

In **2021**, we turned wastewater and trash into:

53.6

BILLION GALLONS OF RECYCLED WATER

75

MEGAWATTS OF ELECTRICITY

120,000

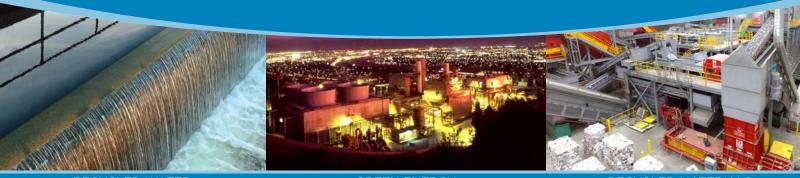
TONS OF RECYCLED COMMODITIES

128,000

TONS OF COMPOST

MISSION

To protect public health and the environment through innovative and cost-effective wastewater and solid waste management and, in doing so, convert waste into resources such as recycled water, energy, and recycled materials.



RECYCLED WATER

GREEN ENERGY

RECYCLED MATERIALS

CORE VALUES

INTEGRITY

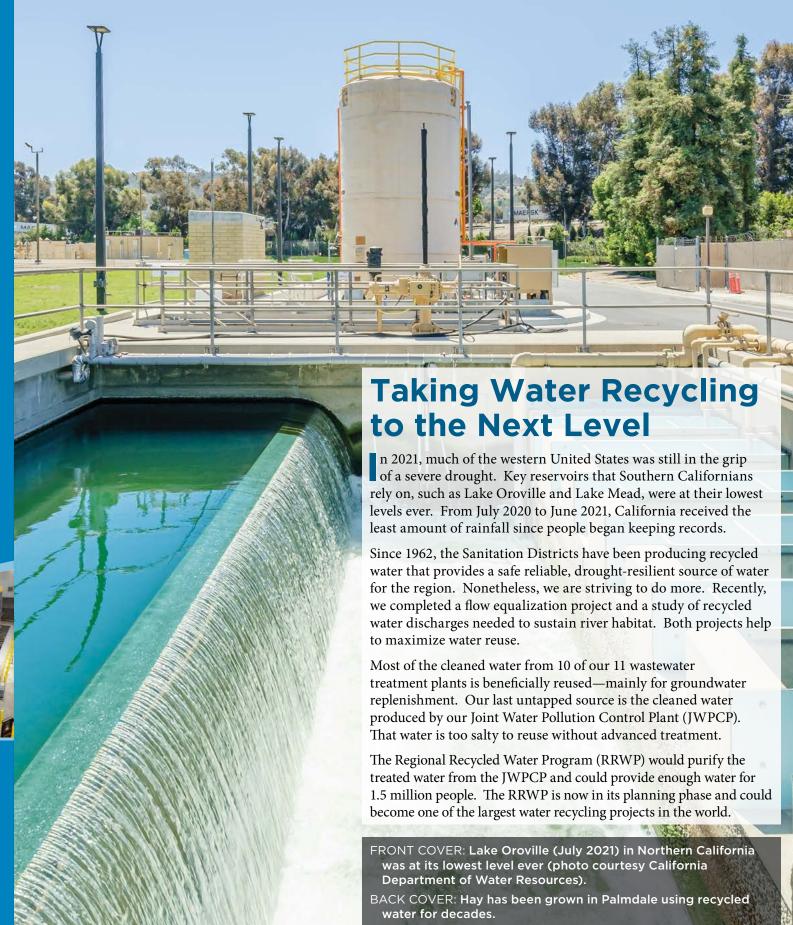
We are committed to ethical standards and accountability in our work

LEADERSHIP

We are committed to the advancement of excellence in wastewater and solid waste management

SERVICE

We are committed to reliable, responsive, and courteous service



San Jose Creek Water Reclamation Plant recycles

over 60 million gallons of water per day.

The Road to Sustainability

ike the rest of society, COVID-19 continued to be a significant challenge for us in 2021. I am proud to report that we kept providing the same high-quality services despite COVID-19-related obstacles, such as staff being quarantined and delays in manufacturing and shipping. We continued to test for coronavirus in wastewater. The resulting data correlated well with community infection level and was shared with local, state and national public health officials to help them manage the pandemic. The California Governor included wastewater monitoring in the state's plans for moving forward. I continue to be grateful to our staff for their resilience, commitment and teamwork, which result in great service to the community.

Another big issue for Californians in 2021 was the ongoing drought and record-setting lack of rainfall. In the 2020/21 water year, California received the least amount of rainfall since people began keeping records in 1895. Lake Oroville and Lake Mead are reservoirs that Southern Californians rely upon and were at their lowest levels ever last year.



The Sanitation Districts have been producing recycled water since 1962. Much of this water is used to replenish our groundwater basins and reduce our reliance on water imported from Northern California and the Colorado River. Over that time, we have recycled over 1 trillion gallons of water, which is enough water to fill an 8-foot diameter pipe that circles the earth 20 times!

Nonetheless, we are working to do more. The previous page describes recent efforts to increase water recycling. The most notable is the Regional Recycled Water Program, which entered its environmental planning phase in 2021 and could become one of the largest recycled water programs in the world. More on this program is provided on page 13.

Another area where we continue to fulfill our mission of converting waste into resources is our growing food waste recycling program, which will significantly reduce greenhouse gases. This program was created to provide a cost-effective way for our member cities to divert organic waste from landfills as required in 2016's Senate Bill 1383. In 2021, we did extensive outreach to cities and waste haulers about this program whose requirements became effective January 1, 2022. For more on these efforts, see page 16.

So, despite the pandemic, we continued serving in a cost-effective and environmentally sound manner and made progress on a range of initiatives, both big and small. In 2022, I hope that we can put the pandemic behind us and create stronger professional and personal relationships through more face-to-face interactions.

Sincerely,

Robert C. Ferrante

Chief Engineer & General Manager

Boards of Directors (as of printing, March 25, 2022*)

Alhambra DIST, 2, 16 Jeffrey K. Maloney Adele Andrade-Stadler Arcadia DIST. 15, 22 Sho Tav **Artesia** DIST. 2, 18, 19 Ali Sajjad Taj; Rene J. Trevino Azusa DIST. 22 Robert Gonzales; Edward J. Alvarez Baldwin Park DIST. 15, 22 Emmanuel J. Estrada Monica Garcia Bell DIST. 1, 2 Ali Saleh Maria Pulido; Jorgel Chavez **Bell Gardens** DIST. 2 Bellflower DIST. 2, 3, 18 Raymond Dunton; Sonny Santa Ines **Beverly Hills DIST. 4** Robert Wunderlich; John Mirisch D. Montgomery Lewis Richard Barakat Bradbury DIST. 15, 22 Carson DIST. 8 Lula Davis-Holmes; Jim Dear **Cerritos** DIST. 2, 3, 18, 19 Grace Hu: Bruce Barrows Claremont DIST, 21 Ied Leano: Ed Reece Commerce DIST. 2 Leonard Mendoza; Ivan Altamirano Compton DIST. 1, 2, 8 Emma Sharif; *Michelle Chambers* Covina DIST. 22 Jorge A. Marquez; Patricia Cortez **Cudahy** DIST. 1 Elizabeth Alcantar; Daisy Lomeli **Culver City** DIST. 5 Daniel Lee; Albert Vera **Diamond Bar DIST. 21** Ruth Low: Andrew Chou Downey DIST. 2, 18 Blanca Pacheco; Claudia Frometa Duarte DIST. 15, 22 Margaret Finlay; Tzeitel Paras-Caracci El Monte DIST. 15 Jessica Ancona; Victoria Martinez El Segundo DIST. 5. SBC Drew Boyles; Chris Pimentel **Gardena** DIST. 5 Tasha Cerda; Paulette C. Francis **Glendora** DIST. 22 Karen Davis; Michael Allawos Hawaiian Gardens DIST. 19 Luis Roa; Maria Teresa Del Rio **Hawthorne** DIST. 5 Alex Vargas; Alex Monteiro **Hermosa Beach SBC** Michael Detoy; Raymond Jackson **Huntington Park DIST. 1** Manuel Avila; Karina Macias **Industry** DIST. 15, 18, 21 Cory Moss **Inglewood** DIST. 5 Irwindale DIST. 15, 22 Larry G. Burrola; Albert F. Ambriz La Cañada Flintridge DIST. 28, 34 Michael A. Davitt Jonathan C. Curtis; Teresa Walker Keith Eich; Richard B. Gunter III La Habra Heights DIST. 18 Dennis Laherty; Brian Bergman La Mirada DIST. 18 Ed Eng; Steve De Ruse La Puente DIST. 15, 21 Charlie Klinakis; Valerie Munoz La Verne DIST. 21. 22 Tim Hepburn; *Muir Davis* Lakewood DIST. 3, 19 Jeff Wood; Steve Croft Lancaster DIST. 14 R. Rex Parris; Marvin Crist Lawndale DIST. 5 Robert Pullen-Miles; Pat Kearney Lomita DIST. 5 Cindy Segawa; James Gazeley

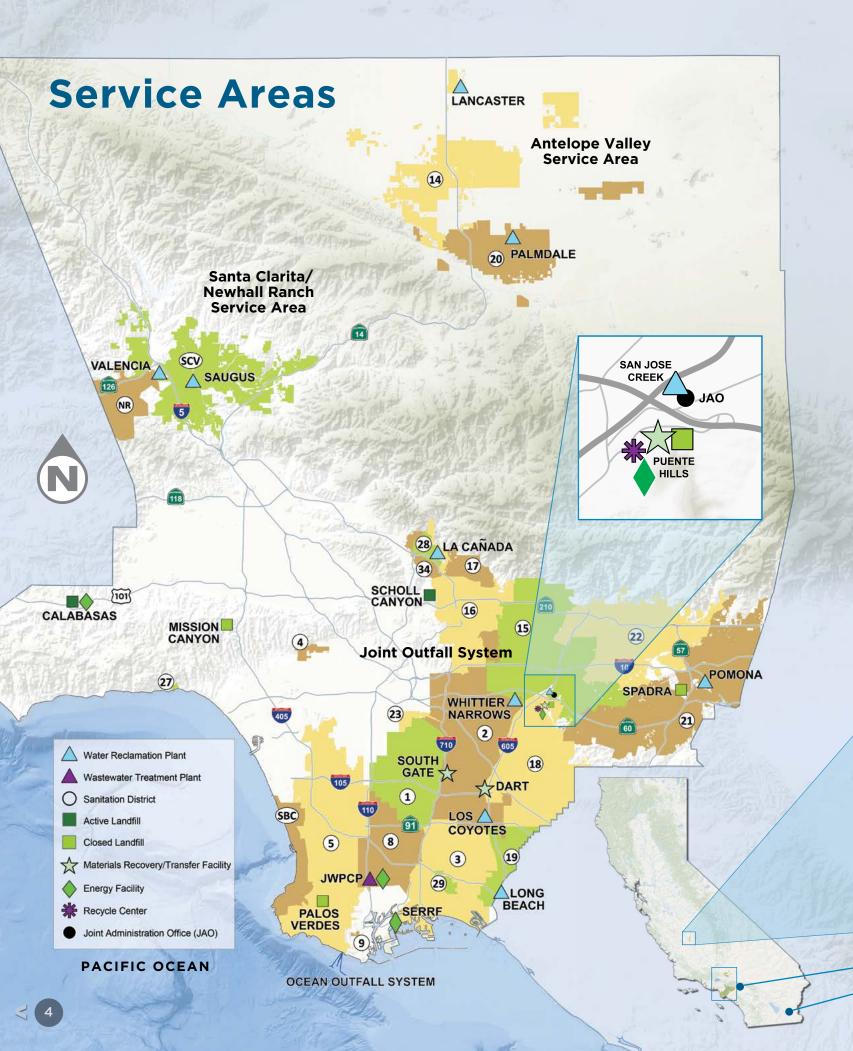
Robert Garcia

Los Angeles County (unit	
DIST. 1, 3, 5, 18, 19	Holly Mitchell; Janice Hahn
DIST. 2, 9, 15, 21, 22 DIST. 27, NR	Holly Mitchell; <i>Hilda Solis</i> Holly Mitchell; Hilda Solis;
	Barger; Janice Hahn; Sheila Kuehl
DIST. 14, 16, 20, SCV	Holly Mitchell; Kathryn Barger
DIST. 17 DIST. 17 (2nd DIR)	Holly Mitchell; Sheila Kuehl Kathryn Barger; Sheila Kuehl
DIST. 9 (2nd DIR)	Janice Hahn; Hilda Solis
	Iarisela Santana; <i>Jose Luis Solache</i>
	SBC Hildy Stern; Steve Napolitano
Maywood DIST. 1	Heber Marquez; Jessica Torres
Monrovia DIST. 15, 22	Tom Adams; Becky A. Shevlin
	Kimberly Ann Cobos-Cawthorne
110111200110 0131. 2, 13	Scarlet Peralta
Monterey Park DIST. 2, 15	Henry Lo; Fred Sornoso
Norwalk DIST. 2, 18	Rick Ramirez; Jennifer Perez
Palmdale DIST. 14, 20 DIST. 20 (2nd DIR)	Steven Hofbauer; Austin Bishop Richard J. Loa; Austin Bishop
Palos Verdes Estates DIST	Г. 5, SBC Victoria A. Lozzi David McGowan
Paramount DIST. 1, 2 Brer	nda Olmos; Vilma Cuellar Stallings
Pasadena DIST. 15, 16, 17	Victor Gordo
	onica Sanchez; Gustavo Camacho
Pomona DIST. 21	Tim Sandoval; Steve Lustro
Rancho Palos Verdes DIS	
	Barbara Ferraro
Redondo Beach DIST. 5, SE	
Rolling Hills DIST. 5	Jeff Pieper; Patrick Wilson
Rolling Hills Estates DIST.	Britt Huff
Rosemead DIST. 15	Polly Low; Sean Dang
San Dimas DIST. 21, 22	Emmett Badar; Denis Bertone
San Gabriel DIST. 2, 15	Tony Ding; Denise Menchaca
San Marino DIST. 15, 16	Susan Jakubowski; Ken Ude
Santa Clarita SCV SCV (2nd DIR)	Jason Gibbs; <i>Marsha McLean</i> Laurene Weste; <i>Marsha McLean</i>
Santa Fe Springs DIST. 18	Annette Rodriguez Joe Angel Zamora
Sierra Madre DIST. 15	Gene Goss
Signal Hill DIST. 3	Keir Jones; Tina Hansen
DIST. 29	Lori Y. Woods; Robert Copeland dward H. J. Wilson; Tina Hansen
South El Monte DIST. 15	Gloria Olmos; Richard Angel
South Gate DIST. 1, 2	Al Rios; Maria Davila
South Pasadena DIST. 16	Michael A. Cacciotti; <i>Jack Donovan</i>
Temple City DIST. 15	Vincent Yu; Cynthia Sternquist
Torrance DIST. 5, SBC Pa	atrick J. Furey; Heidi Ann Ashcraft
Vernon DIST. 1, 2 DIST. 23 Melissa Yb	Melissa Ybarra; William J. Davis parra; Judith Merlo; Leticia Lopez;
Walnut DICT of ac	William J. Davis; Crystal Larios
Walnut DIST. 21, 22	Robert Pacheco; Eric Ching
	2 Dario Castellanos; Rosario Diaz
West Hollywood DIST. 4	Lauren Meister; Sepi Shyne
Whittier DIST. 2, 15, 18	Joe Vinatieri; Cathy Warner

Alternate Directors in italics

Long Beach DIST. 1, 2, 3, 8, 19

Los Angeles City DIST. 1, 2, 3, 4, 5, 8, 9, 16 Nury Martinez



Who We Are

The Sanitation Districts consist of 24 independent special districts serving about 5.5 million people in Los Angeles County. The service area in the map to the left covers approximately 850 square miles and encompasses 78 cities and unincorporated areas in the county.

The Sanitation Districts were created in 1923 to construct, operate and maintain facilities that collect, treat and dispose of domestic and industrial wastewater. The Sanitation Districts own, operate and maintain the larger, regional wastewater collection systems, while cities and unincorporated areas within each district are

5.5 million people
850 square miles
78 cities

responsible for their smaller local collection systems (except for Signal Hill, whose local collection system is owned by Sanitation District No. 29). In the 1950s, the Sanitation Districts were given responsibility for solid waste management (excluding trash pickup). In 2016, the Sanitation Districts were also given the authority to help cities and unincorporated areas in Los Angeles County manage stormwater.

To maximize efficiency and reduce costs, the 24 Districts work cooperatively with one administrative staff headquartered near the intersection of the 60 and 605 freeways, north of Whittier. Each District has a Board of Directors consisting of the mayor of each city served and the Chair of the County Board of Supervisors for unincorporated territory. Each District pays its proportionate share of administrative costs.

Overall wastewater and solid waste management budgets for 2020-21 were \$720 million and \$172 million, respectively. Both systems provide essential public services at some of the most competitive service rates in the country.



Inland Empire Regional Composting Facility

Mesquite Regional Landfill

1,645

AVERAGE YEARS OF SERVICE AT RETIREMENT

25

AVERAGE AGE 46

2021 NEW HIRES

RETIREMENTS 72

LICENSED ENGINEERS **244**

EMPLOYEES WITH ADVANCED DEGREES

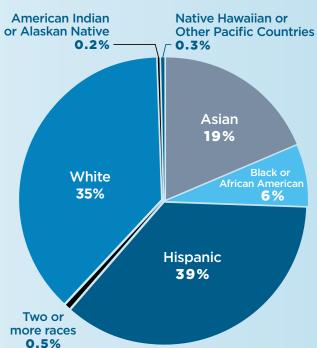
2021

225

EMPLOYEES WITH SPECIAL CERTIFICATIONS

240





Numbers as of Dec. 31, 2021

What We Do

WASTEWATER

We collect, treat and recycle the wastewater (sewage) from 5.5 million people in Los Angeles County. Our wastewater system currently treats about 400 million gallons per day, enough to fill the Rose Bowl nearly five times a day. This system includes 11 wastewater treatment plants, 48 pump stations, over 1,400 miles of sewer, and two state-of-theart composting facilities for managing the solids removed during treatment.

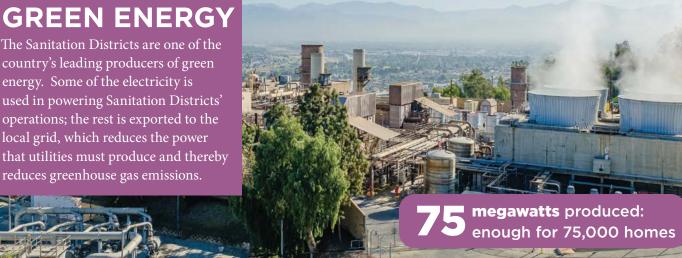


SOLID WASTE

Our solid waste management system accommodates about one fifth of the county's solid waste. We manage the waste hauled to us with a system that includes two active landfills, three materials recovery/transfer facilities, and a recycle center. We also have infrastructure for a waste-by-rail system to handle the county's waste in the future when local disposal options are exhausted.



The Sanitation Districts are one of the country's leading producers of green energy. Some of the electricity is used in powering Sanitation Districts' operations; the rest is exported to the local grid, which reduces the power that utilities must produce and thereby reduces greenhouse gas emissions.



Our Organization

CHIEF ENGINEER & GENERAL MANAGER

Robert C. Ferrante

ASSISTANT CHIEF ENGINEER & ASSISTANT GENERAL MANAGER

Charles E. Boehmke

DEPARTMENTS & SECTIONS

ENGINEERING	FACILITIES PLANNING	FINANCIAL MANAGEMENT	HUMAN RESOURCES	SOLID WASTE MANAGEMENT	TECHNICAL SERVICES	WASTEWATER MANAGEMENT
Construction Management Electrical & Instrumentation Design Sewer Design Structural, Architectural, & Geotechnical Design Civil & Mechanical Design	Information Technology Planning & Property Management Public Information Wastewater Planning	Accounting Budget & Finance Purchasing & Risk Management	Employee Benefits Employee Relations Employment Services Payroll Training & Development	Energy Recovery Fleet Management Solid Waste Operations & Engineering	Air Quality Environmental Health & Safety Laboratories Legislative & Regulatory Programs Reuse & Compliance Wastewater Research Water Quality	Industrial Waste Joint Water Pollution Control Plant Wastewater Collection Systems Water Reclamation Plants

ENGINEERING

Design and construction oversight of Sanitation Districts' facilities

FACILITIES PLANNING

Long range planning, environmental review, environmental permitting, property management, information technology, public relations, security, facilities management, and document management

FINANCIAL MANAGEMENT

Budgeting, accounting, purchasing, revenue collection, and insurance

HUMAN RESOURCES

Hiring employees, payroll, benefits, and compliance with State and Federal employment laws

SOLID WASTE MANAGEMENT

Operation and maintenance of the solid waste management facilities and energy recovery facilities

TECHNICAL SERVICES

Water recycling, biosolids management, water and air permit compliance reporting, wastewater and solid waste research, laboratory processes, regulatory and legislative advocacy, and worker health and safety

WASTEWATER MANAGEMENT

Operation and maintenance of wastewater management facilities and regulating industrial discharges to the Sanitation Districts' sewer system

Carrying Out Our Mission Despite COVID-19

OVID-19 continued to be a huge issue for the agency. However, we carried out our mission and provided high-quality service despite the challenges caused by COVID-19 including significant supply-chain disruptions.

We continued to monitor for coronavirus genetic material (RNA) in the wastewater coming into our largest treatment plant. The results are shared with local and state health officials as well as the Centers for Disease Control and Prevention to help them manage the pandemic.

We worked with our unions to finalize a new telework policy before the end of June 2021. This policy is ready to go into effect once the pandemic has subsided enough for staff that was working from home to fully redeploy to working from the office.

Optimizing Treatment

We have been operating the new flow equalization (FEQ) system at the San Jose Creek Water Reclamation Plant for over a year and are seeing the benefits in operations. The FEQ system consists of two 4-million-gallon underground tanks that are used to reduce flow variability in the plant's biological treatment process.

With the FEQ system, the biological treatment process works more efficiently, which has enabled the plant to treat more flow while consistently meeting ammonia removal requirements. As a result, we are no longer bypassing flows around the plant and are now producing 20 percent more recycled water. We are also producing a greater percentage of our recycled water overnight when the demand for recycled water is highest.

A potential future benefit of FEQ is more energy-efficient operations. The largest energy users at the plant are air compressors that add air into the biological treatment process. By reducing the flow variability of the biological process, air compressors may be operated in a more economical manner thereby reducing energy use.

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New Ways to Build Facilities

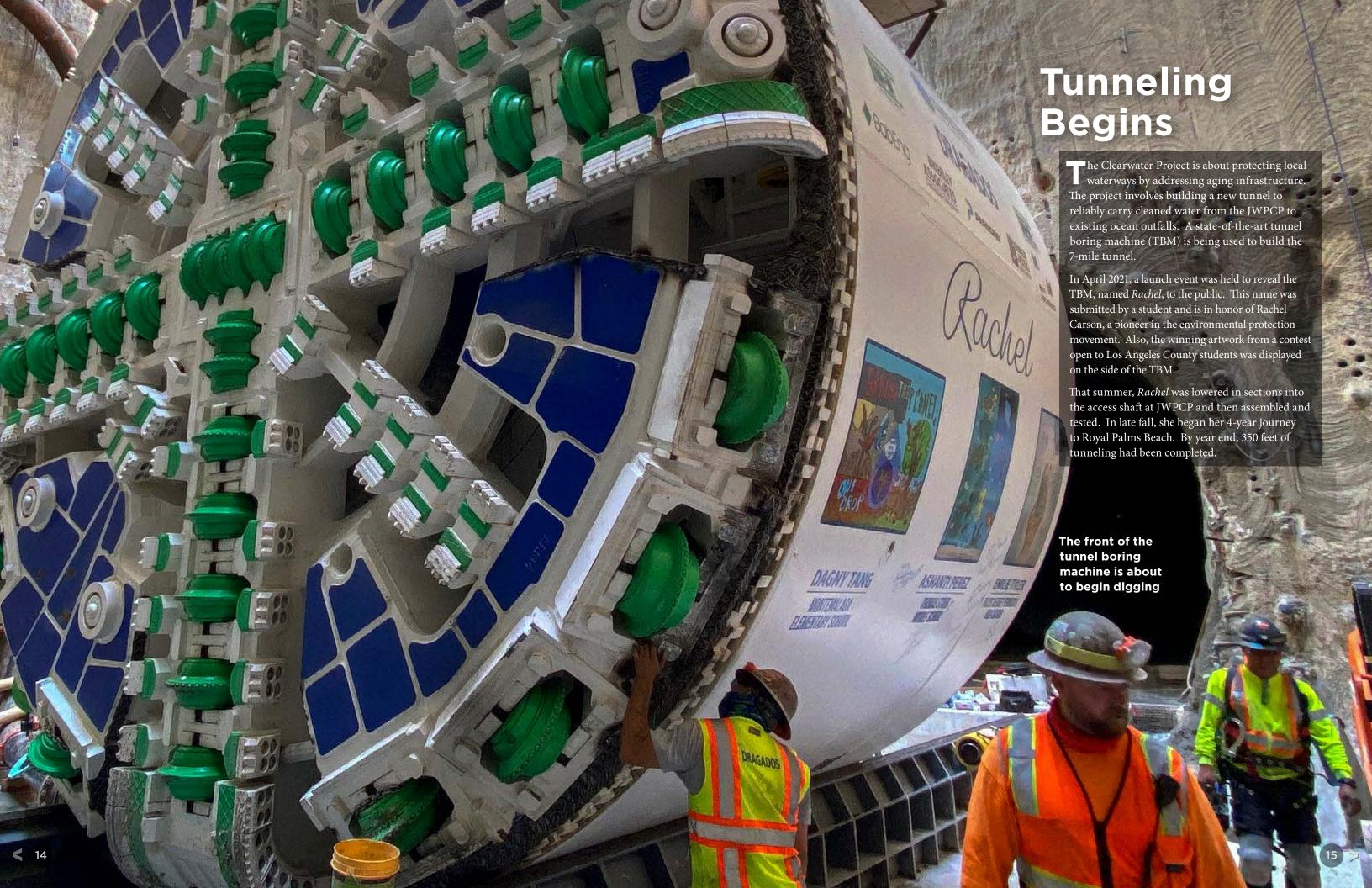
Traditionally, we have constructed facilities using the design-bid-build approach, where one phase is completed before another phase is begun. We are now building two projects using a design-build method called the Energy Service Company (ESCO) process, where construction begins before design is complete. We can use this process for projects that result in significant operational energy savings.

With this approach, we hire an ESCO firm to design and construct the facility with our input and the firm guarantees cost and energy savings that pay for the project in less than 25 years. Other advantages include faster project completion times and the flexibility to hire a designer and contractor based on qualifications when the project requires special expertise. Also, since the ESCO handles most of the design work, this approach can help our design staff manage their workload.

We will continue to evaluate ESCO and other design-build processes to help deliver projects as efficiently as possible. These alternative delivery approaches aren't a fit for every project and we anticipate using the traditional design-bid-build for most construction projects.







Helping Our Member Cities with Organics Recycling

ur program to recycle food waste into green energy continued to grow as we prepared for the state's January 2022 deadline that cities divert organic material from landfills. We have been building a cost-effective program by mostly using existing infrastructure.

In 2021, we added a program where haulers can bring bagged food waste mixed with green waste to the Puente Hills Materials Recovery Facility or Scholl Canyon Landfill. This option joins our prior programs where haulers can bring source-separated food waste or food waste that has been pre-processed and liquified.

At our JWPCP, we added a receiving station last year and are close to finishing a second one, which will increase our ability to accept food waste. We recycle much of the food waste into vehicle fuel that is served at the fueling station adjacent to the JWPCP. In 2022 and 2023, this fueling station will be tripled in size to handle more vehicles per day and the increased amount of fuel we are producing.





Adapting Our Treatment Plants

ur wastewater (sewage) treatment plants are decades old and have been upgraded and modified over time to meet the changing effluent quality requirements of state and federal agencies. Some upgrades, like nutrient removal and disinfection improvements, have resulted in a reduction of treatment capacity.

Water conservation has led to a decrease in flows to our wastewater treatment plants. While flows have decreased, the amount of pollutants (i.e., pounds per day) has slightly increased with population growth. As a result, we receive wastewater with more concentrated pollutants that is more difficult to treat. Finally, ongoing research is identifying new chemicals in wastewater that may be harmful to the environment. Removing these chemicals of emerging concern may require new treatment processes.

To provide high-quality service and protect public health in the coming decades, we are investigating how to modify our plants to address these issues.

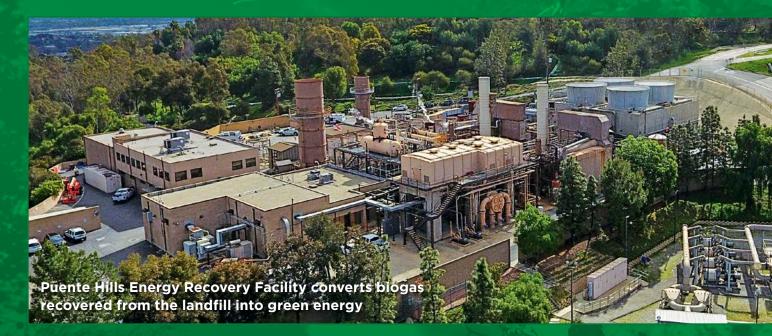
Biological treatment at San Jose Creek Water Reclamation Plant



Our Greenhouse Gas Stewardship

or decades, the Sanitation Districts and its partners have undertaken activities that reduce greenhouse gas (GHG) emissions to help protect the environment and provide a more sustainable world. Most of these initiatives produce green power, which reduces use of fossil fuels, a main contributor to global GHG emissions. Another key initiative is recycling water, which reduces the need to import water and the associated energy required to import water, the largest energy use in the State of California. The seven biggest initiatives are presented below and discussed in a document called *Reducing Our Carbon Footprint: The Sanitation Districts' Greenhouse Gas Reduction Initiatives* (available at lacsd.org/GHG).

The Sanitation Districts are proud to announce we have achieved carbon neutrality for the 2021 calendar year. We continue to look for more ways to reduce GHG emissions and help make Los Angeles County more sustainable.



GHG reduction initiative	GHG avoided in MTCO ₂ e*	Equivalent to avoidance of
BIOGAS-TO-ELECTRICITY	190,000	annual emissions produced by providing energy for 23,000 homes
ALTERNATIVE FUELS	3,400	annual emissions of 730 passenger vehicles
COMMODITIES RECYCLING	59,000	use of 6 million gallons of diesel
WATER RECYCLING	52,000	130 million miles driven by cars
BIOSOLIDS MANAGEMENT	2,500	conversion of 17 acres of forest to cropland
FOOD WASTE DIVERSION	42,000	5 million gallons of gasoline burned
GREEN WASTE DIVERSION	14,000	burning 15 million pounds of coal

Connecting With Our Community



nmunity engagement helps us understand the public's needs so that we can provide better service. The pandemic forced us to cancel in-person outreach, but we responded with live tours via Zoom and attendance has been higher than ever.

A variety of guest speakers, each with their own expertise, have given virtual tours of the Bixby Marshland. Virtual tours for several other Sanitation Districts facilities and programs were also given in 2021. Recordings of these tours are available on our YouTube Channel and serve as an on-demand educational resource.

TOURS OF BIXBY MARSHLAND

166

410

PARTICIPANTS IN 6 IN-PERSON TOURS

PARTICIPANTS IN 6 VIRTUAL **TOURS**

TOURS OF OUR FACILITIES

298

PARTICIPANTS IN 5 IN-PERSON TOURS

PARTICIPANTS IN 8 VIRTUAL **TOURS**





69 HOUSEHOLD HAZARDOUS AND ELECTRONIC WASTE COLLECTION EVENTS

48,783 HOUSEHOLDS SERVED

64 CLEARWATER PROJECT EVENTS

You

16

LAUNCH SCHOOL EVENT PRESENTATIONS

COMMUNITY PRESENTATIONS



1,237 **FOLLOWERS** 1,223

Tube 302 **FOLLOWERS SUBSCRIBERS**

STUDENTS PARTICIPATING IN **SEWER SCIENCE**

AT 42 IN-PERSON **CLASSES**

2021 Awards & Achievements



ENGINEERING ACHIEVEMENT

NACWA 🌒

PLATINUM AWARDS

LOS COYOTES WRP

10 YEARS

LANCASTER WRP

6 YEARS

WHITTIER

NARROWS WRP

5 YEARS

GOLD AWARDS

JOINT WATER

POLLUTION CONTROL

PLANT

LA CAÑADA WRP

LONG BEACH WRP

PALMDALE WRP

POMONA WRP

SAN JOSE CREEK

WRP WEST

CARSON'S CARRIAGE CREST STORMWATER CAPTURE PROJECT



ALFONSO VASQUEZ Los Angeles **Basin Section** Operator of the Year

MARIA ROSALES-RAMIREZ

Community Engagement and Outreach Person of the Year

SAMI HUNKLER

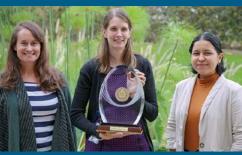
Outstanding Young Professional of the Year



AMERICAN

SUPERIOR ACHIEVEMENT

SUSTAINABLE GREEN FLEET • CLEAN FUEL FOR LA TODAY



GRAND PRIZE

SAN GABRIEL RIVER WATERSHED PROJECT TO REDUCE RIVER **DISCHARGE IN SUPPORT OF INCREASED RECYCLED WATER REUSE**

COMMUNITY ENGAGEMENT AND OUTREACH: PROJECT OF THE YEAR - LARGE 2021

> **CONNECTING WITH OUR COMMUNITY DURING COVID-19**

RESEARCH ACHIEVEMENT

PILOT-SCALE EVALUATION OF THE MEMBRANE-**AERATED BIOFILM REACTOR PROCESS** AT THE WHITTIER **NARROWS WRP**

ACTIVE ENGAGEMENT THROUGH SOCIAL MEDIA

The Financial Landscape

Fiscal Year 2020-21

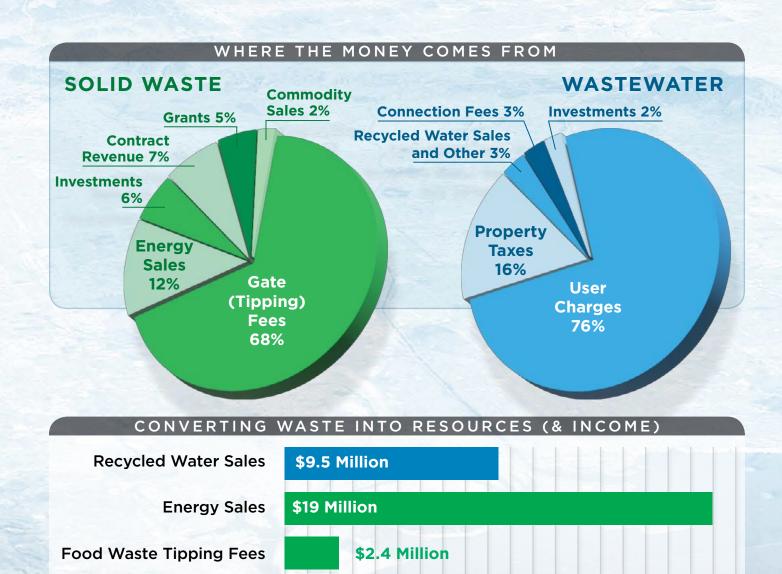
WHERE THE MONEY GOES

SOLID WASTE 19%

\$172 Million

\$720 Million





\$3 Million

Commodity Sales

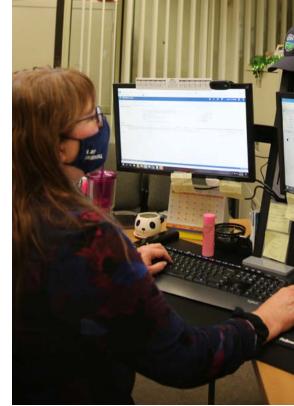












The Districts' Mission Continues





















