



Transparent Resilient Reliable

OUR COMMITMENT TO YOU

**ANNUAL REPORT
2020/2021**





Surge tower at Plant No. 2
in Huntington Beach.

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Who We Are...

The Orange County Sanitation District (OC San) is a special district governed by a 25-member Board of Directors comprised of 20 cities, four special districts, and one representative from the Orange County Board of Supervisors.

OC San provides wastewater collection, treatment, and recycling for approximately 2.6 million people living within a 480 square-mile area of central and northwestern Orange County.

Our wastewater collection facilities include 388 miles of sewer pipes and 15 off-site pump stations, located throughout our service area. Each day, we treat more than 180 million gallons of wastewater from residential, commercial, and industrial sources at our two plants: Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 in Huntington Beach.



Trickling Filters Construction at Plant No. 2 in Huntington Beach.

Our Mission:

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

Our Vision:

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.





Plant No. 1 Secondary Clarifier in Fountain Valley.

Letter from the General Manager

Transparent, Resilient and Reliable service — this continues to be OC San's commitment to its customers, community, board members, and fellow agencies.

This pandemic has shown us the importance of remaining resilient. As we have navigated through the ever-evolving challenges of the past year, OC San's dedicated staff have continued their work to deliver reliable service 24 hours a day, every day. We have also continued planning and building for the future to ensure that our community has resilient infrastructure with up-to-date technology.

At the same time, we have worked to maintain visibility and transparency with the public while implementing COVID-19 safety precautions. OC San has utilized technology to conduct our external-facing work virtually, for example Board Meetings, pre-bid job walks, employee recruitment, and plant tours.

Our agency continued to move forward with important projects during Fiscal Year 2020-21, awarding over \$475 million in construction contracts for more than 20 capital projects. These projects are not only essential to deliver our mission safely and reliably, but the dollars spent are also providing a much-needed boost to our economy.

I would like to thank our current and past Board Members for their vision and foresight. Under their leadership, we are ensuring that we continue to thrive and innovate under these trying times. And thank you to our community for their continued trust and support for our agency, and to our staff for their commitment to protecting public health and the environment — even under the most challenging of circumstances.

Sincerely,

James D. Herberg
General Manager

Board of Directors

City	Active Director
Anaheim	Stephen Faessel
Brea	Glenn Parker
Buena Park	Art Brown
Cypress	Paulo Morales
Fountain Valley	Patrick Harper
Fullerton	Jesus J. Silva
Garden Grove	Steve Jones
Huntington Beach	Kim Carr
Irvine	Anthony Kuo
La Habra	Rose Espinoza
La Palma	Marshall Goodman
Los Alamitos	Mark Chirco
Newport Beach	Brad Avery
Orange	Kim Nichols
Placentia	Chad Wanke (Vice-Chairman)
Santa Ana	Johnathan Ryan Hernandez
Seal Beach	Sandra Massa-Lavitt
Stanton	David Shawver
Tustin	Ryan Gallagher
Villa Park	Chad Zimmerman
Sanitary Districts	
Costa Mesa Sanitary District	Robert Ooten
Midway City Sanitary District	Andrew Nguyen
Water Districts	
Irvine Ranch Water District	John Withers (Chairman)
Yorba Linda Water District	Brooke Jones
County Areas	
Member of the Board of Supervisors	Doug Chaffee

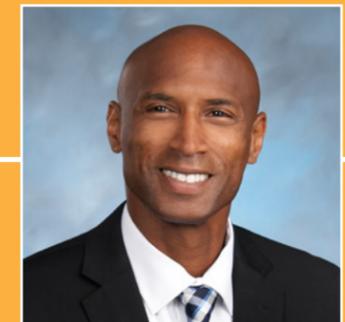
Executive Management Team



James Herberg
General Manager



Robert Thompson
Assistant General Manager and Director of Operations and Maintenance



Lorenzo Tyner
Assistant General Manager and Director of Finance and Administrative Services



Kathleen Millea
Director of Engineering



Celia Chandler
Director of Human Resources



Lan Wiborg
Director of Environmental Services



TRANSPARENT

Construction at Plant No. 2 in Huntington Beach.

New Logo... Same Great Service

We are proud to announce that earlier this year, we updated our name and logo. We want to continue to be a transparent agency with a name and logo that clearly reflect who we are and the work that we do. The rebranding was designed to bring clarity to the work of OC San to reflect the water resource recovery agency it has become, and to avoid confusion with other Orange County agencies.

"Our new logo is a representation of the work we do and the community that we serve," said OC San General Manager Jim Herberg. "Changing the abbreviated version of Orange County Sanitation District from OCSD to OC San will help our agency be easily recognized and more clearly associated with our mission."



OC San Plays a Key Role in COVID-19 Public Health Surveillance System

As the COVID-19 pandemic continues and new variants appear, the Centers for Disease Control and Prevention (CDC) established a National Wastewater Surveillance System (Surveillance Program), a public health surveillance system for COVID-19. The CDC defines a public health surveillance system as an ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice.

In California, the Department of Public Health (CDPH), State Water Resources Control Board, OC San and four other wastewater treatment agencies have been leading the state's wastewater surveillance efforts also known as Wastewater Based Epidemiology since December of 2020. To support the CDC's Surveillance Program and to be transparent, OC San analyzes the raw influent that comes in from throughout Orange County and provides the data to the CDPH three times a week. The reports provided to the CDPH include the findings (if any) of the SARS-CoV-2 genetic material.

Once CDPH reviews the data, it is uploaded to CDC's Surveillance Program data portal. After the data is reviewed and interpreted by CDC, information is shared with public health officials and stakeholders to better understand the extent of COVID-19 infection in communities.

Individuals infected with SARS-CoV-2, both asymptomatic and symptomatic, shed the virus in stool that ends up in the sewage system. Fortunately, SARS-CoV-2 has not been shown to remain infectious in wastewater, but its genetic material can be detected and used as an indicator of the presence of COVID-19 in a community.

Looking Ahead... OC San Builds New Headquarters Building



Architectural rendering of the building and bridge at night, view from Ellis Avenue.

OC San strives for transparency in all that we do. After a long journey and hard work, we have officially broken ground on our new headquarters building, which is located across from Plant No. 1 in Fountain Valley.

The design and technology integrated into the building will provide a world class working environment to accommodate up to 350 staff currently spread out over 100 acres of Plant No. 1 in Fountain Valley, in various aging buildings and trailers. The staff will be brought together under one roof of the new three-story, 110,000-square foot building. The new building will also allow us to showcase what we do with the addition of a grant funded educational center on OC San's resource recovery efforts for our visitors.

Construction is scheduled for completion towards the end of 2023.

The design of the building integrated the most environmentally friendly features and materials and has won several awards including:

Honorable Mention (2020)

Unbuilt — Green Category, Best of Design Awards
Architect's Newspaper

World Changing Ideas Honorable Mention (2020)

Spaces, Places, and Cities Category
Fast Company

Merit Award (2019)

Committee on the Environment NEXT
American Institute of Architects Los Angeles

We thank our community for their support and can't wait till the project is complete and we are able to open our doors.



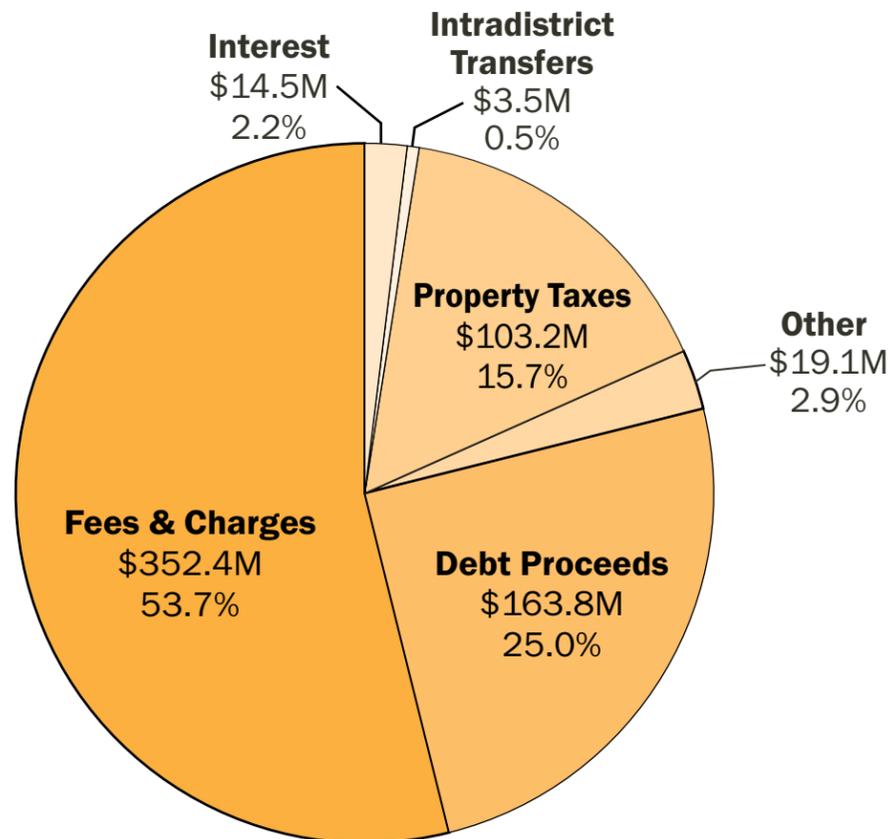
Architectural rendering of the front lobby with mass timber elements.

Financial Planning: Protecting our Communities Assets

OC San strives to ensure we are financially stable while keeping our rates affordable. Recently, OC San had its AAA credit rating reaffirmed by Fitch Ratings, Standard & Poor's, and Moody's Investors Service Incorporated. These ratings are based on our management practices and financial strength. The AAA rating is the highest possible credit rating an agency can receive, which means that we have access to low interest rate financing on infrastructure improvements, resulting in cost savings for OC San's customers. OC San is the only California utility with a AAA rating from all three major rating agencies.

Many government agencies are faced with growing long-term liabilities, particularly in the area of employee pensions. Following the Great Recession, like many agencies OC San had a significant Unfunded Actuarial Accrued Liability (UAAL). Through the proactive stance of our Board of Directors, we paid down the unfunded liability, which will save our ratepayers nearly seven percent a year in premium payments. At this time, OC San's pension obligations are current with zero UAAL.

Where The Money Comes From



Managing Your Money Wisely

OC San is proud to announce that it has received an Investment Policy Certification by the California Municipal Treasurers Association (CMTA). CMTA is the professional society of active public treasurers of California counties, cities, and special districts. It sets ethical standards for the treasury profession in state and local government in California.

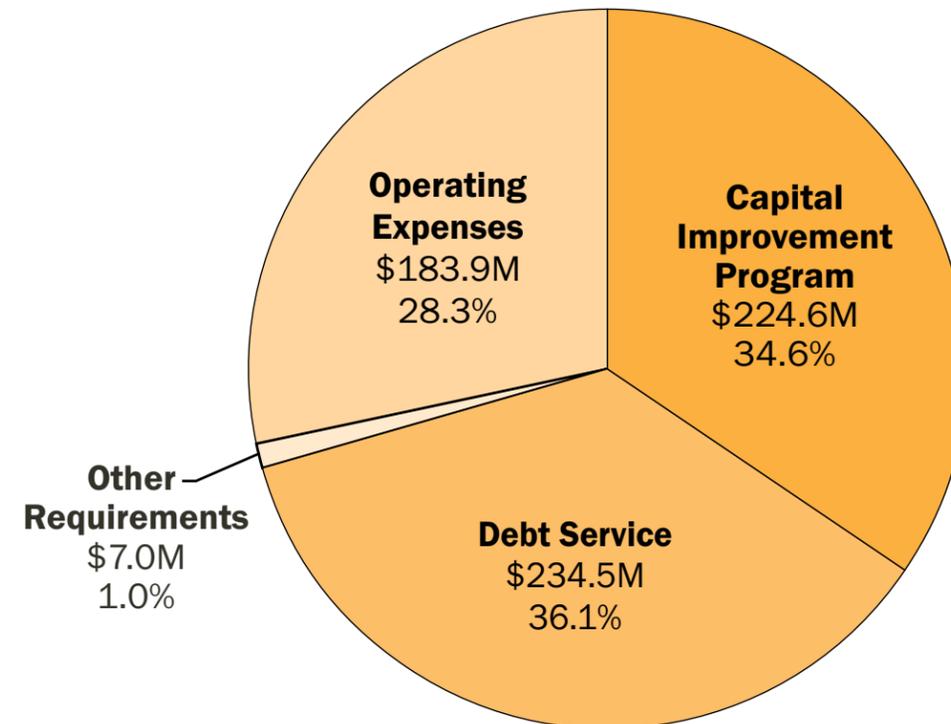
CMTA's Investment Policy Certification program began in 2012 with the support from the California Debt and Investment Advisory Commission. It is open to all government agencies within the State of California including special districts, cities, and counties.

To receive certification, OC San's policy must adhere with the State of California Government Code and meet the program requirements within 18 different topic areas deemed to be best practices for investment policies such as delegation of authority, internal controls, performance standards, reporting, investment policy adoption, ethics, and conflicts of interest.



"As a public agency, we make every effort to be completely diligent and comprehensive in our investments. This is the first time we have applied for the certification, and I am proud to say that it reaffirms our efforts to maintain such high standards," stated Lorenzo Tyner, OC San Assistant General Manager and Director of Finance and Administrative Services.

Where The Money Goes



A wide-angle, high-angle photograph of a large industrial facility, likely a power plant. The scene is filled with complex machinery, including several large, grey, multi-cylinder engines mounted on metal platforms. These engines are interconnected by a dense network of large, silver, insulated pipes that snake across the ceiling and through the facility. The floor is a mix of concrete and metal grating, with various walkways and ladders providing access to the equipment. The lighting is bright and even, highlighting the metallic surfaces and the intricate layout of the plant. The overall impression is one of a well-maintained, large-scale industrial operation.

RESILIENT

CenGen Facilities at Plant No. 1 in Fountain Valley.

We Are Partners

As an everyday practice, we incorporate reliability in all that we do. OC San generates about 550 tons per day of biosolids, which are highly treated, nutrient-rich, organic matter recovered through the treatment of wastewater. OC San's biosolids are treated on-site and used off-site in accordance with all regulations and best management practices.



CenGen at Plant No. 1 in Fountain Valley.

As community partners, OC San works to beneficially reuse all of the products generated as part of the wastewater treatment process. We are more than a wastewater treatment facility; we are an energy producer. We generate an average of 7.8 million kilowatt hours of energy per month by converting biogas, a byproduct of the wastewater treatment process, into electricity and heat. This renewable gas is used at our facilities to save energy, reduce greenhouse gas emissions and save about \$5.6 million annually in power that would otherwise be purchased from Southern California Edison.

We haven't stopped there, we are utilizing the latest energy storage technology too. OC San operates a 4.9-megawatt, 32.5-megawatt-hour Tesla lithium-ion energy storage system which is the largest single customer-sited battery system in the United States. The battery storage system is saving OC San ratepayers at least \$300,000 per year.



Battery storage system at Plant No. 1 in Fountain Valley.

Partnering for Solid Waste Resiliency

In 2016, a California law (SB 1383) established methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants. The bill aimed to address the many impacts of climate change on human health. The new law established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025.

Acting as regional partners to assist cities in our service area with SB 1383 requirements, OC San has designed an Interim Food Waste Receiving Facility to be constructed at our Plant No. 2 in Huntington Beach. The station is designed to accept approximately 150 tons per day of preprocessed food waste slurry from waste haulers and feed it into our existing digester complex. Adding the food waste slurry to our digesters can increase the production of methane gas used for on-site power generation. This project will, once constructed, assist OC San's member agencies in meeting Senate Bill 1383 organic diversion goals.

SB 1383 also encourages the use and purchase of biosolids-based amendments and products. As regional partners, we are working with our local cities to help them meet the requirements of SB 1383 and encourage composting as a tool to meet the statewide mandate. For more information, visit www.ocsan.gov/compost.



We Are In It Together

We understand the financial hardship the pandemic has caused for many in our community. We want to do our part by providing some relief to our ratepayers and lend a helping hand during these challenging times. In response, OC San did not charge late penalties to our customers during the last year. Also, the OC San Board of Directors voted to not raise sewer fees for all customers for the 2020-21 fiscal year. The sewer service fee for a single-family residence remained at \$339 for the year, less than one dollar a day. Sewer service fees for commercial users and permitted industrial users also remained flat during fiscal year 2020-21.

At the same time, OC San reverted to a previous rebate methodology allowing non-residential customers to apply for an additional rebate that could grant them more relief. In an ongoing effort to keep our staff, Board of Directors, vendors and community safe we implemented a variety of safety protocols including virtual meetings, online services, and created an environment where our administrative staff are able to work from home to prevent the spread of COVID-19. Additionally, we knew we had to find a way to conduct business while providing an opportunity for our leadership to continue to guide us. Through technological advances and the implementation of the Governor's Executive Order, for the first-time ever virtual Board Meetings were conducted.

As partners in our community and leaders in the world of research OC San and four other wastewater treatment facilities have been leading the state's wastewater surveillance efforts also known as Wastewater Based Epidemiology. OC San analyzes the raw influent that comes in from throughout Orange County and provides the data to the California Department of Public Health (CDPH), three times a week.

Individuals infected with SARS-CoV-2, both asymptomatic and symptomatic, shed the virus in stool that ends up in the sewage system. Fortunately, SARS-CoV-2 has not been shown to remain infectious in wastewater, but its genetic material can be detected and used as an indicator of the presence of COVID-19 in a community.



John Withers
Board Chairman

"As this pandemic continues to change the landscape of our community, OC San is committed to providing this essential service. Our fiscal stewardship over the years has allowed us to maintain our level of service and protecting public health and the environment is our top priority," stated John Withers, OC San Board Chairman.

Groundwater Replenishment System

With a long standing goal of improving water supply resiliency in Orange County, OC San and the Orange County Water District (OCWD) embarked on the final expansion of the Groundwater Replenishment System (GWRS). The project is a collaboration between OC San and OCWD and is the world's largest water purification system for indirect potable reuse.

The system takes highly treated wastewater from OC San that would have otherwise been released into the ocean and purifies it using a three-step advanced treatment process. The result is high quality water that meets or exceeds all state and federal drinking water standards.

The GWRS final expansion includes a total of four projects, two OC San projects and two OCWD projects. The GWRS will maximize water reuse, reducing the amount of treated wastewater released through the ocean outfall and helping us to meet our goal of recycling 100 percent of our reclaimable flows. The final expansion projects will increase treatment capacity from 100 to 130 million gallons per day, enough water for 1 million people! The final phase of the project is under construction and expected to be completed in 2023.



The GWRS holding tanks allow a slow and steady release of secondary treated effluent into the GWRS treatment facilities.

RELIABLE

Construction at Plant No. 1 in Fountain Valley.

OC San's Ocean Discharge Permit Renewed

Every five years, OC San is required to apply for the renewal of its ocean discharge permit. The permit formally known as the National Pollutant Discharge Elimination System (NPDES) permit, is jointly administered by the United States Environmental Protection Agency (EPA) and the Santa Ana Regional Water Quality Control Board.

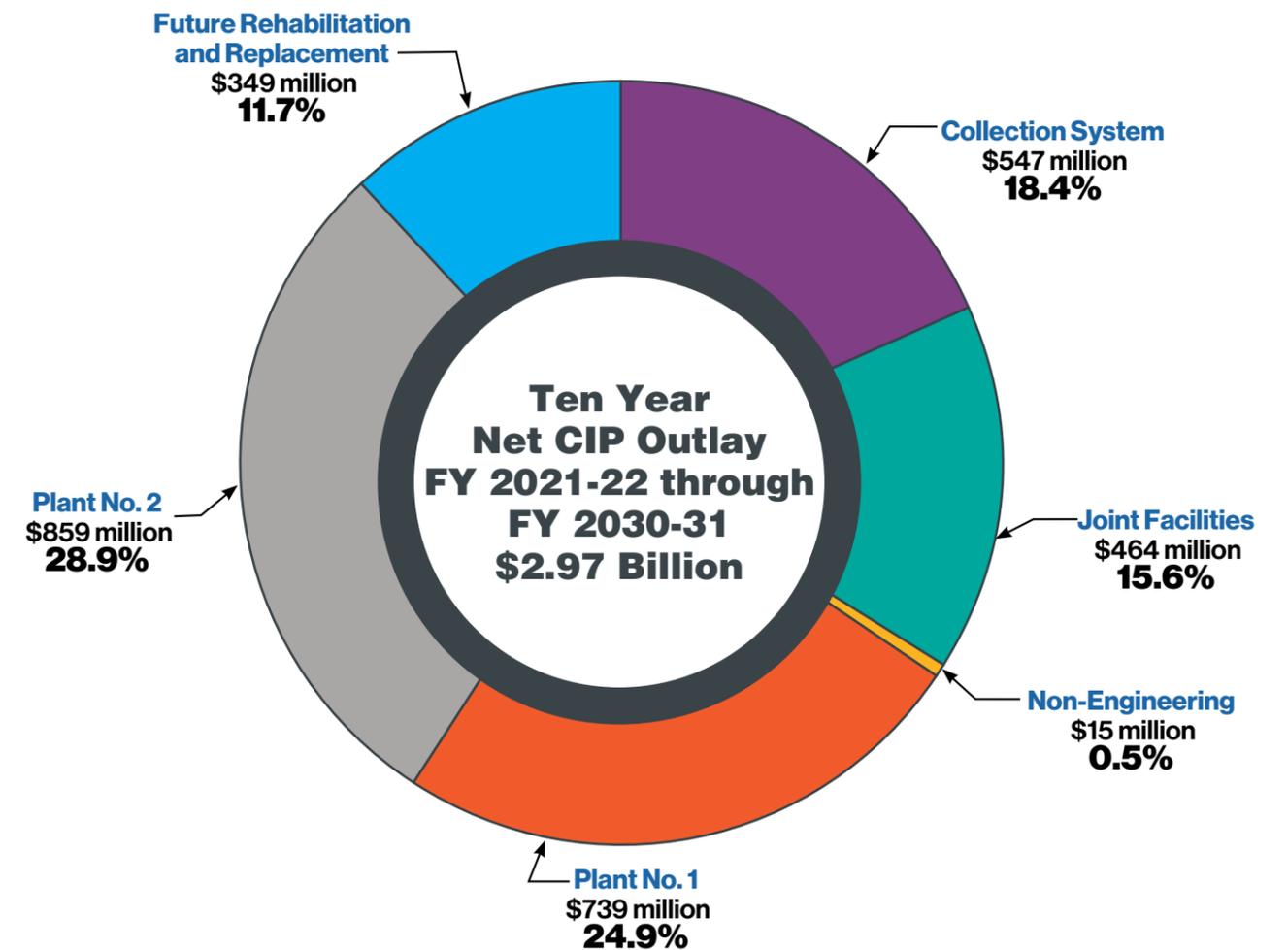
After reviewing extensive technical data provided by OC San, and conducting their own research, the Santa Ana Regional Water Control Board held a public hearing on June 18, 2021, that resulted in a joint agreement with the EPA to reissue the NPDES permit. The renewed permit became effective on August 1, 2021 and will be effective until 2026. In addition to the renewal of our permit, we have more good news—OC San's effluent quality is better (80 percent lower) than our permit limits. This is just another example of our commitment to the work we do and our mission to protect public health and environment.



Ocean Outfall Pipe extending five miles off-shore near Brookhurst Street in Huntington Beach.

Capital Improvement Program

OC San's Capital Improvement Program (CIP) is a 20-year plan to maintain and replace the infrastructure required to provide essential wastewater service to 2.6 million residents of Orange County. Last fiscal year, over 20 projects were advertised for construction with contracts valued at over \$475 million. The projected spending is expected to increase from \$160 million for this past year to \$225 million this coming year; and over \$250 million each year for at least the next ten years.



Looking Ahead — Ensuring Our Reliability

OC San continues to look ahead and plan for the future as we always expect the unexpected. It is said that practice makes perfect — we believe planning makes perfect. By continuously assessing and managing our critical assets we are able to be resilient.

During this fiscal year, we completed the Asset Management Plan ahead of schedule. The plan reviews and updates the ongoing and future capital improvement projects and serves as a tactical document that captures OC San's operational strategies, maintenance plans, and capital improvement plan implementation on an annual basis. Updating this plan was no small feat and provided an opportunity for us to understand the condition and performance of all our critical, major assets and begin the planning process.

*Replacement of engine number one at Plant No. 1
in Fountain Valley.*

For Today and For Tomorrow — Headworks Rehabilitation Project

Ensuring we are reliable not just today but in the future, OC San has begun one of our largest projects to date — the Headworks Rehabilitation Project at Plant No. 1 in Fountain Valley. This project will rehabilitate and provide major upgrades to our Headworks — the heart of our plant — which is the first process as water enters from six regional trunk sewers throughout Orange County.

Headworks lifts the wastewater from the deep sewers and prepares it for treatment. Large debris and other coarse solids are removed from the water; without the Headworks, the water would contain debris capable of damaging our pumps and clogging our treatment systems. This process plays a vital role in OC San's mission to protect public health and the environment.

The budget for this project is over \$340 million and is currently underway. The Headworks Rehabilitation project is expected to be complete in the fall of 2027.



*Construction of the Headworks
Rehabilitation Project.*

Making the Grade

Even during the toughest of times, we continue our tradition of providing the best available service to our community. Every year, Heal the Bay grades over 500 beaches up and down the west coast based on their water quality. This year's report card had 35 beaches on the Honor Roll.

Orange County had the most beaches on the Honor Roll with 10. Statewide, 93 percent of the more than 500 beaches surveyed along the 840 miles of coast earned an A or B in summer months. In Orange County, Summer dry grades were excellent and just below the five-year average with 96 percent of the beaches receiving A and B grades. This is a clear indicator that our collection, treatment and monitoring efforts, and our dry weather urban runoff diversion program are protecting the ocean water quality.

2020-21 Awards

Utility of the Future Today, Energy Generation and Recovery — 2020 Water Environmental Research Foundation, National Association of Clean Water Agencies, Water Environment Federation and Environmental Protection Agency

Platinum Peak Performance Award — 2020 National Association of Clean Water Agencies

Gold Recognition, Excellence in Management — 2020 National Association of Clean Water Agencies

Excellence Award — 2020 Municipal Information Systems Association of California

Santa Ana River Basin — 2021

- Operator of the Year (Gold Category) — Michael Huls
- Collection System Person of the Year — Steve Grande
- Collection System of the Year — 200-500 miles
- Gimmicks and Gadgets — Alkaline Enhanced Iron Odor Control

National Safety Council — 2021

- Occupational Excellence (Plant No. 1)
- Milestone Award (Plant No. 2)

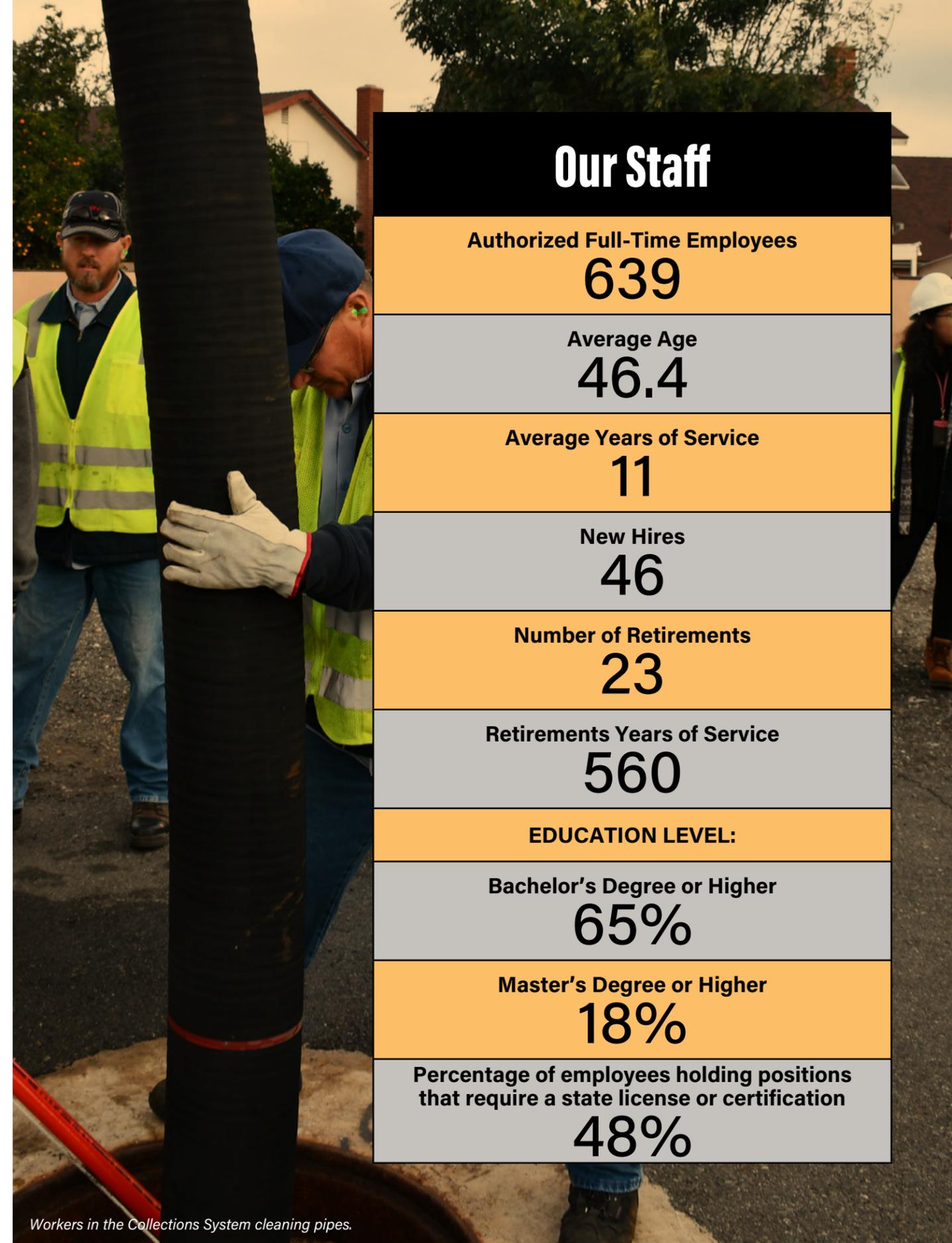
Collections System of the Year, 2nd Place — 2021 California Water Environmental Association

Distinguished Budget Presentation Award — 2021 Government Finance Officers Association

Platinum Peak Performance Award — 2021 National Association of Clean Water Agencies

Gold Recognition, Excellence in Management — 2021 National Association of Clean Water Agencies

Award of Excellence, Asset Management — 2021 California Association of Sanitation Agencies



Our Staff

Authorized Full-Time Employees
639

Average Age
46.4

Average Years of Service
11

New Hires
46

Number of Retirements
23

Retirements Years of Service
560

EDUCATION LEVEL:

Bachelor's Degree or Higher
65%

Master's Degree or Higher
18%

Percentage of employees holding positions that require a state license or certification
48%

Workers in the Collections System cleaning pipes.

Legislative, Social Media, Community Outreach

Legislative

56

Legislative Bills Tracked

13

Federal Position Letters

4

State Position Letters

24

Letters of Support Received

Social Media

755

Social Media Posts

Speakers Bureau

30

Speaking Engagements

Tours

First-time Ever Virtual Tours

35 Tours Reaching 1,144 people

First-Ever Virtual State of the District

140 guests

Education Inside the Outdoors

During the 2020-2021 school year, a total of **1,171** students were reached: **850** elementary students for the "Drip Drop Traveling Scientist" program and **321** middle/high school students for the "Scientists of the Sewer" program.

Y.E.S.

Youth Education Summit

Previously called the Children's Water Education Festival, OC San participated in the Youth Education Summit entitled Y.E.S. reaching more than **6,000** teachers, students and parents throughout Orange County. OC San staff presented on a variety of topics including: the What2Flush program, OC San and the wastewater system.

OC San "U"

Through this internal educational university, 12 sessions were provided with an average attendance of **60** employees per session. The session topics pertain to leadership, technology, communications, and organizational awareness. The university also offers mentoring, a leadership academy, and online courses. Nearly **300** employees have participated in at least one university learning option.



Highlights from 2021

Cleaned six digesters (three at Plant No. 1 and three at Plant No. 2).

Completed maintenance service on 16 primary clarifiers at Plant No. 1.

Major overhaul of six secondary clarifiers at Plant No. 2.

Completed over 25,000 work orders.

Cleaned more than 40 miles of gravity sewers.

In the collections system, removed 44 cubic yards of grit from our gravity sewers.

**Met our levels of service for odor complaints in the collections system.
Received one-third less odor complaints.**

Exceeded our goal to reach 5,000 people through tours, social media, events and publications. We reached nearly 200,000 people.

Increased pump station asset availability from 86 percent to 90 percent.

Managed sanitary sewer overflows to 1.25/100 miles of pipe which is below the Board adopted Levels of Service of 2.1/100 miles of pipe.



Looking Forward 2022

- Rialto Bioenergy Facility (RBF) pilot project. The project will process up to 100 wet tons per day of biosolids, which includes drying and thermal conversion service.
- Refunding the variable rate debt to a lower fixed rate to save our ratepayers \$163 million.
- Conduct a study to find alternatives for treatment plant energy recovery.
- Create a preliminary design for a perimeter wall at Plant No. 2 as part of our Climate Resiliency Plan.
- Continue interagency collaboration to continue developing a Wastewater Surveillance program for COVID-19 and beyond.
- Qualify for and complete the Voluntary Protection Program through the California Division of Occupational Safety and Health (Cal/OSHA).
- OC San will work with the Heritage Museum of Orange County to bring a newly revamped educational program for school-aged children that focuses on wastewater treatment and the What2Flush Program.
- Through the Inside the Outdoors Program, OC San will create a new educational program for middle school and high school students in Orange County that will teach the methodologies in treating wastewater and focus on the What2Flush Program.





*Wastewater Facilities at Plant No. 1
in Fountain Valley.*

Reclamation Plant No. 1 (Administration Offices)

10844 Ellis Avenue, Fountain Valley, California 92708

Treatment Plant No. 2

22212 Brookhurst Street, Huntington Beach, California 92646

Phone: 714.962.2411

www.ocsan.gov

Follow us on:

