

# Budget Update

Fiscal Year 2017-18



**ADOPTED  
JUNE 28, 2017**



*Orange County Sanitation District, California*



INSIDE OF FRONT COVER

The background of the page features a large, light blue watermark of the Orange County Sanitation District logo. The logo is circular and contains the text "ORANGE COUNTY SANITATION DISTRICT" at the top and "PROTECTING THE ENVIRONMENT" at the bottom. In the center of the logo, there is a stylized illustration of a seagull in flight, a sailboat on the water, and three fish swimming below a wavy line representing water.

Orange County Sanitation District, California

# **BUDGET UPDATE**

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Fiscal Year 2017-18

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## **OUR MISSION**

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

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## GFOA BUDGET PRESENTATION AWARD



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Orange County Sanitation District  
California**

For the Biennium Beginning

**July 1, 2016**

A handwritten signature in black ink, reading "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, 2016.

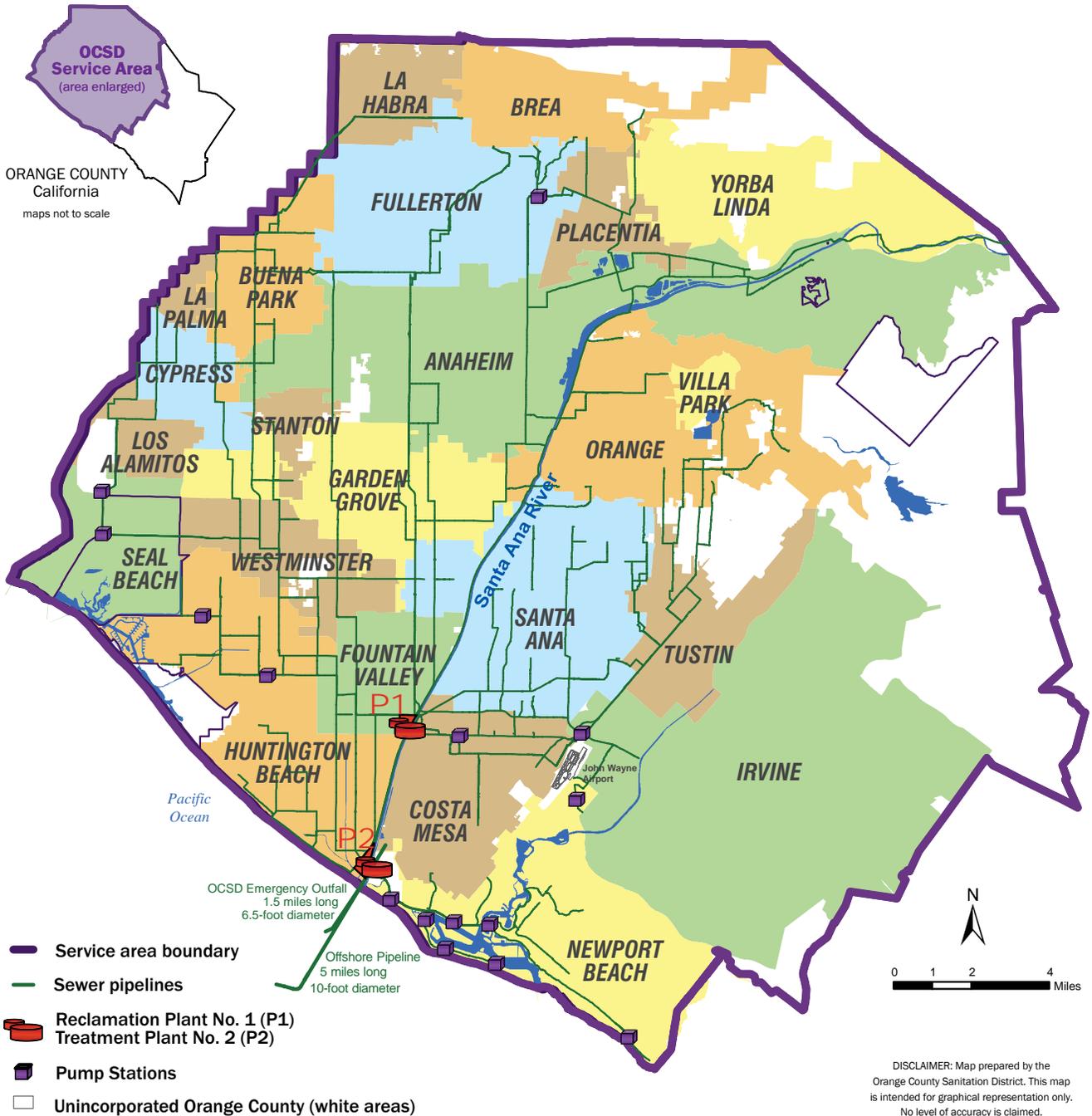
In order to receive this award, a government unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

# TABLE OF CONTENTS

NOTE: HYPERLINKS ARE ACTIVE

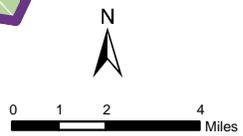
OCSD Service Area .....	i
Board of Directors .....	ii
Board Committees.....	iii
Orange County Sanitation District Organization Chart .....	iv
Administrative Officials.....	v
Message from the General Manager .....	vi
<b>Finance Summary</b> .....	1
Financial Overview and Budgetary Issues.....	2
Where the Money Comes From .....	6
Funding Sources by Category.....	6
Where the Money Goes.....	8
Funding Uses by Category.....	8
<b>Collection, Treatment and Recycling Process Overview</b> .....	10
<b>Strategic Planning</b> .....	12
<b>Infrastructure Asset Management</b> .....	18
<b>Capital Improvement Program</b> .....	28
<b>Debt Financing Program</b> .....	30
<b>Operating Expenses</b> .....	32
<b>Departments</b> .....	36
Summary .....	36
General Manager’s Office.....	38
Human Resources .....	40
Administrative Services .....	42
Environmental Services.....	44
Engineering.....	46
Operations and Maintenance.....	48
<b>Appendix</b>	
Cash Flow Projection.....	A-2
Capital Improvement Program Summary .....	A-4
Project Summary .....	A-5
Capital Improvement Expenditure Graphs .....	A-6
Summary of Capital Requirements .....	A-7
New Project Descriptions.....	A-11
Capital Equipment Budget Summary .....	A-18
Capital Equipment Budget Detail.....	A-20
Self-Funded Insurance Plans.....	A-22
Historical Staffing Summary.....	A-23
Historical Staffing Detail .....	A-24
Appropriations Limit.....	A-35
Miscellaneous Statistics .....	A-36
<b>Wastewater Treatment Process Diagram</b>	

# OCSD SERVICE AREA



ORANGE COUNTY  
California  
maps not to scale

-  Service area boundary
-  Sewer pipelines
-  Reclamation Plant No. 1 (P1)  
Treatment Plant No. 2 (P2)
-  Pump Stations
-  Unincorporated Orange County (white areas)



DISCLAIMER: Map prepared by the Orange County Sanitation District. This map is intended for graphical representation only. No level of accuracy is claimed. Portions of this derived product contain geographical information copyrighted by Rand McNally 12/2013. All Right Reserved. REVISED: 04/2014

# 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

## Active Director

Denise Barnes  
Glenn Parker  
Fred Smith  
Mariellen Yarc  
Steve Nagel  
Greg Sebourn  
Steve Jones  
Barbara Delgleize  
Donald P. Wagner  
Tim Shaw  
Peter Kim  
Richard Murphy  
Scott Peotter  
Teresa Smith  
Chad Wanke  
Sal Tinajero  
Ellery Deaton  
David Shawver  
Allan Bernstein  
Robert Collacott

## Alternate Director

Lucille Kring  
Cecilia Hupp  
Virginia Vaughn  
Stacy Berry  
Cheryl Brothers  
Jesus Silva  
Kris Beard  
Erik Peterson  
Lynn Schott  
Michael Blazey  
Gerard Goedhart  
Warren Kusumoto  
Brad Avery  
Mark Murphy  
Ward Smith  
David Benavides  
Sandra Massa-Lavitt  
Carol Warren  
Chuck Puckett  
Diana Fascenelli

## Sanitary Water Districts

Costa Mesa Sanitary District (CMSD)  
Midway City Sanitary District (MCSD)  
Irvine Ranch Water District (IRWD)  
Yorba Linda Water District (YLWD)

James Ferryman  
Al Krippner  
John Withers  
Phil Hawkins

Robert Ooten  
Charlie Nguyen  
Douglas Reinhart  
Brooke Jones

## County Areas

Member of the Board of Supervisors

Michelle Steel

Shawn Nelson

# BOARD COMMITTEES

## Steering Committee

Greg Sebourn Board Chair  
David Shawver Board Vice-Chair  
Chad Wanke, Chair, Administration Committee  
John Withers, Chair, Operations Committee  
Ellery Deaton, Member-At-Large  
Tim Shaw, Member-At-Large  
Donald P. Wagner, Member-At-Large

## Administration Committee

Chad Wanke, Chair (Placentia)  
Donald P. Wagner, Vice-Chair (Irvine)  
Barbara Delgleize (Huntington Beach)  
James Ferryman (CMSD)  
Peter Kim (La Palma)  
Al Krippner (MCSD)  
Steve Nagel (Fountain Valley)  
Glenn Parker (Brea)  
Scott Peotter (Newport Beach)  
Teresa Smith (Orange)  
Sal Tinajero (Santa Ana)  
Greg Sebourn Board Chair (Fullerton)  
David Shawver Board Vice-Chair (Stanton)

## Operations Committee

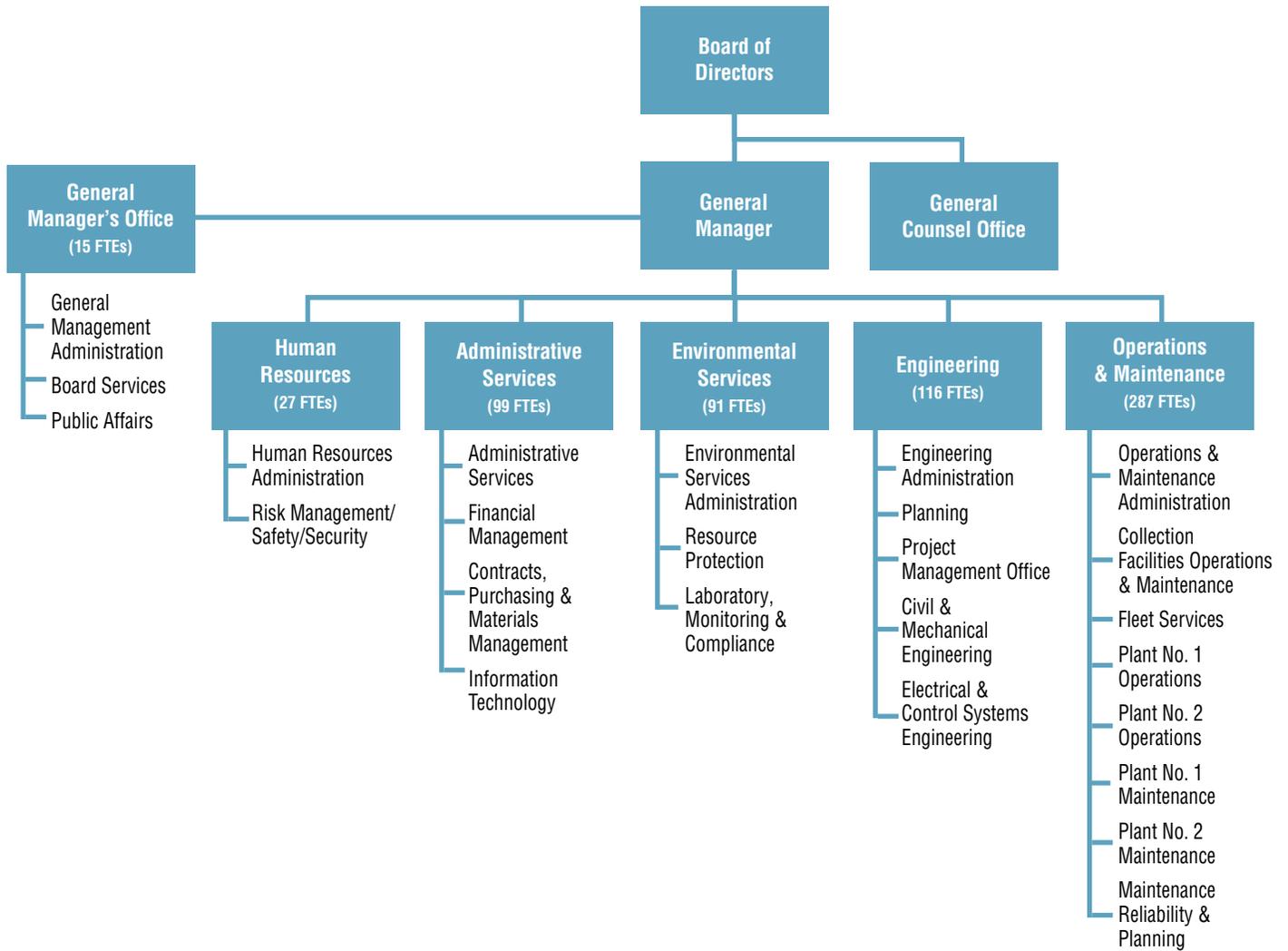
John Withers, Chair (IRWD)  
Ellery Deaton, Vice-Chair (Seal Beach)  
Denise Barnes (Anaheim)  
Allan Bernstein (Tustin)  
Robert Collacott (Villa Park)  
Phil Hawkins (YLWD)  
Steve Jones (Garden Grove)  
Richard Murphy (Los Alamitos)  
Tim Shaw (La Habra)  
Fred Smith (Buena Park)  
Michelle Steel (Board of Supervisors)  
Mariellen Yarc (Cypress)  
Greg Sebourn Board Chair (Fullerton)  
David Shawver Board Vice-Chair (Stanton)

## Legislative and Public Affairs Committee

Allan Bernstein (Tustin)  
Peter Kim (La Palma)  
Greg Sebourn (Fullerton)  
David Shawver (Stanton)  
Donald P. Wagner (Irvine)  
Chad Wanke (Placentia)  
John Withers (IRWD)



# ORGANIZATION CHART



# ADMINISTRATIVE OFFICIALS

## Management Team

General Manager .....	James Herberg
Assistant General Manager .....	Robert Ghirelli
Director of Engineering.....	Robert Thompson
Director of Environmental Services .....	James Colston
Director of Finance and Administrative Services .....	Lorenzo Tyner
Director of Human Resources.....	Celia Chandler
Director of Operations and Maintenance .....	Edward Torres
General Counsel .....	Bradley Hogin



## MESSAGE FROM THE GENERAL MANAGER



June 1, 2017

Honorable Chair and Board of Directors:

I am pleased to submit the Orange County Sanitation District's (OCSD) Proposed Budget Update for the 2017-18 fiscal year. This document lays out the framework of OCSD's activities for the upcoming year, and serves as a source of information for OCSD's Board of Directors, our ratepayers and our employees. This budget includes the operational, capital and debt service expenditures necessary to cost-effectively support our mission. As this is an update to our previously approved two-year budget, relatively minor changes are recommended including operational cost increases of less than two percent. However, there are key areas that I would like to highlight:

- **Expanded Water Recycling** — In partnership with the Orange County Water District (OCWD), our agency recycles enough water to supply the needs of 850,000 people. Our Board of Directors has set a goal of recycling 100 percent of our reclaimable flows to provide a reliable, affordable, and high quality water source. Having completed the joint feasibility study with OCWD for the ultimate expansion of the Groundwater Replenishment System (GWRS), the two agencies now embark on design projects that will increase water recycling for an additional 250,000 people. This expansion will ensure that a potential resource once lost to the ocean will now supply water for over one million people in north and central Orange County.
- **Infrastructure Reliability and Operational Sustainability** — We will continue to improve our planned maintenance program to include civil assets in addition to electrical and mechanical systems. Recognizing the importance of resiliency in the event of a disaster, we will complete our business continuity plan and establish offsite backup infrastructure.
- **Safety and Security** — Capital projects, maintenance activities, and training to address safety in our workplace are included in this budget, as are enhancements to our physical, electronic and cyber security infrastructure.
- **Operating Expense Cost Containment** — Despite inflationary increases on many external costs such as chemicals and utilities, we will minimize the impact on ratepayers by aggressively negotiating our contracts, ensuring a competitive bidding environment, prudently managing debt and implementing efficiencies. Operating efficiencies such as the reduction of long-term liabilities, operational improvements and general cost containment have allowed OCSD to minimize ongoing expenses and the need for additional resources.

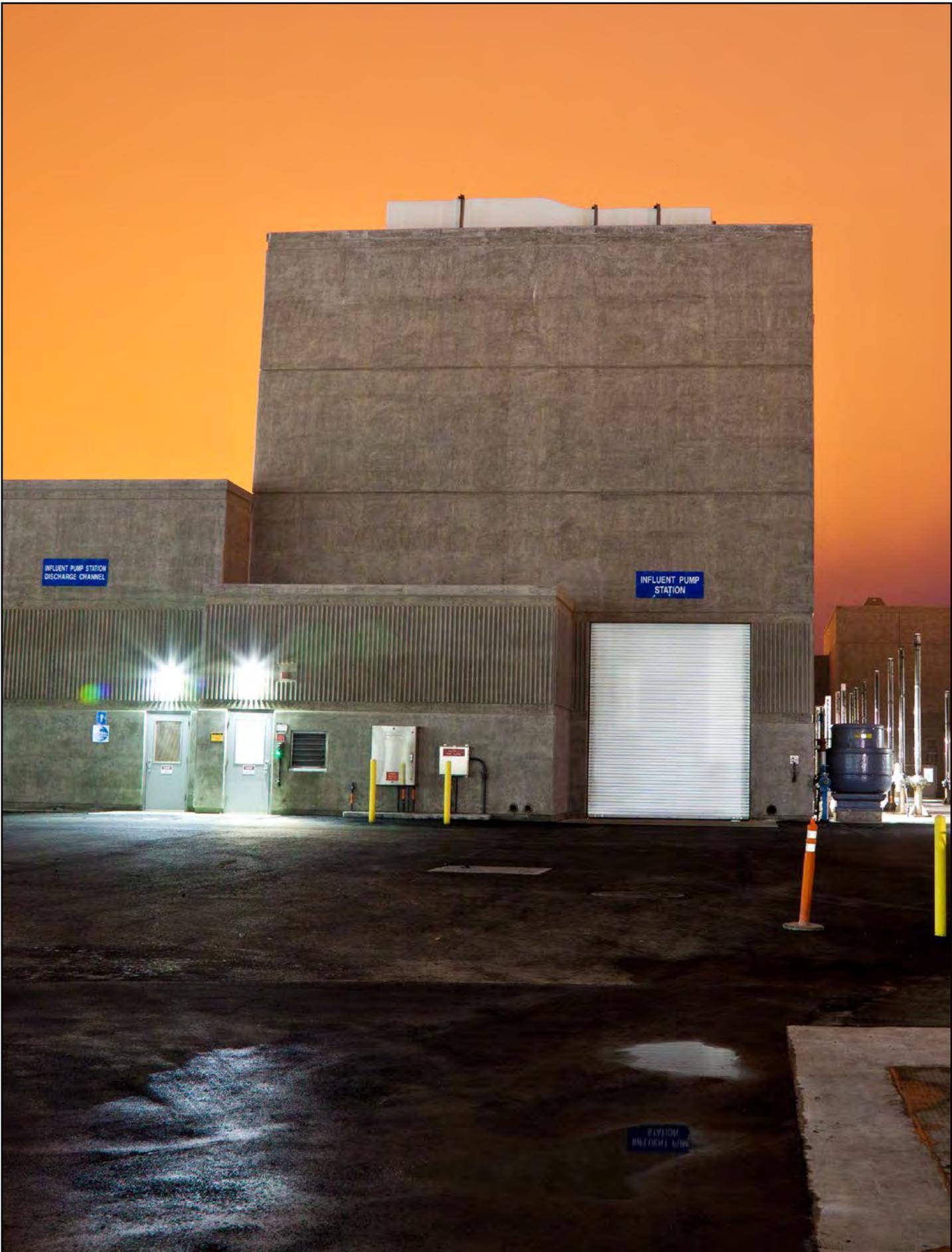
## 2017-18 BUDGET UPDATE

- Staffing Cost Containment — While addressing rising treatment and chemical costs, aging infrastructure, and increased regulatory requirements, this budget displays our commitment to efficiency as it includes only a minimal one percent staffing increase.
- Rate and Sewer Service Planning — Our current rate structure expires on June 30, 2018. During this budget period, we will complete a Capital Improvement Program Master Plan and independent Rate Study. These activities will serve as a basis for our new rate structure and assist in developing a sound financial plan in line with the goals of the agency.

OCSD will continue to provide wastewater treatment, recycling, sewer and facilities maintenance, ocean monitoring and many other services while maintaining one of the lowest rates in the state. I believe this budget fully supports the goals included in the Orange County Sanitation District's Strategic Plan and positions us well to address challenges in the coming years.



James D. Herberg  
General Manager  
Orange County Sanitation District



# FINANCE SUMMARY

# FINANCIAL SUMMARY/OVERVIEW AND BUDGETARY ISSUES

## Budget Overview

Orange County Sanitation District's (OCSD) proposed fiscal year 2017-18 operating and capital improvement budget totals \$385.6 million, or \$10.4 million (2.8 percent) above what was approved last year as the second year of the adopted two-year budget. The increase in the 2017-18 budget is primarily due to an increase of \$10.1 million in the Capital Improvement Program (CIP) budget and an increase of \$1.9 million in the operating budget, which reflects the addition of eight new positions and the cost of living adjustments included in the new Memorandums of Understanding. These budget increases are partially offset by a decrease of \$1.1 million in budgeted debt service costs. The budget continues to reflect the agency's ongoing efforts to streamline operations.

OCSD's proposed CIP budget for fiscal year 2017-18 is \$148.1 million, net of savings and deferrals. This CIP budget supports collection system, joint works treatment and disposal system improvement projects. The increase from the originally proposed budget is attributable to the timing of construction cash outlays as we meet our infrastructure needs.

## Financing

OCSD 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 \$1.0 billion. No new money debt financings are currently forecasted to assist in the funding of the \$2.5 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 reflects an increase of eight authorized full time equivalent (FTE) positions for fiscal year 2017-18 as staffing is proposed at 635 FTE positions. The new positions are needed to provide additional support for the increasing demands of the preventative maintenance programs. However, staffing continues to remain lower than the fiscal year 2010-11 approved staffing level of 641 positions.

Personnel costs will increase primarily due to approved increases in salaries and wages for all employee bargaining units based on the new Memorandums of Understanding. These increases are partially offset by decreases in retirement premiums after an additional payment of \$39 million to eliminate the unfunded pension liability.

OCSD will continue to effectively manage these expenses with approximately 24 percent of the budget allocated to employee costs, much less than most other government agencies.

## Cost of Treatment

The agency's two treatment plants, located in Fountain Valley and Huntington Beach, provide full secondary treatment of approximately 185 million gallons of wastewater each day generated by approximately 2.6 million people residing within central and northwest Orange County and the businesses that operate within this service area. The fiscal year 2017-18 proposed budget to operate, maintain and manage our sewage collection, treatment, recycling and disposal system, including self-insurance requirements, is \$154 million.

The cost per million gallons of wastewater treated (an industry-wide performance measurement) is expected to increase to \$2,250 a \$31, or 1.4 percent increase from the previous 2017-18 approved budget of \$2,219. The increase in the cost per million gallons is due to the increase in the operating budget without any change in projected flows.

## Sewer Service Fees

The 2017-18 single family residential rate is scheduled to increase by approximately one percent to \$331. OCSD's rates are well below the statewide average sewer rate of \$475, according to a 2015 survey of 482 agencies in California

## Groundwater Replenishment System (GWRS)

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

## 2017-18 BUDGET UPDATE



The original GWRS facility reclaimed 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 this project and approximately \$44 million in Federal and State grants that were received to offset part of the total costs.

Initial expansion of GWRS increased the production of reclaimed water to 100 million gallons a day. This expansion, which was funded entirely by the OCWD, was completed in early 2015. OCSD is directing all reclaimable flows from Plant No. 1 to OCWD in support of providing maximum amounts of specification water for reclamation.

A feasibility study for recycling all of OCSD's reclaimable effluent was completed in May 2016. This study was jointly funded by OCSD and OCWD with a grant from the U.S. Bureau of Reclamation. The feasibility study identified the projects necessary to implement the final expansion of GWRS. The expansion will add an additional 30 million gallons a day (MGD), bringing the total GWRS capacity to 130 MGD of drinking water.

### Capital Improvement Program (CIP)

The proposed CIP budget for fiscal year 2017-18, net of savings and deferrals, is \$148.1 million, up \$10.1 million from the previously approved 2017-18 budget due to the timing of construction cash outlays.

Over the next 10 years, OCSD's Capital Improvement Program will:

- Rehabilitate the headworks, primary treatment, solids handling facilities, and utility systems at Plant No. 1.
- Replace a third of the primary treatment and the solids dewatering facilities, and rehabilitate the outfall pumping system at Plant No. 2.
- Construct a new Headquarters Complex.
- Modify existing headworks at Plant No. 2 and construct a new plant water pump station to enable the final expansion of the Groundwater Replenishment System (GWRS).
- Replace or rehabilitate OCSD's aging pump stations and trunk sewers in the collections system.

# FINANCIAL SUMMARY/OVERVIEW AND BUDGETARY ISSUES

## Operating Budget Increase - \$13.2M

The operations budget for the collection, treatment, and disposal of wastewater is proposed at \$154.3 million, a \$13.2 million (9.4 percent) increase above 2016-17 projected expenditures.

Although some expenses will increase or decrease slightly, the overall increase to the operating budget in 2017-18 over the 2016-17 projected is primarily attributable to the following specific areas:

## Salaries and Benefits – \$6.2M Increase

Salaries and benefits will increase \$6.2 million above the 2016-17 projected expenditures primarily due to the impacts of the new collective bargaining agreements, the addition of eight FTE positions, and increases in medical insurance premiums. The increases are partially offset by a decrease in workers' compensation costs and lower retirement premiums resulting from OCS D's decision to use available cash reserves to reduce the unfunded pension liability by \$39 million in 2016-17.

These changes reflect the impacts from new collective bargaining agreements and revised actuarial assumptions on retirement premiums.

## Professional Services – \$1.4M Increase

The increase in professional services in fiscal year 2017-18 is to support the comprehensive Civil Assets Maintenance Program.

## Repairs and Maintenance – \$2.4M 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 2017-18 budget increase of 17 percent over the 2016-17 projected expenditures is mostly attributable to increases in basic repairs and maintenance costs and Central Generation (CenGen) engine overhaul.

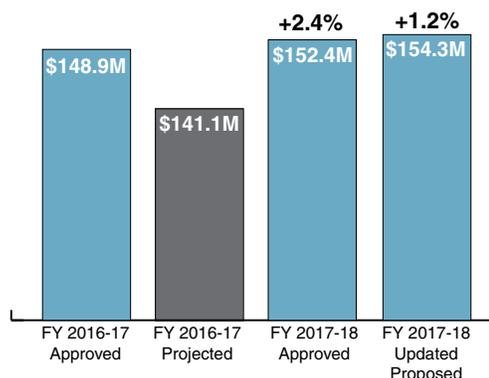
## Utilities – \$1.0M Increase

The proposed budgets for electricity and natural gas reflect increases of \$776,000 and \$166,000, respectively, over the 2016-17 projected expenditures due to anticipated consumption and unit cost increases.

## Other Materials, Supplies, Services – \$2.2M Increase

The increase is primarily due to a \$1.0 million increase in the property and general liability insurance premiums and the restoration of the General Manager's contingency and the contingency for prior year reappropriations.

## Operating Expenses



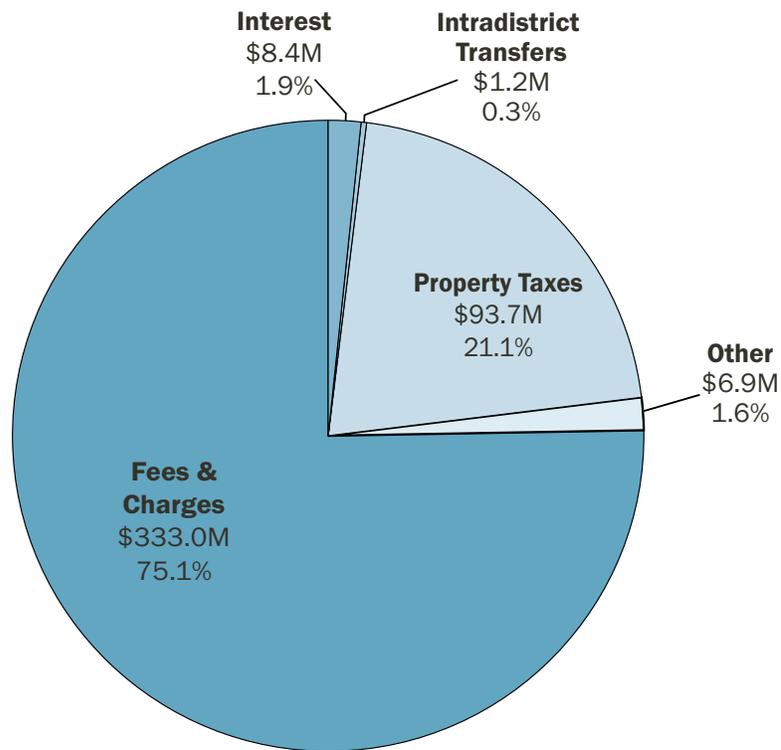
Budget-over-budget percentage changes are shown above.

# 2017-18 BUDGET UPDATE



# FINANCIAL SUMMARY/FUNDING SOURCES BY CATEGORY

## WHERE THE MONEY COMES FROM



### Funding Sources by Category (in millions)

Category	2016-17 Approved	2017-18 Approved	2017-18 Updated Proposed
Service Fees	\$307.1	\$310.1	\$310.2
Property Taxes	87.0	91.4	93.7
Permit User Fees	11.3	11.4	12.9
Capital Facilities Capacity Charges	13.5	18.1	9.9
Interest	8.6	8.8	8.4
Intradistrict Transfers	3.4	1.7	1.2
Debt Proceeds	0.0	0.0	0.0
Other Revenue	4.6	4.9	6.9
<b>Total Funding Sources</b>	<b>\$435.5</b>	<b>\$446.4</b>	<b>\$443.2</b>

# 2017-18 BUDGET UPDATE

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

## **General Service Fees – \$310.2M**

User fees are ongoing fees for service paid by customers connected to the sewer system, and are the primary source of OCSD’s revenue. 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 – \$93.7M**

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. OCSD 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 – \$12.9M**

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 fees for the cost of service received.

## **Capital Facilities Capacity Charges (CFCC) – \$9.9M**

The Capital Facilities Capacity Charge is a one-time 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.

## **Interest Earnings – \$8.4M**

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.

## **Intradistrict Transfers – \$1.2M**

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 (IRWD) and OCSD dated November 15, 1995, ownership is adjusted annually to reflect the current equity percentage ownership based on sewage flows.

## **Debt Proceeds – \$0.0M**

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.

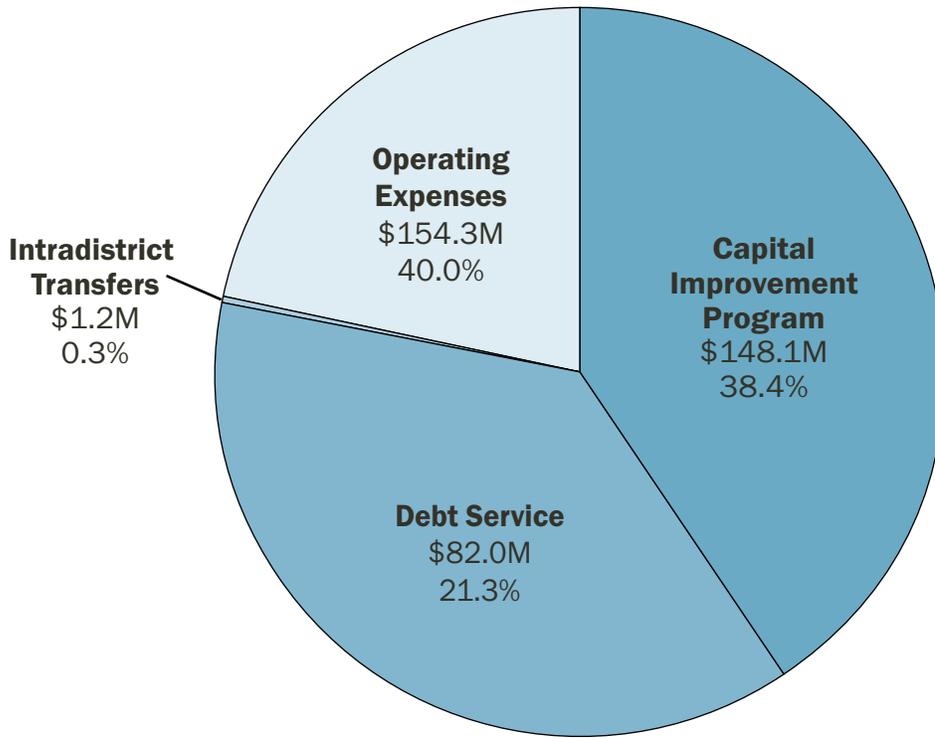
No new money debt issuances are being proposed over the next two fiscal years as the \$2.5 billion in future replacement, rehabilitation, and refurbishment projects anticipated over the next ten years will be adequately funded through current sewer service fee charges and existing reserves.

## **Other Revenue – \$6.9M**

Other revenue includes self-insurance assessments for workers’ compensation and general liability coverage as well as reimbursements from other agencies for shared CIP costs and miscellaneous revenue such as rents and leases.

# FINANCIAL SUMMARY/FUNDING USES BY CATEGORY

## WHERE THE MONEY GOES



### Funding Uses by Category (in millions)

Category	2016-17 Approved	2017-18 Approved	"2017-18 Updated Proposed
Operating Expenses	\$148.9	\$152.4	\$154.3
Capital Improvement Program*	171.3	138.0	148.1
Debt Service	151.6	83.1	82.0
Intradistrict Transfers	3.4	1.7	1.2
<b>Total Funding Uses</b>	<b>\$475.2</b>	<b>\$375.2</b>	<b>\$385.6</b>

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

# 2017-18 BUDGET UPDATE

OCSD budgets its funds in four distinct areas:

## Operating Expenses - \$154.3M

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

## Capital Improvement Program (CIP) - \$148.1M

To provide an appropriate level of service to OCSD's ratepayers, large capital improvements are required. The CIP provides for the management and implementation of these improvements. The CIP budget includes specific projects as well as an allocation for anticipated replacement, rehabilitation, or refurbishment (RRR) projects where detailed job plans have not yet been prepared. The gross CIP project budgets for 2017-18

total \$167.0 million; however, the CIP cash outlays, net of savings and deferrals, is \$148.1 million.

## Debt Service - \$82.0M

This is the cost of repaying debt. Long-term debt financing allows OCSD to complete large multi-year capital projects by providing funds not always immediately available. Currently, OCSD is on track to pay off its \$1.0 billion outstanding debt by 2042.

## Intradistrict Transfers - \$1.2M

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



# COLLECTION, TREATMENT AND RECYCLING PROCESS OVERVIEW

OCSD's system includes approximately 396 miles of sewers that convey wastewater generated within OCSD's service area to its two treatment facilities, Reclamation Plant No. 1 located in the City of Fountain Valley, and Treatment Plant No. 2 located in the City of Huntington Beach.

Influent wastewater undergoes Preliminary Treatment upon entry to the treatment plants where it is filtered through bar screens, and grit and debris are removed. It then flows to Primary Treatment, which consists of large settling basins where solids are settled out, enhanced by the addition of chemicals, and sent to Solids Processing. Wastewater then flows to Secondary Treatment, which is a biological process using either the trickling filter or activated sludge process. Solids removed in Secondary Treatment are also sent to digestion.

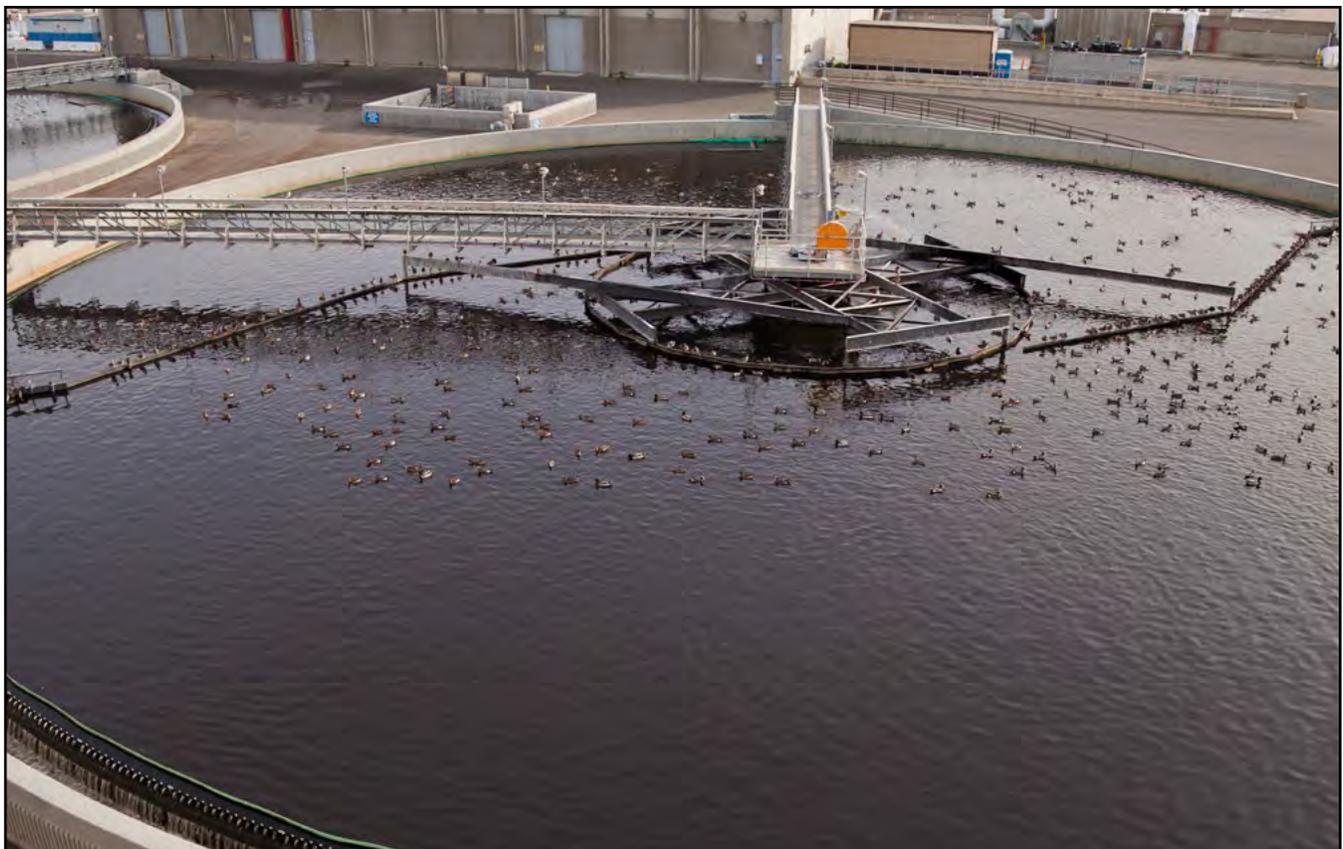
Methane gas generated during the natural decomposition of the solids in the digesters fuels the Central Power Generation System producing enough electricity to meet two-thirds of the power needed to run both treatment plants.

Solids are then dewatered to a 20 percent solids consistency, called biosolids, and recycled via direct land application or composting.

Approximately 130 million gallons per day of secondary effluent from Reclamation Plant No. 1 is sent to the Orange County Water District (OCWD) for recycling in its two treatment processes.

The first is OCWD's Groundwater Replenishment System (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 100 million gallons per day, the GWRS generates enough pure water to meet the needs of 850,000 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 dyeing. The total annual demand for GAP water is about four million gallons per day.



# 2017-18 BUDGET UPDATE



# STRATEGIC PLANNING

## Introduction

Driven by its mission, vision, core values, and the Strategic Plan, OCSD continues aggressive efforts to meet the sanitation, health, and safety needs of the more than 2.6 million people we serve while protecting the environment where we live.

## Mission Statement

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

“To 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 now and in the future 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

Our 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 – Talents, Skills and Abilities

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

Many leading organizations are formally applying risk management processes to identify and manage risks across many aspects of their business. The formalization of risk management processes is a logical step towards increased accountability and transparency placed on the Board and OCSD management.

### Risk assessment and mitigation includes the following steps:

- Identify and assess strategic and organization-wide risks facing OCSD and to develop a high level risk register;
- Identify mitigation measures that OCSD currently has in place;
- Propose additional mitigation measures that OCSD considers appropriate to manage; and
- Develop an action plan of responsibilities and timeframes for follow-up.

## 2017-18 BUDGET UPDATE

The Risk Register is a compilation of the various risks facing OCSD, as seen, and described annually by management. Business Risk is defined as a threat that an event, action, or inaction, will adversely affect OCSD's ability to achieve its business objectives and execute its strategies successfully. OCSD first created the Risk Register in 2006 and subsequently updated it at least bi-annually through 2017.

The top risks identified within the Risk Register Update in 2017 included: 1) earthquake and liquefaction impact facilities and operations; 2) poor maintenance of assets leads to safety and reliability issues; and 3) cyber-terrorist or hacker attack on OCSD. Managers and executive management continue to review these issues and various ways to address those that might impact OCSD.



# STRATEGIC PLANNING

## Strategic Goals and Levels of Service

On the following pages are the updates to OCSD's strategic goals and levels of service. The eight strategic goals are noted and include a projected completion time. The levels of service standards are measures of service that are seen by our customers as high priorities. Goals and levels of service are divided into five areas:

- *Providing Exceptional Customer Service* — providing reliable, responsive and affordable services in line with customer needs and expectations.
- *Protecting Public Health and the Environment* — protecting public health and the environment utilizing all practical and effective means for wastewater, energy, and solids resource recovery.
- *Managing and Protecting the Public's Funds* — continually seeking efficiencies to ensure that the public's money is wisely spent.
- *Stakeholder Understanding and Support* — communicating our mission and strategies with those we serve and all other stakeholders.
- *Organizational Effectiveness* — creating the best possible workforce in terms of safety, productivity, customer service and training.

## Status of Strategic Initiatives since Adoption of the 2016 Five-Year Plan

### Providing Exceptional Customer Service

1. Odor Control — Completion of the Odor Control Master Plan to make sure OCSD's investment is current and, if needed, identification of future process systems necessary to maintain exceptional customer service. The plan is on target for completion in 2017.

### Managing and Protecting the Public's Funds

2. Local Sewer Transfers — Complete transfer of 174 miles of local sewers serving parts of Tustin and unincorporated areas of north of Tustin. The transfer of these local sewers is expected to be completed by June 30, 2017.

### Protecting Public Health and the Environment

3. Future Biosolids Management Options — Completion of the Biosolids Master Plan. This Plan will identify OCSD's future biosolids management options, evaluate OCSD's existing solids handling facilities and alternative solids treatment technologies, and make recommendations for future capital facilities improvements. The plan is on target for completion in 2017.
4. Energy Efficiency — Completion of a research study for new energy efficiency and conversion technologies to maximize energy efficiency, reduce operating costs, minimize environment impact, and replace assets that are at the end of their useful lives. The study is on target for completion by June 2018.

### Stakeholder Understanding and Support

5. Future Water Recycling Options — Determine partnerships, needs, strategies, benefits and costs associated with recycling of Plant No. 2 effluent water. The study is expected to be completed in FY 18-19.

### Organizational Effectiveness

6. Workforce Planning and Workforce Development — This initiative is an ongoing part of a comprehensive effort to ensure we have the right people, with the right skills and abilities, in the right place, at the right time



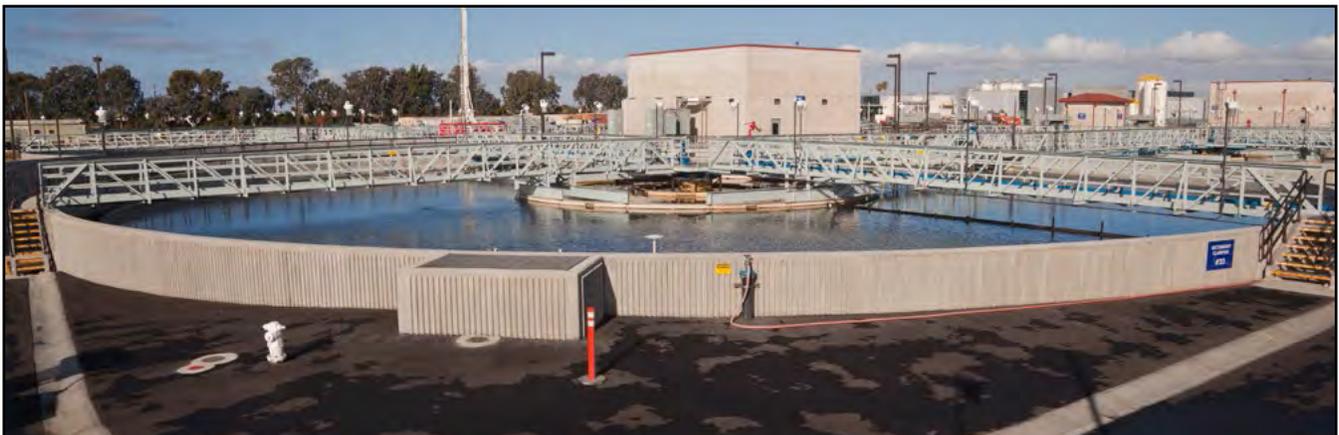
# 2017-18 BUDGET UPDATE

## Providing Exceptional Customer Service Levels of Service

OCSD will provide reliable, responsive and affordable services in line with customer needs and expectations.	FY 16-17 Mid-Year Results	Level of Service Target
Treatment plants odor complaint response within 1 hour	100%	100%
Collection System odor complaint response within 1 working day	100%	100%
Number of odor incidents/events: Reclamation Plant No. 1 under normal operating conditions	9	Zero (0)
Number of odor incidents/events: Treatment Plant No. 2 under normal operating conditions	5	Zero (0)
Number of odor incidents/events: Collections System	22	<=12 per year
Respond to public complaints or inquiries regarding construction projects within 1 working day	100%	100%
New connection permits processed within 1 working day	100%	100%
Respond to all biosolids contractor violations within a week of violation notice	100%	100%

## Managing and Protecting the Public's Funds Levels of Service

OCSD will continually seek efficiencies to ensure that the public's money is wisely spent.	FY 16-17 Mid-Year Results	Level of Service Target
Annual user fees sufficient to cover all O&M requirements	100%	100%
Actual collection, treatment, and disposal costs per million gallons	4%	<=10% of budget
Maintain AAA Bond Rating	100%	100%



# STRATEGIC PLANNING

## Protecting Public Health and the Environment Levels of Service

<b>OCSD will protect public health and the environment utilizing all practical and effective means for wastewater, energy, and solids resource recovery.</b>	<b>FY 16-17 Mid-Year Results</b>	<b>Level of Service Target</b>
Accept dry weather runoff diversion flows without imposing fees	0.75 mgd	<= 10 mgd
Air emissions health risk to community and employees, per one million people (for each treatment plant)	9	<10
No Notices of Violation (NOVs) with air, land, and water permits	1	0
Respond to collection system spills within 1 hour	100%	100%
Sanitary sewer spills per 100 miles	0.0	<2.1 per industry average
Contain sanitary sewer spills within 5 hours	100%	100%
Meet secondary treatment standards BOD-C (mg/L)	6.1	<=25
Meet secondary treatment standards TSS (mg/L)	6.3	<=30
Frequency of unplanned use of emergency one mile (78-inch diameter) outfall (per dry weather)	0	0
Tons of biosolids to landfill through 2017 peak production period	46	< 100 tons per day
Thirty-day geometric mean of total coliform bacteria in effluent after initial dilution of 250:1 (mpn)	570	< 1,000 mpn
Compliance with core industrial pretreatment requirements	90%	100%

## Stakeholder Understanding and Support Levels of Service

<b>OCSD will communicate our mission and strategies with those we serve and all other stakeholders.</b>	<b>FY 16-17 Mid-Year Results</b>	<b>Level of Service Target</b>
Meet GWRS specification requirements for Plant No. 1 secondary effluent	3.3	<5 NTU
Provide all specification effluent available to the Groundwater Replenishment System to full production of purified water	100%	100%

# 2017-18 BUDGET UPDATE

## Organizational Effectiveness Levels of Service

OCSD will create the best possible workforce in terms of safety, productivity, customer service, and training.	FY 16-17 Mid-Year Results	Level of Service Target
Training hours per employee	29.69	>=45 per year
Employee injury incident rate – accidents per 100 employees	2.5	<=3.3 Industry Avg
Meet mandatory OSHA training requirements	100%	>=95%
Hours worked since last lost work day	109,480	>=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	2.1	<=2.5
Average Cost per Workers Compensation claim	\$6,479	\$13,545



## Asset Management

In December 2002, the Orange County Sanitation District (OCSD) Board adopted their “Asset Management Strategic Plan and Framework Analysis” (Strategic Plan). The Strategic Plan defined Asset Management for OCSD as; “to create and acquire, maintain, rehabilitate, replace and augment these valuable wastewater assets in the most cost effective (lowest life cycle cost) sustainable manner at the level of service required by present and future generations of regulators and customers at an acceptable level of risk.”

OCSD is committed to providing services for its ratepayers to reliably meet our regulatory mandates and levels of service approved by the Board of Directors, and will provide these services using sustainable engineering principles that result in the lowest responsible lifecycle cost. OCSD installs, operates, maintains, refurbishes and disposes of assets with lifecycles measured from years to decades, so an approach which balances long, medium and short-term needs is necessary.

Asset management has evolved into a comprehensive decision-making framework that encompasses engineering planning, design and construction of quality facilities, optimized operation, proper maintenance, and planned refurbishment and disposal that will meet OCSD’s changing needs. This coordinated decision making process will allow OCSD to consistently meet mandated levels of service to the ratepayers at the lowest lifecycle cost.

OCSD’s Asset Management Plan focuses on the long-term modeling of systems to ensure the proper rate structure is in place to support sustainable operations and to prioritize condition assessment studies based on service life and service conditions. These are important starting points and have yielded tangible benefits in reduced risk levels and an improved capital planning approach. The results of the long-term modeling are completely dependent on the data quality of the databases supplying information to the TeamPlan Software. Staff continues to improve the data quality of the source systems to improve the accuracy of the long-term model. The implementation of the Maximo Computer Maintenance Management System (CMMS) is an example of an effort to improve OCSD’s Asset Register. CMMS Technicians and the Asset Engineers

continue to work to update the database information including installation date, asset cost, condition and criticality in the new system.

While the TeamPlan Software projects future renewal cash flow requirements in the long-term, OCSD has been striving to more accurately identify medium to short-term capital cash flow requirements. Specifically, the Engineering Planning Division has been working on developing a medium to long-term (up to 20 years) Capital Improvement Program (CIP) by creating specific project plans for the refurbishment, rehabilitation or replacement for each asset area.

This medium-term management is important for several reasons. By moving away from narrowly focused projects to solve individual problems, to more comprehensive projects refurbishing entire processes, OCSD benefits by having less operational disruption and more efficient project delivery, better cash flow estimation, and better operations and maintenance decision-making framework. This is a huge undertaking based on the number of asset and facilities, but over time the undefined future rehabilitation capital estimates within the twenty-year window is expected to be drastically reduced and replaced by more specific estimated capital needs.

Complementing the medium-term planning are the short-term efforts to coordinate maintenance actions that can reduce risks, actively defer the larger refurbishment projects, and reduce asset consumption rates to minimize the need for replacement of structures and conveyance systems when projects are executed. The Planning Division asset engineers are constantly reviewing their area scopes of work, utilizing their criticality and condition information and engineering judgment, to identify opportunities for operational adjustments or maintenance activities that cost effectively extend the life of key assets which may allow for deferral of the larger overall project. This may be a targeted equipment replacement or pipeline repair that is more urgent than the need of the overall facility. These engineers may also identify opportunities to reduce asset consumption through coating systems, atmosphere improvements or small structure repairs before major damage is done. These actions can drastically reduce the cost of future projects by preventing the need to demolish and replace entire structures.

## 2017-18 BUDGET UPDATE

OCSD is committed to continuous improvement of the process by which it manages the assets and facilities that are required to reliably deliver its level of service commitments. The additional resources and individual accountability for specific areas has improved, and will continue to improve our capital planning, project packaging, project execution and delivery, plant operability and maintenance planning.

The average age and value of the assets OCSD own is increasing steadily over time, the latent asset replacement obligation is rising, and as a consequence, OCSD needs to plan for decreased capital projects for expansion and increased renewal expenditures in the future relative to past expenditure levels. Additional focus will need to be given to ensuring that appropriate operation and maintenance strategies are being applied that consider the different ages of assets being maintained.



# INFRASTRUCTURE ASSET MANAGEMENT

## Asset Valuation

The replacement valuation for all of OCSD’s assets has been updated. The table below presents the current replacement and depreciated values of OCSD’s assets. The replacement value represents the cost in December 2009 dollars to completely rebuild all the assets to a new condition. The depreciated value is the book value of the assets based on their age, which is a prediction of their current condition.

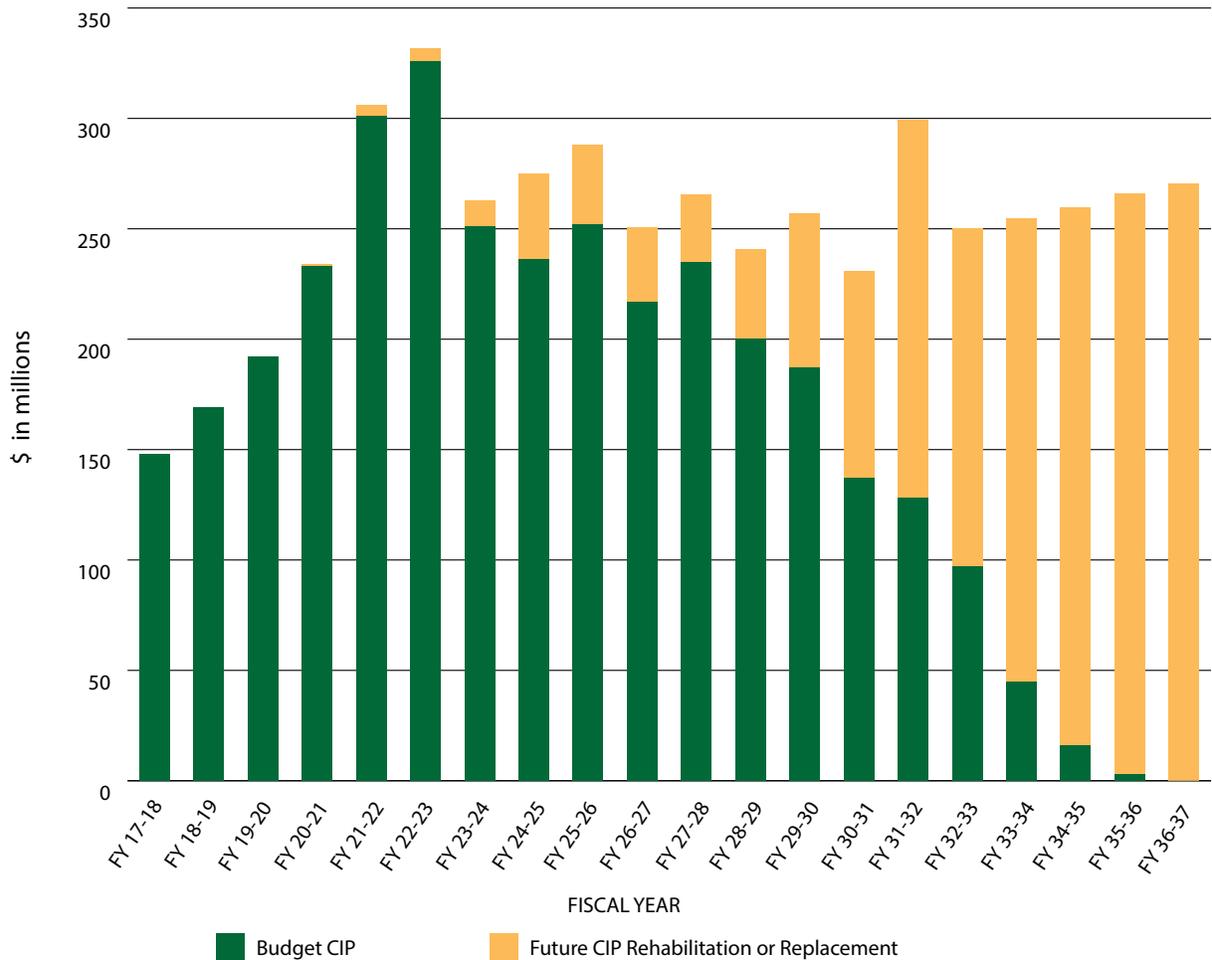
Valuation	Plants	Collection	Total
Replacement Value (in billions)	\$3.11	\$3.09	\$6.20
Depreciated Value (in billions)	\$1.88	\$1.88	\$3.76

The 2012 replacement value is estimated to be \$6.20 billion. In 1998, the prediction was \$2.03 billion, which was based on original purchase cost. It is projected that the replacement value will increase by approximately \$7.1 billion when all of the existing three billion dollar CIP has been captured in OCSD’s database. The major reasons for this increase are all the new assets added to the asset register and the increased replacement costs due to now having to perform construction in a more urbanized Orange County than in the past.

## Planned CIP Outlays

The following chart shows the 20-year CIP outlay which includes current and predicted future Capital Improvement Program projects.

### 20 YEAR CIP OUTLAY



# 2017-18 BUDGET UPDATE

OCSD's capital improvement and maintenance programs are focused on maintaining our infrastructure to ensure that our mission is delivered reliably and that our facilities are managed in a way that minimizes overall life cycle costs.

Below is a status of the fiscal year 2016-17 infrastructure maintenance activities and planned activities for fiscal year 2017-18.

## Collection System:

OCSD's collection system consists of 396 miles of sewers. The maintenance of all regional sewers is actively managed but only 230 miles of regional sewers are on a cleaning schedule. The largest sewers are typically self-cleaning due to higher flows and locations closer to the treatment plants. The regional sewers also include 15 pump stations and three metering locations. Typical collection system maintenance activities consist of: televising, inspecting, and cleaning sewer lines; operating, maintaining and cleaning pump stations with associated facilities; and chemical conditioning of the sewage to reduce corrosion and control odors. Maintenance activities are based on established levels of service to ensure compliance with our Sewer System Management Plan, reducing spills, increasing reliability and safety, and ensuring that our facilities are managed, operated and maintained to minimize overall life cycle costs and need for repairs. The cleaning frequencies are based on data from pipe inspections, closed-circuit television (CCTV) work, historical records, and industry best practices. The planned activities help extend the useful life of the assets and minimize nuisance odors.

During fiscal year 2016-17 the following maintenance activities were completed:

- Cleaned approximately 60 miles of regional sewer lines.
- CCTV video inspection of 670 regional system manholes.
- CCTV video inspection of more than 110 miles of regional sewer pipeline.
- Completed approximately 86 percent of scheduled pump station preventative maintenance work.
- Cleaned approximately 86 percent of scheduled trouble spot and scheduled inverted siphon work.

- Managed odor control chemical expenditures to approximately 88 percent of budget.

Total costs: \$8,358,507

The following activities and goals are planned for fiscal year 2017-18:

- Clean 60 miles of regional sewer lines on a cleaning schedule.
- CCTV video inspection of 500 regional system manholes.
- CCTV video inspection of 80 miles of regional sewer pipeline.
- Complete at least 90 percent of scheduled pump station preventative maintenance work.
- Clean 90 percent of trouble spot and scheduled inverted siphon work.
- Manage odor control chemical expenditures to between 95-102 percent of budget.

Estimated total costs: \$8,899,440

## Collection System Capital Improvement Projects:

Our collections projects go through an intensive planning and design process to ensure all elements of the project are thoroughly assessed. These projects typically renew or replace aging pipelines and pump stations, upgrade facilities to meet current codes and standards, and in some instances to increase flow capacity due to growth in localized portions of our service area.

We are currently planning and executing a comprehensive program to renew our collection system. One of the larger projects is the Newhope-Placentia Trunk Replacement (Project No. 2-72) which is taking place in the cities of Fullerton and Anaheim. Seven miles of sewer along State College Boulevard, from Yorba Linda Boulevard to Orangewood Avenue, will be upsized to handle the flow necessary to allow the abandonment of the Yorba Linda Pump Station which has reached the end of its useful life. After analyzing the system, it is not practical to update the facility due to the high costs of rehabilitation and the limitation to utilize the flow for reclamation. Currently, flow is diverted

## INFRASTRUCTURE ASSET MANAGEMENT

into the Santa Ana River line instead of the Newhope-Placentia line due to the existing insufficient capacity, thus preventing the use of flow for the Groundwater Replenishment System. The project will also include modifications to existing diversion structures to add flexibility to the collection system to divert other reclaimable flow. This project also provides adequate capacity for future development, minimizing the risk of sewer spills in the future. Construction efforts started in May 2016 and the first phase of the project is scheduled to be completed by fall 2017. The project has a current budget of \$99 million.

Another large-scale project is the Rehabilitation of the Western Regional Sewers (Project No. 3-64) which covers approximately 17 miles of sewers in the cities of Anaheim, Buena Park, Cypress, La Palma, Los Alamitos, Seal Beach and unincorporated areas of the County of Orange referred to as Rossmoor. This large project is required to rehabilitate or replace pipes that were installed 45 to 55 years ago. The sewers have multiple deficiencies which have allowed the intrusion of ground water primarily at the joints, but also sporadically along the pipe segments. In some cases, hard calcium deposits have developed, making the pipe difficult to clean, and over time may impede the wastewater flow. Portions of the project will be relined and others will be replaced with larger diameter pipelines. Also, over 150 manholes will be replaced. In addition, the Westside Pump Station will undergo some improvements, the aging pump station needs a new wet well and odor control measures. This project budget is \$217 million.

At the southern edge of the previously mentioned project, the Seal Beach Pump Station (Project No. 3-62) also needs to be rehabilitated to properly support the western region of our service area. Not only are the electrical and safety codes significantly different from when the station was first constructed in the early 1970s, but many of the electrical, mechanical, and control system components are becoming obsolete, so long-term maintenance is no longer an option. The two force mains downstream of the pump station will also need to be addressed. One force main will be replaced and the other rehabilitated to properly support the updated facility. Odor control facilities will be added to reduce system corrosion and minimize public impacts. This project is currently in the design phase with construction anticipated for 2018. The budget for this project is \$61 million.

In the cities of Santa Ana, Tustin, and Irvine, we have the Gisler-Red Hill Trunk Improvements (Project No. 7-37) which is rehabilitating or replacing aging parallel sewer lines. The current pipes, which run along Red Hill Avenue between McGaw Street and Mitchell Avenue, are not large enough to handle the high flows associated with wet weather events which create the risk of spills. The manholes are also deteriorated and corroded and must also be replaced or rehabilitated to avoid failure. The two-mile project has a current budget of \$25 million and began construction in May 2016.

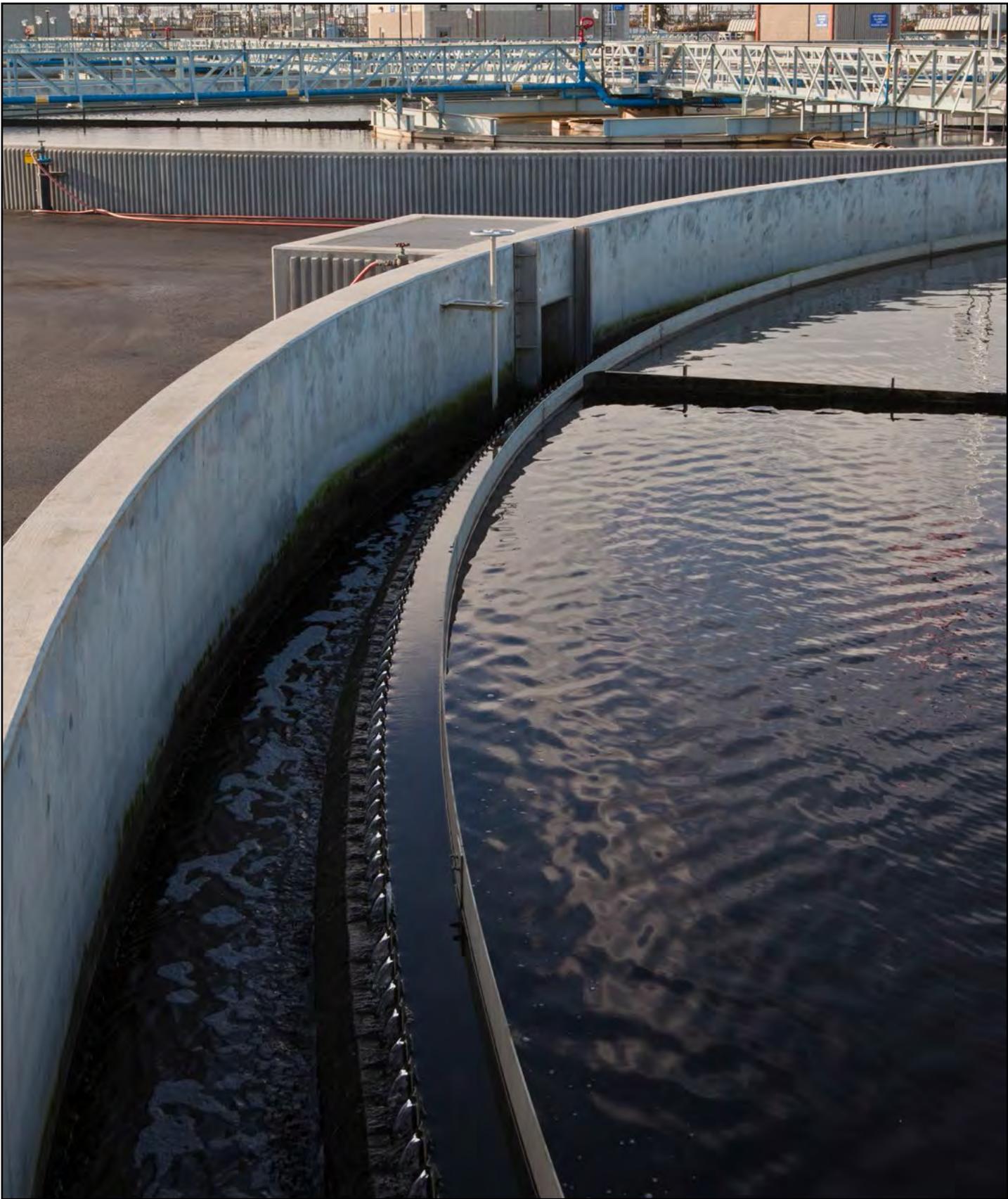
In Newport Beach, we have developed a comprehensive program to coordinate the various projects scheduled to take place in the city in the next few years. We recently completed construction of the Newport Force Main Rehabilitation Project (No. 5-60), which rehabilitated and replaced parallel pipes in Pacific Coast Highway between Dover Drive and just west of Superior Avenue. The project was sequenced in two phases to minimize public impacts by avoiding construction in the busy summer months. The 50-year steel pressurized mains were in poor condition and one of the pipelines was undersized to convey predicted wet weather flows. Now completed, the system should provide another 50 years of service. The project had a budget of \$64 million.

Also in the City of Newport Beach and in portions of Costa Mesa, we have OCSD 6 Trunk Sewer Relief Project (No. 6-17). This project is replacing the sewer that extends from Pomona Avenue to Newport Boulevard ending near Pacific Coast Highway. These improvements will increase capacity to properly handle the projected increase in flow from planned developments. These improvements will extend the life of the sewer by 30 years. Once the project is completed, the risk of sewer spills during dry weather events and common wet weather events will significantly diminish. The current budget for the project is \$8 million.

### **Reclamation Plant No. 1:**

The maintenance organization continues to implement industry best practices for safety, effectiveness and reliability. Some of these best practices include the implementation of a maintenance planning and scheduling program and an increased focus on the implementation of predictive and preventative maintenance programs across all crafts. During the past year, we have also initiated, at both plants, the execution

# 2017-18 BUDGET UPDATE



## INFRASTRUCTURE ASSET MANAGEMENT

of scheduled maintenance activities on civil assets (such as concrete structures and pipes) to ensure their reliability.

During fiscal year 2016-17, more than 3,500 preventative maintenance activities were performed at Plant No. 1. In addition to these routine activities, the following maintenance and repair activities were completed during the year:

- CenGen engine three overhaul, generator condition assessment, and generator PM.
- Sunflower pump upper bearing, lower bearing, coupling, and grease pump overhaul.
- Aeration basin air header membranes maintenance service and replacements.
- Solids handling 'M' conveyor rebuild.
- AS1 Turblex Blower MMI hardware/software upgrade.
- Completed safety inspection repairs under safety project J-126.
- Initiated regular simulated power loss testing of standby electrical generators for increased system reliability.

Total costs: \$6,372,401

During fiscal year 2017-18, there are more than 4,300 preventative maintenance activities that are scheduled to be completed at Plant No.1. This includes typical time or cycle based maintenance tasks such as adjustments and mechanical alignments, cleaning and tightening of electrical equipment, calibration of sensors and meters, changing of lubricants and filters, exercising equipment, rebuilds and regulatory testing. In addition, staff will be utilizing predictive technologies such as vibration analysis to measure imbalance in rotating equipment, thermography to measure excessive heat, oil analysis to predict failure of lubricants, and ultrasonic to detect leaks as well as deterioration and short-circuiting in electrical equipment. Other major planned activities for fiscal year 2017-18 at Reclamation Plant No. 1 include:

- Replace all check valve and jet cell ignitors for two CenGen engines.
- Assess underground cable condition to ensure reliability of the electrical distribution network.
- Completion of the arc flash and protective relay work, including labeling of assets.

- Overhaul of one cake conveyor and one belt press for biosolids dewatering.
- Major service on two blowers that service the AS1 secondary treatment facility.
- Major maintenance service of seven primary clarifiers for increased reliability.
- Replacement of the vane bushings on three of the AS1 blowers.
- Emergency generator service.
- Cleaning and valve replacement of two digesters.

Total estimated costs: \$6,455,878

### Reclamation Plant No. 1 Capital Improvement Projects:

These projects are intended to rehabilitate or reconstruct major components of our treatment process to ensure compliance with regulatory permits, enhance water recycling and safety.

The largest project currently underway is the Headworks Rehabilitation at Plant No. 1 (Project No. P1 105). The facility is 27 years old, so a comprehensive refurbishment is required in order to extend the life of the facility. The project will rehabilitate systems including the metering and diversion structure, the bar screen building, the bin loading building, the main sewage pump station, the grit basins, the primary influent channels, the headworks odor control scrubbers, and electrical power distribution and control systems. This project will also replace the emergency pumping capacity that has been provided by the original headworks pumping system dating back to the 1950s.

While OCS D generally has adequate hydraulic treatment capacity, additional solids handling capacity is needed. The Sludge Dewatering and Odor Control Project (No. P1-101) will provide more capacity to thicken and dewater sludge, which will make better use of existing digester capacity, and reduce off-site biosolids hauling costs. The project will also help us meet our level of service goal by reducing odors. The new facility is scheduled to be in operation by mid- 2018.

A project closely tied to the solids dewatering facility is the Digester Rehabilitation (Project No. P1-100), which is rehabilitating all twelve digesters. That project will be completed by the fall of 2017.

# 2017-18 BUDGET UPDATE

## Treatment Plant No. 2:

All flows entering Treatment Plant No. 2 are treated to full secondary standards and then discharged four miles offshore through our ocean discharge outfall. Plant No. 2 has also implemented the same maintenance best practices implemented at Plant No. 1 to ensure consistency across OCSD in the areas of safety and asset reliability. In addition to more than 3,900 preventative maintenance activities completed during fiscal year 2016/17, the following major activities were also completed at Treatment Plant No.2 during the year:

- Cleaned and replaced mechanical equipment on two digesters to improve mixing and detention time to ensure best possible reclamation of the biosolids.
- Repaired the CenGen Steam Turbine due to oil reservoir delamination.
- Overhauled two conveyor belts in dewatering.
- Performed annual service on two secondary clarifiers.
- Repaired failing dewatering cake transfer pumps and revised preventative maintenance approach to prevent future failure.
- Completed safety inspection repairs under the Safety Improvements Program, Project No. J-126.
- Initiated regular simulated power loss testing of standby electrical generators for increased system reliability.

Total costs: \$5,957,187

During fiscal year 2017-18, there are more than 4,700 preventative maintenance activities that are scheduled to be completed at Treatment Plant No. 2. This includes typical time or cycle based maintenance tasks such as adjustments and mechanical alignments, cleaning and tightening of electrical equipment, calibration of sensors and meters, changing of lubricants and filters, exercising equipment, rebuilds and regulatory testing. In addition, staff will be utilizing predictive technologies such as vibration analysis to measure imbalance in rotating equipment, thermography to measure excessive heat, and oil analysis to predict failure of lubricants. In addition to planned preventative maintenance, other major planned activities at Treatment Plant No. 2 for fiscal year 2017-18 include:

- Replace all check valve and jet cell ignitors for two CenGen engines.

- Completion of the arc flash and protective relay work, including labeling of assets.
- 125k hour overhaul of one CenGen engine.
- Rehabilitation of one CenGen electrical generator.
- Emergency generator service.
- Cleaning and valve replacement of two digesters.

Total estimated costs: \$8,180,410

## Treatment Plant No. 2 Capital Improvement Projects:

Plant No. 2 will be the site of many construction projects over the coming decade. A few of these projects include:

- Completion of the Sludge Dewatering and Odor Control at Plant No. 2, Project No. P2 92, which will substantially reduce the quantity of biosolids requiring costly off-site disposal.
- Construction of a new Outfall Low Flow Pump Station under the Ocean Outfall System Rehabilitation, Project No. J-117 to accommodate the reduced effluent flow rates following the GWRS Final Expansion project.
- Separation of reclaimable and non-reclaimable flows to supply water for the GWRS Final Expansion through the Headworks Modifications at Plant No. 2 for GWRS Final Expansion, Project No. P2-122.

Replacement of the 18 existing anaerobic digesters under a series of projects identified in the Biosolids Master Plan, Project No. PS15-01. The largest of these projects, the Digester Facility at Plant No. 2, will construct six new 110-ft diameter digesters starting in 2025.

## Support Facilities Projects:

The Headquarters Complex, Site and Security, and Entrance Realignment Program, Project No. P1-128, will construct a new headquarters complex to house administrative, engineering and laboratory staff. The project is needed because many of the existing building housing staff at Plant No. 1 cannot be cost effectively rehabilitated to comply with applicable building codes. As of April 2017, the location of the building had not yet been determined.

The Safety Improvements Program, Project No. J-126 is addressing safety risks identified in the Facility Wide

# INFRASTRUCTURE ASSET MANAGEMENT

Safety Assessment, Project No. SP-145-1. The project has been assigned over 900 items across both plants and the collection system pump stations.

## Planning Studies:

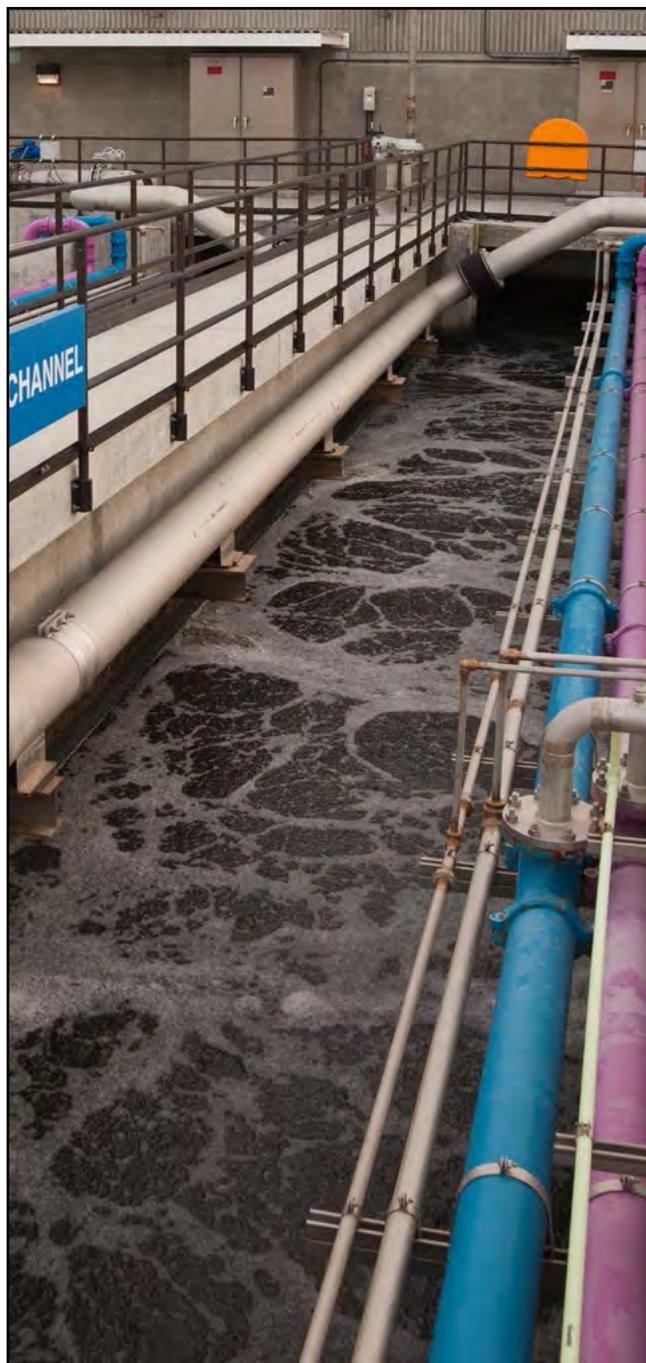
As part of the long-term CIP planning efforts, several studies/master plans are currently underway evaluating various areas of the plants and the collection system to determine their condition, and identify deficiencies or improvements needed. These studies include the 2017 Facilities Master Plan, which will determine, validate and prioritize OCSD's 20-year capital improvement program. We also have studies focusing on topics such as: Collections Capacity Evaluation Study, which will update OCSD's collections hydraulic model and identify future capacity projects; the Pressurization and Odor Control Study at Newport Beach, which will identify areas of improvement to reduce odor in our collections system in the City of Newport Beach; and the Seismic Hazard Evaluation at Plant Nos. 1 and 2. As these studies evolve, projects will be refined or created to improve our systems.

## Civil Assets Maintenance Program

The Civil Assets Maintenance Program (CAMP) covers proactive and corrective maintenance tasks for all OCSD civil assets at all its facilities located at Plants No. 1 and No.2, as well as all OCSD pump stations and the collections system to ensure that OCSD civil assets meet design life expectancy and will complement the existing maintenance programs for mechanical, electrical and instrumentation maintenance. In addition, the program ensures the assessment of nearly all structures in order to achieve OCSD's primary mission of protecting the public health and environment. This includes a valve and gate exercising program comprised of more than 264 preventive maintenance tasks for more than 1,650 valves and gates in both plants and the collections system. Besides developing in-house capabilities to better monitor and maintain these assets, the program entails utilizing consultants and contractors for program development and implementation. Repairs of the assets are planned and scheduled based on condition and criticality, and performed by staff or contracted services. CAMP will also implement an equipment rotation program to ensure that equipment wear is

predictable. For fiscal year 2017-18, 45 planned entries and inspections of civil structures are planned, which will include minor repairs of identified deficiencies.

Estimated total costs: \$3,022,930



**2017-18 BUDGET UPDATE**



# CAPITAL IMPROVEMENT PROGRAM

## CIP Budget Request Summary

This is an update to the fiscal year 2016-18 two-year budget. In preparation for the 2017-18 update, OCSD's Board of Directors reviewed the proposed changes to the CIP to gain an understanding of the impact of the CIP to the current rate structure program.

With \$6.2 billion of aging assets requiring constant investment and attention, OCSD is focusing its efforts on the continued refinement of its asset management based engineering planning process. This process has been used to propose project modifications to more efficiently package projects for execution. OCSD staff is working to carefully identify all the necessary scope of work items in the planning phase of projects to reduce future change orders and other project risks.

The Project Management Controls System staff work with the project managers and management throughout the year to manage the scope, schedule, budget, risk and other key project indicators for each project. The information is collected monthly and compiled in the OCSD Project Control System website. This information is then readily available during the budgeting process to minimize the time and effort needed to prepare and update the CIP portion of the overall budget.

Annually, as part of the CIP budget validation and prioritization process, OCSD staff review each ongoing CIP project to ensure that the scope of the project is appropriate, and that the cost estimates are accurate. All projects in the CIP program have been prioritized based on risk exposure. Projects that would present a higher risk if they were delayed are given a higher priority. The CIP budget process is continually improved and further refined as OCSD improves the CIP project management controls system.

The validated CIP includes 84 large capital projects with a total 10-year expenditure of \$2.458 billion. This represents a net \$3 million increase from the 2016-18 CIP estimate, accounting for reimbursements. For a listing of capital projects and their budgets, see "Summary of Capital Requirements" in the appendix.

During this budget validation process, projects budgets are modified to account for newly discovered issues. In some cases, more accurate construction cost estimates were developed at the preliminary design level when more project details have been defined. In other cases,

delaying the start of the projects escalated the total project costs.

Seven projects have been created totaling \$592 million. Most notably are five projects related to the replacements of the digesters at Plant No. 2 as recommended by the Biosolids Master Plan. These projects are:

- P2-125: Plant No. 2 Southwest Perimeter Screening
- P2-126: Plant No. 2 Warehouse Relocation
- P2-127: Plant No. 2 Collections Yard Relocation
- P2-128: Digester Facility at Plant No. 2
- P2-129: Digester P, Q, R, and S Replacement

Additionally, the following are projects that were not identified in the FY 2016-18 budget book, but had since been approved by OCSD's Board of Directors:

- J-128: Project Management Information System
- P1-129: Return Activated Sludge Piping Replacement at Activated Sludge at Plant No. 1
- P1-132: Uninterruptable Power Supply Improvements at Plant No. 1
- P2-122: Headworks Modifications at Plant No. 2 for GWRS Final Expansion
- P2-123: Return Activated Sludge Piping Replacement at Plant No. 2
- P2-124: Interim Food Waste Receiving Facility

As part of the budget update process, the following projects are cancelled or closed:

### Cancelled:

- 6-19: Southwest Costa Mesa Trunk Sewer
- 7-60: Browning Subtrunk Sewer Relief (Project was transferred to East Orange County Water District)

### Closed:

- 1-17: Santa Ana Trunk Sewer Rehab
- J-109: Cengen Cooling Water System Replacement Project
- J-125: Programmable Control Panel Upgrades
- P1-112: Plant Water System Rehabilitation at Plant No. 1
- P1-124: Plant No. 1 Primary Treatment Upgrades

## 2017-18 BUDGET UPDATE

- P2-101: Plant Water System Rehabilitation at Plant No. 2
- SP-125-04: Fuel Cell Demo
- SP-125-17: AquaCritox Evaluation/Design
- SP-129: Oxygen Plant Demolition at Plant No. 2
- SP-148: Plant Air System Master Plan
- SP-166: Odor Control Master Plan
- SP-173: Effluent Reuse Project

Following within the appendix are descriptions and justifications for the capital improvement projects which are new projects proposed for this fiscal year 2017-18 budget update. They give the reader a brief overview of each project, the budget for the total project, and any potential changes in the operational budget resulting from the implementation of the project. For a description of ongoing projects, see Section 8 of the fiscal years 2016-17 and 2017-18 budget.



# DEBT FINANCING PROGRAM

## Debt Financing

Due to the potential magnitude of the capital improvement program, it is necessary that OCSD utilize debt financing to meet its total obligations. Debt financing allows OCSD 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 OCSD serves as the purchaser. COPs can be issued with fixed or variable interest rates.

As of July 1, 2017, the total outstanding COP indebtedness will be \$1.0 billion.

## Build America Bonds Financings

OCSD 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, 7.2 percent, 7.3 percent, 6.8 percent and 6.9 percent for the federal fiscal years ended 2013, 2014, 2015, 2016 and 2017, 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.

## OCSD Maintains AAA Bond Rating

OCSD’s bond rating is “AAA” from Moody’s, Standard & Poors, and Fitch Ratings. An “AAA” Rating is the highest for a government agency. In order to maintain this rating, OCSD adheres to its 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

OCSD 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 year 2017-18.

## Future Financings

No new money debt issuances are being proposed over the next two fiscal years as the \$2.5 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.

# 2017-18 BUDGET UPDATE



# OPERATING EXPENSES

## Summary of Operating and Maintenance Expenses (in millions)

Category	2016-17 Approved	2017-18 Approved	2017-18 Updated Proposed
Salaries and Benefits	\$89.3	\$90.6	\$93.4
Contractual Expenses	24.8	22.6	24.1
Repairs and Maintenance	14.2	16.1	16.0
Operating Materials & Supplies	16.7	17.4	15.8
Utilities	8.9	10.2	7.9
Professional Services	4.2	4.2	5.1
Other Materials, Supplies, Services	3.4	3.8	4.5
Self-Insurance Requirements	2.5	2.6	2.4
Administrative Expenses	1.8	1.8	2.0
Training and Meetings	1.2	1.2	1.2
Research and Monitoring	0.8	0.9	0.9
Printing and Publications	0.3	0.4	0.4
Cost Allocation	(19.2)	(19.4)	(19.4)
<b>Total Operating Expenses</b>	<b>\$148.9</b>	<b>\$152.4</b>	<b>\$154.3</b>

### Salaries, Wages and Benefits – \$93.4M

Salaries and Wages – The proposed budget for Full Time Equivalent (FTE) positions for 2017-18 reflects an increase of eight FTEs (1.3 percent) from the 2016-17 approved staffing level of 627.0 FTEs to 635.0 FTEs. Provision has been made in these salary projections to comply with the terms of the most recently adopted Memorandum’s 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 decreased in fiscal year 2017-18 from 13.09 percent to 12.33 percent as a result of OCSD’s additional payment in 2016-17 to reduce the unfunded actuarial accrued liability. In addition, OCSD pays 3.5 percent of the employee required contribution.

Group Insurance – These expenses include OCSD’s share (approximately \$16,400 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 ten percent increase for medical plans starting January 2018.

### Contractual Services – \$24.1M

The treatment plants currently produce about 800 wet tons per day of biosolids which are recycled in California and Arizona. About half of the biosolids are currently allocated to create compost and the other half is used on farms to grow feed and seed crops. The 2017-18 biosolids budget is \$15.9 million, approximately 66 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.

# 2017-18 BUDGET UPDATE

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.

## Repairs and Maintenance – \$16.0M

This item, which is for parts and services for repair of plant and collection facilities and annual service contracts, is expected to increase \$2.4 million, or 17 percent above the 2016-17 projected costs of \$13.6 million.

Planned repairs include: CenGen engine overhaul (\$1.7M); engine jet cell check valves and ignitors (\$1.0M); digester cleaning (\$900K); service of aeration blowers (\$400K); clarifier maintenance (\$300K); electrical protective relay maintenance (\$225K); and emergency generator maintenance (\$150K).

## Operating Materials and Supplies – \$15.8M

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 essentially the same as the 2016-17 projected costs.

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

The 2017-18 budget for these chemicals is \$7.5 million, essentially the same as the 2016-17 projected costs.

## Utilities – \$7.9M

During fiscal year 2017-18, the overall cost for utilities, a significant component of the operating budget, is anticipated to increase by \$1.0 million, or 14.8 percent.

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 2017-18 natural gas budget is \$781,000, 27.1 percent higher than the projected 2016-17 costs. With the new emission control systems installed on all GenGen engines, natural gas usage is expected to increase during the summer months in order to reduce peak electricity demand.

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 2017-18 proposed budget is 14.7 percent higher than the 2016-17 projected costs due to a heavier reliance in 2016-17 on natural gas. During this time OCSD efficiently used its engines to produce more power by taking advantage of lower natural gas costs, and as a result had a lesser need to import electricity. In 2017-18, natural gas costs are expected to rise, resulting in a greater projected expense for imported electricity.

With the completion of the emission controls system installation, staff 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 OCSD 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. By agreement, OCSD receives up to 1,120 acre feet per year of GAP water at no charge. The proposed budget is \$2,000 for 2017-18.

## OPERATING EXPENSES

- 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 2017-18 is \$665,000, a nine percent increase from the projected 2016-17 costs.

### Professional Services – \$5.1M

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 – \$4.5M

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 2017-18 is proposed at \$2.1 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 – \$2.4M

OCSD's outside excess general liability insurance coverage is \$40 million per occurrence with self-insurance retention of \$500,000.

OCSD's property insurance coverage is \$1 billion for perils of fire and \$300 million for perils of flood, subject to a self-insurance retention of \$250,000. OCSD is partially self-insured for earthquake, but does carry \$25 million in coverage on seven key structures with a \$5 million deductible. OCSD also has a \$50 million sublimit for builder's risk under the property insurance program to ensure upcoming construction projects are adequately covered.

An appropriation of \$2.1 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.

### Administrative Expenses – \$2.0M

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 – \$1.2M

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 OCSD 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 1.8 percent of budgeted regular salaries due to savings achieved in part through the use of online courses.

### Research and Monitoring – \$0.9M

Research and monitoring expenditures consist of contract services to carry out the extensive ocean monitoring program required by the EPA under provisions of OCSD's NPDES permit; air quality monitoring costs; OCSD's contribution to the Southern California Coastal Water Research Project (SCCWRP) being conducted under a joint powers 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

## 2017-18 BUDGET UPDATE

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 OCSD'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 - (\$19.4M)

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

## Expenses by Department (in millions)

Department	2016-17 Budget	2017-18 Originally Proposed	Percent Change	2017-18 Updated Proposed	Percent Change
<i>Administration Units:</i>					
General Manager's Office	\$4.7	\$4.6	(2.1%)	\$4.9	8.0%
Human Resources	7.7	7.5	(2.6%)	9.5	26.8%
Administrative Services	17.7	18.4	4.0%	18.5	0.3%
<i>Sub-Total</i>	\$30.1	\$30.5	1.3%	\$32.9	7.9%
<i>Operating Units:</i>					
Environmental Services	16.9	17.5	3.6%	17.3	(1.5%)
Engineering	2.4	2.3	(4.2%)	3.1	35.5%
Operations & Maintenance	96.9	99.6	2.8%	98.6	(0.9%)
<i>Sub-Total</i>	\$116.2	\$119.4	2.8%	\$119.0	(0.3%)
<b>Total</b>	<b>\$146.3</b>	<b>\$149.9</b>	<b>2.5%</b>	<b>\$151.9</b>	<b>1.4%</b>

## Staffing by Department (FTEs)

Department	2016-17 Budget	2017-18 Originally Proposed	Percent Change	2017-18 Updated Proposed	Percent Change
<i>Administration Units:</i>					
General Manager's Office	15.00	15.00	0.0%	15.00	0.0%
Human Resources	27.00	27.00	0.0%	27.00	0.0%
Administrative Services	99.00	99.00	0.0%	99.00	0.0%
<i>Sub-Total</i>	141.00	141.00	0.0%	141.00	0.0%
<i>Operating Units:</i>					
Environmental Services	91.00	91.00	0.0%	91.00	0.0%
Engineering	116.00	116.00	0.0%	116.00	0.0%
Operations & Maintenance	279.00	279.00	0.0%	287.00	2.9%
<i>Sub-Total</i>	486.00	486.00	0.0%	494.00	1.6%
<b>Total FTEs*</b>	<b>627.00</b>	<b>627.00</b>	<b>0.0%</b>	<b>635.00</b>	<b>1.3%</b>

*\*FTE totals above exclude three Management Discretion positions that are authorized but used only on a temporary basis to facilitate the replacement of key positions. FTE totals also exclude three companion positions to be used for extended leaves of absence. Total filled positions will not exceed 635 FTEs at any point in time*

# 2017-18 BUDGET UPDATE

## **Administration Units**

### **General Manager's Office**

**Budget \$4.9M – Staffing 15 FTEs**

The General Manager's Office provides general oversight of all OCSD operations and incorporates functions in the areas of Public Affairs and Board Services.

### **Human Resources**

**Budget \$9.5M – Staffing 27 FTEs**

The Human Resources Department works with management and employees to ensure an effective and productive employment relationship. The department also provides risk management services to the organization to create a safe, healthy and secure environment for staff, contractors, and visitors.

### **Administrative Services**

**Budget \$18.5M – Staffing 99 FTEs**

The Administrative Services Department maintains financial oversight and administration of all OCSD funds and accounts and is responsible for contract administration and procurement, and oversees all OCSD computer, networking and customer support issues

## **Operating Units**

### **Environmental Services**

**Budget \$17.3M – Staffing 91 FTEs**

The Environmental Services Department manages all environmental monitoring, regulatory, compliance and reporting elements to ensure that OCSD meets the requirements of federal, state and local regulations for treated sewage discharge into the ocean, water recycling, air emissions, industrial waste, sewer system operations, land use controls and biosolids and stormwater management.

### **Engineering**

**Budget \$3.1M – Staffing 116 FTEs**

The Engineering Department is responsible for the planning and execution of OCSD's capital improvement program and asset management program.

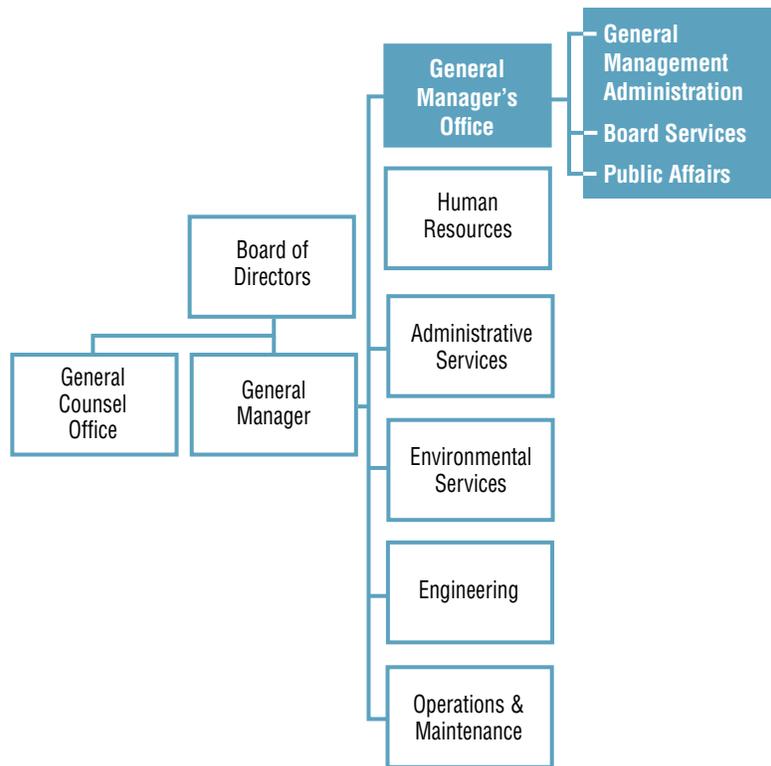
### **Operations and Maintenance**

**Budget \$98.6M – Staffing 287 FTEs**

The Operations and Maintenance Department is responsible for the operation and maintenance of OCSD's two wastewater treatment plants as well as the sanitary sewer system pipeline and pumping facilities. The department also provides fleet management services for OCSD. The budget reflects the addition of eight new positions to support an increasing maintenance workload.

*FTEs = Full-Time Equivalent Positions*

# 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 OCSD 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 OCSD; 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.

# 2017-18 BUDGET UPDATE

<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$2,286,100	\$2,336,300	\$2,416,600
Supplies	355,590	362,690	538,380
Professional / Contractual Services	898,900	642,900	719,000
Research & Monitoring	0	0	0
Repairs & Maintenance	0	0	0
Utilities	122,000	137,000	130,000
Other	1,115,270	1,151,970	1,191,670
Cost Allocation	(57,240)	(57,240)	(57,240)
<b>Total</b>	<b>\$4,720,620</b>	<b>\$4,573,620</b>	<b>\$4,938,410</b>

## Budget Overview

The fiscal year 2017-18 budget for the General Manager’s Office reflects an increase of 8.0 percent over the originally proposed budget. The increase is primarily due to increases in costs for salaries and benefits, training and meetings, and legal services. The increase in training and meetings is attributable to the addition of leadership training for board members and staff, in addition to the centralization of budgets for large annual conferences.

## Performance Objectives / Measures

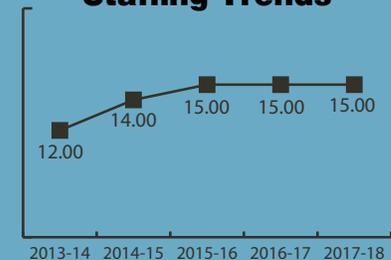
- Ensure that the Board approved Strategic Plan is implemented.
- Provide leadership development opportunities reaching at least 70 percent of staff.
- Maintain the Special District Leadership Foundation (SLDF) District Transparency Certificate of Excellence.
- Respond to 90 percent of public records requests within seven business days.
- Provide information to Board of Directors through the General Manager’s monthly report and the new Board member orientation.
- Provide services and implement programs that meet communication needs of OCSD’s external audience by reaching a minimum of 3,000 people.

### Authorized FTE Positions

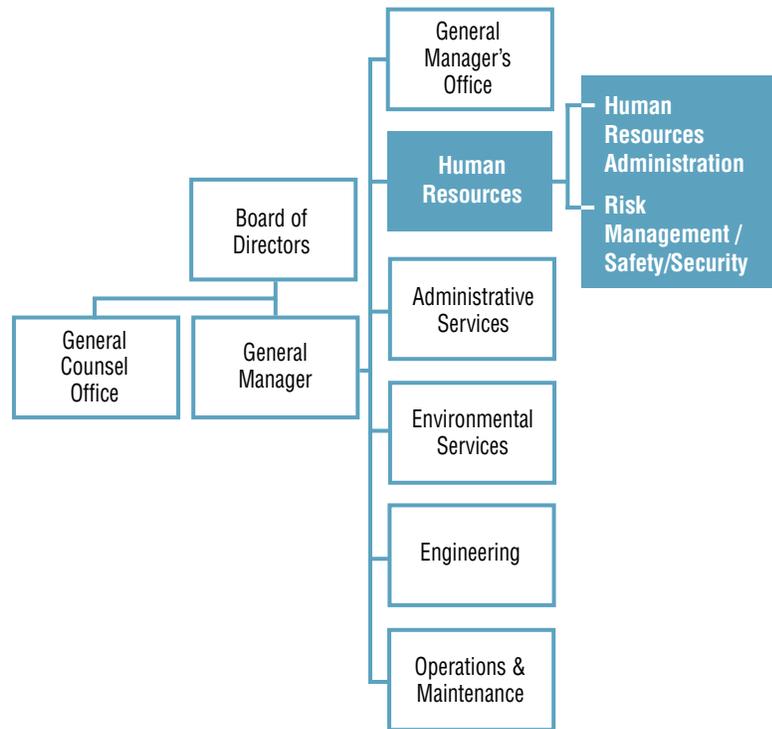
Managers .....	2.00
Supervisors /Professionals .....	8.00
Administrative /Clerical .....	5.00
<b>Total .....</b>	<b>15.00</b>

*\*FTE totals exclude four Management Discretion positions which are authorized to be used only on a temporary basis to facilitate the replacement of key positions.*

### Staffing Trends



# HUMAN RESOURCES DEPARTMENT



## Service Description

Human Resources is a full-service department responsible for all aspects of Human Resources and Risk Management administration that ensures a productive and safe workplace and maintain programs that support a positive employment relationship. The Human Resources Department is committed to a workplace grounded in fair and equitable employment decisions and practices. This department serves as the in-house advisor to the General Manager, executive staff, OCSD departments, and all staff by delivering high quality services with an emphasis on customer satisfaction as a key objective.

**Human Resources Administration** oversees all human resources functions, including Benefits Administration, Classification and Compensation, Employee and Labor Relations, Employee Development/Performance Management, and Recruitment and Selection. Benefits Administration administers and maintains employee benefits and the reasonable accommodation program. Classification and Compensation is a vital function that establishes new classifications and salaries. Employee and Labor Relations offers professional assistance in various areas of the employee and labor relations field. Employee Development/Performance Management manages and coordinates District-wide legally mandated and development training programs; and oversees the employee performance program. Through the Recruitment and Selection program, OCSD seeks to attract, hire, and retain the best qualified employees in a manner that is fair, equitable and merit-based.

**Risk Management/Safety/Security** protects the finances and human resources of OCSD. It identifies and addresses potential risk to the organization and provides solutions for mitigating or reducing the risk. The major areas of responsibility include insurances, occupational safety and health, workers' compensation, security, and emergency preparedness. The division manages OCSD's numerous insurance programs that include excess liability, property, boiler and machinery, earthquake and excess workers' compensation. Safety is a priority for OCSD, and this area includes comprehensive safety training programs, safe working practices, and quarterly facility inspections. Security and emergency preparedness programs include the oversight of OCSD's contracted security services, planning emergency drills, and ensuring OCSD has the necessary programs, supplies and training in preparation for an emergency. These programs ensure OCSD provides a secure, safe and healthy work environment for OCSD staff, contractors, and visitors.

# 2017-18 BUDGET UPDATE

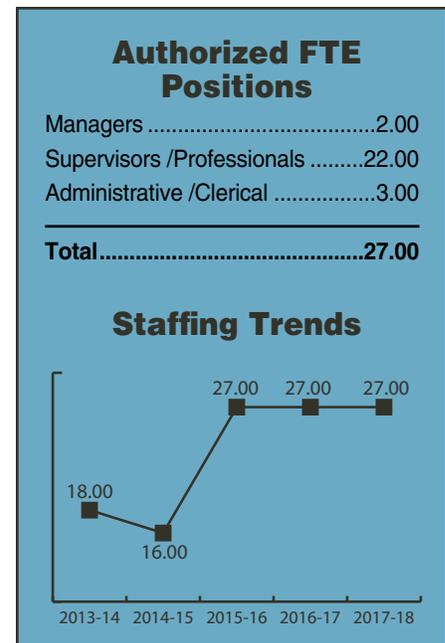
<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$4,409,600	\$4,484,300	\$4,614,900
Supplies	707,220	687,910	753,460
Professional / Contractual Services	2,292,000	1,642,400	2,737,900
Research & Monitoring	0	0	0
Repairs & Maintenance	28,050	28,050	3,050
Utilities	0	0	0
Other	1,231,070	1,576,120	2,313,730
Cost Allocation	(931,720)	(931,720)	(931,720)
<b>Total</b>	<b>\$7,736,220</b>	<b>\$7,487,060</b>	<b>\$9,491,320</b>

## Budget Overview

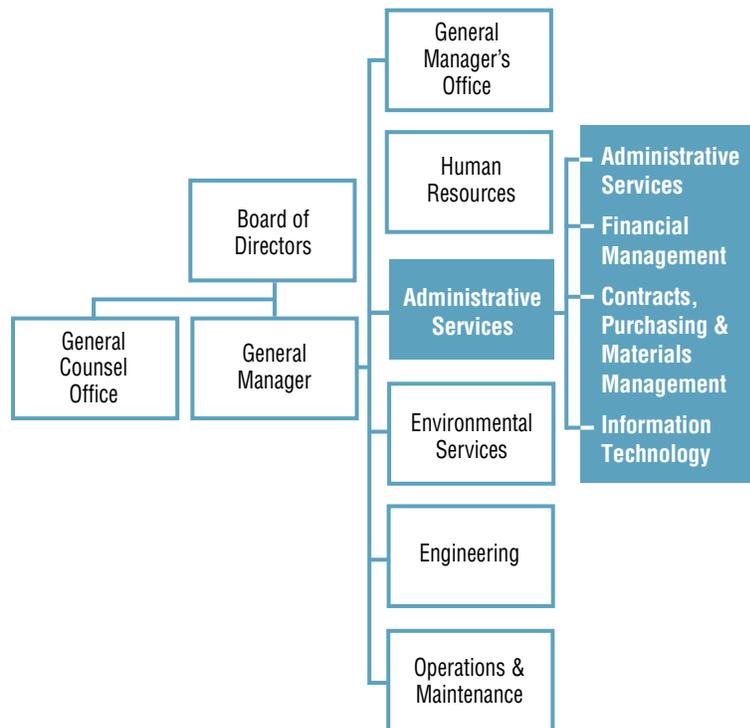
The fiscal year 2017-18 budget for the Human Resources Department reflects a 26.8 percent increase from the previously proposed budget. The increase is primarily due to increases in costs for salaries and wages, property and general liability insurance in-lieu premiums, security and other professional services, partially offset by a decrease in legal services.

## Performance Objectives / Measures

- Continue with development and implementation of effective workforce planning/development and succession planning strategies.
- Continued with a recruitment plan to reduce vacancies and time-to-fill.
- Review all training requirements and support departments in meeting the training level of service of 45 hours per employee.
- Ensure 100 percent of Safety Compliance Training is completed.
- Implement Leading Safety Indicators to reduce injuries to employees.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.



# ADMINISTRATIVE SERVICES DEPARTMENT



## Service Description

The Administrative Services Department oversees all of OCSD’s finance, contracts/purchasing, 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 four 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, and 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.

# 2017-18 BUDGET UPDATE

<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$13,363,400	\$13,563,000	\$13,884,300
Supplies	1,391,960	1,581,870	1,557,050
Professional / Contractual Services	1,289,400	1,578,900	1,340,000
Research & Monitoring	0	0	0
Repairs & Maintenance	2,042,000	2,142,000	2,140,000
Utilities	400,000	400,000	400,000
Other	109,610	121,610	123,610
Cost Allocation	(942,320)	(942,320)	(942,320)
<b>Total</b>	<b>\$17,654,050</b>	<b>\$18,445,060</b>	<b>\$18,502,640</b>

## Budget Overview

The fiscal year 2017-18 budget for the Administrative Services Department reflects a 0.3 percent increase from the previously proposed budget. Increases in costs for salaries and wages were largely offset by decreased costs for postage, county service fees, and other professional services

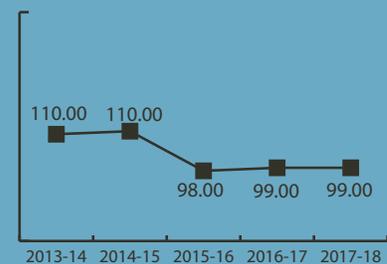
## Performance Objectives / Measures

- 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.
- 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.

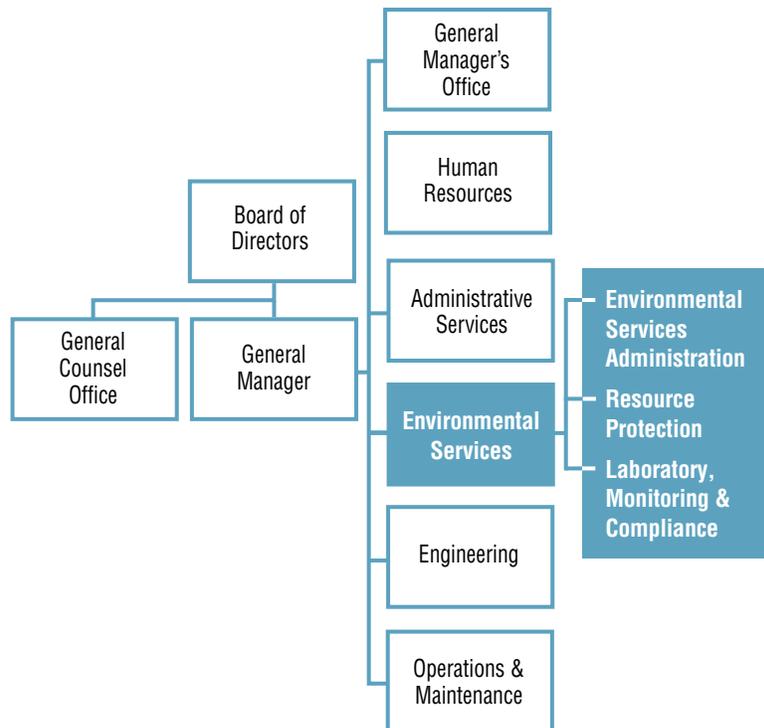
### Authorized FTE Positions

Managers .....	4.00
Supervisors /Professionals .....	57.00
Administrative /Clerical .....	36.00
Other .....	2.00
<b>Total.....</b>	<b>99.00</b>

### Staffing Trends



# ENVIRONMENTAL SERVICES DEPARTMENT



## Service Description

The Environmental Services Department manages all of OCSD’s environmental monitoring, regulatory, compliance and reporting elements to ensure that OCSD meets the requirements of federal, state and local regulations for treated sewage discharge into the ocean, water recycling, air emissions, industrial waste, sewer system operations, land use controls and biosolids and stormwater management. The Environmental Services Department consists of three divisions:

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

**Resource Protection** fulfills regulatory requirements with proper biosolids management, air quality controls, federal pretreatment regulations, non-industrial source control, and water reclamation and reuse. This is done in the most cost effective, practical, and beneficial manner that meets regulatory requirements, protects OCSD’s assets, employees, and ocean discharge.

**Laboratory, Monitoring and Compliance** performs sampling, monitoring, analysis, evaluation and recommendations for collection system, treatment processes, air samples, coastal water quality, marine sediments and the fish populations within the influence of OCSD’s wastewater discharge. The division also assures compliance with environmental permits and regulations, and the team works proactively on developing regulations of interest to OCSD.

# 2017-18 BUDGET UPDATE

<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$13,239,100	\$13,387,300	\$13,420,000
Supplies	768,150	781,530	795,180
Professional / Contractual Services	681,000	966,800	674,800
Research & Monitoring	800,000	872,400	872,400
Repairs & Maintenance	255,000	270,000	270,000
Utilities	448,000	504,000	500,000
Other	778,370	793,240	779,060
Cost Allocation	(34,950)	(34,950)	(34,950)
<b>Total</b>	<b>\$16,934,670</b>	<b>\$17,540,320</b>	<b>\$17,276,490</b>

## Budget Overview

The fiscal year 2017-18 budget for the Environmental Services Department reflects a decrease of 1.5 percent from the originally proposed budget. The decrease is primarily attributable to decreases in costs for legal services, audit and accounting services, and other professional services, partially offset by a net increase in costs for salaries and benefits.

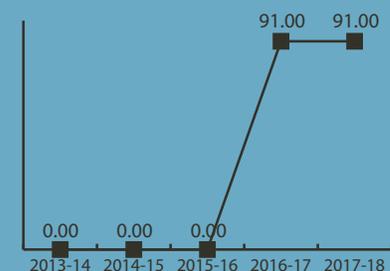
## Performance Objectives / Measures

- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Ensure that reporting divisions achieve 90 percent of individual performance objectives.
- Ensure that all environmental compliance reporting requirements are met on or before required submission dates.
- Conduct audits of all major environmental permits at least once every three years.
- Complete 100 percent of Safety Scorecard requirements each quarter.

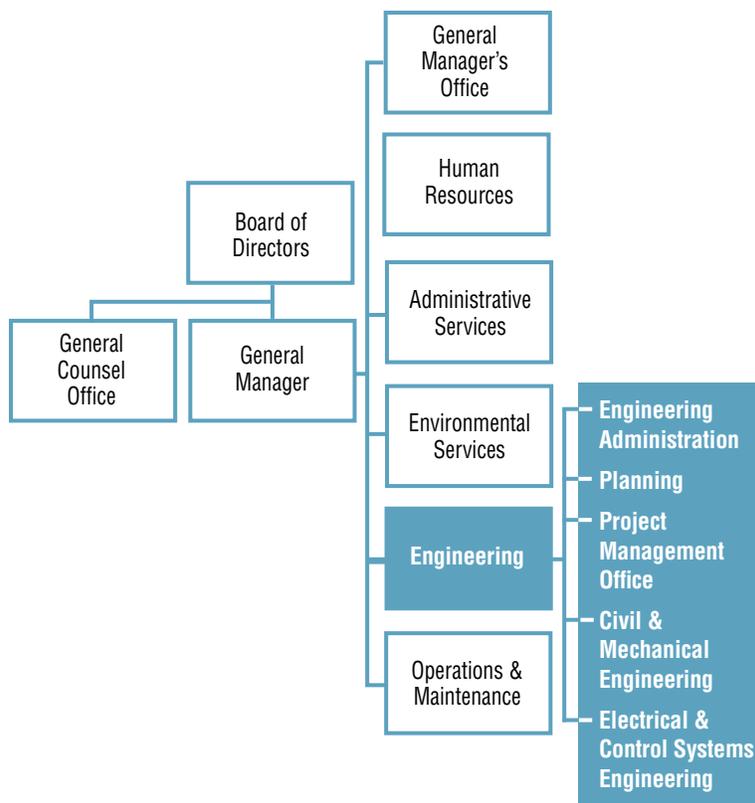
### Authorized FTE Positions

Managers .....	3.00
Supervisors / Professionals .....	63.00
Administrative /Clerical .....	9.00
Technical.....	16.00
<b>Total.....</b>	<b>91.00</b>

### Staffing Trends



# ENGINEERING DEPARTMENT



## Service Description

The Engineering Department is responsible for the planning and execution of OCSD’s Capital Improvement Program 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 Asset Management program 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.

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

**Electrical and Control Systems Engineering** provides electrical and control system designs, ensures that projects are properly and safely constructed, and provides process control SCADA system hardware, software and data network support for collections and treatment plant processes that monitor, record, control, and operate our facilities.

# 2017-18 BUDGET UPDATE

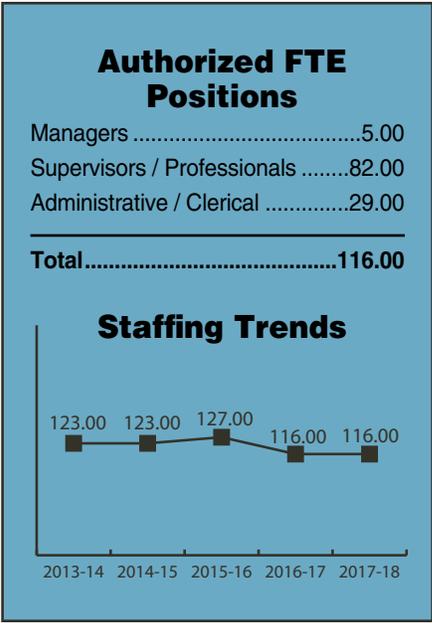
<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$18,341,000	\$18,594,200	\$19,334,430
Supplies	516,090	471,430	457,360
Professional / Contractual Services	530,000	430,000	501,000
Research & Monitoring	0	0	0
Repairs & Maintenance	2,000	2,000	5,700
Utilities	0	0	10,000
Other	4,360	4,410	4,410
Cost Allocation	(17,010,000)	(17,220,420)	(17,220,420)
<b>Total</b>	<b>\$2,383,450</b>	<b>\$2,281,620</b>	<b>\$3,092,480</b>

## Budget Overview

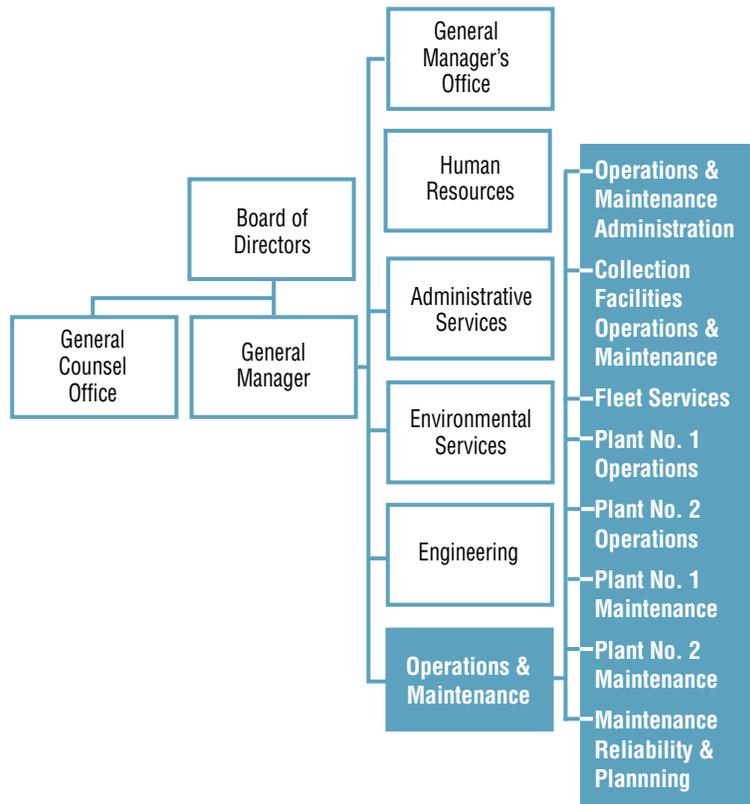
The fiscal year 2017-18 budget for the Engineering Department reflects a 35.5 percent increase from the previously proposed budget primarily due to increases in costs for salaries and wages.

## Performance Objectives / Measures

- Expend minimum 90 percent of project annual Capital Improvement Program cash flows for fiscal year 2017-18.
- Manage operating expenditures to within 90 to 100 percent of the approved budget.
- Ensure that reporting divisions achieve 90 percent of individual performance objectives.
- Prepare and maintain a 20-year District-wide capital plan coordinating research, condition assessment, regulatory requirements, changing levels of science, and projected capacity requirements.



# OPERATIONS AND 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, providing maintenance support to all treatment facilities, operating and maintaining the sanitary sewer system pipeline and pumping facilities, and for providing fleet management services. The Department consists of eight divisions:

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

**Collection Facilities Operations and Maintenance** operates and maintains the regional facilities which include gravity sewers and pumping facilities.

**Fleet Services** provides fleet and heavy equipment services and motor pool management to all OCSD staff.

**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, power generation, 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 Groundwater Replenishment System.

**Plant No. 1 and Plant No. 2 Maintenance** are responsible for civil, electrical, facilities, instrumentation and mechanical maintenance of the two treatment plants and pump stations.

**Maintenance Reliability and Planning** is responsible for the planning function for all maintenance activities as well as reliability engineering for both Plants and the Collections System. The Division also oversees administration of the Civil Assets Maintenance Program (CAMP).

# 2017-18 BUDGET UPDATE

<b>Operating Expense</b>			
Category	2016-17 Budget	2017-18 Originally Proposed	2017-18 Updated Proposed
Personnel	\$37,650,600	\$38,252,300	\$39,706,800
Supplies	16,337,150	16,900,820	15,311,040
Professional / Contractual Services	23,767,950	21,549,530	23,229,380
Research & Monitoring	0	0	0
Repairs & Maintenance	11,938,880	13,718,110	13,600,860
Utilities	7,272,240	9,192,670	6,858,590
Other	166,490	121,190	119,280
Cost Allocation	(205,800)	(207,910)	(207,910)
<b>Total</b>	<b>\$96,927,510</b>	<b>\$99,526,710</b>	<b>\$98,618,040</b>

## Budget Overview

The fiscal year 2017-18 budget for the Operations and Maintenance Department reflects a 0.9 percent decrease from the previously proposed budget. The decrease is primarily due to decreases in costs for electricity, odor control chemicals, and other contractual services, partially offset by increases in costs for salaries and benefits, solids removal, and engineering services. Department staffing is proposed to increase by eight full time equivalent (FTE) positions to support the increasing maintenance workload.

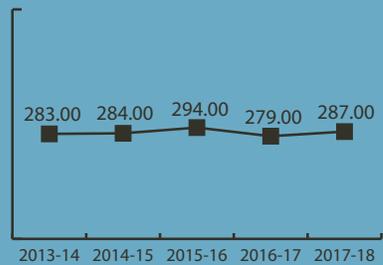
## Performance Objectives / Measures

- 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.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.

### Authorized FTE Positions

Managers .....	5.00
Supervisors/Professionals.....	65.00
Administrative /Clerical.....	5.00
Technical.....	1.00
Operations & Maintenance .....	211.00
<b>Total.....</b>	<b>287.00</b>

### Staffing Trends





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# Appendix

# Cash Flow Projection

## Orange County Sanitation District Consolidated Cash Flow Projections

Ref	Description	Preliminary 17-18	Preliminary 18-19	Preliminary 19-20	Preliminary 20-21	Preliminary 21-22	Preliminary 22-23
<b>Revenues:</b>							
1	General User Fees	291,158,000	297,643,000	305,095,000	312,588,000	320,124,000	327,701,000
2	Permitted User Fees	12,925,000	13,159,000	13,433,000	13,706,000	13,979,000	14,253,000
3	IRWD Assessments	15,807,800	15,095,800	13,305,290	15,063,790	17,927,400	19,145,500
4	SAWPA Assessments	3,263,000	3,394,000	3,530,000	3,671,000	3,818,000	3,971,000
5	Property Taxes	93,666,000	98,349,000	103,266,000	108,429,000	113,850,000	119,543,000
6	New COP Issues	-	-	-	-	-	-
7	Interest Revenues	8,398,000	12,231,000	16,369,000	17,038,000	16,749,000	15,609,000
8	Capital Facilities Capacity Charges	9,900,000	9,089,000	9,534,000	10,004,000	10,494,000	11,008,000
9	Other Revenues	8,088,900	10,489,000	15,739,000	16,132,000	24,763,000	24,532,000
10	<b>Revenues</b>	<b>443,206,700</b>	<b>459,449,800</b>	<b>480,271,290</b>	<b>496,631,790</b>	<b>521,704,400</b>	<b>535,762,500</b>
<b>Requirements:</b>							
11	Oper & Mtce Exp (4.0% yr)	151,919,380	157,996,000	164,316,000	170,889,000	177,725,000	184,834,000
12	Capital Improvement Program (CIP)	166,976,000	187,785,000	213,753,000	253,475,000	319,777,000	336,477,000
13	Less: CIP Savings & Deferrals	(18,915,000)	(18,800,000)	(21,400,000)	(20,300,000)	(19,200,000)	(10,100,000)
14	Repl, Rehab & Refurb	-	-	311,000	956,000	5,196,000	5,460,000
15	COP Service	82,033,000	80,464,000	79,956,000	76,019,000	72,472,000	72,466,000
16	Other Requirements	3,615,000	2,375,000	2,375,000	2,375,000	2,375,000	2,375,000
17	<b>Requirements</b>	<b>385,628,380</b>	<b>409,820,000</b>	<b>439,311,000</b>	<b>483,414,000</b>	<b>558,345,000</b>	<b>591,512,000</b>
18	<b>Revenues-Requirements</b>	<b>57,578,320</b>	<b>49,629,800</b>	<b>40,960,290</b>	<b>13,217,790</b>	<b>(36,640,600)</b>	<b>(55,749,500)</b>
Accumulated Funds:							
19	Beginning of Year	535,274,550	592,852,870	642,482,670	683,442,960	696,660,750	660,020,150
20	End of Year	592,852,870	642,482,670	683,442,960	696,660,750	660,020,150	604,270,650
21	Consolidated Reserve Policy	519,558,000	519,040,000	519,642,000	517,217,000	515,564,000	517,495,000
22	<b>Over (Under) Reserve Policy*</b>	<b>73,294,870</b>	<b>123,442,670</b>	<b>163,800,960</b>	<b>179,443,750</b>	<b>144,456,150</b>	<b>86,775,650</b>
<b>Sewer Service User Fees:</b>							
23	Avg SFR Annual User Fee	\$331.00	\$337.00	\$344.00	\$351.00	\$358.00	\$365.00
24	Percentage Change	1.22%	1.81%	2.08%	2.03%	1.99%	1.96%
25	Equivalent Dw elling Units	924,950	927,725	930,508	933,300	936,100	938,908
26	SFR Connection Fee	\$3,855	\$4,032	\$4,217	\$4,411	\$4,614	\$4,826
27	<u>Outstanding COPs</u>	\$1,004,684,000	\$965,540,000	\$925,258,000	\$887,211,000	\$851,126,000	\$813,576,000
<u>Reserve Policy</u>							
28	50% Next Year Operating	75,960,000	78,998,000	82,158,000	85,445,000	88,863,000	92,417,000
29	10% Next Year Operating	15,192,000	15,800,000	16,432,000	17,089,000	17,773,000	18,483,000
30	100% Next Year AUG COP Svc.	82,033,000	80,464,000	79,956,000	76,019,000	72,472,000	72,466,000
31	50% average ten-year CIP Bal.	122,932,000	122,932,000	122,932,000	122,932,000	122,932,000	122,932,000
32	DSR @ 10% Outstanding COPs	100,468,000	96,554,000	92,526,000	88,721,000	85,113,000	81,358,000
33	SFI @ \$57mm	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000
34	Repl & Refurb @ 2%/yr	65,973,000	67,292,000	68,638,000	70,011,000	71,411,000	72,839,000
35	<b>Total</b>	<b>519,558,000</b>	<b>519,040,000</b>	<b>519,642,000</b>	<b>517,217,000</b>	<b>515,564,000</b>	<b>517,495,000</b>
<u>COP Ratios</u>							
36	Sr Lien Coverage, Min 1.25	3.43	3.63	3.83	4.15	4.60	4.69

# 2017-18 Budget Update

## Orange County Sanitation District Consolidated Cash Flow Projections

Ref	Description	Preliminary 23-24	Preliminary 24-25	Preliminary 25-26	Preliminary 26-27	10-Year Total
<b>Revenues:</b>						
1	General User Fees	336,263,000	343,929,000	352,585,000	361,289,000	3,248,375,000
2	Permitted User Fees	14,565,000	14,839,000	15,152,000	15,464,000	141,475,000
3	IRWD Assessments	16,922,510	17,672,880	18,463,090	17,402,580	166,806,640
4	SAWPA Assessments	4,130,000	4,295,000	4,467,000	4,645,000	39,184,000
5	Property Taxes	125,520,000	131,796,000	138,386,000	145,305,000	1,178,110,000
6	New COP Issues	-	-	-	-	-
7	Interest Revenues	15,014,000	15,007,000	14,738,000	15,010,000	146,163,000
8	Capital Facilities Capacity Charges	11,551,000	8,651,000	9,078,000	9,523,000	98,832,000
9	Other Revenues	13,433,000	5,687,000	4,844,000	4,905,000	128,612,900
<b>10</b>	<b>Revenues</b>	<b>537,398,510</b>	<b>541,876,880</b>	<b>557,713,090</b>	<b>573,543,580</b>	<b>5,147,558,540</b>
<b>Requirements:</b>						
11	Oper & Mtce Exp (4.0% yr)	192,227,000	199,916,000	207,913,000	216,230,000	1,823,965,380
12	Capital Improvement Program (CIP)	258,761,000	241,072,000	257,586,000	222,569,000	2,458,231,000
13	Less: CIP Savings & Deferrals	(7,800,000)	(4,800,000)	(5,200,000)	(5,500,000)	(132,015,000)
14	Repl, Rehab & Refurb	11,794,000	39,010,000	36,200,000	33,491,000	132,418,000
15	COP Service	72,470,000	72,460,000	72,467,000	68,667,000	749,474,000
16	Other Requirements	2,375,000	2,375,000	2,375,000	2,375,000	24,990,000
<b>17</b>	<b>Requirements</b>	<b>529,827,000</b>	<b>550,033,000</b>	<b>571,341,000</b>	<b>537,832,000</b>	<b>5,057,063,380</b>
<b>18</b>	<b>Revenues-Requirements</b>	<b>7,571,510</b>	<b>(8,156,120)</b>	<b>(13,627,910)</b>	<b>35,711,580</b>	<b>90,495,160</b>
Accumulated Funds:						
19	Beginning of Year	604,270,650	611,842,160	603,686,040	590,058,130	535,274,550
20	End of Year	611,842,160	603,686,040	590,058,130	625,769,710	625,769,710
21	Consolidated Reserve Policy	519,498,000	521,533,000	523,662,000	522,411,001	522,411,001
<b>22</b>	<b>Over (Under) Reserve Policy*</b>	<b>92,344,160</b>	<b>82,153,040</b>	<b>66,396,130</b>	<b>103,358,709</b>	<b>103,358,709</b>
<b>Sewer Service User Fees:</b>						
23	Avg SFR Annual User Fee	\$373.00	\$380.00	\$388.00	\$396.00	
24	Percentage Change	2.19%	1.88%	2.11%	2.06%	
25	Equivalent Dw elling Units	941,725	944,550	947,384	950,226	
26	SFR Connection Fee	\$5,048	\$5,280	\$5,523	\$5,777	
27	<u>Outstanding COPs</u>	\$774,625,000	\$734,093,000	\$692,165,000	\$652,304,000	
<u>Reserve Policy</u>						
28	50% Next Year Operating	96,114,000	99,958,000	103,957,000	108,115,000	
29	10% Next Year Operating	19,223,000	19,992,000	20,791,000	21,623,000	
30	100% Next Year AUG COP Svc.	72,470,000	72,460,000	72,467,000	68,667,000	
31	50% average ten-year CIP Bal.	122,932,000	122,932,000	122,932,000	122,932,000	
32	DSR @ 10% Outstanding COPs	77,463,000	73,409,000	69,217,000	65,230,000	
33	SFI @ \$57mm	57,000,000	57,000,000	57,000,000	57,000,001	
34	Repl & Refurb @ 2%/yr	74,296,000	75,782,000	77,298,000	78,844,000	
35	Total	519,498,000	521,533,000	523,662,000	522,411,001	
<u>COP Ratios</u>						
36	Sr Lien Coverage, Min 1.25	4.60	4.60	4.70	5.06	

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## Capital Improvement Program Summary

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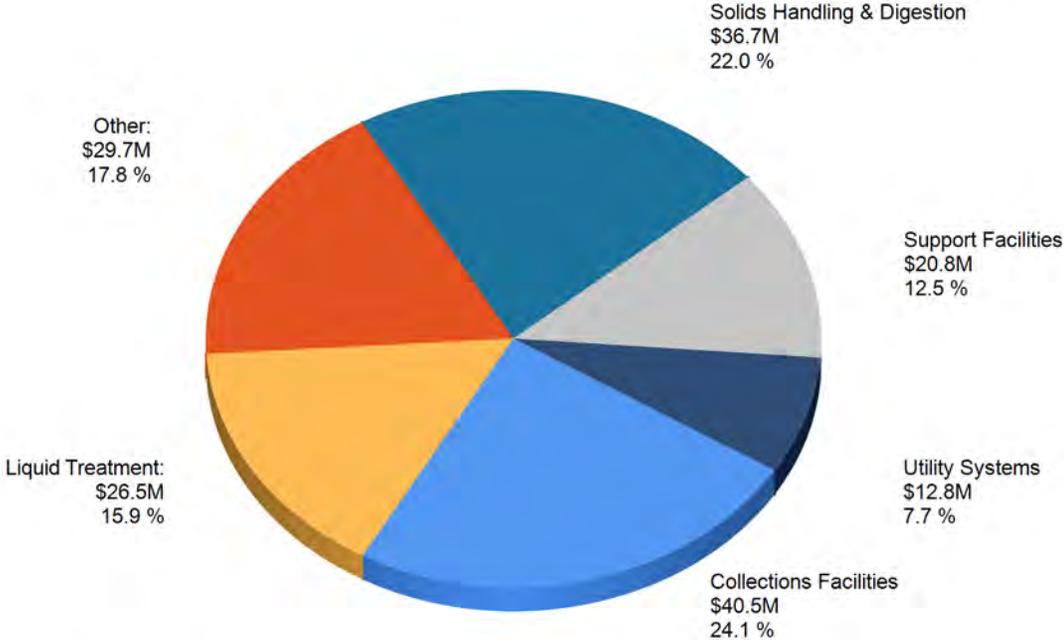
		<u>% Change</u>
Revised FY 2017-18 Budget	\$ 153,026,935	
Projects Completed or Cancelled	(666,960)	(0.44%)
New Projects	5,163,803	3.37%
Additions to Existing Projects	32,667,460	21.35%
Deductions from Existing Projects	(26,090,581)	(17.05%)
Changes to Capital Equipment	2,875,000	1.88%
Revised FY 2017-18 Budget	<u>\$ 166,975,657</u>	<u>9.11%</u>
Revised Total Budget	\$ 3,253,228,000	
Projects Completed or Cancelled	(67,940,000)	(2.09%)
New Projects	682,594,000	20.98%
Additions to Existing Projects	378,210,000	11.63%
Deductions from Existing Projects	(127,549,000)	(3.92%)
Revised Total Budget	<u>\$ 4,118,543,000</u>	<u>26.6%</u>

# 2017-18 Budget Update

## Project Summary FY 2017-18

Item	Replacement/ Rehabilitation	Improved Treatment	Additional Capacity	Support	Total Budget
Collections Facilities	\$ 24,079,228	\$ 2,877,401	\$ 12,923,176	\$ 655,194	\$ 40,534,999
Solids Handling & Digestion	11,662,948	14,236,892	10,543,737	220,192	36,663,769
Support Facilities	10,266,590	1,705,320	-	8,814,930	20,786,840
Utility Systems	12,468,211	251,540	-	45,512	12,765,263
Liquid Treatment:					
Headworks	6,527,669	737,045	1,789,057	-	9,053,771
Ocean Outfall Systems	8,012,510	-	-	-	8,012,510
Primary Treatment	6,334,472	703,830	-	-	7,038,302
Secondary Treatment	2,389,129	-	-	-	2,389,129
Liquid Treatment Total	<u>23,263,780</u>	<u>1,440,875</u>	<u>1,789,057</u>	<u>-</u>	<u>26,493,712</u>
Other:					
Process Related Special Projects	9,986,488	-	-	-	9,986,488
Information Management Systems	2,746,182	-	517,590	3,994,659	7,258,431
Strategic & Master Planning	2,801,830	1,898,279	700,458	1,751,144	7,151,711
Equipment	969,825	969,825	969,825	969,825	3,879,300
Research	-	652,718	652,718	-	1,305,436
Water Management Projects	-	86,651	-	-	86,651
Others	-	-	-	63,057	63,057
Other Total	<u>16,504,325</u>	<u>3,607,473</u>	<u>2,840,591</u>	<u>6,778,685</u>	<u>29,731,074</u>
<b>Grand Total</b>	<b><u>\$ 98,245,082</u></b>	<b><u>\$ 24,119,501</u></b>	<b><u>\$ 28,096,561</u></b>	<b><u>\$ 16,514,513</u></b>	<b><u>\$ 166,975,657</u></b>

# Capital Improvement Expenditure Graphs



**Total FY 2017-18 Capital Improvement Outlays by Process - \$167.0 Million**



**Total FY 2017-18 Capital Improvement Outlays by Type - \$167.0 Million**

# 2017-18 Budget Update

## Summary of Capital Requirement - Collection System Improvement Projects

	Project Number	Original Total Project Budget	Revised Total Project Budget	Original 2017-18 Cashflow Budget	Revised 2017-18 Cashflow Budget	Project Status
<b>Collections Facilities</b>						
Raitt & Bristol Street Sewer Extension	1-101	\$ 13,622,000	\$ 13,622,000	\$ 184,407	\$ 68,623	Continuing
Santa Ana Trunk Sewer Rehab	1-17	6,974,000				Revised
Edinger Bolsa Chica Trunk Impr.	11-25	5,159,000	5,159,000			Future
Edinger Pumping Station Upgrade & Rehab	11-33	8,880,000	8,880,000			Future
Slater Avenue Pump Station Rehab	11-34	9,729,000	9,729,000			Future
SARI Re-Alignment	2-41	11,404,000	11,404,000		201,407	Continuing
SARI Rock Stabilizers Removal	2-41-8	3,743,000	6,860,000	881,137	515,545	Revised
Taft Branch Impr.	2-49	1,928,000	1,928,000			Future
Newhope - Placentia Trunk Grade Separation Repl.	2-65	5,739,000	4,300,000	719,339	132,306	Revised
Newhope-Placentia Trunk Repl.	2-72	99,475,000	112,000,000	14,157,441	9,464,252	Revised
Yorba Linda Pump Station Abandonment	2-73	7,053,000	7,053,000	120,583		Future
Lakeview Grade Separation Project	2-75	330,000	330,000	49,034	114,950	Continuing
Tustin Rose OCTA Grade Separation	2-76	586,000	586,000		64,700	Continuing
Orangethorpe OCTA Grade Separation	2-77		1,505,000		12,901	Revised
Beach Trunk/Knott Interceptor Sewer Relief	3-60	118,678,000	118,678,000			Future
Seal Beach Pump Station Rehab	3-62	60,840,000	54,000,000	2,463,453	4,375,967	Revised
Rehab of Western Regional Sewers	3-64	217,069,000	217,069,000	6,380,601	9,528,506	Continuing
Interstate 405 Widening Project Impacts on OCSD Sewers	3-66		528,000		36,860	New
Newport Force Main Rehab	5-60	64,000,000	59,668,000			Revised
Crystal Cove Pumping Station Upgrade & Rehab	5-66	10,882,000	10,882,000			Future
Bay Bridge Pump Station & Force Main Repl.	5-67	54,000,000	64,000,000	4,291,175	709,700	Revised
Newport Beach Pump Station Odor Control Impr.	5-68	4,066,000	4,066,000	67,533	67,514	Continuing
District 6 Trunk Sewer Relief	6-17	7,965,000	7,965,000	1,975,316	4,616,301	Continuing
Southwest Costa Mesa Trunk Sewer	6-19	29,650,000		666,960		Revised
Gisler - Red Hill Trunk Impr. - Reach B	7-37	25,213,000	25,213,000	6,902,874	6,698,851	Continuing
Browning Subtrunk Sewer Relief	7-60	16,952,000				Revised
MacArthur Pump Station Rehab	7-63	8,762,000	8,762,000	145,682	41,271	Future
Main Street Pump Station Rehab	7-64	39,219,000	39,219,000			Future
Gisler - Red Hill Interceptor Rehab	7-65	5,486,000	15,300,000	138,529		Future
Facilities Engineering Program - Collections	M-FE-COLLECT	12,192,000	14,192,000	3,310,756	3,795,001	Revised
Bay Bridge Pumpstation & Force Mains Rehab Study	SP-178	725,000	725,000	12,011	90,344	Continuing
<b>Collections Facilities Total Budget</b>		<b>850,321,000</b>	<b>823,623,000</b>	<b>42,466,831</b>	<b>40,534,999</b>	

# Summary of Capital Requirements

## Summary of Capital Requirement - Treatment System Improvement Projects

	Project Number	Original Total Project Budget	Revised Total Project Budget	Original 2017-18 Cashflow Budget	Revised 2017-18 Cashflow Budget	Project Status
<b>Utility Systems</b>						
Cengen Cooling Water System Repl. Project	J-109	11,477,000				Revised
Cengen Emissions Control Project	J-111	23,820,000	23,820,000		251,540	Continuing
UPS System Upgrades	J-121	8,087,000	8,087,000			Future
Digester Gas Facilities Rehab	J-124	87,897,000	96,500,000	361,387	733,218	Revised
Natural Gas Pipelines Repl. at P1 & P2	J-127	1,310,000	1,310,000	53,872	88,946	Continuing
Electrical Power Distribution System Impr.	J-98	34,608,000	34,608,000			Future
Plant Water System Rehab at P1	P1-112	6,157,000				Revised
Central Generation Rehab at P1	P1-127	73,151,000	87,000,000			Future
Uninterruptable Power Supply Impr. at P1	P1-132		4,800,000		45,512	New
Plant Water System Rehab at P2	P2-101	3,704,000				Revised
Consolidated Demolition & Utility Impr. at P2	P2-110	38,460,000	30,300,000	8,688,005	11,646,047	Revised
Central Generation Rehab at P2	P2-119	95,906,000	114,000,000			Future
Plant Air System Master Plan	SP-148	225,000				Revised
<b>Utility Systems Total</b>		<b>384,802,000</b>	<b>400,425,000</b>	<b>9,103,264</b>	<b>12,765,263</b>	
<b>Ocean Outfall Systems</b>						
Final Effluent Sampler & Building Area Upgrades	J-110	16,411,000	16,411,000	675,385	541,037	Continuing
Ocean Outfall System Rehab	J-117	87,683,000	147,000,000	5,448,891	7,471,473	Revised
<b>Ocean Outfall Systems Total</b>		<b>104,094,000</b>	<b>163,411,000</b>	<b>6,124,276</b>	<b>8,012,510</b>	
<b>Information Management Systems</b>						
Process Control Systems Upgrades	J-120	102,399,000	102,399,000			Future
Programmable Control Panel Upgrades	J-125	2,283,000				Revised
Project Mgmt. Information System	J-128		4,000,000		1,951,448	New
Information Technology Capital Program	M-MC-IT	10,000,000	10,000,000	1,297,930	1,176,832	Continuing
P2 Power Monitoring & Control Systems	P2-107	34,123,000	24,100,000	2,580,842	1,764,544	Revised
EAM Software & Process Implementation	SP-100	7,500,000	7,500,000	627,109	658,725	Continuing
PDS2D Software Repl.	SP-103	525,000	530,000	67,749	83,814	Revised
Geographic Information System	SP-15	4,568,000	4,568,000	614,082	659,791	Continuing
Process Control Systems Upgrades Study	SP-196	3,554,000	3,554,000	2,205,911	963,277	Continuing
<b>Information Management Systems Total</b>		<b>164,952,000</b>	<b>156,651,000</b>	<b>7,393,623</b>	<b>7,258,431</b>	
<b>Process Related Special Projects</b>						
Safety Impr. Program	J-126	9,702,000	19,000,000	710,073	9,986,488	Revised
Odor Control Master Plan	SP-166	1,950,000		27,982		Revised
<b>Process Related Special Projects Total</b>		<b>11,652,000</b>	<b>19,000,000</b>	<b>738,055</b>	<b>9,986,488</b>	

# 2017-18 Budget Update

## Summary of Capital Requirement - Treatment System Improvement Projects

	Project Number	Original Total Project Budget	Revised Total Project Budget	Original 2017-18 Cashflow Budget	Revised 2017-18 Cashflow Budget	Project Status
<b>Water Management Projects</b>						
GWRS Final Expansion Coordination	J-36-2		1,132,000		86,651	New
Effluent Reuse Study	SP-173	3,250,000				Revised
<b>Water Management Projects Total</b>		<b>3,250,000</b>	<b>1,132,000</b>		<b>86,651</b>	
<b>Support Facilities</b>						
Facilities Engineering Program - Plant	M-FE-PLANT	43,325,000	43,325,000	14,749,859	11,368,803	Continuing
Operations & Maintenance Capital Program	M-SM-CAP	15,622,000	15,622,000	3,172,087	2,308,427	Continuing
Title 24 Access Compliance & Building Rehab Project	P1-115	17,509,000	17,609,000	1,564,022	1,709,156	Revised
Headquarters Complex, Site & Security, & Entrance Realignment Program	P1-128	179,067,000	179,067,000	10,955,474	5,389,573	Continuing
P2 Warehouse Relocation	P2-126		9,800,000			New
P2 Collections Yard Relocation	P2-127		1,500,000			New
TPAD Digester Facility at P2	P2-128		419,000,000			New
Site & Security Impr. at P2	P2-96	252,000	252,000	7,295	10,881	Continuing
<b>Support Facilities Total</b>		<b>255,775,000</b>	<b>686,175,000</b>	<b>30,448,737</b>	<b>20,786,840</b>	
<b>Research</b>						
Research Program	M-RESEARCH	8,500,000	8,500,000	1,695,092	1,305,436	Continuing
Fuel Cell Demo	SP-125-04	135,000		9,183		Revised
SCCWRP Nutrient Cycling Sampling	SP-125-15	95,000	95,000	15,526		Continuing
AquaCritox Evaluation/Design	SP-125-17	588,000				Revised
<b>Research Total</b>		<b>9,318,000</b>	<b>8,595,000</b>	<b>1,719,801</b>	<b>1,305,436</b>	
<b>Strategic &amp; Master Planning</b>						
Planning Studies Program	M-STUDIES	23,652,000	28,652,000	8,483,815	7,004,576	Revised
Climate Change Impact Study	SP-152	590,000	590,000		147,135	Continuing
<b>Strategic &amp; Master Planning Total</b>		<b>24,242,000</b>	<b>29,242,000</b>	<b>8,483,815</b>	<b>7,151,711</b>	
<b>Solids Handling &amp; Digestion</b>						
Digester Rehab at P1	P1-100	66,650,000	67,150,000	2,567,779	2,306,580	Revised
Sludge Dewatering & Odor Control at P1	P1-101	188,328,000	188,328,000	9,725,351	13,707,858	Continuing
Interim Food Waste Receiving Facility	P2-124		5,400,000		440,383	New
Digester P, Q, R, & S Repl.	P2-129		158,000,000			New
Solids Thickening & Processing Upgrades	P2-89	51,150,000	48,150,000	305,546	267	Revised
P2 Digester Facilities Rehab	P2-91-1	49,220,000	49,220,000	151,386	159,528	Continuing
Sludge Dewatering & Odor Control at P2	P2-92	90,477,000	90,477,000	16,789,351	20,049,153	Continuing
<b>Solids Handling &amp; Digestion Total</b>		<b>445,825,000</b>	<b>606,725,000</b>	<b>29,539,413</b>	<b>36,663,769</b>	
<b>Headworks</b>						
Headworks Rehab & Expansion at P1	P1-105	274,841,000	436,000,000	7,569,666	7,229,469	Revised

# Summary of Capital Requirements

## Summary of Capital Requirement - Treatment System Improvement Projects

	Project Number	Original Total Project Budget	Revised Total Project Budget	Original 2017-18 Cashflow Budget	Revised 2017-18 Cashflow Budget	Project Status
<b>Headworks</b>						
Trunk Line Odor Control Impr.	P1-123	9,299,000	9,299,000	11,539	35,245	Continuing
Headworks Modifications at P2 for GWRS Final Expansion	P2-122		54,000,000		1,789,057	New
<b>Headworks Total</b>		<b>284,140,000</b>	<b>499,299,000</b>	<b>7,581,205</b>	<b>9,053,771</b>	
<b>Primary Treatment</b>						
Primary Scrubber Impr. at P1	P1-114	94,228,000	74,800,000	389,521		Future
P1 Primary Treatment Upgrades	P1-124	9,146,000				Revised
Primary Clarifiers Repl.s & Impr. at P1	P1-126	158,332,000	112,000,000	476,555		Revised
Primary Treatment Rehab at P2	P2-98	428,264,000	491,000,000	5,558,634	7,038,302	Revised
<b>Primary Treatment Total</b>		<b>689,970,000</b>	<b>677,800,000</b>	<b>6,424,710</b>	<b>7,038,302</b>	
<b>Secondary Treatment</b>						
Return Activated Sludge Piping Repl. at Activated Sludge P1	P1-129		3,979,000		263,483	New
Activated Sludge Aeration Basin Deck Repair at P2	P2-118	2,331,000	2,800,000	1,871,166	1,638,294	Revised
Return Activated Sludge Piping Repl. at P2	P2-123		15,000,000		487,352	New
Oxygen Plant Demolition at P2	SP-129	3,444,000		45,127		Revised
<b>Secondary Treatment Total</b>		<b>5,775,000</b>	<b>21,779,000</b>	<b>1,916,293</b>	<b>2,389,129</b>	
<b>Others</b>						
Interstate 405 Widening Project Impacts on OCSD Front Entrance	P1-130		2,655,000		16,451	New
Banning Gate Relocation & Grading at P2	P2-120	2,812,000	2,931,000	55,056		Future
P2 Southwest Perimeter Screening	P2-125		2,800,000		46,606	New
Capital Improvement Program Mgmt. Services	SP-195	300,000	300,000	27,556		Continuing
<b>Others Total</b>		<b>3,112,000</b>	<b>8,686,000</b>	<b>82,612</b>	<b>63,057</b>	
<b>Total Treatment and Disposal Projects</b>		<b>2,386,907,000</b>	<b>3,278,920,000</b>	<b>109,555,804</b>	<b>122,561,358</b>	
<b>Total Collections Facilities</b>		<b>850,321,000</b>	<b>823,623,000</b>	<b>42,466,831</b>	<b>40,534,999</b>	
<b>Capital Equipment Purchases</b>		<b>16,000,000</b>	<b>16,000,000</b>	<b>1,004,300</b>	<b>3,879,300</b>	
<b>Total Capital Improvement Program Budget</b>		<b>\$ 3,253,228,000</b>	<b>\$4,118,543,000</b>	<b>\$153,026,935</b>	<b>\$166,975,657</b>	

# 2017-18 Budget Update

## CIP New Project Descriptions

<b>Project Name &amp; Number</b>	<b>Interstate 405 Widening Project Impacts on OCSD Sewers - 3-66</b>		
<b>Project Category</b>	<b>Collections Facilities</b>	<b>Project Budget:</b>	<b>\$528,000</b>

**Description**

This project will provide reimbursement for staff support for the realignment/conflicts of District facilities as part of Orange County Transit Authority's (OCTA) proposed widening of the Interstate 405 (I-405) between State Route 73 and Interstate 605.

**Justification**

In partnership with the California Department of Transportation (CalTrans), the Orange County Transportation Authority (OCTA) proposes to widen the Interstate 405 (I-405) between State Route 73 and Interstate 605. This project will require relocation of existing District facilities. Eight utility agreements provide the terms for 22 District facility conflicts and reimbursement up to \$427,151.

This project will not have an impact on operational budgets.



**Collections  
Facilities**

<b>Project Name &amp; Number</b>	<b>Project Management Information System - J-128</b>		
<b>Project Category</b>	<b>Information Management Systems</b>	<b>Project Budget:</b>	<b>\$4,000,000</b>

**Description**

This project will implement a new Project Management Information System to replace the obsolete software application currently in use and to serve additional business processes related to management of the capital improvement program.

**Justification**

The software application currently used to manage construction contracts is no longer supported by the vendor and cannot continue to meet requirements. In addition, a number of business processes involved in managing the capital improvement program could be more efficiently and effectively performed using a modern commercially available software system.

The impacts to operational budgets have not yet been determined.



**Information  
Management  
Systems**

# CIP New Project Descriptions

<b>Project Name &amp; Number</b>	<b>GWRs Final Expansion Coordination - J-36-2</b>		
<b>Project Category</b>	<b>Water Management Projects</b>	<b>Project Budget:</b>	<b>\$1,132,000</b>

**Description**

This project will be used to track costs, forecast resources, and coordinate Sanitation District reviews related to the Orange County Water District's Groundwater Replenishment System Final Expansion project. This project will not address modification of Sanitation District Facilities, which are included in other projects such as the Headworks Modifications at Plant 2 for GWRs Final Expansion, Project No. P2-122, and the Ocean Outfall Rehabilitation Project No. J-117.

**Justification**

The Orange County Water District's Groundwater Replenishment System Final Expansion will impact Sanitation District Facilities at both plants and along the interplant effluent pipelines. Per a cooperative agreement between the two agencies, Sanitation District costs for this coordination will not be charged to the Water District.

This project will not have an impact on operational budgets.



**Water Management  
Projects**

<b>Project Name &amp; Number</b>	<b>Return Activated Sludge Piping Replacement at Activated Sludge Plant 1 - P1-129</b>		
<b>Project Category</b>	<b>Secondary Treatment</b>	<b>Project Budget:</b>	<b>\$3,979,000</b>

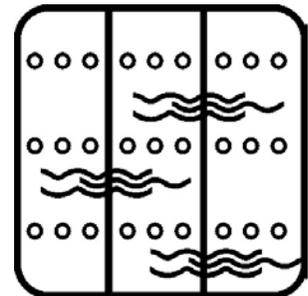
**Description**

The work consists of the removal and replacement of an existing deteriorated 30-inch steel discharge header piping, valves, flexible couplings, and pipe hangers in the Return Activated Sludge (RAS) Pump Room at Plant No. 1 and approximately 220 linear feet of buried discharge piping.

**Justification**

The RAS facility was constructed under Project No. P1-16 in 1974. Over the past few years, the header piping failed in numerous locations due to internal corrosion warranting replacement of leaking piping.

The project budget has been increased from \$3,300,000 to \$3,979,000. The project's construction cost is \$2,250,000. This project will not have an impact on operational budgets.



**Secondary  
Treatment**

# 2017-18 Budget Update

<b>Project Name &amp; Number</b>	<b>Interstate 405 Widening Project Impacts on OCSD Front Entrance - P1-130</b>		
<b>Project Category</b>	<b>Others</b>	<b>Project Budget:</b>	<b>\$2,655,000</b>

**Description**

This project will provide support for OCSD efforts related to the relocation of District front entrance as part of Orange County Transit Authority's (OCTA) proposed widening of the Interstate 405 (I-405) between State Route 73 and Interstate 605.

**Justification**

In partnership with the California Department of Transportation (CalTrans), the Orange County Transportation Authority (OCTA) proposes to widen the Interstate 405 (I-405) between State Route 73 and Interstate 605. This project will require relocation of District's front entrance and wastehauler station. A cooperative agreement was approved by the Board of Directors 8/24/16 that allows the District to reimburse staff time up to an amount of \$470,000. Other costs may be reimbursed through a land acquisition agreement, which has yet to be developed.

This project will not have an impact on operational budgets.



**Others**

<b>Project Name &amp; Number</b>	<b>Uninterruptable Power Supply Improvements at Plant 1 - P1-132</b>		
<b>Project Category</b>	<b>Utility Systems</b>	<b>Project Budget:</b>	<b>\$4,800,000</b>

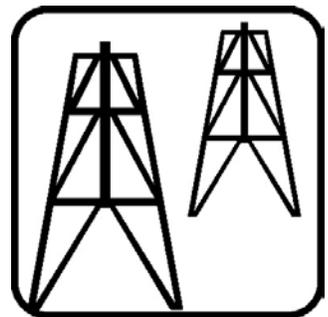
**Description**

This project will add a regional Uninterruptable Power Supply (UPS) in the northwest portion of plant 1. The UPS will supply power to power distribution buildings 4,7 and 8, maintenance buildings, primary clarifiers, any other users requiring UPS in the area. The project will also determine if the UPS will supply power to the laboratory building.

**Justification**

The control center requires a reliable properly sized Uninterruptable Power Supply (UPS). If power is lost to the control center the ability to control the plant could be lost. This project will supply a regional UPS that will also supply power for Power Buildings and Primary Clarifiers.in the area based on the UPS study conducted in March 2013.

The project's construction cost is \$2,368,000. This project will not have an impact on operational budgets.



**Utility Systems**

# CIP New Project Descriptions

<b>Project Name &amp; Number</b>	<b>Headworks Modifications at Plant 2 for GWRs Final Expansion - P2-122</b>		
<b>Project Category</b>	<b>Headworks</b>	<b>Project Budget:</b>	<b>\$54,000,000</b>

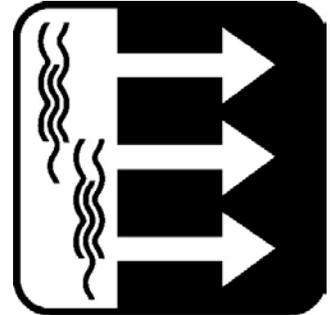
## Description

This project will modify the Headworks, related piping, and sidestream flow routing to separate reclaimable and non-reclaimable flows to accommodate the Orange County Water District's Groundwater Replenishment System Final Expansion. Work elements include installing a new 66-inch diameter flow diversion with a new flow meter and vault, new motorized gates, and modification of waste sidestream pump station discharge piping to the non-reclaimable portion of the plant.

## Justification

Secondary effluent is required to support Groundwater Replenishment System (GWRs) final expansion. Currently, all the secondary effluent from Plant 1 is routed to GWRs. To support the final expansion, all reclaimable flow suitable from Plant 2 will need to be pumped to GWRs. This will require a new pump station, an equalization tank, and conveyance system, as well as substantial modifications to the Plant 2 facilities to provide separate treatment for flow streams that are not currently suitable as source water for GWRs.

The project budget has been increased from \$50,000,000 to \$54,000,000. The project's construction cost is \$31,718,000. This project will not have an impact on operational budgets.



**Headworks**

<b>Project Name &amp; Number</b>	<b>Return Activated Sludge Piping Replacement at Plant 2 - P2-123</b>		
<b>Project Category</b>	<b>Secondary Treatment</b>	<b>Project Budget:</b>	<b>\$15,000,000</b>

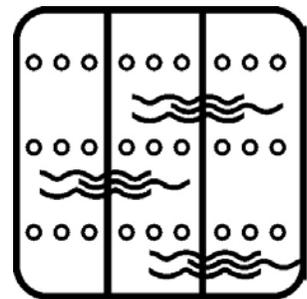
## Description

The Activated Sludge (AS) facility was built in 1979 as part of multi-facility treatment improvement. The work consists of the removal and replacement of the existing deteriorated AS piping, valves, valve actuators, flexible couplings, and pipe supports located in the AS pump stations east and west, Kinnison tunnel, and Scott tunnel at Plant No. 2. All piping and associated appurtenances will be replaced in kind, with the exception of the butterfly valves, which will be replaced with plug valves.

## Justification

The AS facility has experienced major leaks in various locations within its piping system. Multiple repair methods have been used with varying success. Based on the results of a recent assessment and O&M concerns, a recommendation was made to rehabilitate the piping immediately. Due to the level of corrosion of the pipes, replacement is the only feasible option.

The project's construction cost is \$9,641,025. This project will not have an impact on operational budgets.



**Secondary Treatment**

# 2017-18 Budget Update

<b>Project Name &amp; Number</b>	<b>Interim Food Waste Receiving Facility - P2-124</b>		
<b>Project Category</b>	<b>Solids Handling &amp; Digestion</b>	<b>Project Budget:</b>	<b>\$5,400,000</b>

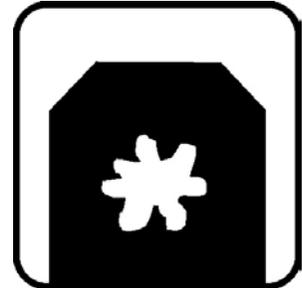
**Description**

This project will construct a station to receive, store, and feed pre-processed food waste slurry to the digester complex at Plant 2 to generate additional digester gas. The cost of the project will be offset by revenues from tipping fees charged to food waste haulers. This facility will be replaced with a permanent receiving station following completion of a proposed program to replace existing digester at Plant 2.

**Justification**

This project was identified in the Biosolids Master Plan, Project No. PS15-01 to address the need for solids waste generators and haulers to divert organic waste from landfills. Waste haulers will separate organics at the source, and the screen and process the high strength organic waste into a liquid slurry. The Sanitation District's costs to construct, operate the facilities, and handle the additional biosolids production will be offset by tipping fees charged to haulers and additional power associated with increased digester gas production.

The project's construction cost is \$3,279,843. The impacts to operational budgets have not yet been determined.



**Solids Handling & Digestion**

<b>Project Name &amp; Number</b>	<b>Plant 2 Southwest Perimeter Screening - P2-125</b>		
<b>Project Category</b>	<b>Others</b>	<b>Project Budget:</b>	<b>\$2,800,000</b>

**Description**

This project will install landscaping or other appropriate line-of-sight barriers to minimize the visual impact on neighbors and traffic on Pacific Coast Highway and Brookhurst street.

**Justification**

This project is part of the Sanitation District's commitment to be a good neighbor.

The project's construction cost is \$1,396,370. The impacts to operational budgets have not yet been determined.



**Others**

# CIP New Project Descriptions

<b>Project Name &amp; Number</b>	<b>Plant 2 Warehouse Relocation - P2-126</b>		
<b>Project Category</b>	<b>Support Facilities</b>	<b>Project Budget:</b>	<b>\$9,800,000</b>

**Description**

The project will construct a replacement for the existing warehouse located in the southwest corner of Plant 2, which must be demolished to accommodate the proposed Temperature Phased Anaerobic Digestion facilities.

**Justification**

The area where the Plant 2 Warehouse is currently located is needed to accommodate facilities associated with the new digester project. These new facilities must be near the new digesters.

The project's construction cost is \$5,359,034. The impacts to operational budgets have not yet been determined.



**Support Facilities**

<b>Project Name &amp; Number</b>	<b>Plant 2 Collections Yard Relocation - P2-127</b>		
<b>Project Category</b>	<b>Support Facilities</b>	<b>Project Budget:</b>	<b>\$1,500,000</b>

**Description**

This project will replace the existing Collections Facilities yard and fencing in a new location, yet to be determined.

**Justification**

The area where this facility is currently located is needed for the new Temperature Phased Anaerobic Digestion facilities.

The project's construction cost is \$714,493. The impacts to operational budgets have not yet been determined.



**Support Facilities**

# 2017-18 Budget Update

<b>Project Name &amp; Number</b>	<b>TPAD Digester Facility at Plant 2 - P2-128</b>		
<b>Project Category</b>	<b>Support Facilities</b>	<b>Project Budget:</b>	<b>\$419,000,000</b>

## Description

This project is the largest of a set of related projects to replace the mesophilic anaerobic digesters at Plant 2 with new digesters in a temperature-phased anaerobic digester (TPAD) configuration. This project will include six new thermophilic digesters, batch tanks, cooling facilities, and associated sludge pumping, digester mixing, power distribution, and controls. Replacement and demolition of existing digesters will be included in a separate project.

## Justification

The 2017 Biosolids Master Plan conducted a comprehensive evaluation of end-to-end alternatives for solids processing at Plant No. 2. The study was prompted by seismic and condition deficiencies in many of the existing digesters. The evaluation concluded that the best alternative was to replace the existing digester complex with a temperature-phased anaerobic digestion process with batch tanks to meet Class A requirements. One of the key benefits of this approach is that when the thermophilic digesters are placed into service, the Sanitation District would be able to produce classified sludge even if the existing digesters failed due to seismic event.

The project's construction cost is \$273,930,463. The impacts to operational budgets have not yet been determined.



**Support Facilities**

<b>Project Name &amp; Number</b>	<b>Digester P, Q, R, and S Replacement - P2-129</b>		
<b>Project Category</b>	<b>Solids Handling &amp; Digestion</b>	<b>Project Budget:</b>	<b>\$158,000,000</b>

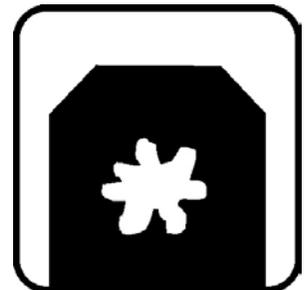
## Description

This project will replace, or extensively rehabilitate Digesters P, Q, R, and S to address both condition issues, seismic deficiencies, and liquefaction risks.

## Justification

Digesters P, Q, R, and S are subject to liquefaction in the event of an earthquake, there are known structural deficiencies with the structures, and a thorough rehabilitation of mechanical and electrical systems is required based on age and condition.

The project's construction cost is \$95,047,949. The impacts to operational budgets have not yet been determined.



**Solids Handling & Digestion**

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# Capital Equipment Budget Summary

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## Capital Equipment Budget 2017-18

Department	Trucks & Vehicles 09410000	Other Mobile Eq 09410001	Machine Eq & Tools 09410002	Comm Equipment 09410003
Information Technology	\$ -	\$ -	\$ -	\$ -
Laboratory, Monitoring and Compliance	-	-	-	-
Electrical and Control Systems Engineering	-	-	-	-
Collection Facilities O&M	-	261,700	-	-
Fleet Services	891,100	857,300	11,000	-
Plant No. 1 Operations	-	-	-	-
Plant No. 1 Maintenance	-	-	252,200	-
Maintenance Reliability and Planning	-	-	-	-
Plant No. 2 Maintenance	-	-	-	-
Total Proposed Capital Equipment	<u>\$ 891,100</u>	<u>\$ 1,119,000</u>	<u>\$ 263,200</u>	<u>\$ -</u>

# 2017-18 Budget Update

## Capital Equipment Budget 2017-18

Department	Instr / Test Equipment 09410004	Safety & Traffic Eq 09410005	Office Fix & Eq 09410006	Computer Equipment 09410007	2017-18 Proposed Budget
Information Technology	\$ -	\$ -	\$ -	\$ 857,000	\$ 857,000
Laboratory, Monitoring and Compliance	571,500	-	-	-	571,500
Electrical and Control Systems Engineering	85,400	-	-	-	85,400
Collection Facilities O&M	-	-	-	-	261,700
Fleet Services	-	-	-	-	1,759,400
Plant No. 1 Operations	39,500	-	-	-	39,500
Plant No. 1 Maintenance	-	-	-	-	252,200
Maintenance Reliability and Planning	28,500	-	-	-	28,500
Plant No. 2 Maintenance	17,300	6,800	-	-	24,100
<b>Total Proposed Capital Equipment</b>	<b>\$ 742,200</b>	<b>\$ 6,800</b>	<b>\$ -</b>	<b>\$ 857,000</b>	<b>\$ 3,879,300</b>

# Capital Equipment Budget Summary

## Capital Equipment Budget Detail

<u>Division</u>	<u>Equipment Type</u>	<u>Proposed Equip. Budget</u>
<u>250 - Information Technology</u>		
	Disaster Recovery (DR) Infrastructure Support	100,000
	Disaster Recovery (DR) Infrastructure Hardware/Software	210,000
	Upgrade/Replace IT Service Management System	80,000
	Upgrade/Replace Existing Physical Access System	300,000
	Additional Wonderware Licenses fro Div. 770	134,000
	Cathodic Protection Software for Div. 875	33,000
	Total	<u>\$ 857,000</u>
<u>630 - Laboratory, Monitoring and Compliance</u>		
	Automated Sample Extraction System	120,000
	Digital Droplet PCR System	84,000
	Acoustic Releases	16,500
	Two (2) Acoustic Doppler Current Profilers (ADCP)	62,000
	Telemetry Oceanographic Mooring	130,000
	Seakeeper Vessel Stabilizing System	138,600
	Laboratory Glassware Washer - Replacement	20,400
	Total	<u>\$ 571,500</u>
<u>770 - Electrical and Control Systems Engineering</u>		
	Three (3) PLC Test Units	85,400
	Total	<u>\$ 85,400</u>
<u>820 - Collection Facilities O&amp;M</u>		
	Hose Reel Trailer for 10" Pumps	261,700
	Total	<u>\$ 261,700</u>
<u>822 - Fleet Services</u>		
	Light Duty Service Truck - Replace V0427	41,600
	Light Duty Service Truck - Replace V0433	44,000
	Sedan - Replace V0469	25,700
	Heavy Duty Tow Truck	97,600
	Light Duty Service Truck - Replace V0548 for Div. 630	45,000
	Light Cargo Van - Replace V0422 for Div. 770	46,800
	Light Duty Service Truck - Replace V0432 for Div. 770	25,600
	Heavy Duty Service Truck - Replace V0539 for Div. 820	77,100
	Light Duty Service Truck - Replace V0576 for Div. 820	46,100
	Seven (7) Cargo Carts - Replace C1034, 1036, C1037, C1041, C1082, C1083, C1084 for Div. 870	83,100
	Middle-Size Truck - Replace V0503 for Div. 870	47,700
	Heavy Duty Service Truck - Replace Utility Bed V0521 for Div. 870	10,400
	Two (2) Cargo Carts for NEW positions in Div. 870	23,800
	Light Duty Service Truck - Replace V0435 for Div. 875	44,000
	Sedan - Replace V0447 for Div. 875	26,000

# 2017-18 Budget Update

## Capital Equipment Budget Detail

<u>Division</u>	<u>Equipment Type</u>	<u>Proposed Equip. Budget</u>
<u>822 CONTINUED - Fleet Services</u>		
	Middle-Size Truck - Replace V0449 for Div. 875	47,100
	Sedan - Replace V0511 for Div. 875	26,000
	Middle-Size Truck for NEW Reliability Maint. Tech in Div. 875	44,400
	Middle-Size Truck for Div. 875 P2 Maintenance Planners	45,100
	Light Duty Service Truck - Replace V0436 for Div. 880	44,000
	Four (4) Electric Carts - Replace C0942, C1119, C1120, C1121	48,400
	Heavy Duty Trailer - Replace E0904 for Div. 820	31,500
	Electric Scissor Lift for Plant No. 2	20,800
	Two (2) Mobile Fueler Trailers	24,500
	Four (4) Personnel Carts - Replace C0819, C0849, C0909, C1093 & Two (2) Cargo Electric Carts - Replace C0812, C0845	60,500
	Genie 65' Aerial Lift - Replace E1152	130,600
	Five (5) Electrical Carts - Replace C0794, C1008, C1021, C1064, C1099 for Div. 830	55,000
	Three (3) Electric Carts for NEW positions in Div. 880	36,000
	65-75 Ton A/T Crane - Replace E1178	450,000
	Blast Cabinet Replacement for Fleet	11,000
	Total	<u>\$ 1,759,400</u>
<u>830 - Plant No. 1 Operations</u>		
	Two (2) Hydrogen Sulfide Analyzers - Replacements	39,500
	Total	<u>\$ 39,500</u>
<u>870 - Plant No. 1 Maintenance</u>		
	Dake Band Saw	35,400
	Press Brake Power Back Gauge	32,500
	TU3 Beveling Tool	8,100
	Clausing Large Swing Standard Lathe - Replacement	150,000
	Piranah Iron Worker Tooling - Replacement	10,900
	Two (2) Power Breezers- Replacements	15,300
	Total	<u>\$ 252,200</u>
<u>875 - Maintenance Reliability and Planning</u>		
	GSSI Structure Scan Mini XT GPR rebar locator	17,900
	Slab Impulse Response System	10,600
	Total	<u>\$ 28,500</u>
<u>880 - Plant No. 2 Maintenance</u>		
	HART Field Communicator	5,800
	Modal Shop Portable Vibration Test Unit	11,500
	Tripod Hoist Base	6,800
	Total	<u>\$ 24,100</u>
	<b>Total Proposed 2017-18 Capital Equipment Budget</b>	<b><u>\$ 3,879,300</u></b>

# Self-Funded Insurance Plans

## SELF-FUNDED INSURANCE PLANS

The General Liability and Property program and the Workers' Compensation program provide for OCSD to be partially self-insured for general liability and workers' compensation. The in-lieu premiums charged to the operating divisions are the revenue source for these programs. Expenses primarily consist of settlement claims, legal fees and excess loss insurance premiums. Ending Reserve Balances are projected at \$57 million.

### General Liability and Property

- OCSD's current excess general liability insurance coverage is \$40 million per occurrence with an annual aggregate limit and with a self-insured retention of \$500,000.
- OCSD's current property insurance coverage is \$1 billion for perils of fire and \$300 million for perils of flood, subject to a self-insured retention of \$250,000. OCSD is partially self-insured for earthquake, but does carry \$25 million in coverage on several key structures with a \$5 million deductible. OCSD also has a \$50 million sublimit for builder's risk under the property insurance program to ensure upcoming construction projects are adequately covered.
- In order to maintain the reserve balance of \$55 million for the General Liability and Property program, appropriations for in-lieu premiums charged to operating divisions are recommended at \$2,110,870 for FY 2017-18.

### Workers' Compensation

- OCSD's current excess workers' compensation coverage has unlimited statutory coverage per occurrence and \$4 million employer's liability per employee with a self-insured retention of \$1 million per person per occurrence.
- In order to maintain the reserve balance of \$2 million for the Workers' Compensation program, appropriations for in-lieu premiums charged to operating divisions are recommended at \$554,330 for FY 2017-18.

DESCRIPTION OR ACCOUNT TITLE	FY 2017-18 Self-Insurance Program Budget		
	General Liability & Property Program	Workers' Compensation Program	Total Self-Insurance Program
<b>Beginning Reserves</b>	\$ 54,205,430	\$ 2,475,670	\$ 56,681,100
<b>Revenues</b>			
In-Lieu Premiums	2,110,870	554,330	2,665,200
Miscellaneous Other Revenue	-	10,000	10,000
Service Department Allocation	18,700	-	18,700
<b>Total Revenues</b>	<u>2,129,570</u>	<u>564,330</u>	<u>2,693,900</u>
<b>Expenses</b>			
Benefits/Claims	100,000	600,000	700,000
Contractual Services	-	-	-
Legal Services	130,000	175,000	305,000
Professional Services	25,000	65,000	90,000
Policy Premium Expense	1,080,000	200,000	1,280,000
<b>Total Expenses</b>	<u>1,335,000</u>	<u>1,040,000</u>	<u>2,375,000</u>
<b>Excess Revenue (Expenses)</b>	<u>794,570</u>	<u>(475,670)</u>	<u>318,900</u>
<b>Ending Reserves</b>	<u>\$ 55,000,000</u>	<u>\$ 2,000,000</u>	<u>\$ 57,000,000</u>

# 2017-18 Budget Update

## Historical Staffing Summary

Department and Division Name	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>General Manager's Office</b>					
General Management Administration	4.00	5.00	6.00	5.00	5.00
Board Services	5.00	5.00	4.00	5.00	5.00
Public Affairs	3.00	4.00	5.00	5.00	5.00
<b>Department Subtotal*</b>	<b>12.00</b>	<b>14.00</b>	<b>15.00</b>	<b>15.00</b>	<b>15.00</b>
<b>Human Resources Department</b>					
Human Resources Administration	18.00	16.00	16.00	16.00	16.00
Risk Management/Safety/Security	-	-	11.00	11.00	11.00
<b>Department Subtotal</b>	<b>18.00</b>	<b>16.00</b>	<b>27.00</b>	<b>27.00</b>	<b>27.00</b>
<b>Administrative Services Department</b>					
Administrative Services Administration	3.00	4.00	3.00	3.00	3.00
Financial Management	18.00	18.00	19.00	19.00	19.00
Contracts, Purchasing and Materials Management	31.00	32.00	32.00	32.00	32.00
Information Technology	47.00	45.00	44.00	45.00	45.00
Risk Management	11.00	12.00	-	-	-
<b>Department Subtotal</b>	<b>110.00</b>	<b>111.00</b>	<b>98.00</b>	<b>99.00</b>	<b>99.00</b>
<b>Facilities Support Services Department</b>					
Facilities Support Services Administration	3.00	3.00	4.00	-	-
Facilities Support	3.00	3.00	-	-	-
Equipment Rebuild	8.00	8.00	-	-	-
Fleet Services	8.00	8.00	9.00	-	-
Facilities Engineering and Repair Services	11.00	9.00	5.00	-	-
NPDES Source Inspection	16.00	16.00	16.00	-	-
Odor and Corrosion Control	6.00	6.00	6.00	-	-
Collection Facilities Operations and Maintenance	23.00	23.00	23.00	-	-
<b>Department Subtotal</b>	<b>78.00</b>	<b>76.00</b>	<b>63.00</b>	<b>-</b>	<b>-</b>
<b>Environmental Services Department</b>					
Environmental Services Administration	-	-	-	2.00	2.00
Resource Protection	-	-	-	47.00	37.00
Laboratory, Monitoring and Compliance	-	-	-	42.00	52.00
<b>Department Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>91.00</b>	<b>91.00</b>
<b>Engineering Department</b>					
Engineering Administration	2.00	2.00	2.00	2.00	2.00
Planning	18.00	17.00	15.00	15.00	15.00
Project Management Office	20.00	20.00	20.00	17.00	17.00
Civil and Mechanical Engineering	51.00	53.00	59.00	53.00	53.00
Electrical and Control Systems Engineering	-	-	-	29.00	29.00
Environmental Compliance	32.00	31.00	31.00	-	-
<b>Department Subtotal</b>	<b>123.00</b>	<b>123.00</b>	<b>127.00</b>	<b>116.00</b>	<b>116.00</b>
<b>Operations and Maintenance Department</b>					
Operations and Maintenance Administration	3.00	2.00	2.00	3.00	3.00
Collection Facilities Operations and Maintenance	-	-	-	26.00	26.00
Fleet Services	-	-	-	8.00	8.00
Plant No. 1 Operations	54.00	54.00	69.00	62.00	61.00
Plant No. 2 Operations	48.00	47.00	54.00	50.00	51.00
Building, Grounds, and Mechanical Maintenance	62.00	65.00	-	-	-
Instrumentation and Electrical Maintenance	75.00	75.00	-	-	-
Plant No. 1 Maintenance	-	-	82.00	85.00	62.00
Maintenance Reliability and Planning	-	-	-	-	28.00
Plant No. 2 Maintenance	-	-	46.00	45.00	48.00
Environmental Laboratory and Ocean Monitoring	41.00	41.00	41.00	-	-
<b>Department Subtotal</b>	<b>283.00</b>	<b>284.00</b>	<b>294.00</b>	<b>279.00</b>	<b>287.00</b>
<b>Grand Total - All Departments*</b>	<b>624.00</b>	<b>624.00</b>	<b>624.00</b>	<b>627.00</b>	<b>635.00</b>

# Historical Staffing Detail

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>General Manager's Office</b>					
<b>110 General Management Administration</b>					
General Manager	1.00	1.00	1.00	1.00	1.00
Assistant General Manager	1.00	1.00	1.00	1.00	1.00
Public Affairs Manager	-	1.00	1.00	-	-
Principal Staff Analyst	1.00	1.00	-	1.00	1.00
Records Management Specialist	-	-	1.00	1.00	1.00
Senior Staff Analyst	-	-	1.00	-	-
Secretary to the General Manager	1.00	1.00	1.00	1.00	1.00
Total General Management Administration*	4.00	5.00	6.00	5.00	5.00
<b>120 Board Services</b>					
Clerk of the Board	1.00	1.00	1.00	1.00	1.00
Records Management Specialist	1.00	1.00	-	-	-
Deputy Clerk of the Board	-	-	1.00	1.00	1.00
Administrative Assistant	1.00	1.00	-	-	-
Program Assistant	2.00	2.00	2.00	2.00	2.00
Office Assistant				1.00	1.00
Total Board Services	5.00	5.00	4.00	5.00	5.00
<b>140 Public Affairs</b>					
Public Affairs Supervisor	-	-	-	1.00	1.00
Principal Public Affairs Specialist	-	1.00	1.00	-	-
Senior Public Affairs Specialist	1.00	-	1.00	1.00	1.00
Public Affairs Specialist	-	1.00	1.00	1.00	1.00
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Graphics Coordinator	1.00	1.00	1.00	1.00	1.00
Total Public Affairs	3.00	4.00	5.00	5.00	5.00
<b>Total General Manager's Office</b>	<b>12.00</b>	<b>14.00</b>	<b>15.00</b>	<b>15.00</b>	<b>15.00</b>
<b>Human Resources Department</b>					
<b>160 Human Resources Administration</b>					
Director of Human Resources	1.00	1.00	1.00	1.00	1.00
HR and Risk Manager	-	-	-	-	1.00
Human Resources Manager	1.00	1.00	1.00	1.00	-
Human Resources Supervisor	-	-	1.00	1.00	1.00
Principal Human Resources Analyst	2.00	2.00	3.00	3.00	3.00
Senior Human Resources Analyst	4.00	5.00	4.00	4.00	4.00
Human Resources Analyst	5.00	4.00	4.00	4.00	4.00
Executive Assistant	1.00	-	-	-	-
Human Resources Assistant	2.00	1.00	1.00	1.00	1.00
Program Assistant	2.00	2.00	1.00	1.00	1.00
Total Human Resources Administration	18.00	16.00	16.00	16.00	16.00
<b>161 Risk Management/Safety/Security</b>					
Safety & Health Supervisor	-	-	1.00	1.00	1.00
Principal Financial Analyst	-	-	1.00	1.00	1.00
Safety & Health Specialist	-	-	1.00	1.00	1.00
Security & Emergency Planning Specialist	-	-	1.00	1.00	1.00
Occupational Health Nurse	-	-	1.00	1.00	1.00
Senior Safety & Health Representative	-	-	2.00	2.00	2.00
Safety & Health Representative	-	-	3.00	3.00	3.00
Administrative Assistant	-	-	1.00	1.00	1.00
Total Risk Management/Safety/Security	-	-	11.00	11.00	11.00
<b>Total Human Resources Department</b>	<b>18.00</b>	<b>16.00</b>	<b>27.00</b>	<b>27.00</b>	<b>27.00</b>

# 2017-18 Budget Update

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>Administrative Services Department</b>					
<b>210 Administrative Services Administration</b>					
Director of Finance & Administrative Services / Treasurer	1.00	1.00	1.00	1.00	1.00
Principal Financial Analyst	1.00	1.00	1.00	1.00	1.00
Executive Assistant	1.00	1.00	1.00	1.00	1.00
Accounting Assistant II	-	1.00	-	-	-
Total Administrative Services Administration	3.00	4.00	3.00	3.00	3.00
<b>220 Financial Management</b>					
Controller	1.00	1.00	1.00	1.00	1.00
Accounting Supervisor	3.00	3.00	3.00	3.00	3.00
Principal Accountant	3.00	3.00	3.00	2.00	2.00
Senior Accountant	1.00	1.00	1.00	2.00	2.00
Senior Staff Analyst	-	-	1.00	1.00	1.00
Accountant/Staff Analyst	4.00	4.00	3.00	3.00	3.00
Payroll Technician	2.00	2.00	2.00	2.00	2.00
Accounting Assistant II	4.00	4.00	5.00	5.00	5.00
Total Financial Management	18.00	18.00	19.00	19.00	19.00
<b>230 Contracts, Purchasing and Materials Management</b>					
Contracts & Purchasing Manager	1.00	1.00	1.00	1.00	1.00
Contracts Supervisor	1.00	1.00	1.00	1.00	1.00
Principal Contracts Administrator	2.00	2.00	2.00	2.00	2.00
Purchasing Supervisor	1.00	1.00	1.00	1.00	1.00
Materials Control Supervisor	1.00	1.00	1.00	1.00	1.00
Senior Contracts Administrator	3.00	3.00	3.00	3.00	3.00
Principal Buyer	1.00	1.00	1.00	1.00	1.00
Contracts Administrator	3.00	3.00	3.00	3.00	3.00
Senior Buyer	1.00	1.00	1.00	1.00	1.00
Buyer	2.00	3.00	3.00	3.00	3.00
Contracts/Purchasing Assistant	5.00	5.00	5.00	5.00	5.00
Lead Storekeeper	2.00	2.00	2.00	2.00	2.00
Senior Storekeeper	3.00	3.00	3.00	3.00	3.00
Storekeeper	5.00	5.00	5.00	5.00	5.00
Total Contracts, Purchasing and Materials Management	31.00	32.00	32.00	32.00	32.00
<b>250 Information Technology</b>					
Information Technology Systems and Operations Manager	1.00	1.00	1.00	1.00	1.00
Information Technology Manager	2.00	1.00	1.00	1.00	-
Information Technology Supervisor	1.00	2.00	2.00	2.00	3.00
Principal Information Technology Analyst	6.00	6.00	6.00	6.00	6.00
Principal Public Affairs Specialist	1.00	-	-	-	-
Senior Information Technology Analyst	9.00	9.00	9.00	10.00	10.00
Information Technology Analyst III	3.00	4.00	6.00	6.00	6.00
Engineering Associate	1.00	-	-	-	-
Senior Staff Analyst	-	1.00	-	-	-
Data Management Technician II	7.00	7.00	7.00	7.00	7.00
Information Technology Analyst II	6.00	5.00	3.00	3.00	3.00
Data Management Technician I	5.00	4.00	4.00	4.00	4.00
Staff Analyst	1.00	1.00	1.00	1.00	1.00
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Information Technology Technician II	1.00	1.00	1.00	1.00	1.00
Information Technology Technician I	1.00	1.00	1.00	1.00	1.00
Program Assistant	1.00	1.00	1.00	1.00	1.00
Total Information Technology	47.00	45.00	44.00	45.00	45.00

# Historical Staffing Detail

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>260 Risk Management</b>					
Risk Manager	-	1.00	-	-	-
Safety & Health Supervisor	1.00	1.00	-	-	-
Principal Financial Analyst	1.00	1.00	-	-	-
Safety & Health Specialist	2.00	1.00	-	-	-
Security & Emergency Planning Specialist	1.00	1.00	-	-	-
Occupational Health Nurse	1.00	1.00	-	-	-
Senior Safety & Health Representative	1.00	2.00	-	-	-
Safety & Health Representative	3.00	3.00	-	-	-
Administrative Assistant	1.00	1.00	-	-	-
Total Risk Management	11.00	12.00	-	-	-
<b>Total Administrative Services Department</b>	<b>110.00</b>	<b>111.00</b>	<b>98.00</b>	<b>99.00</b>	<b>99.00</b>
<b>Facilities Support Services Department</b>					
<b>310 Facilities Support Services Administration</b>					
Director of Facilities Support	1.00	1.00	1.00	-	-
Principal Financial Analyst	1.00	1.00	1.00	-	-
Senior Staff Analyst	-	-	1.00	-	-
Executive Assistant	1.00	1.00	1.00	-	-
Total Facilities Support Services Administration	3.00	3.00	4.00	-	-
<b>320 Facilities Support</b>					
Facilities Manager	1.00	1.00	-	-	-
Senior Staff Analyst	1.00	1.00	-	-	-
Office Assistant	1.00	1.00	-	-	-
Total Facilities Support	3.00	3.00	-	-	-
<b>321 Equipment Rebuild</b>					
Maintenance Supervisor	1.00	1.00	-	-	-
Machinist	1.00	1.00	-	-	-
Senior Mechanic	3.00	3.00	-	-	-
Welder/Fabricator	3.00	3.00	-	-	-
Total Equipment Rebuild	8.00	8.00	-	-	-
<b>322 Fleet Services</b>					
Maintenance Supervisor	1.00	1.00	1.00	-	-
Lead Mechanic	1.00	1.00	1.00	-	-
Automotive/ Heavy Equipment Technician	3.00	3.00	3.00	-	-
Mobile Crane Operator	2.00	2.00	2.00	-	-
Automotive/ Heavy Equipment Assistant	1.00	1.00	1.00	-	-
Office Assistant	-	-	1.00	-	-
Total Fleet Services	8.00	8.00	9.00	-	-
<b>330 Facilities Engineering and Repair Services</b>					
Engineering Manager	1.00	1.00	1.00	-	-
Senior Engineer	1.00	1.00	1.00	-	-
Engineer	2.00	2.00	-	-	-
Associate Engineer	3.00	3.00	2.00	-	-
Maintenance Specialist	2.00	-	-	-	-
Engineering Associate	1.00	1.00	-	-	-
Administrative Assistant	1.00	1.00	1.00	-	-
Total Facilities Engineering and Repair Services	11.00	9.00	5.00	-	-

## 2017-18 Budget Update

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>341 NPDES Source Inspection</b>					
Source Control Supervisor	1.00	1.00	1.00	-	-
Principal Environmental Specialist	1.00	1.00	1.00	-	-
Senior Environmental Specialist	1.00	1.00	-	-	-
Lead Source Control Inspector	-	-	1.00	-	-
Source Control Inspector II	9.00	8.00	7.00	-	-
Source Control Inspector I	-	1.00	2.00	-	-
Administrative Assistant	1.00	1.00	1.00	-	-
Environmental Technician	3.00	3.00	3.00	-	-
<b>Total NPDES Source Inspection</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>-</b>	<b>-</b>
<b>342 Odor and Corrosion Control</b>					
Engineering Supervisor	1.00	1.00	1.00	-	-
Associate Engineer	1.00	1.00	1.00	-	-
Senior Environmental Specialist	2.00	2.00	2.00	-	-
Engineering Assistant I	1.00	1.00	1.00	-	-
Environmental Technician	1.00	1.00	1.00	-	-
<b>Total Odor and Corrosion Control</b>	<b>6.00</b>	<b>6.00</b>	<b>6.00</b>	<b>-</b>	<b>-</b>
<b>343 Collection Facilities Operations and Maintenance</b>					
Maintenance Supervisor	2.00	2.00	2.00	-	-
Lead Mechanic	5.00	5.00	5.00	-	-
Senior Mechanic	8.00	8.00	8.00	-	-
Mechanic	8.00	8.00	8.00	-	-
<b>Total Collection Facilities Operations and Maintenance</b>	<b>23.00</b>	<b>23.00</b>	<b>23.00</b>	<b>-</b>	<b>-</b>
<b>Total Facilities Support Services Department</b>	<b>78.00</b>	<b>76.00</b>	<b>63.00</b>	<b>-</b>	<b>-</b>
<b>Environmental Services Department</b>					
<b>610 Environmental Services Administration</b>					
Director of Environmental Services	-	-	-	1.00	1.00
Executive Assistant	-	-	-	1.00	1.00
<b>Total Environmental Services Administration</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>2.00</b>
<b>620 Resource Protection</b>					
Engineering Manager	-	-	-	-	1.00
Environmental Compl & Reg Affairs Manager	-	-	-	1.00	-
Engineering Supervisor	-	-	-	2.00	2.00
Environmental Supervisor	-	-	-	1.00	-
Senior Engineer	-	-	-	1.00	1.00
Senior Regulatory Specialist	-	-	-	1.00	-
Engineer	-	-	-	5.00	5.00
Source Control Supervisor	-	-	-	1.00	1.00
Regulatory Specialist	-	-	-	3.00	-
Associate Engineer	-	-	-	4.00	3.00
Principal Environmental Specialist	-	-	-	3.50	3.00
Lead Source Control Inspector	-	-	-	1.00	1.00
Senior Environmental Specialist	-	-	-	4.50	1.00
Source Control Inspector II	-	-	-	7.00	7.00
Source Control Inspector I	-	-	-	2.00	2.00
Administrative Assistant	-	-	-	2.00	2.00
Environmental Technician	-	-	-	3.00	3.00
Program Assistant	-	-	-	4.00	4.00
Office Assistant	-	-	-	1.00	1.00
<b>Total Resource Protection</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>47.00</b>	<b>37.00</b>

# Historical Staffing Detail

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>630 Laboratory, Monitoring and Compliance</b>					
Environmental Lab & Ocean Monitoring Manager	-	-	-	1.00	1.00
Environmental Supervisor	-	-	-	1.00	4.00
Laboratory Supervisor	-	-	-	2.00	-
Senior Regulatory Specialist	-	-	-	-	1.00
Senior Scientist	-	-	-	3.00	3.00
Regulatory Specialist	-	-	-	-	2.00
Scientist	-	-	-	1.00	1.00
Associate Engineer	-	-	-	-	1.00
Principal Environmental Specialist	-	-	-	2.00	8.50
Principal Laboratory Analyst	-	-	-	6.00	-
Senior Environmental Specialist	-	-	-	6.00	18.50
Boat Captain	-	-	-	1.00	1.00
Senior Laboratory Analyst	-	-	-	10.00	-
Environmental Specialist	-	-	-	2.00	7.00
Laboratory Analyst	-	-	-	3.00	-
Administrative Assistant	-	-	-	1.00	1.00
Environmental Technician	-	-	-	-	3.00
Laboratory Assistant	-	-	-	3.00	-
Total Laboratory, Monitoring and Compliance	-	-	-	42.00	52.00
<b>Total Environmental Services Department</b>	-	-	-	<b>91.00</b>	<b>91.00</b>
<b>Engineering Department</b>					
<b>710 Engineering Administration</b>					
Director of Engineering	1.00	1.00	1.00	1.00	1.00
Executive Assistant	1.00	1.00	1.00	1.00	1.00
Total Engineering Administration	2.00	2.00	2.00	2.00	2.00
<b>740 Planning</b>					
Engineering Manager	1.00	1.00	1.00	1.00	1.00
Engineering Supervisor	1.00	1.00	1.00	2.00	2.00
Senior Engineer	4.00	4.00	3.00	3.00	3.00
Engineer	5.00	4.00	4.00	3.00	3.00
Principal Financial Analyst	-	-	-	1.00	1.00
Principal Staff Analyst	1.00	1.00	1.00	1.00	1.00
Associate Engineer	2.00	3.00	2.00	2.00	2.00
Principal Environmental Specialist	1.00	-	-	-	-
Assistant Engineer	1.00	-	-	-	-
Engineering Associate	-	1.00	1.00	1.00	1.00
Senior Staff Analyst	1.00	1.00	1.00	-	-
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Total Planning	18.00	17.00	15.00	15.00	15.00

## 2017-18 Budget Update

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>750 Project Management Office</b>					
Engineering Manager	1.00	1.00	1.00	1.00	1.00
Engineering Supervisor	1.00	1.00	1.00	-	-
Project Controls Supervisor	1.00	-	-	-	-
Capital Improvement Program Project Manager	8.00	8.00	7.00	8.00	9.00
Senior Engineer	-	-	1.00	2.00	1.00
Principal Project Controls Analyst	1.00	1.00	1.00	1.00	1.00
Engineer	1.00	1.00	1.00	-	-
Principal Staff Analyst	1.00	2.00	2.00	2.00	2.00
Cost Estimator	1.00	1.00	1.00	-	-
Planner/Scheduler	1.00	1.00	1.00	-	-
Senior Staff Analyst	2.00	1.00	1.00	-	-
Engineering Assistant II	-	1.00	1.00	1.00	1.00
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Office Assistant	1.00	1.00	1.00	1.00	1.00
Total Project Management Office	20.00	20.00	20.00	17.00	17.00
<b>760 Civil and Mechanical Engineering</b>					
Engineering Manager	1.00	1.00	1.00	1.00	1.00
Engineering Supervisor	3.00	4.00	4.00	5.00	5.00
Senior Construction Inspection Supervisor	1.00	1.00	1.00	-	-
Senior Engineer	8.00	8.00	9.00	7.00	7.00
Construction Inspection Supervisor	1.00	1.00	1.00	2.00	2.00
Engineer	10.00	10.00	13.00	13.00	13.00
Associate Engineer	2.00	1.00	3.00	3.00	3.00
Cost Estimator	-	-	-	1.00	1.00
Planner/Scheduler	-	-	-	1.00	1.00
Senior Construction Inspector	7.00	7.00	7.00	5.00	5.00
Assistant Engineer	1.00	2.00	2.00	1.00	1.00
Associate Engineer II	-	-	-	-	-
Engineering Associate	-	-	1.00	1.00	1.00
Senior Staff Analyst	-	1.00	1.00	2.00	2.00
Construction Inspector	9.00	9.00	9.00	5.00	5.00
Associate Engineer I	-	-	-	-	-
Engineering Assistant II	3.00	3.00	3.00	3.00	3.00
Public Affairs Specialist	-	-	-	-	-
Staff Analyst	1.00	1.00	1.00	-	-
Administrative Assistant	2.00	2.00	2.00	2.00	2.00
Engineering Assistant I	1.00	1.00	1.00	1.00	1.00
Program Assistant	1.00	1.00	-	-	-
Total Civil and Mechanical Engineering	51.00	53.00	59.00	53.00	53.00
<b>770 Electrical and Control Systems Engineering</b>					
Engineering Manager	-	-	-	1.00	1.00
Engineering Supervisor	-	-	-	2.00	2.00
Senior Construction Insp Supv	-	-	-	1.00	1.00
Senior Engineer	-	-	-	6.00	6.00
Principal Info Tech Analyst	-	-	-	4.00	4.00
Engineer	-	-	-	4.00	4.00
Senior Info Tech Analyst	-	-	-	3.00	3.00
Information Tech Analyst III	-	-	-	1.00	1.00
Senior Construction Inspector	-	-	-	2.00	2.00
Information Tech Analyst II	-	-	-	1.00	1.00
Construction Inspector	-	-	-	4.00	4.00
Total Electrical and Control Systems Engineering	-	-	-	29.00	29.00

# Historical Staffing Detail

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>790 Environmental Compliance</b>					
Environmental Compl & Reg Affairs Manager	1.00	1.00	1.00	-	-
Engineering Supervisor	2.00	2.00	2.00	-	-
Environmental Supervisor	1.00	1.00	1.00	-	-
Public Affairs Manager	1.00	-	-	-	-
Senior Scientist	1.00	1.00	1.00	-	-
Engineer	6.00	6.00	6.00	-	-
Regulatory Specialist	3.00	3.00	3.00	-	-
Associate Engineer	4.00	4.00	4.00	-	-
Associate Engineer III	-	-	-	-	-
Principal Environmental Specialist	2.50	2.50	2.50	-	-
Principal Laboratory Analyst	-	-	-	-	-
Senior Environmental Specialist	4.50	4.50	4.50	-	-
Administrative Assistant	1.00	1.00	1.00	-	-
Program Assistant	4.00	4.00	4.00	-	-
Office Assistant	1.00	1.00	1.00	-	-
Intern	-	-	-	-	-
Total Environmental Compliance	32.00	31.00	31.00	-	-
<b>Total Engineering Department</b>	<b>123.00</b>	<b>123.00</b>	<b>127.00</b>	<b>116.00</b>	<b>116.00</b>
<b>Operations and Maintenance Department</b>					
<b>810 Operations and Maintenance Administration</b>					
Director of Operations & Maintenance	1.00	1.00	1.00	1.00	1.00
Operations Manager	1.00	-	-	-	-
Senior Staff Analyst	1.00	1.00	1.00	2.00	1.00
Staff Analyst	-	-	-	-	1.00
Total Operations and Maintenance Administration	3.00	2.00	2.00	3.00	3.00
<b>820 Collection Facilities Operations and Maintenance</b>					
Engineering Manager	-	-	-	1.00	1.00
Maintenance Supervisor	-	-	-	2.00	2.00
Lead Mechanic	-	-	-	5.00	5.00
Administrative Assistant	-	-	-	1.00	1.00
Senior Mechanic	-	-	-	8.00	8.00
Mechanic	-	-	-	8.00	8.00
Office Assistant	-	-	-	1.00	1.00
Total Collection Facilities Operations and Maintenance	-	-	-	26.00	26.00
<b>822 Fleet Services</b>					
Maintenance Supervisor	-	-	-	1.00	1.00
Lead Mechanic	-	-	-	1.00	1.00
Automotive/ Heavy Equipment Technician	-	-	-	3.00	3.00
Mobile Crane Operator	-	-	-	2.00	2.00
Automotive/ Heavy Equipment Assistant	-	-	-	1.00	1.00
Total Fleet Services	-	-	-	8.00	8.00

## 2017-18 Budget Update

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>830 Plant No. 1 Operations</b>					
Engineering Manager	1.00	-	-	-	-
Operations Manager	-	1.00	1.00	1.00	1.00
Engineering Supervisor	1.00	1.00	2.00	1.00	1.00
Chief Plant Operator	1.00	1.00	1.00	1.00	1.00
Senior Engineer	2.00	2.00	4.00	1.00	1.00
Principal Information Technology Analyst Engineer	-	-	3.00	-	-
Engineer	2.00	2.00	3.00	2.00	2.00
Operations Supervisor	6.00	6.00	6.00	6.00	6.00
Senior Information Technology Analyst	-	-	3.00	-	-
Maintenance Supervisor	-	-	1.00	-	-
Scientist	1.00	1.00	1.00	1.00	1.00
Associate Engineer	-	-	1.00	2.00	2.00
Principal Environmental Specialist	-	-	-	-	1.00
Information Technology Analyst III	-	-	1.00	-	-
Assistant Engineer	2.00	2.00	1.00	1.00	1.00
Senior Environmental Specialist	1.00	1.00	1.00	2.00	1.00
Information Technology Analyst II	-	-	1.00	-	-
Lead Plant Operator	5.00	5.00	3.00	4.00	4.00
Lead Power Plant Operator	-	-	1.00	1.00	1.00
Power Plant Operator II	-	-	4.00	4.00	4.00
Senior Plant Operator	15.00	14.00	14.00	15.00	15.00
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Plant Operator	14.00	15.00	14.00	16.00	15.00
Environmental Technician	-	-	-	1.00	1.00
Control Center Technician	2.00	2.00	2.00	2.00	2.00
Total Plant No. 1 Operations	54.00	54.00	69.00	62.00	61.00
<b>840 Plant No. 2 Operations</b>					
Chief Plant Operator	1.00	1.00	1.00	1.00	1.00
Operations Supervisor	6.00	6.00	6.00	6.00	7.00
Lead Plant Operator	5.00	5.00	6.00	5.00	4.00
Lead Power Plant Operator	-	-	-	-	1.00
Power Plant Operator II	-	-	4.00	4.00	4.00
Senior Plant Operator	14.00	14.00	15.00	14.00	14.00
Administrative Assistant	1.00	1.00	1.00	1.00	1.00
Plant Operator	20.00	19.00	20.00	18.00	19.00
Control Center Technician	1.00	1.00	-	-	-
Program Assistant	-	-	1.00	1.00	-
Total Plant No. 2 Operations	48.00	47.00	54.00	50.00	51.00
<b>850 Building, Grounds, and Mechanical Maintenance</b>					
Maintenance Manager	1.00	1.00	-	-	-
Senior Engineer	-	1.00	-	-	-
Engineer	1.00	-	-	-	-
Maintenance Supervisor	6.00	6.00	-	-	-
Associate Engineer	1.00	1.00	-	-	-
Maintenance Specialist	5.00	8.00	-	-	-
Reliability Maintenance Technician	4.00	4.00	-	-	-
Lead Mechanic	4.00	4.00	-	-	-
Administrative Assistant	1.00	1.00	-	-	-
Senior Mechanic	29.00	29.00	-	-	-
Lead Facilities Worker	1.00	1.00	-	-	-
Facilities Worker/Builder	3.00	3.00	-	-	-
Facilities Worker/Painter	2.00	2.00	-	-	-
Mechanic	2.00	2.00	-	-	-
Maintenance Worker	2.00	2.00	-	-	-
Total Building, Grounds, and Mechanical Maintenance	62.00	65.00	-	-	-

# Historical Staffing Detail

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>860 Instrumentation and Electrical Maintenance</b>					
Engineering Manager	1.00	1.00	-	-	-
Engineering Supervisor	1.00	1.00	-	-	-
Senior Engineer	3.00	3.00	-	-	-
Principal Information Technology Analyst	1.00	2.00	-	-	-
Engineer	4.00	3.00	-	-	-
Senior Information Technology Analyst	4.00	4.00	-	-	-
Maintenance Supervisor	5.00	5.00	-	-	-
Information Technology Analyst III	2.00	1.00	-	-	-
Information Technology Analyst II	-	1.00	-	-	-
Lead Electrical Technician	5.00	5.00	-	-	-
Lead Instrumentation Technician	3.00	3.00	-	-	-
Lead Power Plant Operator	1.00	1.00	-	-	-
Electrical Technician II	13.00	14.00	-	-	-
Instrumentation Technician II	15.00	14.00	-	-	-
Power Plant Operator II	8.00	8.00	-	-	-
Administrative Assistant	1.00	1.00	-	-	-
Power Plant Operator I	1.00	1.00	-	-	-
Electrical Technician I	2.00	2.00	-	-	-
Instrumentation Technician I	1.00	2.00	-	-	-
Maintenance Worker	4.00	3.00	-	-	-
Total Instrumentation and Electrical Maintenance	75.00	75.00	-	-	-
<b>870 Plant No. 1 Maintenance</b>					
Engineering Manager	-	-	1.00	-	-
Maintenance Manager	-	-	-	1.00	1.00
Engineering Supervisor	-	-	1.00	1.00	-
Maintenance Superintendent	-	-	1.00	1.00	1.00
Senior Engineer	-	-	2.00	3.00	-
Engineer	-	-	3.00	4.00	-
Maintenance Supervisor	-	-	6.00	7.00	6.00
Associate Engineer	-	-	1.00	2.00	-
Maintenance Specialist	-	-	5.00	5.00	-
Lead Electrical Technician	-	-	3.00	3.00	3.00
Lead Instrumentation Technician	-	-	1.00	1.00	1.00
Maintenance Planner/Scheduler	-	-	3.00	4.00	-
Reliability Maintenance Technician	-	-	4.00	6.00	-
Electrical Technician II	-	-	7.00	7.00	8.00
Instrumentation Technician II	-	-	6.00	5.00	6.00
Lead Mechanic	-	-	2.00	2.00	2.00
Machinist	-	-	1.00	1.00	1.00
Administrative Assistant	-	-	1.00	1.00	1.00
Senior Mechanic	-	-	17.00	17.00	18.00
Welder/Fabricator	-	-	3.00	3.00	3.00
Lead Facilities Worker	-	-	1.00	1.00	1.00
Electrical Technician I	-	-	1.00	1.00	1.00
Instrumentation Technician I	-	-	3.00	3.00	3.00
Facilities Worker/Builder	-	-	3.00	2.00	2.00
Facilities Worker/Painter	-	-	2.00	1.00	1.00
Mechanic	-	-	1.00	1.00	1.00
Maintenance Worker	-	-	3.00	2.00	2.00
Total Plant No. 1 Maintenance	-	-	82.00	85.00	62.00

## 2017-18 Budget Update

Division & Position	Authorized FTEs 2013-14	Authorized FTEs 2014-15	Authorized FTEs 2015-16	Authorized FTEs 2016-17	Proposed FTEs 2017-18
<b>875 Maintenance Reliability and Planning</b>					
Engineering Manager	-	-	-	-	1.00
Engineering Supervisor	-	-	-	-	1.00
Senior Engineer	-	-	-	-	3.00
Engineer	-	-	-	-	4.00
Maintenance Supervisor	-	-	-	-	1.00
Associate Engineer	-	-	-	-	2.00
Maintenance Specialist	-	-	-	-	11.00
Reliability Maintenance Technician	-	-	-	-	5.00
Total Maintenance Reliability and Planning	-	-	-	-	28.00
<b>880 Plant No. 2 Maintenance</b>					
Maintenance Superintendent	-	-	1.00	1.00	1.00
Maintenance Supervisor	-	-	5.00	5.00	5.00
Lead Electrical Technician	-	-	2.00	2.00	2.00
Lead Instrumentation Technician	-	-	2.00	2.00	2.00
Electrical Technician II	-	-	6.00	6.00	7.00
Instrumentation Technician II	-	-	7.00	6.00	8.00
Lead Mechanic	-	-	2.00	2.00	2.00
Administrative Assistant	-	-	1.00	-	-
Senior Mechanic	-	-	15.00	14.00	14.00
Lead Facilities Worker	-	-	-	1.00	1.00
Electrical Technician I	-	-	1.00	1.00	1.00
Instrumentation Technician I	-	-	1.00	-	-
Facilities Worker/Builder	-	-	-	1.00	1.00
Facilities Worker/Painter	-	-	-	1.00	1.00
Mechanic	-	-	1.00	1.00	1.00
Maintenance Worker	-	-	2.00	2.00	2.00
Total Plant No. 2 Maintenance	-	-	46.00	45.00	48.00
<b>890 Environmental Laboratory and Ocean Monitoring</b>					
Environmental Lab & Ocean Monitoring Manager	1.00	1.00	1.00	-	-
Environmental Supervisor	1.00	1.00	1.00	-	-
Laboratory Supervisor	2.00	2.00	2.00	-	-
Senior Scientist	3.00	3.00	3.00	-	-
Scientist	1.00	1.00	1.00	-	-
Principal Environmental Specialist	2.00	2.00	2.00	-	-
Principal Laboratory Analyst	6.00	6.00	6.00	-	-
Senior Environmental Specialist	6.00	6.00	6.00	-	-
Boat Captain	1.00	1.00	1.00	-	-
Senior Laboratory Analyst	10.00	10.00	10.00	-	-
Environmental Specialist	1.00	1.00	1.00	-	-
Laboratory Analyst	3.00	3.00	3.00	-	-
Administrative Assistant	1.00	1.00	1.00	-	-
Laboratory Assistant	3.00	3.00	3.00	-	-
Total Environmental Laboratory and Ocean Monitoring	41.00	41.00	41.00	-	-
<b>Total Operations and Maintenance Department</b>	<b>283.00</b>	<b>284.00</b>	<b>294.00</b>	<b>279.00</b>	<b>287.00</b>
<b>Grand Total, All Departments*</b>	<b>624.00</b>	<b>624.00</b>	<b>624.00</b>	<b>627.00</b>	<b>635.00</b>

*\*FTE totals above exclude three Management Discretion positions that are authorized but used only on a temporary basis to facilitate the replacement of key positions. FTE totals also exclude three companion positions to be used for extended leaves of absence. Total filled positions will not exceed 635 FTEs at any point in time.*

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## **Historical Staffing Detail**

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# 2017-18 Budget Update

## **Appropriations Limit**

Article XIII B of the California State Constitution, more commonly referred to as the Gann Initiative or Gann Limit, was adopted by California voters in 1980. The Gann Limit placed limits on the amount of proceeds of taxes that state and local governmental agencies can receive and appropriate (authorize to spend) each year.

The limit is different for each agency and the limit changes each year. The annual limit is based on the amount of tax proceeds that were authorized to be spent in fiscal year 1978-79 in each agency, modified for changes in inflation and population in each subsequent year.

Proposition 111 was passed by the State's voters in June 1990. This legislation made changes to the manner in which the Appropriations Limit is to be calculated:

The annual adjustment factors for inflation and population have been changed. Instead of using the lesser of California per capita income, or U.S. CPI, each agency may choose either the growth in the California per capita income, or the growth in assessed valuation due to new non-residential construction within the district. For population, instead of using only the population growth of an agency, each agency may choose to use the population growth within its county. These are both annual elections.

The revised annual adjustment factors will be applied to the 1986-87 limit for most agencies and each year in between in order to calculate the 1990-91 limit. The actual limits for the intervening years, however, are not affected.

Expenditures for "qualified capital outlay", which are capital assets with a value of more than \$100,000 and an expected life of 10 years or more, are excluded from the limit.

An agency which exceeds the limit in any one year may choose to not give a tax refund if they fall below the limit in the next fiscal year. They then have two more years to refund any remaining excess or to obtain a successful override vote.

In certain situations, proceeds of taxes may be spent on emergencies without having to reduce the limit in future years.

Each agency also conducts a review of its Appropriations Limit during its annual financial audit.

The law requires a governing body to annually adopt, by resolution, an appropriations limit for the following year, along with a recorded vote regarding which of the annual adjustment factors have been selected. The Orange County Sanitation District's appropriations limit and annual adjustment factors are adopted at the same meeting as the budget. The adjustment factors used for 2017-18 are the weighted average change in city population and the change in state per capita personal income.

The following table shows the annual appropriations limit for each of the last two years and the appropriations limit and the appropriations, or proceeds from taxes, for 2017-18. The increase in the limit is based upon population changes ranging from (0.15 percent) to 0.80 percent for major cities within the District as provided by the State Department of Finance and a per capita personal income change of 3.69 percent as provided by the State Department of Finance.

Annual Appropriation Limits:	
2015-16	\$95,682,784
2016-17	\$101,768,666
2017-18	\$105,998,787

Proceeds of Taxes (Appropriations)	
2017-18	\$22,418,475

As a result of the July 1998 consolidation of the District, a single limit is presented in contrast to individual limits shown in years prior to 1998. Population changes for representative cities have continued to be used in order to ensure consistency and to eliminate significant population growth in parts of the County outside of OCSD's service area. This method results in a lower limit than using the County-wide change.

# Miscellaneous Statistics

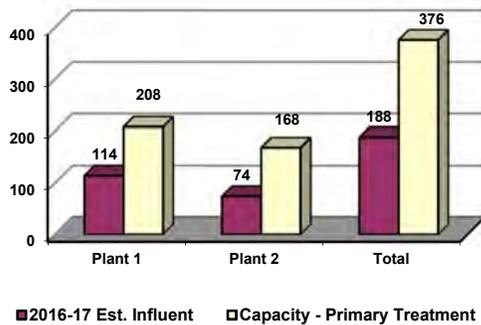
## General Information

Year of Formation..... 1948  
 Form of Government ..... County Sanitation District  
 Authority..... Section 4700 et. seq.  
 ..... California Health & Safety Code  
 Service Area ..... 479 sq. miles  
 Service Population ..... Approximately 2.6 million  
 2016-17 Assessed Value..... \$391.8 billion

Miles of Sewers..... 396 miles  
 On-Plant Pump Station.....2  
 Off-Plant Pump Stations.....15  
 Operating Authority ..... RWQCB/NPDES Permit No.  
 .....CA0110604  
 .....Statewide WDR Order No. 2006-0003  
 2017-18 Authorized Staff (Full-Time Equivalent)..... 635.00

## Treatment Information

**Daily Influent Flow to Total Primary Capacity Comparison (in mgd)**



2015-16 Influent BOD:  
 Plant No. 1 ..... 320 milligrams per liter  
 Plant No. 2 ..... 330 milligrams per liter

2015-16 Influent Suspended Solids:  
 Plant No. 1 ..... 353 milligrams per liter  
 Plant No. 2 ..... 370 milligrams per liter

2015-16 Effluent BOD ..... 9.5 milligrams per liter

2015-16 Effluent Suspended Solids ..... 6.0 milligrams per liter

2015-16 Biosolids Produced & Reused ..... 284,633 wet tons

Primary Treatment Capacity (includes standby):  
 Plant No. 1 ..... 208 mgd  
 Plant No. 2 ..... 168 mgd  
 TOTAL ..... 376 mgd

2016-17 Estimated Average Daily Influent:  
 Plant No. 1 ..... 114 mgd  
 Plant No. 2 ..... 74 mgd  
 TOTAL ..... 188 mgd

Secondary Treatment Capacity:  
 Plant No. 1 ..... 182 mgd  
 Plant No. 2 ..... 150 mgd  
 TOTAL ..... 332 mgd

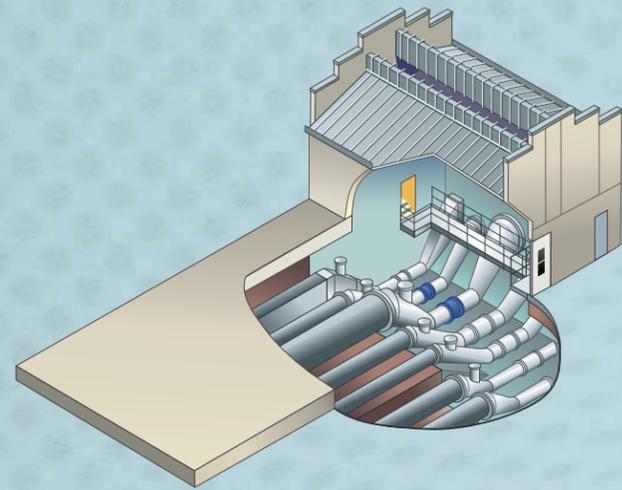
2016-17 Estimated Electricity Generated:  
 Plant No. 1 ..... 41,424,000 kwh  
 Plant No. 2 ..... 56,381,000 kwh  
 TOTAL ..... 97,805,000 kwh

Legend:  
 mgd – million gallons per day  
 kwh – kilowatts per hour

## Financial Information

	2015-16 Actual	2016-17 Projected	2017-18 Originally Proposed	2017-18 Updated Proposed
<b>Fees and Charges:</b>				
One-Time 3-Bedroom Residence Connection	\$3,588.00	\$3,710.00	\$3,710.00	\$3,855.00
Average Annual Single-Family Residence Fee	\$322	\$327	\$331	\$331
Local SFR Fee	\$216	\$108	\$108	\$108
OCSD's Avg. Share of Ad Valorem Property Tax	1.62%	1.62%	1.80%	1.80%
Cost to Collect, Treat, & Dispose of 1 Million Gallons	\$2,110.39	\$2,047.83	\$2,219.24	\$2,249.82
<b>Summary of COP Issues:</b>				
April 2009A New Money	\$ 9,155,000			
May 2010A New Money	80,000,000			
November 2010C New Money	157,000,000			
September 2011A Refunding	96,330,000			
February 2012A Refunding	100,645,000			
August 2012B Refunding	66,395,000			
August 2014A Refunding				85,090,000
February 2015A Refunding				127,510,000
March 2016A Refunding				145,880,000
November 2016B Refunding				109,875,000
February 2017A Refunding				66,370,000
Total Outstanding COP Balance 7/1/17				<u>\$ 1,044,250,000</u>

# Orange County Sanitation District Wastewater Treatment Process

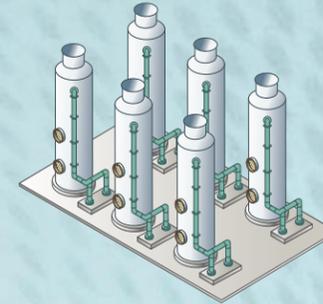
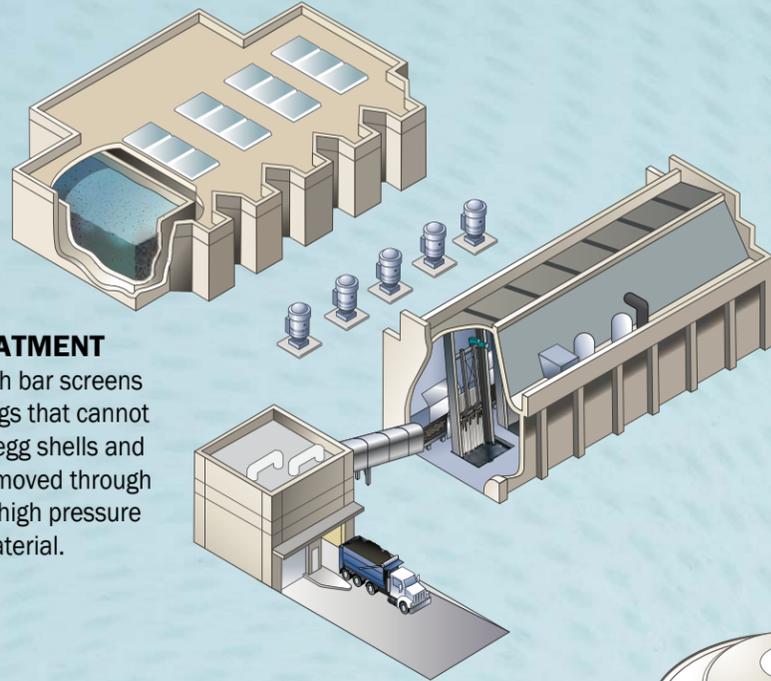


## 1. METERING AND DIVERSION

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.

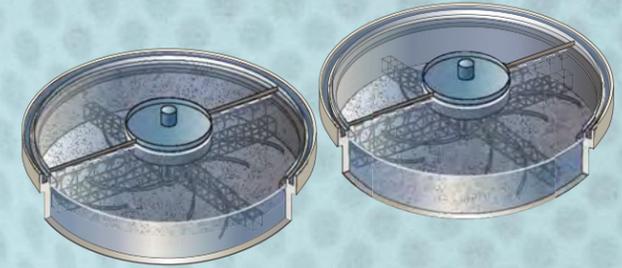
## 2. PRELIMINARY TREATMENT

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.



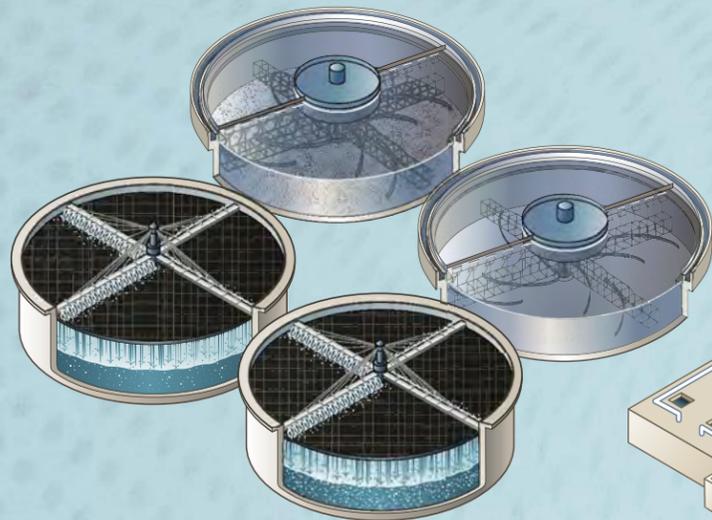
## 3. AIR SCRUBBER

Hydrogen Sulfide (foul air) is captured throughout the process and funneled into large silos. It passes through a plastic medium and mixes with caustic soda and bleach. Causing the odorous compounds to be neutralized.



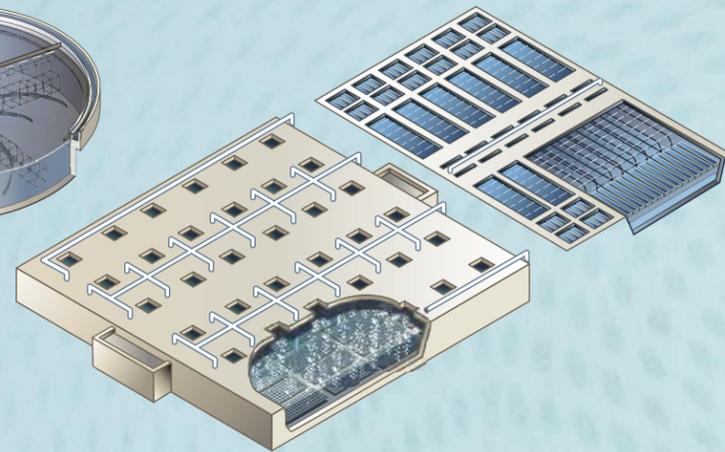
## 4. PRIMARY TREATMENT

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



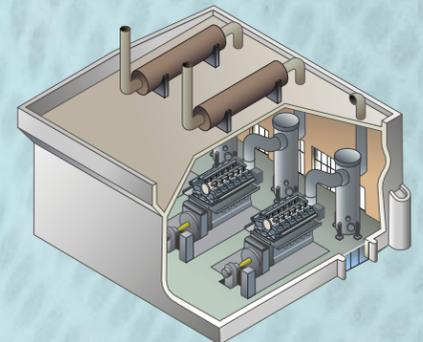
## 5. SECONDARY TREATMENT

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 removed through primary treatment. Aeration tanks use a combination of oxygen and microorganisms, (activated sludge) that consume the remaining organic solids. Treated 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 anaerobic digesters where they are heated to about 98 degrees and treated for 18-21 days. They enter de-watering where water is squeezed out using belt presses. The nutrient rich biosolids are trucked off to farms 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.



## Our Mission:

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

The Orange County Sanitation District (OCSD) is a public agency that provides wastewater collection, treatment, and disposal services for approximately 2.5 million people in our service area of central and northern Orange County. OCSD is a special district that is governed by a Board of Directors consisting of 25 board members. OCSD has two operating facilities that treat wastewater from residential, commercial, and industrial sources.

### Follow the Flow:

**Pretreatment:** All the cities’ sewers connect to OCSD’s collections system that transports the wastewater to our treatment plants. Before the sewage enters our facilities, our Source Control Program permits and inspects business and industry that discharge waste into the sewers. Maintaining and protecting our trunklines from corrosion and odor issues is also an important part of what we do.

**1. Metering and Diversion:** Wastewater enters our treatment plants through trunklines up to 10-feet in diameter at a speed of 2.5-5 mph. Automated equipment measures the pH, conductivity, flow, and temperature. Data is monitored by Operators around the clock.

**2. Preliminary Treatment:** Consists of two parts – bar screens and grit chambers. First, sewage passes through metal bars that catch large items (rags, trash, wood, etc.). Next, grit chambers use air bubbles to suspend lighter material while heavier grit (egg shells, coffee grounds, gravel, sand, etc.) sinks to the bottom and is removed. Screenings and grit are sent to a landfill.

**3. Air Scrubber:** Most processes that produce odors are covered and the foul air is drawn off for cleaning (deodorizing) by air scrubbers. OCSD uses both Chemical and Biofilter systems. Hydrogen Sulfides (sewer gas smell) are neutralized by using caustic soda, bleach, or live microorganisms.

**4. Advanced Primary Treatment:** Chemicals (ferric chloride and anionic polymer) are added to the preliminary treated sewage to improve settling. Heavier suspended solids clump together and sink to the bottom. Lighter waste (grease and oil) float to the surface. This process takes about 2 hours and up to 75% of the suspended solids are continuously removed by scraper arms revolve along the top and bottom of the basin. These solids are sent to digesters for further processing.

**5. Secondary Treatment:** Advanced primary treated sewage is sent to either trickling filters or activated sludge processes where aerobic microorganisms eat the remaining dissolved waste from the water. The secondary treated wastewater is then settled in clarifiers allowing the remaining sludge (either live or dead microorganisms) to be removed. Activated sludge process uses aeration basins to mix oxygen and microorganisms to enhance the waste removal rate. Some of the sludge is pumped back into the aeration basin as return activated sludge to regenerate the basin. The remaining sludge is thickened and sent to digesters.

**Final Effluent:** Almost all the secondary treated wastewater from Plant 1 is sent to the Orange County Water Districts for advanced treatment through the Groundwater Replenishment System (GWRS). This water is used to replenish Orange County’s groundwater aquifers and protect against seawater intrusion. The secondary treated wastewater from Plant 2 is safely released through our ocean pipeline five miles out to sea at a depth of 200 feet below the ocean surface.

## Biosolids

**Our Policy:** OCSD strives to recycle our biosolids using sustainable options while protecting public health and the environment.

Some of our biosolids are recycled and used like fertilizer on farm fields to create and maintain healthy soils and improve crop yields.

Some of OCSD’s biosolids are further processed through composting to create a consumer-grade soil amendment that is distributed to agricultural, commercial and residential users.

### Certified Program

OCSD was the first public wastewater agency in the nation certified by the National Biosolids Partnership (NBP) ([www.biosolids.org](http://www.biosolids.org)) for our biosolids program in 2003. Certification is maintained through independent, third-party audits that verify OCSD conforms to the management system standard that was designed by the NBP, U.S. Environmental Protection Agency (EPA) and other clean water partners.



### Learn More

Visit our web site at [www.ocsewers.com/biosolids](http://www.ocsewers.com/biosolids) for more information and to sign up for periodic biosolids program newsletters using the “Keep me Informed” button.



The Groundwater Replenishment System (GWRS) is the world’s largest advanced water purification system for potable reuse. It takes treated wastewater that otherwise would be sent to the Pacific Ocean and purifies it using a three-step advanced process.

The design and construction of the GWRS was jointly funded by the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD). Together OCWD and OCSD constructed one of the most celebrated civil engineering and water reuse projects in the world.

The GWRS provides a reliable supply of high-purity near-distilled quality water even during drought and offers a more cost-effective and energy-efficient strategy than importing water from distant sources.

GWRS provides the county with new water it can count on and serves as a model project for other regions throughout the United States and the world that are or will be facing natural and man-made water supply challenges.



## Know what should go down the drain that is sewer safe

It’s simple, the toilet is only meant to flush the **three P’s—pee, poop and paper.**

Unfortunately, over the years, people have turned the toilet into a trash can. From medications and sanitary products to deceased pet fish and cigarette butts. If it fits, people flush it. Flushing these types of items down the toilet causes home pipes to clog, wastes water (up to 5 gallons of water every time you flush) and most importantly can have a huge impact on our sewers, not to mention our ocean.



Besides the three P’s **the only other thing going down the drain should be soap and water.** The toilet is not the only drain that people are using to get rid of unwanted waste; people are also known to use the kitchen sink as a trash can. Letting trash flow and go down the kitchen sink (or any other drain in the house) may cause pipes to clog and can eventually lead to sewage spills that harm the environment.

Visit [www.What2Flush.com](http://www.What2Flush.com) to learn how to properly dispose of common items that people flush or dump down the drain. Let’s keep our wastewater flowing and our oceans clean. Educate yourself and others.

Know **What 2 Flush** and what to put down the drain. Protect our sewers and environment!



**Reclamation Plant No. 1 and Administration Offices**  
10844 Ellis Avenue, Fountain Valley, California 92708



**Treatment Plant No. 2**  
22212 Brookhurst Street, Huntington Beach, California 92646



Phone: 714.962.2411  
Email: [forinformation@ocsd.com](mailto:forinformation@ocsd.com)  
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INSIDE OF BACK COVER



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