



MESSAGE FROM DISTRICT ENGINEER

It's my pleasure to present the Sacramento Regional County Sanitation District's State of the District Report. This report captures highlights of our activities in 2020 and outlines our plans for the coming years.

While 2020 started as a typical year for us, things quickly changed when we found ourselves navigating the COVID-19 pandemic. Fortunately, due to proactive emergency planning, we were able to maintain continuity of operations for customers and keep our essential staff safe. As the pandemic evolved here regionally, so too did our procedures and safety precautions. Staff's unwavering commitment was on full display this year as we all worked together to protect public health and the environment in a new climate.

Despite these challenges, work continued on many critical efforts. Several rehabilitation projects are underway at the wastewater treatment plant, and our landmark EchoWater Project continued to make great progress this year. A portion of the



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nutrient removal process was put in operation in 2020, well ahead of the permit deadline, allowing for more than 60 percent of ammonia removal. When the EchoWater Project upgrades are completed in 2023, Regional San's wastewater treatment plant will be the largest tertiary treatment facility in the Western United States.

As these necessary improvements have moved forward, we've been working hard to keep customers' rates as low as possible. We've implemented various cost-saving measures and worked to control project costs, and as a result, customers' rates remained at \$37 per month for the third year and are expected to remain at that level for several

more years. Additionally, Regional San proactively implemented a Commercial Rate Relief Program this year that offered rate adjustments and account credits for businesses impacted by COVID-19.

This year challenged us in ways we couldn't have anticipated, but I'm incredibly proud of how we consistently demonstrated our values and delivered on our mission for the communities we're privileged to serve.

A handwritten signature in blue ink that reads "Prabhakar Somavarapu".

Prabhakar Somavarapu
DISTRICT ENGINEER

VISION

Regional San is a leader in environmental stewardship and a trusted partner in regional sustainability

MISSION

To protect public health and the environment by conveying, treating, and recovering resources from wastewater responsibly and cost effectively

VALUES

- Responsibility
- Resolve
- Proficiency
- Environmental Stewardship

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PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT

OVERVIEW

For the last 47 years, the Sacramento Regional County Sanitation District (Regional San) has carried out its mission to protect public health and the environment through reliable and safe conveyance, treatment, and disposal of wastewater. As the region's wastewater conveyance and treatment utility, we proudly serve 1.6 million customers throughout unincorporated Sacramento County; the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento, and West Sacramento; and the communities of Courtland and Walnut Grove.

Wastewater from these communities travels through a complex network of underground collection pipes to our system of large interceptor pipes. A combination of gravity pipes and pressurized force mains with pump stations help convey the wastewater through approximately 169 miles of interceptor pipes. These interceptors are responsible for delivering the wastewater to the Sacramento Regional Wastewater Treatment Plant (SRWTP) near Elk Grove. At SRWTP, the wastewater

is effectively treated and safely discharged to the Sacramento River. In normal weather years, we treat an average of 135 million gallons of wastewater each day.

Our landmark recycled water program, Harvest Water, aims to provide a safe and reliable supply of recycled water for agricultural uses. It will increase groundwater levels and groundwater storage capacity, support habitat improvement efforts, and advance regional water sustainability. You can learn more about Harvest Water in the upcoming section—Commitment to Environmental Stewardship.

Regional San is governed and represented by a 17-member Board of Directors from our service areas. Our Board consists of five members of the Sacramento County Board of Supervisors; five council members from Sacramento; two council members from Elk Grove; and one representative each from Yolo County, Citrus Heights, Folsom, Rancho Cordova, and West Sacramento.

2020 FAST FACTS

169
MILES
of Interceptor
Pipelines

1.6 M
Population Served

181 M
GALLONS PER DAY
Treatment Plant Permitted
Capacity (average dry
weather flow)

84,428
Laboratory Tests
Completed

41,350
TONS OF STEEL
used in EchoWater Project

1982
Year Sacramento Regional
Wastewater Treatment Plant
was Commissioned



MANAGING OUR ASSETS AND BUILDING FOR THE FUTURE

OVERVIEW

Regional San is committed to sustaining the infrastructure used for sewage conveyance and treatment, and in the past several years, a number of rehabilitation projects were completed. In 2020, these projects were part of regular maintenance and other efforts to support the ongoing EchoWater Project.

Emergency Storage Basin D Rehabilitation Project

Emergency Storage Basin D (ESB-D) is one of six storage basins located at the wastewater treatment plant. Combined, these basins can store up to 400 million gallons of wastewater. ESB-D is used routinely to store up to 77 million gallons of treated wastewater when the conditions in the Sacramento River do not allow direct discharge. In order to discharge to the Sacramento River, the river flow must meet certain temperature and dilution requirements. When these requirements cannot be met, the treated wastewater must be stored until the river conditions are right.

In March, crews began the rehabilitation of ESB-D. The rehabilitation replaced the original basin plastic liner with a concrete floor and side slopes. The new concrete liner will help keep the treated wastewater clean when it needs to be stored in the basin. The project used over 19,700 cubic yards of concrete. Rehabilitation work was completed in December 2020.

Digester #7 Rehabilitation Project

Rehabilitation of Regional San's sludge digesters and related systems has been in progress for several years. This system treats and reduces the solid materials removed from wastewater and converts it to methane gas for electricity generation and biosolids for fertilizer or disposal.

Occasional rehabilitation of these assets is necessary to maintain and extend their useful life and sustain the capacity of the digester systems.

There are eight digesters at the wastewater treatment plant. Digester 7 was the first to go offline, and repair work included the replacement of valves, piping, and other mechanical

components that were beyond their useful life. The work also included sandblasting and recoating the metallic components of the digester cover and other modifications that are essential to the reliable and safe operation of the system. Digester 7 will be back online in early 2021, and the other digesters are currently being rehabilitated.

SERVICE LEVEL PERFORMANCE

Regional San has established seven core service levels that measure and report to our customers how well we are meeting our mission. In 2020, Regional San met four of our service levels.

SERVICE LEVELS	ANNUAL TARGET	2020 PERFORMANCE	TARGET MET?
Water Quality Violations	≤5	1	✓
Major Sanitary Sewer Overflows	≤1	3 ¹	—
Major Wastewater Treatment Plant Spills	0	0	✓
Major Interceptor Odor Events	≤6	12 ²	—
Wastewater Treatment Plant Odor Events	≤8	5	✓
Biosolids Recycling (equivalent acres/year)	3,000–3,650	3,657 ³	✓
Water Recycling (equivalent acres/year)	200–300	100 ⁴	N/A

¹ Regional San exceeded the service level target for annual major sanitary sewer overflows due to construction-related activities.

² Regional San exceeded the service level target for annual interceptor odor events due to unexpected equipment failures, construction-related activities, and other operational problems.

³ To ensure that targets are met, Synagro typically produces more product than required at no additional cost, with the difference carrying over to the following contract year.

⁴ In July 2018, Regional San's Board of Directors approved the temporary suspension of the Water Recycling and Wastewater Treatment Plant Odor Event service levels due to the EchoWater Effluent System Reliability Project (ESRP). The ESRP required frequent plant diversions, which did not allow for the seasonal operation of the Water Recycling Facility and increased the risk of nuisance odors around the Plant. The ESRP was completed in October 2019, but in April 2020, Regional San's Board of Directors approved continued suspension of the Water Recycling Service Level due to the Biological Nutrient Removal Project startup activities.

ECHOWATER PROJECT

The EchoWater Project is nearing the final stages of construction and commissioning, with Regional San on track to complete the treatment plant upgrades by 2023.

This year marked the EchoWater Project's sixth full year of construction. Progress continued steadily on the several remaining projects. The largest of these are the Biological Nutrient Removal Project (BNR) and the Tertiary Treatment Facilities (TTF). Other projects that advanced significantly in 2020 include the Return Activated Sludge Pumping Project and the Channel Aeration Blower Project.

Once operational, the EchoWater Project will reduce ammonia in our discharge by 99 percent, eliminate more pathogens, and produce recycled water suitable for irrigation and other industrial uses.

Biological Nutrient Removal

Under construction since 2016, the BNR facility is the largest component of the EchoWater Project. With a total construction cost of more than \$400 million, it also is the most expensive component of the EchoWater Project. The BNR will improve water quality in the Sacramento River by reducing ammonia and nitrate in treated wastewater.

In 2020, work progressed on three of the eight BNR basins, and commissioning of the pump station was completed. Introduction of primary effluent through Basins 1–3 was initiated in September, which means the BNR is now successfully treating a portion of the plant's flow. Work also continued on the electrical equipment and support facilities.



Channel Aeration Blower Project

The Channel Aeration Blower Project (CAB) replaced the treatment plant's original and nearly obsolete channel air blowers located in the Influent and Effluent Building. The project included the installation of new turbo blowers that provide a more useful distribution system. The new turbo blowers also provide operational flexibility, and increase the efficiency and reliability of the Channel Aeration Air (CAA). In addition to the air blower work, the original concrete channel air duct was abandoned in place, and new piping was installed to complete

the new distribution system. Some parts of the existing CAA distribution piping system continue to be in service. The project was completed in 2020.

The result of the CAB project is an improved and more efficient air flow system for the treatment process, bringing better reliability and significant energy savings. The project was awarded a SMUD Incentive Award in the amount of \$150,000 for the energy efficiency measures and overall reduction in energy demand.

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FINANCIAL OVERVIEW

FINANCIAL SUMMARY

Regional San's revenue is generated primarily from two sources: monthly rates paid by existing customers and sewer impact fees paid by new customers connecting to our system. Our monthly rate revenue has increased due to rate increases required to build the EchoWater Project; however, revenue from sewer impact fees fluctuates from year to year as local economic growth ebbs and flows. In 2020, we collected \$280 million in monthly rates and \$24 million in impact fees.

RATE INCREASES

In order to fund the EchoWater Project, monthly rates were gradually increased. These increases were phased in slowly to reduce the impact to our ratepayers. In May 2019, our Board rescinded previously approved rate increases for the last three years of a five-year rate increase plan. This means rates are projected to stay at the current level of \$37 per month for several more years.

RATING AGENCY	RATING	OUTLOOK
Moody's	Aa2	Stable
Standard & Poors	AA	Stable
Fitch	AA-	Stable

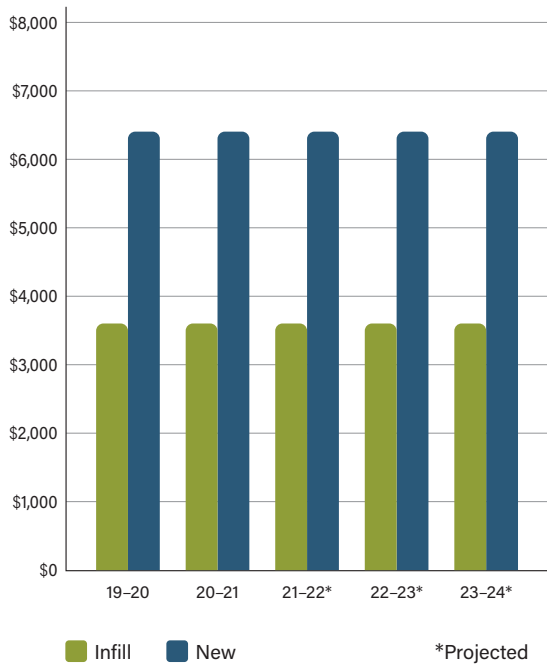
DEBT MANAGEMENT

Once the EchoWater Project is complete, Regional San will have long-term debt totaling approximately \$2.7 billion. Of this total, approximately \$650 million is variable-rate debt, most of which is hedged with swaps that essentially convert the debt into fixed-rate debt. Another \$650 million is traditional fixed-rate bonds. The remaining \$1.4 billion in debt is from the EchoWater Project loan agreements with the State of California through the Clean Water State Revolving Fund. These loans have an average interest rate of 1.68 percent with a 30-year repayment term. This low-interest loan is expected to save our ratepayers more than \$500 million in interest, compared to traditional bond financing.

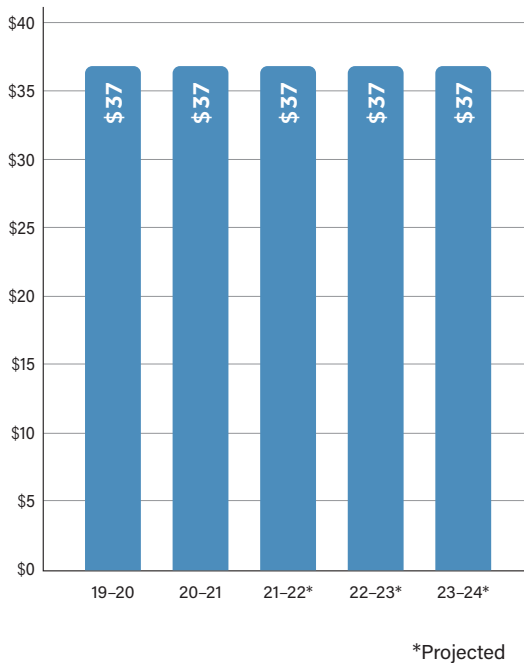
In June 2020, we received a rating upgrade from Moody's Investors Service. Our credit rating went from Aa3 to Aa2. The rating upgrade was based on improved financial metrics and a stable outlook for the next five years.



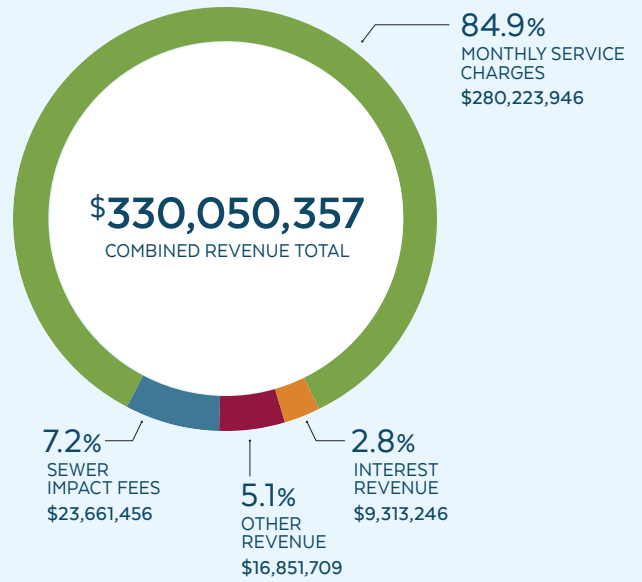
CURRENT AND PROJECTED SEWER IMPACT FEES



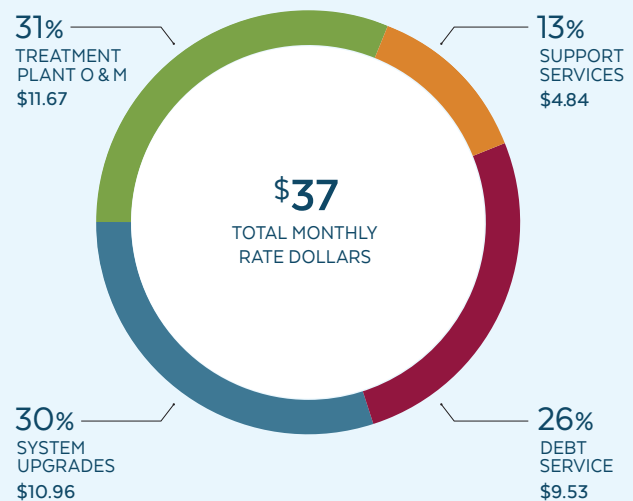
CURRENT AND PROJECTED MONTHLY SERVICE RATES



2020 REVENUE SOURCES



2020 RATE DOLLARS SPENT



BUILDING COMMUNITY CONNECTIONS

OVERVIEW

Regional San is a part of the communities we serve, and connecting with our community is a critical part of our job. Every year, we work to engage customers and stakeholders through community outreach events and treatment plant tours, but due to COVID-19, public tours had to be cancelled, and our community engagement looked different this year.

SOCIAL MEDIA ENGAGEMENT

In 2020, with the cancellation of our outreach events, our staff took advantage of social media to stay engaged with the community. We continued to take a proactive approach by utilizing both Facebook and Twitter. Each week, we shared key messages and fun videos that helped educate our followers. In 2020, we had more than 20,000 impressions on Facebook alone.

During Water Professionals Appreciation Week in October, we highlighted our essential staff and their efforts. We shared informational graphics and videos that demonstrated the diversity of professions required to provide wastewater services. One of the most popular posts during the week was a video showcasing our Bufferlands, which earned more than 240 impressions.

Engaging our customers on social media is a key component of our outreach strategy. Our commitment to raising awareness and increasing Regional San's visibility via these platforms has proven to be a successful, cost-effective strategy. In the future, we will continue to leverage these tools to connect with the communities we serve.



CONFLUENCE REGIONAL PARTNERSHIP PROGRAM

Each year, Regional San partners with the Sacramento Area Sewer District to fund the Confluence Regional Partnership Program. This unique grant program uses non-rate, non-fee revenues to support community programs that advance environmental, educational, and economic vitality in the Sacramento region.

In 2020, Regional San funded several projects. One such project was the Regional Parks cleanup of the American River Parkway and Watershed Management. This project provided cleanup and removal of trash and debris within the American River Parkway.

We also helped fund the City of Sacramento's River District Hot Shot Program, which included proper disposal of needles, biohazardous materials, and human waste. All Confluence Program funding helps assist the community while advancing the two agencies' missions, visions, and values.

Applicants can request funding for projects and programs in several categories: environmental stewardship, regional economic development, public education, sewer lifeline rate assistance, and other issues or projects. During the 2019-20 fiscal year, the Confluence Program obligated nearly \$4.3 million dollars for various efforts.

NICOLAUS DAIRY RENOVATIONS AND EDUCATIONAL PROGRAM CONTINUES

In 2020, the renovations of the historical Nicolaus Dairy made substantial progress. With a sense of responsibility for the sites historical significance, Regional San made efforts to preserve the original farmhouse and buildings. Renovations included upgrading landscaping and structures; installing fire alarms and smoke detectors in all structures; and building a new roadway to help make the property more accessible. Prior to on-campus closures, high school students built workshop tables and benches, designed and created

exhibits, and established plants in the raised garden beds. With support from the California State Parks, a small dairy museum was completed and is home to a collection of loaned dairy and farm artifacts.

Meanwhile, the educational component—named Project AWE for its focus on agriculture, water, energy, and the environment—continued. A team of fourth-grade teachers from the Elk Grove Unified School District (EGUSD) began piloting the dairy-themed “Moovin’ into

the Valley” curriculum in their classrooms. When EGUSD closed on-campus learning, Project AWE staff quickly developed a distance learning model with several online lessons. Staff also completed the “Dirt to Dinner” fifth-grade curriculum and began developing a fifth-grade distance learning website. Previously planned in-person field trips are on hold until COVID-19 improves and health conditions permit.



COMMITMENT TO ENVIRONMENTAL STEWARDSHIP

OVERVIEW

At Regional San, it's our responsibility to help create a sustainable environment for future generations. We feel a deep commitment to protect the environment through the responsible stewardship of natural resources. As a core component of our mission, environmental stewardship drives a diversity of programs that aim to protect and improve the precious natural resources in our region. In 2020, Regional San made important progress on our water recycling efforts and the practical reuse of a precious natural resource.

HARVEST WATER

Regional San's largest water recycling effort, Harvest Water (formerly the South County Ag Program), made significant progress in 2020. This landmark undertaking demonstrates Regional San's long-term commitment to responsible environmental stewardship and ecosystem sustainability. Harvest Water has been preliminarily approved for \$280.5 million in grant funding from the state Water Storage Investment Program and \$4.2 million from a federal Title XVI grant.

When completed, Harvest Water will be one of the largest agricultural water recycling projects in California, delivering up to 50,000 acre feet per year of tertiary-treated recycled water to an estimated 16,000 acres of farm and habitat lands in southern Sacramento County. Harvest Water will also deliver lasting environmental benefits by increasing groundwater levels and groundwater storage capacity, supporting habitat improvement efforts, and advancing regional water sustainability.

Throughout the year, the Harvest Water team continued to connect with local farmers. Our notable activities included pursuing EcoPlan partnerships, progressing with environmental permitting, and coordinating with public resource agencies to develop public benefit agreements. Regional San's Board of Directors also gave approval to begin the LAFCo process to annex the Harvest Water area into Regional San's service area, for recycled water service only.

The program also took a big step forward in 2020 by establishing the Capital Program Management Office, or C-PMO, which is responsible for developing designs and managing construction of Harvest Water. Design of the system components will start in spring 2021, and construction is expected to start in early 2023. Initial delivery of recycled water is planned for late 2024.

BIOGAS ENGINE PROJECT

One way Regional San protects the environment is by recycling biogas—a renewable by-product of the solids digestion process. In 2020, Regional San began procurement and design planning for a biogas cogeneration engine system. Currently, Regional San delivers renewable biogas to the Sacramento Municipal Utility District (SMUD) in exchange for reliable utility and backup power, steam for digester heating, and revenue per a commodity agreement. The original driver for the agreement was the co-location of the Carson Cogeneration Plant, which is located on SRWTP's property, but SMUD no longer combusts the digester gas onsite and now sends the gas to its Cosumnes Power Plant.

With this change and the commodity agreement expiring in 2025, Regional San staff took the opportunity to begin planning the construction of a new biogas cogeneration engine system to utilize digester gas onsite. This new system will use biogas to power generators and will produce enough renewable energy to power over 7,500 homes.

AWARDS & RECOGNITION

Regional San values its commitment to environmental protection and public education. Notable awards and recognitions for 2020 included the following:

- **President's Choice Award** from California Water Environment Association-Sacramento Area Section for our support of laboratory training sessions
- **Monetary Award of \$150,000** from SMUD for the EchoWater's Channel Aeration Blower Project
- **2020 Project of the Year** Environment Category from American Public Works Association-Sacramento Chapter for the Return Activated Sludge Pumping Project
- **Award of Distinction** from California Association of Public Information Officers for Regional San and SASD's Joint Elementary Schools Outreach Program
- **Gold Award** from the National Association of Clean Water Agencies for Regional San's operational performance and permit compliance

LIVING OUR VALUES

DEMONSTRATING RESOLVE IN THE FACE OF A PANDEMIC

COVID-19 hit Sacramento County in early 2020, and Regional San immediately began implementing emergency plans. As an essential service provider, we had to safely and seamlessly maintain continuity of operations in order to deliver on our mission of protecting public health and the environment.

During perhaps the most difficult time ever for many area businesses, Regional San proactively began offering rate adjustments and account credits for businesses impacted by the local COVID-19 Public Health Orders. This rate relief will continue as long as businesses are impacted by related closures.

Regional San has also been proactively participating in important research that

will help public health officials better understand and fight COVID-19. Wastewater epidemiology—or sewage surveillance—analyzes viral markers in influent to track infection rates in communities. The hope is this data can be used by public health officials to both assess the effectiveness of measures aimed at limiting the spread of the virus and provide communities an early warning of new outbreaks.

In looking back at 2020, Regional San demonstrated exceptional determination and adaptability under daunting conditions. Collective resolve has kept the treatment plant operating at full strength, while major efforts like the EchoWater Project and Harvest Water remain on schedule. Each and



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every employee has contributed to this remarkable achievement. While normal routines and business operations have changed dramatically, the past year has proven that Regional San will continue to deliver on our mission—no matter what.

In a year of unexpected challenges, Regional San showed tremendous resolve. We modified our operations to protect public health and identified ways to support the region during economic hardship.



2020 BOARD OF DIRECTORS

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REGIONALSAN
TAKING THE WASTE OUT OF WATER