WRD
WATER REPLENISHMENT DISTRICT
OF SOUTHERN CALIFORNIA

Achievements in Water Independence

Fiscal Year 2023
Annual Budget

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Mission Statement, Board of Directors & Standing Committees

Mission Statement

"To provide, protect and preserve safe and sustainable high-quality groundwater."

The District's mission statement is interpreted and directed by the District's policymaking and governing body, the Board of Directors, which represents the highest authority within the management structure of the District.

Board of Directors

Joy Langford
Division One

Robert Katherman
Division Two

John D.S. Allen
Division Three

Sergio Calderon
Division Four

Vera Robles Dewitt
Division Five

The five-member Board is elected by the voting public to serve four-year terms. Stated goals and objectives are accomplished through a committee structure that reports to the Board of Directors. Committees may delegate some of its authority to staff in the interest of efficiency, stability, and prudent management for completion of specific tasks.

Standing Committees

The Board shall be organized into the following Standing Committees that are advisory to the Board with respect to matters within their respective areas of responsibility:

- Administrative Committee
- Capital Improvement Projects Committee
- External Affairs Committee
- Finance/Audit Committee
- Groundwater Quality Committee
- Water Resources Committee

Administrative Committee

The Administrative Committee shall study, advise, and make recommendations regarding the following:

1. Administrative and personnel policies and procedures to be considered by the Board of Directors

2. Policies and procedures pertaining to the oversight and management of the organization, including but not limited to the District's organization and the flow of the authority and responsibilities

3. Periodic independent reviews and studies of the organization, classification of positions and related compensation ranges, some of which are outlined in the Memorandum of Understanding with the employees' bargaining unit

Capital Improvement Projects Committee

The Capital Improvement Projects Committee, composed of the five members of the Board, shall advise the Board of Directors and make recommendations on all capital improvement program-related projects and issues related to:

1. Project budgets and schedules

2. Decisions relating to competing alternatives in project planning

3. Addition and deletion of proposed projects

4. Decision related to ongoing operation and maintenance of the treatment facilities

External Affairs Committee

The External Affairs Committee, composed of the five members of the Board, shall study, advise, and make recommendations regarding the following:

1. Proposals and recommendations concerning local, regional, state, and federal legislation, or amendments thereto, that may affect the District

2. Opportunities for Directors to assist in outreach activities, including but not limited to efforts to inform members of the Legislature or the Congress of the District's position regarding proposed legislation

3. The effectiveness of legislative advocacy efforts

4. The development and implementation of school education programs, including the expectations and goals for these programs

5. The effectiveness of the District's external affairs programs and general communications efforts directed at member agencies and the general public

6. The selection of public information consultants and the scope of their assignments

Finance/Audit Committee

The Treasurer of the Board must serve on the Finance/Audit Committee. The committee shall study, advise, and make recommendations regarding the following:

1. Financial activities of the District by reviewing the monthly demands, financial statements, reimbursements, and other key financial issues of the District

2. The coordination of the annual budget process and monitoring the budget as necessary to ensure that the operations of the District are conducted pursuant to it

3. The District's investment policy and the District's investment portfolio. The committee is to monitor any short, intermediate, and long-term capital needs of the District

4. Acts as the Audit Committee relating to the Comprehensive Annual Financial Audit conducted by the District's independent financial auditor

Groundwater Quality Committee

The Groundwater Quality Committee shall study, advise, and make recommendations regarding the following:

1. The operation, protection, and maintenance of the District's water quality facilities

2. Engineering aspects of all water quality projects

3. The effect on the District of existing and proposed federal, state, and local water quality statutes and regulations; and

4. The District's Capital Improvement Program as it relates to water quality projects

Water Resources Committee

The Water Resources Committee shall study, advise, and make recommendations regarding the following:

1. The operation, protection, and maintenance of the District's replenishment water facilities

2. Policies, sources and means related to the stewardship of the Central and West Coast Groundwater Basins, including but not limited to, importing, and distributing water, transferring water and wheeling as required by the District

3. Policies regarding the use, reuse, recycling, and underground storage of water

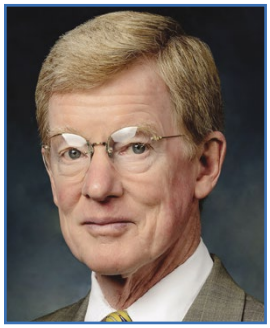
4. Environmental compliance and requirements and the effect on the District of existing and proposed federal, state, and local environmental statutes and regulations

5. Engineering aspects of all replenishment water projects

6. Input related to the District's Capital Improvement Program as it relates to replenishment water projects

7. Policies related to the District's conjunctive use efforts, including but not limited to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA)

Board President's Report



John D. S. Allen
President

Despite the operating challenges of the continuing COVID pandemic, it was a busy and productive year for WRD. We approved a Project Labor Agreement with the Los Angeles & Orange County Construction Trades Council for the Regional Brackish Water Reclamation Project, funded multiple PFAS remediation projects, realigned our division boundaries to accommodate population changes over the past ten years, broke ground on our Inland Injection Well Project in Long Beach, and completed a water treatment facility in Maywood. And importantly as we move forward, we adopted a new Strategic Plan and Five-Year Capital Improvement Program.

Strategic Plan

The Board adopted a Strategic Plan that will guide the district's work for the next several years. Our strategic goals:

Promote Organizational Excellence

- WRD will optimize internal operations, continue outreach and engagement with the public, regulators, and elected officials, and will maintain strong financial standing through accurate budgeting and obtainment of funding sources.

Maximize Innovation & Environmental Resiliency

- WRD will strive for continued increased efficiency in all treatment and recharge operations and will plan adaptability into new and existing projects.

Expand Replenishment Opportunities

- WRD will identify and secure new replenishment sources and locations to ensure reliable recharge water for adjudicated pumping allocations and also to utilize available storage space for increased local water supply.

Expand Extraction Capacity

- WRD will expand groundwater extraction capacity through remediation, identification of new extraction sites and through incentives for groundwater pumpers.

Capital Improvement Plan

A strategic plan is of little value, of course, unless supported by a Capital Improvement Plan (CIP) that implements plan goals and objectives. The Board adopted a five-

year CIP that identifies specific projects and programs that correspond to each of the Strategic Plan goals, along with a timeline for program and project implementation, and an anticipated budget and funding plan. Total costs are forecast to be $178.8 million, with $26.5 million of that from outside sources like grants and direct federal appropriations. Groundwater quality and remediation is the largest component of total costs, with $102.3 million anticipated for those purposes over a five-year period. Projects that reduce reliance on imported water total 58 million.

Taken together, the Strategic Plan and CIP are blueprints the district can follow to intelligently and methodically reduce the region's reliance on imported water, remediate contaminated water to make the basins more productive, keep our facilities operating efficiently, and maintain the organizational excellence that makes the projects and their management possible.

Two Important Projects

WRD celebrated the opening of one project in Maywood and broke ground on another in Long Beach. Both will add to groundwater resiliency in the region and reduce reliance on imported water.

The Maywood Mutual Water Company #2 water treatment facility removes manganese and iron that have been of concern to the Maywood community for years. A combination of $1 million from legislation carried by Speaker Anthony Rendon and $1.7 million in Proposition 1 funding made the project possible.

And WRD broke ground on our Inland Injection Well project at the Leo J. Vander Lans Advanced Water Treatment Facility in Long Beach. When complete, the project will yield up to 2 million gallons of purified recycled water per day from the Advanced Water Treatment Facility and inject it into the groundwater aquifer for storage. The project will act as a buffer during drought and contribute to regional water security. The project also reduces the strain on imported water supplies.

PFAS Remediation Program

PFAS (Per- and Polyfluoroalkyl Substances) are contaminants found in drinking water wells throughout the country. They were used for many years in the manufacture of everyday consumer products. They are known as "forever chemicals" because they don't break down into natural constituents.

In recent years, state regulators have established increasingly strict standards for these chemicals and several wells in WRD's service area exceed those standards. The wells have shut down as a result. Fortunately, PFAS lend themselves to treatment.

Last year, WRD established a funding support program to help affected groundwater pumpers to install treatment systems to eliminate PFAS and return their wells to production. The pumpers in turn pledge a minimum volume of pumping once the wells are restored.

I am very pleased to report that WRD's PFAS Remediation Program is an unqualified success. To date, four pumpers have taken advantage of the program, three more have pending applications, and even more are taking preliminary steps to apply. While WRD has allotted $35 million for the program, we estimate that total remediation of all affected wells will cost over $100 million. WRD is aggressively pursuing state and federal funding opportunities to support the program.

Outside Funding

WRD has enjoyed great success over the years in securing outside funding to support our projects, and this past year was no exception. We received $1.5 million from the Bureau of Reclamation and $1.5 million from PepsiCo for our Inland Injection Well Project. We are well-positioned to receive significant funding support from the state and federal governments for our PFAS remediation program. Outside funding, of course, helps keep the Replenishment Assessment on pumping quite inexpensive relative to imported supply.

The Passing of Willard H. Murray, Jr.

The WRD family lost a beloved member in December of last year when Director Willard H. Murray, Jr. passed away. During Murray's 23-year tenure on the Board, WRD built recycled water plants in Long Beach and Pico Rivera, a desalter in Torrance, and many facilities throughout the district to remediate contaminated groundwater. He was an early champion and advocate of WRD's Water Independence Now (WIN) initiative to eliminate reliance on imported water to meet the district's replenishment needs. He made an indelible imprint on water supply reliability in Southern California. The region and the state are lasting beneficiaries of his many contributions.

Appointment of Joy Langford

After a diligent candidate recruitment and interview process, the Board in February selected Ms. Joy Langford to fill the remainder of Director Murray's term. Ms. Langford brought to her candidacy over 15 years' experience in environmental project management and intergovernmental relations. As an Assembly legislative deputy, she crafted environmental policies to support local water districts, including WRD. She was born in Los Angeles and raised in the Division she now represents. In her relatively brief tenure with the district, she has demonstrated her policy expertise and leadership skills. She is an asset to her community and to WRD. We are very pleased to have her on board!

Thank you!

I want to thank General Manager Stephan Tucker and WRD's staff for the superb work they do in moving the district's business forward under difficult pandemic conditions. Thanks as well to the pumper community for their collaboration on WRD's projects and budget and for their steady support of our PFAS remediation program. And I want to thank my fellow Board members for their commitment to the work of the district and the long hours and hard work they put into meeting the many obligations that service on our Board entails.

John D.S. Allen
President

General Manager's Report

Stephan Tucker
General Manager

Epic Drought

The American Southwest is in the grips of the most severe drought in the last 1,200 years. The impacts are devastating and are likely to get worse as climate change accelerates. Snowpack runoff that melts to provide the source of supply for the State Water Project was so low this year that the state is allocating 0 (zero) water to State Water Project users, including Southern California. Water levels in Lake Mead are so low that power generation from the Hoover Dam may be compromised as early as next year and water from the Colorado River to Arizona, Nevada, and California may be drastically curtailed by as much as 2 to 4 million acre-feet.

Areas of Southern California that are reliant on the State Water Project are being forced by the Metropolitan Water District to cut water consumption by 35%. Using water on ornamental landscape at commercial and industrial facilities has been banned statewide. The Governor's call for a voluntary 20% reduction in water use has had a modest effect.

Short-term, the state and region are desperate for rain and snow. Longer-term, two massive advanced treated recycled water projects and a major groundwater brackish water reclamation plant are planned or underway that will virtually drought-proof the region and make much of Southern California less dependent on imported water from either Northern California or the Colorado River. WRD is collaborating with the recycled water project sponsors to use significant volumes of produced water for groundwater replenishment, groundwater storage, and possibly for the augmentation of groundwater rights.

Pure Water Southern California

Pure Water Southern California is the new name for what was formerly called the Regional Recycled Water Program. A joint effort of the Metropolitan Water District and the Los Angeles County Sanitation Districts, this advanced treated recycled water project will produce up to 150 million gallons of water daily or nearly 170,000 acre-feet per year. That is enough to meet the annual needs of 500,000 homes. While the water produced will be of drinking water quality, it is anticipated that much of it will be spread or injected in underground aquifers in the region, including those underlying WRD, and subsequently pumped out.

A demonstration facility for the project was opened in 2019 and environmental documentation should be completed in 2023. Plans call for completion in 2032, but MWD is looking at some deliveries as early as 2028. It will be one of the largest facilities of its kind in the world. It carries a $2 billion price tag

Operation Next

Operation Next is a project of the Los Angeles Department of Water designed to maximize production of advanced treated recycled water from the Hyperion Water Reclamation Plant. The water would be used for groundwater storage and to increase local water supplies. With the potential to produce as much as 217 million gallons per day, or 243,000 acre-feet per year, the project could be even larger than Pure Water Southern California.

LADWP is examining storage potential in the West Coast and Central Basins and also looking to convey extracted groundwater to LADWP's distribution system. There is also the possibility of integrating Operation Next with Pure Water Southern California to expand the regional benefits of both projects.

The timeline for Operation Next calls for completion by 2052. While that is 30 years out, we have learned from experience that 30 years in the water world is not a long time.

Regional Desalter

When the barrier system was built to retard the intrusion of seawater water into the aquifers underlying the West Coast Basin, approximately 600,000 acre-feet of salty water that had already migrated inland was trapped, principally but not exclusively underlying the city of Torrance. The plume has led to approximately 30,000 acre-feet of unused water rights and the inability of groundwater pumpers to use an estimated 120,000 acre-feet of storage space within the basin.

Since 2002, the Goldsworthy Desalter has been treating about 4,000 acre-feet of that water annually, far less than its capacity and not a lot, considering the size of the plume. Two years ago, WRD along with eight stakeholders undertook a feasibility study to evaluate ways to remediate the residual brackish plume in four distinct aquifers. The study recommended a central desalter fed by new groundwater extraction wells and the treatment of 10,000 to 20,000 acre-feet per year over a 30-year period.

Since the study was published, WRD has determined to approach the desalination of the aquifers individually in stages rather than as a single project. So the first stage of the program will focus on maximizing the performance of the Goldsworthy Desalter and on remediating the plume located in the Lynwood and Silverado aquifers with a new regional desalter.

To implement the first stage, WRD engaged an engineering firm to do testing and water quality characterization as Phase 1 of a 3-phased approach. Phase 1 lays the groundwork for the successful extraction, treatment, and delivery of an additional 10 million gallons per day from the seawater plume in two of the aquifers in the West Coast Groundwater Basin. It also provides an opportunity to address and solve the current difficulties with fouling at Goldsworthy in conjunction with a new Regional Brackish Plant.

Since persistent, more intense and longer-lasting drought that severely constrains imported water supplies is now our normal condition, Pure Water Southern California, Operation Next, and WRD's Regional Brackish Water Reclamation Plant are the future of water supply in the Greater Los Angeles region. As a sponsor or collaborator on all of these projects, WRD is pleased to be a significant part of that future.

Gender & Racial Equity Organizational Assessment

Shortly after becoming General Manager of WRD just over a year ago, I proposed that WRD conduct a Gender and Racial Equity Organizational Assessment. It is not immediately evident that there are any underlying systemic issues that WRD needs to address, but my feeling is that a proactive approach will ensure equity in WRD's employment practices and will strengthen the employer-employee relationship and employee morale. I am pleased to report that the assessment is nearing completion and the district looks forward to sharing it with employees and stakeholders.

Stephan Tucker
General Manager

Water Replenishment District Service Area

About the Water Replenishment District

The Water Replenishment District of Southern California (WRD) is a special water district that was established in 1959 by popular vote to counteract the effects of over pumping of groundwater from the Central and West Coast Groundwater Basins in Los Angeles County.

WRD is the only replenishment district in California operating under the provisions of the California Water Code, Section 60000 et seq., which specifically governs water replenishment districts. The District manages the two major groundwater basins which provide groundwater for approximately four million residents in 43 cities of southern Los Angeles County.

Prior to the formation of the District, over-pumping of the two groundwater basins caused overdraft, and many wells went dry and seawater intruded into the groundwater aquifers – underground geological formations that store water. In 1957, the accumulated overdraft in the Central Basin was almost one million acre-feet, which translates to a tremendous withdrawal of water from aquifers in excess of the amount of water that naturally, or artificially, replaces it. In both basins, groundwater levels had dropped to below sea level.

In 1959, the Central Basin Water Association and West Basin Water Association, comprised of the major groundwater producers from each basin, jointly proposed and obtained voter approval for formation of the Water Replenishment District of Southern California to manage the Central and West Coast Groundwater Basins. Today the basins have recovered, are in balance, and independent of imported water for groundwater replenishment, using only recycled water and stormwater for recharge.

The District's mission is "to provide, protect and preserve safe and sustainable high-quality groundwater". The District accomplishes this through its various programs and projects to ensure a reliable supply of high-quality groundwater. In addition, the District's role has expanded as it developed programs to capture stormwater, recharge recycled wastewater, monitor water quality and build advanced water treatment plants to ensure safe and reliable groundwater supplies.

Local Economy

At the beginning of 2020, Los Angeles County was experiencing a long and unprecedented period of economic strength. However, by the end of the first quarter of 2021, the COVID-19 pandemic struck, temporarily halting economic growth and stability in the region.

Los Angeles County's "Safer at Home" order, issued on March 19, 2020, mandated closures and restrictions that significantly affected a number of businesses. Bars, fitness centers, schools, and entertainment venues were forced to close. In-person dining at restaurants was prohibited with restaurants being limited to take-out and delivery services. Restrictions were relaxed towards the end of May 2020 but were reinstated in July and November which impacted the path of economic recovery, particularly for businesses directly affected by reinstated restrictions.

The structure of the Los Angeles County economy is characterized by a relatively high prevalence of the types of industries (and their accompanying workforce) that were most hard-hit by the pandemic. These industries require a high degree of in-person interaction, and include sectors focused on entertainment, particularly the film and television industry, and the types of businesses that cater to tourists such as restaurants and hotels. As a result, Los Angeles County was particularly hard-hit compared to California or the nation as a whole.

Although jobs recovered at a slower rate in the county compared to California and the U.S. during 2020 and the first half of 2021, during the second half of 2021 Los Angeles County has been adding jobs back at a faster rate than the state or the nation. Nevertheless, Los Angeles County's economy has yet to fully recover from the pandemic-induced downturn. Furthermore, economic recovery has been uneven, with some industries experiencing stronger recovery than others.

Los Angeles County's economic recovery in the years to come will depend on a variety of factors including the future trajectory of the COVID-19 pandemic. Important industries in Los Angeles County provide services that require high degrees of in-person interaction. As a result, the economic performance of many of these industries will be inextricably linked with the state of the pandemic.

Gross county product is expected to grow by 6.8 percent in 2021 and is projected to grow by another 4.6 percent in 2022. Although growth is expected to slow over the next two years after the major rebound of 2021, there are positive signs that the county economy is getting back on track after the losses in 2020.

The negative employment effects of the COVID-19 pandemic were most severe in March and April 2020; approximately 716,100 nonfarm jobs were lost within those two months. By May 2020, Los Angeles County's seasonally adjusted unemployment rate had climbed sharply from 4.3 percent in February to 21.1 percent. By December 2020, the unemployment rate in Los Angeles County had fallen back down to 12.3 percent.

In 2021, the unemployment rate in Los Angeles County continued to fall. February's unemployment rate declined almost two percentage points, reflecting the loosening of restrictions when the Regional Stay at Home Order was rescinded statewide on January 25. The unemployment rate in August was below 10 percent for the first time since the pandemic struck. By November, the unemployment rate had fallen to around 7 percent.

All major industry sectors in Los Angeles County experienced a decline in employment as a result of the pandemic in 2020. The leisure and hospitality sector and trade, transportation, and utilities sector (which includes retail trade) experienced the most significant negative employment shocks in terms of total job losses. The leisure and hospitality industry, whose components include arts, entertainment, and recreation as well as accommodation and food services, was extremely hard hit as tourism all but disappeared during the depths of the pandemic and most offered services could not be provided remotely.

Compared to the Great Recession, the immediate effect of the pandemic on employment was swifter and more significant. However, the rate of employment recovery has so far been more rapid than during the Great Recession. Throughout the pandemic, Los Angeles County experienced the greatest job loss associated with the measures taken to mitigate the spread of the virus that took place between March and April, when more than 772,000 jobs fell off county nonfarm payrolls. Since then, Los Angeles County has added around 67.5 percent of those jobs back.

While the hardest hit industries are trending upwards, many still have quite a way to go before they reach pre-pandemic employment levels. While the Los Angeles region continues to recover from the pandemic-induced downturn, industries that were hardest-hit by the pandemic are still trailing behind in the recovery process. These lagging industries include leisure and hospitality, information (which includes the motion picture and sound recording industry), and other services (which includes personal care services such as hair and nail salons).

Overall, employment in L.A. County was significantly up across most industries in 2021 compared to the depths of the pandemic in 2020. The hardest-hit industries added the highest number of jobs with leisure and hospitality adding back the most. Though Los Angeles County has been adding jobs back to payrolls on a monthly basis, employment in L.A. County is still significantly below January 2020 levels.

Over the next two years, professional and business services, leisure and hospitality, and education and health services are expected to add the most payroll jobs.

Los Angeles County is quickly recovering from the negative economic and social effects of the COVID-19 pandemic. The pandemic-induced job losses, business failures, industry shifts, and overall social and economic changes, will have ramifications that will extend beyond the end of the pandemic.

Table 1

Economic Statistics - United States, California, & Los Angeles County

Description	2017	2018	2019	2020	Forecast 2021	Forecast 2022
Population (1 & 2) in millions						
United States	325.12	326.84	328.33	329.48	331.89	332.84
California	39.49	39.67	39.76	39.78	39.95	40.15
Los Angeles County	10.22	10.23	10.21	10.17	10.20	10.21
Median Home Listing Price (3)						
United States	$279,900	$300,000	$324,900	$342,450	$385,000	$450,000
California	$549,000	$555,000	$585,000	$657,500	$748,000	$759,500
Los Angeles County	$729,450	$749,000	$759,000	$924,750	$954,500	$905,000
Real GDP Growth (4)						
United States	2.7%	2.3%	2.6%	-2.3%	5.7%	3.6%
California	4.7%	4.0%	3.6%	-2.8%	6.7%	4.2%
Los Angeles County	3.5%	2.9%	3.3%	-6.3%	6.8%	4.6%
Unemployment Rate (4)						
United States	4.4%	3.9%	3.7%	8.1%	5.3%	3.9%
California	4.8%	4.3%	4.2%	10.2%	7.7%	5.7%
Los Angeles County	4.8%	4.7%	4.6%	12.8%	9.6%	6.4%
Real Per Capita Income (4)						
United States	3.4%	3.3%	1.3%	3.4%	2.1%	-1.9%
California	1.7%	1.8%	3.9%	7.0%	2.1%	-1.9%
Los Angeles County	1.2%	1.4%	3.1%	6.2%	1.3%	-2.1%

Sources

(1) U.S. Census Bureau
(2) California Department of Finance
(3) Federal Reserve Economic Data
(4) Los Angeles County Economic Development Corporation

Strategic Goals & Objectives

Strategic Planning: Purpose & Process

WRD has developed a strategic plan to guide the District in near-term and long-term planning efforts. These efforts begin at the highest level, looking 20 years into the future and setting visionary goals for increased regional sustainability. Building upon the successful WIN program, this effort has been envisioned as WIN 4 ALL: The 2040 Plan for Regional Water Independence.

To provide near-term focus for accomplishing the WIN 4 ALL goals, WRD has produced this 2-Year Strategic Plan, which incorporates planning efforts from the regularly updated 5-Year Capital Improvement Projects Program document and enlists a 2-Year work plan for immediate District strategy moving into the following year.

Top Strategic Accomplishments by Department

Hydrogeology Department

- Commenced groundwater treatment system construction to clean up perchlorate impacted groundwater in the Los Angeles Forebay. Eighty percent (80%) of the project costs are funded through a Proposition 1 grant we received for a total of ~$12 million from the State Water Resources Control Board (SWRCB).

- Completed the destruction of three water supply wells as part of a well destruction program grant we received through Proposition 1. Two additional well destructions are planned for FY 2023. The SWRCB is providing 80% of the total costs for an amount not to exceed $844,000.

- Groundwater modeling support for multiple planning projects being considered where the results will help inform stakeholders on how best to balance planned increased production with additional replenishment via inland injection wells and/or existing seawater barriers located within the Central Basin and West Coast Basin.

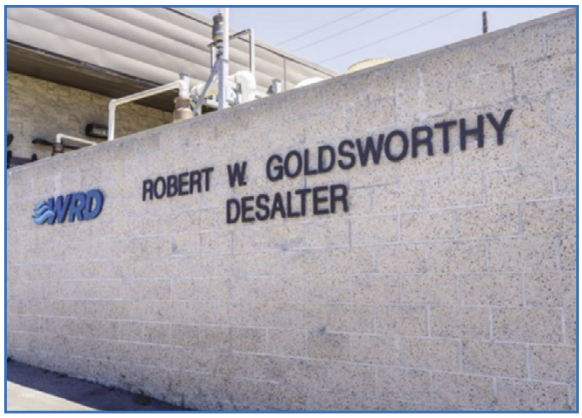
- Installed two additional deep nested regional groundwater monitoring wells with the U.S. Geological Survey (USGS). The monitoring wells were installed to fill two data gaps in the cities of Cerritos (Cerritos #3) and Paramount (Paramount #1).

- WRD completed the installation of another regional groundwater monitoring well with a partial grant obtained from the USGS. The monitoring well was installed to fill a data gap in the Montebello Forebay Spreading Grounds.

- USGS published the updated groundwater basin model for the Los Angeles Coastal Plain, which includes the Central Basin and West Coast Basin. The report is publicly available at https://pubs.er.usgs.gov/publication/sir20215088. USGS staff are currently in the process of converting the groundwater model to MODFLOW 6.

Engineering Department

- Completed Construction of Albert Robles Center for Water Recycling and Environmental Learning resulting in over 10,000 AFY of advanced treated recycled water to the Montebello Forebay.



- Transitioned operations at the Leo J. Vander Lans Advanced Water Treatment Facility to PERC Water Corporation.

- Performed O&M and Capital projects to allow LVL AWTF to reliably deliver 5 million gallons of water per day to the Alamitos Barrier Project.

- Completed Feedwater quality investigation and Pilot testing to better understand performance issues at the Goldsworthy Desalter.

- Managed ten Safe Drinking Water Disadvantaged Community Program projects at various stages of funding pursuits and project deliveries

Human Resources Department

- Developed procedures to ensure compliance with local and state public health officials and implementation of COVID-19 Workforce Transition Plan. Maintained seamless operations throughout the COVID-19 pandemic.

- Implementation of new performance management evaluation form and process for staff.

- Increased communications with staff using regular staff meetings and the WRD Intranet Portal.

- Coordinated with the Los Angeles County Registrar's office for three Board election seats in 2022 General Election.

- Streamlined the Agenda Management process, including access to agendas on a web browser.

- Expanded District's internship program across technical departments.

- Completion of two comprehensive classification and compensation studies.

Data & Technology Services Department

- Implementation of a Computerized Maintenance Management System (CMMS) at Leo J. Vander Lans and the Albert Robles Center.

- Enhancements on network security and our Virtual Private Network (VPN) enabling our workforce to securely work from home while accessing internal resources.

- Launch of the Pumper Portal to collect groundwater production data from pumpers.

- Launch of WRD Hydrographs to the public to make access to water level data and graphs readily available.

- Launch of an updated Water Rights Calculator (version 2) adding several new dimensions.

- Launch of the WRD Agendas web app, enhancing our ability to quickly distribute public meeting information.

Finance Department

- Maintained AA+ rating from Fitch Ratings on the District's 2018 Replenishment Assessment Revenue Bonds reflecting the District's strong financial profile with strong revenue defensibility and low operating risks.

- Received Distinguished Budget Presentation Award from the Government Finance Officers Association for the Fiscal Year 2022 budget.

- Received Certificate of Achievement for Excellence in Financial Reporting for the Fiscal Year 2021, the highest form of recognition in governmental accounting and financial reporting.

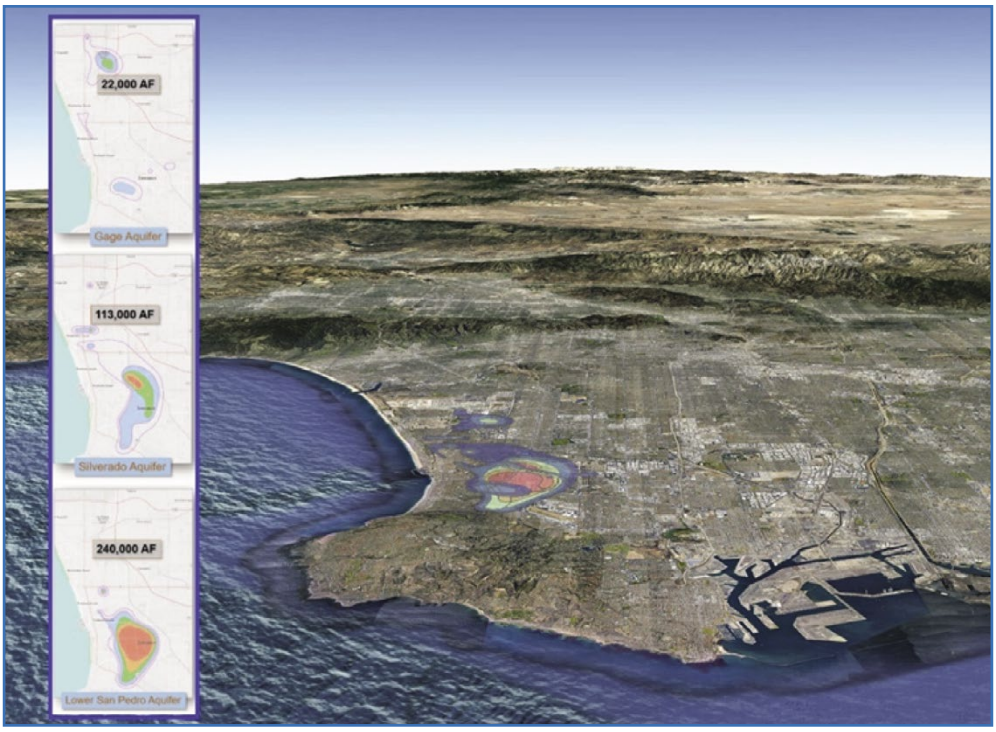
Water Resources Department

- Renegotiated and executed a new water purchase agreement with Long Beach Water Department for the recycled water supply to Leo J. Vander Lans Facility.

- Executed a Memorandum of Understanding with the Los Angeles County Department of Public Works to initiate the development of a Joint Power Authority (JPA) for cooperative operations of replenishment and resiliency facilities.

- Applied for and received a Title XVI authorization and $4.9M for the Regional Brackish Water Reclamation Program.

- Developed and implemented a PFAS Remediation Program to provide over $34 million of funding for the pumping community for remediation of PFAS.



External Affairs Department

- Developed a comprehensive virtual field trip program for Kindergarten through 12th-grade students at the Albert Robles Center for Water Recycling and Environmental Learning.

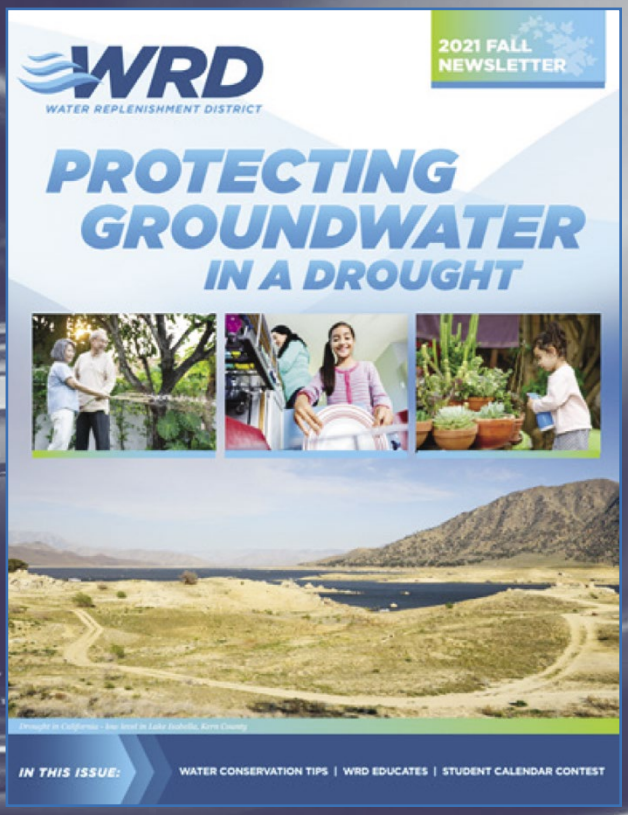
- Executed a successful COVID-19 outreach program informing the public that the virus has no effects on their water which had over 2.5 million views.

- Developed four newsletters mailed to half a million residents throughout the service area.

- Created new Eco-Gardener Classes and hosted 30 in-person and virtual classes.

- Advocated for increased funding for PFAS remediation at the State and Federal levels.


WRD
WATER REPLENISHMENT DISTRICT
#COVID19
FACTS
The CDC and the World Health Organization confirm that
COVID-19 is not transmitted through water.


WRD
WATER REPLENISHMENT DISTRICT
2021 FALL NEWSLETTER
PROTECTING GROUNDWATER IN A DROUGHT
IN THIS ISSUE:
WATER CONSERVATION TIPS | WRD EDUCATES | STUDENT CALENDAR CONTEST

WRD Strategic Priorities for Fiscal Year 2023

WRD leadership identified key Strategic Priorities which describe the resources put into place to achieve our mission and accomplish our strategic goals.

The Strategic Priorities are outlined and described below:

Human Resources: One of WRD's greatest assets is its people. WRD will ensure the recruitment and retention of a talented, highly qualified and diverse workforce to drive productivity and innovation within WRD. WRD's human resources include Executive Management, leadership and support staff, and interns.

Capital Program Development: Ensuring WRD's services continue to bring significant value to the region is our priority. This includes efficiently managing and maintaining WRD's infrastructure and investing in system improvements to continue the fulfillment of our mission. Capital Program Developments include water treatment facilities, wellhead treatment programs, replenishment monitoring infrastructure, groundwater monitoring well equipment, and engineering and hydrogeology expertise

Financial Stability: WRD will maintain strong financial standing through accurate budgeting and pursuing appropriate low-cost funding sources. Financial stability will be maintained by planning wisely for our financial future, enhancing our revenue stability, ensuring reasonable costs, and continuous improvement of financial transparency. WRD's financial resources include funds obtained through the Replenishment Assessment, revenues from water sales, and outside funding from revenue bonds and public or private grant and loan programs.

Groundwater Technical Expertise: WRD was established as the groundwater management agency responsible for maintaining the quality and quantity of groundwater in the region. To continue our mission, WRD relies on technical resources including an extensive asset management system, databases of groundwater monitoring and usage data, hydrogeological data, and spatial data, and historical WRD technical, operations, and budgeting reports.

Long Term Water Resource Planning: Given the impacts of climate change and issues that affect access to water resources, WRD must continue planning for long-term water shortages and accessibility. Planning resources include inter-departmental technical expertise, historical data and predictive modeling, and well-established relationships with local, state, and federal stakeholders.

Stakeholder and Community Engagement: WRD has built a reputation of being a reliable and innovative public agency and has been able to build support for large-scale projects through its stakeholder and community engagement. The district will continue this path utilizing external affairs operations including inter-agency coordination, legislative and governmental efforts, community education programs and grants advocacy.

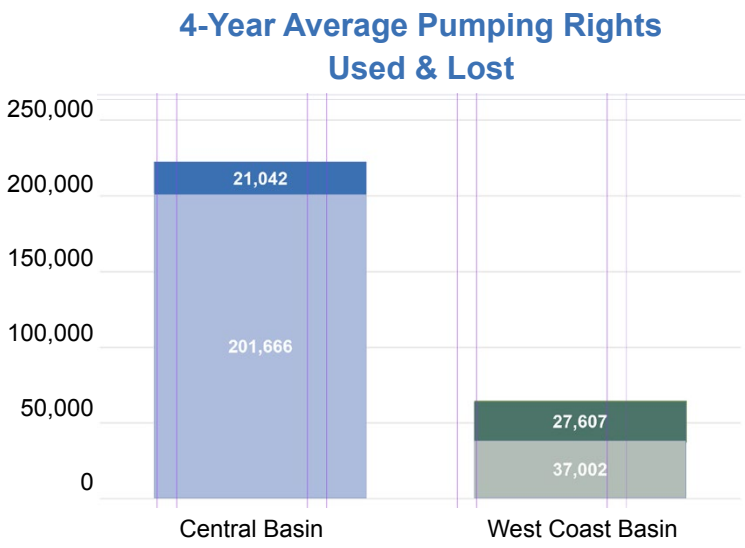
WRD successfully completed the Water Independence Now (WIN) Program including the Albert Robles Center Advanced Water Treatment Facility which realized a long-term goal of eliminating imported water use for groundwater replenishment. The district is continually adapting this program to deal with the new normal of water shortages caused by climate change, increased conservation, and drought. The district is focused on new efforts to develop local supplies of water and regional sustainability.

WRD's new effort- WIN 4 ALL aims to further offset the region's imported water use by working with regional partners such as the Los Angeles County Sanitation Districts, Metropolitan Water District, Los Angeles Department of Water and Power, Los Angeles Bureau of Sanitation, West Basin Municipal Water District, and Central Basin Municipal Water District to secure locally sustainable groundwater supplies for the greater Los Angeles Basin. Key components of WIN 4 ALL include expanded recycled water sources and increased stormwater capture. Combined, these goals prioritize local supply and maximize the use of available groundwater storage capacity in our groundwater aquifers.

As droughts intensify in our state, it is important that we invest in water infrastructure projects that will ease the strain on our state's water supply and offset the demand for drought-sensitive surface water.

WRD's Regional Brackish Water Reclamation Program (RBWRP) is a major groundwater desalination project that will treat up to 20 million gallons of water a day. This multi-faceted program includes the installation of groundwater monitoring wells, extraction wells, implementation of advanced desalination technologies, and injection wells to replenish the West Coast Basin. The new source of drinking water may be used in the cities of Torrance, Manhattan Beach, Lomita, cities served by the Golden State Water Company, California Water Service, and the Los Angeles Department of Water and Power.

The real key to a sustainable drought-proof future lies under our feet. Groundwater aquifers are immense natural reserves, currently with empty storage space that can hold nearly a year's water supply for WRD's service area of four million people, located in southern Los Angeles County. The RBWRP will produce water that may be used to replenish groundwater basins and offset the demand for drought-sensitive and unsustainable imported surface water. Water used for the RBWRP will be derived from local sources and help to build a more drought resilient future.



Fiscal Year 2023 Budget Overview

Short-term Factors Influencing Fiscal Year 2023 Budget

The challenges and short-term factors which impact the development of the District's budget are different every year. The Southern California region experienced below average rainfall during the past year. The District is currently 71% of normal rainfall through May 31, 2022. Water levels in the Montebello Foreway rose nearly 17 feet by the start of the winter season but are presently about 1.7 feet lower than the previous year (May 2021). Basin conditions have improved over the past couple water years but are still below pre-drought conditions. The District will continue to replenish with recycled water and continue to monitor groundwater levels in the Central and West Coast basins.

The groundwater pumping for Fiscal Year 2023 is expected to remain the same as last year at 213,000 acre-feet. The Replenishment Assessment is increased from $394/acre-foot in Fiscal Year 2022 to $411/acre-foot in Fiscal Year 2023, or a 4.2% increase, which includes a $8/acre-foot for the per- and polyfluoroalkyl substances (PFAS) program.

The Albert Robles Center for Water Recycling and Environmental Learning (ARC) was completed in 2019. The Fiscal Year 2023 budget includes $10.2 million for ARC operating costs, a decrease approximately $0.9 million over the last year, reflecting a full year of operation.

As was done last year, the Fiscal Year 2023 budget includes revenues for anticipated carryover conversions. This occurs when a pumper determines it is in their interest to convert a pumping right to storage and pays the District even though it has not pumped its right – but, rather reserves the water to be pumped in a future year. The estimated carryover conversion revenues in Fiscal Year 2023 budget are the same as last year for $4 million.

The Coronavirus (COVID-19) pandemic is an unprecedented event in modern history, with businesses and industries temporarily shutting down, causing water demands to be reduced significantly. The impacts to the District's Fiscal Year 2023 revenues and projected groundwater pumping of 213,000 acre-feet are unknown at this time. The District is taking prudent steps to mitigate some of the adverse impacts on revenue losses over COVID-19 pandemic due to lost water sales. In April 2020, the Board of Directors increased the Operating Reserve from three months to four and a half

months of the cost of operations. In late fiscal year 2022, the District has started the hiring process which froze since 2021 due to the COVID-19 pandemic. As the result, the administrative costs are anticipated a slight increase approximately $0.5 million in fiscal year 2023

Long-range Financial Plans

In the past, a large percentage of replenishment water for the Central and West Coast Basins came from sources in Northern California and the Colorado River. Over the last 15 years, the District has been moving toward its goal of independence from imported water through the Water Independence Now (WIN) initiative, a series of projects that will fully utilize storm water and recycled water sources to restore and protect the groundwater resources of the Central and West Coast Groundwater Basins.

The WIN-related projects are expected to allow the District to become completely independent from imported water. In order to fund WIN, the District obtained financing through its 2015 and 2018 Replenishment Assessment Revenue Bonds, and Clean Water State Revolving Fund Loan. The State Revolving Fund Loan of $80 million bears a 1% interest rate and will be repaid on a level debt basis over the next thirty years. With the leadership provided by the Water Replenishment District's Board of Directors, the transparency and financial stability of the District and AA+ ratings from both Standard and Poor's and Fitch Ratings, the District was able to obtain low-cost financing for these important capital initiatives. This will provide benefits to the pumpers and ratepayers in the Central and West Coast basins for decades to come.

Annually, WRD collects over 600 groundwater samples from its monitoring well network and analyzes them for more than 100 water quality constituents to produce over 60,000 individual data points that help track the water quality in the Central Basin and West Coast Basin. In 2019/2020, WRD also conducted a two-year study evaluating the presence per-and polyfluoroalkyl substances (PFAS). This leads to the formation of a working group to update the pumping community on current research and treatment technologies for addressing PFAS. WRD subsequently developed a remediation program for affected pumpers and continues to work with State and Federal partners to secure funding to treat PFAS.

Debt service costs will be mitigated by reduced purchases of imported replenishment water as the District will be able to use additional recycled water and capture more storm water runoff. Each year, more water is pumped from the Central and West Coast Groundwater Basins than nature can replenish. The District makes up the difference by purchasing imported and recycled water. In the past, the District purchased 21,000 acre-feet of imported spreading water to help replenish the basins. Given the completion and commercial operation of ARC in 2019, the District replaced 21,000 acre-feet of imported water with highly treated recycled water.

The District's 5-Year Capital Improvement Plan includes projects which will need additional funding. To lessen the financial burden to rate payers, staff will continue to seek grant funding when available and seek cost-effective borrowings as needed. Through coordination and planning with other local and regional water suppliers, the District continues to engage in developing long-term solutions to the various water supply challenges. These efforts are evidenced in the District's participation in regional conjunctive use programs as well as local groundwater storage and recovery projects. It is through participation in these and other programs, such as the WIN program, that will enable the District to continue to meet its long-term water supply needs.

The WIN program is specifically designed to make use of local water supplies to become completely independent of imported water from the Colorado River and the California State Water Project. Before 1961/62, the West and Central Groundwater Basins received about 36% of the replenishment water from stormwater and 64% from imported water. Today, with the completion of the ARC, the demand for imported water to replenish the basin has dropped to zero.

As part of the long-range financial planning, the District has taken steps to address the unfunded pension liabilities. The latest actuarial reports from California Public Employees' Retirement System (CalPERS) projected the District's unfunded pension liabilities at $6.9 million as of June 30, 2022. Under the 30-year amortization schedule, the annual employer contribution is projected at $0.6 million. The unfunded accrued liability (UAL) will be paid off by June 30, 2044 and the total interest paid is projected at $5.2 million.

In December 2020, the Board of Directors approved the 15-year amortization to accelerate paying off unfunded pension liability. Projected annual employer contribution will increase by $0.2 million to $0.8 million. The current UAL will be paid off by June 30, 2035 and total interest paid is projected at $4.1 million, a saving of $1.1 million over the 30-year amortization schedule.

WRD Management

Stephan Tucker
General Manager

Rob Beste
Assistant General Manager
/ Chief Operating Officer

Greg Black
Chief Financial Officer

Eric Owens
Manager of Engineering
and Operations

Brian Partington
Manager of Hydrogeology

Esther Rojas
Manager of Watermaster
Services and Water
Resources

Angie Mancillas
Manager of External Affairs

Dina Hidalgo
Manager of Administration
and Human Resources

Evan Lue
Manager of Data and
Technology Services (DTS)

Tom Knoell
Water Operations
Superintendent

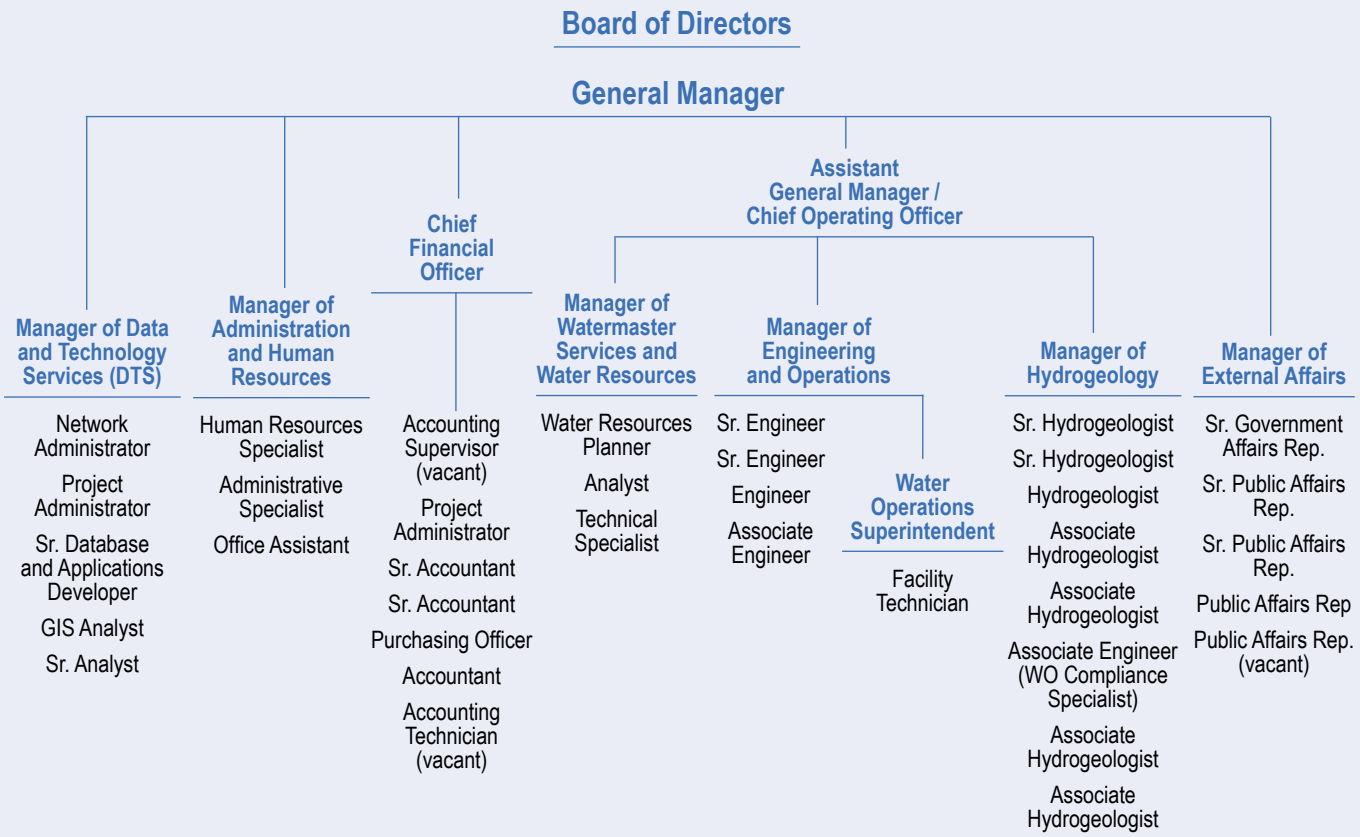
Organization Chart & Staffing Summary

Staffing

The District budgeted 42 professional and administrative staff in Fiscal Year 2022; 38 staff positions are funded through the collection of the Replenishment Assessment and 4 staff positions allocated to the District's Watermaster function and are funded independently outside of the Replenishment Assessment by the Central and West Basins.

In Fiscal Year 2023, the District plans to fill vacant positions frozen in prior year due to the COVID-19 pandemic. This will increase the professional and administrative staff to 46. The District's staffing on its various projects remains relatively stable. WRD's organizational structure adjusts from time to time to adapt to changes in the District responsibilities and to provide increased efficiencies.

Organization Chart



46 Total Full-time Equivalent (FTE) positions

(43.5 funded by WRD Replenishment Assessment + 2.5 funded by Water Master)

Table 2

Summary of Personnel by Department

	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget	Change from FY 2022 Budget
General Management				
General Manager	1	1	1	0
Assistant General Manager/Chief Operating Officer	1	1	1	0
Assistant General Manager/Chief Admin. Officer	1	0	0	0
Hydrogeology Department				
Manager of Hydrogeology	1	1	1	0
Senior Hydrogeologist	2	2	2	0
Hydrogeologist	1	1	1	0
Associate Hydrogeologist	2	2	3	1
Associate Engineer	1	1	1	0
Assistant Hydrogeologist	1	1	1	0
Water Resources & Watermaster Department				
Manager of Water Resources & Watermaster	1	1	1	0
Senior Water Resources Planner	1	1	0	(1)
Water Resources Planner	0	0	1	1
Senior Analyist	1	1	0	(1)
Analyst	0	0	1	1
Technical Specialist	1	1	1	0
Engineering Department				
Manager of Engineering and Operations	1	1	1	0
Water Operations Superintendent	1	1	1	0
Senior Engineer	1	1	2	1
Engineer	2	2	1	(1)
Associate Engineer	1	1	1	0
Facilities Technician	0	0	1	1
Finance Department				
Chief Financial Officer	1	1	1	0
Accounting Supervisor	0	0	1	1
Financial Analyst	1	1	0	(1)
Project Administrator	1	1	1	0
Senior Accountant	3	3	2	(1)
Purchasing Officer	**1**	**1**	**1**	**0**
Accountant	0	0	1	1
Accounting Technician	1	1	1	0
External Affairs				
Manager of External Affairs	1	1	1	0
Senior Government Affairs Rep.	1	1	1	0
Senior Public Affairs Rep.	1	1	2	1
Public Affairs Rep.	3	1	2	1
Administration and Human Resources Department				
Manager of Administration and HR	1	1	1	0
Human Resources Specialist	0	0	1	1
Senior Administrative Specialist	1	1	0	(1)
Administrative Specialist	1	1	1	0
Senior Office Assistant	1	1	0	(1)
Office Assistant	0	0	1	1
Data and Technology Services				
Manager of Data and Technology Services	1	1	1	0
Network Administrator	1	1	1	0
Project Administrator	1	1	1	0
Online Data and Technology Specialist	1	1	0	(1)
Senior Database & Applications Developer	0	0	1	1
Geographic Information Systems Analyst	1	1	1	0
Technical Specialist	1	1	0	(1)
Senior Analyst	0	0	1	1
TOTAL	**45**	**42**	**46**	**4**

Financial Policies

Budget Controls & Revisions

The District reports its activities as an enterprise fund, which is used to account for operations that are financed and operated in a manner similar to a private business enterprise. The intent of the District is that the costs of managing the groundwater basins on a continuing basis be financed or recovered primarily through user charged replenishment assessments, capital grants and similar funding. Revenues and expenses are recognized on the full accrual basis of accounting.

Operating Revenues result from exchange transactions associated with the District's principal activity. Exchange transactions are those in which each party receives and gives up essentially equal values. Non-operating revenues, such as grant funding and investment income, result from non-exchange transactions in which the District gives (receives) value without directly receiving (giving) value in exchange. Operating expenses, such as water purchases, are the result of the District's exchange transactions along with associated expenses for running the District's day-to-day operations. Non-operating expenses, such as interest paid on debt service or election costs are the result of expenses that do not relate to the District's day-to-day operations.

Basics of Accounting & Budgeting

The basis of accounting and budgeting refers to the method of recognition of revenues and expenses in financial and budgetary reporting.

The District operates as a utility enterprise, and Enterprise Funds are accounted for using the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized when incurred.

During the year end June 30, 2012, the District implemented certain provisions of Government Accounting Standards Board (GASB) No 62, Codification of Accounting and Financial Reporting Guidance contained in Pre-November 30, 1989 FASB and AICPA Pronouncements, specifically the accounting for rate-regulated activities which allows deferral of the recognition of revenues until the related costs or charges associated with the rates assessed are incurred. The District's accounting and financial reporting systems are maintained in compliance with Generally Accepted Accounting Principles and standards of the Government Accounting Standards Board (GASB).

As the District's financials are accounted for as an Enterprise Fund, the budget is prepared based on the full accrual basis of accounting. Revenues are recognized when earned and expenses are recognized when a liability is incurred. Exceptions are as follows:

Depreciation and amortization are handed differently in financial reporting and budgetary reporting. In financial reporting, depreciation and amortization are included, and the repayment of principal on debt is not reported as expenses. In budgetary reporting, depreciation and amortization are excluded, and the repayment of principal on debt as expenditures are included.

Financial Reporting

The District's basic financial statements are presented in conformance with the provisions of Government Accounting Standards Board (GASB) Statement No. 34, "Basis Financial Statement and Management's Discussion and Analysis for State and Local Governments". This statement established revised financial reporting requirements for state and local governments throughout the United States for the purpose of enhancing the understandability and usefulness of financial reports.

Budgetary Policies

The District adopts an annual budget for planning, control, and evaluation purposes. Budgetary control and evaluation are affected by comparisons of actual revenues and expenses with planned revenues and expenses for the period. Each year, the Board of Directors follows the legislation as set forth in the California State Water Code when preparing and adopting the annual budget and establishing the ensuing year's Replenishment Assessment.

Replenishment Assessment Policy

On or before the second Tuesday of May each year, the Board of Directors, in accordance with California Water Code Section 60315 sets the Replenishment Assessment rate for the ensuing fiscal year. In order to prepare for this action, the District holds public hearings in the spring of each year to determine to what extent the estimated costs for the ensuing year shall be paid for by a Replenishment Assessment. In preparing for these hearings, the District develops an annual operating budget and updates its five-year capital plan. These documents outline the funds needed to:

1. Purchase replenishment water
2. Protect and preserve the groundwater supply
3. Pay for the related administrative expenses

Investment Policy

The Board of Directors has adopted an investment policy that conforms to California Government Code Sections 53600-53686. The objectives of the investment policy are safety, liquidity, and yield. In 2009, at the direction of the Board of Directors, the District implemented its Community Banking Program and invested in several local community banks that are fully insured by the Federal Deposit Insurance Corporation (FDIC) or secured as required by state law. The Board of Directors reviews the adopted investment policy on an annual basis and approves any changes.

Capital Assets

Capital assets acquired and/or constructed are capitalized at historical cost. District policy has set the capitalization threshold for reporting capital assets at $5,000. Donated assets are recorded at estimated fair value at the date of donation. Upon retirement or other disposition of capital assets, the cost and related accumulated depreciation are removed from the respective balances and any gains or losses are recognized. Provision for depreciation is computed using the straight-line method over the following estimated useful lives of the assets:

Table 3

Capital Assets

Asset	Useful Life (in years)
Utility plant and equipment	30
Monitoring and injection equipment	3 to 20
Service connection	50
Office furniture and equipment	5 to 10

Procurement Policy

Purchases will be made in accordance with the District's Procurement Policies & Procedures as outlined in the District's Administration Code. The District gives preference to local businesses when the District enters into contracts for supplies, materials and equipment, construction and professional services totaling under $25,000. Summarized below are the significant provisions of the District's procurement policies and procedures:

1. All contracts for construction work, materials, equipment, supplies and professional services shall be in writing and, at a minimum, include the relevant scope of work, duration and terms of payment.

2. All contracts valued less than $10,000 may be approved and signed by the General Manager or other District's representative authorized by the Board of Directors.

The General Manager may not execute multiple contracts on behalf of the District with the same person or entity within a one-year period that cumulatively total $10,000 or more without the Board of Directors' prior approval.

3. All contracts valued $10,000 or more shall be authorized by the Board of Directors and signed by the President and the Secretary except that the Board of Directors may, by resolution for a specific expense, authorize the General Manager or the other District's representative to sign contracts in the name of the District, not to exceed $25,000.

4. Where the contract amount is less than $25,000, an informal solicitation may be made by the General Manager by informal quotes through telephone, mail or electronic inquiry, comparison of prices on file or other. Every attempt shall be made to receive at least three price quotations.

5. Before making any contract for construction work or purchase of materials, supplies, and equipment that total $25,000 or more within any 12 month period, the District shall advertise for bids by issuing a Contract Solicitation.

6. Advertising should be in a newspaper of general circulation in Los Angeles County at least once a week for four consecutive weeks. Advertisement for bids shall set forth all of the following information:

    a. That plans and specifications for the work to be done can be seen and obtained at the District's office;

    b. That the Board of Directors will receive sealed bids for the contract;

    c. That the contract will be awarded to the lowest responsive and responsible bidder; and

    d. That bids will be publicly opened at a given time and place.

7. Bids shall be opened in public at the time and place stated in the notice inviting bids. Two District employees and/or representatives shall be present at the bid openings. As each bid is opened, the bidder's name and bid amount shall be announced. At the conclusion of the bid opening, the name of the apparent low bidder and its bid amount shall be announced. A tabulation of all bids received shall be open for public inspection during regular business hours for a period of not less than 30 calendar days after the bid opening.

8. Before making any contract for professional services, the District may solicit a Request for Proposals (RFP) for such services. However, a RFP is not required for professional services contracts. The District from time to time may issue a request for qualifications for the purpose of developing a list of qualified consultants to provide professional services for future work. Prior to issuing a request for qualifications or a request for proposal, District staff shall obtain the approval from the Board of Directors.

9. Request for qualifications may be advertised in a publication of the respective professional society or by any other means reasonably calculated to reach its intended audience. Upon review and receipt of the qualifications from the interested consultants, the District shall develop the list of qualified consultants based upon criteria established by the District.

Debt Management

Each year during the budgeting process the Board of Directors reviews the District's Capital Improvement Plan to determine the ensuing year's capital needs. Based on this review, the Board of Directors determines whether there is a need for any additional long-term debt financing or whether projects can be funded on a pay-go basis.

If the Board of Directors determines that additional debt financing is necessary, the Board holds public workshops in order to obtain stakeholder input relating to any increases to the Replenishment Assessment due to annual debt service payments. Additionally, as part of this process, the District prepares a five-year financial projection in order to ascertain the long-term impact to the Replenishment Assessment. The Board of Directors approves the debt management structure when adopting the five-year Capital Improvement Plan.

Auditing

As required by the California State Water Code Section 60292, the district shall order, review, and maintain on file an independent, audited financial statement not later than 180 days from the conclusion of the District's fiscal year. The independent audited financial statement shall be prepared by a certified public accountant and shall be consistent with standards provided in the Generally Accepted Government Auditing Standards. Copies of the independent audited financial statement shall be submitted to the Governor, the Senate Committee on Governance and Finance or its successor, the Assembly Committee on Local Government or its successor, and the California State Auditor on or before December 31 of each year.

Internal Control Structure

The Board of Directors manages the District's internal control structure through the Board-adopted Administrative Code, which provides internal control guidelines. They also monitor internal controls through communications with the independent financial auditor. District Management is responsible for the establishment and maintenance of the internal control structure that ensures the assets of the District are protected from loss, theft, or misuse. The internal control structure also ensures that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The District's internal control structure is designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that (1) the cost of control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits requires estimates and judgments by management.

Risk Management

The District is exposed to various risks of loss related to torts, theft of, damage to and destruction of assets, errors and omissions, injuries to employees, and natural disasters. The District is a member of the Association of California Water Agencies/ Joint Power Insurance Authority (ACWA/JPIA), an intergovernmental risk sharing joint powers authority created to provide self-insurance programs for California water agencies. The purpose of the ACWA/JPIA is to arrange and administer programs of self-insured losses and to purchase excess insurance coverage. Risk management policy is not adopted by the Board of Directors but is a requirement of membership in the ACWA/JPIA.

Fund Balance/Net Assets

Within governmental funds, equity is reported as fund balance; proprietary and fiduciary fund equity is reported as net position. Fund balance and net position are the difference between fund assets plus deferred outflows of resources and liabilities plus deferred inflows of resources reflected on the balance sheet or statement of net position.

Reserve Policies

The annual analysis of the District's reserve funds is an important part of responsible financial planning, particularly as the District transitions from an agency that produces water to one that produces water and operates and maintains three capital facilities.

Restricted Reserve Fund

Debt Service Reserve	Established pursuant to the debt covenants in the Clean Water State Revolving Fund Loan. The District is required to maintain one year of debt service in reserve as security for the State Revolving Fund Loan.

Unrestricted Reserve Fund

Safe Drinking Water Reserve	Accounts for, and fund loans and grants to help clean up the groundwater basin.
Well Rehabilitation & Construction Reserve	Provides zero interest loans to help finance well construction and rehabilitation to increase pumping capacity in the basin.
Equipment Replacement Reserve	Funds periodic replacement of assets with expected useful life to three to twenty years.
Operating Reserve	Provides needed working capital and to help ensure against unforeseen events, including lower than expected sales, unbudgeted expenses, emergencies (e.g. earthquakes or other natural disasters), and other unforeseen events. Due to the potential impact of COVID-19 on projected District revenues, at its meeting on April 23, 2020, the Board of Directors increased the Operating Reserve from three months to four and a half months of the cost of operations.
Water Purchase Carryover & Rate Stabilization Reserve	Ensures the District's ability to acquire or develop water supplies to replenish the Central and West Coast groundwater basins and to stabilize rates.
PayGo & PFAS Remediation Reserves	Funds pay-go various capital projects and PFAS remediation program.

WRD Fund Allocation

Operating & Capital Expenses by Fund Allocation

California Water Code Sections 60220 through 60226 describe the broad purposes and powers of the District to perform any acts necessary to replenish, protect, and preserve the groundwater supplies of the District. To meet statutory responsibilities, WRD has instituted numerous projects and programs in a continuing effort to effectively manage groundwater replenishment and groundwater quality in the Central and West Coast Basins. These projects and programs include activities that enhance the replenishment program, increase the reliability of the groundwater resources, improve and protect groundwater quality, and ensure that the groundwater supplies are suitable for beneficial uses. These projects and programs have had a positive influence on the basins, and WRD will continue these activities into the ensuing year as a necessary act to replenish, protect, preserve and enhance the groundwater resources in the basins.

The following sections discuss the projects and programs that WRD will continue or initiate during the upcoming budget year. The tables below breakdown the expenses by fund. The percentages are calculated by relating the costs to the purpose benefited by those costs – replenishment or clean water. The capital expenses are funded through long-term financing.

Relationships of Funds, Projects, & Programs

The District operates two major funds: the Replenishment Fund and the Clean Water Fund. Expenses from the projects and programs are allocated to each fund, reflecting the benefits arising from these expenditures. For budget purposes, projects and programs are separated into either Replenishment, Clean Water Projects or Dual Purpose Projects and Programs. Dual purpose projects and programs are those that address both replenishment operations and clean water efforts.

Replenishment Fund

The annual amount pumped from the Central and West Coast Groundwater Basins is greater than the natural replenishment of groundwater aquifers, creating an annual deficit or annual overdraft. The District has the authority and responsibility under the California State Water Code to acquire water supplies for recharge to make up this overdraft.

The Replenishment Fund is the budgetary control for all expenses related to the District's replenishment efforts. This includes the following primary expenses of the District:

- Water Purchases
- Water Treatment and Production
- Water Resources
- Water Quality Programs
- Water Replenishment Support

Clean Water Fund

Consistent with the District's mission to provide, protect and preserve safe and reliable high-quality groundwater, the District annually collects nearly 600 groundwater samples from its monitoring well network. The District tests these samples for over 100 water quality constituents to produce nearly 60,000 individual data points to help track the water quality in the basins. By analyzing and reviewing the results on a regular basis, any new or growing water quality concerns can be identified and managed. In addition, the District funds programs to help prevent, reduce and eliminate contamination in the basin to increase the amount of water available for pumping.

The Clean Water Fund is the budgetary control for all expenses related to the District's efforts to provide clean and safe water to the nearly four million residents in the District's service area.

The table below illustrates Programs/Projects and Funds relationship:

Table 4

Programs/Projects Fund Allocation

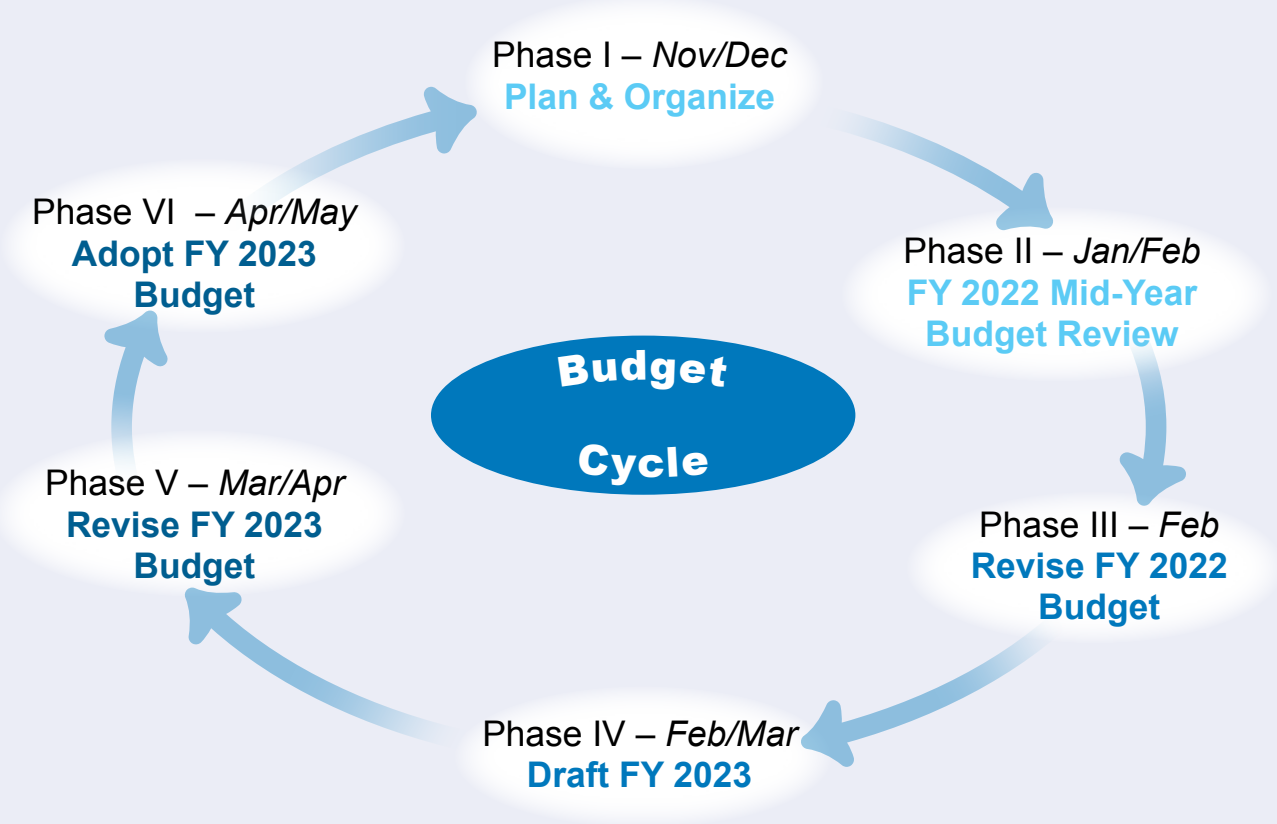
Program/Project Number & Title		Replenishment Fund	Clean Water Fund
Water Purchases			
WTR	Water Costs	100%	
018	Dominguez Gap Barrier Recycled Water Injection	100%	
Water Treatment and Production			
001	Leo J Vander Lans Water Treatment Facility	100%	
002	Robert W. Goldsworthy Desalter		100%
033	Albert Robles Center (ARC)	100%	
Water Resources			
EAC	Water Conservation	50%	50%
004	Montebello Forebay Recycled Water	100%	
005	Groundwater Resources Planning Program	100%	
Water Quality Programs			
006	Water Quality Improvement Program		100%
012	Safe Drinking Water Program		100%
011	Regional Groundwater Monitoring Program	50%	50%
025	Hydrogeology Program	50%	50%
035	West Coast Basin Barrier Program	100%	
043	Regional Brackish Water Program	50%	50%
046	Well Construction & Rehabilitation Program	100%	
048	Per- and Polyfluoroalkyl Substances (PFAS) Program	100%	
Water Replenishment Support			
010	Geographic Information Systems (GIS)	50%	50%
023	Replenishment Operations	100%	
038	Engineering Program	100%	
040	Asset Management Program	100%	
EAE	Water Education	50%	50%

Budget Process

The budget process is not simply an exercise in balancing one year at a time, it is strategic in nature, encompassing a multi-year financial and operating plan that allocates resources based on identified goals and objectives. These goals and objectives were established by the Board of Directors and District staff through the District's Strategic Plan and the five-year Capital Improvement Program.

The District moved beyond the traditional concept of line-item expense control and provided incentives and flexibility to Project/Program Managers that has led to improved program efficiency and effectiveness. The District's staff continually assesses program and financial performance to encourage progress toward achieving the goals and objectives of the District.

Figure 1
Budget Process Cycle



Plan & Organize

The budget sets forth a strategic resource allocation plan that is distinctly aligned with the District's mission and the Board of Director's goals and objectives for staff. The budget process is a year-long effort of monitoring revenue and adjusting expenses based on the changing needs of operations. The Finance Department organizes the ensuing year's budget as early as November and December the year before. This phase includes preparing election ballots for the Budget Advisory Committee (in election years), preparing a mid-year budget review as well as budget request forms that are provided to the Project/Program Managers.

FY 2022 Mid-year Budget Review

The Mid-Year Budget Review is a time when the District measures how we are tracking according to the planned budget and how we expect to end the fiscal year. It provides a financial assessment of the District's budget condition and is based on six months of actual data and six months of projected data. The mid-year analysis is also a platform and guide to the ensuing year's budget. The mid-year budget analysis is presented to the Board of Directors and the public. It is a time when the Board is given details of how well District projects and programs are aligned with the Board's goals and objectives.

Revise FY 2022 Budget

Based on feedback provided by the Board of Directors and the public, the Board may direct staff to adjust resources to various projects or programs and modify the budget through Board approval. This process helps to ensure that the Board is aware of the financial and human resources allocated to each of the District's goals.

Draft FY 2023 Budget

With the mid-year budget review and adjustments completed, staff prepares the first draft of the ensuing year's budget. Project/Program Managers prepare their budget requests and submits to the Finance Department who then organize and compile all budget information into a consolidated package. To confirm that all project and program expense requests are in line with the directions of the Board, the General Manager, Assistant General Manager, Chief Financial Officer along with the Finance Staff, review each individual line-item expense prior to submitting it to the Finance/Audit Committee for review. The Finance/Audit Committee of the Board of Directors is responsible to study, advise and make recommendations regarding the budget to the Board of Directors. Once reviewed and verified through the Finance/Audit Committee, the budget is presented to the Board of Directors.

Revise FY 2023 Budget

Staff makes the necessary adjustments to the budget based on the feedback obtained through meetings with the General Manager and public budget workshops with the Finance/Audit Committee and the Board of Directors. These refinements are related to reallocation of resources to best accomplish the Board's goals and objectives.

Adopt FY 2023 Budget

Based on section 60315 of the California Water Code, the Board of Directors must adopt the ensuing year's Replenishment Assessment no later than the second Tuesday in May. The basis of the Replenishment Assessment is the annual budget, which is adopted at the same time as the Board sets the Replenishment Assessment. Every year, the District conducts a series of public budget meetings to seek comments pursuant to the Water Code and other applicable regulatory requirements.

To ensure transparency, accountability, and fiscal responsibility, the District has an independent Budgetary Advisory Committee (BAC) comprised of stakeholders from the groundwater pumping community that are charged with providing guidance and advice on budgetary, finance, and technical matters relating to the District's projects and programs. The BAC was initiated by state law under Senate Bill 620 but was sunset in January 2020. However, the Water Replenishment District's Board of Directors recognized the benefits of having the BAC and allowed its continuance through amendment of its Administrative Code to incorporate the BAC as a standing entity.

The BAC consists of seven members who serve a two-year term, are elected from among representatives of groundwater producers and who are owners or operators of groundwater producing facilities that are subject to the Replenishment Assessment. No later than the second Tuesday in April of each year, the BAC will make its recommendation to the Board of Directors of the Water Replenishment District on the annual Replenishment Assessment, reserve funds and the draft budget. After considering the recommendations from the BAC, as well as the public, the Finance/ Audit Committee makes budget recommendations to the Board of Directors.

Upon final approval by the Board of Directors, the preliminary estimates will be revised accordingly to reflect the approved budget amounts and corresponding levels of services. The District's Replenishment Assessment rates have increased gradually over the years as shown in the chart below, for the District to meet the demands of maintenance and preservation of the Basins, and, thus, availability of water for pumpers to pump.

Budget Controls & Revisions

The District's budget is prepared on an annual basis and since the budget is an estimate, at times it is necessary to make adjustments to meet the priorities and needs of the District.

The first milestone in this process is the mid-year budget review. During this process, the District compiles the six months of actual financial data and projects the final six months of data to obtain a new 12-month projected budget. The Finance Department compares the adjusted 12-month projection to the original budget adopted by the Board of Directors and presents the results to the Finance/Audit Committee and the

Board of Directors. The budget is revised when expenses are anticipated to exceed estimates. A report outlining the reasons for increasing any budget appropriation is prepared and submitted to the Board of Directors for consideration.

Increases in budget appropriations must be approved by the Board of Directors. Budget transfers affecting personnel and capital outlay must be approved by the General Manager. Reallocations or transfers within a department or program require the approval of the General Manager or Department Manager.

Pumper Notification Process

The District also conducts a separate process known as the Pumper Notification Process in setting the budget and Replenishment Assessment. This process generally follows the notice requirements and protest rights granted by Proposition 218 for property-related fees. However, the District conducts the process voluntarily as an extra measure for transparency and opportunity for public input and comment, and not because it believes that the Replenishment Assessment is a property-related fees that is subject to the requirements of Proposition 218. If the Board receives written protests to the proposed Replenishment Assessment from more than 50% of the active pumpers it has been given notice to, the Board will not approve an increase to the current Replenishment Assessment rate.

As part of the Pumper Notification Process, a detailed Cost of Service Report is prepared each year by the District to explain how the Replenishment Assessment complies with these requirements. The Cost-of-Service Report describes the services the District anticipates performing during the ensuing fiscal year and analyzes the costs of providing these services. The costs associated with these services are described using the best available information, along with an evaluation of the fair and equitable Replenishment Assessment necessary to cover these costs. The Cost-of-Service Report is available via the District's web site at www.wrd.org.

The District approved the Fiscal Year 2023 Replenishment Assessment of $411 per acre-foot at the public hearing on May 3, 2022. The Replenishment Assessment was approved after an extensive and transparent process to inform all parcel owners and groundwater pumping rights holders in the District's service area. The funds generated from the Replenishment Assessment cover the cost of water purchased to replenish the two largest and most utilized groundwater basins in Southern California. Moreover, the new Replenishment Assessment is critical to helping achieve the District's goal in becoming 100% independent from costly and unreliable imported water.

Budget Calendar

November/December 2021

Internal budget meetings with District Staff to communicate the expectations, responsibilities and projected timeline to all staff involved in the budget.

January 2022

The budget team interviews with Project and Program Managers to complete the Mid-Year Budget Review of the District's operations. This review process starts with six months of actual financial data from July 1 through December 31, six months of financial projections and a twelve-month analysis of all the data. The Mid-Year Budget Review serves as the basis for planning for the ensuing year's budget.

February 2022

Staff prepares budget requests for the ensuing year's budget. The Finance Department compiles all of staff's budget requests into a draft report which accounts for all the District's financial needs. The draft budget is reviewed by the General Manager and the budget team. The resulting draft budget is presented to the public through several budget workshops, ending with the final budget workshop and the Board of Directors setting the Replenishment Assessment no later than the second Tuesday in May.

February 3, 2022 – Finance/Audit Committee

Discussed Fiscal Year (FY) 2022 mid-year budget, previewed FY 2023 proposed budget and the 5-year rate forecast model.

February 9, 2022 - Budget Advisory Committee

Previewed FY 2023 budget and the Replenishment Assessment (RA) upper limit scenarios. The Committee provided feedback on the proposed budget.

February 16, 2022 – Board of Directors

Reviewed FY 2022 Mid-Year Projection, FY 2023 proposed budget and the RA upper limit. Discussed feedback from the Budget Advisory Committee on the proposed budget.

March 2022

Based on input received from the public budget meetings, Finance staff continues to refine the budget.

March 2, 2022 – Budget Advisory Committee

The Committee discussed and recommended adopting the FY 2023 RA upper limit at $411 per acre-foot, which includes an estimated 213,000 acre-feet of assessable pumping and a $8 per acre-foot for the PFAS program.

March 3, 2022 – Board of Directors

The Board of Directors received and filed the 2022 Engineering Survey and Report. The report determines the groundwater conditions, the District's replenishment water

needs and the estimated costs for the water. The report combined with the FY 2023 proposed budget, provides the Board and the public with the necessary information to determine the RA for the next fiscal year.

March 9, 2022 – Finance/Audit Committee

The Committee discussed the proposed budget and recommended that the Board of Directors adopted the FY 2023 RA upper limit at $411 per acre-foot, which is a 4.3% or $17 increase on the current RA of $394 per acre-foot.

March 17, 2022 – Board of Directors

The Board of Directors accepted the Finance/Audit Committee recommendation and approved the FY 2023 RA upper limit at $411 per acre-foot to provide on the Pumper Notification mailing on March 18, 2022.

April 2022

Present the proposed budget to the Board of Directors for consideration in setting the annual Replenishment Assessment rate.

April 7, 2022 – Board of Directors

The Board of Directors received and filed the FY 2023 Cost of Service Report. The report is intended for use in the FY 2023 budget review and public input process.

April 13, 2022 – Finance/Audit Committee

The Finance/Audit Committee recommended the FY 2023 RA at $411 per acre-foot, which is a 4.3% or $17 increase on the current RA of $394 per acre-foot. The FY 2023 RA includes a $8 per acre-foot for the PFAS program.

April 21, 2022 – Board of Directors

Discussed FY 2023 proposed budget and convened public hearing on the FY 2023 proposed RA per Water Code section 60306.

May 2022

Adopt the proposed budget and Replenishment Assessment for the next fiscal year.

May 3, 2022 – Board of Directors

The Board convened the continued Water Code Public Hearing, received public comments and closed the Public Hearing. The Board opened the Pumper Notification Public Hearing on the Fiscal Year 2023 RA, received staff reports and testimony, and closed the Public Hearing.

The Board adopted the Fiscal Year 2023 budget and the RA of $411 per acre-foot, which includes a $8 per acre-foot for the PFAS program.

It should be noted there were no significant changes between the draft budget submitted in February 2022 to the adopted budget in May 2022. The overall variance is approximately $100,000.

Financial Highlights

Operations & Maintenance

O&M costs are projected to increase by $3.8 million from fiscal year 2022 to fiscal year 2023 to $98.3 million. This variance is primarily due to increases in Water Costs, $2.9 million, Safe Drinking Program, $0.5 million and Administrative and General Expenses, $0.5 million. Other increases are offset by lower costs in Water Treatment and Production. However, Chemical costs at the treatment facilities are projected to increase by approximately 20% to 30%.

Revenue

Revenue is projected to increase by $3.8 million or 4% above the fiscal year 2022. Carryover conversion revenue is estimated to be as same as last year's projection and is a contributing factor to lower pumping output for the fiscal year. An $8 per AF assessment was approved and added to the Replenishment Assessment for PFAS Remediation.

Debt Service

Debt Service remains unchanged from the prior year. It is anticipated that no borrowing will be required in fiscal year 2023.

Capital Improvement Plan

The 5-Year Capital Improvement Plan (FY 2022 – FY 2026) shows planned expenditures of $65.9 million. This includes $22.8 million for PFAS Remediation, Safe Drinking Water program, $15.7 million, Dominguez Gap improvements, $11 million and Leo J. Vander Lans AWTF improvements of $4.5 million.

Table 5 – Fiscal Year 2023

Proposed Statement of Revenues, Expenses, & Changes in Net Assets

	FY 2021 Actual	FY 2022 Projection	FY 2023 Budget
Operating Revenues			
Replenishment Assessment	$76,161,044	$83,922,000	$85,769,268
Carryover Conversion	4,220,699	4,000,000	4,000,000
LJVWTF - Water Supply	2,156,938	3,288,662	4,480,000
Goldsworthy Desalter Sales	2,598,650	3,459,226	2,900,000
Albert Robles Center (ARC)	692,773	557,809	630,000
Total Operating Revenues	**$85,830,104**	**$95,227,697**	**$97,779,268**
Operating Expenses			
Water Purchases	$31,210,752	$35,766,000	$38,617,406
Water Conservation	598,479	641,344	640,903
LJVWTF - Water Supply	4,607,882	5,250,526	5,942,545
Albert Robles Center (ARC)	9,726,250	9,621,847	10,166,168
Projects/Programs	8,728,868	9,031,203	12,202,031
Administration	6,715,436	7,535,440	6,080,493
Board of Directors	352,728	271,507	529,868
GASB 45 (Required Retirement Funding)	890,000	890,000	890,000
Total Operating Expenses	**$62,830,395**	**$69,007,867**	**$75,069,414**
Operating Income (Loss)	**$22,999,709**	**$26,219,830**	**$22,709,854**
Non-Operating Revenues (Expenses)			
Debt Service and Other Non-Operating Costs	$(17,363,207)	$(20,221,000)	$(20,346,830)
Other Special Programs and Supportive Costs	(2,687,738)	(1,640,000)	(2,863,524)
Property Taxes, Interest and Other Revenues	1,183,468	494,140	500,500
Total Other Revenues (Expenses)	**$(18,867,477)**	**$(21,366,860)**	**$(22,709,854)**
Change in Net Assets	**$4,132,232**	**$4,852,970**	**$-**

The table above shows District's Statement of Revenues, Expenditures, and Changes in Net Assets. These statements reflect the operations and maintenance expenses and do not include capital expenses, except for the payments to cover debt service.

Fiscal Year 2023 Budget

Figure 2

Fiscal Year 2023 Budget Summary

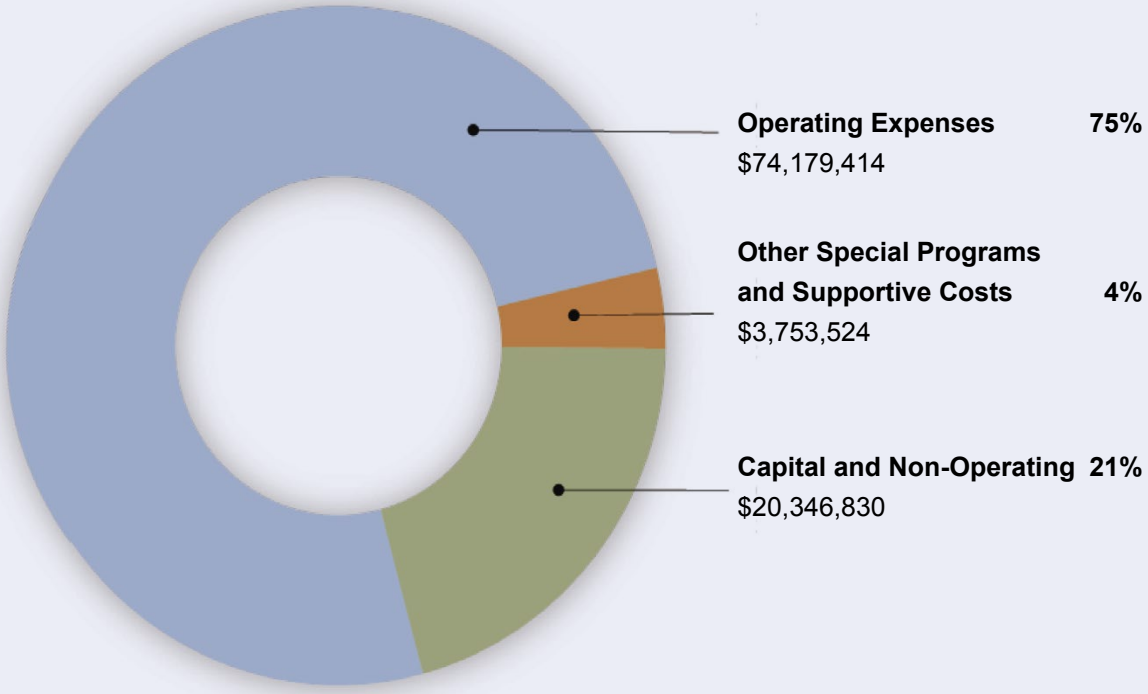


Table 6

Fiscal Year 2023 Budget

Description	FY 2022 Adopted Budget	FY 2023 Adopted Budget	FY 2023 Budget compared to FY 2022 Budget
OPERATING EXPENSES			
Water Purchases			
Water Costs	$35,766,000	$38,617,406	$2,851,406
Dominguez Gap Barrier Recycled Water	357,000	336,052	(20,948)
Water Treatment and Production			
Albert Robles Center (ARC)	11,090,000	10,166,168	(923,832)
Water Supply Production - Vander Lans	5,966,000	5,942,545	(23,455)
Water Supply Production - Goldsworthy Desalter	2,978,000	3,221,393	243,393
Water Resources			
Water Conservation	693,000	640,903	(52,097)
Montebello Forebay Recycled Water	753,000	442,702	(310,298)
Groundwater Resource Planning	1,666,000	1,839,911	173,911
Water Quality Programs			
Water Quality Improvement Program	564,000	722,842	158,842
Groundwater Monitoring Program	1,433,000	1,502,568	69,568
Safe Drinking Water Program	374,000	928,305	554,305
Hydrogeology Program	515,000	600,845	85,845
West Coast Basin Barrier Program	22,000	-	(22,000)
Regional Brackish Water Program	350,000	150,000	(200,000)
Per- and Polyfluoroalkyl Substances (PFAS) Program	-	98,231	98,231
Well Construction and Rehabilitation Program	25,000	13,102	(11,898)
Water Replenishment Support			
Geographic Information Systems (GIS)	266,000	467,223	201,223
Replenishment Operations	292,000	258,698	(33,302)
Engineering Program	303,000	436,555	133,555
Asset Management	108,000	92,770	(15,230)
Water Education	1,249,000	1,090,834	(158,166)
General and Adminstration			
Board of Directors	382,000	529,868	147,868
Administration	5,753,000	6,080,493	327,493
SUB-TOTAL	**70,905,000**	**74,179,414**	**3,274,414**
OTHER SPECIAL PROGRAMS AND SUPPORTIVE COSTS			
GASB 45 (Required Retirement Funding)	1,357,000	1,658,384	301,384
WRD Facility Maintenance	379,000	455,140	76,140
Litigation	125,000	125,000	-
Cost of Services and Notices	15,000	15,000	-
Election Expense	1,500,000	1,500,000	-
SUB-TOTAL	**3,376,000**	**3,753,524**	**377,524**
DEBT SERVICE AND OTHER NON-OPERATING COSTS			
Revenue Bond Debt Service Payments	19,795,000	16,670,830	(3,124,170)
Additional Fund for DSC	-	3,250,000	3,250,000
Funding for PAYGO Capital Projects ($2 to fund CIP)	426,000	426,000	-
SUB-TOTAL	**20,221,000**	**20,346,830**	**125,830**
TOTAL BUDGET	**$94,502,000**	**$98,279,768**	**$3,777,768**
REVENUES			
Replenishment Assessment	$83,106,000	$85,769,268	$2,663,268
Vander Lans Income/OCWD/MWD Subsidy	3,430,000	4,480,000	1,050,000
Goldsworthy Desalter Income/MWD Subsidy	3,150,000	2,900,000	(250,000)
Albert Robles Center Income/MWD Subsidy	630,000	630,000	-
Other Income	186,000	500,500	314,500
Carryover Conversion	4,000,000	4,000,000	-
TOTAL REVENUES	**$94,502,000**	**$98,279,768**	**$3,777,768**

Operations & Maintenance Budget

The District's Operations and Maintenance budget is divided into three major categories:

1. Operating Expenditures
2. Other Special Programs and Supportive Costs
3. Debt Service and Other Non-Operating Costs

Operating Expenditures include projects, programs and activities that enhance the replenishment operations, increase the reliability of groundwater resources, improve and protect groundwater quality and ensure that groundwater supplies are suitable for beneficial use. General and administration include the Board of Directors and Administrative related expenses.

Other special programs and supportive costs include expenses related to litigation, election expenses (which represent mandatory pass-through costs from the County Registrar-Recorder to manage the election of the District's elected officials.) and WRD facility maintenance.

The District has debt service payments on its 2015 Replenishment Assessment Revenue Bonds, 2018 Replenishment Assessment Revenue Bonds and Clean Water Sate Revolving Fund Loan. Debt service is included in the third category of expenses: Capital and Other Non-Operating Expenses

Basis for Fiscal Year 2023 Expense Estimate

Comparing with the prior fiscal year projection, budgeted expenses have increased by $3.8 million to $98.3 million in FY 2023

The Albert Robles Center has completed and started producing water to replace expensive imported water in FY 2021. This project is the corner stone to the District's Water Independence Now (WIN) Initiative. The operating costs associated with the plant are projected to be $10.2 million for FY 2023, a $0.9 million decrease over the prior year. Water purchase cost is projected to increase by $2.5 million to $35.7 million in FY 2023. Based on the completion of Albert Robles Center, an advanced treated recycled water facility, and the expansions of advanced treated recycled water facilities for the barriers, the local supply from these facilities will eliminate WRD's need for imported water.

Changes made to the operations of the Leo J. Vander Lans Advanced Water Treatment Facility (LVL), resulted in a higher output of product water sent to the Alamitos Seawater Intrusion Barrier. The District is anticipating LVL producing close to the plant's production capacity and the operating costs are projected for $5.9 million in FY 2023.

WRD's Safe Drinking Water Program has operated since 1991 and is intended to promote the cleanup of groundwater resources at specific well locations. Through the installation of wellhead treatment facilities at existing production wells, the District expects to remove contaminants from the underground supply and deliver the extracted water for potable purposes. Projects implemented through this program are accomplished through direct input and coordination with well owners. Expenses are projected to increase approximately $0.5 million in FY 2023. The program expenses included planning and designing services for the Safe Drinking Water projects and on-call engineering service for the Disadvantage Community projects. These expenses are reimbursed through grant funding.

Other special programs and election expenses are projected to increase by $0.4 million in FY 2023. The increase is primarily due to the annual GASB 45 and GASB 68 funding programs.

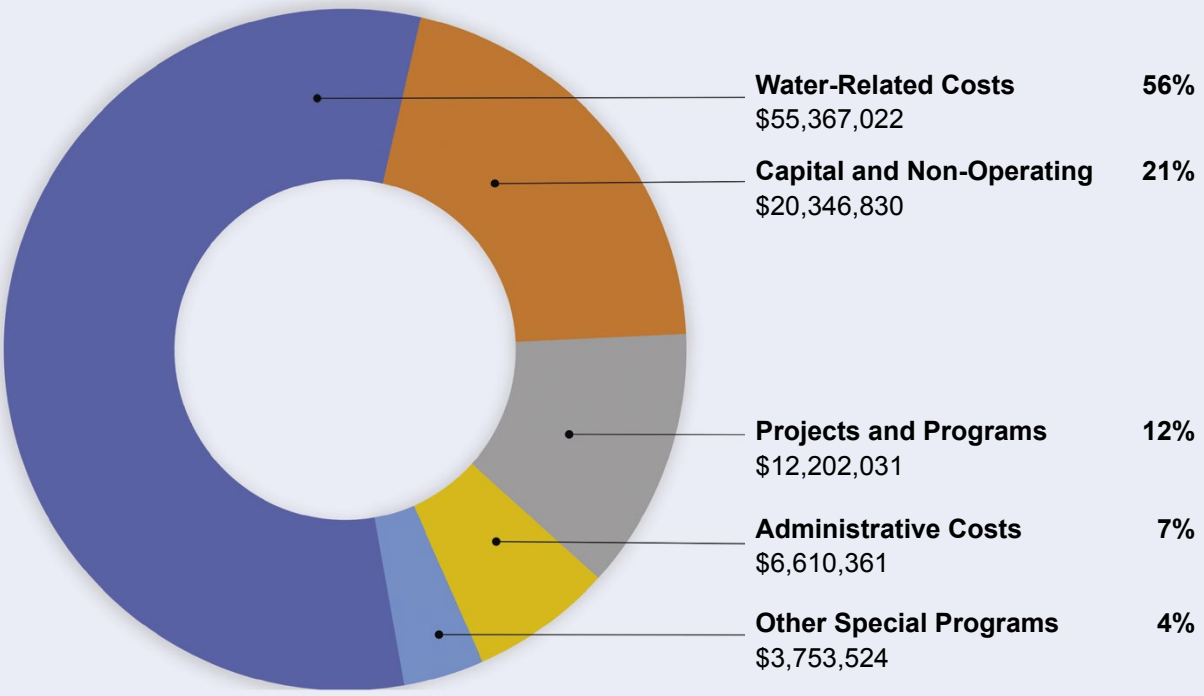
The District has debt service covenants that required funds set aside to meet the District's debt service obligations. Currently, the District has three major debt instruments: Clean Water State Revolving Fund – Proposition 1 Funding, 2015 and 2018 Replenishment Assessment Revenue Bonds that are budgeted for $16.7 million in FY 2023 for the annual principal and interest payments. PAYGO projects are projected at $0.4 million in FY 2023.

The remaining projects, programs, administration and supportive costs are projected to increase by $0.7 million in FY 2023.

The following tables and figures provide the expense analysis which contains five-year operation and maintenance costs that are allocated by funds.

Figure 3

Total Operations & Maintenance Costs



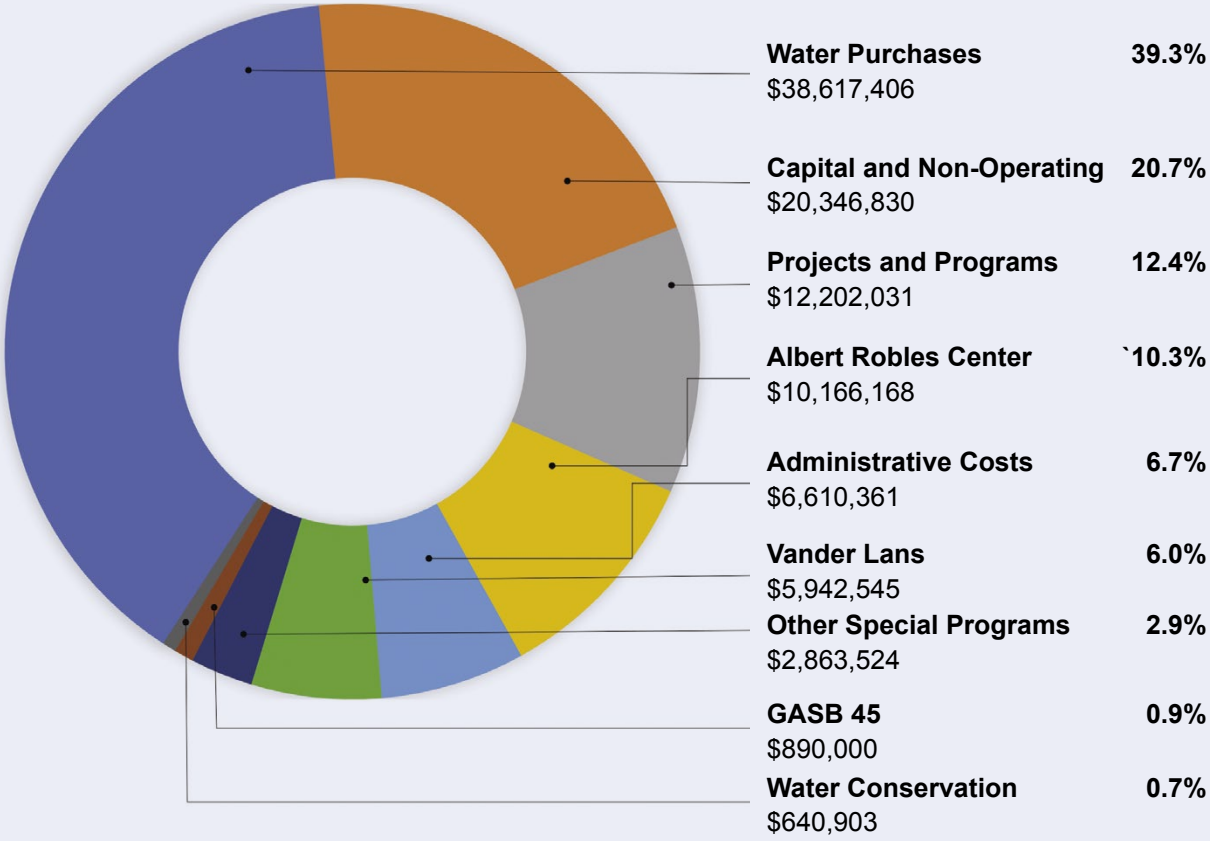
Operating Expense Detail

District's most significant budgetary expenses are water and water-related costs. Of the total budgeted expenditures of $98.3 million, about $55.4 million or 56% of total expenses is related to water supply purchases, production of water or water conservation efforts.

Capital and non-operating costs related to debt service are budgeted at $20.3 million or 21% of total expenses. Project and program expenses are projected at $12.2 million or 12% of total expenses. Administrative costs are projected to at $6.6 million or 7% while other special programs, including Other Post-Employment Benefits (OPEB) payment and election expenses are projected at $3.8 million or 4% of total expenses.

Figure 4

Operating Expense Detail



Comparison to Prior Fiscal Year 2022 Budget Expenses

Total budgeted expenses for the prior fiscal year were $94.5 million, while total budgeted expenses for fiscal year 2023 are expected to increase by $3.8 million or 4% to total budget of $98.2 million. Water and water related costs increased by $1.9 million or 3% from $53.5 million to $58.4 million, respectively. Capital and non-operating costs has a slight increase of $0.1 million over the prior fiscal year, reflecting debt service payment associated with the 2015 and 2018 Replenishment Assessment Revenue Bonds and Clean Water State Revolving Fund Loan, and funding for PAYGO projects. Costs for projects and programs have a slight increase by $0.9 million or 0.7% from $11.9 million to $12.8 million, respectively. Administrative costs are projected to increase approximately $0.5 million or 0.8% as the hiring process will start in fiscal year 2023 which was put on hold in the prior fiscal year due to Covid-19 pandemic.

Table 7

Water Replenishment District of Southern California

Schedule of Expenses: Trend Analysis

Description	FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Water Purchases						
Water Costs	$33,447,236	$35,844,159	$31,210,752	$35,766,000	$38,617,406	$2,851,406
Dominguez Gap Barrier Recycled Water	212,501	195,201	295,572	247,523	336,052	88,529
Water Treatment & Production						
Albert Robles Center (ARC)	2,027,514	8,412,804	9,726,250	9,621,847	10,166,168	544,321
Water Supply - Vander Lans	1,858,171	2,442,253	4,607,882	5,250,526	5,942,545	692,019
Goldsworthy Desalter	1,301,686	1,740,648	1,999,187	2,290,188	3,221,393	931,205
Water Resources						
Water Conservation	596,893	593,095	598,479	641,344	640,903	(441)
Montebello Forebay Recycled Water	228,730	229,720	360,834	293,954	442,702	148,748
Groundwater Resource Planning	1,124,914	305,346	1,294,512	1,434,333	1,839,911	405,578
Water Quality Programs						
Water Quality Improvement Program	562,312	589,344	432,460	571,537	722,842	151,305
Groundwater Monitoring Program	1,314,395	1,369,793	1,388,250	1,338,511	1,502,568	164,057
Safe Drinking Water Program	751,653	712,626	451,475	378,373	928,305	549,932
Hydrogeology Program	813,935	954,923	794,125	460,975	600,845	139,870
West Coast Barrier Program	22,211	303	-	-	-	-
Regional Brackish Water Program	-	6,993	117,291	125,520	150,000	24,480
Per- and Polyfluoroalkyl Substances (PFAS) Program	-	-	36,253	-	98,231	98,231
Well Construction and Rehabilitation Program	-	7,487	8,521	5,330	13,102	7,772
Water Replenishment Support						
Geographic Information Systems (GIS)	295,108	241,219	214,188	275,938	467,223	191,285
Replenishment Operations	202,651	328,341	185,691	198,049	258,698	60,649
Engineering Program	208,294	520,575	259,178	202,308	436,555	234,247
SCADA	19,200	18,435	28,598	16,007	-	(16,007)
Asset Management	3,191	12,671	97,982	107,988	92,770	(15,218)
Water Education	997,811	736,762	659,632	1,084,669	1,090,834	6,165
General & Administration						
Board of Directors	314,362	339,778	352,728	271,507	529,868	258,361
Administration	6,540,762	7,293,087	6,715,436	7,535,440	6,080,493	(1,454,947)
Other Special Programs & Supportive Costs						
GASB 45 (Required Retirement Funding)	878,256	700,000	890,000	890,000	890,000	-
Annex Building Program	6,690	25,822	105,119	-	-	-
WRD Facility Maintenance	-	-		379,000	455,140	76,140
Other Special Programs and Supportive Costs	2,791,521	838,000	2,687,738	1,261,000	2,408,384	1,147,384
Debt Service & Other Non-Operating Costs						
Debt Service and Other Non-Operating Costs	12,550,952	16,728,195	17,363,539	20,221,000	20,346,830	125,830
Total Expenses	**$69,070,949**	**$81,187,580**	**$82,881,672**	**$90,868,867**	**$98,279,768**	**$7,410,901**

Table 8

Water Replenishment District of Southern California

Schedule of Expenses by Fund Allocation: Replenishment Assessment Fund

Description	Replenishment Assessment Fund	FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Water Purchases							
Water Costs	100%	$33,447,236	$35,844,159	$31,210,752	$35,766,000	$38,617,406	$2,851,406
Dominguez Gap Barrier Recycled Water	100%	212,501	195,201	295,572	247,523	336,052	$88,529
Water Treatment & Production							
Albert Robles Center (ARC)	100%	2,027,514	8,412,804	9,726,250	9,621,847	10,166,168	$544,321
Water Supply - Vander Lans	100%	1,858,171	2,442,253	4,607,882	5,250,526	5,942,545	$692,019
Water Resources							
Water Conservation	50%	298,447	296,548	299,000	320,000	320,000	$-
Montebello Forebay Recycled Water	100%	228,730	229,720	360,834	293,954	442,702	$148,748
Groundwater Resource Planning	100%	1,124,914	305,346	1,294,512	1,434,333	1,839,911	$405,578
Water Quality Programs							
Groundwater Monitoring Program	50%	657,198	684,897	694,000	669,000	751,000	$82,000
Hydrogeology Program	50%	406,968	477,462	397,000	230,000	300,000	$70,000
West Coast Barrier Program	100%	22,211	303	-	-	-	$-
Regional Brackish Water Program	50%	-	3,497	59,000	63,000	75,000	$12,000
Per- and Polyfluoroalkyl Substances (PFAS) Program	100%	-	-	36,253	-	98,231	$98,231
Well Construction and Rehabilitation Program	100%	-	7,487	8,521	5,330	13,102	$7,772
Water Replenishment Support							
Geographic Information Systems (GIS)	50%	147,554	120,610	107,000	138,000	234,000	$96,000
Replenishment Operations	100%	202,651	328,341	185,691	198,049	258,698	$60,649
Engineering Program	100%	208,294	520,575	259,178	202,308	436,555	$234,247
SCADA	100%	19,200	18,435	28,598	16,007	-	$(16,007)
Asset Management	100%	3,191	12,671	97,982	107,988	92,770	$(15,218)
Water Education	50%	498,906	368,381	329,816	542,335	545,417	$3,082
General & Administration							
Board of Directors	94%	295,500	319,391	332,000	255,000	498,000	$243,000
Administration	94%	6,148,316	6,855,502	6,313,000	7,083,000	5,716,000	$(1,367,000)
Other Special Programs & Supportive Costs							
GASB 45 (Required Retirement Funding)	94%	825,561	658,000	837,000	837,000	837,000	$-
Annex Building Program	100%	6,690	25,822	105,119	-	-	$-
WRD Facility Maintenance	100%	-	-	-	379,000	455,140	$76,140
Other Special Programs and Supportive Costs	94%	2,624,030	787,720	2,526,000	1,185,000	2,264,000	$1,079,000
Debt Service and Other Non-Operating Costs	94%	11,797,895	15,724,503	16,322,000	19,008,000	19,126,000	$118,000
Sub-Total Replenishment Assessment Fund		**$63,061,676**	**$74,639,626**	**$76,432,960**	**$83,853,200**	**$89,365,697**	**$5,512,497**

For fiscal year 2023, total budgeted operating expenses related to the Replenishment Fund are $89.3 million or 91% of the total budget.

Table 9

Water Replenishment District of Southern California

Schedule of Expenses by Fund Allocation: Clean Water Fund

Description	Clean Water Fund	FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Water Treatment & Production							
Goldsworthy Desalter	100%	1,301,686	1,740,648	1,999,187	2,290,188	3,221,393	$931,205
Water Resources							
Water Conservation	50%	$298,447	$296,548	$299,479	$321,344	$320,903	$(441)
Water Quality Programs							
Water Quality Improvement Program	100%	562,312	589,344	432,460	571,537	722,842	$151,305
Groundwater Monitoring Program	50%	657,198	684,897	694,250	669,511	751,568	$82,057
Safe Drinking Water Program	100%	751,653	712,626	451,475	378,373	928,305	$549,932
Hydrogeology Program	50%	406,968	477,462	397,125	230,975	300,845	$69,870
Regional Brackish Water Program	50%	-	3,497	58,291	62,520	75,000	$12,480
Water Replenishment Support							
Geographic Information Systems (GIS)	50%	147,554	120,610	107,188	137,938	233,223	$95,285
Water Education	50%	498,906	368,381	329,816	542,334	545,417	$3,083
General & Adminstration							
Board of Directors	6%	18,862	20,387	20,728	16,507	31,868	$15,361
Administration	6%	392,446	437,585	402,436	452,440	364,493	$(87,947)
Other Special Programs & Supportive Costs							
GASB 45 (Required Retirement Funding)	6%	52,695	42,000	53,000	53,000	53,000	$-
Other Special Programs and Supportive Costs	6%	167,491	50,280	161,738	76,000	144,384	$68,384
Debt Service & Other Non-Operating Costs							
Debt Service and Other Non-Operating Costs	6%	753,057	1,003,692	1,041,539	1,213,000	1,220,830	$7,830
Sub-Total Clean Water Fund		**$6,009,273**	**$6,547,954**	**$6,448,712**	**$7,015,667**	**$8,914,071**	**$1,898,404**
Total Expenses		**$69,070,949**	**$81,187,580**	**$82,881,672**	**$90,868,867**	**$98,279,768**	**$7,410,901**

Total budgeted operating expenses related to the Clean Water Fund are $8.9 million or 9% of the total budget.

Table 10

Fiscal Year 2023 Operations & Maintenance Budget

Five-Year Forecast

Description	Esc %	FY 2023 Adopted Budget	FY 2024 Forecast Budget	FY 2025 Forecast Budget	FY 2026 Forecast Budget	FY 2027 Forecast Budget
Operating Expenses						
Water Purchases	5%	38,617,406	40,548,276	42,575,690	44,704,475	46,939,698
Water Treatment and Production	4%	19,330,106	20,103,310	20,907,443	21,743,740	22,613,490
Water Resources	3%	2,923,516	3,011,221	3,101,558	3,194,605	3,290,443
Water Quality Programs	2%	4,015,893	4,096,211	4,178,135	4,261,698	4,346,932
Water Replenishment Support	2%	2,682,132	2,735,775	2,790,490	2,846,300	2,903,226
General and Administration	2%	6,610,361	6,742,568	6,877,420	7,014,968	7,155,267
Sub-Total		**74,179,414**	**77,237,362**	**80,430,736**	**83,765,786**	**87,249,056**
Non-Operating Expenses						
Other Special Programs & Supportive Costs	1%	3,753,524	3,791,059	3,828,970	3,867,260	3,905,932
Debt Service and Other Non-Operating Costs	NA	20,346,830	20,346,830	20,346,830	20,346,830	20,346,830
Sub-Total		**24,100,354**	**24,137,889**	**24,175,800**	**24,214,090**	**24,252,762**
Total Budget		**98,279,768**	**101,375,251**	**104,606,536**	**107,979,875**	**111,501,818**

Five – Year Expenses Forecast

The District is forecasting an overall 23 percent or $16 million increase in operating expenditure over the next 5 years. The primary driver is Water Purchases that is increasing by 25 percent or $11 million. It is expected that Water Treatment and Production Costs will continue to rise as a result of inflation, supply chain issues and higher wages. The District is investigating ways to mitigate these costs through negotiations, partnerships and projects to secure water, and chemicals at a lower cost. This is in addition to more efficient operations at the facilities and in managing the administration costs of the District.

As inflation continues to rise and the country adjust to the pandemic becoming a part of our normal life. The business environment for the District is in constant change. This being the case, accurate forecasting will be an ever important factor in the operational decisions made to maintain our financial stability.

Revenues Budget

The District's primary source of revenue comes from the Replenishment Assessment (RA) which making up 87% or approximately $85.8 million of the District's revenue. RA is based on the amount of water pumped from the Central and West Coast basins, andbasins and is applied to every acre-foot of water pumped.

Carryover Conversion to Groundwater Storage, known simply as "Carryover Conversion", is a relatively new option for pumpers in the Central and West Coast groundwater basins. A groundwater pumper has the option to transfer their unpumped rights each year into a storage account so that they can use those rights to pump water in a later year. Otherwise, they may lose those right permanently. Carryover conversion revenue is expected to remain the same as last year budget which is $4 million or 4% in fiscal year 2023.

The District also expects to collect approximately $4.5 million or 5% of total revenue from recycled water sales to the Orange County Water District (OCWD) form the Leo J. Vander Lans Advanced Treatment Water Facility (LVL AWTF), along with incentives received from the Metropolitan Water District of Southern California (MWD) for every acre-foot produced by the plant. This facility provides advanced water treated water to the Alamitos Seawater Intrusion Barrier Project which would otherwise be supplied with more expensive imported water from MWD.

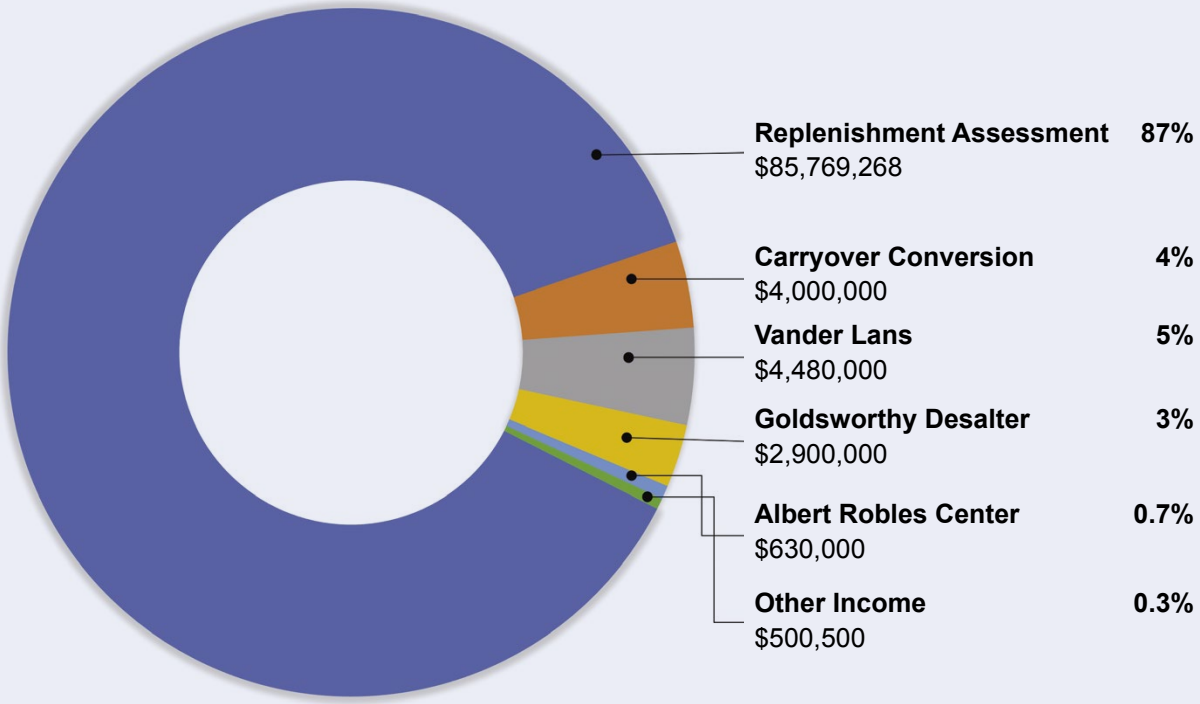
The Goldsworthy Desalter is located in the West Coast basin and treats brackish groundwater for sale to the city of Torrance. The anticipated revenue is $2.9 million or 3% of total revenue.

The Albert Robles Center (ARC) purifies approximately 10,000 acre feet of tertiary treated (recycled) water annually to near-distilled levels through an advanced water treatment facility. Since ARC offsets the need for imported water from MWD, the District receives from the agency's Local Resources Program subsidy through the city of Torrance, a MWD's member agency. The estimated total revenue from this advanced water treatment facility is $0.6 million or 0.7% of total revenue.

Other income and expenses account for $0.5 million or 0.3% of total revenue and is the net of interest income, property tax revenue and other expenses that are not charged to the RA.

Figure 5

Fiscal Year 2023 Total Revenues



Comparison to Prior Fiscal Year 2022 Budgeted Revenues

Total revenues for fiscal year 2023 are projected approximately $3.7 million or 4% higher than the budget in prior fiscal year primarily due to an increase in the Replenishment Assessment (RA) effective July 1, 2022. As a result, RA revenue is about $2.7 million or 3% higher than last year's budget. In addition, Vander Lans revenue is projected to increase about $1.1 million while Carryover Conversion revenue remains the same which is estimated of $4 million in fiscal year 2023.

Table 11

Fiscal Year 2023 Revenues

Description	FY 2022 Adopted Budget	FY 2023 Adopted Budget	FY 2023 Budget compared to FY 2022 Budget
Replenishment Assessment	$83,106,000	$85,769,268	$2,663,268
Vander Lans Income/OCWD/MWD Subsidy	3,430,000	4,480,000	1,050,000
Goldsworthy Desalter Income/MWD Subsidy	3,150,000	2,900,000	(250,000)
Albert Robles Center Income/MWD Subsidy	630,000	630,000	-
Other Revenues	186,000	500,500	314,500
Carryover Conversion	4,000,000	4,000,000	-
Total Revenues	**$94,502,000**	**$98,279,768**	**$3,777,768**

Sources of Revenue

Replenishment Assessment Revenue Estimate

The District has statutory authority to set and collect a Replenishment Assessment (RA) from all entities that own or lease water rights on each acre-foot (AF) of groundwater that they pump from the basins.

For Fiscal Year 2023, the District estimates that it will collect $85,769,268 from the Replenishment Assessment (RA) based on the estimated groundwater pumping of 213,000 AF. From thel adopted RA of $411per AF, $8 per AF is funded for the per- and polyfluoroalkyl substances (PFAS) remediation program.

Pursuant to the Water Code and applicable regulations, the RA is established annually by the Board of Directors. Mathematically, the RA is calculated based on the cost allocation analysis which includes assessing the beneficiaries (i.e. pumpers) their proportional share of the cost to provide water replenishment service.

As required by the Water Code, the District annually prepares the Engineering Survey & Report (ESR) that provides the Board of Directors with the necessary information to justify the setting of an RA for the ensuing fiscal year to purchase replenishment water and to fund projects and programs related to groundwater replenishment and groundwater quality. The ESR contains the following key components:

- A discussion of groundwater production with the District;
- An evaluation of groundwater conditions with the District, including estimates of the annual overdraft, the accumulated overdraft, changes in water levels, and the effects of water level fluctuations on the groundwater resources;
- An appraisal of the quantity, availability, and cost of replenishment water required for the ensuing water year; and
- A description of current and proposed programs and projects to accomplish replenishment goals and to protect and preserve high quality groundwater supplies within the District.

Specifically, the ESR provides an estimate of the total groundwater pumping quantity for the ensuing year, which is approximately 213,000 AF in the District's service area. Furthermore, the ESR identifies the quantity of supplemental water required to replenish and protect the groundwater basins from pumping. The total estimated cost of service for FY 2023 is $85,769,268 which is necessary to service the estimated 213,000 AF of groundwater pumped from the basins. Therefore, the estimated total cost of service is allocated in proportion to the estimated total groundwater pumped.

The unit cost, or RA, per AF of water pumped is calculated as follows:

$$\frac{\text{Total Cost of Service \$}}{\text{Total Groundwater Pumped (AF)}} = \text{Unit Cost (\$/AF pumped)}$$

The FY 2023 pumping estimates were evaluated and refined throughout the budget process. Based on the series of budget presentations during the budget process, the Board of Directors arrived at the total groundwater AF pumped to determine the unit cost as follows:

$$\frac{\text{Total Cost of Service (\$85,769,268)}}{\text{Total Groundwater Pumped (213,000 AF)}} = \text{Unit Cost (\$403/AF)}$$

Unit Cost $403/AF and $8/AF to the PFAS program = $411/AF

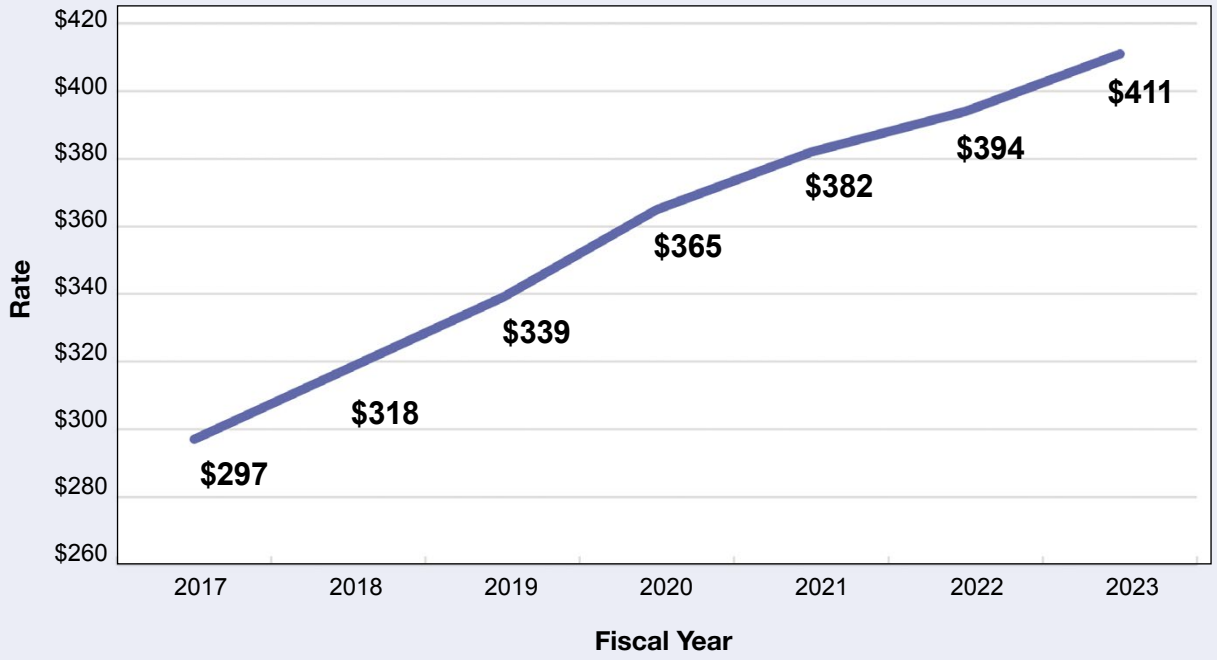
The amount of RA charged to an individual operator is calculated based on the quantity of water they pump multiplied by the RA. For example, if an operator pumps a total of 1,000 AF, that operator will be charged a total of $411,000 (1,000 AF x $411/AF).

The RA consists of two components: funds for replenishment and funds for clean water. Most of the District's efforts are related to the replenishment of the Central and West Coast Groundwater Basins. The revenue collected through the RA is split 94% to the Replenishment Fund and 6% to the Clean Water Fund based on the anticipated use of the revenue.

The District's Replenishment Assessment rate have increased gradually over the years as shown in the chart below, for the District to meet the demands of maintenance and preservation of the Basins, and, thus, availability of water for pumpers to pump.

Figure 6

Replenishment Assessment



To estimate the ensuing year's Replenishment Assessment rate, WRD has made a forecast based on the current year's anticipated pumping. The Finance/Audit Committee's recommendation for the Fiscal Year 2023 Replenishment Assessment is $411 per acre-foot, which included $8 per acre-foot of the Replenishment Assessment to the per- and polyfluoroalkyl substances (PFAS) program. The recommendation was based on the following assumptions:

1. Ensuing year's pumping to be 213,000 acre-feet. It anticipates that pumpers will remove 213,000 acre-feet from the Basins;

2. Ensuing year's water purchases to be 92,100 acre-feet to replenish the Basins; and

3. $4.0 million of revenue will come from the Water Purchase Carryover (water storage for future extraction by pumpers).

The District anticipates that the net cost of its operations for Fiscal Year 2023 will be $85,769,268; therefore, the cost of providing services including $8 per acre-foot of the Replenishment Assessment to the PFAS program will be $411 per acre-foot of water removed from the Basins.

Shown below are the basins top twenty pumpers in fiscal year 2022:

Table 12

Production Summary

Fiscal Year 2022 Top 20 Pumpers

Number	Name	Production (Acre Feet)
1	Long Beach, City of	26,413
2	Golden State Water Company	22,997
3	California Water Service Company	14,980
4	Downey, City of	14,456
5	Tesoro Refining & Marketing Company, LLC	9,522
6	South Gate, City of	8,159
7	Cerritos, City of	7,675
8	Compton, City of	7,145
9	Lakewood - City of	7,053
10	Vernon, City of	6,513
11	Phillips 66 Company	6,379
12	Whittier, City of	5,877
13	Bellflower-Somerset Mutual Water Company	4,885
14	Liberty Utilities Corporation	4,732
15	Water Replenishment District	4,648
16	Los Angeles City of Dept of Water and Power	4,562
17	Pico Rivera, City of	4,436
18	Lynwood, City of	4,427
19	Montebellow Land and Water Company	2,984
20	Huntington Park, City of	2,942
	Total	**170,785**

Production & Treatment Revenue Estimates

The District receives revenue from the Leo J. Vander Lans Advanced Water Treatment Facility, the Robert W. Goldsworthy Desalter and the Albert Robles Center for Water Recycling & Environmental Learning.

The Leo J. Vander Lans Advanced Water Treatment Facility provides advanced treated water to the Alamitos Seawater Barrier Project in order to keep seawater from intruding into the fresh groundwater supplies in the Central Basin. The revenue from

the facility comes from the sale of water production to the Orange County Municipal Water District as well as a subsidy received from the Central Basin Municipal Water District through a Local Resource Program offered by the Metropolitan Water District of Southern California.

The District completed the Leo J. Vander Lans Expansion Project in FY 2016, which doubled the capacity of the treatment plant and completely replaced the need for imported water with highly treated recycled water at the Alamitos Seawater Intrusion Barrier. This is one of the key components in the District's Water Independence Now (WIN) Program. Projected revenues for FY 2023 is $4.5 million.

Fund Allocation – The primary purpose of this project is to provide a more reliable means of replenishing the basins through the use of advanced treated recycled water, 100% of this revenue is allocated to the Replenishment Fund.

The Robert W. Goldsworthy Desalter has been operating since 2002 to remove 18,000 acre-feet of brackish groundwater from a seawater intrusion plume in the Torrance area that was stranded inland of the West Coast Basin Seawater Intrusion Barrier after the barrier project was put into operation in the 1950s and 1960s. The production well and desalting facility are located within the City of Torrance and the product water that would otherwise be useless due to the Saline Plume located in the West Coast Basin is delivered for potable use to the City's distribution system. The treatment capacity is about 2,200 acre-feet per year.

The District expanded the Goldsworthy Desalter and completed the construction in 2017. The expansion project increased the treatment capacity to 4,800 acre-feet per year. The City of Torrance is responsible for the operation and maintenance of the treatment plant under contract with WRD. The revenue from the Desalter comes from the sale of water production to the City of Torrance as well as a subsidy received from the City of Torrance through a Local Resource Program offered by the Metropolitan Water District of Southern California. Projected revenues for FY 2023 is $2.9 million.

Fund Allocation – The purpose of the Desalter is directly related to remediating degraded groundwater quality and costs are thus attributed 100% to the Clean Water Fund.

The Albert Robles Center for Water Recycling & Environmental Learning is a 5.2 acre facility in the City of Pico Rivera, adjacent to the San Gabriel River, allowing for direct delivery of purified recycled water to an existing pipeline leading into the spreading grounds.

The Albert Robles Center purifies approximately 10,000 acre feet (3.25 billion gallons) of tertiary treated (recycled) water annually to near-distilled levels through an

advanced water treatment facility. The facility takes in tertiary treated recycled water as source water and subjects it to additional advanced treatment through ultrafiltration, reverse osmosis, and advanced oxidation to further purify the water for groundwater replenishment in the Montebello Forebay.

Since the Albert Robles Center offsets the need for imported water from Metropolitan Water District (MWD) of Southern California, the District receives MWD's Local Resources Program subsidy through the City of Torrance, a MWD member agency. Projected revenues for FY 2023 is $0.6 million.

Fund Allocation – The primary purpose of this project is to provide a more reliable means of replenishing the basins through the use of advanced treated recycled water, 100% of this revenue is allocated to the Replenishment Fund.

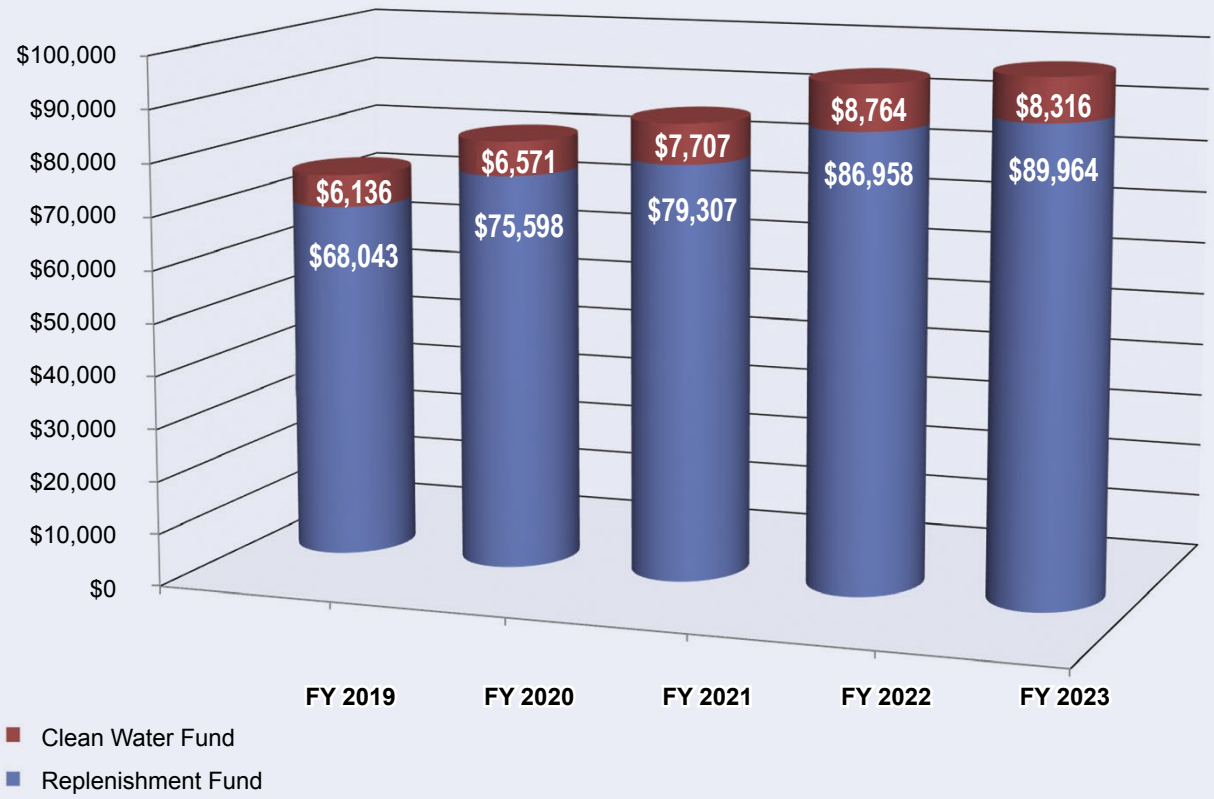
Table 13

Comparative Revenue by Fund

Description	Allocation % Replen-ishment Fund	Allocation % Clean Water Fund	FY 2019 Actual	FY 2020 Actual	FY 2021 Actual	FY 2022 Projection	FY 2023 Budget
Replenishment Fund							
Replenishment Assessment	94%		$63,926,684	$66,691,894	$71,591,381	$78,886,680	$80,623,112
LJVWTF - Water Supply	100%		114,273	488,860	2,156,938	3,288,662	4,480,000
Albert Robles Center	100%		-	239,432	692,773	557,809	630,000
Other Income	94%		1,585,074	1,596,073	898,409	464,492	470,470
Carryover Conversion	94%		2,416,988	6,581,417	3,967,457	3,760,000	3,760,000
Sub-Total Replenishment Fund			$68,043,020	$75,597,675	$79,306,958	$86,957,643	$89,963,582
Clean Water Fund							
Replenishment Assessment		6%	$4,080,427	$4,256,929	$4,569,663	$5,035,320	$5,146,156
Goldsworthy Desalter Sales		100%	1,578,986	1,551,550	2,598,650	3,459,226	2,900,000
Other Income		6%	322,219	342,825	285,059	29,508	30,030
Carryover Conversion		6%	154,276	420,090	253,242	240,000	240,000
Sub-Total Clean Water Fund			$6,135,907	$6,571,395	$7,706,614	$8,764,054	$8,316,186
Total All Funds			**$74,178,927**	**$82,169,069**	**$87,013,572**	**$95,721,697**	**$98,279,768**

Figure 7

Comparative Revenue by Fund *(in thousands)*



Other Revenue Estimates

Other Income

The District is estimating revenue for FY 2023 from property tax to be $0.4 million and interest income to be $0.1. There are non-RA related expenses of $0.6 million which off-set the above that will bring the estimated revenue from this source to $0.1 million.

Fund Allocation – The revenue collected through other revenue (e.g. property taxes and interest income) is split 94% to the Replenishment Fund and 6% to the Clean Water Fund based on the anticipated use of the revenue.

Groundwater is an economical source of water. In FY 2023, the District's Replenishment Assessment is $411/AF. The additional cost to the water purveyors to operate their systems and serve the water could add up to $250/AF to the Replenishment Assessment rate. In contrast, the price of treated imported water, which is the alternative source

to groundwater, is projected at $1,460/AF. Therefore, groundwater is over 50% less than the cost of treated imported water.

Taking a longer view on the cost-benefit side, water imported from Northern California and the Colorado River cannot be relied on to meet the replenishment needs of WRD and the cost of imported water keeps climbing up every year. The only way to stabilize groundwater rates is to become independent of imported water.

The District's primary responsibilities are to protect the basins by replenishing groundwater, deter seawater intrusion, and remove contaminants from the groundwater. Furthermore, with the recent drought and future uncertainty of imported water, the District is moving forward with the WIN program, a series of projects that will fully utilize stormwater and recycled water sources to protect the basins and to ensure sustainable, reliable local groundwater supply to WRD's stakeholders.

Table 14

Fiscal Year 2023 Revenues Budget

Five-Year Forecast

Description	FY 2023 Adopted Budget	FY 2024 Adopted Budget	FY 2025 Forecast Budget	FY 2026 Forecast Budget	FY 2027 Forecast Budget
Replenishment Assessment	$85,769,268	$87,484,653	$89,234,346	$91,019,033	$93,749,604
Vander Lans Income/OCWD/MWD Subsidy	4,480,000	4,480,000	4,480,000	4,000,000	4,000,000
Goldsworthy Desalter Income	2,900,000	2,900,000	2,900,000	2,900,000	2,900,000
Albert Robles Center Income/MWD Subsidy	630,000	630,000	630,000	630,000	630,000
Other Income	500,500	500,500	500,500	500,500	500,500
Carryover Conversion	4,000,000	4,500,000	4,500,000	4,500,000	4,500,000
Total Revenues	**$98,279,768**	**$100,495,153**	**$102,244,846**	**$103,549,533**	**$106,280,104**

The forecast above shows the Replenishment Assessment increasing at approximately 2 percent annually. Income at the treatment facilities is expected to remain at the same level based on consistent operations and ongoing subsidies. Carryover conversion does appear to be increasing. As a result, the forecast has increased by $500,000 annually. Subsidy expiration dates are as follows:

- Goldsworthy Desalter (through the City of Torrance): Expired June 30, 2022
- Leo Vander Lans (through Central Basin): 2025
- Leo Vander Lans Expansion (through Long Beach Water): 2043
- Albert Robles Center (through the City of Torrance): 2042

Fund Balances

Reserve Fund Policy

The level of reserves maintained by the District is an important component of short and long-term financial management, and is a key consideration in the rate-setting process. Furthermore, the level of reserves is one of the key financial metrics used by credit rating agencies when evaluating the financial strength of an organization. Prudent reserves are an important financial tool that benefits both WRD and the pumpers. A prudent level of reserves helps mitigate financial risks due to changes in pumping levels, unexpected cost increases, and emergencies.

WRD's reserve policy is to ensure that reserves meet WRD's financial and operational objectives. Among other things, the Reserve Policy includes:

- How these balances are established
- How funds are used
- How the adequacy of each respective reserve fund balance is determined
- How reserves are replenished when used

The District's reserve policy will be reviewed annually during the budgeting process to monitor current levels and evaluate compliance with the policy. Decisions can then be made to maintain, increase, or spend down reserve balances, as appropriate, with an understanding of the impact of such decisions to the upcoming budget period and the long-term financial plan. The annual analysis of funds is an important part of responsible financial planning, particularly as WRD transitions from an agency that produces water to one that produces water and operates and maintains three capital facilities.

As of June 30, 2022, the District has $92,776,000 in Cash and Reserve Funds. This includes $3,122,000 of restricted reserves and $89,654,000 in unrestricted reserves. The following pages provide a detailed breakdown of the District's reserve funds.

Table 15
Reserve Fund Balances

Reserve Funds:	
Debt Services (Restricted)	$3,200,000
Equipment Replacement	5,000,000
Safe Drinking Water Program & Disadvantage Community	7,900,000
Well Rehabilitation & Construction	4,800,000
Water Purchase Carryover & Rate Stabilization	10,000,000
PayGO Capital Reserve	13,000,000
PFAS Remediation Program	17,800,000
Operating Reserve	31,100,000
Total Reserve Balances as of June 30, 2022	**$92,800,000**

Restricted Reserve Fund

1. **Debt Service Reserve –** established pursuant to the covenants in WRD's State Revolving Fund (SRF) Loan. The District is required to maintain one year of debt service in reserve as security for the SRF loan.

   Source of Funds: Replenishment Assessment
   Use of Funds: Debt Service

Unrestricted Reserve Funds:

1. **Equipment Replacement Reserve –** to fund periodic replacement of assets with expected useful life of three to twenty years.

   Source of Funds: Replenishment Assessment
   Use of Funds: Equipment Replacement Costs

2. **Safe Drinking Water & Disadvantaged Community Reserve –** to account for, and fund loans and grants to help clean up the groundwater basin.

   Source of Funds: Replenishment Assessment
   Use of Funds: Safe Drinking Water and Disadvantaged Community Projects

3. **Well Rehabilitation & Construction Reserve –** to provide zero interest loans to help finance well construction and rehabilitation to increase pumping capacity in the basin.

Source of Funds:	Replenishment Assessment
Use of Funds:	Well Rehabilitation Program

4. **Water Purchase Carryover & Rate Stabilization Reserve –** to ensure WRD's ability to acquire or develop water supplies to replenish the Central and West Coast groundwater basins and to stabilize rates.

Source of Funds:	Replenishment Assessment
Use of Funds:	Acquire or Develop Water Supplies

5. **PayGo Reserve –** to fund pay-go various capital projects

Source of Funds:	Replenishment Assessment
Use of Funds:	Miscellaneous Capital Projects

6. **PFAS Remediation Reserve –** to fund PFAS Remediation Program

Source of Funds:	Replenishment Assessment
Use of Funds:	PFAS Remediation Projects

7. **Operating Reserve –** to provide needed working capital and to help ensure against unforeseen events, including lower than expected sales, unbudgeted expenses, emergencies (e.g. earthquakes or other natural disasters), and other unforeseen events. The Operating Reserve is equal to three months of the cost of operations, including annual debt services, in the current year budget.

Source of Funds:	Replenishment Assessment
Use of Funds:	Non-Recurring Operating Expenses

Trust Funds

A relationship whereby funds are legally held and managed by another party or organization for the benefit of specific purpose.

The Water Replenishment District has a number of trust funds related to District's Capital Improvement Plan. The District's Trustee, U.S. Bank, holds the majority of the funds which were received from the issuance of 2015 and 2018 Replenishment Assessment Revenue Bonds. The remaining amount relates to the funds received from the California Department of Transportation (CalTrans) settlement of $8.0 million which was received in June 2004. Since that time, the District has been reimbursed for costs associated with the project, as well as for charges tied to the amount of water pumped from the basin for dewatering the freeway.

The balance of trust funds as of June 30, 2022 is as follows:

Table 16

Water Replenishment District of Southern California

Trust Fund Report as of June 30, 2022

Fund Purpose	Beginning Balance	Interest Income or Change in Net Invest-ments	Disburse-ments	Addition	Ending Balance
2015 Revenue Bonds	$135	$-			$135
2018 Revenue Bonds	36,710,601	4,965			36,715,566
CalTrans Trust Fund (BancWest)	5,558,422	277			5,558,700
Total	**$42,269,158**	**$5,242**	**$-**	**$-**	**$42,274,400**

Restricted for Capital Projects – Funds held in trust with U.S. Bank for use in accordance with the 2018 Revenue Bond Official Statement and the Master Trust Agreement.

Source of Funds:	2018 Revenue Bond
Use of Funds:	Restricted for Capital Projects only

CalTrans Trust – These funds are held in trust by WRD as part of a settlement with the California Department of Transportation (CalTrans) for dewatering the 105 freeway.

Source of Funds:	CalTrans Settlement
Use of Funds:	Restricted for CalTrans Project and Replenishment Assessment

Originally, the CalTrans settlement of $8.0 million was received in June 2004. Since that time, the District has been reimbursed for costs associated with the project, as well as for charges tied to the amount of water pumped from the basin for dewatering the freeway.

Table 17

Projected Unreserved Fund Balance

as of June 30, 2022 and 2023

Description	Estimated Unreserved Fund Balance 6/30/22	Estimated Revenues	Estimated Expenses	Debt Service	Estimated Unreserved Fund Balance 6/30/23
Replenishment Fund	$16,171,811	$89,963,582	$(73,828,815)	$(15,509,762)	$16,796,816
Clean Water Fund	$1,032,243	$8,316,186	$(7,951,206)	$(989,985)	$407,238
Total All Funds	**$17,204,054**	**$98,279,768**	**$(81,780,021)**	**$(16,499,747)**	**$17,204,054**

Table 18

Projected Unreserved Fund Balance

5-Year Forecast

Description	FY 2023 Budget	FY 2024 Forecast	FY 2025 Forecast	FY 2026 Forecast	FY 2027 Forecast
Beginning Funds Balance	$17,204,054	$17,204,054	$15,823,956	$12,962,267	$8,511,926
Add: Estimated Revenues	98,279,768	99,995,153	101,744,846	103,529,533	106,260,104
Total Funds Available	115,483,822	117,199,207	117,568,803	116,491,801	114,772,030
Less: Estimated Expenditures	(81,780,021)	(84,881,629)	(88,114,664)	(91,486,128)	(95,008,196)
Annual Debt Service	(16,499,747)	(16,493,622)	(16,491,872)	(16,493,747)	(16,493,622)
Ending Funds Balance	**$17,204,054**	**$15,823,956**	**$12,962,267**	**$8,511,926**	**$3,270,211**

Long-Term Debt

Currently, the District's financial plan does not require any long-term borrowing in fiscal year 2023. This is due to over 440 days of cash-on-hand, PayGo, PFAS Assessment, Grants and 2018 Bond Funds. Going forward the issuance of any long-term debt would be based on an acceleration of the Regional Brackish program, additional commitments for PFAS remediation or refinancing opportunities.

In January 2021, Fitch ratings reviewed but took no action on the WRD AA+ with a Negative Outlook. The Negative Outlook was driven by the District's weaker financial performance in fiscal years 2019 and 2020 in combination with new debt related to system expansion, which elevated its net leverage. The District experienced a revenue decline in fiscal years 2019 and 2020 due to reduced pumping while in 2020 the system experienced higher operating costs associated with the new advance water treatment facility (ARCWTF) coming online.

The District's 'AA+' issue rating reflect strong financial profile in the context of very strong revenue defensibility and very low operating risks. In addition to benefiting from very low water pricing relative to competing supplies and strong purchaser credit quality.

Debt Management Policy

Pursuant to the requirements of SB-1029 California Debt and Investment Advisory Commission, the District adopted the Debt Management Policy that established guidelines for the issuance and the on-going administration process for debt securities and other forms of indebtedness issued by the District.

The District is committed to long-term financial planning, maintaining appropriate reserves levels and employing prudent practices in governance, management and budget administration. The District intends to issue debt for the purposes stated in these Debt Management Policies and to implement policy decisions incorporated in the District's Five-Year Financial Plan and its annual operating budget.

The District recognizes that a fiscally prudent debt policy is required to:

- Maintain the District's sound financial position.
- Ensure the District has the flexibility to respond to changes in future service priorities, revenue levels, and operating expenses.
- Protect the District's creditworthiness.
- Ensure that all debt is structured to protect both current and future taxpayers, ratepayers, and constituents of the District.
- Ensure that the District's debt is consistent with the District's planning, goals and objectives for capital improvements and operations, as applicable.

The District issued long-term debt to finance the construction, acquisition, and rehabilitation of facilities, equipment and land owned or to be owned and operated by the District. Long-term debt financings are not appropriate for current operating expenses and routine maintenance expenses. Details of the District's long-term debt are presented below.

Replenishment Assessment Revenue Bonds, Series 2015

On December 10, 2015 the District issued $148,345,000 Replenishment Assessment Revenue Bonds, Series 2015. Additionally, the District formed "The Authority", a joint exercise of powers agency organized under the laws of the State of California and formed pursuant to that certain Joint Exercise of Powers Agreement dated August 6, 2015 by the California Municipal Finance Authority, a joint exercise of powers authority organized and existing under and by virtue of the laws of the State of California. The bonds were issued by the Authority to: (i) finance the acquisition, construction and installation of certain capital improvement projects of the WRD, (ii) prepay the 2004, 2008 and 2011 Certificates of Participation, and (iii) to pay costs of issuance of the bonds.

Both Standard and Poor's and Fitch ratings affirmed the WRD's credit rating of AA+ with a stable outlook. This helped in the District obtaining AAA pricing, in line with the Metropolitan Water District pricing the day before WRD priced its bonds. The District will have level debt service payments of $9.25 million annually for 30 years. The result of the refunding resulted in a net present value (NPV) of $9.72 million and an all-in lowering of total interest cost of 3.49%, compared to the 2004 COP – 4.52%, 2008 COP – 6.15%, and 2011 COP – 4.70%. Due to the District's strong credit rating and aggressive pricing by the District's underwriting team, the demand for the bonds was four-times the offering amount.

The net proceeds of $69,500,000 was used to fund the following capital projects:

1. Albert Robles Center for Water Recycling and Environmental Learning
2. Goldsworthy Brackish Water Reclamation Program
3. Stormwater Conservation and Groundwater Storage Program
4. Groundwater Basin Management Program
5. Improvements related to the Safe Drinking Water Program
6. Improvements related to the Groundwater Infrastructure Management Program

Replenishment Assessment Revenue Bonds, Series 2018

As the District goes through the annual update of its Capital Improvement Plan, the District looks to the capital funding needs for the next three to five years. With the completion of the Albert Robles Center for Water Recycling and Environmental Learning and the Goldsworthy Desalter expansion, it is evident that additional funds will be needed to continue WRD's mission to supply clean and reliable water to the West Coast and Central Groundwater Basins.

In December 2018, the District issued $65,785,000 Replenishment Assessment Revenue Bonds, Series 2018. The 2018 Revenue Bond are being issued pursuant to an Indenture of Trust among the Water Replenishment District of Southern California Financing Authority ('the Authority'), WRD ('the District") and U.S. Bank as trustee. The Bonds were issued by the Authority to finance the acquisition, construction, and installation of the following capital improvement projects and pay costs of issuance of bonds.

1. Leo J. Vander Lans (LVL) Facility Improvement Projects
2. Regional Brackish Water Reclamation Project
3. Field Operations and Storage Annex Facility Project
4. Whittier Narrows Conservation Pool Feasibility Study
5. Dominguez Gap Seawater Intrusions Barrier – Second Connection/potable backup supply
6. Groundwater Basin Management Program
7. Safe Drinking Water Program

Clean Water State Revolving Fund

As the District moves towards independence from imported water from both the Colorado River and the California State Water Project, we continue to find ways to keep the costs as low as possible. As part of this effort, the District applied for and has been awarded a $15,000,000 million grant and an $80,000,000, 30-year one-percent loan to assist with the building of the Groundwater Reliability Improvement Project (Albert Robles Center) through the California Clean Water State Revolving Fund. The savings will amount to nearly $47,000,000 to the District's customers when compared to a 30-year Replenishment Assessment Revenue Bonds at the District's last borrowing interest rate of 3.49%.

Projected Budget Impact of Debt Service

The projected budget impact of principal and interest payments with the 2015 and 2018 Replenishment Assessment Revenue Bonds, and Clean Water State Revolving Fund is as follows:

Table 19

Annual Debt Service Payments *(in million $)*

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
2015 Bonds	$9.3	$9.3	$9.3	$9.3	$9.3
2018 Bonds	4.3	4.3	4.3	4.3	4.3
State Revolving Fund Loan	3.0	3.0	3.0	3.0	3.0
Total	**$16.6**	**$16.6**	**$16.6**	**$16.6**	**$16.6**

The projects constructed with these borrowings will replace the need to purchase 21,000 acre-feet of imported water for replenishment purposes. The reduction in imported water costs mitigates the impact of the ongoing debt service payments shown above. In addition, the cost of imported water is expected to increase over time, while debt service will be essentially level for the next thirty years, providing a hedge against uncertainty regarding the future cost of imported water supplies.

Table 20

Debt Service Payment Schedule

Due Date	Fiscal Year	2015 Revenue Bond Payment Schedule			2018 Revenue Bond Payment Schedule			CWSRF Loan Payment Schedule			Debt Service
		Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total
08/01/2016	2017	1,655,000	4,118,895	**5,773,895**	-	-	**-**	-	-	**-**	
02/01/2017		-	3,472,350	**3,472,350**	-	-	**-**	-	-	**-**	9,246,245
08/01/2017	2018	2,350,000	3,472,350	**5,822,350**	-	-	**-**	-	-	**-**	
02/01/2018		-	3,425,350	**3,425,350**	-	-	**-**	-	-	**-**	9,247,700
08/01/2018	2019	2,445,000	3,425,350	**5,870,350**	-	-	**-**	-	-	**-**	
02/01/2019		-	3,376,450	**3,376,450**	-	392,883	**392,883**	-	-	**-**	9,639,683
08/01/2019	2020	2,560,000	3,376,450	**5,936,450**	-	1,644,625	**1,644,625**	-	-	**-**	
12/31/2019							**-**	2,295,672	628,866	**2,924,539**	
02/01/2020		-	3,312,450	**3,312,450**	-	1,644,625	**1,644,625**				15,462,689
08/01/2020	2021	2,690,000	3,312,450	**6,002,450**	1,035,000	1,644,625	**2,679,625**				
12/31/2020								2,191,480	733,059	**2,924,539**	
02/01/2021		-	3,245,200	**3,245,200**		1,618,750	**1,618,750**				16,470,564
08/01/2021	2022	2,830,000	3,245,200	**6,075,200**	1,085,000	1,618,750	**2,703,750**				
12/31/2021								2,213,395	711,144	**2,924,539**	
02/01/2022		-	3,174,450	**3,174,450**		1,591,625	**1,591,625**				16,469,564
08/01/2022	2023	2,975,000	3,174,450	**6,149,450**	1,145,000	1,591,625	**2,736,625**				
12/31/2022								2,235,529	689,010	**2,924,539**	
02/01/2023		-	3,100,075	**3,100,075**		1,563,000	**1,563,000**				16,473,689
08/01/2023	2024	3,125,000	3,100,075	**6,225,075**	1,200,000	1,563,000	**2,763,000**				
12/31/2023								2,257,884	666,655	**2,924,539**	
02/01/2024		-	3,021,950	**3,021,950**		1,533,000	**1,533,000**				16,467,564
08/01/2024	2025	3,285,000	3,021,950	**6,306,950**	1,260,000	1,533,000	**2,793,000**				
08/01/2024								2,280,463	644,076	**2,924,539**	
02/01/2025			2,939,825	**2,939,825**		1,501,500	**1,501,500**				16,465,814

Table 20

Debt Service Payment Schedule

Due Date	Fiscal Year	2015 Revenue Bond Payment Schedule			2018 Revenue Bond Payment Schedule			CWSRF Loan Payment Schedule			Debt Service
		Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total
08/01/2025	2026	3,455,000	2,939,825	**6,394,825**	1,325,000	1,501,500	**2,826,500**				
12/31/2025								2,303,268	621,271	**2,924,539**	
02/01/2026			2,853,450	**2,853,450**		1,468,375	**1,468,375**				16,467,689
08/01/2026	2027	3,630,000	2,853,450	**6,483,450**	1,395,000	1,468,375	**2,863,375**				
12/31/2026								2,326,300	598,238	**2,924,539**	
02/01/2027			2,762,700	**2,762,700**		1,433,500	**1,433,500**				16,467,564
08/01/2027	2028	3,815,000	2,762,700	**6,577,700**	1,465,000	1,433,500	**2,898,500**				
12/31/2027								2,349,563	574,975	**2,924,539**	
02/01/2028			2,667,325	**2,667,325**		1,396,875	**1,396,875**				16,464,939
08/01/2028	2029	4,015,000	2,667,325	**6,682,325**	1,540,000	1,396,875	**2,936,875**				
12/31/2028								2,373,059	551,480	**2,924,539**	
02/01/2029			2,566,950	**2,566,950**		1,358,375	**1,358,375**				16,469,064
08/01/2029	2030	4,220,000	2,566,950	**6,786,950**	1,620,000	1,358,375	**2,978,375**				
12/31/2029								2,396,790	527,749	**2,924,539**	
02/01/2030			2,461,450	**2,461,450**		1,317,875	**1,317,875**				16,469,189
08/01/2030	2031	4,435,000	2,461,450	**6,896,450**	1,705,000	1,317,875	**3,022,875**				
12/31/2030								2,420,758	503,781	**2,924,539**	
02/01/2031			2,350,575	**2,350,575**		1,275,250	**1,275,250**				16,469,689
08/01/2031	2032	4,660,000	2,350,575	**7,010,575**	1,790,000	1,275,250	**3,065,250**				
12/31/2031								2,444,965	479,574	**2,924,539**	
02/01/2032			2,234,075	**2,234,075**		1,230,500	1,230,500				16,464,939
08/01/2032	2033	4,900,000	2,234,075	**7,134,075**	1,885,000	1,230,500	3,115,500				
12/31/2032								2,469,415	455,124	**2,924,539**	
02/01/2033			2,111,575	**2,111,575**		1,183,375	1,183,375				16,469,064
08/01/2033	2034	5,155,000	2,111,575	**7,266,575**	1,980,000	1,183,375	3,163,375				
12/31/2033								2,494,109	430,430	**2,924,539**	
02/01/2034			1,982,700	**1,982,700**		1,133,875	1,133,875				16,471,064

Table 20

Debt Service Payment Schedule

Due Date	Fiscal Year	2015 Revenue Bond Payment Schedule			2018 Revenue Bond Payment Schedule			CWSRF Loan Payment Schedule			Debt Service
		Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total
08/01/2034	2035	5,415,000	1,982,700	**7,397,700**	2,080,000	1,133,875	3,213,875				
12/31/2034								2,519,050	405,489	**2,924,539**	
02/01/2035			1,847,325	**1,847,325**		1,081,875	1,081,875				16,465,314
08/01/2035	2036	5,695,000	1,847,325	**7,542,325**	2,190,000	1,081,875	3,271,875				
12/31/2035								2,544,240	380,298	**2,924,539**	
02/01/2036			1,704,950	**1,704,950**		1,027,125	1,027,125				16,470,814
08/01/2036	2037	5,985,000	1,704,950	**7,689,950**	2,300,000	1,027,125	3,327,125				
12/31/2036								2,569,683	354,856	**2,924,539**	
02/01/2037			1,555,325	**1,555,325**		969,625	969,625				16,466,564
08/01/2037	2038	6,295,000	1,555,325	**7,850,325**	2,420,000	969,625	3,389,625				
12/31/2037								2,595,380	329,159	**2,924,539**	
02/01/2038			1,397,950	**1,397,950**		909,125	909,125				16,471,564
08/01/2038	2039	6,615,000	1,397,950	**8,012,950**	2,540,000	909,125	3,449,125				
12/31/2038								2,621,334	303,205	**2,924,539**	
02/01/2039			1,232,575	**1,232,575**		845,625	845,625				16,464,814
08/01/2039	2040	6,955,000	1,232,575	**8,187,575**	2,675,000	845,625	3,520,625				
12/31/2039								2,647,547	276,992	**2,924,539**	
02/01/2040			1,058,700	**1,058,700**		778,750	778,750				16,470,189
08/01/2040	2041	7,315,000	1,058,700	**8,373,700**	2,810,000	778,750	3,588,750				
12/31/2040								2,674,022	250,517	**2,924,539**	
02/01/2041			875,825	**875,825**		708,500	708,500				16,471,314
08/01/2041	2042	7,685,000	875,825	**8,560,825**	2,955,000	708,500	3,663,500				
12/31/2041								2,700,763	223,776	**2,924,539**	
02/01/2042			683,700	**683,700**		634,625	634,625				16,467,189
08/01/2042	2043	8,040,000	683,700	**8,723,700**	3,105,000	634,625	3,739,625				
12/31/2042								2,727,770	196,769	**2,924,539**	
02/01/2043			522,900	**522,900**		557,000	557,000				16,467,764

Table 20

Debt Service Payment Schedule

Due Date	Fiscal Year	2015 Revenue Bond Payment Schedule			2018 Revenue Bond Payment Schedule			CWSRF Loan Payment Schedule			Debt Service
		Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Total
08/01/2043	2044	8,370,000	522,900	**8,892,900**	3,265,000	557,000	3,822,000				
12/31/2043								2,755,048	169,491	**2,924,539**	
02/01/2044			355,500	**355,500**		475,375	475,375				16,470,314
08/01/2044	2045	8,710,000	355,500	**9,065,500**	3,430,000	475,375	3,905,375				
12/31/2044								2,782,598	141,940	**2,924,539**	
02/01/2045			181,300	**181,300**		389,625	389,625				16,466,339
08/01/2045	2046	9,065,000	181,300	**9,246,300**	3,610,000	389,625	3,999,625				
12/31/2045								2,810,424	114,115	**2,924,539**	
02/01/2046		-	-	**-**		299,375	299,375				16,469,839
08/01/2046	2047	-	-	**-**	3,795,000	299,375	4,094,375				
12/31/2046		-	-	**-**				2,838,529	86,010	**2,924,539**	
02/01/2047		-	-	**-**		204,500	204,500				7,223,414
08/01/2047	2048	-	-	**-**	3,990,000	204,500	4,194,500				
12/31/2047		-	-	**-**				2,866,914	57,625	**2,924,539**	
02/01/2048		-	-	**-**		104,750	104,750				7,223,789
08/01/2048	2049	-	-	**-**	4,190,000	104,750	4,294,750				
12/31/2048		-	-	**-**				2,895,583	28,956	**2,924,539**	7,219,289
	Total	**148,345,000**	**129,068,795**	**277,413,795**	**65,785,000**	**62,510,258**	**128,295,258**	**75,601,535**	**12,134,630**	**87,736,165**	**493,445,218**

Debt Limit

There is currently no debt limit or ceiling in the California State Water Code for water districts such as WRD. The District has the authority to collect the cost of debt in its Replenishment Assessment (RA). The upper limit of the RA is set by the Board and is in effect a limiting factor in the issuance of debt by the District. Capital Improvement Program additions and betterments will be primarily funded through long-term debt.

Debt Service Coverage

Shown below is the projected Debt Service Coverage (DSC) for fiscal year 2023. The planned DSC is 1.45x which is 0.25x higher than our bond covenant requirement of 1.2x.

Table 21

Debt Service Coverage

Description	2019 Actual	2020 Actual	2021 Actual	2022 Projection	2023 Budget
Operating Revenue					
Water Replenishment Assessment	$68,007,111	$70,948,823	$76,161,044	$83,922,000	$85,769,268
Desalter Assessment	1,578,986	1,551,550	2,598,650	3,459,226	2,900,000
Water Treatment Subsidies (LVL, ARC)	114,273	728,292	2,849,711	3,846,471	5,110,000
Carryover Conversion	2,571,264	7,001,507	4,220,699	4,000,000	4,000,000
Other Operating Income	1,907,293	1,938,898	1,183,468	494,000	500,500
Operating Revenue	**$74,178,927**	**$82,169,070**	**$87,013,572**	**$95,721,697**	**$98,279,768**
Revenues	$74,178,927	$82,169,070	$87,013,572	$95,721,697	$98,279,768
Less: Operations & Maintenance	19,402,984	27,077,226	30,729,643	32,351,867	35,562,008
Net Revenue	54,775,943	55,091,844	56,283,929	63,369,830	62,717,760
Debt Service					
CWSRF Loan	$-	$2,924,539	$2,945,391	$2,924,539	$3,110,654
2015 Certificates	9,246,800	9,248,900	9,247,650	9,249,525	9,249,525
2018 Certificates	392,883	3,289,250	4,298,375	4,299,625	4,295,375
Debt Service	**$9,639,683**	**$15,462,689**	**$16,491,416**	**$16,473,689**	**$16,655,554**
Debt Service Coverage	**5.68**	**3.56**	**3.41**	**3.85**	**3.77**
Rate Covenant Calculation:					
Net Revenue	$54,775,943	$55,091,844	$56,283,929	$63,369,830	$62,717,760
Less: Water Purchase Payments	33,447,236	35,844,159	31,210,752	35,766,000	38,617,406
Revenue for Rate Covenant Calculation	**$21,328,707**	**$19,247,685**	**$25,073,177**	**$27,603,830**	**$24,100,354**
Rate Covenant Debt Service Coverage	**2.21**	**1.24**	**1.52**	**1.68**	**1.45**

Resolution

RESOLUTION NO. 22-1177

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA LEVYING A REPLENISHMENT ASSESSMENT ON THE PRODUCTION OF GROUNDWATER FROM THE GROUNDWATER SUPPLIES WITHIN THE DISTRICT DURING THE FISCAL YEAR COMMENCING JULY 1, 2022 AND ENDING ON JUNE 30, 2023 AS PROVIDED IN SECTION 60317 OF THE CALIFORNIA WATER CODE AND MAKING FINDINGS AND DETERMINATIONS REGARDING SAID ASSESSMENT IN ACCORDANCE WITH SECTIONS 60315 AND 60316 OF THAT CODE.

WHEREAS, the Board of Directors (the "Board") of the Water Replenishment District of Southern California (the "District") on February 3, 2022, in compliance with California Water Code § 60300, timely ordered an Engineering Survey and Report (the "ESR") to be made regarding the groundwater supplies and groundwater quality issues within the District; and

WHEREAS, the ESR has been prepared pursuant to the Board's request and the ESR has been available for inspection by any interested party for the time required by law; and

WHEREAS, the Board, by Resolution No. 22-1172, has declared that funds shall be raised to purchase water for replenishment of groundwater supplies within the District during the ensuing fiscal year, beginning July 1, 2022 through June 30, 2023 (FY 2022/23), and to accomplish all acts reasonably necessary pursuant to said replenishment, including, but not limited to, the development and operation of capital projects, and that such funds shall be raised by a replenishment assessment as provided in Chapter 2 of Part 6 of the California Water Code, and further finding that the funds to be raised will benefit, directly or indirectly, all of the persons or real property and improvements within the District; and

WHEREAS, the Board, by Resolution No. 22-1172, has declared that funds shall be raised to remove contaminants from groundwater supplies and to exercise any other power under California Water Code § 60224, including, but not limited to, the development and operation of capital projects, and that such funds shall be raised by a replenishment assessment as provided in Chapter 2 of Part 6 of the California Water Code, and further finding that the funds so raised will benefit, directly or indirectly, all of the persons or real property and improvements within the District; and

WHEREAS, the District prepared a Cost of Service Report dated April 21, 2022, which has been made available to the public, describing the services the District anticipates performing in FY 2022/23, estimating the costs of providing those services, and calculating a Replenishment Assessment that ensures that those costs are spread amongst water producers in an equitable manner; and

WHEREAS, on April 21, 2022, as required by California Water Code § 60307, the Board held a public hearing for the purpose of determining whether and to what extent the estimated cost of water replenishment programs and the estimated cost of water quality programs for the ensuing year shall be paid for by a replenishment assessment; and

WHEREAS, notice of the April 21, 2022 hearing was published as required by law; and

WHEREAS, in addition to the public hearing, the District also held budget workshops that were open to the public, where the District provided the public with information concerning its FY 2023 budget, which is directly related to the Replenishment Assessment; and

WHEREAS, the District's Budget Advisory Committee (BAC) met and the Board has received and considered recommendations from the BAC; and

WHEREAS, all evidence and testimony relevant to the ESR and the Board's determination that such a Replenishment Assessment shall be levied was heard at the public hearing; and

WHEREAS, all other findings required by law have already been made, including, but not limited to, any findings required by California Water Code § 60231; and

WHEREAS, the Board desires to move forward with the levy of a Replenishment Assessment for the upcoming year.

NOW, THEREFORE, BE IT RESOLVED AND DECLARED BY THE BOARD OF DIRECTORS OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA AS FOLLOWS:

1. That said Board pursuant to §60315 of the Water Code of the State of California finds as follows:

    a) The annual overdraft of the preceding water year, Fiscal Year beginning July 1, 2020 through June 30, 2021was 153,865 acre-feet as provided in the 2022 ESR and any updates.

b) The estimated annual overdraft for the current water year, Fiscal Year beginning July 1, 2021 through June 30, 2022 , is 101,800 acre-feet as provided in the 2022 ESR and any updates.

c) The estimated annual overdraft for the ensuing water year, Fiscal Year beginning July 1, 2022 through June 30, 2023), is 77,800 acre-feet as provided in the 2022 ESR and any updates.

d) The accumulated overdraft as of the last day of the preceding water year was 809,140 acre-feet as provided in the 2022 ESR and any updates.

e) The estimated accumulated overdraft as of the last day of the current water year is 823,200 acre-feet as provided in the 2022 ESR and any updates.

f) The total production of groundwater from the groundwater supplies within the District during the preceding water year was 213,623 acre-feet as provided in the 2022 ESR and any updates.

g) The estimated total production of groundwater from groundwater supplies within the District for the current water year is 223,000 acre-feet as provided in the 2022 ESR and any updates.

h) The estimated total production of groundwater from the groundwater supplies within the District for the ensuing water year is also 223,000 acre-feet as provided in the 2022 ESR and any updates.

i) Water Year 2020/21 had below normal precipitation, increased pumping, and a below average amount of replenishment by WRD. Therefore, groundwater levels dropped on average 3.9 feet District wide. This led to a decrease in groundwater storage of approximately 66,900 AF. The 2022 ESR and any updates provide details of water levels and basin conditions.

j) The District is currently experiencing 123% of normal rainfall through January 31, 2022. Water levels in the Montebello Forebay rose nearly 17 feet by the start of the winter season and are presently about 8.8 feet higher than the previous water year (January 2021). Basin conditions have not changed much over the past couple water years and are still below pre-drought conditions. The 2022 ESR and any updates provide details of water levels and basin conditions.

k) The quantity of water that should be purchased by the District for the replenishment of the groundwater supplies of the District during the ensuing water year is 92,100 acre-feet, which includes 64,100 acre-feet at the spreading grounds and 28,000 acre-feet at the seawater barrier wells.

Details of the calculations for these amounts are presented in the 2022 ESR and any updates, and on budget discussions with the Board and BAC.

l) The source and estimated cost of the water available for the replenishment described in Section (k) is presented in the 2022 ESR and any updates.

m) The estimated net costs of replenishing the groundwater supplies with the water so purchased is $38,953,458 (including Dominguez Gap Barrier water). The derivation of this amount is described in the 2022 ESR, the 2022 Cost of Service Report, and any updates to these documents, and on Board and BAC decisions at various public meetings. The estimated rate of the replenishment assessment required to fund these purchases based on the anticipated pumping in the ensuing year described in Section (h) is $183 per acre-foot of groundwater pumped.

The estimated additional costs to the District for its replenishment program costs, estimated capital costs, and other costs relating to the replenishment of the groundwater supplies, are $41,021,240. The estimated rate of the replenishment assessment required to fund these costs based on the anticipated pumping in the ensuing year described in Section (h) is $193 per acre-foot of groundwater pumped. A listing of the projects and programs and their intended objective – replenishment and/or clean water – is provided in the 2022 ESR and Cost of Service Reports, and any updates to these documents.

n) It is not anticipated that additional replenishment funds need to be raised in the ensuing year for future replenishment water that should be purchased in the ensuing year but cannot be purchased due to an anticipated unavailability of replenishment water in the ensuing year.

o) The estimated rate of the replenishment assessment required to be levied upon the production of groundwater from the groundwater supplies within the District during the ensuing fiscal year for the purposes of accomplishing replenishment activities (replenishment water plus replenishment projects and programs) is $376 per acre-foot.

p) Contaminants should be removed from groundwater supplies during the ensuing fiscal year pursuant to the District's projects and programs described in the 2022 ESR and any updates, the District's capital improvement program, and the District's proposed annual budget document. The estimated costs to the District for the groundwater quality program for the FY 2022/23 fiscal year are estimated at $7,498,570 . The estimated additional rate of replenishment assessment required to be levied upon the production of groundwater from the groundwater supplies within the District during the ensuing fiscal year for those purposes is $35 per acre-foot.

q) The programs for the removal of contaminants or other actions under Water Code § 60224 are multi-year programs.

r) The estimated amount of reserves on hand at the end of the FY 2022/23 will not exceed the applicable limitations provided in Water Code Sections 60290.

2. After accounting for other revenue, possible debt financing, or use of reserves, the estimated rate of the replenishment assessment required to be levied upon the production of groundwater from the groundwater supplies within the District during the ensuing FY 2022/23, for the purpose of accomplishing such replenishment and water quality programs by the District is $411 per acre-foot of yearly groundwater production. After accounting for the use of an estimated $12,510,500 in other revenue, said replenishment assessment will produce the approximate necessary funds to pay the following costs: $376 per acre-foot for the cost of purchasing water, financing capital improvement projects and other costs relating to accomplishing groundwater replenishment, $35 per acre-foot for clean water programs. Of the $376 per acre-foot allocated to accomplishing groundwater replenishment, $90 per acre-foot is allocated to capital projects. Of the $35 per acre-foot allocated to clean water programs, $6 per acre-foot may be allocated to capital projects. General and administrative expenses of the District will be met on a pro tanto basis given each function's (replenishment and clean water) load factor on operations.

3. Prior to accounting for other revenue, possible debt financing, or use of reserves, the entire cost of purchasing water for replenishment for the ensuing fiscal year shall be paid for by the assessment identified in Section 2 above. The cost of removing contaminants from groundwater supplies and taking other actions authorized under Water Code § 60224 shall be paid for by the assessment identified in Section 2 above, from possible debt financing for capital improvement projects, and from reserve funds as necessary maintained in accordance with Water Code § 60290. The costs of those capital projects to be undertaken in the ensuing fiscal year, but for which no capital construction accounts have been established pursuant to Water Code § 60291, shall also be paid for by the reserve fund maintained in accordance with Water Code § 60290.

4. All of the estimated costs for the ensuing fiscal year for water replenishment programs and for groundwater quality programs by the District as found in Section 1 of this Resolution shall be paid for by a replenishment assessment levied pursuant to Water Code § 60317 and by the reserve fund maintained in accordance with Water Code § 60290. There is hereby levied on the production of groundwater from groundwater supplies within the District during the fiscal year commencing July 1, 2022 and ending June 30, 2023, a replenishment assessment in the amount of $411 per acre-foot produced during said fiscal year.

5. This Replenishment Assessment complies with the California Environmental Quality Act ("CEQA"), based on any one of the following grounds:

(a) That the District's groundwater replenishment program is exempt from CEQA pursuant to CEQA Guidelines §15261(a), in that it is an ongoing project commencing at a date such that an environmental impact report has not been required, and the FY 2022/23 program is part of that ongoing project.

(b) Funds generated by the RA will be used for (1) operating expenses, (2) financial reserve needs, (3) purchasing or leasing of, equipment, materials and supplies, and (4) funds for capital projects necessary to maintain service within existing service areas. That Finding is based on documents and information provided in the record of these proceedings, including but not limited to the annual ESR, the 2022 Cost of Service Report, the proposed 2022/23 budget, and the staff's written reports and PowerPoint presentations to the Board. Further, the funds raised by the RA will not be used to expand the area or territory in which the District provides services or to fund capital projects that would expand the District's service area or system. Accordingly, the District finds that its adoption of this resolution exempt from CEQA pursuant to, among other bases, CEQA Section 20180(b)(8) and CEQA Guidelines 15261 and 15273, and the Board directs staff to file an appropriate Notice of Exemption.

(c) Notwithstanding the exemptions cited above, an Environmental Impact Report ("EIR") for the District's groundwater replenishment program was previously prepared and that EIR and program have been approved by the District's Board. Subsequent to the preparation of that EIR, the District prepared and certified a number of Mitigated Negative Declarations and Negative Declarations for various water quality and water supply projects (collectively, the "NDs"). The District has examined the imposition of a water replenishment assessment for the FY 2022/23 to determine whether an additional environmental document must be prepared. Based on this examination, the 2022 Engineering Survey and Report and all other evidence in the administrative record of the District's proceedings herein, the District concludes that: (1) the imposition of a water replenishment assessment for the FY 2022/23 would not have any effects that were not examined in the EIR and NDs; (2) pursuant to CEQA Guidelines §15162, no new effects would occur and no new mitigation measures would be required; and (3) the imposition of a water replenishment assessment for the FY 2022/23 fiscal year is within the scope of the groundwater replenishment program covered by the EIR and NDs and such activity is adequately described in said EIR, and no new environmental document is required.

6. The Replenishment Assessment will be imposed on persons and entities that extract groundwater from the Central Basin and West Coast Basin. Extraction of groundwater from those Basins is governed by court judgments entered in 1962 and 1965 pursuant to groundwater adjudication lawsuits. Those judgments granted certain parties an allocation to pump water based on prescriptive water rights and not based on any aspect of ownership of land overlying either Basin. Accordingly, since the pumping rights granted by the Judgments were based on prescriptive water rights, the parties do not pump the groundwater pursuant to any tenancy or fee interest in the overlying land or any rights that attach as a result of a tenancy or fee interest in overlying land. Further, neither of the Judgments for the Central and West Coast Basins included a determination of the amount or extent to which any party to said Judgment may extract groundwater from said basin without exceeding the natural safe yield of said basin.

7. The purpose of the Replenishment Assessment is to fund the District's water basin management services. These services are a package of services that make high quality water available to those exercising adjudicated pumping rights and consist of: monitoring the level and quality of groundwater in the basins; purchasing and producing water needed to replenish the basins; preventing seawater contamination of the groundwater supply; funding replenishment operations; and other activities that make the basins a reliable and low-cost source of safe, high-quality water. Every activity of the District is a part of the water basin management services.

   The water basin management services benefit those charged. All persons receiving the services or benefitting from the services by exercising pumping allocations are subject to the Replenishment Assessment. Services are not provided to those who are not charged the Replenishment Assessment and do not benefit those who are not charged the Replenishment Assessment. The amount of the Replenishment Assessment does not exceed the District's reasonable costs to provide services, confer benefits and/or grant privileges as described in this paragraph. Consequently, the Replenishment Assessment is not a "tax" within the meaning of Article XIII C, Section 1(e) of the California Constitution.

   Pursuant to the recent California Supreme Court decision in City of San Buenaventura v. United Water Conservation District, the District does not believe that its replenishment assessment is a "property-related fee" subject to the requirements of Article XIII D, Section 6 of the California Constitution (Proposition 218). Notwithstanding this, in the interest of public participation, the District has conducted a noticed public hearing with respect to the replenishment assessment. The fact the District has done so should not be interpreted to

mean that the District believes that the requirements of Article XIII D, Section 6 apply to the replenishment assessment.

The Board also makes the following findings:

(a) Notice of the May 3, 2022 Public Hearing was mailed by the District to the holders of adjudicated pumping rights in the basins.

(b) The purpose of this mailing was to ensure that every adjudicated pumping rights holder in the basins was kept informed of the Replenishment Assessment proposal.

(c) On April 21, 2022 the Board opened the Public Hearing, provided an opportunity for oral and written comment, and then continued to the Public Hearing to May 3, 2022.

(d) On May 3, 2022 the Board considered all written testimony and protests and heard oral comments from all who wished to speak regarding the proposed Replenishment Assessment.

(e) From the date the hearing notice was mailed through the close of the public testimony portion of the Public Hearing on May 3, 2022, the District accepted written testimony and protests, all of which were entered into the record of the Public Hearing and made available for inspection by the public and by members of the Board.

(f) The Board determines that it has not received written protests from a majority of active pumpers.

(g) The rate of the Replenishment Assessment is such that proceeds of the Replenishment Assessment will not exceed the funds required to provide the water basin management services.

(h) Revenues derived from the Replenishment Assessment will not be used for any purpose other than providing water basin management services.

(i) The amount of the Replenishment Assessment imposed upon any parcel or person does not exceed the proportional cost of water basin management services attributable to that parcel or person.

(j) No Replenishment Assessment is imposed upon any person who neither actually uses water basin management services nor has water basin management services immediately available to them.

(k) Water basin management services are not a “general government service” that is available to the general public.

(l) The Board notes that, in addition to replenishment assessment proceeds, the District receives an allocation of ad valorem property tax revenues. It is the intent of the Board that the District’s Grants and Sponsorship Program, memberships and dues, water education expenses, and other community programs, be funded from these property tax revenues.

PASSED, APPROVED AND ADOPTED THIS 3rd day of May 2022 by the following vote:

AYES: 5
NOES: 0
ABSENT: 0
ABSTAIN: 0

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

Board President

ATTEST:

Board Secretary

May 3, 2022
DATE

APPROVED AS TO FORM:

Leal, Trejo APC, Attorneys for the Water Replenishment District of Southern California

Replenishment Projects & Programs

Water Purchases

Sources of Replenishment Water

The District currently has available to it recycled and imported water sources for use as artificial replenishment water. Starting in 2020, with the completion of WRD's ARC facility, the District can plan on using 100% recycled water for its replenishment needs. This was a major accomplishment from the WIN initiative started over a decade ago. Since recycled water availability is reliant upon source water supply from water reclamation plants, imported water connections are kept current to possibly utilize that source should temporary needs arise. These two replenishment sources are described below:

Recycled Water

Recycled water is wastewater from the sewer systems that is reclaimed and purified through extensive treatment at WRPs. The water is treated to high quality standards so that it can be reused safely, and offsets the need to use more expensive and sometimes less available imported water. Some agencies and businesses use recycled water for non-potable purposes, such as for irrigation of parks, golf courses, and street medians, or for industrial purposes (known as "purple-pipe projects"). WRD has successfully used recycled water for groundwater recharge since 1962. In semi-arid areas such as Southern California where groundwater and imported water are in short supply, recycled water has proven to be a safe and reliable additional resource to supplement the water supply. Recycled water is used at the spreading grounds and the seawater barrier injection wells and is high quality, relatively low cost, and a reliable supply all year long. As of 2020, the District has all applicable permits and treatment plants completed to plan on 100% recycled water for replenishment at the spreading grounds and seawater barrier wells. Imported water connections are kept current in case shortages of recycled water should occur.

Imported Water

River water originating in northern California (State Water Project and Los Angeles Aqueduct) and from western states (the Colorado River) is imported into Southern California through canals and aqueducts by the MWD and the City of Los Angeles Department of Water and Power (LADWP). MWD sells this water as-is (untreated raw river water) or after it treats the water to potable standards to their member agencies for multiple uses, including municipal, industrial, and groundwater recharge. When needed, WRD purchases raw imported water from the State Water Project

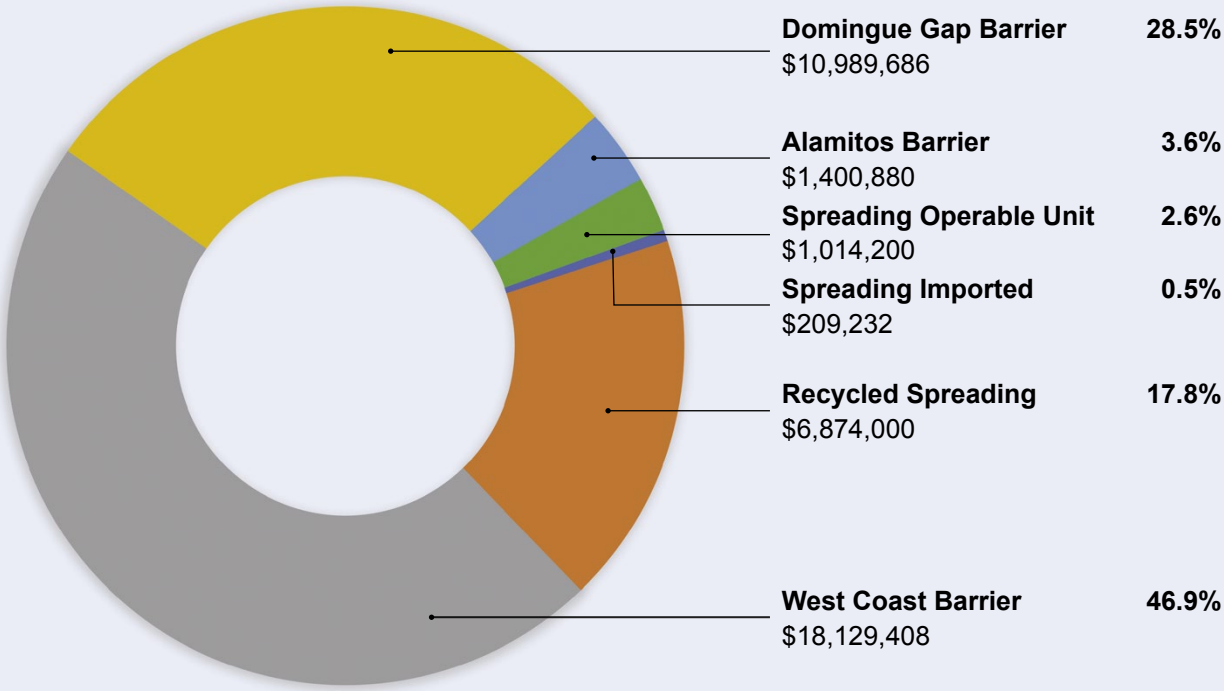
at the spreading grounds (Colorado River water is currently not available to WRD due to potential invasive Quagga Mussel issues) and uses treated potable water for injection at the seawater barrier wells and the In-Lieu program. Because of treatment and transportation costs, imported water is the most expensive type for groundwater replenishment. Prior to October 2011, MWD offered seasonally available discounted water that could be purchased for replenishment. In turn for the discount, it was considered by MWD to be interruptible and they could stop deliveries at any time. But due to a lack of surplus supplies caused by drought and other factors, MWD has eliminated offering this type of discounted interruptible water. Instead, replenishment agencies such as WRD must now purchase what is known as “Tier 1” or “Tier 2” water from MWD member agencies for spreading and In-Lieu. This water is at a higher price and relies on available allocation from the member agency. But, this Tier 1 or Tier 2 water is supposed to be firm delivery (not interruptible), although during extreme droughts MWD can implement a water supply allocation to reduce sales of imported water. The seawater barrier injection water has been Tier 1 treated water for decades and has to date not been interrupted by MWD.

Recommended Quantity of Replenishment Water Required in the Ensuing Year

The District determines replenishment water needs based on averages from a long-term (30 year) hydrologic record and computer models, meaning extremely wet years and extremely dry years in addition to average precipitation years are accounted for in deriving the average replenishment needs. Other considerations by the Board are also incorporated into replenishment water needs. The District’s Water Independence Now (WIN) initiative has been successful to build and/or have permitted the recharge facilities it uses to replenish the groundwater basins with 100% recycled water instead of imported water. As these facilities secure the recycled water they need for full operations, the amount of imported water will approach near zero.

Figure 8

Fiscal Year 2023 Estimated Water Purchases



Cost and quantity of water that WRD plans to purchase in the ensuing year are as follows:

Table 22

Cost of Replenishment Water for Fiscal Year 2023

Expense Category	FY 2022 Projection	FY 2023 Budget	Increase (Decrease) Over Prior Year
Imported Water			
Spreading - Tier 1 Untreated Imported			
MWD Untreated Tier 1 - Spreading	$-	$-	$-
CBMWD Water Service & Admin Surcharges	$196,850	$209,232	$12,382
Total Spreading - Tier 1 Untreated Imported	**$196,850**	**$209,232**	**$12,382**
Alamitos Barrier - Imported			
MWD Treated Tier 1 - Alamitos Barrier	$1,763,720	$1,183,000	$(580,720)
MWD Capacity Charges/LBWD RTS & Admin Surcharges	$297,374	$217,880	$(79,494)
Total Alamitos Barrier - Imported	**$2,061,094**	**$1,400,880**	**$(660,214)**
Dominguez & West Coast Barriers- Imported			
MWD Tier 1 - Dominguez Barrier	$3,470,790	$3,312,400	$(158,390)
MWD Tier 1 - West Coast Barrier	$7,775,846	$4,732,000	$(3,043,846)
MWD RTS Charge & WBMWD Capacity/Admin/Service Charges	$525,768	$1,537,194	$1,011,426
Total Dominguez & West Coast Barriers - Imported	**$11,772,404**	**$9,581,594**	**$(2,190,810)**
In-lieu			
MWD Member Agency	No IL Program	No IL Program	$-
WBMWD Member Agency	No IL Program	No IL Program	$-
Total for In-lieu Payments	**$-**	**$-**	**$-**
Recycled Water			
Dominguez Barrier - Recycled			
LADWP Recycled Water	$7,596,902	$6,469,500	$(1,127,402)
Total Dominguez Barrier - Recycled	**$7,596,902**	**$6,469,500**	**$(1,127,402)**
Spreading - Recycled			
SDLAC - Tertiary Water (WN, SJC, Pomona)	$4,282,088	$6,874,000	$2,591,912
Recycled - ARC AWTF*	$-	$-	$-
Total Spreading - Recycled	**$4,282,088**	**$6,874,000**	**$2,591,912**
Spreading-Whittier Narrows Operable Unit			
MSGBWM	$1,265,600	$1,014,200	$(251,400)
Total Spreading - WN Operable Unit	**$1,265,600**	**$1,014,200**	**$(251,400)**
West Coast Barrier - Recycled			
WBMWD Recycled Water	$5,219,481	$13,068,000	$7,848,519
Total West Coast Barrier - Recycled	**$5,219,481**	**$13,068,000**	**$7,848,519**
Alamitos Recycled - WRD			
WRD Recycled Water - Vander Lans*	$-	$-	$-
Total Alamitos Recycled - WRD	**$-**	**$-**	**$-**
Groundwater Replenishment Reserve	**$3,371,581**	**$-**	**$(3,371,581)**
Total Water Purchases	**$35,766,000**	**$38,617,406**	**$2,851,406**

*Cost of source water for ARC AWTF and Vander Lans is covered under that project's separate operations budget.

Acronyms:

CBMWD
Central Basin Municipal Water District

LBWD
Long Beach Water Department

LADWP
Los Angeles Department of Water & Power

MSGBWM
Main San Gabriel Basin Watermaster

MWD
Metropolitan Water District of Southern California

RTS
Readiness-to-Serve

SDLAC
Sanitation District of Los Angeles County

SJC
San Jose Creek

WBMWD
West Basin Municipal Water District

WN
Whittier Narrows

WRD
Water Replenishment District of Southern California

Table 23

Quantity of Replenishment Water for Fiscal Year 2023

Expense Category	FY 2022 Projection	FY 2023 Budget	Increase (Decrease) Over Prior Year
By Acre Feet			
Imported Water:			
Spreading Imported	-	-	-
West Coast Barrier Imported	2,000	2,800	800
Dominguez Gap Imported	3,000	4,000	1,000
Alamitos Imported	1,000	1,000	-
In Lieu - MWD Member Agency	-		-
In Lieu - West Basin Customer	-		-
Recycled Water:			
Spreading Recycled (SJC & WN & Pomona)	50,000	53,000	3,000
Spreading Recycled (ARC AWTF)*	10,000	10,000	-
Spreading (Whittier Narrows Operable Unit)	1,400	1,100	(300)
West Coast Barrier Recycle	14,000	11,000	(3,000)
Dominguez Gap Recycled	5,000	5,700	700
Alamitos Recycled*	3,500	3,500	-
Total Water Purchases	**89,900**	**92,100**	**2,200**

*Cost of source water for ARC AWTF and Vander Lans is covered under that project's separate operations budget.

Program 001
Leo J. Vander Lans Advanced Water Treatment Facility – Water Supply

Background

The Leo J. Vander Lans (LVL) advanced water treatment facility (AWTF) supplies water to the Alamitos Gap Barrier (AGB). This AWTF utilizes a multitude of treatment technologies, including microfiltration (MF), reverse osmosis (RO) and advanced oxidation (AOP) using hydrogen peroxide and ultraviolet (UV) light. The overall goal of Program 001 is to ensure the health, reliability and sustainability of the groundwater supplies in Southern California and within the WRD service area, while reducing the region's reliance on imported water. This is supported through the unit goal of operating, and maximizing LVL treatment facility production, which provides advanced treated recycled water to the AGB to prevent seawater intrusion, protect the groundwater supplies of the Coastal Plain and reduce the use of imported water.

In July 2020, the transition of contract operations from the Long Beach Water Department to PERC Water was completed and PERC began as the dedicated operational team. At the same time, PERC Water was also the operator at the Albert Robles Center, which afforded the opportunity for operational standardizations and synergies across the two treatment facilities – LVL and the Albert Robles Center. One operational team overseeing both treatment facilities allows for common operational philosophies, procedures and reporting.

Costs for this budget year are primarily related to operations and maintenance expenses of the treatment facility. Typical expenses include fixed labor cost for operations and variable costs such as power, water treatment chemicals and analytical costs to ensure water quality meets all regulatory requirements. Additional routine costs include parts and materials for repairs and maintenance-related issues. As the facility, and especially the original facility commissioned in 2004, continues to age, additional capital investment through the District's refurbishment and replacement (R&R) program and Capital Improvement Program (CIP) have been employed. A condition assessment was completed which systematically evaluated the condition of the treatment plant infrastructure, systems and equipment and identified assets in need of corrective action. In conjunction with this effort, a project was initiated to refurbish the MF filtrate tank and add additional cartridge filtration for protection of downstream MF modules. A project was also initiated to re-design and ultimately upgrade the original, and obsolete plant Supervisory Control and Data Acquisition (SCADA) system, which will dramatically improve plant performance and reliability once completed. The District also broke ground on a construction project to expand the use of recycled water at LVL through

operations of an on-site injection well. The LVL treatment plant is coupled to the AGB system and can disrupt steady-state operations of barrier injection wells due to flow variability resulting from plant starts, stops or changes in flow output from the plant. A project was implemented to better understand the hydraulic impacts, concerns, and identification of measures to mitigate the impacts on the AGB system, which would allow for improved and expanded LVL plant operations.

Operations and maintenance costs are drawn from the Replenishment Fund, while capital investments will be paid through local, State and Federal grant opportunities or debt financing.

FY 2022 Accomplishments

- Achieved a record annual production total of 4,000AF of advanced treated recycled water that met all regulatory requirements for injection in the Alamitos Barrier. This was achieved through stable operations and expansion of the baseline daily rate of production to 5.0 million gallons per day.

- Worked collaboratively with the Long Beach Water Department, Los Angeles County Sanitation District and the Los Angeles County Department of Public Works to prioritize and maximize the use of recycled water to satisfy a greater percentage of barrier demand.

- Completion of a comprehensive condition assessment, which reviewed asset conditions and identified those in need of replacement.

- Completion of the MF filtrate tank rehabilitation project, which will extend asset life as well as protect the MF modules through the addition of cartridge filtration.

- Initiation of the LVL discharge improvement project – a project to evaluate the hydraulic interactions between with the Alamitos Barrier and the treatment plant and identify efforts to mitigate the effects of changing flowrates on the barrier injection well operations.

- Initiation of a project to re-design and ultimately upgrade the original treatment plant Supervisory Control and Data Acquisition (SCADA) system.

- Continued to successfully work with manufacturers through the pandemic and challenges posed by global supply chain interruptions to ensure continued delivery of parts and supplies. This included the renegotiation of bulk chemical contracts to secure and maintain suppliers.

FY 2023 Objectives

- Achieve a targeted production of 4,500AF of advanced treated recycled water that meets all regulatory and permit requirements.
- Filing of reports to ensure adherence with all facility regulatory and compliance permits.
- Completion of solicitation, onboarding and transition to a new contract operational team for long-term operations and maintenance of the LVL treatment facility.
- Establish multi-year contracts with providers to supply bulk chemicals to the treatment plant.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The treatment plant demonstrated consistent operations during FY 2022 and achieved record production. This allowed for the further refinement of operational budgets based on known and consistent expenditures, including major costing centers such as source water, labor, power and water treatment chemicals. In addition, with consistent operations comes the need to account for maintenance as a result of equipment operating for extended periods of time. This budget reflects increases associated with sustained and expanded operations of the LVL treatment facility and support of treatment facility systems and equipment.

Table 24

Program 001 - Leo J Vander Lans AWTF Water Supply

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$1,771,634	$1,884,758	$113,124
R&M/Materials/Equipment	1,270,670	1,150,000	(120,670)
Other Expenses	1,920,102	2,334,300	414,198
Other General & Administration	288,120	573,487	285,367
TOTAL	**$5,250,526**	**$5,942,545**	**$692,019**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 001 - Leo J Vander Lans AWTF Water Supply				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goals
1 GOAL: Maximize recycled water delivery at the AGB.				Expand Replenishment Opportunities
MEASURE: LVL annual production (AF). *Treatment plant off-line due to IBWRP construction.		3,800 AF	4,500 AF	
2 GOAL: Filing of reports to ensure adherence with all facility regulatory and compliance permits.				Expand Replenishment Opportunities
MEASURE: Percentage of submitted compliance reports (monthly, semi-annual and annual) to the Los Angeles Regional Water Quality Control Board, Los Angeles County Sanitation District and the City of Long Beach.	100%	100%	100%	
3 GOAL: On-boarding of a new contract operational team.				Expand Replenishment Opportunities
MEASURE: Facility operations by the new operational team.	N/A	N/A	100% Complete Contract Execution	
4 GOAL: Establish multi-year contracts with providers to supply bulk chemicals.				Expand Replenishment Opportunities
MEASURE: Execution of chemical contracts for supply of bulk chemicals.	N/A	N/A	100% Complete Contract Execution for 15 Bulk Chemicals	

Program 004
Montebello Forebay Recycled Water

Background

Recycled water has been and continues to be a cost-effective, reliable source of water for surface spreading in the Montebello Forebay and injection at the seawater intrusion barriers. In light of exposure to prolonged drought like the region encounters quite frequently, with record-low rainfalls and increasing uncertainty in the winter snow pack and availability of imported supplies, recycled water has become increasingly attractive as a locally sustainable solution to improving the reliability of the local groundwater supply. WRD's Water Independence Now, or WIN, program seeks to replace our imported water supplies with recycled water and stormwater to ensure reliable and high quality groundwater replenishment sources for the Central and West Coast Basins.

WRD participates in a variety of activities to ensure that the use of recycled water for groundwater recharge continues to remain safe and reliable. From an operational standpoint, the District will continue to fulfill groundwater monitoring duties as required by our various recycled water for recharge permits, and submit the results to the regulatory agencies to demonstrate that the current practices and operation of utilizing recycled water, along with other sources of water, remain safe.

In addition to providing regular monitoring and sampling associated with the Montebello Forebay spreading grounds, WRD, in conjunction with other agencies, periodically participates in research efforts to more fully investigate the effectiveness of soil aquifer treatment during infiltration of recycled water into the aquifers, and the travel time of recycled water once recharged to the nearest drinking water wells through tracer studies. The overall objectives are to characterize the percolation process and quantify the purifying properties of the underlying soil on constituents of concern such as nitrogen, total organic compounds (TOC), biodegradable dissolved organic carbon (BDOC), and emerging contaminants, such as pharmaceuticals, endocrine disruptors, personal care products, and perfluorinated compounds (PFAS).

Recycled water represents a significant portion of the source water portfolio for the three seawater intrusion barrier projects (Alamitos Gap, West Coast, and Dominguez Gap Barriers) as well as the Albert Robles Center for Water Recycling and Environmental Learning (ARC – formerly known as GRIP). Preparation for a new tertiary-quality recycled water permit to replace the 1991 permit for the Montebello Forebay will also be a major collaborative effort with the Los Angeles County Sanitation Districts (LACSD).

Projects under this program help to improve the reliability and utilization of an available local resource, i.e., recycled water, which is used to improve replenishment capabilities. This is a regular program with standard, recurring year to year activities. The projects under this program are funded entirely from the Replenishment Fund.

FY 2022 Accomplishments

- Continued working on a revised permit and the associated Title 22 Engineering Reported for spreading tertiary-treated recycled water into the Montebello Forebay.

- Continued to comply with water recycling permit requirements for the Montebello Forebay Spreading Grounds, including bi-monthly sampling of monitoring wells, semi-annual monitoring of production wells and quarterly monitoring of intakes to the spreading facilities.

- Continued to monitor recycled water use at seawater barrier wells, collecting hundreds of groundwater samples for analysis. Completed quarterly and annual permit compliance reports.

- As a result of continue drought conditions, WRD and LACSD jointly submitted a letter to the regulatory agencies requesting a permit modification to increase recycled water percentage (RWC%) from 45% to 50% and to allow advanced treated water from the ARC facility to be considered as diluent water when calculating the RWC% for the Montebello Forebay.

FY 2023 Objectives

- In collaboration with the LACSD, continue working on a revised tertiary-treated recycled water permit for the Montebello Forebay. Work will include data analysis, potential new monitoring well drilling, submitting drafts to and meeting with the regulatory agencies, and drafting a Title 22 Engineering Report.

- Continue to comply with water recycling permit requirements for the Montebello Forebay Spreading Grounds, including bi-monthly monitoring of monitoring wells, semi-annual monitoring of production wells and quarterly monitoring of intakes to the spreading facilities.

- Continue to comply with water recycling permit requirements for the seawater barrier injection wells, including monitoring well sampling and permit compliance reporting.

- Continue to facilitate the ongoing dialogue between the LACSD, Metropolitan Water District, and City of Los Angeles to increase the amount of recycled water available for groundwater recharge in the WRD service area.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

FY 2022 planned budget for staff and professional services was moved forward due to agency delays and is anticipated to be spent in FY 2023.

Table 25

Program 004 – Montebello Forebay Recycled Water

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$150,000	$230,000	$80,000
R&M/Materials/Equipment	39,000	32,000	(7,000)
Other Expenses	27,662	38,500	10,838
Other General & Administration	77,292	142,202	64,910
TOTAL	**$293,954**	**$442,702**	**$148,748**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 004 – Montebello Forebay Recycled Water					
		FY 2021 Actual	FY 2022 Actual;	FY 2023 Budget	District's Strategic Goals
1	**GOAL:** Continue to comply with water recycling permit requirements for the Montebello Forebay Spreading Grounds.				Maximize Innovation and Environmental Resiliency
	MEASURE: % of regulatory permit requirements and deadlines met.	100%	100%	100%	
2	**GOAL:** Continue to facilitate the ongoing dialogue between agencies to provide more recycled water for groundwater recharge.				Expand Replenishment Opportunities
	MEASURE: Quarterly meetings with LACSD, LACDPW, etc.	4	4	4	
4	**GOAL:** Participate in the preparation of Title 22 Engineering Report.				Expand Replenishment Opportunities
	MEASURE: WRD portion of the report will be submitted to LACSD.	1	1	1	

Program 005
Groundwater Resource Planning

Background

The Groundwater Resources Planning Program was instituted to evaluate basin management issues and to provide a means of assessing potential projects and the associated impacts over the Central and West Coast Groundwater Basins. Prior to moving forward with a new project, an extensive evaluation is always undertaken. Within the Groundwater Resources Planning Program, new projects and programs are analyzed and evaluated based on benefits to overall basin management. Beyond technical feasibility, this analysis also includes performing an extensive economic evaluation to compare estimated costs with anticipated benefits. As part of this evaluation process, all new capital projects are brought to the District's Technical Advisory Committee (TAC) for review and recommendation. Projects deemed worthy by the TAC and District Board will then be recognized as independent projects and may be included within the District's Five-Year Capital Improvement Program.

WRD will continue to coordinate with basin stakeholders to develop projects that increase replenishment resiliency and utilize available groundwater storage. Meanwhile, the District will continue to determine the effects of such programs on the overall management of the basins and the specific impacts to aspects such as water levels, annual overdraft, accumulated overdraft, etc. The management of this program requires close review and administration by the District staff.

During the coming year, work under this program will focus on WRD's vision for the future under WIN4ALL, the 2040 plan for regional water independence. Under WIN4ALL, WRD will look to utilize available storage in both groundwater basins, secure new locally sustainable water supplies for replenishment and storage, review operational alternatives for the Central and West Coast basins, and full utilization for all existing groundwater pumping rights. In addition to moving forward with WIN4ALL, the Groundwater Resources Planning Program will look to identify and provide technical assistance to purveyors to ensure they have the ability to maximize their groundwater rights.

Additionally, the District will continue to evaluate projects identified in the CIP. Specifically, funds have been allocated within this program to perform an in-depth evaluation of projects with the goal of increasing the District's competitiveness for grant funding opportunities.

District staff will continue to monitor and participate in the Greater Los Angeles Integrated Regional Water Management Plan (GLAC IRWMP) and three Los Angeles County Safe Clean Water (Measure W) Steering Committees. The District serves as the co-chair for the GLAC IRWM Lower Los Angeles River and San Gabriel River Subcommittee. The District also coordinates the subregion meetings and manages the outreach to subregion members. Participation in this process is necessary if the District wishes to secure grant funding under Proposition 84, Proposition 1, and other state grant funding opportunities. District staff will also continue to monitor State and Federal grant programs to determine applicability to the District's list of potential projects. WRD will continue to work with Federal agencies, such as the U.S. Bureau of Reclamation to identify potential opportunities for funding.

Projects under the Groundwater Resources Planning Program serve to improve replenishment operations and general basin management. Accordingly, this program is wholly funded through the Replenishment Assessment Fund.

FY 2022 Accomplishments

- Received $4.9 million grant for Regional Brackish Water Reclamation Program from Bureau of Reclamation's WaterSMART Desalination Construction Projects under the WIIN Act for FY2021

- Received $1.5 million grant for Leo J. Vander Lans AWTF Regional Drought Resiliency Project from Bureau of Reclamation's WaterSMART Drought Response Program for FY2021

- Submitted a Hazard Mitigation Plan (HMP) for review to California Office of Emergency Services, for WRD to be eligible for future FEMA funding.

- Submitted a grant application for the Albert Robles Center Advanced Water Treatment Facility under the Bureau of Reclamation's WaterSMART Title XVI Water Recycling Projects WIIN Act FY2022.

FY 2023 Objectives

- Initiate and complete a WIN4ALL Strategic Plan
- Complete and submit a Bureau of Reclamation Title XVI Feasibility Study for Per- and Polyfluoroalkyl Substances (PFAS) in the Central Basin
- Execute an MOU with Los Angeles Department of Water and Power for recycled water from the Hyperion Water Reclamation Plant for replenishment and storage purposes
- Execute Joint Powers Authority (JPA) for the cooperative management structure of resiliency structures in Los Angeles County
- Initiate preliminary agreement with Metropolitan Water District (MWD) for recycled water from their Regional Recycled Water Program

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The change in FY 2023 budget is due to increase in professional services and labor allocation to the program.

Table 26

Program 005 – Groundwater Resources Planning

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$878,000	$1,050,000	$172,000
R&M/Materials/Equipment	-	-	-
Other Expenses	313,581	464,800	151,219
Other General & Administration	242,752	325,111	82,359
TOTAL	**$1,434,333**	**$1,839,911**	**$405,578**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 005 – Groundwater Resources Planning				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1 GOAL: Draft WIN4ALL Strategic Plan.				Maximize Innovation and Environmental Resiliency
MEASURE: Completed Plan.	N/A	0%	100%	
2 GOAL: Continue to facilitate agreements with partner agencies for recycled water access.				Maximize Innovation and Environmental Resiliency
MEASURE: Executed MOU, JPA, or Agreements	N/A	0%	100%	
3 GOAL: Complete BOR Title XVI Feasibility Study for PFAS in Central Basin.				Maximize Innovation and Environmental Resiliency
MEASURE: Submit completed Study to BOR for consideration	N/A	0%	100%	
4 GOAL: Identify outside funding opportunities for WRD's projects.				Maximize Innovation and Environmental Resiliency
MEASURE: Submitted grant application.	N/A	100%	100%	

Program 018
Dominguez Gap Barrier Recycled Water Project

Background

This Project involves the delivery of recycled water from the City of Los Angeles Terminal Island Treatment Plant (TITP) to the Dominguez Gap Barrier (DGB). The portion of the TITP effluent destined for the Barrier first undergoes a set of advanced treatment, consisting of microfiltration, reverse osmosis, and chlorination, at the Advanced Water Treatment Facility. The plant has been recently expanded from 6.0 million gallons per day (mgd) to 12.0 mgd with the goal to eliminate the use of imported water at the DGB.

The City of Los Angeles Bureau of Sanitation (LABOS) and Los Angeles Department of Water and Power (LADWP) are responsible for the treatment and delivery of the recycled water and all the water quality sampling at the treatment plant associated the final recycled water. The District conducts groundwater monitoring, which is required to observe changes in aquifer water quality conditions and to anticipate potential problems before recycled water reaches drinking water wells. The District also performs groundwater modeling to simulate the fate and transport of the recycled water in the aquifers after injection. This monitoring commenced with the start of the recycled water deliveries in February 2006. Baseline monitoring was completed to establish preexisting groundwater quality conditions prior to the start of deliveries.

Recycled water use at the barriers improves the reliability of a water supply that is needed on a continuous basis, in order to prevent seawater intrusion. Traditionally, water purchases for the barriers have been viewed as a replenishment function. Therefore, this program is funded entirely through the Replenishment Fund.

FY 2022 Accomplishments

- Participated in regular meetings with LABOS and LADWP to discuss issues related to the continuous production of ATW and the TITP.
- Ongoing discussions associated with new water purchase agreement with LADWP.
- Continued groundwater monitoring in accordance with permit requirements.

- Continued to prepare groundwater compliance monitoring reports to provide to project permittees LADWP, LABOS, and LACDPW.

- Awarded construction contract for the Dominguez Gap Barrier 2nd Recycled Water Connection Construction Project.

FY 2023 Objectives

- Increase recycled water contribution to the DGB.

- Continue to conduct groundwater monitoring and modeling as necessary in accordance with permit requirements.

- Continue to provide groundwater compliance monitoring data to project permittees LADWP, LABOS and LACDPW.

- Issue the Notice to Proceed and perform site mobilization for the Dominguez Gap Barrier 2nd Recycled Water Connection Construction Project.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The change is primarily associated with a labor allocation evaluation and subsequent adjustment for FY 2023.

Table 27

Program 018 – Dominguez Gap Barrier Recycled Water Project

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$155,000	$155,000	$-
R&M/Materials/Equipment	24,000	24,000	-
Other Expenses	13,881	12,500	(1,381)
Other General & Administration	54,642	144,552	89,910
TOTAL	**$247,523**	**$336,052**	**$88,529**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 018 – Dominguez Gap Barrier Recycled Water Project				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1 GOAL: Prepare compliance monitoring reports and coordinate reporting/compliance for submittal to permittees (LADWP, LABOS, and LACDPW) to ensure all regulatory permit requirements and deadlines are met.				Maximize Innovation and Environmental Resiliency
MEASURE: % of regulatory permit requirements and deadlines met.	100%	100%	100%	
2 GOAL: Design and construct the Dominguez Gap Barrier 2nd Recycled Water Connection Project to increase injection of recycled water into the barrier.				Maximize Innovation and Environmental Resiliency
MEASURE: Award appropriate project phase contracts.	Complete 60% Design	Complete 100% Design and release construction bid package for advertisement	Issue Notice to Proceed for construction, and have contractor mobilize to site.	

Program 023
Replenishment Operations

Background

WRD actively monitors the operations and maintenance practices at the spreading grounds and seawater barrier wells owned and operated by the Los Angeles County Department of Public Works (LACDPW). Optimizing replenishment opportunities is fundamentally important to WRD, in part because imported and recycled water deliveries directly affect the District's annual budget. Consequently, the District seeks to ensure that the conservation of stormwater is maximized, and that imported and recycled water replenishment are optimized.

WRD coordinates regular meetings with LACDPW, Metropolitan Water District of Southern California, Sanitation Districts of Los Angeles County (LACSD), and other water interests to discuss replenishment water availability, spreading grounds operations, scheduling of replenishment deliveries, seawater barrier improvements, upcoming maintenance activities, and facility outages or shutdowns. The District tracks groundwater levels in the Montebello Forebay weekly to assess general basin conditions and to determine the level of artificial replenishment needed. Additionally, WRD monitors the amount of recycled water used at the spreading grounds and seawater barriers, to maximize its use while complying with regulatory limits.

As its name implies, this program deals primarily with replenishment issues, and its costs are borne completely by the Replenishment Fund.

FY 2022 Accomplishments

- Continued working cooperatively with the LACDPW, Orange County Water District (OCWD), LACSD, and Long Beach Water Department (LBWD) on the Leo Vander Lans (LVL) Plant Operations, OCWD Barrier Expansion, and Long Beach Waste Treatment Plant (LBWTP) Multi-year Maintenance Project to provide increased recycled water to the Alamitos Gap Barrier.

- Continued working cooperatively with the LACDPW and West Basin Municipal Water District (WBMWD) to maximize recycled water to the West Coast Basin Barrier.

- Continued working cooperatively with the Los Angeles Department of Water and Power (LADWP), Los Angeles Bureau of Sanitation (LABOS), and LACDPW on the Terminal Island Treatment Plant (TITP) to provide increased recycled water to the Dominguez Gap Barrier.

- Continued participating in bimonthly meetings with replenishment agencies to maximize groundwater recharge opportunities.

- Continued to evaluate new potential replenishment opportunities (e.g., replenishment water sources, spreading grounds improvements).

- Providing input/comments on technical memorandums prepared to evaluate new potential replenishment opportunities (e.g., replenishment water sources, spreading grounds improvements, WRD/LADWP Joint L.A. Basin Replenishment and Extraction Master Plan, Regional Brackish Water, etc.).

- Presented monthly updates to the WRD Water Resources Committee and posted reports online at https://www.wrd.org/reports/groundwater-basin-update.

FY 2023 Objectives

- Work with United States Geological Survey (USGS), United States Army, Corp of Engineers (USACOE), LACDPW, San Gabriel River Watermaster (SGRWM), and other applicable agencies/stakeholders on enhancement/upgrade of existing surface water gaging stations.

- Continue working with LACDPW on the West Coast Basin Barrier expansion project (Unit 13).

- Continue working cooperatively with the LACDPW on an operations plan for the Interconnection Pipeline to maximize its usage to move recycled water.

- Continue working cooperatively with the LACDPW on recommendations from the Enhanced-Montebello Forebay Recharge Enhancement Study (eMFRES).

- Working cooperatively with LACDPW, USACOE, LACDPW, San Gabriel River Watermaster (SGRWM), and other applicable agencies/stakeholders on evaluating the results and alternatives presented in the Zone 1 Condition Assessment Report.

- Continue working cooperatively with the LADWP, LABOS, and LACDPW on the expanded TITP to provide increased recycled water to the Dominguez Gap Barrier.

- Continue working cooperatively with the LACDPW, OCWD, LACSD, and LBWD on the LVL Plant Operations follow-up, OCWD Barrier Expansion follow-up, and LBWTP Multi-year Maintenance Project follow-up to provide increased recycled water to the Alamitos Gap Barrier.

- Continue working cooperatively with the LACDPW and WBMWD to maximize recycled water to the West Coast Barrier.
- Continue participating in bimonthly meetings with replenishment agencies to maximize groundwater recharge opportunities.
- Continue to evaluate new potential replenishment opportunities (e.g., replenishment water sources, spreading grounds improvements, WRD/LADWP Joint L.A. Basin Replenishment and Extraction Master Plan, Regional Brackish Water, etc.).
- Continue to provide monthly updates to the WRD Water Resources Committee.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Budget added for agency correspondence associated with permit renewal for the Montebello Forebay.

Table 28

Program 023 – Replenishment Operations

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$-	$51,000	$51,000
R&M/Materials/Equipment	23,500	23,500	-
Other Expenses	5,925	3,150	(2,775)
Other General & Administration	168,624	181,048	12,424
TOTAL	**$198,049**	**$258,698**	**$60,649**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below

Program 023 – Replenishment Operations				
	FY 2021 Actual	FY 2022 Budget	FY 2023 Actual	District's Strategic Goal
1 GOAL:				
Continue working cooperatively with the LADWP, LABOS, and LACDPW on the Terminal Island Treatment Plant Expansion to provide increased recycled water to the Dominguez Gap Barrier.				Maximize Innovation and Environmental Resiliency
MEASURE:				
Recycled water increased to the Dominguez Gap Barrier (assumes TITP delivering 6.0 mgd).	9,637 AF Total 5,127 AF RW	8,000 AF Total 5,000 AF RW	8,500 AF Total 5,000 AF RW	
2 GOAL:				
Continue working cooperatively with the LACDPW and LACSD on the Montebello Forebay Spreading Grounds to provide increased RW. Goal is 63,000 including 56,000 tertiary and 7,000 GRIP water for its first year.				Maximize Innovation and Environmental Resiliency
MEASURE:				
Recycled water increased to the Spreading Grounds.	50,013 AF 3° RW 11,817 AF ATW	50,000 AF 3° RW 10,000 AF ATW	50,000 AF 3° RW 10,000 AF ATW	
3 GOAL:				
Continue working cooperatively with the LACDPW, LBWD, and OCWD on the Alamitos Gap Barrier Project to provide increased recycled water to the Alamitos Gap Barrier.				Maximize Innovation and Environmental Resiliency
MEASURE:				
Recycled water increased to the Alamitos Gap Barrier (assumes full operation of LVL).	6,813 AF Total 3,734 AF RW WRD: 4,141 AF Total 2,269 AF RW	7,800 AF Total 6,000 AF RW WRD: 4,500 AF Total 3,500 AF RW	7,800 AF Total 6,000 AF RW WRD: 4,500 AF Total 3,500 AF RW	
4 GOAL:				
Continue working cooperatively with the LACDPW and WBMWD on the West Coast Barrier Project to provide increased recycled water to the West Coast Barrier.				Maximize Innovation and Environmental Resiliency
MEASURE:				
Recycled water increased to the West Coast Barrier.	11,817 AF Total 8,034 AF RW	16,000 AF Total 14,000 AF RW	15,000 AF Total 11,000 AF RW	

Program 033
Albert Robles Center for Water Recycling & Environmental Learning (ARC)

Background

The Albert Robles Center (ARC) is a multi-use campus consisting of the treatment facility, Administration Learning Center (ALC), interpretive gardens and two, off-site turnout structures along the San Gabriel River. The advanced water treatment facility (AWTF) treats recycled water provided by the Los Angeles County Sanitation District's San Jose Creek Water Reclamation Plant using technologies including ultrafiltration (UF), reverse osmosis (RO) and advanced oxidation (AOP) using chlorine and ultraviolet (UV) light. The ALC and gardens provides office space for WRD staff, conference rooms and facilities to support WRD activities, public outreach and education. The overall goals of Program 033 is to ensure the health, reliability and sustainability of the groundwater supplies in Southern California and within the WRD service area. Project 033 supports this through the unit goal of operating the AWTF, which supplies advanced treated recycled water to the San Gabriel Coastal Spreading Grounds to satisfy the water demand within the Central Basin and reduce the use of imported water. Project 033 also supports the District's outreach efforts to educate the public regarding the importance of water conservation, recycling and sustainability.

Operations of the ARC treatment facility have been overseen by PERC Water, under contract with J.F. Shea Construction (JFS). In April 2021, the PERC Water operations subcontract was assigned directly to WRD, eliminating the continued service and cost of JFS. With an established working knowledge of plant operations, the operations team continued to focus on maintaining steady-state operations while identifying areas for optimization and improved operations. For the calendar year 2021, the treatment facility produced 10,600AF of advanced treated recycled water that met all regulatory requirements – exceeding the goal of 10,000AF.

Expected costs for this budget year are reflective of the expenses incurred during the previous fiscal year and continue to be refined with facility operations. Cost consists of both the treatment facility, administration learning center and grounds. Major costing centers for the treatment facility include fixed labor for operations and variable costs, including source water, power and water treatment chemicals – all of which collectively make up a majority of the Program 033 budget. Additional costing centers include analytical costs for water quality regulatory compliance, site-wide security, landscaping and janitorial as well as maintenance of systems and equipment in both the treatment facility and administration learning center. ARC is a multi-use facility

and therefore the Program 033 budget is reflective of this - structured to account for both treatment facility and non-treatment facility expenses. The Replenishment Fund will serve as the funding source for this program.

FY 2022 Accomplishments

- Produced 10,600AF of advanced treated recycled water that met all regulatory requirements for discharge to the San Gabriel Coastal Spreading Grounds – exceeding the annual target of 10,000AF.

- Successfully transitioned vendors, service providers and other resources that were previously supporting operations under J.F. Shea Construction, which enabled for continued and sustained plant operations.

- Coordinated with the Los Angeles Regional Water Quality Control Board and began successfully discharging water to the San Gabriel River that met all National Pollutant Discharge Elimination System (NPDES) compliance requirements, including chronic toxicity.

- Identified and began tracking major costing centers within the treatment plant, which allowed for focused optimization of operations for improvements and added efficiencies. Changes in the post-treatment chemical stabilization routine continued to prove successful, resulting in significant chemical savings with no adverse changes in water quality.

- Successfully completed the change-out of all membranes in the recovery reverse (RO) osmosis system. A total of 420 elements were replaced with membranes from four manufacturers – each loaded into four separate RO system trains.

- Successfully replaced bulk chemical dosing pumps with high precision pumps to provide enhanced reliability and accuracy to improve efficient usage and reduce plant interruptions.

- Continued to successfully work with manufacturers through the pandemic and challenges posed by global supply chain interruptions to ensure continued delivery of parts and supplies. This included the renegotiation of bulk chemical contracts to secure and maintain suppliers.

FY 2023 Objectives

- Achieve the targeted production of 10,000AF of advanced treated recycled water that meets all regulatory and permit requirements.

- Filing of reports to ensure adherence with all facility regulatory and compliance permits.

- Completion of solicitation, onboarding and transition to a new contract operational team for long-term operations and maintenance of the ARC treatment facility.
- Establish multi-year contracts with providers to supply bulk chemicals to the treatment plant.
- Develop and implement a comprehensive Operations and Maintenance (O&M) manual for operations and maintenance of the treatment.
- Maintain ALC facilities and garden readiness to ensure uninterrupted public access for tours and events.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The FY 2023 budget supports three district's facilities – the treatment facility, administration learning center (ALC) and gardens, and the turnout structures along the San Gabriel River. As the ARC facility is now exhibiting consistent operations, expenditures are leading to a continued refinement of budgets. Year over year increases in the ARC operational budget are associated with global rising costs of parts, supplies and utilities such as electricity and bulk chemicals for the treatment plant. The reopening of the ALC and gardens for tours, events and other activities has warranted an increase in staff time and resources, including the reassignment of WRD staff.

Table 29

Program 033 – Albert Robles Center for Recycling & Environmental Learning (ARC)

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$2,255,451	$2,268,120	$12,669
R&M/Materials/Equipment	2,099,839	1,990,000	(109,839)
Other Expenses	5,021,569	5,325,200	303,631
Other General & Administration	244,988	582,848	337,860
TOTAL	**$9,621,847**	**$10,166,168**	**$544,321**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 033 – Albert Robles Center for Water Recycling & Environmental Learning (ARC)				
	FY 2021 Actual	FY 2022 Budget	FY 2023 Budget	District's Strategic Goal
1 GOAL:				
Maximize advanced treated recycled water production to the San Gabriel Coastal Spreading Grounds.				Expand Replenishment Opportunities
MEASURE:				
Production of Advanced Treatment Water (AF).	10,850 AF	10,600 AF	10,000 AF	
2 GOAL:				
Filing of reports to ensure adherence with all facility regulatory and compliance permits.				Expand Replenishment Opportunities
MEASURE:				
Percentage of submitted compliance reports (monthly, semi-annual and annual) to the Los Angeles Regional Water Quality Control Board, Los Angeles County Sanitation District and the County of Los Angeles.	100%	100%	100%	
3 GOAL:				
Onboarding of a new contract operational team.				Expand Replenishment Opportunities
MEASURE:				
Facility operations by the new operational team.	N/A	N/A	100% Complete Contract Execution	

4	**GOAL:**				
	Establish multi-year contracts with providers to supply bulk chemicals.				Promote Organizational Excellence
	MEASURE:				
	Execution of chemical contracts for supply of bulk chemicals.	N/A	N/A	100% Complete Contract(s) Execution for 15 Bulk Chemicals	
5	**GOAL:**				
	Develop a comprehensive Operations and Maintenance (O&M) manual for the treatment plant.				Promote Organizational Excellence
	MEASURE:				
	Completion and implementation of the O&M manual	N/A	N/A	100% Finalization of O&M Manual	
6	**GOAL:**				
	Maintain functionality and accessibility of the ALC and gardens for tours and events.				Promote Organizational Excellence
	MEASURE:				
	Percentage of cancellations and rescheduling resulting from ALC inaccessibility.	N/A	N/A	0% Loss of Functionality	

Project 038
Engineering Program

Background

The Engineering Department provides technical, engineering, program management, and hands on support on capital improvement projects ranging from concept development through engineering design, project management and construction inspections. The Engineering Department is also responsible for developing, updating, and managing the capital improvement program (CIP) and its related projects. The Engineering Department prepares and/or oversees the preparation plans, specifications and engineer's estimates of probable construction costs (PS&E's) or creates request for proposals/qualifications (RFPs/RFQs) for professional engineering consultation and construction management services depending on the size and specific needs of the project.

This Engineering Department receives and reviews public bids and provides recommendations to various committees and the Board of Directors to award contracts; applies, secures, and administers/manages grants from various Federal, State and Local organizations to supplement funds allocated by WRD.

The Engineering Department provides (oversees) project planning and environmental review/entitlement services for its Capital Improvement Program (CIP); monitors construction work in progress, reviews/approves progress pay estimates; and provides quality assurance/control oversight services on approved development projects to ensure compliance with Board goals and objectives.

The Engineering Program is intended to provide a mechanism for engineering staff to plan and further develop alternatives for potential capital improvement projects. Not all CIP project concepts develop into multi-year capital improvement program projects, and more often than not require many months of advanced planning and concept development before being capitalized. The Engineering Program deals primarily with replenishment issues and therefore its costs are borne by the Replenishment Fund until such time as alternative capital improvement program funding is identified.

FY 2022 Accomplishments

- Updated the 5-year CIP Plan in November 2021

FY 2023 Objectives

- Update the 5-year CIP Plan
- Review and update Construction Project Front-end Documents

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The increase in FY 2023 is due to reallocation of staff time to support the engineering program.

Table 30

Program 038 – Engineering

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$-	$-	$-
R&M/Materials/Equipment	-	-	-
Other Expenses	16,800	22,700	5,900
Other General & Administration	185,508	413,855	228,347
TOTAL	**$202,308**	**$436,555**	**$234,247**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 038 – Engineering

		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District Goals
1	**GOAL:** Update the 5-year CIP Plan.				Expand Replenishment Opportunities Expand Extraction Capacity Promote Organizational Excellence
	MEASURE: Release of updated 5-year CIP plan	October 2020	November 2021	November 2022	
2	**GOAL:** Review and update Construction Project Front-end Documents.				Promote Organizational Excellence
	MEASURE: Adopt new documents for incorporation into CIP procurement process.	N/A	N/A	June 2023	

Program 046
Well Construction & Rehabilitation Program

Background

The District developed a Well Construction and Rehabilitation Loan Program in Fiscal Year 2019 to assist groundwater producers within its service area to increase their groundwater pumping capabilities. This Program will improve the producers' ability to utilize their full groundwater extraction rights and reduce their need for imported water. The Program will provide 10-year, zero percent interest loans, up-front capital, and expert assistance with the design, construction, and implementation of new production wells and well rehabilitation projects

FY 2022 Accomplishments

- Project completion and full loan disbursement for the City of Signal Hill's project.
- Continued loan repayment by the City of Vernon.
- Continued offering loan program to interested and qualified groundwater producers.

FY 2023 Objectives

- Initiate loan repayment by the City of Signal Hill.
- Continue offering loan program to interested and qualified groundwater producers.
- Continue receiving quarterly payments from the City of Vernon for their completed project.

Basis for Changes FY 2022 Projection to FY 2023 Budget

The City of Signal Hill completed their well construction project in FY 2022. We anticipate at least two applicants in FY2023. Thus, we expect loan funds to be disbursed in the last quarter of FY2023.

Table 31

Program 046 - Well Construction & Rehabilitation

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$-	$-	$-
R&M/Materials/Equipment	-	-	-
Other Expenses	-	-	-
Other General & Administration	5,330	13,102	7,772
TOTAL	**$5,330**	**$13,102**	**$7,772**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 046 - Well Construction & Rehabilitation

		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1	**GOAL:**				
	Provide well construction and re-habilitation loans to assist pumpers to maximize their groundwater rights by maintaining or increasing groundwater pumping.				Expand Extraction Capacity
	MEASURE:				
	Loan recipient ability to maintain or increase pumping.	N/A	50%	50%	

Program 048
Per- & Polyfluoroalkyl Substances (PFAS) Program

Background

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals, which include perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), and perfluorobutane sulfonic acid (PFBS) that have been manufactured and used in a variety of industries around the globe and the region since the 1940s. The State Water Resource Control Board's Division of Drinking Water (DDW) established Response Levels (RLs) of 10 parts per trillion (ppt) for PFOA, 40 ppt for PFOS, and 5,000 ppt for PFBS. Assembly Bill 756, codified as Health and Safety Code Section 116378 which became effective January 1, 2020, requires that community water systems, including groundwater pumpers, either notify their customers of PFAS detections exceeding RLs, or remove from service any drinking water sources with PFAS exceeding RLs. In response, the WRD Board of Directors established the PFAS Remediation Program (the Program) on to provide either grants for water producers (i.e., groundwater pumpers) to install their own treatment systems (referred to as Funding Support Projects), or for WRD to design and construct treatment systems for the pumpers (referred to as Turnkey Projects) to remediate impacted production wells.

An initial application for participation in this Program was issued to pumpers and 15 applications were received. Thirteen applications were considered qualified for the Program, and a draft Funding Agreement was developed with input from pumpers in the West Coast and Central Groundwater Basins.

FY 2022 Accomplishments

- Executed a Funding Support Project agreement with Pico Water District for $4.2M.
- Executed a Funding Support Project agreement with the City of Commerce for $2.5M.
- Executed a Funding Support Project agreement with the City of Pico Rivera for $5.9M.
- Executed a Funding Support Project agreement with California Water Service Company for $4.2M.
- Developed a program to assist Disadvantaged Communities (DACs) to secure State and Federal funding for PFAS remediation projects.

FY 2023 Objectives

- Execute a total of four new PFAS Remediation Program agreements, either as Funding Support Projects or Turnkey Projects.

Basis for Changes FY 2022 Projection to FY 2023 Budget

The program was initiated after budget preparation and adoption of the FY 2022 budget.

Table 32

Program 048 – Per- & Polyfluoroalkyl Substances (PFAS) Program

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$-	$-	$-
R&M/Materials/Equipment	-	-	-
Other Expenses	-	-	-
Other General & Administration	-	98,231	98,231
TOTAL	**$-**	**$98,231**	**$98,231**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 048 – Per- & Polyfluoroalkyl Substances (PFAS) Program

		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District Goal
1	**GOAL:**				
	Identify projects and support candidates with PFAS Remediation Project funding or project delivery resources.				Expand Extraction Capacity
	MEASURE:				
	No. of projects funded to provide assistance to candidates with PFAS remediation	N/A	4	4	

Clean Water Projects & Programs

Program 002
Robert W. Goldsworthy Desalter
Background

The Robert W. Goldsworthy Desalter (Desalter), located in the City of Torrance, began operating in 2002, and utilizes reverse osmosis (RO) as the main treatment technology for salinity removal before water can be conveyed to the City of Torrance potable distribution system. Source water to the Desalter is provided by two production wells – the City Yard Well, located in the City of Torrance property and the Delthorne Park Well, located adjacent to the City of Torrance property in Delthorne Park. The Desalter and both wells are operated under contract by the City of Torrance Water Department. In FY 2018, the Desalter was expanded to a design capacity of 5mgd, utilizing the same treatment processes and the two production wells. The overall goal of Program 002 is cleanup of the brackish groundwater plume created inland of the West Coast Basin Barrier after the barrier was put into operation. This is supported by the unit goal of operating the Desalter, which also provides a local, sustainable source water for the City of Torrance, thus reducing the reliance on imported water.

The project's cost for this budget year center primarily on operations and maintenance of the treatment facility. Typical expenses include fixed labor cost for operations and variable costs such as power, water treatment chemicals and analytical costs to ensure water quality meets all regulatory requirements. Since the expansion project was completed, the treatment facility has faced operational challenges due to elevated fouling of the RO system, as well as utilization of only two source water wells. With assistance from a WRD engineering and hydrogeology staff, efforts continue to focus on increasing Desalter production through minimizing the impact of RO fouling and optimization of well operations. Since the overall purpose of the project is to remediate degraded groundwater quality, costs are attributed to the Clean Water Fund.

FY 2022 Accomplishments

- Achieved a record annual production total of 3,400AF of treated groundwater that met all regulatory requirements for distribution in the City of Torrance water system.

- Continued to optimize Desalter performance to operate at higher and sustainable levels of production through working closely with WRD staff and the City of Torrance Operations team to minimize the deleterious effects of RO fouling and maximize extraction well output.

- Acquired the Brewer Groundwater Well from West Basin Municipal Water District to supplement and provide a redundant supply of source water to the Desalter.

- Initiated a design project to convey source water from the Brewer Groundwater Well to the Desalter through the addition of an autostrainer system which will provide pretreatment to reduce the rate of cartridge filter fouling, with support provided through a $450,000 grant award.

- Initiated a pilot project to evaluate three pretreatment technologies, including nanofiltration, granular activated carbon, and ion exchange for removal of organic material(s) which have continued to challenge performance of the Desalter RO system.

- Established on-call well rehabilitation program to rapidly respond to future well related issues through securing contracts with three on-call contractors.

- Continued to successfully work with manufacturers through the pandemic and challenges posed by global supply chain interruptions to ensure continued delivery of parts and supplies. This included the renegotiation of bulk chemical contracts to secure and maintain suppliers.

FY 2023 Objectives

- Achieve the targeted production of 3,600AF of advanced treated recycled water that meets all regulatory and permit requirements.

- Redevelopment of Desalter source water wells utilizing the WRD on-call well rehabilitation program.

- Implementation of system modifications and enhancements, including relocation of RO cleaning and RO concentrate flowmeters, chemical pump system safety shields, etc. to improve overall system operation and safety.

- Completion of the Brewer Groundwater Well connection and pretreatment project.

- Establish multi-year contracts with providers to supply bulk chemicals to the treatment plant.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Operational costs for FY 2023 are consistent with expected expenditures including labor, power and water treatment chemicals – all major costing centers associated with treatment facility operations. Renewed fixed operations contract and lease agreement with the City of Torrance, in addition to a continued need to support efforts to minimize RO fouling and optimize production well operations have contributed to an increase in the FY 2023 budget.

Table 33

Program 002 – Robert W. Goldsworthy Desalter

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$325,954	$807,500	$481,546
R&M/Materials/Equipment	589,498	850,000	260,502
Other Expenses	1,193,338	1,419,900	226,562
Other General & Administration	181,398	143,993	(37,405)
TOTAL	**$2,290,188**	**$3,221,393**	**$931,205**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 002 – Robert W. Goldsworthy Desalter				
	FY 2020 Actual	FY 2021 Actual	FY 2023 Budget	District's Strategic Goals
1 GOAL: Maximize the production of treated groundwater for delivery to the City of Torrance distribution system.				Expand Extraction Capacity
MEASURE: Production of Potable Water (AF).	2,700 AF	3,400 AF	3,600 AF	
2 GOAL: Redevelopment of source water well(s) to maintain sustainable Desalter operations.				Expand Extraction Capacity
MEASURE: Completion of redevelopment utilizing on-call well program.	N/A	N/A	100% Completion of Well Rehabilitation	
3 GOAL: Enhancement of Desalter systems and equipment, including RO flowmeters, chemical safety shields, etc.				Expand Extraction Capacity
MEASURE: Percentage of completed system modifications and enhancements.	0	0	100% Completion	

4	**GOAL:**				
	Completion of Brewer Groundwater Well connection and pretreatment project.				Expand Extraction Capacity
	MEASURE:				
	Commissioning and operations of the Brewer Groundwater Well and pretreatment system.	N/A	N/A	100% Completion	
5	**GOAL:**				
	Establish multi-year contracts with providers to supply bulk chemicals.				Expand Extraction Capacity
	MEASURE:				
	Execution of chemical contracts for supply of bulk chemicals.	N/A	N/A	100% Complete Contract(s) Execution for 15 Bulk Chemicals	

Program 006
Water Quality Improvement Program

Background

This comprehensive program represents the District's ongoing efforts to address water quality issues that affect its projects and the pumpers' facilities. The District monitors and evaluates potential impacts of pending water quality regulations and proposed legislations. WRD reviews the justifications and the rationale accompanying the proposed requirements and, if warranted, joins in coordinated efforts with other interested agencies to resolve significant issues of concerns during the early phases of the regulatory and/or legislative processes.

The District continues to evaluate and project water quality compliance in production wells, monitoring wells, and recharge/injection waters of the basins. And where potential issues are identified, appropriate remedial actions are developed along with the associated cost estimates to achieve compliance.

The WRD service area includes a large and diverse industrial base. Consequently, many potential groundwater contamination sources exist within the District boundaries, including but not limited to leaking underground storage tanks, refineries and petrochemical plants, dry cleaning facilities, auto repair shops, metal works facilities, and others. Such potential contamination sources may pose a threat to the drinking water aquifers. WRD, therefore, established the Groundwater Contamination Prevention Program as a key component of the Groundwater Quality Program, in an effort to minimize or eliminate existing and potential threats to groundwater supplies.

WRD is also participating in the Water Augmentation Study, a multi-year investigation by the Council for Watershed Health for the purpose of evaluating the feasibility and impact of using low impact development strategy to capture storm runoff that would have otherwise been discharged to the surface water.

Much of the work for the coming year will involve additional investigations at well sites known to have contaminated water, continued tracking of water quality regulations and proposed legislation affecting production and replenishment operations, further characterization of contaminant migration into the deeper aquifers, and evaluating the need to initiate cleanup activities at contaminated sites. All work under this program is related to water quality and cleanup efforts and therefore, is funded entirely by the Clean Water Fund.

The District continues to administer the Title 22 Groundwater Monitoring Program in the Central Basin and one system in the West Basin, which provides source water monitoring of 84 active wells owned and operated by 22 pumpers. In addition to performing the required compliance monitoring, the District prepares the annual Consumer Confidence Reports for these pumpers.

FY 2022 Accomplishments

- Coordinated and administered meetings of the Groundwater Contamination Forum as a means for key stakeholders to share data and provide updates on major groundwater contaminated sites in the Central Basin and West Coast Basin.

- Continued to work in close consultation with project managers of the United States Environmental Protection Agency (USEPA), California Department of Toxic Substances Control (DTSC), and Los Angeles Regional Water Quality Control Board (LARWQCB) to provide data and technical support to expedite the investigation and cleanup of high-priority groundwater contaminated sites in the Central Basin and West Coast Basin.

- Continued to administer meetings of the Los Angeles Forebay Groundwater Task Force and work with regulatory agencies and water purveyors to implement a groundwater cleanup project using grant funds received from the State Water Resources Control Board (SWRCB). The grant funds will be used to investigate and remediate a perchlorate "hot spot" and other commingled contaminant including 1,4-Dioxane and volatile organic compounds (VOCs) in the Los Angeles Forebay. The State is covering a majority of the costs with Proposition 1 grant funding in the amount of $12,423,085 (or ~80%). WRD will be providing matching funds in the amount of $3,190,339 (or ~20%).

- Participated in the multi-agency Los Angeles Basin Groundwater Restoration Convening meetings to expedite the investigation, identification, and eventual remediation of potential sources associated with contaminated drinking water wells in the Central Basin and West Coast Basin.

- Attended public meetings remotely (via Teams) for various groundwater cleanup projects in the basin including those associated with the Del Amo / Montrose Superfund Sites.

- Coordinated the sampling of three deep nested groundwater monitoring wells installed by WRD. The wells were installed to characterize the vertical extent of groundwater contamination associated with the Omega Chemical Superfund Site. The data resulted in the regulatory agency requiring additional groundwater delineation in 2018. WRD continues to work closely with the responsible parties and EPA.

- WRD staff continue to provide technical support to multiple pumpers in the basin regarding the installation of water supply wells in proximity of existing groundwater plumes and concerns raised by the Division of Drinking Water (DDW).

- Monitored potential impacts of pending legislation and regulations on drinking water quality by participating in the California WateReuse Legislative / Regulatory Committee, Association of California Water Agencies' Clean Water and Safe Drinking Water Committees, and subscribing to listserv of various regulatory agencies.

- WRD staff have been participating in various activities related to the Sustainable Groundwater Management Act (SGMA):

  - Continue to participate in a group discussion for two fringe areas in the unadjudicated northern portion of the Central Basin. The main stakeholders include the City of Beverly Hills, City of Culver City, Golden State Water Company, and Los Angeles Department of Water and Power (LADWP).

  - Central basin was reclassified as a "very low" priority basin by the Department of Water Resources (DWR). This action allowed the stakeholder group to withdraw an "alternative analysis" previously submitted to the DWR. Thus, no action is currently required to comply with SGMA.

  - Annual Watermaster reports will continue to be submitted as required by SGMA.

- Conducted quarterly status update meetings with our on-call water quality laboratory. The meetings provide an opportunity for staff to communicate directly with our vendor partners ensuring the highest quality work for the District.

- Provided groundwater contamination and current drought conditions update at the board of director meeting of the Southeast Water Coalition (SEWC).

- Continue to participate in various environmental justice events including the 2022 Los Angeles Environmental Justice Network Workshops.

- WRD staff continue to track the progress of and provide periodic updates regarding various perfluorinated compounds (an emerging chemical of concern) including perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), collectively PFAS.

- WRD and the LARWQCB signed an MOU to work collaboratively on mutually selected sites and/or areas to evaluate groundwater contamination or threat of

contamination to the Basin. The MOU may help to identify other "high priority" sites and possible identification of groundwater remediation projects that could be partially funded by a grant program such as Proposition 1 or Site Cleanup Subaccount Program (SCAP). Quarterly meetings are held between the WRD and LARWQCB.

FY 2023 Objectives

- Maintain a high level understanding of the highest priority contamination sites within the basin and work collaboratively with project managers at the USEPA, DTSC, and LARWQCB. Coordinate regular status update meetings for key sites via the Groundwater Contamination Forum.

- Work collaboratively with various regulatory agencies to identify responsible parties and address groundwater contamination in the Los Angeles Forebay. WRD will continue to build upon the work initiated under the Groundwater Task Force.

- Participate in the multi-agency Los Angeles Basin Groundwater Restoration Convening.

- Monitor potential impacts of pending legislation and regulations on drinking water quality by subscribing to the listserv of various regulatory agencies and participating in the California WateReuse Legislative/Regulatory Committee, Association of California Water Agencies' Clean Water, and Safe Drinking Water Committees.

- Provide technical support to our pumping community and continued communication via the Annual Groundwater Quality Workshop.

- Partner with and evaluate additional stormwater recharge opportunities through the Council for Watershed Health on the Water Augmentation Study and the Southern California Water Committee.

- Participate in the technical advisory committee of the Los Angeles Basin Stormwater Conservation Study undertaken by the Los Angeles County Public Works and United States Bureau of Reclamation.

- Administer the Title 22 Groundwater Monitoring Program.

- Continue groundwater remediation efforts with grant funds being administered by Prop 1. Pursue additional groundwater cleanup projects with available grant funds related to Prop 1.

- Continue working group to provide timely information to the pumpers and provide updates on a pilot testing program developed to evaluate treatment technologies and well profiling being conducted in the Montebello Forebay.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Budget adjustments were made to complete previously budgeted investigation work (temporarily on hold due to access delays) and accommodate laboratory testing associated with the Title 22 Monitoring Program.

Table 34

Program 006 – Water Quality Improvement Program

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$354,320	$452,000	$97,680
R&M/Materials/Equipment	31,500	31,500	-
Other Expenses	11,259	15,300	4,041
Other General & Administration	174,458	224,042	49,584
TOTAL	**$571,537**	**$772,842**	**$151,305**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 006 – Water Quality Improvement Program				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goals
1 GOAL: Coordinate and administer meetings of the Groundwater Contamination Forum as a means for key stakeholders to share data and provide updates on major groundwater contaminated sites in the Central Basin and West Coast Basin.				Maximize Innovation and Environmental Resiliency Promote Organizational Excellence
MEASURE: Successful coordination and hosting of two meetings each Fiscal Year.	2	2	2	
2 GOAL: Conduct groundwater quality workshop for local water purveyors to promote professional learning and networking.				Maximize Innovation and Environmental Resiliency Promote Organizational Excellence
MEASURE: Hold one workshop each Fiscal Year.	0 (COVID-19)	0 (COVID-19)	1	
3 GOAL: Title 22 Monitoring Program.				Maximize Innovation and Environmental Resiliency Promote Organizational Excellence
MEASURE: Administer program for various pumpers within the District.	22	22	22	

4	**GOAL:**				
	Prop 1 grant funding to remediate “hot spot” in the Los Angeles Forebay and identify responsible party in coordination with DTSC and LARWQCB.				Maximize Innovation and Environmental Resiliency Expand Extraction Capacity
	MEASURE:				
	Provide public updates at Committee Meetings.	4	4	4	
5	**GOAL:**				
	Continue gathering additional data and sharing information related to PFAS.				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Provide updates to pumpers via Committee Meetings, Board Meetings, Water Rights Association, and BAC/TAC.	12	12	4	

Program 012
Safe Drinking Water

Background

WRD's Safe Drinking Water Program ("SDWP") has operated since 1991 and is intended to promote the cleanup of groundwater resources at specific well locations. Through the installation of wellhead treatment facilities at existing production wells, the District expects to remove contaminants from the underground supply and deliver the extracted water for potable purposes. Projects implemented through this program are accomplished through direct input and coordination with well owners.

The grant program focuses on the removal of Volatile Organic Compounds (VOCs) and offers financial assistance for the design and equipment of the selected treatment facility. The program is designed to help groundwater pumpers remove VOCs from affected wells to enable the well to meet public drinking water standards. This increases groundwater pumping capacity and reduces dependence on limited and expensive imported water supplies. In addition, removal of VOCs from the groundwater supply helps prevent the contaminants from spreading to other areas.

Another component of the program offers no-interest loans for secondary constituents of concern that affect a specific production well. The capital costs of wellhead treatment facilities range from $1,500,000 to over $3,000,000. Due to financial constraints, this initial cost is generally prohibitive to most pumpers. Financial assistance through the District's SDWP makes project implementation much more feasible. The program places a greater priority on projects involving VOC contamination or other anthropogenic (man-made) constituents, classified as Priority A Projects. Any treatment projects for naturally-occurring constituents would be classified as Priority B Projects and funded on a secondary priority, on a case-by-case basis, and only if program monies are still available during the fiscal year.

New candidates for participation are on the rise. A total of seventeen (17) facilities are already completed and online and one facility has successfully completed removal of the contamination and no longer needs treatment.

As an extension of the District's Safe Drinking Water Program, the District also offers the Safe Drinking Water Disadvantage Communities (DAC) Program. The goal of this program is to assist water systems located in disadvantaged communities within the District's service area with state and federal funding application efforts to address the issues related to their drinking water wells. The focus of the program is to provide

technical assistance and extensive outreach to help the systems secure funding that is set aside specifically for disadvantaged communities. Currently there are eleven (11) water systems participating in the program and receiving assistance with funding applications. Five of these systems have already received state funding, one project is under construction and one project is currently completed and in operation.

Projects under the SDWP involve the treatment of contaminated groundwater for subsequent beneficial use. This water quality improvement assists in meeting the District's groundwater cleanup objectives. Thus, funding for the costs of the program is drawn entirely from the Clean Water Fund.

FY 2022 Accomplishments

- Completed construction of the Maywood Mutual Water Company No. 2. May Avenue Wellhead treatment project, which was funded by California Prop 84-AB240 through the DAC program.

- Initiated design phase for the Tract 349 Wells 3&4 Treatment Project in order to pursue state and federal grant funding for construction of the project.

- Initiated grant application and planning phase for Maywood Mutual Water Company No. 3 Distribution System and Storage Reservoir Upgrade project

FY 2023 Objectives

- Complete construction on Huntington Park Well 15 project. $1,000,000 funded by WRD SDW Program.

- Complete construction on Lynwood Well 11 project. $800,000 funded by WRD SDP Program.

- Complete construction of California American Water Arlington Well & 48th St. Well Project. $1,600,000 funded by WRD SDW Program.

- Obtain State of California Prop 1 Grant and begin construction on Iron & Manganese treatment system for Sativa Well 5.

- Issuance of $2,000,000 SDWP grant payment to City of Lomita Well 5 to treat VOCs by end of fiscal year.

- Secure State of California Prop 1 funding and begin construction of the $2,394,000 DAC Program Walnut Park Water Meter Replacement Project by December 2022.

- Complete design phase for the DAC Program Tract 349 Wells 3&4 Treatment Project and secure state or federal funding for construction costs. By end of fiscal year.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Increase to this program is based on increased interest in the Disadvantage Community (DAC) projects. Design and construction expenses are reimbursed through grant funding at the completion of the phase. Any expenses for the traditional SDWP requiring a loan or grant will be considered from WRD's reserve funds.

Table 35

Program 012 – Safe Drinking Water

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$366,168	$880,000	$513,832
R&M/Materials/Equipment	-	-	-
Other Expenses	2,087	14,980	12,893
Other General & Administration	10,118	33,325	23,207
TOTAL	**$378,373**	**$928,305**	**$549,932**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 012 – Safe Drinking Water Program				
		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1	**GOAL:**				
	Identify projects and fund grants to assist candidates with primary priority contamination removal through the Safe Drinking Water (SDW) Program.				Expand Extraction Capacity
	MEASURE:				
	No. of projects funded to provide assistance to candidates with primary priority contamination removal.	3	0	1	
2	**GOAL:**				
	Complete construction of projects previously awarded grant funding through SDW Program				Expand Extraction Capacity
	MEASURE:				
	No. of construction projects completed and Notice of Completion (NOC) issued by WRD Board of Directors.	0	0	3	

3	**GOAL:**				
	Identify projects and funding from local, state, and federal grant programs to assist candidates with primary or secondary priority contamination removal through the Safe Drinking Water Disadvantaged Community (DAC) Program.				Expand Extraction Capacity
	MEASURE:				
	No. of DAC projects funded to provide assistance to candidates with primary or secondary priority contamination removal.	3	2	1	
4	**GOAL:**				
	Complete Construction of projects previously awarded state or federal funding through SDW DAC Program				Expand Extraction Capacity
	MEASURE:				
	No. of construction projects completed and Notice of Completion (NOC) issued by WRD Board of Directors	0	1	1	

Dual Purpose Projects & Programs

Program 010 Geographic Information System (GIS)

Background

The District maintains an extensive database and Geographic Information System (GIS) in-house. The database includes water level, water quality, and groundwater production data throughout the entire WRD service area with information drawn not only from the District's Regional Groundwater Monitoring Program, but also from water quality data received from various state and partner agencies and the District's administration of the Title 22 Monitoring Program in the Central Basin. The system requires continuous update and maintenance but serves as a powerful tool for understanding basin characteristics and overall basin health.

GIS, in conjunction with the regional groundwater model, is used to provide better planning and basin management. The system is used to organize, store, and access spatial information and accompanying datasets, including well locations, water level data, water quality information, well construction data, production data, aquifer locations, and computer model files. Staff uses the system daily for project support and database management. Specific information is available to any District pumper or stakeholder upon request and can be delivered through the preparation of maps, tables, reports, or other compatible format. Additionally, the District's web-based Interactive Well Search tool is available to the public; this website provides users with access to WRD's data on wells in its service area, including water levels, water quality, and groundwater production. The web-based application is continually updated to expand functionality for WRD staff and outside users.

District staff will continue to streamline and refine the existing data management system and website as well as satisfy both internal and external data requests. Continued use, upkeep, and maintenance of the GIS are planned for the coming year. In addition, District staff is working closely with our consultants to develop new geospatial applications and add features to existing ones. The use of the system supports District functions such as replenishment activities, groundwater quality efforts , and the Computerized Maintenance Management System (CMMS) used at operations facilities. Accordingly, the cost for this program is equally split between the Replenishment and Clean Water Funds.

FY 2022 Accomplishments

- Continued developing new features to improve the District's online Interactive Well Search Tool.
- Developed in-house applications for WRD Staff to easily access GIS layers such as well and water data. An example from FY 2022 is the Local Business Enterprise map, used by procurement staff to determine bidding vendors' eligibility for the program.
- Worked with WRD staff to design and develop Esri Story Maps for use in educational, promotional, and presentation materials.
- Continued comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.
- Migrated deprecated database systems to new computing environments.
- Commissioned the development of a GIS Roadmap to help set the direction of GIS services in coming years.
- Began the upgrade of our GIS services to a new enterprise software platform.

FY 2023 Objectives

- Continue developing new GIS applications and adding new features to improve existing applications.
- Continue working with Operations staff on CMMS usage for operating facilities.
- Continue developing maps and layers for Esri Story Maps development for use in educational, promotional, and presentation materials.
- Continue comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity, including documentation and data dictionaries.
- Complete the development of the GIS Roadmap guiding document and implement recommendations as needed.
- Complete enterprise software platform migration.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The budgeting of $200,000 for professional services in support of the GIS program is requested to aid in program development and capacity building, as well as complete work initiated in FY 2021 and FY 2022 that experienced delays. A slight decrease in other expenses is a result of purchases made this past fiscal year to replace older computer and printing hardware.

Table 36

Program 010 – Geographic Information System (GIS)

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$100,000	$200,000	$100,000
R&M/Materials/Equipment	-	-	-
Other Expenses	43,824	40,700	(3,124)
Other General & Administration	132,114	226,523	94,409
TOTAL	**$275,938**	**$467,223**	**$191,285**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 010 – Geographic Information System (GIS)					
		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District Goals
1	**GOAL:** Develop applications to access GIS layers (e.g., well/water data).				Promote Organizational Excellence
	MEASURE: New applications produced.	3	2	2	
2	**GOAL:** Develop map presentations (e.g., Story Maps) for use in educational, promotional, and informational materials.				Promote Organizational Excellence
	MEASURE: New map presentations produced.	2	3	2	
3	**GOAL:** Maintain comprehensive GIS data catalog for the District.				Promote Organizational Excellence
	MEASURE: Review catalog with data team at least twice per year.	2	2	2	

Program 011
Regional Groundwater Monitoring

Background

The Regional Groundwater Monitoring Program continues to be very successful and currently consists of a network of 347 WRD and the United States Geological Survey (USGS)-installed monitoring wells at nearly 62 locations throughout the District. Monitoring well data is supplemented with information from production wells to capture the most accurate information available. WRD staff, comprised of hydrogeologists and engineers, provides the in-house capability to collect, analyze and report groundwater data. This information is stored in the District's Geographic Information System (GIS) and provides the basis to better understand the characteristics of the Central and West Coast Basins (CBWCB).

Water quality samples from the monitoring wells are collected periodically. Automatic dataloggers record water level daily in most monitoring wells. Dataloggers are downloaded and water levels measured by WRD field staff a minimum of four times per year. The water quality data is available online at https://gis.wrd.org/ and water level data are available online at https://hydrographs.wrd.org/. On an annual basis, staff prepares a report that documents groundwater production, groundwater level, and groundwater quality conditions throughout the District. The annual reports are available online at https://www.wrd.org/reports/regional-groundwater-monitoring-report.

Most of the work during the coming year will involve continued bi-monthly, quarterly, and semiannual monitoring and reporting activities. The program will also work cooperatively with the USGS to address specific water quality issues and update the hydrogeologic conceptual model. Work associated with the Regional Groundwater Monitoring Program also supports activities relating to both replenishment and water quality projects. The program, therefore, is funded 50% each from the Replenishment and Clean Water Funds.

In November 2009, the State Legislature amended the Water Code mandating a statewide groundwater elevation monitoring program to track seasonal and long-term trends in California's groundwater basins. In October 2011, WRD was designated the agency responsible for collecting and reporting CBWCB groundwater level data to the California Statewide Groundwater Elevation Monitoring (CASGEM) program and continues in this role. WRD also provides water level data to a National Groundwater Monitoring Program as overseen by the USGS.

FY 2022 Accomplishments

- Completed spring and fall groundwater quality sampling at WRD monitoring wells including analysis of over 100 chemical constituents and contaminants. In March 2021, WRD also documented the results of a two year sampling effort to evaluate the presence of per- and polyfluoroalkyl substances (PFAS).

- Collected quarterly groundwater levels at WRD monitoring wells and compiled daily datalogger data to prepare historical water level hydrographs.

- Published the annual Regional Groundwater Monitoring Report summarizing groundwater data from monitoring wells and production wells in the CBWCB for Water Year 2020/21.

- Grant funding became available for a National Groundwater Monitoring Program through the USGS. WRD Staff secured additional funding and extended our contract for National Groundwater Monitoring Network. WRD also received partial funding of a deep nested groundwater monitoring well completed in the Montebello Forebay.

- Continued to collect and report CBWCB groundwater level data to the CASGEM program.

- Completed the installation of telemetry equipment in key groundwater monitoring wells located in the CBWCB.

- Completed the installation of two new deep nested groundwater monitoring wells (Cerritos 3 and Paramount 1) with USGS. The investigation reports documenting the installation results will be ready in FY 2023.

- Performed extensive data logger testing, maintenance and repairs.

FY 2023 Objectives

- Collect spring and fall groundwater quality samples at WRD monitoring wells. Analyze samples for over 100 chemical constituents and contaminants.
- Collect quarterly groundwater levels at WRD monitoring wells and compile daily data logger data and prepare historical water level hydrographs.
- Identify emerging contaminants of concern to the water supply community and groundwater basin managers to assess the need for a basin-wide screening to determine whether long-term monitoring is warranted in the CBWCB.
- Continue to report Regional Groundwater Monitoring Program data in accordance with the State-mandated Salt and Nutrient Management Plan.
- Continue to collect and report CBWCB groundwater level data to the CASGEM program.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The change is primarily associated with a labor allocation evaluation and subsequent adjustment for FY 2023.

Table 37

Program 011 – Regional Groundwater Monitoring

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$585,000	$606,000	$21,000
R&M/Materials/Equipment	115,000	115,000	-
Other Expenses	164,117	122,500	(41,617)
Other General & Administration	474,394	659,068	184,674
TOTAL	**$1,338,511**	**$1,502,568**	**$164,057**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 011 – Regional Groundwater Monitoring				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1 GOAL: Collect semiannual groundwater quality samples and quarterly water levels at monitoring wells installed by WRD. Place results on Interactive Well Search Tool maintained by WRD. Report results to NGWMN and CASGEM.				Maximize Innovation and Environmental Resiliency
MEASURE: Compile results and release annual report by April 2021.	1	1	1	
2 GOAL: Drill and install nested monitoring wells in data gap areas with USGS.				Maximize Innovation and Environmental Resiliency
MEASURE: Installation of wells with USGS.	1	1	0	
3 GOAL: Integrate Regional Groundwater Monitoring Program data into a salt and nutrient groundwater monitoring program.				Maximize Innovation and Environmental Resiliency
MEASURE: % of completion for the integration of Regional Groundwater Monitoring Program data into a salt and nutrient groundwater monitoring program.	100%	100%	100%	

Program 025
Hydrogeology

Background

This recurring program accounts for hydrogeologic analysis of the Central, West Coast, and surrounding groundwater basins. These scientific efforts are necessary for specific issues, projects, programs and basin management issues that face the District. The program includes evaluation of replenishment needs and forecasting at the spreading grounds and barrier wells, computer modeling, 3D aquifer imaging, and assessing the overall health of the basins by analyzing water levels and water quality data, including salt and nutrient loading.

Staff work performed under this program includes the preparation of the annual Engineering Survey and Report, including the calculation and determination of important hydrogeologic factors such as annual overdraft, accumulated overdraft, change in storage, and replenishment needs. Extensive amounts of data are compiled and analyzed by internal State-certified hydrogeologists and registered engineers to determine these values. Maps are created showing water levels in the basins and production patterns and amounts. The updates, maintenance, and use of the Regional Groundwater Flow Model developed by the USGS and WRD are part of this program. This model is a significant analytical tool utilized by WRD to determine basin benefits and impacts of changes proposed in the management of the Central and West Coast Basins.

A focused effort to better characterize the hydrogeologic conditions in the District is also underway and will continue into the ensuing year. This long-term project involves compiling and interpreting extensive data which were generated during the drilling and logging of the WRD/USGS monitoring wells and collected from historical information for production wells and oil wells within the District, and from seismic reflection data. The ultimate goal of this project is to incorporate these data in WRD's GIS and models, and use the system to generate aquifer depths, extents, and thicknesses throughout the District to assist staff, pumpers, and stakeholders better plan for groundwater resource projects such as new well drilling, storage opportunities, or modeling. The data will also be made available on WRD's website to be used as a reference source for hydrogeologic interpretations and fulfilling project- related data requests.

Hydrogeological analysis is also needed for projects associated with groundwater quality concerns and specific cleanup projects. Work by in-house staff may include investigative surveys, data research, oversight of specific project studies, etc. Such

efforts are used to relate water quality concerns with potential impact to basin resources.

Special projects arise occasionally under this program such as well profiling of production wells to define areas of poor water quality entering the well with an emphasis on gather more data related per- and polyfluoroalkyl substances (PFAS). Other special projects include preparation of the Cost of Service Report, saline plume evaluation and modeling, analysis of optimum and minimum groundwater quantities, groundwater tracer investigations, and updates to the Salt Nutrient Management Plan (Recycled Water Policy indicates an update is required by April 8, 2024). An evaluation will also be conducted to evaluate existing groundwater models used across the county line jointly funded by WRD and the Orange County Water District (OCWD).

The Hydrogeology Program addresses both groundwater replenishment objectives and groundwater quality matters. This dual service warrants that the cost of the program be split evenly between the Replenishment and Clean Water Funds.

FY 2022 Accomplishments

- Preparation of the 2022 Engineering Survey and Report leading to the adoption of the 2022/2023 Replenishment Assessment.

- Preparation of the 2022 Cost of Service Report, including an in-depth analysis of the geology of the WRD Service area. This report, along with the ESR, led to the adoption of the 2022/2023 Replenishment Assessment.

- Published the updated groundwater basin model (unstructured grid) with USGS. The report is publicly available at https://pubs.er.usgs.gov/publication/sir20215088. The groundwater model is currently be converted to MODFLOW 6.

- Conducted annual adjudicated basin reporting as required under the Sustainable Groundwater Management Act (SGMA).

- Commenced county line groundwater modeling evaluation with OCWD.

- Reported the results of two pilot tests evaluating wellhead treatment technologies for PFAS. The reports are publicly available at https://www.wrd.org/content/pfas-remediation-program.

- Presented on “Developing and Implementing a Robust, Deep Nested Groundwater Monitoring Program in Southern Los Angeles County, California” to the South Coast Geological Society (SCGS). WRD staff also participated

on a panel discussing “Solving the Groundwater Challenge” to a worldwide audience sponsored by Seequent (a software company we use to visualize data in a three dimensional space using Leapfrog Works™).

- Continue to provide modeling support to water resource department for the Master Plan and Regional Brackish Water.

FY 2023 Objectives

- Completion of 2023 Engineering Survey and Report.
- Completion of 2023 Cost of Service Report
- Convert USGS groundwater basin model to MODFLOW 6.
- Present technical materials and papers at groundwater conferences and various organizations related to the District.
- Complete annual adjudicated basin reporting as required under SGMA.
- Assist groundwater purveyors on data needs for new production wells.
- Continue to provide modeling support to water resource department for the Master Plan and Regional Brackish Water.
- Continue county line groundwater modeling evaluation with OCWD and report results to the Board

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The change is primarily associated with a labor allocation evaluation and subsequent adjustment for FY 2023.

Table 38

Program 025 – Hydrogeology

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$226,500	$152,500	($74,000)
R&M/Materials/Equipment	14,500	14,500	-
Other Expenses	47,297	35,750	(11,547)
Other General & Administration	172,678	398,095	225,417
TOTAL	**$460,975**	**$600,845**	**$139,870**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 025 – Hydrogeology					
		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1	**GOAL:** Prepare ESR leading to the adoption of the RA.				Maximize Innovation and Environmental Resiliency
	MEASURE: Prepared ESR which led to the adoption of the RA.	1	1	1	
2	**GOAL:** Prepare annual Cost of Service report including an in-depth analysis of the geology of the WRD service area.				Maximize Innovation and Environmental Resiliency
	MEASURE: Prepared annual Cost of Service report which included an in-depth analysis of the WRD service area geology.	1	1	1	
3	**GOAL:** Provide modeling support for Master Plan and Regional Brackish Water.				Expand Replenishment Opportunities Expand Extraction Capacity
	MEASURE: Participate in at least six stakeholder meetings each Fiscal Year.	6	12	6	
4	**GOAL:** Complete county line groundwater modeling evaluation with OCWD (funded jointly by WRD/OCWD).				Maximize Innovation and Environmental Resiliency
	MEASURE: Provide feedback on groundwater modeling evaluation and once completed report results to Board.	1	1	1	

Program 043
Regional Brackish Water Reclamation

Background

This project will remove the saline plume in the Silverado Aquifer, located in the West Coast groundwater basin in south Los Angeles County. Operation of seawater barrier injection wells has effectively curtailed seawater intrusion into the West Coast Basin; however, a large residual saline plume remains trapped inland of the barrier wells, occupying 600,000 acre-feet of volume in the West Coast groundwater basin.

This project intends completely remediate the saline plume over a 40-year period by pumping and desalting 5,000 – 10,000 acre-feet of brackish groundwater each year. This project would provide a significant new potable water supply in the West Coast Basin and also reclaim groundwater storage capacity in the basin by removing the brackish plume in the Silverado Aquifer.

The WRD's Groundwater Basin Master Plan assumes this project would operate on a regional basis, providing a new potable source of water for groundwater pumpers located within that basin whose pumping options are currently limited by the saline plume. This effort would ultimately adjust pumping patterns to maximize containment and removal of the saline plume, which would result in groundwater contamination remediation, reclamation of significant groundwater storage volume in the basin and creation of a significant new local water supply.

FY 2022 Accomplishments

- Awarded contract for professional services associated with Phase 1 of the program, which includes Feed water Quality Characterization, Treatment Process Pilot Testing, Development of a Preliminary Design Report, and Environmental Documentation on the California Environmental Quality Act (CEQA).

FY 2023 Objectives

- Determine source water well sites and install pilot wells to develop Feedwater Quality Characterization for treatment plant design.

- Design and construct treatment plant pilot test facility.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Phase 1 of the Program is part of the Capital Improvement Project Budget and began in FY 2022. No significant budget changes to the operations budget, which includes aspects of the program that cannot be capitalized.

Table 39

Program 043 – Regional Brackish Water Reclamation

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$123,858	$150,000	$26,142
R&M/Materials/Equipment	-	-	-
Other Expenses	-	-	-
Other General & Administration	1,662	-	(1,662)
TOTAL	**$125,520**	**$150,000**	**$24,480**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program 043 – Regional Brackish Water Reclamation					
		FY 2020 Actual	FY 2021 Actual	FY 2022 Budget	District Goal
1	**GOAL:** Complete feasibility planning phase of program in FY 2021 and initiate CEQA and pilot phases of program in FY 2022.				Expand Extraction Capacity
	MEASURE: Complete feasibility study and issue RFPs for professional services.	N/A	100%	100%	
2	**GOAL:** Develop Scope of Work and Request For Proposals for engineering services for Phase 1 of the Regional Brackish Program				Expand Extraction Capacity
	MEASURE: Award contract for Phase 1 engineering services	N/A	February 2022	N/A	
3	**GOAL:** Determine source water well sites and install pilot wells.				Expand Extraction Capacity
	MEASURE: Development of Feedwater Quality Characterization for treatment plant design.	N/A	N/A	June 2023	
4	**GOAL:** Design and construct treatment plant pilot test facility.				Expand Extraction Capacity.:
	MEASURE: Release Construction Bid Package and Award Contract for Construction	N/A	N/A	June 2023	

Program EAC
Water Conservation

Background

Water Conservation outreach activities provide tangible and proven strategies to successfully engage constituents, pumpers, and cities to continue to conserve water throughout the service area. As the Western United States experiences the worst drought on record in 1,200 years, the WRD conservation program has increased outreach to proactively educate the public and make water conservation a lifestyle. Outreach is also geared towards educating the public about WRD's innovative planning to address this and future droughts.

In FY2022 the External Affairs Department continued to conduct its virtual outreach programming throughout the service area and created new offerings to adapt to new methods of communicating with our varied audiences. With easing restrictions on in-person meetings and events, the department also held several live events and attended conferences and workshops to highlight WRD's projects and programs.

The External Affairs Department expanded the number of Eco-Gardener classes for the public. WRD hosted 30 Eco Gardener courses in both virtual and in-person settings. The department also reinstated our Eco-Pro Series where we work with municipalities to train their landscaping staff on sustainable landscape techniques. Outreach for these classes included social media posts, direct email contact, newspaper advertisements, and placement in the WRD Newsletter. Advertising serves two main purposes. In addition to advertising the Eco-Gardener classes, they highlight WRD and our function in the service area.

The WRD History book was also completed in FY 2022 and distributed to WRD stakeholders. External Affairs staff worked closely with the Ad Hoc History Committee to complete the project. "Protecting Our Groundwater: A History of the Water Replenishment District" is an educational resource that provides an overview of the region's water history and WRD's efforts to develop sustainable groundwater. The project included writing, designing, and printing the book. The book was ultimately copyrighted and registered with the Library of Congress

The Water Awareness Calendar profiles 23 local student artists who use their artwork to encourage water literacy and conservation. The FY 22 Calendar Contest had a 60% increase in the number of school districts that participated. The department was able to continue utilizing the digital submission process that was piloted last year which

helped increase participation. The outreach for the Student Art Contest was shared with approximately 128,000 families from throughout the service area including 30 school districts and 262 individual schools.

The department also initiated a mass social media campaign to highlight the drought and share water conservation tips. WRD's Drought Awareness month was comprised of 13 unique videos, 31 daily social media posts, a newsletter, and 10 print and digital ads shared throughout the district which were shared during the month of October 2022. This campaign reached over 2 million people throughout the month.

External Affairs staff developed presentations that were accepted at three conferences. Presentations discussed the development of the Albert Robles Center Exhibit Hall and were held at the WateReuse, Groundwater Resources Association, and California Public Information Officers Conferences.

FY 2022 Accomplishments

- Hosted 30 Eco-Gardener classes.
- Reinstated Eco-Pro classes and held a series with the city of Bell Gardens.
- Completed WRD History Book.
- Distributed drought tool-kits to residents in the service area.
- Completed successful Drought Awareness Month Campaign with over 2 million views.

FY 2023 Objectives

- Increase outreach throughout the service area to promote WRD projects and programs.
- Engage in conservation partnerships with stakeholders including groundwater pumpers and water industry partners.
- Broaden Eco-Gardener education opportunities for the public. Eco-Gardener classes increase public awareness of drought and water conservation with classes focused on water saving gardening practices.
- Increase in-person outreach activities in all five divisions of the service area developing new outreach programs and engagement opportunities.
- Increase in-person outreach activities in all five divisions of the service area developing new outreach programs and engagement opportunities.

Basis for Changes from FY 2023 Projection to FY 2023 Budget

No significant changes noted.

Table 40

Program EAC – Water Conservation

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$65,821	$65,000	$(821)
R&M/Materials/Equipment	-	-	-
Other Expenses	300,825	300,000	(825)
Other General & Administration	274,698	275,903	1,205
TOTAL	**$641,344**	**$640,903**	**$(441)**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

EAC – Water Conservation				
		FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1	**GOAL:**				
	Increase outreach throughout the service area to promote WRD projects and programs.				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Distribute Drought Toolkits	N/A	200	300	
	Number of Schools Participating in Student Art Calendar Contest	66	80	100	
2	**GOAL:**				
	Engage in conservation Partnerships with stakeholders including groundwater pumpers and water industry partners				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Participation in commercial, institutional, residential and educational partnerships with stakeholders through the service area	15	20	30	
	Maintain presence at industry conferences (Watersmart Innovations and American Water Works Association)	2	2	2	
	Hold Eco Pro Series in two new cities	N/A	1	2	

3	**GOAL:**				
	Broaden Eco-Gardener education opportunities for the public.				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Develop a series of work-books and educational materials	3	3	3	
	Develop new classes for participants to attend	2	2	3	
	Number of Eco Gardening classes hosted	25	30	30	
4	**GOAL:**				
	Increase in-person outreach activities in all five divisions of the service area developing new outreach programs and engagement opportunities				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Host event commemorating 60th Anniversary of Recycled Water Usage	N/A	N/A	1	

Program EAE
Water Education & Outreach

Background

Water Education and Outreach activities aim to provide direct informative communication between WRD and a broad range of constituents including:

- Groundwater purveyors (pumpers)
- Elected officials and policymakers
- Federal and state regulators
- Members of the public
- Children and Youth (schools)
- Members of the water industry
- News reporters, bloggers, other media.

Water Education and Outreach activities engage constituents on a variety of important policy and project development areas pertaining to groundwater management and practices, as well as recycled water production and use. These activities include tours; participation in community events and forums; development of printed and digital educational materials; involvement in industry and organizational conferences; and promotion of education through annual public events, such as the WRD Groundwater Festival. These avenues of communication enable WRD to successfully advance discussions around critical policies and programs that promote public interest in, and awareness of, water. Due to the COVID-19 pandemic, several events and activities hosted or attended by EA staff have been either canceled or held in a virtual setting.

The External Affairs department is tasked with the mission of leading the education and outreach programs for the District - with attention to the Water Independence Now (WIN) Program and the WIN 4 ALL Program through presentations at conferences, conventions, and regional community events. These programs encapsulate WRD's core projects that are helping the region by creating a completely locally sustainable source of water for groundwater replenishment.

Conference and convention outreach participation includes participation at conferences and workshops that average approximately 1,500 attendees. Water and education outreach at conferences and conventions alone have reached over 25,000 industry leaders and elected officials and policymakers. This year, these conferences were held in both virtual and in-person settings which allowed the district to engage the audience using multimedia presentations including virtual tours and videos.

The department is also tasked with supporting the agency's legislative affairs strategies. This year the agency held virtual meetings with our entire Congressional and State Legislative delegation.

WRD continued its innovative education program in virtual settings. The External Affairs Department created new programming to keep students engaged while utilizing virtual platforms like Zoom. This included using new technology like Storymaps and video production.

FY 2022 Accomplishments

- Increased number of social media followers, engagements, and posts to 11,000
- Developed Public tour program for ARC and held five tours
- Developed Careers in Water Webinar in partnership with regional water stakeholders.
- Conducted 40 Virtual tours and education activities.
- Broadened outreach to new schools for virtual field trips and activities.
- Distributed over 300 take-home activity packets.

FY 2023 Objectives

- Host annual Groundwater Festival
- Maintain and increase social media presence; add new followers and increase number of posts and platforms
- Resume in-person field trip program for schools and youth organizations
- Develop and mail two newsletters to constituents in the service area
- Host events commemorating successful completion of projects in the service area
- Create fully interactive 360-degree virtual tour
- Advocate for effective groundwater and recycled water policy

Basis for Changes from FY 2022 Projection to FY 2023 Budget

Changes in the budget are adjusted to the assumption that some outreach activities will continue to be held virtually. It also accommodates the development of a virtual tour of ARC and the filling of vacancies in the External Affairs Department.

Table 41

Program EAE – Water Education & Outreach

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$75,000	$75,000	-
R&M/Materials/Equipment	5,000	50,000	45,000
Other Expenses	761,027	631,500	(129,527)
Other General & Administration	243,642	334,334	90,762
TOTAL	**$1,084,669**	**$1,090,834**	**$6,165**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Program EAE – Water Education & Outreach				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goal
1 GOAL:				
Host annual groundwater festival as an on-going groundwater awareness effort				Maximize Innovation and Environmental Resiliency
MEASURE:				
Number of Groundwater Festivals hosted	Postponed due to COVID-19	Postponed due to COVID-19	1	
2 GOAL:				
Maintain and increase social media presence				Maximize Innovation and Environmental Resiliency.
MEASURE:				
Increase number of social media platforms	6	6	7	
Increase number of followers.	10,100	11,000	12,000	
Increase number of social media posts annually.	650	800	800	
3 GOAL:				
Resume in-person field trip program for the general public, schools, and youth organizations.				Expand Replenishment Opportunities
MEASURE:				
Host field trips at ARC for schools.	N/A	25	100	
Develop public tour program of ARC for constituents	N/A	5	12	
Host field trips at ARC for scout troops and other youth organizations.	N/A	10	30	

4	**GOAL:** Develop and mail two newsletters to constituents in the service area.				Maximize Innovation and Environmental Resiliency
	MEASURE: Number of newsletters mailed.	270,000	270,000	270,000	
5	**GOAL:** Create fully interactive 360-degree virtual tour				Maximize Innovation and Environmental Resiliency
	MEASURE: Completion of a virtual tour	N/A	N/A	1	
6	**GOAL:** Host events commemorating successful completion of projects in the service area.				Expand Replenishment Opportunities
	MEASURE: Number of events.	2	2	2	
7	**GOAL:** Advocate for effective groundwater and recycled water policy.				Expand Replenishment Opportunities
	MEASURE: Number of State Government Advocacy Meetings	30 Scheduled	20	25	
	Number of Federal Government Advocacy Meetings	25	25	30	

General Administration

Board of Directors

Background

The Board of Directors is the policy-making and governing body of the District. It represents the highest authority within the management structure of the District. Certain portions of its authority are delegated to staff in the interest of efficiency, stability, and prudent management.

The Board of Directors develops the District's vision and strategic plan and sets policy to assist the General Manager and staff with implementing the vision and strategic plan. The various responsibilities of the board members include directing District activities, outreach, and cooperation with legislators, regulators, cities, pumpers, consultants, water agencies and other government agencies.

There are five members of the Board of Directors; each is elected from one of five divisions within the District service area, within which such Director resides.

The Board officers include the President, Vice President, Secretary, and Treasurer. Officers are elected by the Board at its first meeting in January of at least every odd-numbered year but may do so more frequently if desired.

The President of the Board presides over all meetings of the Board and has all authority afforded the presiding officer, including the power to constitute Standing and Ad Hoc Committees and to assign Board members to serve on such committees.

The Vice President of the Board presides over any meeting at which the President is not present and performs such other services as may be requested by the President.

The Secretary of the Board records and certifies the minutes of all Board meetings and is responsible for the maintenance of District records. In the absence of the Secretary, the Vice President may sign in his/her place when necessary.

The Treasurer of the Board is responsible for the financial affairs of the District, including financial reporting and investment activities. The Treasurer must also serve on the Finance / Audit Committee of the Board.

FY 2022 Accomplishments
See Board President's Report.

FY 2023 Objectives
See Board President's Report.

Basis for Changes from FY 2022 Projection to FY 2023 Budget
Changes in budget are primarily due to fund reallocation from other programs and expense reclassification starting in FY 2023.

Table 42
Board of Directors

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$-	$-	$-
R&M/Materials/Equipment	-	-	-
Other Expenses	65,855	157,990	92,135
Other General & Administration	205,652	371,878	166,226
TOTAL	**$271,507**	**$529,868**	**$258,361**

Administration
Background
The Administration of the District includes the Administration/Human Resources Department, the Data and Technology Services (DTS) Department and the Finance Department. These departments are responsible for ensuring the delivery of core District administrative functions through innovative technology-driven solutions.

Core functions of the Administration/Human Resources Department include general office administration, Board support, human resources, risk management, and building maintenance. The DTS Department is responsible for information technology (IT), enterprise systems, and data management.

Core functions of the Finance Department include facilitating the planning, organization and implementation of financial policies and programs of the District. The department provides financial planning, monitors financial activities of the District, manages the development of annual budget, and prepares the Comprehensive Annual Financial Report.

Basis for Changes from FY 2022 Projection to FY 2023 Budget

The changes are mainly due to more hiring in FY 2022. In addition, District's facilities' maintenance cost and staff time are projected to be reallocated to various projects and programs in FY 2023.

Table 43
Administration

Expense Category	FY 2022 Projection	FY 2023 Budget	FY 2023 Budget compared to FY 2022 Projection
Professional Services	$1,377,582	$1,337,500	$(40,082)
R&M/Materials/Equipment	162,112	100,025	(62,087)
Other Expenses	1,046,296	1,047,808	1,512
Other General & Administration	4,949,450	3,595,160	(1,354,290)
TOTAL	**$7,535,440**	**$6,080,493**	**$(1,454,947)**

Administration/Human Resources and Administration

FY 2022 Accomplishments

- Developed and implemented a COVID-19 Safety Plan, including procedures to ensure compliance with local and state public health officials.
- Onboarded a new director for Division 1, as well as facilitated the redistricting process with the County Registrar-Recorder's office.
- Re-aligned the organization chart for the operational needs of the District.
- Supported the development and implementation of WRD's 2-year Strategic Plan.
- Designed and implemented a new internship policy and program.
- Provided outstanding customer service to District's Board of Directors, management, staff, and the public through increased communications and responsiveness.
- Continued implementation of the employee training resources.

FY 2023 Objectives

- Develop and implement a program at the District focused on Diversity, Equity, and Inclusion (DEI).
- Secure a new Memorandum of Understanding (MOU) with District staff's labor union, AFSCME 1902.
- Continue implementation of COVID-19 and infectious disease safety plans and other risk management initiatives.
- Refine our new hire onboarding and offboarding processes.
- Reinstate a District internship program for local students.

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below:

Human Resources & Administration				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goals
1 GOAL:				
Promote a safe, healthy and supportive work environment for all employees.				Promote Organizational Excellence
MEASURE:				
a. Development and ongoing implementation of procedures to ensure safety of staff in compliance with local and state public health officials and implementation of COVID-19 Workforce Transition Plan.	100%	100%	100%	
b. Continued coordination of WRD safety program.	80%	100%	100%	

2	**GOAL:**				
	Hire, retain and develop a highly qualified, professional, diverse and responsive workforce.				Promote Organizational Excellence
	MEASURE:				
	a. Development and implementation of the District's performance management system.	100%	100%	100%	
	b. Ensure completion of training for Board and employee workforce.	100%	100%	100%	
	c. Continued implementation of Employee Relations Program.	N/A	50%	N/A	
	d. Development and continuation of formal Employee Recognition Program.	30%	100%	100%	
	e. Develop and implement 360-Degree Feedback Program for Management Team	N/A	N/A	100%	
	f. Implement a Human Resources Information System for applicant tracking, onboarding, and performance management.	N/A	N/A	100%	
3	**GOAL:**				
	Increased dissemination of information and communications with staff.				Promote Organizational Excellence
	MEASURE:				
	a. Hold regularly scheduled all-hands meetings.	N/A (not previously measured)	N/A (not previously measured)	12 meetings	
	b. Maximize utilization of WRD Portal and increase information access to all staff.	40%	60%	80%	
4	**GOAL:**				
	Continued compliance with current local, state and federal laws governing the regulations of Water Districts.				Promote Organizational Excellence
	MEASURE:				
	a. Ensure Board actions, documents, resolutions and ordinances are appropriately recorded for future reference.	50%	100%	100%	
	b. Develop and implement Diversity, Equity, and Inclusivity Program.	N/A	N/A	100%	

Data & Technology Services

FY 2022 Accomplishments

- Ensured appropriate information technology and architecture support to all WRD administrative office and off-site facilities.

- Ensured secure access to data systems for staff and facility operators.

FY 2023 Objectives

- Continue building capacity for our cybersecurity and disaster recovery related to our information systems.

- Continue building data services to increase data availability to our partners and the public.

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below.

Data & Technology Services				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goals
1 **GOAL:** Ensure information technology services and support to all WRD facilities and the public.				Promote Organizational Excellence
MEASURE:				
a. Maintain publicly accessible websites and applications	5 public websites	5 public websites	5 public websites	
b. Maintain Computerized Maintenance Management System (CMMS) for operating facilities	2 facilities	3 facilities	3 facilities	
c. Collect and report groundwater production data every month	12 months	12 months	12 months	
d. Maintain data services to increase data availability to our partners and the public.	100%	100%	100%	

Finance Department

FY 2022 Accomplishments

- Worked collaboratively with project managers to develop Fiscal Year 2023 budget and Replenishment Assessment and received Board adoption.
- Completed Fiscal Year 2021 financial audit and received unmodified or “clean” audit opinion.
- Prepared Fiscal Year 2021 Annual Comprehensive Financial Report.
- Received Distinguished Budget Presentation Award and Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for FY 2022 budget.

FY 2023 Objectives

- Work collaboratively with project managers to develop Fiscal Year 2024 budget and Replenishment Assessment and received Board adoption.
- Complete Fiscal Year 2022 financial audit and received unmodified or “clean” audit opinion.
- Prepare Fiscal Year 2022 Annual Comprehensive Financial Report.
- Received Distinguished Budget Presentation Award and Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for FY 2023 budget.
- Implement a new Budget module to interface with the MIP accounting system.
- Transition the MIP accounting system from on-premises to the cloud version.

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2023 are presented below

Finance Department				
	FY 2021 Actual	FY 2022 Actual	FY 2023 Budget	District's Strategic Goals
1 GOAL:				
Continued compliance with the California Water Code on financial reporting and budget adoption.				Promote Organizational Excellence
MEASURE:				
a. Complete audit financial statement no later than 180 days from the conclusion of the District's fiscal year on June 30th.	100%	100%	100%	
b. Adopt Replenishment Assessment and ensuing year budget no later than the second Tuesday in May.	100%	100%	100%	

Capital Improvement Program

The five-year Capital Improvement Program (CIP) plan serves as a comprehensive planning document which identifies capital project expenditures in conjunction with anticipated revenue sources, such as grant funding. The CIP plan is a working document and will be reviewed and updated every two years to reflect stakeholder needs, priorities, and funding opportunities

The five-year CIP includes new and ongoing projects and is an effective tool to ensure planning and implementation of capital improvements are tied to predictable and reliable sources of income that produce successful results. Furthermore, the CIP is used to describe desired projects and follow an adequate timeline for the review of preliminary planning and design by the WRD Board of Directors prior to establishing a construction schedule.

WRD's five-year plan provides information to the public regarding the upcoming capital priorities and allows for multi-year financial planning to support these priorities. The District's capital improvements focus on completing projects identified under the Water Independence Now (WIN) and WIN4ALL initiatives, as well as continued investment in WRD's existing infrastructure to optimize performance and maximize production.

Also included in this section is the Capital Improvement Budget as it aligns with WRD Projects and Programs. For example, we have provided the Capital Expenditures for Water Treatment and Production facilities. This allows interested stakeholders to identify the investment WRD is placing in each facility as opposed to an initiative that may cross multiple facilities. Our expectation is if this view will provide more clarity into the sustainability and growth of WRD.

This CIP includes a total of $178.8 million in capital improvement projects. The Program reflects grant funding of $39.5 million that has been awarded or pursued, and partnerships that will contribute $15.2 million toward the listed projects. In the FY 2023 adopted CIP, WRD is planned to issue $45.5 million in revenue bonds to fund the balance of the capital plan. The CIP plans describe funding from previous debt issuances (Series 2015 and Series 2018), unrestricted reserve funds, and PayGo financing.

As we have just come the end of Fiscal Year 2022, the planned expenditures for Fiscal Year 2022 were lower than initially expected, but unforeseen economic conditions (record increases in inflation) have created an environment that has slowed the

progression of the CIP. The current CIP will be revised later this fiscal year to consider current conditions.

Table 44

WRD Capital Improvement Program Budget
5-Year Outlook by Program

Program / Project	FY21/22 Projected	FY22/23 Projected	FY23/24 Projected	FY24/25 Projected	FY25/26 Projected	Total 5-Year CIP
Leo J. Vander Lans Facility	10,741,433.6	4,449,800.0	2,162,550.0	126,000.0	126,000.0	17,605,893.6
Goldsworthy Desalter	3,926,544.6	1,633,200.0	625,000.0	125,000.0	125,000.0	6,434,744.6
Water Quality Master Plan	4,665,770.0	1,307,560.0	-	-	-	5,973,330.0
Regional Groundwater Monitoring Program	2,783,293.5	-	-	-	-	2,783,293.5
Safe Drinking Water Program	7,710,000.0	15,738,1650	9,705,000.0	1,100,000.0	-	33,853,165.0
Dominguez Gap Seawater Intrusion Barrier	2,370,000.0	11,150,000.0	2,000,000.0	-	-	15,520,000.0
Basin Management	37,500.0	453,309.0	5,000.0	-	-	495,809.0
WRD Facilities	50,0000	350,000.0	3,400,000.0	50,000.0	50,000.0	3,900,000.0
Albert Robles Center	2,195,793.1	2,059,816.1	1,949,248.5	2,070,063.1	1,718,248.5	9,993,169.3
General Engineering	593,504.2	1,593,504.2	-	-	-	2,187,008.5
Annex Building Program	627,535.5	1,500,000.0	672,464.5	-	-	2,800,000.0
Regional Brackish Program	3,042,003.5	2,750,000.0	2,000,000.0	5,000,000.0	3,000,000.0	15,792,003.5
WRD/LADWP Joiont Basin Project	426,000.0	-	-	-	-	426,000.0
PFAS Remediation Program	27,958,333.3	22,875,000.0	10,166,666.7	-	-	61,000,000.0
Total WRD Capital Improvement Program	**66,727,711.3**	**65,860,354.3**	**32,686,039.7**	**8,471,063.1**	**5,019,248.5**	**178,764,416.9**

Leo J. Vander Lans Water Treatment Facility Investments

The CIP calls for a $7 million investment in onsite injection well storage at the Leo J. Vander Lans Water Treatment Facility. As LVL expands production capacity, additional demands downstream from LVL must be accommodated above and beyond the Barrier injection wells. This project would install a new injection well and monitoring wells to recharge the underlying Central Basin. This project would install one injection wells on LVL property that has a capacity of approximately 2.0 mgd.

WRD is implementing an aggressive $4.4 million Rehabilitation and Replacement (R&R) program investment that will include upgrades to equipment, Supervisory Control and Data Acquisition (SCADA) hardware and software, and implementation of an asset management program for the facility. Examples of projects include the microfiltration filtrate welded steel tank which requires refurbishment to extend its useful life. As many of these assets have a high consequence of failure, conducting a condition assessment and planning asset replacement will ensure the facility remains operational and not subject to shutdown associated with asset failure.

The LVL facility utilizes microfiltration (MF) and Reverse Osmosis (RO) advanced treatment technology. Replacing MF and RO membrane often results in improved efficiency, either through better produce water quality, less frequent cleaning requirements, or reduced energy consumption. WRD is investing $2.9 million for membrane replacement.

WRD plans to invest $1.5 million to investigate options for delivering additional source water to LVL from the LACSD's Los Coyotes Water Reclamation Plant (LCWRP).

Goldsworthy Desalter

This WRD plans to purchase of the Brewer production well from West Basin for its use as an additional source of feedwater at the Goldsworthy Desalter to increase the production and water recovery of the facility. The project cost is estimated at $3.5 million and will include the design and construction of conveyance pipeline from the well to the Goldsworthy Desalter. The West Basin Municipal Water District (West Basin) has owned and operated the Brewer Desalter in Torrance, CA since 1994. The facility has reached the end of its useful life and West Basin intends to decommission and demolish the facility. The Brewer production well was installed in 2005 and has 20-30 years of remaining useful life on the asset. The Brewer production well is located less than 250 ft. from the Goldsworthy Desalter.

The Water Replenishment District of Southern California ("WRD" or "District") has developed a Well Construction and Rehabilitation Loan Program (Program) to assist groundwater producers within its service area maintain or increase their groundwater pumping capabilities. The City of Signal Hill will receive a $1.5 million loan as part of this program.

Water Quality Master Plan

The District has been investigating a perchlorate groundwater plume with the assistance of various regulatory agencies in association with our Los Angeles Forebay Task Force. The groundwater impacts are located in a disadvantaged community within a deep regional aquifer system currently utilized by various water purveyors in the Los Angeles Forebay. The perchlorate concentrations are among the highest in California. The WRD has identified a "hot spot" that represents a substantial threat to the Central Groundwater Basin and will require treatment to reduce the threat to a local groundwater source within the Los Angeles Forebay region of the Central Groundwater Basin. The CIP budget is approximately $5 million with most of the funding obtained from the Proposition 1 Groundwater Grant being administered by the State Water Resources Control Board (SWRCB).

Regional Groundwater Monitoring Program (RGMP)

The RGMP collects groundwater level and groundwater quality data used for groundwater basin management for the Central Basin and West Coast Basin, two of the most utilized urban groundwater basins in the nation. This is achieved through groundwater monitoring, modeling, and planning, which provides the basis to understanding the dynamic changes in the basins. The RGMP has proved valuable as WRD works to implement its Water Independence Now program, maximizing local water sources to replenish, preserve and protect the basins and eliminating its dependence on imported water. To fill in data gap areas, four additional wells are planned over the 5-year CIP at a cost of approximately $2 million.

Safe Drinking Water Program

The Safe Drinking Water Program (Program) provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells. The Program offers two options: grant assistance and loan assistance to basin pumpers for wellhead treatment to remove contaminants and improve water quality. The grant assistance program provides treatment for removing groundwater contaminants from man-made sources (e.g., Volatile Organic Compounds). The loan assistance program provides ten-year, zero-interest loans for water treatment to remove or reduce to compliance standards groundwater contaminants from natural sources (e.g., iron, manganese, and arsenic). Since the Program's inception, the District has funded thirteen (13) grants and four (4) loans. The CIP budget for Primary Contaminants is approximately $2.4 million (grant funded) and Secondary Contaminants is $3 million (loan funded).

As an extension of the District's Safe Drinking Water Program, the District approved the creation of the Safe Drinking Water Disadvantage Communities (DAC) Program. The goal of this program is to assist water systems located in disadvantaged communities within the District's service area with state and federal funding to address the issues related to their drinking water wells. The focus of the program is to provide technical assistance and extensive outreach to help the systems secure funding that is set aside specifically for disadvantaged communities. Funding for the CIP budget is approximately $29 million. While WRD will advance the funds required for the delivery of these projects, no project will be performed until outside funding has been approved by the granting authority.

Dominguez Gap Seawater Intrusion Barrier

The Dominguez Gap – 2nd Recycled Water Connection project increases the injection of advanced-treated water within the existing Dominguez Gap Seawater Barrier. The system is supplied with advanced-treated water purchased through the Los Angeles Department of Water and Power (LADWP) from the Terminal Island Advanced Water Treatment Plant (TIAWTP). In partnership with LADWP, this project will construct a pipeline from the TIAWTP to a second point of connection within the existing barrier

wells in order to inject more recycled water than the existing connection can sustain. The second recycled water connection will allow more product water to be injected into the barrier and reduce reliance on potable water. Funding for the CIP budget is approximately $8.2 million. Per the water purchase agreement between WRD and LADWP, LADWP will reimburse WRD for the entirety of the capital cost for this project.

The Potable Backup Supply project increases the injection of advanced-treated water within the existing Dominguez Gap Seawater Barrier. The system is supplied with advanced-treated water purchased through the LADWP from the TIAWTP. Potable water is also purchased for injection from West Basin Municipal Water District when Barrier demand is above 7.5 mgd. In partnership with LADWP, this project will construct a backup supply of potable water from LADWP to the Dominguez Gap Barrier, allowing the use or supplementation of imported water from LADWP if the TIAWTP is unable to provide the agreed upon amount of advanced-treated water. Funding for the CIP budget is approximately $6.8 million. Per the water purchase agreement between WRD and LADWP, LADWP will reimburse WRD for the entirety of the capital cost for this project

The Montebello Forebay Spreading Grounds (MFSG) are a County of Los Angeles owned and operated facility in the City of Pico Rivera which the WRD has used since 1959 as a major groundwater recharge facility. Due to upcoming new permit requirements, it is anticipated that additional monitoring wells will be needed to comply with modern regulations. Also, 2 of the 6 monitoring wells that WRD currently utilizes have proven to be too shallow as with continuing drought conditions, the water table has dropped below the bottom of the wells and they are now dry and cannot be sampled as required. Therefore, deeper replacement wells will be necessary. Approximately $0.5 million is budgeted for the planning of the new monitoring wells is included in this CIP.

WRD Facilities

WRD has allocated $3.6 million for improvements to the District headquarters building, located at 4040 Paramount Blvd in the city of Lakewood.

Albert Robles Center Advanced Water Treatment Facility

The Albert Robles Center (ARC) offsets the use of imported water by providing up to 10,000 acre-feet per year (AFY) of an advanced water treatment facility (AWTF) product water to the Montebello Forebay Spreading Grounds (MSGS). Off-site improvements were required as part of the ARC AWTF project, including the construction of a 16-inch diameter pipeline for disposal of brine concentrate that will be generated by the new treatment facility. This 16-inch diameter brine pipeline connects to an existing Sanitation Districts of Los Angeles County (LACSD) 63-inch diameter sewer pipeline that is located approximately 1,600 feet from the ARC site. The construction of the brine pipeline was completed in February 2017. An agreement for a 10-year payment

schedule with the LACSD for a Connection Fee of $15,932,475.12 was entered into in 2019. WRD has seven annual payments of $1,593,247.51 remaining. Funding for the remaining payment included in the CIP is approximately $8 million.

The Albert Robles Center construction project was completed in 2019. While a majority of new system components were installed, projects are still anticipated that will extend the useful life of the equipment, reduce operations costs, or respond to changing regulatory requirements. Projects will be identified as needed, as well as through continued investment in WRD's Asset Management System. WRD has allocated approximately $0.9 million for these improvements.

The ARC facility utilizes microfiltration (MF) and Reverse Osmosis (RO) advanced treatment technology. Replacing MF and RO membrane often results in improved efficiency, either through better produce water quality, less frequent cleaning requirements, or reduced energy consumption. WRD is investing $1.2 million for membrane replacement.

General Engineering

The General Engineering "project" is a way to capture all the overhead/soft costs associated with completing projects within the CIP. Funding for engineering cost is estimated at $1.2 million.

Annex Building Program

The District owns a 2.3-acre parcel located at 3919 Paramount Blvd (Field Operations and Storage Annex Project) in the city of Lakewood. The District intends to erect a pre-manufactured building on the site for the purposes of storage of testing and sampling equipment, miscellaneous supplies, and fleet parking. Due to its unique proximity to the District and ability to solve WRD's immediate need for additional storage space and future areas for growing inventory of spare and replacement parts for the District's existing facilities, this location is ideal for expanding the District's facilities. The total cost of this investment is approximately $2.8 million.

Regional Brackish Program

Within the West Coast Basin, a significant plume (approx. 600,000 acre feet) of high Total Dissolved Solids (TDS) has been trapped due to seawater intrusion and the implementation of the West Coast Seawater Intrusion Barrier. WRD began the Regional Brackish Water Reclamation Program (Program) through the Groundwater Basin's Master Plan to evaluate ways to remediate the basin. The Feasibility Study evaluates potential siting and technologies for brackish water reclamation facilities within the plume with maximum remediation benefit and the most efficient life cycle cost. The estimated cost in the CIP budget is $0.3 million.

Following completion of the feasibility study, WRD will perform a pilot study for the characterization of feedwater quality and development of treatment plant design parameters. The full-scale plant design is anticipated to include well siting and designs, conveyance pipeline alignments, pretreatment needs, reverse osmosis treatment, post treatment needs, and brine disposal. The CIP budget for the design and feasibility study is approximately $15.5 million

Hyperion Replenishment Master Plan

WRD and LADWP are investigating the potential to collaborate on ways to replenish and pump both the West and Central Groundwater Basins. LADWP has access to the Hyperion Water Reclamation Plant (WRP) as a potential source of replenishment water and is looking to partner with WRD to find reasonable locations to get this water into the Basins. To develop the specific strategy LADWP and WRD must develop and evaluate a comprehensive list of potential project opportunities to meet these sustainable goals. The WRD investment related to this collaboration is estimated to be $0.4 million. WRD and LADWP have a 50/50 cost share for this project as the findings are mutually beneficial to the two agencies.

PFAS Remediation

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals, which include perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), and perfluorobutane sulfonic acid (PFBS), that have been manufactured and used in a variety of industries around the globe and the region since the 1940s. Assembly Bill 756, codified as Health and Safety Code Section 116378 which became effective January 1, 2020, requires that community water systems, including groundwater pumpers, either notify their customers of PFAS detections exceeding RLs or remove from service drinking water sources with PFAS exceeding RLs. In response, the WRD Board of Directors established the PFAS Remediation Program on August 20, 2020, to provide either grants for water producers (e.g., groundwater pumpers) to install their own treatment systems (referred to as Funding Support Projects), or for WRD to design and construct treatment systems for the pumpers (referred to as Turnkey Projects) to remediate impacted production wells. Funding for the PFAS Remediation program to the CIP budget is estimated at $61 million.

Table 45

WRD Capital Improvement Program Budget: Five-Year Outlook by Program Detail

Program / Project	FY 2022 Adopted	FY 2023 Adopted	FY 2024 Adopted	FY 2025 Adopted	FY 2026 Adopted	Total 5-year CIP Budget
Leo J. Vander Lans Facility						
Source Water Supply	$475,000	$1,000,000	$-	$-	$-	$1,475,000
Onsite injection Well Storage/Replenishment	7,050,000	400,000	-	-	-	7,450,000
Offsite injection Well	-	560,000	-	-	-	560,000
General	126,000	126,000	126,000	126,000	126,000	630,000
SCADA Upgrades	700,000	1,900,000	-	-	-	2,600,000
Asset Management Program	246,545	-	-	-	-	246,545
MF Filtrate Welded Steel Tank Repair/Replacement	943,889	-	-	-	-	943,889
DAF System Analysis & Rehabilitation	100,000	-	-	-	-	100,000
Replacement and Rehabilitation Assessment	490,000	-	-	-	-	490,000
Microfiltration Membrane Replacements	200,000	-	1,200,000	-	-	1,400,000
Reverse Osmosis Membrane Replacement	48,000	463,800	463,800	-	-	975,600
Ultraviolet Lamp Replacement	362,000	-	372,860	-	-	734,860
Goldworthy Desalter						
Brewer Well Purchase	2,000,000	1,000,000	500,000			3,500,000
Well Rehabilitation and Construction Program - Signal Hill	1,500,000	-				1,500,000
Goldsworthy Desalter Upgrades	-	-	-	-	-	-
General	180,000	125,000	125,000	125,000	125,000	680,000
Asset Management Program	246,545	-	-	-	-	246,545
Condition Assessment	-	-	-	-	-	-
Desalter Pretreatment Assesment	-	-	-	-	-	-
Reverse Osmosis Membrane Replacement	-	508,200	-	-	-	508,200
Water Quality Master Plan						
Contaminated Site Investigations, Cleanup and Monitoring Wells	32,500	967,500	-	-	-	1,000,000
Perchlorate Remediation Project	4,633,270	340,060	-	-	-	4,973,330
Regional Groundwater Monitoring Program						
Wells (Paramount & Cerritos)	2,037,294	-	-	-	-	2,037,294
Telemetry/SCADA	500,000	-	-	-	-	500,000
Deep Nested Well for NGWMN	246,000	-	-	-	-	246,000

Safe Drinking Water Program						
SDW Grants	2,350,000	-	-	-	-	2,350,000
SDW Loans	1,000,000	1,000,000	1,000,000	-	-	3,000,000
SDW Disacdvantage Community Projects	3,960,000	14,738,165	8,705,000	1,100,000	-	28,503,165
Dominguez Gap Seawater Intrusion Barrier						
2nd RW Connection	2,235,000	5,985,000	-	-	-	8,220,000
Potable Backup Supply	-	4,800,000	2,000,000	-	-	6,800,000
Inland Injection Well Field	135,000	365,000	-	-	-	500,000
Basin Management						
Recycled Water Compliance Monitoring Wells at MFSG	37,500	453,309	5,000	-	-	495,809
WRD Facilities						
Energy Management Plan Study	-	300,000	-	-	-	300,000
WRD Headquaters	50,000	50,000	3,400,000	50,000	50,000	3,600,000
Albert Robles Center						
Brineline Connection Fee	1,593,249	1,593,249	1,593,249	1,593,249	1,593,249	7,966,243
General	125,000	125,000	125,000	125,000	125,000	625,000
Asset Management Program	246,545	-	-	-	-	246,545
Reverse Osmosis Membrane Replacement	231,000	-	231,000	-	-	462,000
Ultraviolet Lamp Replacement	-	341,568	-	351,815	-	693,382
General Engineering						
Regional Replenishment Resource Development	-	1,000,000	-	-	-	1,000,000
General Engineering (Labor, overhead, legislative, legal)	593,504	593,504	-	-	-	1,187,008
Annex Building Program						
Operations and Storage Annex Facility Project	627,536	1,500,000	672,464	-	-	2,800,000
Regional Brackish Program						
Regional Brackish Water Reclamation Program Feasibility Study	292,004	-	-	-	-	292,004
Regional Brackish Desalter Pilot Study	2,750,000	2,750,000	-	-	-	5,500,000
Regional Brackish Detailed Design	-	-	2,000,000	5,000,000	3,000,000	10,000,000
WRD/LADWP Joint Basin Project						
Hyperion Replenishment Master Plan	426,000	-	-	-	-	426,000
PFAS Remediation Program						
PFAS Remediation Program	27,958,333	22,875,000	10,166,667	-	-	61,000,000
Total WRD Capital Improvement Program	**$66,727,711**	**$65,860,354**	**$32,686,040**	**$8,471,063**	**$5,019,249**	**$178,764,417**

WRD Capital Improvement Program Budget by Strategic Objective

Overview

To perform its mission and implement the Board of Director's strategic goals, WRD prepares a five-year Capital Improvement Program (CIP) plan which includes a five-year outlook and funding outlay for all the District's capital projects. Capital improvement projects are permanent structural changes or restorations to the District's infrastructure that enhance value, increase useful life, or allow for increased groundwater capacity. The CIP five-year outlook identifies capital projects and equipment purchases,

There are five objectives of WRD's CIP Program. First is the identification of capital improvement projects needed to achieve WRD's Strategic Goals. Next is the development of project budgets for the individual capital improvement projects. Third is the preparation of a schedule associated with each project. Comparing the project budgets and schedules with the availability of human resources and other considerations, a five-year CIP schedule and budget outlay is revealed. Finally, the sources of funding for each capital improvement project are identified and an annual CIP budget is developed for each of the 5 years in the CIP plan.

Program Categories

For ease of use, the CIP plan is organized into five (5) general program categories. The program categories are as follows:

- Water Independence Now (WIN)
- Regional Water Independence Program
- Basin Management Projects
- Groundwater Quality Protection and Remediation
- Facilities Management, Maintenance, and Repair

Each program category is discussed within this document and includes a specific list of capital improvement projects that are needed to complete the objectives of the program and the strategic goals of the organization. Every capital improvement project is summarized in a dedicated worksheet within this document. The project worksheets include a project description, operating impacts discussion, prior year project highlights, projected five-year capital improvement project cost information and estimated funding schedule.

The CIP accounts for all capital projects that meet one or more of the following criteria:

- Total project cost exceeding $10,000.
- Creates a new asset.
- Significantly increases the physical output or service capacity of an existing asset.
- Significantly lowers associated operating costs for an existing asset.
- Significantly extends the useful life of an existing asset.
- Improves the quality of the output of an existing asset.

Sources of Funding

WRD has a variety of funding sources available for capital improvement projects: Existing Unspent Debt, Outside Funding, PayGo, Reserves, or Future Debt / Future Grants. The tables within this document not only identify the annual CIP budget for each project or program, but also identify the sources of funding for each capital project. The sources of funding include:

- Appropriation of Series 2018 Bond Funds: Funds in this column are already secured through a bond issuance performed in 2018.
- Outside Funding: Funds in this column have already been secured through outsides sources, including state grants and loans or project partnership agreements.
- PayGo / Reserves: Funding in this column will come from WRD's PayGo or various reserve funds.
- Future Debt / Grants: Funding in this column will come from future grant pursuits or additional borrowing.

Grants

The District applies for State and Federal Grant on an ongoing basis. The chart below shows Grants that have either been received or being requested.

Table 46
Grants

Project	Description	Agency	Funding Opportunity Name	Funding Opportunity No.	Type of Funding	Award Amount	Award Date
ARC (GRIP)	2022 WaterSMART Title XVI WIIN Act	USBR	WaterSMART: Title XVI WIIN Act Water Reclamation and Reuse Projects	R22AS00115	Construction	$15,478,307	Aug 22. Funding agreement pending
LVL	"2020 Watersmart Drought Resiliency Grant Program (FY21)"	USBR	WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2021	BOR-DO-20-F002	Construction	$1,500,000	Oct-21. Funding agreement signed May 2022
Regional Brackish	"WIIN Act: Watersmart Desalination Construction (FY21)"	USBR	WaterSMART: Desalination Construction Projects Under the WIIN Act	R21AS00428	Construction	$4,929,000	Aug-21. Funding agreement pending
Brewer Well	Prop 1	DWR	Water Desalination Grant Program		Construction	Requesting: $1.5 million	Submitting grant application Sept 2022

WRD Strategic Goals

The WRD Board of Directors has adopted four strategic goals in order accomplish the District's mission providing, protecting, and preserving safe and sustainable high-quality groundwater. The strategic goals include the following:

- Expand Replenishment Opportunities: WRD will identify and secure new replenishment sources and locations to ensure reliable recharge water for adjudicated pumping allocations and to utilize available storage space for increased local water supply.
- Expand Extraction Capacity: WRD will expand groundwater extraction capacity through remediation, identification of new extraction sites and through incentives for groundwater pumpers.
- Maximize Innovation and Environmental Resiliency: WRD will strive for continued increased efficiency in all treatment and recharge operations and will plan adaptability into new and existing projects.
- Promote Organizational Excellence: WRD will optimize internal operations, continue outreach and engagement with the public, regulators, and elected officials, and will maintain strong financial standing through accurate budgeting and obtainment of funding sources.

The non-financial impacts of each project can be characterized by their achievement of WRD's Strategic Goals. Each of the program categories below include a tabulation of the strategic goals achieved by each project.

Capital Improvement Program Budget
5-Year Outlook by Strategic Program

The five-year CIP budget includes a total of $178.8 million in capital improvement projects. The table below summarizes the projected CIP budget for each of the years between Fiscal Years 2022 and 2026.

Table 47

CIP Budget Five-Year Outlook by Strategic Program

Program/Project	FY 2022 Adopted	FY 2023 Adopted	FY 2024 Adopted	FY 2025 Adopted	FY 2026 Adopted	Total 5-year CIP Budget
Water Independence Now (WIN)	$11,353,249	$13,778,249	$3,593,249	$1,593,249	$1,593,249	$31,911,243
Regional Water Independence Program (WIN4ALL)	3,603,004	4,675,000	2,000,000	5,000,000	3,000,000	18,278,004
Basin Management Projects	4,820,794	1,453,309	505,000	-	-	6,779,103
Groundwater Quality Protection & Remediation	41,434,103	39,920,725	19,871,667	1,100,000	-	102,326,495
Facilities Management, Maintenance & Rehabilitiation	5,516,562	6,033,072	6,716,124	777,815	426,000	19,469,573
TOTAL	**$66,727,711**	**$65,860,354**	**$32,686,040**	**$8,471,063**	**$5,019,249**	**$178,764,417**

The CIP reflects approximately $54.7 million in outside funding from grants and partnerships. In addition, funding sources include $35.1 million remaining from the 2018 bond issuance, $41.3 million from unrestricted reserve funds, and $2.1 million from PayGo funding. It is anticipated that an additional $45.5 million will need to be borrowed in FY 2023 if additional grant opportunities are not identified. The table below summarizes the CIP funding for the five general program categories.

Table 48

CIP Funding by Strategic Program

Program / Project	Appropriation of 2018 Bond Funds	Outside Funds	Paygo Funds	Reserve Funds	Future Debt / Future Grants	Total Project Funding
Water Independence Now (WIN)	$9,757,391	$18,020,000	$-	$4,133,852	$-	$31,911,243
Regional Water Independence Program (WIN4ALL)	1,005,004	4,088,000	-	5,685,000	7,500,000	18,278,004
Basin Management Projects	3,144,103	135,000	-	3,500,000	-	6,779,103
Groundwater Quality Protection & Remediation	16,350,000	32,481,829	-	15,494,666	38,000,000	102,326,495
Facilities Management, Maintenance, and Rehabilitation	**4,853,526**	**-**	**2,130,000**	**12,486,047**	**-**	**19,469,573**
TOTAL	**$35,110,024**	**$54,724,829**	**$2,130,000**	**$41,299,565**	**$45,500,000**	**$178,764,417**

Water Independence Now (WIN) Program

Water Independence Now (WIN) Projects

WRD continues to respond to the ongoing drought with the implementation of its Water Independence Now (WIN) Program to completely eliminate the demand for imported water to replenish the Basins. The WIN program is a series of capital improvement projects that fully utilize stormwater and recycled water sources to replenish the groundwater, resulting in a locally sustainable groundwater supply for WRD's stakeholders. All of the projects within this category are considered non-recurring capital expenses. The financial and non-financial impacts for each project within this category are tabulated below.

Water Independence Now (WIN)		Projected 5-year CIP Budget				
Project	Total 5-year CIP Budget	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
ARCAWTF: Sewer Connection Fee	$ 7,966,243	$ 1,593,249	$ 1,593,249	$ 1,593,249	$ 1,593,249	$ 1,593,249
Leo J Vander Lans Facility: Source Water Supply	$ 1,475,000	$ 475,000	$ 1,000,000	$ -	$ -	$ -
Leo J. Vander Lans Facility: Onsite Inland injection Well	$ 7,450,000	$ 7,050,000	$ 400,000	$ -	$ -	$ -
Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	$ 8,220,000	$ 2,235,000	$ 5,985,000	$ -	$ -	$ -
Dominguez Gap Seawater Intrusion Barrier-Potable Backup Supply	$ 6,800,000	$ -	$ 4,800,000	$ 2,000,000	$ -	$ -
SUBTOTAL	**$ 31,911,243**	**$ 11,353,249**	**$ 13,778,249**	**$ 3,593,249**	**$ 1,593,249**	**$ 1,593,249**

Water Independence Now (WIN)				
Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
ARCAWTF: Sewer Connection Fee	X		X	
Leo J Vander Lans Facility: Source Water Supply	X	X	X	
Leo J. Vander Lans Facility: Onsite Inland injection Well	X	X		
Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	X		X	
Dominguez Gap Seawater Intrusion Barrier-Potable Backup Supply	X		X	

Albert Robles Center (ARC) Advanced Water Treatment Facility (AWTF)

Project Description

The Albert Robles Center (ARC) offsets the use of imported water by providing up to 10,000 acre-feet per year (AFY) of an advanced water treatment facility (AWTF) product water to the Montebello Forebay Spreading Grounds (MSGS). The high-purity AWTF product water allows more tertiary-treated recycled water to be applied to the spreading grounds. Together, a blend of 10,000 AFY of AWTF product water and as much as 61,000 AFY of tertiary-treated recycled water can be conveyed to the MSGS without exceeding permitted values of Recycled Water Concentration for the waters used to recharge the Central Basin through the spreading grounds.

Off-site improvements were required as part of the ARC AWTF project, including the construction of a 16-inch diameter pipeline for disposal of brine concentrate that will be generated by the new treatment facility. This 16-inch diameter brine pipeline connects to an existing Sanitation Districts of Los Angeles County (LACSD) 63-inch diameter sewer pipeline that is located approximately 1,600 feet from the ARC site. The construction of the brine pipeline was completed in February 2017. An agreement for a 10-year payment schedule with the LACSD for a Connection Fee of $15,932,475.12 was entered into in 2019. WRD has 7 annual payments of $1,593,247.51 remaining.

Funding

The CIP budget for Fiscal Years 2022-2026 is $7,966,243. The funds will be drawn from the 2018 Bond Issuance.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

ARC: Brineline Connection Fee	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 1,593,249	$ 1,593,249	$ 1,593,249	$ 1,593,249	$ 1,593,249	$ 7,966,243
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 1,593,249**	**$ 1,593,249**	**$ 1,593,249**	**$ 1,593,249**	**$ 1,593,249**	**$ 7,966,243**

Leo J Vander Lans Advanced Water Treatment Facility: Source Water Supply

Project Description

The Leo J. Vander Lans Advanced Water Treatment Facility (LVL) provides advanced-treated recycled water to the Alamitos Seawater Intrusion Barrier (Barrier). Originally built in 2003, LVL receives tertiary-treated wastewater from the Sanitation Districts of Los Angeles County's (LACSD) Long Beach Water Reclamation Plant (LBWRP) and provides multi-barrier treatment including microfiltration (MF), reverse osmosis (RO) and advanced oxidation process (AOP) with ultraviolet light (UV). In 2014, the expansion of LVL increased its treatment capacity from 3 million gallons per day (mgd) to 8 mgd. LVL has an agreement in place with the Long Beach Water Department (LBWD) for supply of 6,500 AFY of tertiary effluent.

WRD has an allocation of 10,000 AFY of tertiary treated recycled water from the Los Coyotes Water Reclamation Plant (LCWRP), located approximately 6 miles north of the LVL AWTF. This project will analyze the most cost-effective method for increasing the source water supply to the LVL AWTF, investigating opportunities for a direct pipeline between the LCWRP and LVL AWTF, or for interconnecting the tertiary effluent distribution systems of local municipalities between LCWRP and LVL AWTF. Additional studies or preliminary designs are accommodated through the budget.

Funding

The CIP budget for Fiscal Years 2022-2026 is $1,475,000. This funding has been allocated from a combination of the 2018 bond funding and WRD's Water Purchase Carryover & Rate Stabilization Reserves

Operating Impacts

There are no operating impacts at this time

Projected 5-Year CIP

Leo J Vander Lans Facility: Source Water Supply	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 475,000	$ 507,065	$ -	$ -	$ -	$ 982,065
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	492,935	-	-	-	$ 492,935
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 475,000**	**$ 1,000,000**	**$ -**	**$ -**	**$ -**	**$ 1,475,000**

Leo J Vander Lans Advanced Water Treatment Facility: Onsite Inland Injection Well

Project Description

The LVL provides advanced-treated recycled water to the Alamitos Seawater Intrusion Barrier (Barrier). Built in 2003, LVL receives tertiary-treated wastewater from the Sanitation Districts of Los Angeles County's (LACSD) Long Beach Water Reclamation Plant (LBWRP) and provides multi-barrier treatment including microfiltration (MF), reverse osmosis (RO) and advanced oxidation process (AOP) with ultraviolet light (UV). In 2014, the expansion of LVL increased its treatment capacity from 3 million gallons per day (mgd) to 8 mgd. LVL has an agreement in place with the Long Beach Water Department for supply of 6,500 AFY of tertiary effluent.

Currently, LVL production is limited to the Barrier Demand. At specific times of year, there is more tertiary effluent available than demand in the barrier. This project will construct a 2 mgd injection well on site at LVL (inland of the Barrier wells), allowing for up to 2 mgd to be injected into the Central Basin when excess tertiary effluent is available.

Funding

The CIP budget for Fiscal Years 2022-2026 is $7,475,000. A $1,500,000 grant was received from the Pepsi Corporation. Another $1,500,000 grant is anticipated from the United States Bureau of Reclamation (USBR). Additional funding has been allocated from the 2018 bond funding and WRD's reserve fund.

Operating Impacts

This project will improve LVL AWTF operations by allowing more constant operation of the plant due to not being dependent on Barrier operations for LVL AWTF production.

Projected 5-Year CIP

Leo J. Vander Lans Facility: Onsite injection Well Storage/Replenishment	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 809,084	$ -	$ -	$ -	$ -	$ 809,084
Outside Funds	3,000,000	-	-	-	-	$ 3,000,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	3,240,916	400,000	-	-	-	$ 3,640,916
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 7,050,000**	**$ 400,000**	**$ -**	**$ -**	**$ -**	**$ 7,450,000**

Dominguez Gap Seawater Intrusion Barrier: 2nd Recycled Water Connection

Project Description

This project increases the injection of advanced-treated water within the existing Dominguez Gap Seawater Barrier. The system is supplied with advanced-treated water purchased through the Los Angeles Department of Water and Power (LADWP) from the Terminal Island Advanced Water Treatment Plant (TIAWTP). WRD's agreement with LADWP ensures sufficient supply to the Dominguez Gap Seawater Barrier of 7.5 mgd, which is expandable to a maximum of 9.5 mgd. Potable water is also purchased for injection from West Basin Municipal Water District when Barrier demand is above 7.5 mgd. In partnership with LADWP, this project will construct a pipeline from the TIAWTP to a second point of connection within the existing barrier wells in order to inject more recycled water than the existing connection can sustain. The second recycled water connection will allow more product water to be injected into the barrier and reduce reliance on potable water.

Funding

The CIP budget for Fiscal Years 2022-2026 is $8,220,000. Per the water purchase agreement between WRD and LADWP, LADWP will reimburse WRD for the entirety of the capital cost for this project.

Operating Impacts

Increased advanced-treated water capacity at the TIAWTP and WRD's agreement guaranteeing the right to capacity of up to 9.5 mgd decreases WRD's dependence on expensive and unreliable imported water. This project allows for an alternative location for the injection of the advanced-treated water so increased quantities of advanced-treated water can be utilized in the Barrier.

Projected 5-Year CIP

Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	2,235,000	5,985,000	-	-	-	$ 8,220,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 2,235,000**	**$ 5,985,000**	**$ -**	**$ -**	**$ -**	**$ 8,220,000**

Dominguez Gap Seawater Intrusion Barrier: Potable Backup Supply

Project Description

This project increases the injection of advanced-treated water within the existing Dominguez Gap Seawater Barrier. The system is supplied with advanced-treated water purchased through the Los Angeles Department of Water and Power (LADWP) from the Terminal Island Advanced Water Treatment Plant (TIAWTP). WRD's agreement with LADWP ensures sufficient supply to the Dominguez Gap Seawater Barrier of 7.5 mgd, which is expandable to a maximum of 9.5 mgd. Potable water is also purchased for injection from West Basin Municipal Water District when Barrier demand is above 7.5 mgd. In partnership with LADWP, this project will construct a backup supply of potable water from LADWP to the Dominguez Gap Barrier, allowing the use or supplementation of imported water from LADWP if the TIAWTP is unable to provide the agreed upon amount of advanced-treated water.

Funding

The CIP budget for Fiscal Years 2022-2026 is $6,800,000. Per the water purchase agreement between WRD and LADWP, LADWP will reimburse WRD for the entirety of the capital cost for this project.

Operating Impacts

This project will ensure that LADWP can always supply the agreed upon volume of water for Barrier injection, regardless of its makeup of advanced-treated water or potable water. This project allows for an alternative location to provide potable water to the barrier during maintenance or outages at TIAWTP, thus improving reliability of water delivery to the barrier at a cost-effective rate. for the replenishment of the advanced-treated water during barrier maintenance and other barrier outages thus securing the WRD's ability to purchase advanced-treated water at the most cost-effective rate available.

Projected 5-Year CIP

Dominguez Gap Seawater Intrusion Barrier-Potable Backup Supply	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	-	4,800,000	2,000,000	-	-	$ 6,800,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ -**	**$ 4,800,000**	**$ 2,000,000**	**$ -**	**$ -**	**$ 6,800,000**

Regional Water Independence Program (WIN4ALL)

Building upon the sources of WRD's Water Independence Now Program, the District initiated WIN 4 ALL to take advantage of available groundwater storage space to further increase the region's use of sustainable groundwater supplies. WIN 4 ALL is a collection of projects that will allow the utilization of the groundwater aquifers to create a locally sustainable water supply for the Los Angeles Basin Region. The financial and non-financial impacts for each project within this category are tabulated below.

Regional Water Independence Program (WIN4ALL)		Projected 5-year CIP Budget				
Project	Total 5-year CIP Budget	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Hyperion Replenishment Master Plan	$ 426,000	$ 426,000	$ -	$ -	$ -	$ -
Leo J. Vander Lans Facility: Offsite Inland Injection Well	$ 560,000	$ -	$ 560,000	$ -	$ -	$ -
Regional Brackish Water Reclamation Program Feasibility Study	$ 292,004	$ 292,004	$ -	$ -	$ -	$ -
Regional Brackish Desalter Pilot Study & Full Scale Design	$ 15,500,000	$ 2,750,000	$ 2,750,000	$ 2,000,000	$ 5,000,000	$ 3,000,000
Dominguez Gap Seawater Intrusion Barrier- Inland Injection Well Field	$ 500,000	$ 135,000	$ 365,000	$ -	$ -	$ -
Regional Replenishment Resource Development	$ 1,000,000	$ -	$ 1,000,000	$ -	$ -	$ -
SUBTOTAL	**$ 18,278,004**	**$ 3,603,004**	**$ 4,675,000**	**$ 2,000,000**	**$ 5,000,000**	**$ 3,000,000**

Regional Water Independence Program (WIN4ALL)

Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Hyperion Replenishment Master Plan	X	X	X	
Leo J. Vander Lans Facility: Offsite Inland injection Well	X	X	X	
Regional Brackish Water Reclamation Program Feasibility Study		X		X
Regional Brackish Desalter Pilot Study & Full Scale Design		X		X
Dominguez Gap Seawater Intrusion Barrier- Inland Injection Well Field	X	X	X	
Regional Replenishment Resource Development	X		X	X

Hyperion Replenishment Masterplan

Project Description

WRD and LADWP are investigating the potential to collaborate on ways to replenish and pump both the West and Central Groundwater Basins. LADWP has access to the Hyperion Water Reclamation Plant (WRP) as a potential source of replenishment water and is looking to partner with WRD to find reasonable locations to get this water into the Basins. By utilizing the recycled water supply at the Hyperion WRP, which are currently reaching upwards of 200 million gallons per day (mgd), this could be a key component to developing a sustainable groundwater strategy. In order to develop the specific strategy LADWP and WRD must develop and evaluate a comprehensive list of potential project opportunities to meet these sustainable goals.

Funding

The CIP budget for Fiscal Years 2022-2026 is $426,000. WRD and LADWP have a 50/50 cost share for this project as the findings are mutually beneficial to our two agencies.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

Hyperion Replenishment Master Plan	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 213,000	$ -	$ -	$ -	$ -	$ 213,000
Outside Funds	213,000	-	-	-	-	$ 213,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 426,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 426,000**

Leo J Vander Lans Advanced Water Treatment Facility: Offsite Inland Injection Well

Project Description

This project increases water replenishment within the Central Basin through the installation of a new injection well system inland from the existing Alamitos Barrier Project (ABP) for seawater intrusion. The system will be supplied with advanced-treated water produced at the Leo J Vander Lans Advanced Water Treatment Facility (LVL), which can produce up to 8 mgd of advanced-treated water. This project will investigate the feasibility for installing additional inland injection wells for recharging the Central Basin with advanced-treated water offsite from LVL.

Funding

The CIP budget for Fiscal Years 2022-2026 is $560,000. This funding has been allocated from WRD's Water Purchase Carryover & Rate Stabilization Reserves.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

Leo J. Vander Lans Facility: Onsite injection Well Storage/Replenishment	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 809,084	$ -	$ -	$ -	$ -	$ 809,084
Outside Funds	3,000,000	-	-	-	-	$ 3,000,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	3,240,916	400,000	-	-	-	$ 3,640,916
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 7,050,000**	**$ 400,000**	**$ -**	**$ -**	**$ -**	**$ 7,450,000**

Regional Brackish Water Reclamation Program Feasibility Study

Project Description

Within the West Coast Basin, a significant plume (approx. 600,000 acre feet) of high Total Dissolved Solids (TDS) has been trapped due to seawater intrusion and the implementation of the West Coast Seawater Intrusion Barrier. WRD began the Regional Brackish Water Reclamation Program (Program) through the Groundwater Basin's Master Plan to evaluate ways to remediate the basin.

The Feasibility Study evaluates potential siting and technologies for brackish water reclamation facilities within the plume with maximum remediation benefit and the most efficient life cycle cost. At the end of this Feasibility Study WRD and the Stakeholder Group anticipate proceeding forward with partnership agreements determining project specific responsibility followed by CEQA and permitting for the recommended project(s).

Funding

The CIP budget for Fiscal Years 2022-2026 is $292,004. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

Regional Brackish Water Reclamation Program Feasibility Study	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 292,004	$ -	$ -	$ -	$ -	$ 292,004
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 292,004**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 292,004**

Regional Brackish Water Reclamation Program Pilot Study & Full-Scale Design

Project Description

Within the West Coast Basin, a significant plume (approx. 600,000 acre feet) of high Total Dissolved Solids (TDS) has been trapped due to seawater intrusion and the implementation of the West Coast Seawater Intrusion Barrier. WRD began the Regional Brackish Water Reclamation Program (Program) through the Groundwater Basin's Master Plan to evaluate ways to remediate the basin.

Following completion of the feasibility study, WRD will perform a pilot study for the characterization of feedwater quality and development of treatment plant design parameters. The full-scale plant design is anticipated to include well siting and designs, conveyance pipeline alignments, pretreatment needs, reverse osmosis treatment, post treatment needs, and brine disposal. This effort will be distributed between three phases of effort, as noted below:

- Phase 1: Pilot Testing and Water Quality Characterization
- Phase 2: Feedwater and Conveyance Design
- Phase 3: Desalter Detailed Design

Funding

The CIP budget for Fiscal Years 2022-2026 is $15,500,000. Funding has been allocated from WRD's Water Purchase Carryover & Rate Stabilization Reserves and future debt issuance. Outside funding has been awarded from the United States Bureau of Reclamation (USBR) WaterSMART Desalination Program.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

Regional Brackish Desalter Pilot Study & Full Scale Design	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	687,500	687,500	500,000	1,250,000	750,000	$ 3,875,000
Paygo Funds	$ -	$ -	$ -	$ -	$ -	$ -
Reserve Funds	2,062,500	2,062,500	-	-	-	$ 4,125,000
Future Debt / Future Grants	$ -	$ -	$ 1,500,000	$ 3,750,000	$ 2,250,000	$ 7,500,000
Total:	**$ 2,750,000**	**$ 2,750,000**	**$ 2,000,000**	**$ 5,000,000**	**$ 3,000,000**	**$ 15,500,000**

Dominguez Gap Seawater Barrier Inland Injection Well Field

Project Description

This project increases water replenishment within the West Coast Basin through the installation of a new injection well system inland from the existing Dominguez Gap Seawater Barrier. The system will be supplied with local recycled water produced at the Terminal Island Advanced Water Treatment Plant (TIAWTP), which can produce up to 12 mgd of advanced-treated water. WRD's recent agreement with City of Los Angeles Department of Water and Power (LADWP) to provide advanced-treated recycled water and the right to capacity ensures sufficient supply to the Dominguez Gap Seawater Barrier of 7.5 mgd, which is expandable to a maximum of 9.5 mgd. Recent Dominguez Gap Seawater Barrier demands have fluctuated between 4,000 and 9,500 AFY or approximately 4 to 9.5 mgd and therefore surplus advanced-treated recycled water may be available for replenishment. The proposed project will require construction of up to 4 new injection wells and new pipelines in order to replenish advanced-treated water in excess of the Dominguez Gap Seawater Barrier demands.

Funding

The CIP budget for Fiscal Years 2022-2026 is $500,000. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

Increased advanced-treated water capacity at the TIAWTP and WRD's new agreement guaranteeing the right to capacity of up to 9.5 mgd decreases WRD's dependence on imported water. This project allows for an alternative location for the replenishment of the advanced-treated water during barrier maintenance and other barrier outages thus securing the WRD's ability to purchase advanced-treated water at the most cost-effective rate available.

Projected 5-Year CIP

Dominguez Gap Seawater Intrusion Barrier- Inland Injection Well Field	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 135,000	$ 365,000	$ -	$ -	$ -	$ 500,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 135,000**	**$ 365,000**	**$ -**	**$ -**	**$ -**	**$ 500,000**

Regional Replenishment Resource Development

Project Description

As WRD continues to develop a partnership with LADWP and investigates new ways to replenish the West Coast and Central Basins, additional analysis may be needed to further refine or assess the feasibility of certain potential projects and options. Additional work to be done for replenishment development could be, but is not limited to, groundwater modeling, additional design analysis, permit preparation, CEQA analysis, etc. These details and analysis will help WRD to identify and secure additional replenishment to develop more sustainable groundwater basins.

Funding

The CIP budget for Fiscal Years 2022-2026 is $1,000,000. This funding has been allocated from WRD's Water Purchase Carryover & Rate Stabilization Reserves

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

Regional Replenishment Resource Development	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	1,000,000	-	-	-	$ 1,000,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ -**	**$ 1,000,000**	**$ -**	**$ -**	**$ -**	**$ 1,000,000**

Basin Management Program

Basin Management Projects

WRD has been monitoring groundwater quality and water levels in the Basins for over 50 years. Basin Management Projects are those projects that allow for the continuation of the collection of basic information used for groundwater basin management including groundwater level data and water quality data. The financial and non-financial impacts for each project within this category are tabulated below.

Basin Management Projects		Projected 5-year CIP Budget				
Project	Total 5-year CIP Budget	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Regional Groundwater Monitoring Program - Wells	$ 2,037,294	$ 2,037,294	$ -	$ -	$ -	$ -
Regional Groundwater Monitoring Program - Telemetry/SCADA	$ 500,000	$ 500,000	$ -	$ -	$ -	$ -
Deep Nested Well for National Groundwater Monitoring Network	$ 246,000	$ 246,000	$ -	$ -	$ -	$ -
Recycled Water Compliance Monitoring Wells at MFSG	$ 495,809	$ 37,500	$ 453,309	$ 5,000	$ -	$ -
Brewer Well Purchase & Connection to Goldsworthy Desalter	$ 3,500,000	$ 2,000,000	$ 1,000,000	$ 500,000	$ -	$ -
SUBTOTAL	**$ 6,779,103**	**$ 4,820,794**	**$ 1,453,309**	**$ 505,000**	**$ -**	**$ -**

Basin Management Projects				
Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Regional Groundwater Monitoring Program - Wells			X	X
Regional Groundwater Monitoring Program - Telemetry/SCADA			X	X
Deep Nested Well for National Groundwater Monitoring Network			X	X
Recycled Water Compliance Monitoring Wells at MFSG			X	X
Brewer Well Purchase & Connection to Goldsworthy Desalter		X	X	

Regional Groundwater Monitoring Program: Wells

Project Description

The Regional Groundwater Monitoring Program (RGMP) collects groundwater level and groundwater quality data used for groundwater basin management for the Central Basin and West Coast Basin, two of the most utilized urban groundwater basins in the nation. This is achieved through groundwater monitoring, modeling, and planning, which provides the basis to understanding the dynamic changes in the basins. The RGMP currently consists of a network of 347 specialized monitoring wells at 62 locations throughout the District to a maximum depth of nearly 3,000 feet, and WRD staff, comprised of hydrogeologists and engineers, provide the expertise to collect, analyze and report on the groundwater data. WRD uses the data generated by the RGMP to address current and potential water quality issues and groundwater replenishment within the basins. In addition, the RGMP provides flexible management practices to adjust groundwater resources planning as circumstances or conditions warrant. The RGMP has proved valuable as WRD works to implement its Water Independence Now program, maximizing local water sources to replenish, preserve and protect the basins and eliminating its dependence on imported water. To fill in data gap areas, four additional wells are planned over the 5-year CIP.

Funding

The CIP budget for Fiscal Years 2022-2026 is $2,037,294. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

Wells are monitored by WRD staff. The new wells will be folded into the current operations plan which consists of deployment of data loggers, quarterly visits to download the data loggers and collect water levels, and semi-annual visits to collect groundwater samples. In addition, equipment maintenance, repairs, and calibrations are performed.

Projected 5-Year CIP

Regional Groundwater Monitoring Program - Wells (Paramount & Cerritos)	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 2,037,294	$ -	$ -	$ -	$ -	$ 2,037,294
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 2,037,294**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,037,294**

Regional Groundwater Monitoring Program: Telemetry/SCADA

Project Description

The Regional Groundwater Monitoring Program (RGWMP) deploys automated data loggers in each of its 347 monitoring wells to collect, record, and store water levels in the wells every 6 hours so that the District can have accurate information on long-term and short-term water level trends. Water quality data are also collected in many of the data loggers. Obtaining the information is currently laborious, involving field staff to visit each well quarterly, connect the data loggers to handheld devices to download the information, bring the handheld devices back to the office to connect to desktop computers to view and check the information, and then uploaded to the District's sequel server databases. This is a time-consuming task which only provides the data to managers once per quarter although the data are collected 4 times daily. The process also jeopardizes data integrity with all the various handlings by staff and devices. This work will be optimized by connecting the data loggers to a telemetry system so that the recorded data are automatically transmitted to the District daily (versus quarterly) and in one step directly to the sequel servers for rapid access by managers and staff. A feasibility study will be performed to evaluate the most appropriate system for the District, followed by purchase, deployment, and implementation of the system.

Funding

The CIP budget for Fiscal Years 2022-2026 is $500,000. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

Installation of the telemetry system will significantly reduce manual labor efforts by automating the data downloading, processing, and incorporating into sequel servers freeing up staff for other duties. It will allow access to the data much more frequently (daily vs quarterly) proving WRD with near real-time groundwater levels and quality throughout the District for better basin management.

Projected 5-Year CIP

Regional Groundwater Monitoring Program - Telemetry/SCADA	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 500,000**

Deep Nested Monitoring Well for the National Groundwater Monitoring Network

Project Description

WRD was awarded a grant for various groundwater monitoring related activities associated with the National Groundwater Monitoring Network (NGWMN) as administered by the United States Geological Survey (USGS). The grant funds were used to install a deep nested groundwater monitoring well in a key data gap area within the Montebello Forebay. The overall goal of the program is to develop a nationwide, long-term groundwater monitoring framework that could provide information necessary for the planning, management, and development of groundwater resources to meet current and future water needs, and ecosystem requirements with a primary focus on the nation's principal aquifers as defined by the USGS. WRD has a very extensive groundwater monitoring network within one of the most heavily utilized aquifers in California. The data would provide beneficial information for the nationwide evaluation of groundwater resources and help fill a key data gap in the current NGWMN.

Funding

The CIP budget for Fiscal Years 2022-2026 is $246,000. Funding has been allocated from WRD's 2018 Bond issuance and grant funds from the USGS NGWMN.

Operating Impacts

Wells are monitored by WRD staff. The new wells will be folded into the current operations plan which consists of deployment of data loggers, quarterly visits to download the data loggers and collect water levels, and semi-annual visits to collect groundwater samples. In addition, equipment maintenance, repairs, and calibrations are performed.

Projected 5-Year CIP

Deep Nested Well for NGWMN	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 111,000	$ -	$ -	$ -	$ -	$ 111,000
Outside Funds	135,000	-	-	-	-	$ 135,000
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 246,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 246,000**

Recycled Water Compliance Monitoring Wells at the Montebello Forebay Spreading Grounds

Project Description

The Montebello Forebay Spreading Grounds (MFSG) are a County of Los Angeles owned and operated facility in the City of Pico Rivera which the WRD has used since 1959 as a major groundwater recharge facility. Beginning in 1962, the WRD initiated groundwater recharge using treated wastewater, today known as tertiary-treated water or simply recycled water. Recycled water has proven to be a reliable, safe, and cost-effective groundwater recharge source. However, because it originated as wastewater prior to extensive treatment to make it usable again, regulatory agencies including the State Water Resources Control Board – Division of Drinking Water (DDW) and the Los Angeles Regional Water Quality Control Board (RWQCB) require strict permit requirements to ensure its safety. Part of these requirements include monitoring of the groundwater by collecting samples from wells. Due to upcoming new permit requirements, it is anticipated that additional monitoring wells will be needed to comply with modern regulations. Also, 2 of the 6 monitoring wells that WRD currently utilizes have proven to be too shallow as with continuing drought conditions, the water table has dropped below the bottom of the wells and they are now dry and cannot be sampled as required. Therefore, deeper replacement wells will be necessary. The planning of the new monitoring wells is included in this CIP.

Funding

The CIP budget for Fiscal Years 2022-2026 is $495,809. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

Installation of the new wells will require monitoring and sampling by WRD staff in addition to analyzing and reporting on the data collected from the wells.

Projected 5-Year CIP

Recycled Water Compliance Monitoring Wells at MFSG	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 37,500	$ 453,309	$ 5,000	$ -	$ -	$ 495,809
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 37,500**	**$ 453,309**	**$ 5,000**	**$ -**	**$ -**	**$ 495,809**

Brewer Well Addition to Robert W. Goldsworthy Desalter Feed Supply

Project Description

The Robert W. Goldsworthy Desalter was constructed in 2005 to treat 2.5 mgd of brackish groundwater to drinking water standards. The plant was expanded in 2018 to 5.0 mgd production and 80% recovery of water. Since that time, the facility has been derated to 4.0 mgd and 76% water recovery due to significant fouling of the reverse osmosis membrane preventing operation at the original design conditions.

The West Basin Municipal Water District (West Basin) has owned and operated the Brewer Desalter in Torrance, CA since 1994. The facility has reached the end of its useful life and West Basin intends to decommission and demolish the facility. The Brewer production well was installed in 2005 and has 20-30 years of remaining useful life on the asset. The Brewer production well is located less than 250 ft. from the Goldsworthy Desalter.

This project includes purchase of the Brewer production well from West Basin for its use as an additional source of feedwater at the Goldsworthy Desalter to increase the production and water recovery of the facility. The project will include the design and construction of conveyance pipeline from the well to the Goldsworthy Desalter.

Funding

The CIP budget for Fiscal Years 2022-2026 is $3,500,000. This funding has been allocated from WRD's Water Purchase Carryover & Rate Stabilization Reserves.

Operating Impacts

This project will increase the feed water supply to the Goldsworthy Desalter and result in more efficient operations costs associated with energy and chemical.

Projected 5-Year CIP

Brewer Well Purchase	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	2,000,000	1,000,000	500,000	-	-	$ 3,500,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 2,000,000**	**$ 1,000,000**	**$ 500,000**	**$ -**	**$ -**	**$ 3,500,000**

Groundwater Quality Protection & Remediation Program

Groundwater Quality Protection and Remediation are a collection of CIP projects focused on addressing WRD's ongoing effort to address water quality issues that affect WRD projects and the pumpers' facilities. The financial and non-financial impacts for each project within this category are tabulated below.

Groundwater Quality Protection & Remediation		Projected 5-year CIP Budget				
Project	Total 5-year CIP Budget	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Contaminated Site Investigations, Cleanup and Monitoring Wells	$ 1,000,000	$ 32,500	$ 967,500	$ -	$ -	$ -
Perchlorate Remediation Project	$ 4,973,330	$ 4,633,270	$ 340,060	$ -	$ -	$ -
PFAS Remediation Program	$ 61,000,000	$ 27,958,333	$ 22,875,000	$ 10,166,667	$ -	$ -
Well Construction and Rehabilitation Program	$ 1,500,000	$ 1,500,000	$ -	$ -	$ -	$ -
Safe Drinking Water Program - Primary Contaminants (Grants)	$ 2,350,000	$ 2,350,000	$ -	$ -	$ -	$ -
Safe Drinking Water Program - Secondary Contaminants (Loans)	$ 3,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ -	$ -
Safe Drinking Water Program - Disadvantaged Community Projects	$ 28,503,165	$ 3,960,000	$ 14,738,165	$ 8,705,000	$ 1,100,000	$ -
SUBTOTAL	**$ 102,326,495**	**$ 41,434,103**	**$ 39,920,725**	**$ 19,871,667**	**$ 1,100,000**	**$ -**

Groundwater Quality Protection & Remediation				
Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Contaminated Site Investigations, Cleanup and Monitoring Wells		X	X	
Perchlorate Remediation Project		X	X	
PFAS Remediation Program		X	X	
Well Construction and Rehabilitation Program		X	X	
Safe Drinking Water Program - Primary Contaminants (Grants)		X	X	
Safe Drinking Water Program - Secondary Contaminants (Loans)		X	X	
Safe Drinking Water Program - Disadvantaged Community Projects		X	X	

Contaminated Site Investigations, Cleanup & Monitoring Wells

Project Description

WRD's service area contains a large and diverse industrial and commercial base. Consequently, many potential groundwater contamination sources exist within District boundaries. Examples of potential contamination sources include leaking underground storage tanks, petroleum pipeline leaks at refineries and petrochemical plants, and discharges from dry cleaning facilities, auto repair shops, metal works facilities, and others. Such contamination sources already pose or may pose a threat to the drinking water aquifers. Accordingly, WRD established its Groundwater Contamination Prevention Program to minimize or eliminate threats to groundwater supplies.

Over the past few years, WRD has installed groundwater monitoring wells in areas of suspected or known contamination to collect more data to provide regulatory agencies to assist them in targeting responsible parties and develop remediation action plans. Many of these areas do not have funding available for investigations which is why WRD, under its jurisdiction and responsibilities for water quality projection, installs these wells. Three well locations in Vernon related to perchlorate in groundwater lead to the state granting WRD over $7 million to investigate and cleanup this contamination (see next CIP project on Perchlorate Remediate Project). Similar wells in Santa Fe Springs have assisted the U.S. Environmental Protection Agency in their oversight of the Omega Superfund Site. For the current CIP, the WRD has identified other areas in the basin that need additional monitoring wells to evaluate the nature and extent of threatening contaminants, including solvents in groundwater related to the Anadite site in South Gate, deep hexavalent chromium in Los Angeles, and other areas. Funding for this program will allow installation of wells in key locations with the intent of eventually finding the responsible parties to clean up their contamination.

Funding

The CIP budget for Fiscal Years 2022-2026 is $1,000,000. Funding has been allocated from WRD's 2018 Bond issuance.

Operating Impacts

Installation of the wells will require routine sampling, laboratory analysis, evaluation of the data, and reporting.

Projected 5-Year CIP

Contaminated Site Investigations, Cleanup and Monitoring Wells	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 32,500	$ 967,500	$ -	$ -	$ -	$ 1,000,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 32,500**	**$ 967,500**	**$ -**	**$ -**	**$ -**	**$ 1,000,000**

Perchlorate Remediation in the Los Angeles Forebay Project

Project Description

The District has been investigating a perchlorate groundwater plume with the assistance of various regulatory agencies in association with our Los Angeles Forebay Task Force. The groundwater impacts are located in a disadvantaged community within a deep regional aquifer system currently utilized by various water purveyors in the Los Angeles Forebay. The perchlorate concentrations are among the highest in California. The WRD has identified a "hot spot" that represents a substantial threat to the Central Groundwater Basin and will require treatment to reduce the threat to a local groundwater source within the Los Angeles Forebay region of the Central Groundwater Basin. A responsible party (RP) has not been identified by either the Department of Toxic Substances Control (DTSC) or the Los Angeles Regional Water Quality Control Board (LARWQCB).

Funding

The CIP budget for Fiscal Years 2022-2026 is $4,973,330. Funding for 80% of this project has been obtained from the Proposition 1 Groundwater Grant being administered by the State Water Resources Control Board (SWRCB). The remainder is drawn from WRD's Water Purchase Carryover & Rate Stabilization Reserves.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

Perchlorate Remediation Project	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ -	$ -	$ -	$ -	$ -	$ -
Outside Funds	3,706,616	272,048	-	-	-	$ 3,978,664
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	926,654	68,012	-	-	-	$ 994,666
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 4,633,270**	**$ 340,060**	**$ -**	**$ -**	**$ -**	**$ 4,973,330**

PFAS Remediation Program

Project Description

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals, which include perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), and perfluorobutane sulfonic acid (PFBS), that have been manufactured and used in a variety of industries around the globe and the region since the 1940s. The State Water Resource Control Board's Division of Drinking Water (DDW) established Response Levels (RLs) of 10 parts per trillion (ppt) for PFOA, 40 ppt for PFOS, and 5,000 ppt for PFBS. Assembly Bill 756, codified as Health and Safety Code Section 116378 which became effective January 1, 2020, requires that community water systems, including groundwater pumpers, either notify their customers of PFAS detections exceeding RLs or remove from service drinking water sources with PFAS exceeding RLs. In response, the WRD Board of Directors established the PFAS Remediation Program on August 20, 2020, to provide either grants for water producers (e.g., groundwater pumpers) to install their own treatment systems (referred to as Funding Support Projects), or for WRD to design and construct treatment systems for the pumpers (referred to as Turnkey Projects) to remediate impacted production wells.

Funding

The CIP budget for Fiscal Years 2022-2026 is $61,000,000. Funding for this program is derived from 2018 Bond issuance, various reserve funds, and future borrowing.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

PFAS Remediation Program	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	$ 15,000,000	$ -	$ -	$ -	$ -	$ 15,000,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	8,000,000	-	-	-	-	$ 8,000,000
Future Debt / Future Grants	4,958,333	22,875,000	10,166,667	-	-	$ 38,000,000
Total:	**$ 27,958,333**	**$ 22,875,000**	**$ 10,166,667**	**$ -**	**$ -**	**$ 61,000,000**

Well Construction & Loan Program

Project Description

The Water Replenishment District of Southern California ("WRD" or "District") has developed a Well Construction and Rehabilitation Loan Program (Program) to assist groundwater producers within its service area maintain or increase their groundwater pumping capabilities. This Program can improve the producers' ability to optimize their groundwater rights and reduce their reliance on any imported water that they may purchase instead of producing groundwater. Nearly a half million acre feet of allowable extraction has not been produced over the last 10 years, partially due to problems with wells, well capacity, and water quality. The purpose of this Program is to assist groundwater producers to reach their total extraction rights, to reduce the need for imported water, and to ensure system reliability, and to better utilize the storage capability of the basins.

Funding

The CIP budget for Fiscal Years 2022-2026 is $1,500,000. Funds will be drawn from Well Rehabilitation & Construction Reserve.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

Well Rehabilitation and Construction Program - Signal Hill	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	-	-	-	-	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	1,500,000	-	-	-	-	$ 1,500,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 1,500,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,500,000**

Safe Drinking Water Program: Primary Contaminants (Grants)

Project Description

The Safe Drinking Water Program (Program) provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells. The Program offers two options: grant assistance and loan assistance to basin pumpers for wellhead treatment to remove contaminants and improve water quality. The grant assistance program provides treatment for removing groundwater contaminants from man-made sources (e.g., Volatile Organic Compounds). Since the Program's inception, the District has funded 13 grants. This CIP project is intended to cover the costs associated with Grant Funded Projects only.

The District Board approved three wellhead treatment system projects for FY 16-17, including Lynwood, Huntington Park, and CA American Water Arlington Well. The wellhead treatment system at all three wells will consist of a complete granular-activated carbon (GAC) filtration system built within the boundaries of the existing well sites owned and operated by the water systems. The District will take the lead on procurement and installation of the treatment facilities. However, operation, maintenance, and all permits remain the responsibility of the water system.

In 2020, WRD entered into an agreement with the City of Lomita to fund $2,000,000 towards the City's Well 5 treatment project consisting of GAC treatment for benzene. The City is taking the lead on the design and construction of the system and WRD funding will be issued at successful completion of the construction project.

Funding

The CIP budget for Fiscal Years 2022-2026 is $2,350,000. Funding for completion of three construction projects has been allocated from WRD's 2018 Bond issuance. Funding for the City of Lomita is identified from WRD's Safe Drinking Water Reserve Funds.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

Safe Drinking Water Program - Primary Contaminants (Grants)	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	350,000	-	-	-	-	$ 350,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	2,000,000	-	-	-	-	$ 2,000,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 2,350,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,350,000**

Safe Drinking Water Program: Secondary Contaminants (Loans)

Project Description

The Safe Drinking Water Program (Program) provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells. The Program offers two options: grant assistance and loan assistance to basin pumpers for wellhead treatment to remove contaminants and improve water quality. The grant assistance program provides treatment for removing groundwater contaminants from man-made sources (e.g., Volatile Organic Compounds). The loan assistance program provides ten-year, zero-interest loans for water treatment to remove or reduce to compliance standards groundwater contaminants from natural sources (e.g., iron, manganese, and arsenic). Since the Program's inception, the District has funded four loans. This CIP project is intended to fund the initial value of the loan, with repayment made over a 10-year period.

Funding

The CIP budget for Fiscal Years 2022-2026 is $3,000,000. Funds will be drawn from the Safe Drinking Water Reserve Funds.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

Safe Drinking Water Program - Secondary Contaminants (Loans)	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	-	-	-	-	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	1,000,000	1,000,000	1,000,000	-	-	$ 3,000,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ -**	**$ -**	**$ 3,000,000**

Safe Drinking Water: Disadvantaged Community Program

Project Description

As an extension of the District's Safe Drinking Water Program, the District approved the creation of the Safe Drinking Water Disadvantage Communities (DAC) Program. The goal of this program is to assist water systems located in disadvantaged communities within the District's service area with state and federal funding to address the issues

related to their drinking water wells. The focus of the program is to provide technical assistance and extensive outreach to help the systems secure funding that is set aside specifically for disadvantaged communities.

Funding

The CIP budget for Fiscal Years 2022-2026 is $28,503,165. While WRD will advance the funds required for the delivery of these projects, no project will be performed until outside funding has been approved by the granting authority.

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

Safe Drinking Water Program - Disadvantaged Community Projects	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	-	-	-	-	$ -
Outside Funds	3,960,000	14,738,165	8,705,000	1,100,000	-	$ 28,503,165
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 3,960,000**	**$ 14,738,165**	**$ 8,705,000**	**$ 1,100,000**	**$ -**	**$ 28,503,165**

Facilities Management, Maintenance & Repair Projects

Over the years, WRD has made a significant investment in facilities related to groundwater replenishment and groundwater quality improvements. Facilities Management, Maintenance, and Rehabilitation are required to ensure that the intended lifecycle of each asset is achieved, and to extend the original life expectancy of the infrastructure. The financial and non-financial impacts for each project within this category are tabulated below.

Facilities Management, Maintenance, and Rehabilitation		Projected 5-year CIP Budget				
Project	Total 5-year CIP Budget	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Operations and Storage Annex Facility Project	$ 2,800,000	$ 627,536	$ 1,500,000	$ 672,464	$ -	$ -
Energy Management Plan Study and Implementation	$ 300,000	$ -	$ 300,000	$ -	$ -	$ -
WRD Office Building Improvements	$ 3,600,000	$ 50,000	$ 50,000	$ 3,400,000	$ 50,000	$ 50,000
Albert Robles Center AWTF Upgrades	$ 871,545	$ 371,545	$ 125,000	$ 125,000	$ 125,000	$ 125,000
Leo J Vander Lans AWTF Upgrades	$ 5,010,434	$ 2,606,434	$ 2,026,000	$ 126,000	$ 126,000	$ 126,000
Goldsworthy Desalter Upgrades	$ 926,545	$ 426,545	$ 125,000	$ 125,000	$ 125,000	$ 125,000
Membrane and UV Lamp Replacements	$ 4,774,042	$ 841,000	$ 1,313,568	$ 2,267,660	$ 351,815	$ -
General Engineering (Labor, overhead, legislative, legal)	$ 1,187,008	$ 593,504	$ 593,504	$ -	$ -	$ -
SUBTOTAL	**$ 19,469,573**	**$ 5,516,562**	**$ 6,033,072**	**$ 6,716,124**	**$ 777,815**	**$ 426,000**

Facilities Management, Maintenance, and Rehabilitation				
Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Operations and Storage Annex Facility Project				X
Energy Management Plan Study and Implementation			X	X
WRD Office Building Improvements				X
Albert Robles Center AWTF Upgrades			X	
Leo J Vander Lans AWTF Upgrades			X	
Goldsworthy Desalter Upgrades			X	
Membrane and UV Lamp Replacements			X	
General Engineering (Labor, overhead, legislative, legal)	X	X	X	X

Operations & Storage Annex Facility Project

Project Description

The District owns a 2.3-acre parcel located at 3919 Paramount Blvd (Field Operations and Storage Annex Project) in the city of Lakewood. The District intends to erect a pre-manufactured building on the site for the purposes of storage of testing and sampling equipment, miscellaneous supplies, and fleet parking. The District has previously leased off-site space for these uses since moving into 4040 Paramount Boulevard, Lakewood, CA. Due to its unique proximity to the District and ability to solve WRD's immediate need for additional storage space and future areas for growing inventory of spare and replacement parts for the District's existing facilities, this location is ideal for expanding the District's facilities.

Funding

The CIP budget for Fiscal Years 2022-2026 is $2,800,000. This funding has been allocated from a combination of the 2018 bond funding and WRD's Water Purchase Carryover & Rate Stabilization Reserves

Operating Impacts

This project is an important piece of the District's operations overseeing the health of the two basins as well operating and maintaining three distinct treatment facilities.

Projected 5-Year CIP

Operations and Storage Annex Facility Project	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	627,536	-	-	-	-	$ 627,536
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	1,500,000	672,464	-	-	$ 2,172,464
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 627,536**	**$ 1,500,000**	**$ 672,464**	**$ -**	**$ -**	**$ 2,800,000**

Energy Management Plan Study

Project Description

WRD has taken the initiative to develop a strategic approach to identifying and minimizing the District's Green House Gas (GHG) footprint. This effort will entail identifying all of WRD's existing electrical demands and potential optimization efforts.

Funding

The CIP budget for Fiscal Years 2022-2026 is $300,000. This funding has been allocated from the 2018 bond issuance.

Operating Impacts

None at this time.

Projected 5-Year CIP

Energy Management Plan Study	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	300,000	-	-	-	$ 300,000
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ -**	**$ 300,000**	**$ -**	**$ -**	**$ -**	**$ 300,000**

WRD Office Building Improvements

Project Description

The District headquarters building, located at 4040 Paramount Blvd in the city of Lakewood, upkeep and maintenance needs are outlined in various phases and projects:

- The Roof Replacement Project
- The HVAC Improvements Project: includes replacement of two HVAC units and automation upgrades
- Four additional Electrical Vehicle (EV) charging stations

Funding

The CIP budget for Fiscal Years 2022-2026 is $3,600,000. This funding has been allocated from a combination of PayGo and WRD's Water Purchase Carryover & Rate Stabilization Reserves

Operating Impacts

There are no operating impacts currently.

Projected 5-Year CIP

WRD Office Building Improvements	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	-	-	-	-	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	50,000	50,000	50,000	50,000	50,000	$ 250,000
Reserve Funds	-	-	3,350,000	-	-	$ 3,350,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 50,000**	**$ 50,000**	**$ 3,400,000**	**$ 50,000**	**$ 50,000**	**$ 3,600,000**

Albert Robles Center AWTF Upgrades

Project Description

The Albert Robles Center (ARC) offsets the use of imported water by providing up to 10,000 acre-feet per year (AFY) of an advanced water treatment facility (AWTF) product water to the Montebello Forebay Spreading Grounds (MSGS). The high-purity AWTF product water allows more tertiary-treated recycled water to be applied to the spreading grounds. Together, a blend of 10,000 AFY of AWTF product water and as much as 61,000 AFY of tertiary-treated recycled water can be conveyed to the MSGS without exceeding permitted values of Recycled Water Concentration for the waters used to recharge the Central Basin through the spreading grounds.

The construction project was completed in 2019. While a majority of new system components were installed, projects are still anticipated that will extend the useful life of the equipment, reduce operations costs, or respond to changing regulatory requirements. Projects will be identified as needed, as well as through continued investment in WRD's Asset Management System.

Funding

The CIP budget for Fiscal Years 2022-2026 is $871,545. This funding has been allocated from a combination of the 2018 bond funding and PayGo.

Operating Impacts

Continued investment in R&R of the facility will reduce unplanned shutdowns and downtime, increase plant efficiency, and optimize the performance of the treatment process.

Projected 5-Year CIP

ARC: Advanced Water Treatment Facility (AWTF)	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	246,545	-	-	-	-	$ 246,545
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	125,000	125,000	125,000	125,000	125,000	$ 625,000
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 371,545**	**$ 125,000**	**$ 125,000**	**$ 125,000**	**$ 125,000**	**$ 871,545**

Leo J. Vander Lans AWTF Upgrades

Project Description

This project will address improvements associated with aging infrastructure at the treatment facility. Since the initial project completion in 2003, assets have begun to age through normal operational use over time. While a majority of new system components were installed during the expansion in 2015, assets from the initial plant construction have not all been updated. WRD is implementing an aggressive Rehabilitation and Replacement (R&R) program that will include upgrades to equipment, Supervisory Control and Data Acquisition (SCADA) hardware and software, and implementation of an asset management program for the facility. Examples of projects include the microfiltration filtrate welded steel tank which requires refurbishment to extend its useful life. As many of these assets have a high consequence of failure, conducting a condition assessment and planning asset replacement will ensure the facility remains operational and not subject to shutdown associated with asset failure. Projects anticipated during the 5-year period include the following:

- LVLAWTF SCADA Upgrades
- MF Filtrate Welded Steel Tank Rehabilitation
- DAF System Analysis & Rehabilitation
- Replacement and Rehabilitation Condition Assessment
- LVL Asset Management Program

Additional Projects will be identified as needed, as well as through continued investment and roll-out of WRD's Asset Management System.

Funding

The CIP budget for Fiscal Years 2022-2026 is $5,010,434. This funding has been allocated from a combination of PayGo, the 2018 bond issuance, and WRD's Water Purchase Carryover & Rate Stabilization Reserves.

Operating Impacts

Continued investment in R&R of the facility will reduce unplanned shutdowns and downtime, increase plant efficiency, and optimize the performance of the treatment process.

Projected 5-Year CIP

Leo J Vander Lans Upgrades	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	1,741,917	803,976	-	-	-	$ 2,545,893
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	126,000	126,000	126,000	126,000	126,000	$ 630,000
Reserve Funds	738,517	1,096,024	-	-	-	$ 1,834,541
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 2,606,434**	**$ 2,026,000**	**$ 126,000**	**$ 126,000**	**$ 126,000**	**$ 5,010,434**

Robert W. Goldsworthy Desalter Upgrades

Project Description

The expansion project was completed in 2018. While a majority of system components were replaced and/or upgraded, assets from the initial plant remained. Examples include critical infrastructure such as the reverse osmosis (RO) system high pressure pump, finish product water pumps and manifold piping, fiberglass FRP grating, etc. As many of these assets have a high consequence of failure, planning asset replacement will ensure the facility remains operational and not subject to shutdowns associated with asset infrastructure failure.

Projects will be identified as needed, as well as through continued investment and roll-out of WRD's Asset Management System.

Funding

The CIP budget for Fiscal Years 2022-2026 is $926,545. This funding has been allocated from a combination of PayGo, the 2018 bond issuance, and WRD's Water Purchase Carryover & Rate Stabilization Reserves.

Operating Impacts

The City of Torrance will continue to operate the Desalter and work closely with WRD to monitor existing asset condition, performance, and operations.

Projected 5-Year CIP

Goldsworthy Desalter Upgrades	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	246,545	-	-	-	-	$ 246,545
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	125,000	125,000	125,000	125,000	125,000	$ 625,000
Reserve Funds	55,000	-	-	-	-	$ 55,000
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 426,545**	**$ 125,000**	**$ 125,000**	**$ 125,000**	**$ 125,000**	**$ 926,545**

Membrane & UV Lamp Replacements

Project Description

All three of WRD's facilities utilize advanced treatment technology. The Goldsworthy Desalter uses reverse osmosis (RO) membrane for desalting groundwater, while the LVL AWTF and ARC AWTF use microfiltration (MF), RO, and advanced oxidation (ultraviolet light (UV) and oxidant). MF membranes have a life expectance of 7-10 years in this application, RO have an expected lifecycle of 5-10 years, and UV lamps are required to be replaced by the permit every 12,000 hours (approximately 18 months). Because these replacement costs can be predicted based on performance, and are high-dollar items, WRD tracks their costs separately from the individual facilities.

Funding

The CIP budget for Fiscal Years 2022-2026 is $4,774,042. Funding will draw from the Equipment Replacement Reserve Fund.

Operating Impacts

Replacing MF and RO membrane often results in improved efficiency, either through better produce water quality, less frequent cleaning requirements, or reduced energy consumption. UV lights are replaced every 12,000 hours regardless of performance as this is required by the operating permit.

Projected 5-Year CIP

Membranes and UV Lamp Replacements	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	-	-	-	-	-	$ -
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	841,000	1,313,568	2,267,660	351,815	-	$ 4,774,042
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 841,000**	**$ 1,313,568**	**$ 2,267,660**	**$ 351,815**	**$ -**	**$ 4,774,042**

General Engineering (Labor, Overhead, Legislative, Legal)

Project Description

The General Engineering “project” is a way to capture all of the overhead/soft costs associated with completing projects within the CIP. Previously WRD has budgeted these expenses within the CIP projects themselves but has now decided to make sure all time working on projects is being accurately accounted for within this line item. This CIP line item also accounts for specialty consultants that help WRD with grant reporting, legislative analysis and general support services that support numerous projects within the CIP.

Funding

The CIP budget for Fiscal Years 2022-2026 is $1,187,008. Funding will draw from the 2018 Bond Issuance.

Operating Impacts

There are no operating impacts at this time.

Projected 5-Year CIP

General Engineering (Labor, overhead, legislative, legal)	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026	Total 5-year CIP Budget
Appropriation of 2018 Bond Funds	593,504	593,504	-	-	-	$ 1,187,008
Outside Funds	-	-	-	-	-	$ -
Paygo Funds	-	-	-	-	-	$ -
Reserve Funds	-	-	-	-	-	$ -
Future Debt / Future Grants	-	-	-	-	-	$ -
Total:	**$ 593,504**	**$ 593,504**	**$ -**	**$ -**	**$ -**	**$ 1,187,008**

Glossary of Terms

Acre-foot (AF): The volume of water necessary to cover one acre to a depth of one foot, equal to 325,900 gallons. An acre-foot is the amount of water used by two households in one year.

Aquifer: The geologic formation of sand and gravel where groundwater is stored and can be easily pumped out by wells.

Contamination: An impurity in air, soil or water that can cause harm to human health or the environment.

Desalination: A process that converts seawater or brackish water to fresh water.

Discharge: To expel water that naturally moves from an aquifer to a surface stream or lake.

Drought: An extended period of dry weather.

Groundwater: Water under the ground's surface. It fills up the pore spaces(voids) between grains of gravel, sand, silt, or clay, and is a common source of water for drinking and irrigation.

Groundwater flow: The movement of groundwater beneath the earth's surface.

Imported water: Water that the WRD purchases from the Colorado River or Northern California to put into the groundwater basins to supplement insufficient local rainfall.

Overdraft: Groundwater extractions typically exceed the natural inflows into the groundwater basin.

Precipitation: Stage of the water cycle when water vapor molecules become too large and heavy to remain in the atmosphere and fall to the ground in the form of rain, snow, sleet, hail, etc.

Recharge: To refill the groundwater basin by infiltrating rain water, imported water, or recycled water down into the aquifers.

Recycled Water: Water that has been collected after prior use, then highly treated at wastewater treatment plants so that it can be safely used again, such as for groundwater recharge.

Runoff: Water that does not become absorbed by the earth but flows across the surface of the land into a stream or lake.

Treatment: The process in which water is cleaned and purified.

Water Cycle: The never-ending movement of water through the atmosphere, ground and back again; also called the hydrologic cycle.

Water Table: The top of the saturation zone.

Well: A hole or shaft drilled into the earth to pump water to the surface.

Wheeling: Use of conveyance facilities by parties other than the owner.

WRD: The Water Replenishment District of Southern California, an agency responsible for managing two of the most utilized groundwater basins in Southern California . These basins, the Central and West Coast, extend 420 square-miles through southern Los Angeles County and are among the region's most reliable natural water resources

Acronyms

ABAC	Audit and Budget Advisory Committee
ACWA/JPIA	Association of California Water Agencies/Joint Power Insurance Authority
AF	Acre-Feet (equivalent to 325,851 gallons)
AFY	Acre-Feet per Year
AGB	Alamitos Gap Barrier
AGWT	American Groundwater Trust
AM	Asset Management
AOP	Advanced oxidation using hydrogen peroxide
ARC	Albert Robles Center for Water Recycling and Environmental Learning
AWPF	Advanced Water Purification Facility
AWTF	Advanced Water Treatment Facility
AWWA	American Water Works Association
AWWARF	American Water Works Association Research Foundation
BAC	Budget Advisory Committee
BDOC	Biodegradable dissolved organic carbon
BOD	Board of Directors
CalPERS	California Public Employee Retirement System
Caltrans	California Department of Transportation
CAR	Compliance Assessment Report
CASGEM	California Statewide Groundwater Elevation Monitoring
CBMWD	Central Basin Municipal Water District
CBWCB	Central Basin and West Coast Basin
CDIR	California Department of Industrial Relations
CDWR	California Department of Water Resources
CEPRD	Coalition for Environmental Protection, Restoration, and Development
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CMFA	California Municipal Finance Authority
CMMS	Computerized Maintenance Management System
COE	Corp. of Engineers
COP	Certificates of Participation
CSDLAC	County Sanitation Districts of Los Angeles County
CSR	Cost of Service Report
CWF	Clean Water Fund
CWSC	California Water Service Company
CWSRF	California Clean Water State Revolving Fund
DAC	Disadvantaged Communities
DAF	Dissolved Air Flotation
DDW	Division of Drinking Water
DGB	Dominguez Gap Barrier
DTS	Data & Technology Services
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
E-MFRES	Enhanced-Montebello Forebay Recharge Enhancement Study
EAM	Enterprise Asset Management
EAMS	Electronic Adjudication Management System
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Environmental Science Associates
ESR	Engineering Survey and Report
ESRI	Environmental Systems Research Institute
FAT	Fully Advanced Treated
FCD	Flood Control District
FDIC	Federal Deposit Insurance Corporation
FTE	Full -Time Equivalent
FY	Fiscal Year

GAAP Generally Accepted Accounting Principles
GAAS Generally Accepted Auditing Standards
GASB Government Accounting Standards Board
GBMP Groundwater Basin Master Plan
GBOP Groundwater Basin Optimization Pipeline
GDP Gross Domestic Product
GFOA Government Finance Officers Association
GIS Geographic Information System
GLAC Greater Los Angeles County
GRAC Groundwater Resources Association of California
GRIP Groundwater Reliability Improvement Program
GRRR Groundwater Replenishment using Recycled Water Regulations
GSWC Golden State Water Company
GW Groundwater
GWAM Groundwater Augmentation Model
GWMA Groundwater Management Area

HR Human Resources
HVAC Heating, Ventilation and Air Conditioning

ICA Independent Cities Association
ICP Interconnection Pipeline Improvements
IRWMP Integrated Regional Water Management Plan
IT Information Technology

JPA Joint Powers Authority
JWPCP Joint Water Pollution Control Plan

LABC Los Angeles Business Council
LABOS Los Angeles Bureau of Sanitation
LACDPW Los Angeles County Department of Public Works (Flood Control)
LACFCD Los Angeles County Flood Control District
LACSD Los Angeles County Sanitation Districts
LADWP City of Los Angeles Department of Water and Power
LAIF Local Agency Investment Fund
LAMS4 Los Angeles County Municipal Stormwater Permit
LARWQCB Los Angeles Regional Water Quality Control Board
LASAN Los Angeles Sanitation
LBWD City of Long Beach Water Department
LBWRP Long Beach Water Reclamation Plant
LBWTP Long Beach Waste Treatment Plant
LEED Leadership in Energy & Environmental Design
LGCR Local Government Compensation Report
LJVWTF Leo J. Vander Lans Water Treatment Facility
LRP Local Resources Program
LUST Leaking Underground Storage Tank
LVL Leo J. Vander Lans

MAR Managed Aquifer Recharge
MF Microfiltration
MFI Modified Fouling Index
MFRES Montebello Forebay Recharge Enhancement Study
MFSG Montebello Forebay Spreading Grounds
MFSGOM Montebello Forebay Spreading Grounds Operational Model
MGD Million Gallons per Day
MISAC Municipal Information Systems Association of California
MODFLOW MODular three-dimensional finite-difference groundwater FLOW model
MOU Memorandum of Understanding
MSGBWM Main San Gabriel Basin Watermaster
MWD Metropolitan Water District of Southern California

N/A Not Applicable
NCWUP Non-Consumptive Water Use Permit
ND Negative Declaration
NEPA National Environmental Policy Act
NGWA National Groundwater Association
NGWN National Groundwater Monitoring Network
NPV Net Present Value
NSGIS NorthSouth Geographic Information System

O & M Operation and Maintenance
OA Owner's Agent
OCWD Orange County Water District
OE Owner's Engineers
OPEB Other Post-Employment Benefits

PCE	Perchloroethylene Pollution
PEIR	Programmatic Environmental Impact Report
PFAS	Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
QA	Quality Assurance
QC	Quality Control
RA	Replenishment Assessment
R&M	Repairs & Maintenance
RF	Replenishment Fund
RFB	Request for Bid
RFP	Request for Proposal
RFQ	Request for Quote
RGMP	Regional Groundwater Monitoring Program
RGWMR	Regional Groundwater Monitoring Report
RHSG	Rio Hondo Spreading Grounds
RO	Reverse-osmosis
RTS	Readiness-to-Serve
RW	Recycled Water
RWQCB	LA California Regional Water Quality Control Board – Los Angeles
SAT	Soil Aquifer Treatment
SCADA	Supervisory Control and Data Acquisition
SCWC	Southern California Water Committee
SDLAC	Sanitation Districts of Los Angeles County
SDWP	Safe Drinking Water Program
SGCBSG	San Gabriel Coastal Basin Spreading Grounds
SGMA	Sustainable Groundwater Management Act
SGSG	San Gabriel Spreading Grounds
SGRWM	San Gabriel River Watermaster
SJC	San Jose Creek
SJCWRP	San Jose Creek Water Reclamation Plant
SMBGSA	Santa Monica Basin Groundwater Sustainability Agency
SRF	State Revolving Fund
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TBD	To be determined
TCE	Trichloroethylene
TDS	Total Dissolved Solids
TITP	Terminal Island Treatment Plant
TIWRP	Terminal Island Water Reclamation Plant
TOC	Total organic compounds
UAL	Unfunded Accrued Liability
UCMR	Unregulated Contaminant Monitoring Rule
UPS	Uninterruptible Power Supply
USACE	U.S. Army Corps of Engineers
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
USFW	United States Fish & Wildlife
USGS	United States Geological Survey
UV	Ultraviolet
VOC	Volatile organic compound
WAS	Water Augmentation Study
WBMWD	West Basin Municipal Water District
WCBBP	West Coast Basin Barrier Project
WCS	Water Compliance Solutions
WDR	Waste Discharge Requirement
WEF	Water Education Foundation
WET	Water Education for Teachers
WE&T	Water Environment & Technology
WEFTEC	Water Environment Federation Technical Exhibition and Conference
WIN	Water Independence Now Program
WN	Whittier Narrows
WNOU	Whittier Narrows Operable Unit
WRD	Water Replenishment District of Southern California
WRP	Water Reclamation Plant
WWTS	Wastewater Treatment Surcharge
WY	Water Year

Acknowledgement

The District's management team and the Finance Department acknowledge the leadership and dedication of the Board of Directors, as well as the cooperation, assistance and support of the District staff in addressing the financial challenges of Fiscal Year 2022 and the preparation of the Fiscal Year 2023 budget. Many staff members throughout the District contributed a high degree of commitment and professionalism in the production of this document. Through their combined efforts, the issuance of this report has been made possible, and their collective dedication is both acknowledged and sincerely appreciated.

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