

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 479 square-mile area of central and northwestern Orange County. Our wastewater collection facilities include 388 miles of sewer pipelines and 15 off-site pump stations, located throughout our service area.

Each day, we treat approximately 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.

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
- 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.

Letter from the General Manager



Looking back on OC San's accomplishments over the past year, what stands out is the importance of collaboration and resiliency. Delivering effective wastewater collection, treatment, and recycling to our 2.6 million residents requires teamwork here at OC San, and collaboration with other agencies and our community. As we've seen over the past three years, we need to be ready for the unexpected. Our long-term strategic focus on preparation, planning, and building for the future has allowed us to remain resilient in the face of challenges while continuing to move forward on important initiatives.

During the past fiscal year, OC San continued investing in our community's future with \$195 million in capital projects that are not only essential to deliver our mission safely and reliably, but the dollars spent also provide a boost to our economy. Under our continued partnership with the Orange County Water District, our capital improvement program is on track to deliver water for the start-up of the Groundwater Replenishment System final expansion. The final expansion will increase the capacity of GWRS to provide enough water for over 1 million of Orange County's residents, providing a resilient water supply during the ongoing historic drought.

As many of you already know, I will be retiring in February 2023. It is difficult to put into words how much I have enjoyed being part of OC San, and I would like to thank the current and past Board Members for their trust in me and jointly leading this agency over the past decade. I would also like to thank our staff for their dedication and commitment in making OC San a leader in our industry.

Sincerely,

James Herberg James D. Herberg **General Manager**

Board of Directors

City **Active Director**

Anaheim Stephen Faessel

Glenn Parker Brea

Buena Park Art Brown **Paulo Morales Cypress**

Fountain Valley Patrick Harper

Fullerton Jesus J. Silva Garden Grove Steve Jones

Kim Carr **Huntington Beach**

Anthony Kuo Irvine La Habra Rose Espinoza

La Palma Marshall Goodman Los Alamitos Jordan Nefulda

Newport Beach Brad Avery Orange Kim Nichols

Placentia Chad Wanke (Chairman) Santa Ana Johnathan Ryan Hernandez

Seal Beach Sandra Massa-Lavitt

David Shawver Stanton

Tustin Ryan Gallagher (Vice-Chairman)

Villa Park **Chad Zimmerman**

Sanitary Districts

Robert Ooten Costa Mesa Sanitary District Andrew Nguyen Midway City Sanitary District

Water Districts

Irvine Ranch Water District John Withers Yorba Linda Water District **Brooke Jones**

County Areas

Member of the **Board of Supervisors**

Donald P. Wagner



Executive Management Team

James Herberg — General Manager

Robert Thompson — Assistant General Manager



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



Kathleen Millea — Director of Engineering



Celia Chandler — Director of Human Resources

Riaz Moinuddin — Director of Operations and Maintenance

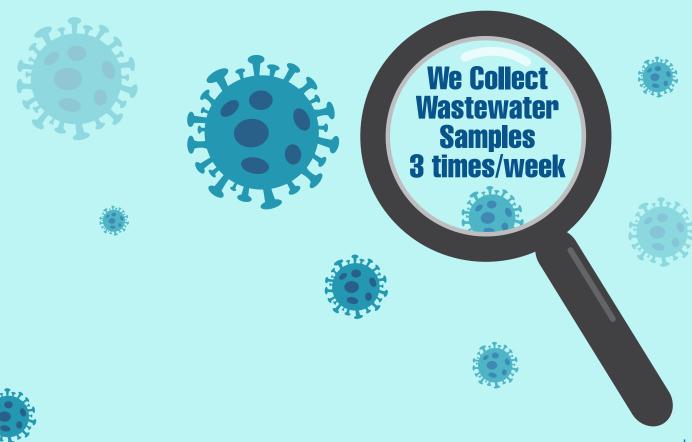
Lan Wiborg — Director of Environmental Services

COVID-19 Public Health Surveillance System — Together We Can

In response to the COVID-19 pandemic, the Centers for Disease Control and Prevention (CDC) launched the National Wastewater Surveillance System in September 2020. This is the first public health surveillance system in the United States to coordinate and support the nation's capacity to monitor SARS-CoV-2 in wastewater. Shortly after, in December 2020 the California Department of Public Health and State Water Resources Control Board in partnership with OC San and four other wastewater agencies initiated the state's first wastewater surveillance effort to support the CDC's efforts.

Over the last fiscal year, OC San continued to play an important role by collecting and shipping wastewater samples three times per week to the state's lab and OC San's contract lab for timely analysis and reporting of data. The data were reported to the CDC for review and interpretation. The information was shared with public health officials and stakeholders to better understand the extent of COVID-19 infection in our communities.

Wastewater surveillance continues to gain wider acceptance as a tool to look for other pathogens at the community level. The CDC plans to expand the wastewater surveillance system as a public health tool to better understand and respond to infectious diseases like antimicrobial resistance or foodborne diseases.



We Learn Together

Our community, our cities, our employees, and our Board of Directors, make us OC San. What better way to celebrate our community than to open our doors (virtually) with the first-ever Wastewater 101 Citizens Academy which took place in the spring of 2022. The virtual Academy educated our community on the various programs, initiatives, and efforts led by OC San.

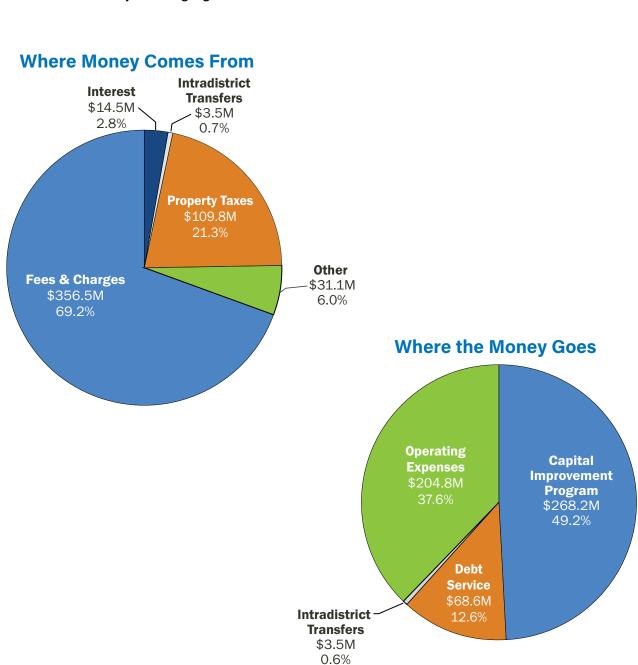
The Academy featured four workshops over the course of two months and was hosted and presented by OC San team members. The curriculum included workshops that covered Who We Are and What We Do, OC San in a Nutshell, Capital Improvement Program, and Environmental Services. With the success of our first-ever Academy, it was decided to continue the knowledge sharing and host the Academy annually.

The program is available to community members who are 18 years and older. Additional information can be found at www.ocsan.gov/wastewater101.

We are Financial Planners

OC San strives to maintain financial stability while keeping our sewer rates affordable. We have received a AAA rating for OC San's Wastewater Refunding Revenue Obligations, Series 2022A, and had our AAA rating reaffirmed on other obligations 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 rates on financing our infrastructure improvements, resulting in cost savings for our customers. OC San is the only California utility with a AAA rating from all three major rating agencies.



We are Leaders

OC San has created a framework for its ongoing per- and polyfluoroalkyl substances (PFAS) source investigation. As part of the framework, it has the first municipal wastewater laboratory in the state of California accredited to test for PFAS in wastewater, it is one of 10 labs in California accredited for this, the other nine are commercial labs.

PFAS are a group of thousands of manmade chemicals used to make items with properties that are non-stick and/or resistant to water, oil, and stains. They are also used in several industrial processes and firefighting activities.

As a leader in the wastewater community, OC San's research and case study have been shared with fellow wastewater facilities to show how best to approach a contaminant such as PFAS, which includes residential and conventional industrial discharges. OC San is actively applying its framework for PFAS and other contaminants of emerging concern (CECs) and has engaged with our fellow partners, including the academic community and upper watershed partners, to help identify discharge sources. This framework applies to all CECs, and the system is robust to adjust for different sources.



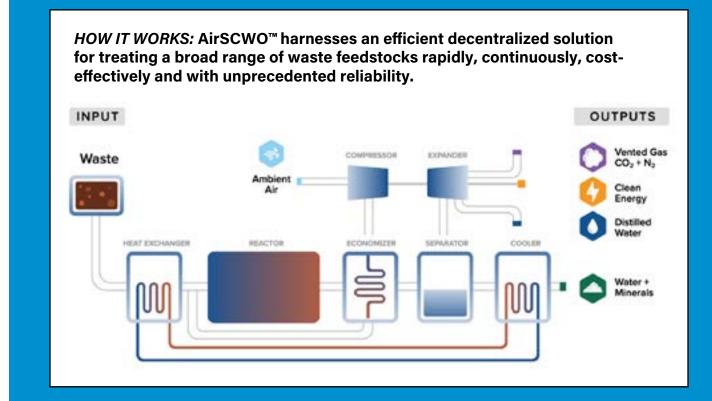
Marta Dudek, Senior Environmental Specialist, testing samples.

We are Innovators

OC San is always looking for and exploring technology to be utilized as part of wastewater treatment. An exciting new opportunity that we have ventured into is an agreement with 374Water to pilot a technology known as hydrothermal oxidation. Through this technology, we will test the potential to convert the energy of the organic compounds from wastewater into additional heat or electricity.

This technology can potentially replace energy-intensive processes of anaerobic digestion, biogas cleaning/compression/storage, and residual solids dewatering, in addition to reducing the need for onsite or offsite management. This technology may also address the pressing challenges created by the demand to develop effective treatments for the forever chemicals known as Per- and Polyfluorinated Substances (PFAS).

As part of this project, OC San and 374Water have partnered to build a six-ton-perday demonstration project called AirSCWO Nix6. This process uses water at a high temperature and pressure to oxidize and break down complex compound materials like PFAS. Once treated, we expect that the compounds are transformed into more fundamental and benign compounds and ensure enhanced public health, including exposure to water and air that would otherwise contain PFAS. Once operational, AirSCWO Nix6 may provide opportunities to solve other challenges facing OC San and other clean water agencies throughout California. Project construction will take place starting in the spring of 2023 and will be operational in the spring of 2024.



We are Sustainable



To unite over 300 staff members spread out over 100 acres in aging buildings and trailers that are in need of repairs and upgrades at our Fountain Valley Plant No. 1, we are constructing a new headquarters building. The new three-story, 110,000-square foot building will be located across the street from our current administration building and will be connected to the plant with a pedestrian bridge. By relocating the building across the street, we will have additional land for future treatment process needs at Plant No. 1.

The new headquarters building will be a hybrid of mass timber columns and decking combined with exposed steel-braced framing. Mass timber is made of compressed layers of wood which is engineered for high strength like concrete and steel but significantly lighter in weight. The new building has many environmental components, including using the hot water from the treatment plant for heating, net zero energy, and LEED Gold certification. The building design integrated the most environmentally friendly features and materials, which has been recognized through several industry awards.

It has been a long journey, and we are proud to announce that the new headquarters building is slated to be completed in late 2023. We cannot wait until the project is complete and we are able to open our doors to the public.



We are Regional Partners

OC San collaborates with regional stakeholders to accept up to 10 million gallons per day of dry weather urban runoff through our Dry Weather Urban Runoff Diversion Program. The program's primary objective is to improve water quality in streams, rivers, and beaches in OC San's service area.

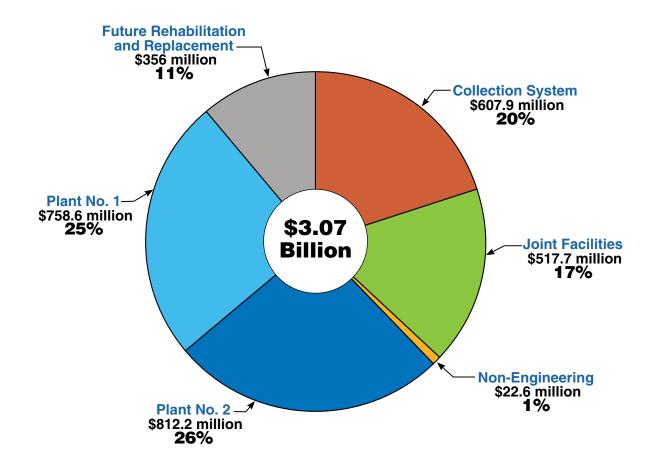
To continue this effort, OC San has partnered with the Orange County Water District and the Orange County Public Works to conduct the Urban Runoff Optimization Study. This will be a comprehensive engineering study to identify feasible opportunities to improve water quality in the ocean and increase water recycling by maximizing OC Public Works runoff management systems, OC San treatment systems, and OCWD recycling and recharge systems. OC San issued a request for proposal in September, and anticipate the final study to be published in 2024.

OC San Environment Technicians conducting beach sampling at Huntington Beach.

We are Planners

OC San's Capital Improvement Program (CIP) is a long-term plan to maintain and replace the infrastructure required to provide essential wastewater service to 2.6 million people in Orange County. Over the next 10 years, \$3 billion is projected for improvements to OC San facilities. Last fiscal year alone, over \$195 million was spent on various projects that continue to allow us to meet our mission of protecting public health and the environment. Over the next few years that number is expected to rise to over \$250 million annually.

10-Year Net CIP Outlay Fiscal Years 2022/23 through 2031/32



We are Renewable

E COUNTY SANITATION DISTRICT — ANNUAL REPORT 2021/2022

As community partners, OC San is committed to reuse all the products of the wastewater treatment process beneficially. We are more than a wastewater treatment plant; we are an energy producer and generate an average of 7.1 million kilowatt hours of energy per month by converting biogas, a byproduct of the wastewater treatment process, into electricity and process heat.

The renewable gas is used at our facilities to save energy, reduce greenhouse gas emissions, and save about \$6.2 million annually in power (10 to 11 megawatts on average) that would otherwise be purchased from the grid. In fact, our Plant No. 2 in Huntington Beach runs completely on energy we produce and only uses energy from the grid as a backup or during times of increased demand. We also host a 4.9-megawatt, 32-megawatt-hour Tesla lithium-ion energy storage system. This saves OC San ratepayers a minimum of \$300,000 annually and reduce our overall electrical needs during peak use periods so that other customers have greater access to the supply.

And it does not end there, OC San generates over 500 tons per day of biosolids, which are highly treated, nutrient-rich, organic matter recovered through the treatment of wastewater. OC San's biosolids are recycled by applying them directly on farm fields to grow non-food crops as a soil amendment or through composting. Biosolids land application and biosolids composting have been used safely for decades. Research has demonstrated that the nutrients and beneficial microbes in biosolids create and maintain healthy soils and improve crop yields. Biosolids are also a valuable source of carbon sequestration. Amending soils with biosolids helps mitigate climate changes by storing carbon in the soil. This way, we keep the carbon from biosolids out of the atmosphere.

We Are One Region

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. SB 1383 also requires the purchase of products made from the organic diversion including biosolids-based compost.

To help our member agencies meet the procurement requirements of SB 1383 and encourage composting as a tool to meet the statewide mandate, OC San has partnered with our biosolids compost manufacturers to assist our member agencies meet these requirements and make compost available at a discounted rate. For more information, visit www.ocsan.gov/compost.





We Are Strategic

Planning and preparing for the future have been a premise for OC San since our beginning and has proven beneficial as we navigate through these uncertain times. As a part of the planning process, OC San updated the Strategic Plan in November 2021. The Plan sets the course for our agency and is the result of the Board of Directors guidance and planning. The Plan is reviewed and updated every two years to verify and validate whether the issues, policies, and initiatives are still relevant and appropriate.

Strategic planning is the first step to define OC San's ability to have people and assets in the right place at the right time to meet its agreed upon mission and levels of service. The second step is budget development. The budget document lays out the tactical planning and resource allocation based on the adopted plan. The third step is the budget execution which is the day in and day out delivery of services to the public we serve.

The final step is reporting on our levels of service, including what we have achieved.

These four steps are repeated every two years adjusting as needed based on the Board of Directors input, legal and regulatory changes, and the needs of the communities we serve.

Following are some of the accomplishments based on the direction of the Strategic Plan:

- Warehouse Modernization Completed a plan to implement remote warehousing at Plant No. 2 in Huntington Beach to allow for the demolition of the current warehouse facility to make room for new facilities.
- Cybersecurity Policy Completed the Cybersecurity Incident Response Program and incorporated the processes into the OC San Integrated Emergency Response Plan.
- Climate and Catastrophic Event Resilience Policy Completed the preliminary design report for the perimeter wall at Plant No. 2 in Huntington Beach.
- Classification & Compensation Study Conducted an agency-wide Classification and Compensation study, completed analysis and presented the findings to the Board in June 2022.
- Voluntary Protection Program OC San completed its annual comprehensive safety audit to assess our safety and health management systems as part of our standard process and our pursuit of the California Voluntary Protection Program (Cal/VPP) recognition.



Construction of low flow pump station at Plant No. 2 in Huntington Beach.

We are Committed

OC San has always stood committed to our values, but as times change so do organizations. To better serve our community, ratepayers, fellow agencies and staff, the OC San Core Values were updated. The Core Values support our 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. As part of the 2021 Strategic Plan, staff undertook the process of making the necessary changes to better serve and reflect the culture of the agency.

Core Values

Integrity, Inclusion, Honesty, and Respect

We aspire to the highest degree of integrity, inclusion, honesty, and respect in our interactions with each other, our suppliers, our customers, and our community. We strive to demonstrate these values in our actions, commitments, and service.

Leadership, Teamwork, and Problem Solving

We lead by example, acknowledging the value of our resources and using them wisely to achieve our mission. We strive to reach OC San goals through cooperative efforts and collaboration with each other and our constituencies. We work to solve problems creatively, cost-effectively, and safely, and we acknowledge team and individual efforts.

Customer Service, Transparency, and Accountability

We are committed to acting in a timely, accurate, accessible, and transparent manner through excellent customer service. We are committed to act in the best interest of our internal and external stakeholders.

Resiliency, Innovation, and Learning

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

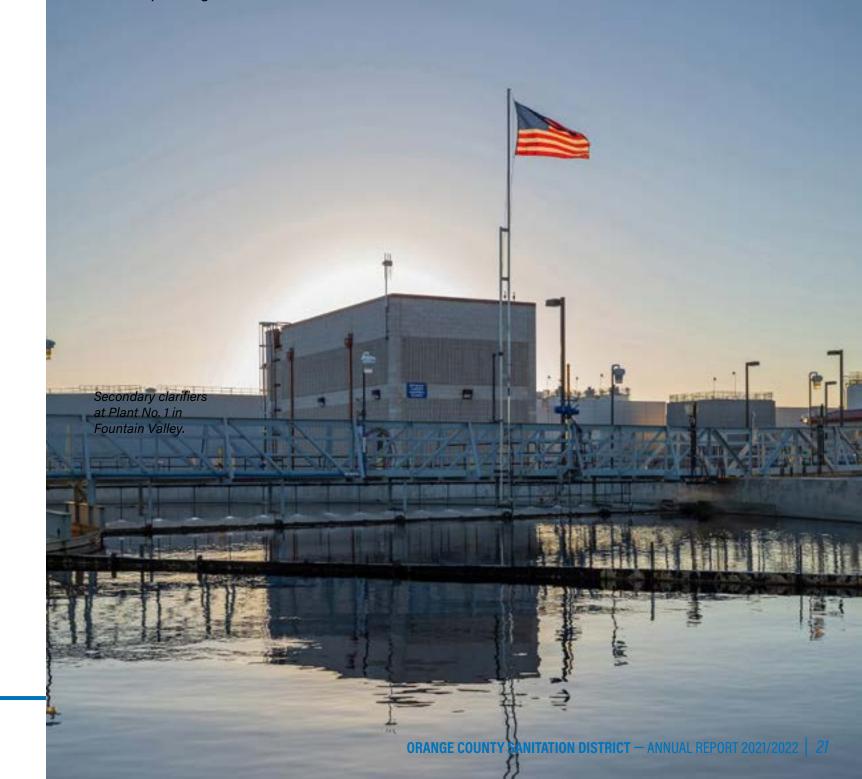
Safety

We are committed to providing a safe work environment. We will demonstrate leadership, promote individual accountability, and participate actively in the advancement of our health and safety practices.

We are Responsible

Every two years, as part of the Strategic Plan update, we review our plan for addressing risks facing OC San to ensure accuracy, relevance, and make necessary adjustments. This risk analysis is also used in the preparation and support of the Strategic Plan and General Manager's Work Plan.

The top business risks fell across a wide spectrum with many of the top concerns involving staffing/succession management, cybersecurity, supply chain issues, and operating concerns.



We are Partners

Along with the Orange County Water District (OCWD), we are working to ensure a safe and reliable source of water for generations to come through the Groundwater Replenishment System (GWRS), 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 outcome is high-quality water that meets or is better than state and federal drinking water standards. The GWRS produces up to 100 million gallons a day of purified water for residents of Orange County. This results in - enough new water for nearly 850,000 north and central Orange County residents.

With the success of the project, both agencies embarked on the final expansion of the GWRS which includes a total of four projects, two OC San projects and two OCWD projects. The final expansion will take treated wastewater from Plant No. 2 in Huntington Beach and pipe it to the Fountain Valley GWRS facility. The GWRS is maximizing water reuse by utilizing all of OC San's reclaimable flow and allowing us to meet our goal of recycling 100 percent of our reclaimable flows. The final expansion projects will increase treatment capacity 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 operational in early 2023.



We are Environmental Stewards

At OC San, we have a legacy of being environmental stewards and ensuring that our beaches remain clean and safe. Each year, Heal the Bay's Beach Report Card grades over 500 beaches along 840 miles of coast based on water quality. OC San has been diligently monitoring Orange County's beaches for decades to ensure that our beaches are safe for recreation.

This year, Orange County received stellar marks with 99 percent of beaches receiving A and B grades during the summer dry season, 95 percent receiving A and B grades during the winter dry season, and 66 percent receiving A and B grades during the wet weather season. Orange County also had the most beaches on the Honor Roll for a second year in a row with 19 beaches making the list. To make the Honor Roll, a beach must be monitored weekly all year and must receive an A+ for all seasons. And five of the beaches are within OC San's service area.

This is a true testament to OC San's effective collection and treatment process, our extensive dry weather urban runoff diversion program, and our ocean monitoring efforts.





Our Staff

Authorized Full-Time Employees 639

> **Average Years of** Service 10

> **Average** Age 46

Diversity: Male 74.8% **Female** 25.2%



Education Level: Bachelor's **Degree or** Higher 65%

Education Level: Master's **Degree or** Higher 18%

Number of employees holding positions that require a state license or certification 264





Number of Retirements 42

Retirements Years of Service 999













2021-22 Awards

The following service efforts and accomplishments were achieved by OC San:

- 2022 Epic Award/Award of Distinction California Association of Public Information Officers
- 2022 Excellence in Procurement National Procurement Institute
- 2022 Paul B. Clark Award California Association of Public Information Officers o Jennifer Cabral, Administration Manager
- 2022 Platinum Peak Performance Award National Association of Clean Water Agencies
- 2022 Award of Distinction Communicator Award
- 2022 American Inhouse Design Award Graphic Design USA
- 2022 Outstanding Wastewater Treatment Award American Society of Civil **Engineers**
- 2022 Honor Award American Academy of Environmental Engineers & Scientists
- 2022 California Water Environmental Association
- o Large Plant Safety Award
- o Operator of the Year, Anthony Chang
- 2021 Excellence in Information Technology Practices Municipal Information Systems Association of California
- 2021 District Transparency Certificate of Excellence Special District Leadership Foundation
- 2021 Certificate of Achievement for Excellence in Financial Reporting 2021 Government Finance Officers Association
- 2021 Distinguished Budget Presentation Award Government Finance Officers Association
- 2021 Excellence in Procurement National Procurement Institute
- 2021 Santa Ana River Basin Section Large Plant Safety Award
- **2021 Advocacy Achievement Award** − WateReuse



























We are Community

LEGISLATIVE STATS

45 Legislative Bills Tracked

13 Federal Position Letters

12 State Position Letters

90 Letters of Support Received

SPEAKERS BUREAU

23 speaking engagements

OC SAN "U"

We Are Lifelong Learners

Through this internal educational program that allows employees the opportunity to enhance their skills, 14 sessions were provided with an average attendance of 66 employees per session. The session topics pertain to leadership, technology, communications, and organizational awareness. The program also offers mentoring, a leadership academy, and online courses. Nearly 400 employees have participated in at least one university learning option. Additionally, OC San "U" implemented a new learning option that extends select course seats to interested member agency employees. Thus far, we've had participants from Fountain Valley, Fullerton, La Habra, Seal Beach, Yorba Linda, and Costa Mesa Sanitary District.

CONSTRUCTION OUTREACH

Five active projects are currently in construction, impacting the cities of Anaheim, Buena Park, Cypress, Fountain Valley, Irvine, Costa Mesa, Los Alamitos, Seal Beach and Westminster. Over 100 information pieces reached over 120,000 residents, businesses, and schools about construction activity in their neighborhoods.

TOURS

Virtual Tours

31 Tours reaching 860 people

Social Media

790 social media posts reaching more than 198,000 people

WE ARE EDUCATORS:

Inside the Outdoors

In 2021, OC San staff and Inside the Outdoors, a California Environmental Literacy Initiative which seeks to increase access to environment-based learning for all of California's PreK-12 students, worked together to create a new program that focused on the wastewater industry. The program goes into the classrooms to provide hands on teaching about the wastewater industry and how everybody can play a role in protecting public health and the environment. The one-year pilot program served as a trial run for a future program. The program was a success as a total of 755 students were reached through 27 virtual programs: 575 elementary students and 180 middle/ high school students. Participating schools are in Anaheim, Fountain Valley, Fullerton, Garden Grove, Santa Ana, and Tustin.

Children's Water Education Festival

OC San was honored to participate in the 25th annual Children's Water Education Festival held virtually in the spring of 2021. The award-winning program hosted by the Orange County Water District reached more than 5,500 third, fourth and fifth grade Orange County students. OC San staff presented on a variety of topics including the What2Flush program and the wastewater system.

Heritage Museum

Through a partnership with the Heritage Museum of Orange County, OC San and the museum developed a program to increase knowledge of the wastewater treatment process and illustrate how OC San protects public health and the environment. This partnership has shown the community how they can be an environmental steward and contribute to protecting the environment by learning What2Flush. The program began with a virtual component and is now available virtually and in-person. Through the program, more than 4,500 adults and children have been reached.

> Bean bag toss game at Heritage Museum of Orange County



We are Safe

- OC San completed its six safety goals established in 2020, which focused on safety policy updates and implementation: expansion of our online management program for industrial hygiene and ergonomic modules; comprehensive Voluntary Protection Programs safety audits; security design measures; Interplant Digester Gas Pipeline exercise; and COVID-19 response.
- In 2021, OC San provided over 50 individual safety trainings with nearly 15,000 courses completed. New hires completed trainings within 30 days of hire and had a 99.6 percent on-time completion rate for all staff.
- Quarterly building inspections were restructured to ensure that all buildings were inspected and that these inspections were completed by staff with Risk Management facilitating each inspection. 192 inspections were completed.
- We have met our levels of service for odor complaints in the collections system, which is 12 or fewer odor complaints per year under normal operating conditions in the collections system.
- Managed sanitary sewer overflows to 0.25/100 miles of pipe which is less than the previous year and Board adopted Levels of Service of 2.1/100 miles of pipe.
- Cleaned more than 40 miles of gravity sewers.
- In 2021, OC San achieved Plant Safety of the Year award through Santa Ana River Basin Section, California Water Environment Association, and Water Environment Foundation. The last time OC San won all three awards was in 2015.



Margil Jimenez, Scientist analyzing samples.

- In preparation for establishing a new five-year rate program, we conducted a five-year rate study to determine customers' fair and equitable share of collection, treatment, and disposal costs. The current rate structure expires in June 2022.
- As part of the Energy Master Plan Study, OC San staff will investigate energy storage options to help build energy resilience and provide cost savings. Staff will provide a report to the Board of Directors in the Summer of 2023.
- The new headquarters building is slated to be completed in late 2023. Additionally, a component of the new headquarters building will be an educational display that will

