WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

Achievements in Water Independence

Fiscal Year 2021 Annual Budget

WRD
WATER REPLENISHMENT DISTRICT

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Mission Statement, Strategic Goals and Standing Committees

Mission Statement

To provide, protect and preserve safe and reliable 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. The five member Board is elected by the voting public every four years and accomplishes its stated goals and objectives through a Committee structure which is responsible for and reports to the Board of Directors and which also delegates certain of its authorities to staff in the interest of efficiency, stability and prudent management for completion.

Strategic Goals

The Board of Directors' Strategic Goals for the District and staff are to:

- Expand Replenishment Opportunities
- Expand Extraction Capacity
- Maximize Innovation and Environmental Resiliency
- Promote Organizational Excellence

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; and,
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 on all capital improvement program-related projects and issues related to the same.

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; and
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; and
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;

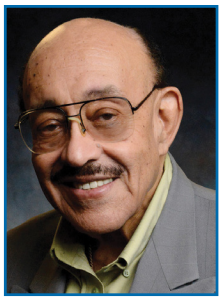
5. Engineering aspects of all replenishment water projects;

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

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 of Directors

Division 1



Willard H. Murray, Jr.
Secretary

Division 2

Rob Katherman
Treasurer

Division 3

John D. S. Allen
Director

Division 4

Sergio Calderon
Vice President

Division 5

Vera Robles DeWitt
President

Management Team

Robb Whitaker, P.E. | *General Manager*
Rob Beste | *Assistant General Manager/Chief Operating Officer*
Ted Johnson | *Assistant General Manager/Chief Administrative Officer*
Lawrence Chiu | *Chief Financial Officer*
Eric Owens | *Manager of Engineeering*
Brian Partington | *Manager of Hydrogeology*
Diane Gatza | *Manager of Water Resources*
Angie Mancillas | *Manager of External Affairs*
Dina Hidalgo | *Manager of Admin & Human Resources*
Evan Lue | *Manager of Data & Technology Services*

Contact

Water Replenishment District of Southern California

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Lakewood, CA 90712

Phone: 562-921-5521
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www.wrd.org

Vision Statement

"Utilizing groundwater storage
to create a locally sustainable water supply
for the Los Angeles Basin."

General Manager's Report

Robb Whitaker
General Manager

Water Planning in a Mega-Drought

Based on an analysis of 1200 years of tree ring records, 100 years of weather records, and dozens of climate models, a recent article in Science Magazine makes the case that California is 20 years into an extended "mega-drought," the likes of which have not been seen in recorded history. While there have been occasional years of above average precipitation, the norm for the past two decades has been below average rainfall and above average temperatures. The last time California experienced such a protracted drought was a 28-year period that ended in 1603!

Global warming and reduced precipitation are the combustible ingredients for the catastrophic wildfires that have besieged California in the past several years. Those conditions also challenge our assumption that sources of imported water transported by the massive infrastructure we built in the 20th century would remain abundant forever. That assumption doesn't hold anymore, as the vulnerabilities and reduced water supplies from the Colorado River and Northern California over the past 20 years make clear.

While not aware that we were four years into a mega-drought at the time, WRD made the conscious decision 16 years ago to plan and implement programs and projects to "drought-proof" our replenishment supplies by eliminating the use of imported water for groundwater replenishment. The availability of imported water from year to year had become uncertain by virtue of persistent drought and regulatory curtailment and its cost was climbing precipitously. Imported water for replenishment was becoming unsustainable from a supply and financial standpoint.

What we called Water Independence Now, or WIN, was a suite of programs and projects implemented over a 15-year period that increased the use of captured stormwater and recycled water to the point that in this fiscal year, WRD will not purchase any imported water for groundwater replenishment. The August 2019 opening of the Albert Robles Center (ARC), an advanced treated recycled water facility in Pico Rivera, completed WRD's journey to imported water independence.

Altogether, WRD's projects undertaken on its own or in partnership with other agencies have resulted in an additional 110,000 acre-feet of local supply. One might say we are "mega-drought-proof" for purposes of groundwater replenishment.

WIN 4 All

The closer WRD got to its WIN objective, the more we started thinking that WIN could be a template for the deliberate development of local water resources for the region, that perhaps the entire WRD service area could become independent of imported water for its needs.

As detailed in the President's Report, the WRD Board this year incorporated the WIN 4 ALL vision in our Strategic Plan.

Joint Replenishment Facility Operations

The 60-year partnership between WRD and the Los Angeles County Flood Control District took an historic turn when the WRD Board approved a Memorandum of Understanding to develop a Joint Powers Agreement with the District to jointly operate the spreading grounds and seawater intrusion barrier system the District owns. Although these facilities get water into the ground for both replenishment and flood control purposes, there is a potential for our agencies to repurpose them for future water resiliency. A repurposing of these facilities, cooperative management and operations, along with the available storage capacity in the groundwater basins could help the County meet its Resiliency Plan objectives and WRD meet its WIN 4 All goals. We anticipate the Joint Powers Agreement will be in place by the end of 2020.

WRD to Build LADWP Projects to Ensure Water Supply to the Dominguez Gap Seawater Barrier

Under a joint services agreement with the Los Angeles Department of Water & Power, WRD will construct an additional pipeline connecting the Terminal Island Advanced Water Purification Facility to the Dominguez Gap Seawater Barrier. The current pipeline has a capacity to deliver 6 million gallons per day (mgd) of advanced treated recycled water. Full barrier demand is 7.5 mgd, thus necessitating a second pipeline and connection point to the barrier. WRD will also construct a pipeline connecting LADWP's potable distribution system to the advanced treated recycled water distribution system to serve as a backup supply of potable water for the Dominguez Gap Seawater Barrier. LADWP will reimburse WRD for the costs of the two projects.

Los Angeles County Safe Clean Water Program

By more than a two-thirds margin, Los Angeles County voters in November 2018 adopted the Safe Clean Water Program (Measure W). Measure W established a permanent source of funding to enable municipalities to comply with the Clean Water Act. The program is funded by a parcel tax of 2.5 cents per square foot of impervious

surface. The tax is expected to generate $300 million per year to fund municipal and regional infrastructure projects that improve water quality and in many cases also increase water supply. Half of the money is available to Regional Infrastructure projects.

58 projects in the nine watersheds covered by Measure W submitted applications in the first Regional Infrastructure funding cycle. 15 proposed projects in WRD's service area have water supply benefits totaling 201 acre-feet annually. Most of these projects have been submitted by municipal pumpers and with proper documentation and quantification will be eligible for storage credit. Some of these projects lend themselves to expansion in future years and there are additional projects in the planning and feasibility study pipeline that will further increase stormwater capture and groundwater supply opportunities.

WRD is a member of three of the nine Watershed Area Steering Committees. The Steering Committees make project funding recommendations to the Regional Oversight Committee which in turn makes recommendations to the County Board of Supervisors. The Board will make final decisions on the first round of Regional Infrastructure projects and funding in August. The Watershed Area Steering Committee vetting process for the second round of funding will begin in October.

WRD in a Time of Novel Coronavirus

The virus that causes COVID-19 has not been detected in water wells or municipal drinking water and we are all grateful for that. However, the Safer at Home Orders designed to minimize public exposure to the virus have required most businesses to temporarily shut down and public agencies to close their doors to the public.

While adjustments have had to be made, when it comes to performing its functions, WRD has not skipped a beat. Board and committee meetings are conducted by teleconference and most employees are doing their work at home. Our groundwater monitoring program continues, all wellhead treatment projects are operating, construction continues on the perchlorate cleanup project in the Los Angeles Forebay, and our two advanced treated water recycling facilities in Long Beach and Pico Rivera and our desalter in Torrance remain on-line and functioning well.

Robb Whitaker
General Manager

Board President's Report

Vera Robles DeWitt
President

This was an exceptionally productive year for the Water Replenishment District. We completed one of the most sophisticated advanced recycled water treatment facilities in the world, launched an initiative to make our region independent of imported water by 2040, secured additional outside funding for our projects and added to the growing portfolio of awards we have received in recent years.

ARC Grand Opening

The highlight of the year, marking one of the most significant events in WRD's 60-year history, was the August 2019 opening celebration of the Albert Robles Center for Water Recycling and Environmental Learning (ARC). Attended by 800 people, the opening showcased the magnificent advanced recycled water treatment facility and the educational and community center that attaches to it.

ARC is the culmination of WRD's Water Independence Now or WIN program. The objective of the 15-year WIN effort was to become independent of imported water for groundwater replenishment and, with the completion of ARC, we achieved that objective. ARC will produce 10,000 acre-feet of water annually for delivery to the spreading grounds for infiltration into the underlying aquifer. The water is of such a high quality that visitors who complete the facility tour can actually drink it.

In addition to its very significant contribution to local water supply, ARC is an educational destination for school kids where they can learn about water recycling, stormwater capture, native landscaping, watershed health, and the history of WRD and our role in providing 50% of the water supply to our service area. And it is a community asset that has hosted numerous public agency and civic organization meetings.

ARC is named for former WRD Director Albert Robles who championed its construction from start to finish.

The Road to Independence

Guests at the opening celebration received a copy of *Our Road to Water Independence*, a chronicle of the steps taken by WRD starting in 1962 and accelerating in the last 25 years to replace our use of imported water for replenishment with recycled water and stormwater.

In partnership with the Los County Flood Control District and the County Sanitation Districts, WRD financed construction of the Whittier Narrows Water Reclamation Plant in 1962. This was the first water reclamation plant in the world built for the specific purpose of producing recycled water for groundwater replenishment.

In 1995, we began using advanced treated recycled water to inject at the West Coast Basin Barrier, followed by advanced treated recycled water for injection at the Alamitos Barrier in 2005 and the Dominguez Gap Barrier in 2006.

Natural storm flow into the spreading grounds has always been a staple of replenishment, but starting in 2004, and in partnership with the Los Angeles County Department of Public Works, WRD has greatly increased its use of captured stormwater. In 2004, the capacity of the conservation pool behind the Whittier Narrows Dam was expanded to provide more stormwater to the spreading grounds. In 2005, three rubber dams were installed on the San Gabriel River to control releases of stormwater into the spreading grounds that would otherwise be lost to the ocean. In 2012, WRD completed construction of a pipeline connecting the Rio Hondo and San Gabriel Spreading Grounds, further enhancing our use of stormwater for replenishment.

And finally, in 2019 with the opening of ARC, we completed our journey toward independence from imported water. A new journey has begun, with WIN 4 ALL as our destination.

WIN 4 ALL

The WRD Board annually adopts a 5-year Strategic Plan to articulate our near- and long-term goals. The incorporation of WIN 4 ALL this year into that Plan commits the District to a vision of regional independence from imported water by 2040. Just as the realization of WIN eliminated imported water for groundwater replenishment, WIN 4 ALL aims to offset the region's imported water use by securing locally sustainable groundwater supplies for the entire WRD service area.

Some specific projects to implement the WIN 4 ALL vision can be completed more quickly than others. Our Groundwater Contamination Prevention Program is already underway, with our first project in that program a Perchlorate Cleanup facility in Vernon. Our Well Construction and Rehabilitation Loan Program, designed to allow groundwater pumpers to utilize their unused pumping rights in-lieu of buying imported

water, is also underway. Longer-term projects like an envisioned Regional Brackish Water Reclamation Program and maximizing the use of flows from the Hyperion Water Reclamation Plant for replenishment are subjects of ongoing feasibility studies in one case and a WRD/LADWP Los Angeles Basin Joint Master Plan in the other.

Grants and Awards

WRD has been fortunate over the years to have received over $66 million in grants from state and federal agencies to help fund capital projects like the Robert W. Goldsworthy Desalter, the Leo J. Vander Lans Advanced Water Treatment Facility and the Albert Robles Center. On top of the $15 million in grant funding received previously for ARC, the District this year was awarded an additional $4.1 million by the U.S. Bureau of Reclamation toward ARC construction costs. Adding to the $7 million received last year from the State Water Resources Control Board for the Perchlorate Cleanup Project in Vernon, we received $844,240 in Proposition 1 funding this year that will enable us to properly destroy inactive wells that serve as potential conduits for contaminated water. And we were awarded $135,000 from the U.S. Geological Survey for monitoring wells near the spreading grounds.

WRD has also received distinguished recognition over the years for its programs and projects. For the ARC project, we received the 2019 American Public Works Association Project of the Year Award and the 2020 American Council of Engineering Companies Merit Award.

Thank you!

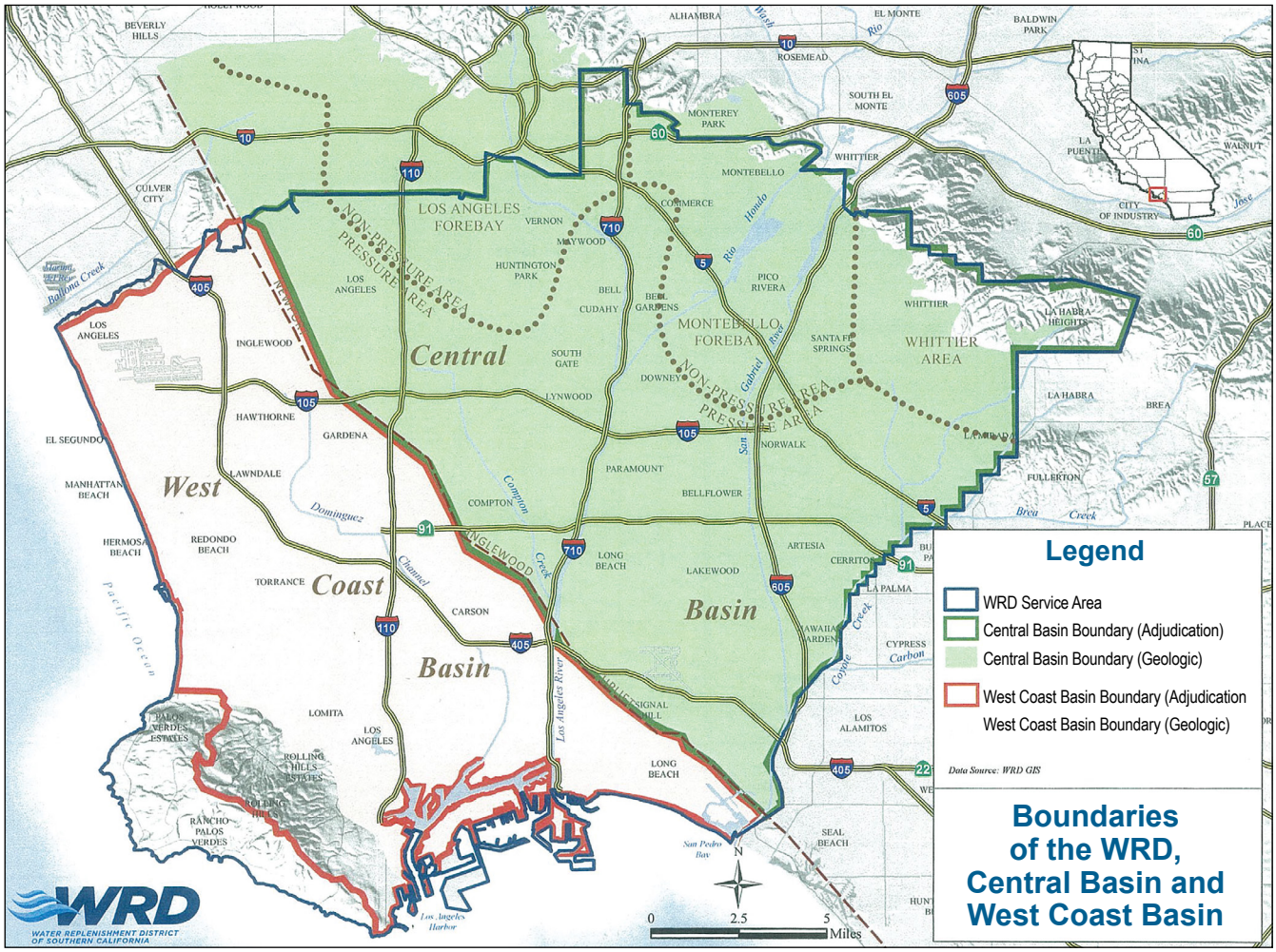
On behalf of the Board of Directors, I want to thank the pumpers who serve on the Technical Advisory Committee and the Budget Advisory Committee. Their contributions are valued and appreciated by WRD.

I also want to express appreciation and thanks to WRD General Manager Robb Whitaker. He is simply the best water agency manager anywhere. And our gratitude and thanks as well to the exceptional staff Robb has assembled to help carry out the important work of the District.

And I want to express special thanks and gratitude to my fellow Directors on the Board whose hard work and dedication have made this such an exceptionally productive year for WRD.

Vera Robles DeWitt

President


Legend
WRD Service Area
Central Basin Boundary (Adjudication)
Central Basin Boundary (Geologic)
West Coast Basin Boundary (Adjudication
West Coast Basin Boundary (Geologic)
Data Source: WRD GIS
Boundaries of the WRD, Central Basin and West Coast Basin
Central Basin
West Coast Basin
LOS ANGELES FOREBAY
MONTEBELLO FOREBAY
WHITTIER AREA
NON-PRESSURE AREA
PRESSURE AREA
0 2.5 5 Miles
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

Fiscal Year 2021 Budget Overview

Profile of the 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 district. 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 reliable 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

The District office is located in Los Angeles County, California's most populous County, with over 10 million residents in 88 cities spread across 4,100 square miles; Los Angeles County's population exceeds that of 43 states. Los Angeles boasts a workforce of more than 5.1 million people and is the nation's largest manufacturing center. In 2019, real GDP in Los Angeles County grew at 1.6 percent, with the unemployment rate down to 4.4%.

Induced by the COVID-19 pandemic, the economy has a great fall since March 2020. Despite the Federal stimulus package including Paycheck Protection Program, many small businesses failed and jobs in retail, leisure and hospitality disappeared. It will take time for the economy to return to normal.

The COVID-19 impacts on water demand could be short-lived as people slowly return to work. However, there could be longer-term impacts if unemployment remains high and people continue to work from home. The duration of the pandemic is yet to be determined. The UCLA Anderson Forecast states that the global health crisis has morphed into a depression-like crisis and that it does not expect the national economy to return to its 2019 fourth-quarter peak until 2023.

In California, the seasonally adjusted unemployment rate was 14.9 percent in June 2020, 16.4 percent in May 2020, and 4.0 percent a year ago in June 2019. The comparable estimates for the nation were 11.1 percent in June 2020, 13.3 percent in May 2020, and 3.7 percent a year ago in June 2019.

Southern California like the rest of the state and the county, will face significant economic challenges. In Los Angeles County, the seasonally adjusted unemployment rate decreased over the month to 19.4 percent in June 2020, from a revised 21.1 percent in May 2020, and was above the rate of 4.4 percent one year ago. Civilian employment increased by 242,000 to 3,981,000 in June 2020, while unemployment decreased by 43,000 to 956,000. Between June 2019 and June 2020, the leisure and hospitality employment in Los Angeles County was down 171,600 jobs or 31 percent from a year ago, making up the majority of the job reduction.

Demographics and Economic Statistics—Los Angeles County

Year	Unemployment Rate			Population	Real Per Capita Income	Real GDP Growth
	U.S.	California	Los Angeles County			
2015	5.2%	6.1%	6.6%	10,176,031	$45,994	4.9%
2016	4.8%	5.5%	5.3%	10,211,351	$46,842	1.7%
2017	4.3%	4.7%	4.8%	10,255,733	$47,210	3.6%
2018	3.9%	4.1%	4.7%	10,269,935	$48,395	3.7%
2019	3.7%	4.0%	4.4%	10,260,237	$49,775	1.6%
2020	11.1%	14.9%	19.4%	10,257,557*	$50,615*	1.8%*

Note: * Forecast

Source: Los Angeles County Economic Development Corporation

*California Department of Finance

Financial Overview – Replenishment Assessment

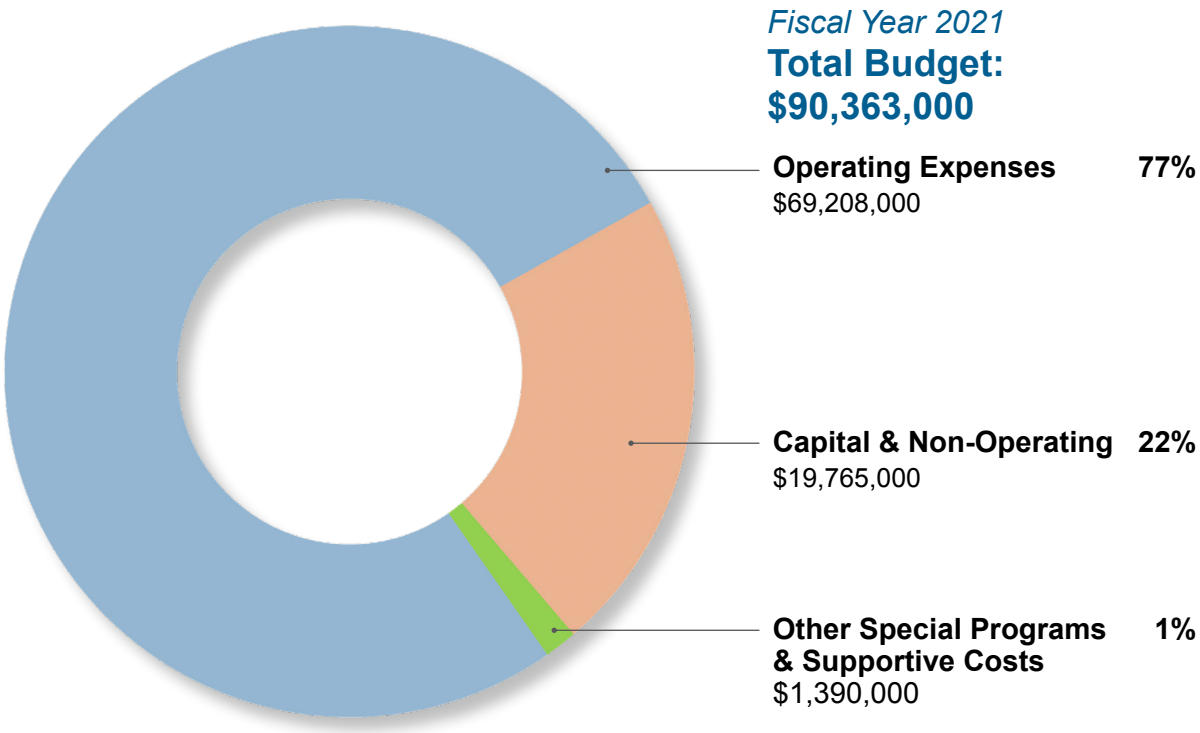
The District's budget is divided into three major categories:

1. Operating Expenses – Primarily used to track expenses related to projects, programs and administrative costs
2. Other Special Programs and Supportive Costs
3. Capital and Other Non-Operating Revenues and Expenses

Project, program and administrative costs are tracked in the category of operating expenses. These projects and programs include 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. Direct administrative support costs include the Board of Directors, Administration, Finance and External Affairs.

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

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.



Fiscal Year 2021 Budget

Description	FY 2020 Adopted Budget	FY 2021 Adopted Budget	FY 2021 Budget compared to FY 2020 Budget
OPERATING EXPENDITURES			
Water Costs	$34,534,000	$34,133,000	$(401,000)
Dominguez Gap Water Purchase Contingency Fund	900,000	900,000	-
Albert Robles Center (ARC)	8,573,000	10,050,000	1,477,000
Water Conservation	499,000	629,000	130,000
Water Supply Production - Vander Lans	6,025,000	5,814,000	(211,000)
Water Supply Production - Goldsworthy Desalter	3,086,000	2,748,000	(338,000)
Montebello Forebay Recycled Water	765,000	540,000	(225,000)
Groundwater Resource Planning	366,000	1,486,000	1,120,000
Water Quality Improvement Program	615,000	353,000	(262,000)
Geographic Information Systems (GIS)	166,000	260,000	94,000
Groundwater Monitoring Program	1,115,000	1,514,000	399,000
Safe Drinking Water Program	1,474,000	44,000	(1,430,000)
Dominguez Gap Barrier Recycled Water	411,000	333,000	(78,000)
Replenishment Operations	362,000	272,000	(90,000)
Hydrogeology Program	1,318,000	853,000	(465,000)
West Coast Basin Barrier Program	-	20,000	20,000
Engineering Program	375,000	296,000	(79,000)
Regional Brackish Water Program	-	350,000	350,000
Well Construction & Rehabilitation Program	1,017,000	31,000	(986,000)
Water Education	1,091,000	1,153,000	62,000
Board of Directors	459,000	357,000	(102,000)
Administration	4,928,000	6,175,000	1,247,000
GASB 45 (Required Retirement Funding)	740,000	897,000	157,000
SUB-TOTAL	**68,819,000**	**69,208,000**	**389,000**
OTHER SPECIAL PROGRAMS & SUPPORTIVE COSTS			
Litigation	125,000	125,000	-
Cost of Services and Notices	15,000	15,000	-
Election Expense	750,000	1,250,000	500,000
SUB-TOTAL	**890,000**	**1,390,000**	**500,000**
CAPITAL & OTHER NON-OPERATING COSTS			
Revenue Bond Debt Service Payments	14,870,000	19,765,000	4,895,000
Prior Year Deficit Recovery	-	-	-
SUB-TOTAL	**14,870,000**	**19,765,000**	**4,895,000**
TOTAL BUDGET	**$84,579,000**	**$90,363,000**	**$5,784,000**
REVENUES			
Replenishment Assessment	$77,837,000	$81,366,000	$3,529,000
Vander Lans Income/OCWD/MWD Subsidy	660,000	1,765,000	1,105,000
Goldsworthy Desalter Income/MWD Subsidy	4,300,000	4,250,000	(50,000)
Albert Robles Center Income/MWD Subsidy	-	600,000	600,000
Other Income & Expense	282,000	382,000	100,000
Carryover Conversion	1,500,000	2,000,000	500,000
TOTAL REVENUES	**$84,579,000**	**$90,363,000**	**$5,784,000**

Relationship of Funds, Projects, and 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 three primary expenses of the District: Water Supply Purchases, Water Supply Production and the Albert Robles Center for Water Recycling & Environmental Learning (ARC), which make up 61% of Fiscal Year 2021 Replenishment Fund operating expenses. Total budgeted operating expenses related to the Replenishment Fund are $83.3 million or 92% of the total budget.

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. Total budgeted operating expenses related to the Clean Water Fund are $7.1 million or 8% of the total budget.

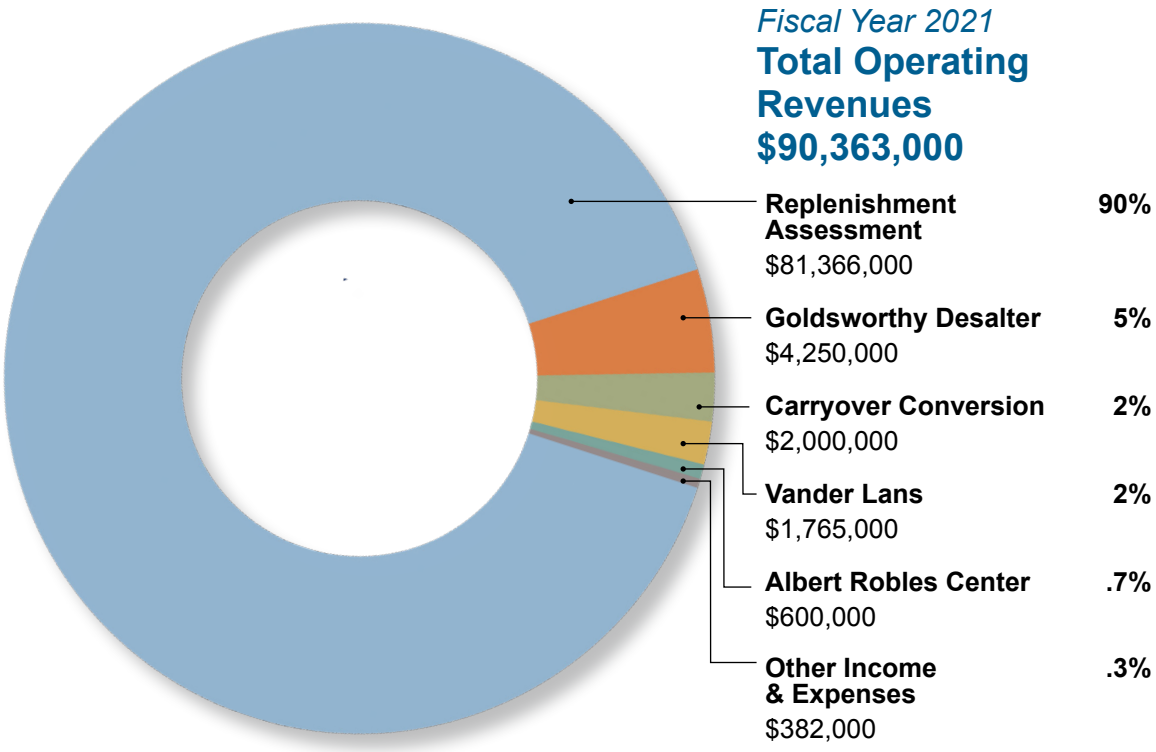
The table below illustrates Programs/Projects and Funds relationship.

Relationship of Funds, Projects and Programs

Program / Project Number & Name		Replenishment Fund	Clean Water Fund
001	Leo J Vander Lans Water Treatment Facility	100%	
002	Robert W. Goldsworthy Desalter Facility		100%
004	Montebello Forebay Recycled Water Project	100%	
005	Groundwater Resource Planning	100%	
006	Water Quality Improvement Program		100%
010	Geographic Information Systems	50%	50%
011	Groundwater Monitoring Program	50%	50%
012	Safe Drinking Water Program		100%
018	Dominguez Gap Barrier Recycled Water Project	100%	
023	Replenishment Operations	100%	
025	Hydrogeology Program	50%	50%
033	Albert Robles Center (ARC)	100%	
038	Engineering Program	100%	
043	Regional Brackish Water Program	100%	
EAC	Water Conservation Program	50%	50%
EAE	Water Education Program	50%	50%

Revenues

The District's primary source of revenue comes from the Replenishment Assessment, making up 90% or $81.4 million of the District's revenue. Replenishment Assessment is based on the amount of water pumped from the Central and West Coast basins, and is applied to every acre-foot of water pumped.



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 $4.3 million or 5% of total revenue.

Carryover conversion revenues are expected to increase by $0.5 million to $2 million or 2% of total revenue.

The District also expects to collect $1.8 million or 2% of total revenue from recycled water sales to the Orange County Water District (OCWD) from the Leo J. Vander Lans Advanced Water Treatment Facility, 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 treated water to the Alamitos Seawater Intrusion Barrier Project which would otherwise be supplied with more expensive imported water from MWD.

Other income and expenses account for $0.4 million or 0.3% of total revenues and is the net of interest income, property tax revenue and other expenses not charged to the Replenishment Assessment.

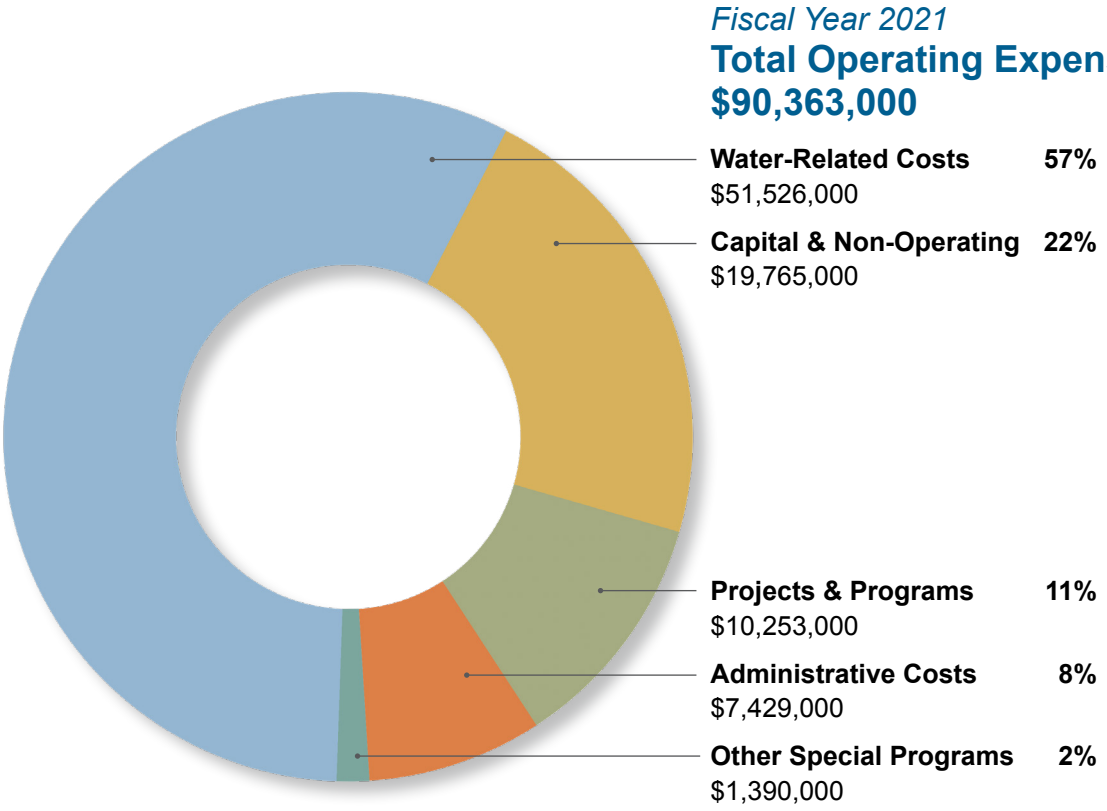
Comparison to Prior Fiscal Year 2020 Budgeted Revenues

Budgeted revenues for Fiscal Year 2021 are approximately 6.8% or $5.8 million higher than the budget in prior fiscal year due primarily to the increase in the Replenishment Assessment from $365/acre-foot to $382/acre-foot, effective on July 1, 2020. As a result, Replenishment Assessment revenues are approximately $3.5 million or 4.5% higher than in last year's budget. In addition, Carryover Conversion revenues are up $0.5 million, while Vander Lans and Albert Robles Center revenues are projected to increase by $1.1 million and $0.6 million respectively.

Expenses

The most significant budgetary item for the District is water and water-related costs. Of the District's total budgeted expenses of $90.4 million, about $51.5 million or 57% of total expenses is related to either water supply purchases, production of water or water conservation efforts. The water costs include $0.9 million of contingency funds in case imported water supplies are needed.

Project and program expenses are projected at $10.3 million or 11% of total expenses. Administrative costs, including funding for Other Post-Employment Benefits (OPEB) payments are projected at $7.4 million, and debt service related costs are budgeted at $19.8 million. Other special programs, including election expenses are projected at $1.4 million or 2% of total expenses.



Comparison to Prior Fiscal Year 2020 Budgeted Expenses

Total budgeted expenses for the prior fiscal year were $84.6 million, while total expenses for Fiscal Year 2021 are expected to increase by $5.8 million or 7% to $90.4 million. Water and water-related costs increased by $1.0 million or 2% from $50.5 million in Fiscal Year 2020 to $51.5 million in Fiscal Year 2021. Debt service costs are anticipated to be $19.8 million, an increase of $4.9 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.

Short-term Factors Influencing Fiscal Year 2021 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 above average rainfall during the past fiscal year, with record or near record rainfall throughout most of the area. On the positive side, this results in less pumping and higher groundwater levels. However, this affects the District's Replenishment Assessment as pumping is expected to remain the same as last year at 213,000 acre-feet. As noted above, the Replenishment Assessment is increased to $382/acre-foot from the prior fiscal year of $365/acre-foot to meet the District's expected expenditures for Fiscal Year 2021.

The Albert Robles Center for Water Recycling and Environmental Learning (ARC) was completed in 2019. In anticipation of commercial operation of ARC, imported water costs have been reduced to a contingency amount of $900,000. The Fiscal Year 2021 budget includes $10.1 million for ARC operating costs, an increase of $1.5 million over the last year, reflecting a full year of operation.

As was done last year, the Fiscal Year 2021 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 2021 budget are $2 million, an increase of $0.5 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, as well as some water users unable to pay their bills on time due to unemployment, the impacts to the District's Fiscal Years 2020 and 2021 revenues and projected underground water 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, including a 6-month hiring freeze and increased the Operating Reserve from three months to four and a half months of the cost of operations.

Impacts of Long-range Financial Planning on Future Budgets

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.

The District has been monitoring groundwater quality for the past couple decades using a groundwater monitoring network of 335 monitoring wells, which monitor over 120 contaminants throughout the basin, including Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonate (PFOS). The District is actively working with the pumping community to address PFOA and PFOS within the basins by forming a working group which convenes stakeholders to discuss treatment options and current research. The District is also working with the State and Federal partners to secure funding to provide treatment programs when necessary.

The table below shows the projected budget impact of principal and interest payments associated with the 2015 and 2018 Replenishment Assessment Revenue Bonds, and Clean Water State Revolving Fund Loan.

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
2015 Bonds	$11.1M	$11.1M	$11.1M	$11.1M	$11.1M
2018 Bonds	5.2M	5.2M	5.2M	5.2M	5.2M
State Revolving Fund Loan	3.5M	3.5M	3.5M	3.5M	3.5M
TOTAL	**$19.8M**	**$19.8M**	**$19.8M**	**$19.8M**	**$19.8M**

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.

Staffing

In Fiscal Year 2020, the vacant Manager of Financial Services was replaced with two lower level staff positions including an Accounting Technician and a Financial Analyst, to provide resources needed for day to day operations of the Finance Department.

The District staffing increased one position and has increased from 44 to 45 budgeted professional and administrative staff; 41 are paid for through the collection of the Replenishment Assessment and 4 staff positions are allocated to the District's Watermaster function and are paid for independently outside of the Replenishment Assessment. The District's staffing on its various projects remain relatively stable. WRD's organizational structure adjusts from time to time in an effort to adjust to changes in the District responsibilities and to provide increased efficiencies.

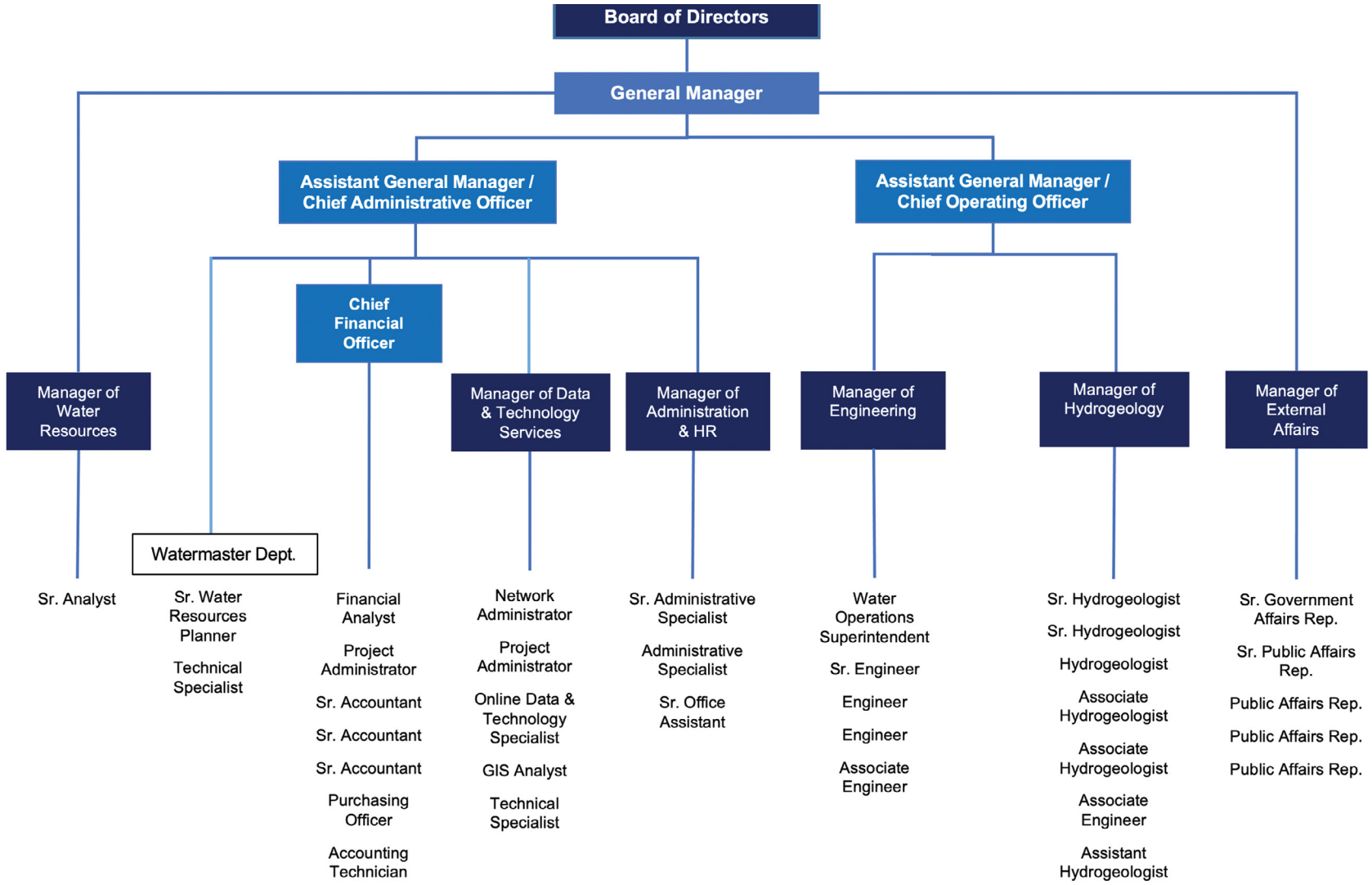
Acknowledgment

The District's management team and the Finance Department acknowledge the leadership and dedication of the Board of Directors, as well as the cooperation and assistance of the District staff in addressing the financial challenges of Fiscal

Year 2021. 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.

Lawrence Chiu
Chief Financial Officer

Organization Chart



45 Total Full Time Equivalent (FTE) positions
(41 funded by WRD Replenishment Assessment + 4 funded by Watermaster)

Summary of Personnel by Department

	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	Change from FY 2020 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	0	1	1	0
HYDROGEOLOGY DEPARTMENT				
Chief Hydrogeologist	1	0	0	0
Manager of Hydrogeology	0	1	1	0
Senior Hydrogeologist	1	1	2	1
Hydrogeologist	3	3	1	(2)
Associate Hydrogeologist	2	2	2	0
Associate Engineer	0	1	1	0
Water Quality & Regulatory Compliance Specialist	1	0	0	0
Assistant Hydrogeologist	0	0	1	1
WATERMASTER DEPARTMENT				
Senior Water Resources Planner	0	0	1	1
Water Resources Planner	1	1	0	(1)
Technical Specialist	0	0	1	1
Office Assistant	1	1	0	(1)
ENGINEERING DEPARTMENT				
Manager of Engineering	1	1	1	0
Water Operations Superintendent	1	1	1	0
Senior Engineer	1	1	1	0
Engineer	2	2	2	0
Associate Engineer	1	1	1	0
WATER RESOURCES DEPARTMENT				
Manager of Water Resources	0	1	1	0
Senior Analyst	0	1	1	0
FINANCE DEPARTMENT				
Chief Financial Officer	1	1	1	0
Manager of Financial Services	1	1	0	(1)
Financial Analyst	0	0	1	1
Project Administrator	0	0	1	1
Senior Accountant	3	3	3	0
Purchasing Officer	1	1	1	0
Accounting Technician	0	0	1	1
EXTERNAL AFFAIRS				
Manager of External Affairs	1	1	1	0
Senior Government Affairs Rep.	0	1	1	0
Senior Public Affairs Rep.	0	1	1	0
Public Affairs Rep.	5	3	3	0

Summary of Personnel by Department

	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	Change from FY 2020 Budget
ADMINISTRATION AND HUMAN RESOURCES DEPARTMENT				
Manager of Administration and HR	1	1	1	0
Senior Administrative Specialist	2	1	1	0
Administrative Specialist	0	1	1	0
Project Administrator	2	2	0	(2)
Senior Office Assistant	0	0	1	1
Office Assistant	1	1	0	(1)
DATA AND TECHNOLOGY SERVICES				
Manager of Data and Technology Services	0	1	1	0
Supervisor of Data and Technology Services	1	0	0	0
Network Administrator	1	1	1	0
Project Administrator	0	0	1	1
Online Data and Technology Specialist	1	1	1	0
Geographic Information Systems Analyst	1	1	1	0
Technical Specialist	1	1	1	0
Document Imaging Specialist	1	0	0	0
TOTAL	**42**	**44**	**45**	**1**

Financial Policies

Budget Controls and 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.

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:

- Utility plant and equipment – 30 years
- Monitoring and injection equipment – 3 to 20 years
- Service connection – 50 years
- Office furniture and equipment – 5 to 10 years

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.

Reserve Policies

The annual analysis of the District's reserve funds are 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 Funds

Safe Drinking Water Reserve - to account for, and fund loans and grants to help clean up the groundwater basin.

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

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

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. 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.

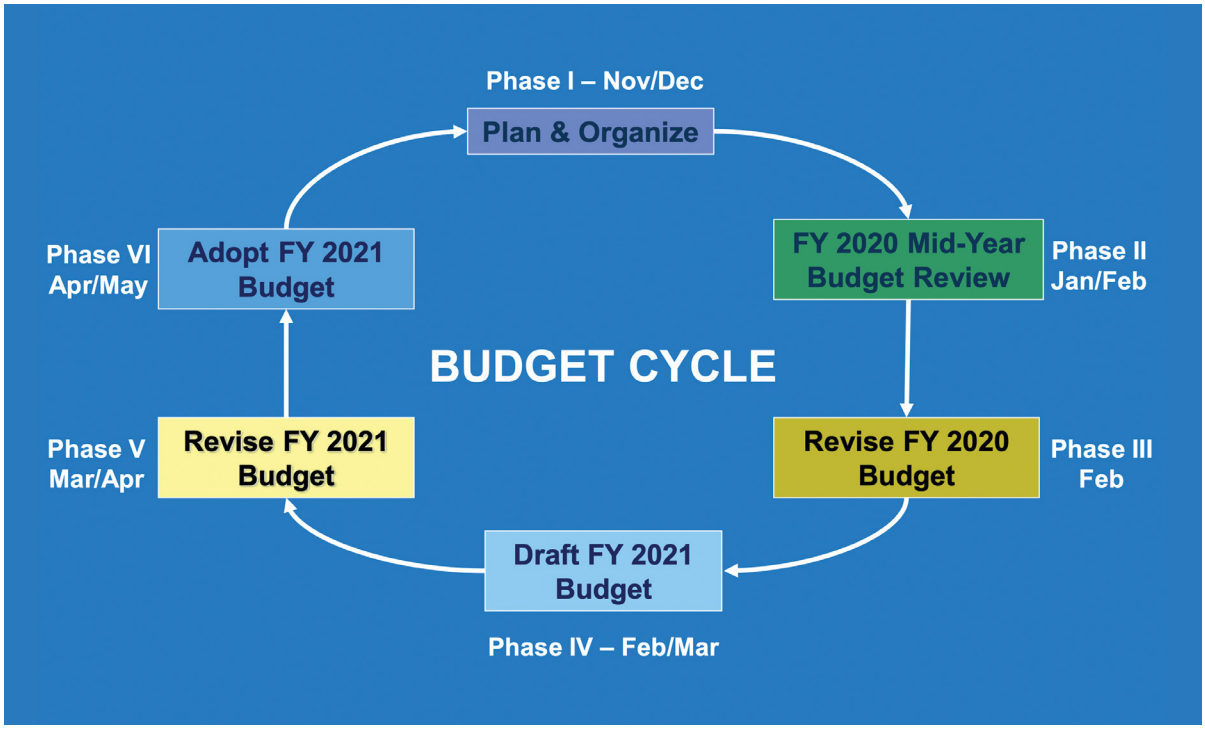
Water Purchase Carryover & Rate Stabilization Reserve – to ensure the District's ability to acquire or develop water supplies to replenish the Central and West Coast groundwater basins and to stabilize rates.

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 on the basis of 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.

Budget Process Overview



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.

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 4 months of actual data and 8 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 Current Year's 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 Ensuing Year's 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 Managers, 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 Ensuing Year's Budget

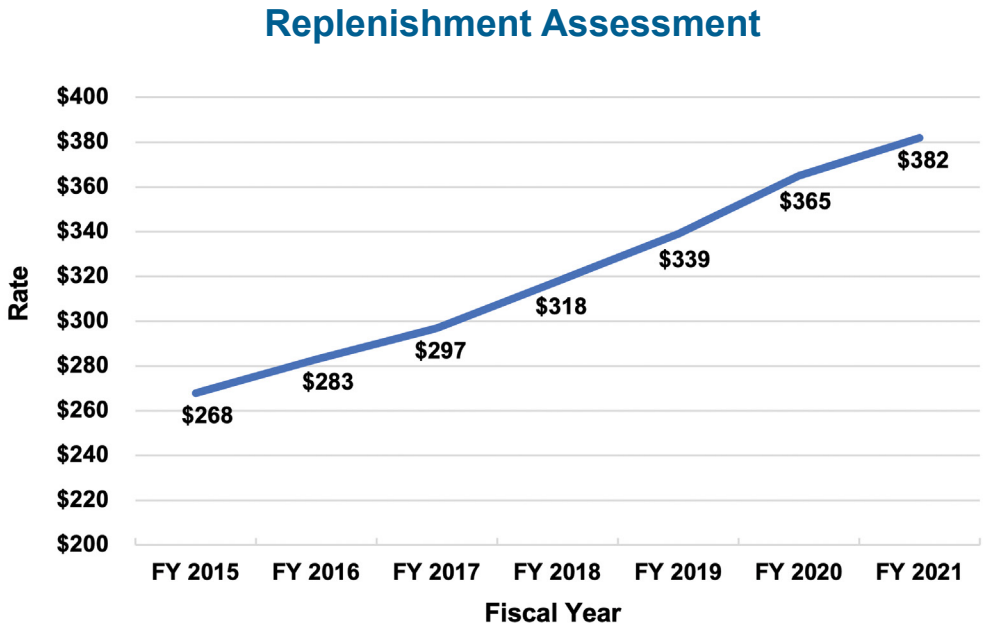
Staff makes the necessary adjustments to the budget based on the feedback obtained through meetings with the General Manager and public budget workshops with the Finance/Audit Committee and the Board of Directors. These refinements are related to reallocation of resources to best accomplish the Board's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

Adopt Ensuing Year's Budget

Based on section 60315 of the California State 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 a Budgetary Advisory Committee (BAC) with representatives from stakeholders pursuant to SB620, are charged with providing guidance and advice on budgetary, finance, and technical matters relating to the District's projects and programs. 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 contained herein will be revised accordingly to reflect the approved budget amounts and corresponding levels of services. 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.



To estimate the ensuing year's Replenishment Assessment rate, WRD has made a forecast based on the current year's anticipated pumping. The Budget Advisory Committee's recommendation for the Fiscal Year 2021 Replenishment Assessment is $382.00 per acre foot (4.7% or $17.00 increased from the prior Fiscal Year 2020). This 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 91,200 acre-feet to replenish the Basins

3. $2.0 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 2021 will be $81,336,000, therefore, the cost of providing services will be $382 per acre-foot of water removed from the Basins.

Budget Controls and 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 first three months of actual financial data and projects the final nine 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.

Senate Bill 620 (SB 620) added provisions to Section 60233 of the California State Water Code establishing a Budget Advisory Committee (BAC) for the purposes of reviewing the District's Replenishment Assessment, the annual budget and reserve funds maintained by the District. The BAC consists of seven members who serve a two-year term, are elected from among representatives of 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 WRD Board of Directors on the annual Replenishment Assessment, reserve funds, and the draft budget.

Proposition 218 – Notice of Public Hearing on District's Replenishment Assessment

Proposition 218 (Prop 218), also known as the Right to Vote on Taxes Act, was adopted by California voters in November 1996. Prop 218 amended the California Constitution (Articles XIIIC and XIIID) which, as it relates to assessments, requires the local government agencies to have a vote of effected property owners for any proposed new or increased assessment before it could be levied. Prop 218 imposes a number of substantive requirements on property-related fees. These substantive requirements are found in Article XIII D, Section6(b) of the California Constitution.

The Cost of Service Report has been prepared 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 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 Replenishment Assessment of $382 per acre foot for Fiscal Year 2021 at the public hearing on April 23, 2020. 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

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

JANUARY

The budget team interviews with Project and Program Managers in order 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 of the data. The Mid-Year Budget Review serves as the basis for planning for the ensuing year's budget.

January 29, 2020 - Budget Advisory Committee

Previewed Fiscal Year 2021 Capital Improvement Program.

FEBRUARY

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 of 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 6, 2020 – Board of Directors

External Affairs Department presented FY 2021 regional sponsorships and chamber/ membership dues to the Board of Directors for approval.

February 26, 2020 – Special Joint Board of Directors/Budget Advisory Committee Meeting

Previewed FY 2021 budget.

MARCH

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

March 5, 2020 – Board of Directors

Staff presented the 2020 Engineering Survey and Report, Fiscal Year 2020 mid-year budget and Fiscal Year 2021 proposed budget. The Board of Directors accepted the Budget Advisory Committee recommendation and approved the Fiscal Year 2021 Replenishment Assessment upper limit of 5% for an increase of $18.25 from $365 per acre foot to $383.25 per acre foot to provide on the Pumper Notification mailing on March 6, 2020.

March 16, 2020 – Finance/Audit Committee

Further discussion on the Fiscal Year 2021 budget.

March 23, 2020 – Finance/Audit Committee

Staff presented the 2020 Cost of Services Report. Further discussion on the Fiscal Year 2021 budget.

March 25, 2020 – Budget Advisory Committee

Discussed potential Fiscal Year 2021 Replenishment Assessment recommendation for the Board of Directors.

APRIL

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

April 2, 2020 – Board of Directors

Staff presented the 2020 Cost of Service Report and discussed the Fiscal Year 2021 budget. The Board received and filed the Budget Advisory Committee recommendation on the Fiscal Year 2021 Replenishment Assessment of $382 per acre foot, which is 4.7% or $17.00 increase on the current Replenishment Assessment of $365 per acre foot. Convened public hearing on the Fiscal Year 2021 proposed Replenishment Assessment per Water Code section 60306.

April 16, 2020 – Board of Directors

The Water Code Public Hearing was continued to the Board of Directors meeting on April 16, 2020. Further discussion on the Fiscal Year 2021 budget and the proposed Replenishment Assessment.

April 20, 2020 – Finance/Audit Committee

The Finance/Audit Committee recommended the Fiscal Year 2021 Replenishment Assessment at $382 per acre foot.

April 23, 2020 – 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 2021 Replenishment Assessment, received staff reports and testimony, and closed the Public Hearing.

The Board of Directors adopted the Fiscal Year 2021 Replenishment Assessment of $382 per acre foot and the Fiscal Year 2021 budget.

Financial Highlights

Basis of Accounting and Budgeting

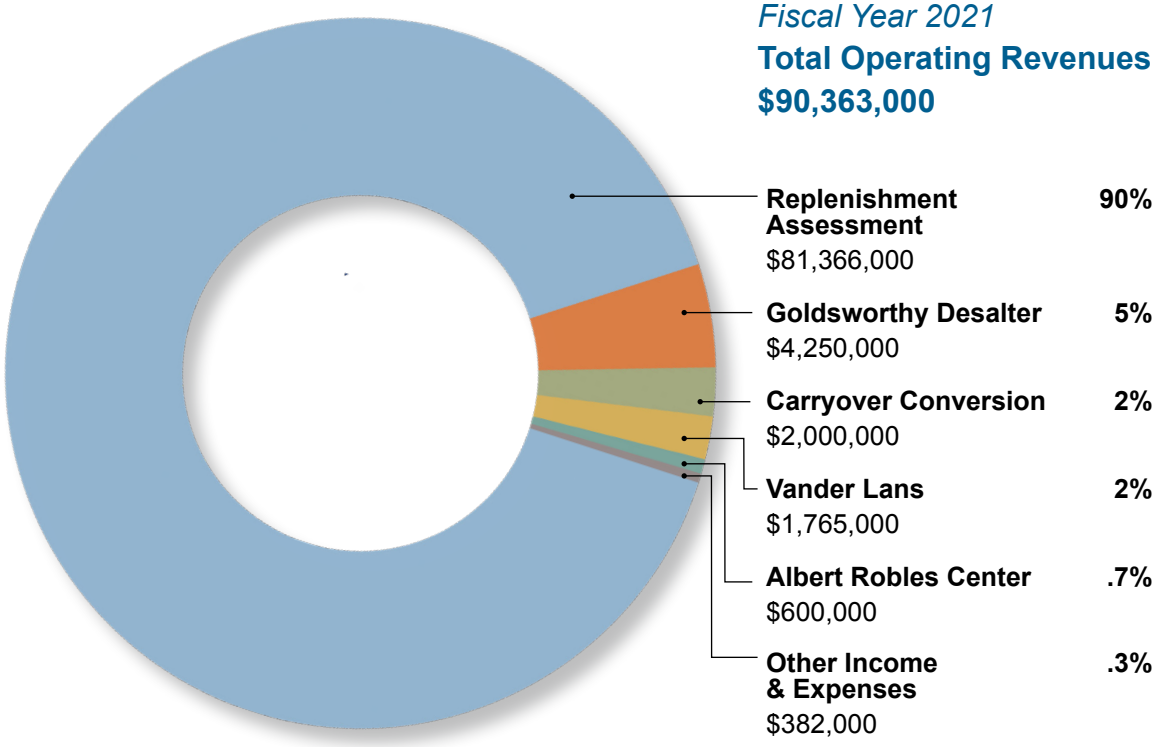
The basis of accounting and budgeting refers to the method of recognition of revenues and expenses in financial and budgetary reporting.

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:

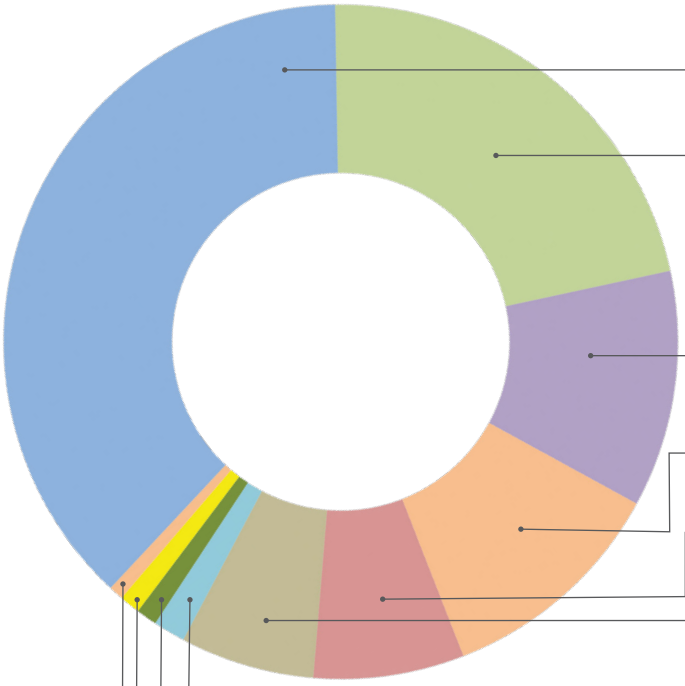
Depreciation and amortization are handed differently in financial reporting and budgetary reporting. In financial reporting, depreciation and amortization are included, and the repayment of principal on debt is not reported as expenses. In budgetary reporting, depreciation and amortization are excluded,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


Fiscal Year 2021
Total Operating Revenues
$90,363,000
Replenishment Assessment 90%
$81,366,000
Goldsworthy Desalter 5%
$4,250,000
Carryover Conversion 2%
$2,000,000
Vander Lans 2%
$1,765,000
Albert Robles Center .7%
$600,000
Other Income & Expenses .3%
$382,000

Fiscal Year 2021

Total Expenses

$90,363,000



Water Purchases	$34,133,000	**37.8%**
Capital & Non-Operating	$19,765,000	**21.9%**
Projects and Programs	$10,253,000	**11.4%**
Albert Robles Center (ARC)	$10,050,000	**11.1%**
Administration	$6,532,000	**7.2%**
LJVWTF - Water Supply	$5,814,000	**6.4%**
Other Special Programs	$1,390,000	**1.5%**
Dominguez Gap Water Purchase Contingency	$900,000	**1.0%**
GASB 45	$897,000	**1.0%**
Water Conservation	$629,000	**.7%**

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

Fiscal Year 2021 Proposed Statement of Revenues, Expenses and Changes in Net Assets

	FY 2019 Actual	FY 2020 Projection	FY 2021 Budget
Operating Revenues			
Replenishment Assessment	$68,007,000	$77,745,000	$81,366,000
LJVWTF - Water Supply	114,000	673,000	1,765,000
Goldsworthy Desalter Sales	1,579,000	2,357,000	4,250,000
Albert Robles Center (ARC)	-	-	600,000
Total Operating Revenues	**$69,700,000**	**$80,775,000**	**$87,981,000**
Operating Expenses			
Water Purchases	$33,447,000	$41,157,000	$35,033,000
Water Conservation	416,000	495,000	629,000
LJVWTF - Water Supply	1,870,000	3,877,000	5,814,000
Albert Robles Center (ARC)	2,057,000	6,816,000	10,050,000
Projects/Programs	8,623,000	10,274,000	10,253,000
Administration	4,952,000	5,745,000	6,175,000
Board of Directors	314,000	422,000	357,000
GASB 45 (Required Retirement Funding)	878,000	740,000	897,000
Total Operating Expenses	**$52,557,000**	**$69,526,000**	**$69,208,000**
Operating Income (Loss)	**$17,143,000**	**$11,249,000**	**$18,773,000**
Non-Operating Revenues (Expenses)			
Debt Service Expense & SFR Loan	$(10,667,000)	$(15,463,000)	$(19,765,000)
Other Special Programs & Supportive Costs	(2,808,000)	(848,000)	(1,390,000)
Property Taxes & Interest Revenue	1,659,000	282,000	382,000
Misc. Revenue (Carryover Conversion)	2,595,000	2,500,000	2,000,000
Total Other Revenues (Expenses)	**$(9,221,000)**	**$(13,529,000)**	**$(18,773,000)**
Change in Net Assets	**$7,922,000**	**$(2,280,000)**	**$-**

Revenue Sources

The District's major revenue sources are as follows:

Replenishment Assessment (RA)

The District bills the users of groundwater on a monthly basis for water pumped from the basins. The basins' top twenty pumpers are as follows:

PRODUCTION SUMMARY

Fiscal Year 2020 Top Twenty Pumpers

Number	Name	Production (Acre Feet)
1	Long Beach, City of	17,905
2	Golden State Water Company	13,568
3	Downey, City of	8,756
4	California Water Service Company (East LA)	5,400
5	Cerritos, City of	5,276
6	Liberty Utilities Corporation	5,047
7	South Gate, City of	4,804
8	Compton, City of	4,367
9	Lakewood, City of Water Department	4,037
10	Vernon, City of	3,542
11	Paramount, City of	3,427
12	Whittier, City of	3,276
13	Lynwood, City of	3,088
14	Phillips 66 Company	3,082
15	Bellflower-Somerset Mutual Water Company	3,018
16	Tesoro Refining & Marketing Co., LLC	2,661
17	Pico Rivera, City of	2,584
18	Torrance, City of	2,388
19	California Water Service Company (Dominguez)	2,262
20	Inglewood, City of	2,239
	Total	**100,727**

Leo J. Vander Lans AWTF - Water Supply

The revenue from the Leo J. Vander Lans Advanced Water Treatment Facility comes from the sale of the product water to Orange County Water District as well as a subsidy received from Central Basin Municipal Water District through a Local Resources Program offered by MWD.

Goldsworthy Desalter

Over pumping of the West Coast Basin caused seawater to intrude into some aquifers in coastal area cities affecting the local groundwater supply. To respond to seawater intrusion, the District constructed the Goldsworthy Desalter that is capable of removing 2,000 gallons of brackish water per minute from the City of Torrance's drinking water supply. The product water is then sold to the City of Torrance.

Revenues

Basis for 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 2021, the District estimates that it will collect approximately $81,366,000 from the Replenishment Assessment based on the estimated groundwater pumping of 213,000 AF at the adopted Replenishment Assessment of $382 per AF.

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 2021 is approximately $81,366,000 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 2021 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:

$$\frac{\text{Total Cost of Service } (\$81,366,000)}{\text{Total Groundwater Pumped (213,000 AF)}} = \text{Unit Cost (\$382/AF)}$$

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 $382,000 (1,000 AF x $382/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.

Basis for Capital Revenue Estimates

The District receives revenue from two capital assets, the Leo J. Vander Lans Advanced Water Treatment Facility and the Robert W. Goldsworthy Desalter.

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 (MWD) 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 2021 is $1.8 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 (LRP) offered by the Metropolitan Water District (MWD). Projected revenues for FY 2021 is $4.3 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.

Basis for Other Revenue Estimates

Other Income

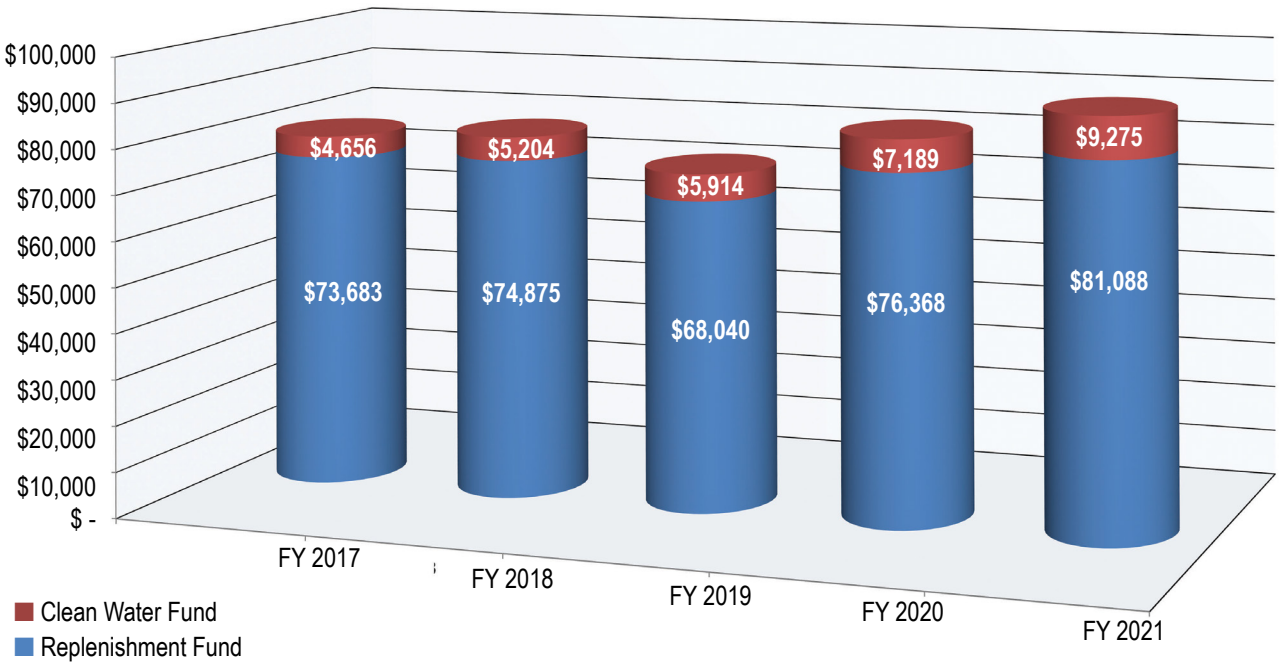
The District is estimating revenue for FY 2021 from property tax to be $0.4 million and interest income to be $0.5 million. There are non-RA related expenses of $0.5 million which off-set the above that will bring the estimated revenue from this source to $0.4 million.

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.

Comparative Revenue by Fund

Description	Allocation % Replen-ishment Fund	Allocation % Clean Water Fund	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projection	FY 2021 Budget
Replenishment Fund							
Replenishment Assessment	94%		$69,393,000	$69,267,000	$63,927,000	$73,080,000	$76,484,000
LJVWTF - Water Supply	100%		750,000	166,000	114,000	673,000	1,765,000
Albert Robles Center	100%		-	-	-	-	600,000
Other Revenues	94%		577,000	1,618,000	1,559,000	265,000	359,000
Carryover Conversion	94%		2,963,000	3,824,000	2,440,000	2,350,000	1,880,000
Sub-Total Replenishment Fund			**$73,683,000**	**$74,875,000**	**$68,040,000**	**$76,368,000**	**$81,088,000**
Clean Water Fund							
Replenishment Assessment		6%	$4,429,000	$4,421,000	$4,080,000	$4,665,000	$4,882,000
Goldsworthy Desalter Sales		100%	1,000	436,000	1,579,000	2,357,000	4,250,000
Other Revenues		6%	37,000	103,000	100,000	17,000	23,000
Carryover Conversion		6%	189,000	244,000	155,000	150,000	120,000
Sub-Total Clean Water Fund			**$4,656,000**	**$5,204,000**	**$5,914,000**	**$7,189,000**	**$9,275,000**
Total All Funds			**$78,339,000**	**$80,079,000**	**$73,954,000**	**$83,557,000**	**$90,363,000**

Comparative Revenue by Fund (in thousands)



Groundwater is an economical source of water. In FY 2021, the District's Replenishment Assessment is $382/AF. The additional cost to the water purveyors to operate their systems and serve the water could add $50/AF to $200/AF to the Replenishment Assessment rate. In contrast, the price of treated imported water, which is the alternative source to groundwater, is projected at $1,302/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.

Expenses

Operating and 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. In order 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.

Basis for Fiscal Year 2021 Expense Estimate

Comparing with the prior fiscal year projection, budgeted expenses have increased by $4.2 million to $90.4 million in FY 2021.

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 is expected to be about $10.1 million for FY 2021, a $3.2 million increase over the prior year. Water purchase cost decreased by $6.1 million to $35.0 million in FY 2021. 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 in FY 2021. The operating costs associated with the plant is projected to increase by $1.9 million to $5.8 million in FY 2021.

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. Projected expenses for FY 2021 has decreased by $1.3 million. The decrease to this program is based on 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 and therefore not shown in the operating budget.

The District has debt service covenants that required funds set aside to meet the District's debt service obligations. Currently, the District has three majors debt instruments: Clean Water State Revolving Fund – Proposition 1 Funding, 2015 and 2018 Replenishment Assessment Revenue Bonds that increased the FY 2021 budget by $4.3 million to $19.8 million.

The remaining projects, programs, administration and supportive costs are projected to increase by $2.2 million.

Water Replenishment District of Southern California

Expenses Analysis

Description	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Water Purchases	$47,086,000	$38,716,000	$33,463,000	$41,157,000	$35,033,000	$(6,124,000)
Albert Robles Center (ARC)	200,000	272,000	2,027,000	6,816,000	10,050,000	3,234,000
Water Conservation	337,000	328,000	416,000	495,000	629,000	134,000
Water Supply - Vander Lans	3,276,000	2,510,000	1,843,000	3,877,000	5,814,000	1,937,000
Goldsworthy Desalter	811,000	826,000	1,301,000	2,506,000	2,748,000	242,000
Montebello Forebay Recycled Water	275,000	338,000	229,000	392,000	540,000	148,000
Groundwater Resource Planning	547,000	378,000	1,125,000	622,000	1,486,000	864,000
Water Quality Improvement Program	229,000	506,000	562,000	544,000	353,000	(191,000)
Geographic Information Systems (GIS)	236,000	299,000	295,000	257,000	260,000	3,000
Groundwater Monitoring Program	954,000	1,146,000	1,314,000	1,348,000	1,514,000	166,000
Safe Drinking Water Program	450,000	559,000	752,000	1,373,000	44,000	(1,329,000)
Dominguez Gap Barrier Recycled Water	170,000	173,000	213,000	242,000	333,000	91,000
Replenishment Operations	183,000	205,000	203,000	357,000	272,000	(85,000)
Hydrogeology Program	655,000	334,000	814,000	1,013,000	853,000	(160,000)
West Coast Barrier Program	-	-	22,000	-	20,000	20,000
Engineering Program	50,000	181,000	208,000	424,000	296,000	(128,000)
Regional Brackish Water Program	-		-	6,000	350,000	344,000
Well Construction Program	-	-	-	1,000	31,000	30,000
Water Education	1,044,000	1,192,000	997,000	1,185,000	1,153,000	(32,000)
Board of Directors	294,000	329,000	314,000	422,000	357,000	(65,000)
Administration	5,628,000	5,756,000	6,254,000	6,096,000	6,175,000	79,000
GASB 45 (Required Retirement Funding)	628,000	760,000	878,000	740,000	897,000	157,000
Other Special Programs & Supportive Costs		2,436,000	2,792,000	848,000	1,390,000	542,000
Capital & Other Non-Operating Costs	2,875,746	6,174,000	10,106,000	15,463,000	19,765,000	4,302,000
Total Expenses	**$65,928,746**	**$63,418,000**	**$66,128,000**	**$86,184,000**	**$90,363,000**	**$4,179,000**

Water Replenishment District of Southern California

Schedule of Expenses by Fund Allocation

Replenishment fund

Description	Replenishment Assessment Fund	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projection	FY 2021 Budget
Water Purchases	100%	$47,086,000	$38,716,000	$33,463,000	$41,157,000	$35,033,000
Albert Robles Center (ARC)	100%	200,000	272,000	2,027,000	6,816,000	10,050,000
Water Conservation	50%	168,500	164,000	208,000	247,500	314,500
Water Supply - Vander Lans	100%	3,276,000	2,510,000	1,843,000	3,877,000	5,814,000
Montebello Forebay Recycled Water	100%	275,000	338,000	229,000	392,000	540,000
Groundwater Resource Planning	100%	547,000	378,000	1,125,000	622,000	1,486,000
Geographic Information Systems (GIS)	50%	118,000	149,500	147,500	128,500	130,000
Groundwater Monitoring Program	50%	477,000	573,000	657,000	674,000	757,000
Dominguez Gap Barrier Recycled Water	100%	170,000	173,000	213,000	242,000	333,000
Replenishment Operations	100%	183,000	205,000	203,000	357,000	272,000
Hydrogeology Program	50%	327,500	167,000	407,000	506,500	426,500
West Coast Barrier Program	100%	-	-	22,000	-	20,000
Engineering Program	100%	50,000	181,000	208,000	424,000	296,000
Regional Brackish Water Program	100%	-	-	-	6,000	350,000
Well Construction Program	100%	-	-	-	1,000	31,000
Water Education	50%	522,000	596,000	498,500	592,500	576,500
Board of Directors	94%	276,360	309,260	295,160	396,680	335,580
Administration	94%	5,290,320	5,410,640	5,878,760	5,730,240	5,804,500
GASB 45 (Required Retirement Funding)	94%	590,320	714,400	825,320	695,600	843,180
Other Special Programs & Supportive Costs	94%	-	2,289,840	2,624,480	797,120	1,306,600
Capital & Other Non-Operating Costs	94%	2,703,201	5,803,560	9,499,640	14,535,220	18,579,100
Sub-Total Replenishment Assessment Fund		**$62,260,201**	**$58,950,200**	**$60,374,360**	**$78,197,860**	**$83,298,460**

Water Replenishment District of Southern California

Schedule of Expenses by Fund Allocation

Clean Water Fund

Description	Clean Water Fund	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projection	FY 2021 Budget
Water Conservation	50%	$168,500	$164,000	$208,000	$247,500	$314,500
Goldsworthy Desalter	100%	811,000	826,000	1,301,000	2,506,000	2,748,000
Water Quality Improvement Program	100%	229,000	506,000	562,000	544,000	353,000
Geographic Information Systems (GIS)	50%	118,000	149,500	147,500	128,500	130,000
Groundwater Monitoring Program	50%	477,000	573,000	657,000	674,000	757,000
Safe Drinking Water Program	100%	450,000	559,000	752,000	1,373,000	44,000
Hydrogeology Program	50%	327,500	167,000	407,000	506,500	426,500
Water Education	50%	522,000	596,000	498,500	592,500	576,500
Board of Directors	6%	17,640	19,740	18,840	25,320	21,420
Administration	6%	337,680	345,360	375,240	365,760	370,500
GASB 45 (Required Retirement Funding)	6%	37,680	45,600	52,680	44,400	53,820
Other Special Programs & Supportive Costs	6%	-	146,160	167,520	50,880	83,400
Capital & Other Non-Operating Costs	6%	172,545	370,440	606,360	927,780	1,185,900
Sub-Total Clean Water Fund		**3,668,545**	**4,467,800**	**5,753,640**	**7,986,140**	**7,064,540**
Total Expenses		**$65,928,746**	**$63,418,000**	**$66,128,000**	**$86,184,000**	**$90,363,000**

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, 2020, the District had $84,880,000 in Reserve Funds. This includes $3,200,000 of restricted reserves and $81,680,000 in unrestricted reserves. The following pages provide a detailed breakdown of the District's reserve funds.

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	
Reserved for Debt Service		**$3,200,000**

Unrestricted Reserve Funds

1. **Safe Drinking Water 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 Projects	
Reserved for Safe Drinking Water		**$5,000,000**

2. **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	
Reserved for Well Rehabilitation & Construction		**$7,500,000**

3. **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	
Reserved for Equipment Replacement		**$5,000,000**

4. **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. 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, including annual debt services, in the current year budget.

Source of Funds:	Replenishment Assessment	
Use of Funds:	Non-Recurring Operating Expenses	
Reserved for Operating		**$32,000,000**

5. **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
   Reserved for Water Purchase Carryover & Rate Stabilization **$32,180,000**

The District's reserve balances are summarized as follows:

Reserve Fund Balances	
Reserve Funds:	
Debt Services (Restricted)	$ 3,200,000
Safe Drinking Water	5,000,000
Well Rehabilitation & Construction	7,500,000
Equipment Replacement	5,000,000
Operating	32,000,000
Water Purchase Carryover & Rate Stabilization	32,180,000
TOTAL Reserve balances as of June 30, 2020	**$ 84,880,000**

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, 2020 was as follows:

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

Proceeds from the 2015 Debt Issuances

Total in Trust for 2015 Debt Issuance	**$2,109**

Proceeds from the 2018 Debt Issuances

Source of Funds:	2018 Revenue Bond
Use of Funds:	Restricted for Capital Projects Only
Total in Trust for 2018 Debt Issuance	**$54,530,850**

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.

Total in Trust for CalTrans Project	**$ 5,556,478**
TOTAL Trust balances as of June 30, 2020	**$60,089,437**

Projected Unreserved Fund Balance at June 30, 2020

Description	Estimated Unreserved Fund Balance 6/30/2020	Estimated Revenues	Estimated Expenses	Debt Service	Estimated Unreserved Fund Balance 6/30/2021
Replenishment Fund	$15,458,088	$81,208,000	$(64,719,360)	$(18,579,100)	$13,367,628
Clean Water Fund	$986,686	$9,155,000	$(5,878,640)	$(1,185,900)	$3,077,146
Total All Funds	**$16,444,774**	**$90,363,000**	**$(70,598,000)**	**$(19,765,000)**	**$16,444,774**

Projected Unreserved Fund Balance (5-Year Forecast)

Description	FY 2021 Budget	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Beginning Funds Balance	**$16,444,774**	**$16,444,774**	**$16,483,402**	**$16,487,979**	**$16,499,284**
Add: Estimated Revenues	$90,363,000	$93,435,342	$96,425,273	$99,414,456	$102,595,719
Total Funds Available	**$106,807,774**	**$109,880,116**	**$112,908,675**	**$115,902,435**	**$119,095,003**
Less: Estimated Expenditures	$(70,598,000)	$(73,633,714)	$(76,652,696)	$(79,642,151)	$(82,827,837)
Annual Debt Service	$(19,765,000)	$(19,763,000)	$(19,768,000)	$(19,761,000)	$(19,759,000)
Total All Funds	**$16,444,774**	**$16,483,402**	**$16,487,979**	**$16,499,284**	**$16,508,166**

Long-Term Debt

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 credit-worthiness.
- 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 and capital improvement program or budget, as applicable.

The District issued long-term debt to finance the constructions, acquisition, and rehabilitation of capital improvements and facilities, equipment and land 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 as follows:

Replenishment Assessment Revenue Bonds, Series 2015

With water independence on the horizon, 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.

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 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.

The net proceeds of $69,500,000 are being 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 being 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 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 associated with the 2015 and 2018 Replenishment Assessment Revenue Bonds, and Clean Water State Revolving Fund is as follows:

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
2015 Bonds	$11.1M	$11.1M	$11.1M	$11.1M	$11.1M
2018 Bonds	5.2M	5.2M	5.2M	5.2M	5.2M
State Revolving Fund Loan	3.5M	3.5M	3.5M	3.5M	3.5M
TOTAL	**$19.8M**	**$19.8M**	**$19.8M**	**$19.8M**	**$19.8M**

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.

Debt Ceiling

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. Capital Improvement Program additions and betterments will be primarily funded through long-term debt.

Debt Service Payments Schedule

		2015 Revenue Bonds			2018 Revenue Bonds			Clean Water State Revolving Fund Loan		
Due Date	Fiscal Year	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
08/01/2016		1,655,000	4,118,895	**5,773,895**						
02/01/2017	**2017**		3,472,350	**3,472,350**						
08/01/2017		2,350,000	3,472,350	**5,822,350**						
02/01/2018	**2018**		3,425,350	**3,425,350**						
08/01/2018		2,445,000	3,425,350	**5,870,350**						
02/01/2019	**2019**		3,376,450	**3,376,450**		392,883	**392,883**			
08/01/2019		2,560,000	3,376,450	**5,936,450**		1,644,625	**1,644,625**			
12/31/2019							-			
02/01/2020	**2020**		3,312,450	**3,312,450**		1,644,625	**1,644,625**	2,295,672	628,866	**2,924,539**
08/01/2020		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	**2021**		3,245,200	**3,245,200**		1,618,750	**1,618,750**			
08/01/2021		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	**2022**		3,174,450	**3,174,450**		1,591,625	**1,591,625**			
08/01/2022		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	**2023**		3,100,075	**3,100,075**		1,563,000	**1,563,000**			
08/01/2023		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	**2024**		3,021,950	**3,021,950**		1,533,000	**1,533,000**			
08/01/2024		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	**2025**		2,939,825	**2,939,825**		1,501,500	**1,501,500**			
08/01/2025		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	**2026**		2,853,450	**2,853,450**		1,468,375	**1,468,375**			

		2015 Revenue Bonds			2018 Revenue Bonds			Clean Water State Revolving Fund Loan		
08/01/2026		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	**2027**		2,762,700	**2,762,700**		1,433,500	**1,433,500**			
08/01/2027		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	**2028**		2,667,325	**2,667,325**		1,396,875	**1,396,875**			
08/01/2028		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	**2029**		2,566,950	**2,566,950**		1,358,375	**1,358,375**			
08/01/2029		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	**2030**		2,461,450	**2,461,450**		1,317,875	**1,317,875**			
08/01/2030		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	**2031**		2,350,575	**2,350,575**		1,275,250	**1,275,250**			
08/01/2031		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	**2032**		2,234,075	**2,234,075**		1,230,500	**1,230,500**			
08/01/2032		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	**2033**		2,111,575	**2,111,575**		1,183,375	**1,183,375**			
08/01/2033		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	**2034**		1,982,700	**1,982,700**		1,133,875	**1,133,875**			
08/01/2034		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	**2035**		1,847,325	**1,847,325**		1,081,875	**1,081,875**			
08/01/2035		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	**2036**		1,704,950	**1,704,950**		1,027,125	**1,027,125**			
08/01/2036		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	**2037**		1,555,325	**1,555,325**		969,625	**969,625**			
08/01/2037		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	**2038**		1,397,950	**1,397,950**		909,125	**909,125**			

		2015 Revenue Bonds			2018 Revenue Bonds			Clean Water State Revolving Fund Loan		
08/01/2038		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	**2039**		1,232,575	**1,232,575**		845,625	**845,625**			
08/01/2039		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	**2040**		1,058,700	**1,058,700**		778,750	**778,750**			
08/01/2040		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	**2041**		875,825	**875,825**		708,500	**708,500**			
08/01/2041		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	**2042**		683,700	**683,700**		634,625	**634,625**			
08/01/2042		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	**2043**		522,900	**522,900**		557,000	**557,000**			
08/01/2043		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	**2044**		355,500	**355,500**		475,375	**475,375**			
08/01/2044		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	**2045**		181,300	**181,300**		389,625	**389,625**			
08/01/2045		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	**2046**					299,375	**299,375**			
08/01/2046					3,795,000	299,375	**4,094,375**			
12/31/2046								2,838,529	86,010	**2,924,539**
02/01/2047	**2047**					204,500	**204,500**			
08/01/2047					3,990,000	204,500	**4,194,500**			
12/31/2047								2,866,914	57,625	**2,924,539**
02/01/2048	**2048**					104,750	**104,750**			
08/01/2048					4,190,000	104,750	**4,294,750**			
12/31/2048	**2049**							2,895,583	28,956	**2,924,539**
	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**

Replenishment Projects and Programs

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

Background

The Leo J. Vander Lans (LVL) advanced water treatment facility supplies water to the Alamitos Gap Barrier (AGB) to prevent seawater intrusion and protect the groundwater supplies of the Coastal Plain. Water provided by the LVL treatment facility improves the quality of supply water to the barrier through the use of advanced treatment technologies including microfiltration (MF), reverse-osmosis (RO) and advanced oxidation (AOP) using hydrogen peroxide and ultraviolet (UV) light. Product water from this facility offsets imported water used to supply the Alamitos Barrier, thereby improving the reliability of water to the barrier. The treatment facility was originally constructed in 2004 and expanded in 2015.

For the past sixteen years, the Long Beach Water Department (LBWD) has operated and maintained the treatment facility under contract with WRD. Recently, WRD has recognized the opportunity to standardize its operations across two treatment facilities – LVL and the Albert Robles Center. With one operational group overseeing both treatment facilities, common operational philosophies, procedures and reporting can be realized. PERC Water has assumed operational responsibilities for the LVL treatment facility under contract and have provided dedicated staff to the project. As part of this change, WRD has also taken a more active role in operations to ensure that process optimization efforts are employed, production targets are met, and operational challenges are addressed to minimize facility downtime.

Expected costs for this budget year are primarily related to expenses associated with operations and maintenance of the plant. Typical expenses include labor, power, water treatment chemicals and analytical costs to ensure water quality meets all regulatory requirements. Additional routine costs are associated with maintenance-related parts and services that address the maintenance needs of the facility. As the facility, and especially the original facility commissioned in 2004, continues to age, additional capital investment through the District's rehabilitation and replacement program and Capital Improvement Project (CIP) will be anticipated.

The goal of the LVL treatment project is to provide a more reliable and local, sustainable means of replenishing the basin through injection. Operations and maintenance costs are drawn from the Replenishment Fund, while capital investments will be paid for through local, state and federal grant opportunities or debt financing.

FY 2020 Accomplishments

- Contracted with PERC Water for operations of the LVL treatment facility.
- Initiated the process of on-boarding chemical and support contracts which have been held by the LBWD.
- Completed the construction of adding additional storage capacity for calcium chloride to increase operational flexibility and reliability.
- Completed a hydraulic evaluation of the Backwash Treatment (BWT) MF system, including implementing recommended program changes to improve system reliability.
- Completed structural analysis and rehabilitation (Phase 1) of the reverse osmosis clean-in-place, reinforced fiberglass (FRP) tank platform.
- A condition assessment was completed to evaluate the state of the MF filtrate tank, which has shown visible signed of deterioration.
- Completed the process to permit the bulk aqueous ammonia system, including the development of a risk management plan required by the regulatory agency.
- Continued to evaluate the most cost-effective means of increasing plant production through supplementation of source water from the Los Coyotes Water Reclamation Plant.
- Continued to evaluate the most cost-effective use of additional product water beyond the barrier demand. Additional injection wells were modeled and reviewed.

FY 2021 Objectives

- Complete the transition of operations from the LBWD to PERC Water, including operational, sampling and reporting obligations as well as remaining service contracts and support currently managed by LBWD.
- Development and documentation of Standard Operating Procedures (SOPs) for the plant operations and support activities.

- Review and update the Operations Optimization Plan (OOP) required for regulatory compliance.
- Implementation of the WRD Maintenance Support Program to support facility operations.
- Rehabilitation of the MF filtrate tank based on the recommendation and findings from the condition assessment profile.
- Perform Supervisory Control and Data Acquisition (SCADA) upgrades to improve process reliability.
- Continue to evaluate the most cost-effective means of increasing plant production through supplementation of source water from the Los Coyotes Water Reclamation Plant.
- Continue to evaluate the most cost-effective use of additional product water beyond the barrier demand. Additional injection wells onsite and offsite at LVL will be reviewed.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The operational costs indicated in the FY 2020 projections reflect the extended duration the treatment facility was off-line due to construction-related activities at the Long Beach Water Reclamation Plant (LBWRP), which supplies water to LVL. With phase three of the infrastructure improvement project completed at the LBWRP, the FY 2021 budget reflects more typical and consistent operational expenditures. This budget also reflects an increase in the cost of source water the District pays to the City of Long Beach Water Department to provide a more reliable supply for LVL operations.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$1,880,000	$1,870,000	$(10,000)
R&M/Materials/Equipment	1,062,000	1,187,000	125,000
Other Expenses	734,000	2,432,000	1,698,000
Other General & Administration	201,000	325,000	124,000
TOTAL	**$3,877,000**	**$5,814,000**	**$1,937,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Maximize recycled water delivery at the AGB through consistent LVL operations.				Expand Replenishment Opportunities
	MEASURE: LVL annual production (AF). * Treatment plant off-line due to LBWRP construction.	*	*	3,500 Acre Feet	
2	**GOAL:** Comply with regulatory requirements for monitoring and compliance.				Expand Replenishment Opportunities
	MEASURE: Submit compliance reports to RWQCB to satisfy permit compliance requirements.	Yes	Yes	Planned	
3	**GOAL:** Conduct recycled water testing to ensure satisfaction of water quality criteria for the County of Los Angeles Department of Public Works.				Expand Replenishment Opportunities
	MEASURE: Submit monthly Alamitos Barrier Injection Water Quality Reports that satisfy LADPW's water quality standards.	Yes	Yes	Planned	
4	**GOAL:** Operation and maintenance sufficient to increase reliability of the treatment facility.				Expand Replenishment Opportunities
	MEASURE: Treatment facility on-line factor (%) and annual production.	N/A	N/A	Planned	

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, 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 perfluorinated compounds (PFAS), nitrogen, total organic compounds (TOC), biodegradable dissolved organic carbon (BDOC), and emerging contaminants, such as pharmaceuticals, endocrine disruptors, and personal care products. For the upcoming year, research into these issues will continue.

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 new 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 Sanitation Districts of Los Angeles County.

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 2020 Accomplishments

- Continued work on a revised permit for spreading tertiary-treated recycled water into the Montebello Forebay.

- Initiated the preparation of the Title 22 Engineering Reported for the Montebello Forebay Recycled Water Recharge Project.

- 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.

- Continued sampling of monitoring wells for the latest chemicals of emerging concern, PFAS.

FY 2021 Objectives

- Continue collaborating with the Sanitation Districts 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 the regulatory agencies, and drafting a Title 22 Engineering Report.

- Perform additional sampling for PFAS compounds to determine relationship to recycled water for recharge.

- 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 Sanitation Districts, Metropolitan Water District, and City of Los Angeles to help increase the amount of recycled water available for groundwater recharge in the WRD service area.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

FY 2020 planned budget for staff and professional services was moved forward due to agency delays and is anticipated to be spent in FY 2021.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$176,000	$302,000	$126,000
R&M/Materials/Equipment	27,000	39,000	12,000
Other Expenses	45,000	33,000	(12,000)
Other General & Administration	145,000	166,000	21,000
TOTAL	**$393,000**	**$540,000**	**$147,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 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	
3	**GOAL:** Perform additional sampling for PFAS compounds to determine relationship to recycled water for recharge.				Maximize Innovation and Environmental Resiliency
	MEASURE: Collect samples and report results in our annual RGWMR.	1	1	1	
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.	0	0	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 mitigate all potential impacts from Per- and Polyfluoroalkyl Substances (PFAS) in the groundwater basins. PFAS emerged in 2019 through a State Water Resources Control Board (SWRCB) well sampling order and is now being regulated in 2020. Impacts to the pumping community could be significant and a pumper adopted PFAS Funding and Action Plan to provide support to pumpers in need will be the primary objective in 2020/2021.

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 and San Gabriel Rivers Subcommittee as well as the Chair of the South Santa Monica Measure W Committee. 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 2020 Accomplishments

- Finalized a term sheet for a new Recycled Water Purchase Agreement with Long Beach Water Department for the Leo J. Vander Lans Advanced Water Treatment Facility.

- Executed an extension of the Los Coyotes Recycled Water Allocation with Los Angeles County Sanitation Districts.

- Executed an MOU with the Los Angeles County Department of Public Works for cooperative management of resiliency facilities in LA County.

- Initiated a PFAS Action and Funding Plan and group to determine total PFAS impacts to the pumping community and developing a plan to mitigate impacts.

- Participate on three (3) Measure W Stormwater Steering Committees and Chair one (1) committee.

- Participated in the Greater Los Angeles Integrated Regional Water management Planning Process (GLAC IRWM) and served as co-chair of the GLAC IRWM Lower Los Angeles and San Gabriel Rivers Subcommittee.

- Attended monthly and quarterly meetings of the Central and West Basin Water Associations, providing each with an update of up-to-date basin conditions and ongoing District activities.

- Finalized the Regional Brackish Water Reclamation Program Feasibility Study, working with six stakeholders in the West Coast Basin to identify alternatives for remediation and beneficial use of the saline plume.

- Signed agreement with the Department of Water Resources for Proposition 50 for the Goldsworthy Desalter expansion project for $3 million.

FY 2021 Objectives

- Executed JPA for the cooperative management structure of resiliency structures in LA County.
- Execute a new potable water purchase agreement with the City of Torrance for the Goldsworthy Desalter.
- Executed MOUs with Regional Brackish stakeholders for quantities of water from the eventual final program.
- An approved and adopted Title XVI Feasibility Study with the US Bureau of Reclamation for the Regional Brackish Water Reclamation Program.
- Executed agreement with LACSD for a dedicated brine line from the Regional Brackish Water Reclamation Project to the Joint Water Pollution Control Plant.
- Initiate and complete an agency wide Climate Action Plan for WRD.
- Execute an MOU with LA Department of Water and Power for recycled water from the Hyperion Water Reclamation Plant for replenishment and storage purposes.
- Execute a Letter of Intent (LOI) with Metropolitan Water District (MWD) for recycled water from their Regional Recycled Water Program.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Professional services increased due to the addition of a consultant for the Climate Action Plan. Other additional expenses incurred within the Department Budget are the reallocation of all WRD agency memberships and legislative consultants, now managed by the Groundwater Resources Department.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$455,000	$815,000	$360,000
R&M/Materials/Equipment	-	-	-
Other Expenses	36,000	327,000	291,000
Other General & Administration	132,000	344,000	212,000
TOTAL	**$623,000**	**$1,486,000**	**$863,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Update strategic plan.				Maximize Innovation and Environmental Resiliency
	MEASURE: Plan to be adopted by the Board of Directors.	N/A	N/A	In Progress	
2	**GOAL:** Continue to develop new projects that meet WIN4ALL resiliency goals.				Maximize Innovation and Environmental Resiliency
	MEASURE: Agreements with key stakeholders to be signed as needed.	N/A	N/A	In Progress	
3	**GOAL:** PFAS Action and Funding Plan to be adopted.				Maximize Innovation and Environmental Resiliency
	MEASURE: Consensus amongst pumper community and Board adopted plan.	N/A	N/A	In Progress	
4	**GOAL:** Regional Brackish Water Program advancing.				Maximize Innovation and Environmental Resiliency
	MEASURE: Signed Letters of Intent (LOIs) with stakeholders.	N/A	N/A	In Progress	

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 2020 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.
- Finalized construction agreement for Second Gap Connection & Potable Backup Projects. Construction is anticipated to begin in FY2021.

FY 2021 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.
- Prepare and post RFBs for Second Gap Connection & Potable Backup Projects. Construction is anticipated to begin in FY2021.
- Award construction contracts and begin construction activities associated with the Second Gap Connection & Potable Backup Projects.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Reduced equipment budget and staff labor was reallocated for FY 2021.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$136,000	$136,000	$ -
R&M/Materials/Equipment	35,000	24,000	(11,000)
Other Expenses	13,000	15,000	2,000
Other General & Administration	58,000	158,000	100,000
TOTAL	**$242,000**	**$333,000**	**$91,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Prepare compliance monitoring reports and coordinate reporting/compliance for submittal to permittees (LADWP, LABOS, & 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:** Prepare and post RFBs for Second Gap Connection & Potable Backup Projects. Construction is anticipated to begin in FY2021.				Maximize Innovation and Environmental Resiliency
	MEASURE: Post RFBs	0	0	1	

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 2020 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.

- Finalized the Montebello Forebay Spreading Grounds Operational Model (MFSGOM) Enhancements project and update the Montebello Forebay Recharge Enhancement Study (MFRES; eMFRES).

- Finalized the Zone 1 Condition Assessment to evaluate the confluence of the Zone 1 Ditch and the Crossover Channel, and the water pathway under Rosemead Blvd., to restore normal water flows to the Rio Hondo on the west side of Rosemead Blvd.

- 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).

- Presented monthly updates to the WRD Water Resources Committee.

FY 2021 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.

- Work 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 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).

- Continue to provide monthly updates to the WRD Water Resources Committee.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

No significant budget changes for work planned in FY 2021.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$99,000	$102,000	$3,000
R&M/Materials/Equipment	25,000	23,000	(2,000)
Other Expenses	49,000	11,000	(38,000)
Other General & Administration	184,000	136,000	(48,000)
TOTAL	**$357,000**	**$272,000**	**$(91,000)**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
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).	7,676 AF Total 1,823 AF RW	7,100 AF Total 2,250 AF RW	7,800 AF Total 5,800 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 recycled water to the Spreading Grounds	48,530 AF	47,350 AF 3° RW 8,660 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.	Maximized Recycled Water in light of LVL start-up and LBWTP shutdowns			Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Recycled water increased to the Alamitos Gap Barrier (assumed full operation of LVL).	5,271 AF Total 115 AF RW WRD: 3,206 AF Total 73 AF RW	5,150 AF Total 340 AF RW WRD: 3,000 AF Total 210 AF RW	8,300 AF Total 6,600 AF RW WRD: 5,000 AF Total 4,000 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.	14,239 AF Total 10,245 AF RW	15,000 AF Total 12,080 AF RW	17,000 AF Total 14,000 AF RW	

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

Background

The Albert Robles Center (ARC) advanced water treatment facility (AWTF) supplies advanced treated water for recharge at the San Gabriel Coastal Spreading Grounds (spreading grounds or percolation basins). Recycled water provided by the Los Angeles County Sanitation District's San Jose Creek Water Reclamation Plant is treated using advanced treatment technologies including ultrafiltration (UF), reverse osmosis (RO) and advanced oxidation (AOP) using chlorine and ultraviolet (UV) light. With an annual production target of 10,000 acre-feet (AF) of water, coupled with an additional 11,000 AF of recycled water, the overall goal is to eliminate the current demand for imported water at the Central Basin.

Operations of the ARC treatment facility are overseen by PERC Water, under contract with J.F. Shea Construction. With construction largely completed in FY 2020, transition operations began in January 2019 and activities centered on commissioning the treatment facility, including acceptance testing and gaining all regulatory approvals to allow advanced treatment water to be conveyed to the spreading grounds. During the coming fiscal year, efforts will continue to close out all remaining construction-related issues and transition operations deliverables, achieve AWTF production targets, and work toward further optimizing treatment plant performance.

Expected costs for this budget year are primarily related to expenses associated with ARC operations and maintenance. Since the ARC campus is comprised of both the treatment facility, administration learning center (ALC) and grounds, the FY 2021 budget reflects the anticipated typical costs for all facets: treatment facility fixed and variable costs such as labor, power, water treatment chemicals and analytical costs for regulatory compliance; ALC and grounds costs, including security, landscaping, janitorial, exhibits maintenance, etc. With ARC serving as both a treatment facility and a multiuse facility to support community outreach programs and activities, the Program 033 budget is structured to track both treatment and non-treatment expenditures associated with these distinct activities. The Replenishment Fund will serve as the funding source for this program.

FY 2020 Accomplishments

- Completion of construction activities related to the ARC facilities, including the (treatment) process building, ALC and grounds.

- Commissioning and acceptance testing of the treatment facility were completed and the facility began consistent production of advanced treated water for discharge to the San Gabriel River.

- Successfully completed the site inspection by the State Water Quality Control Board, Division of Drinking Water, who witnessed and verified treatment process performance.

- Received final approval by the Los Angeles Regional Water Quality Control Board to begin discharging advanced treated water to the San Gabriel Coastal Spreading Grounds.

- Commencement of ALC-related activities including tours, workshops and seminars.

FY 2021 Objectives

- Consistent and stable operations of the AWTF to produce 10,000 AF of advanced treated recycled water.

- Continue to optimize operations of the AWTF to maintain steady costing centers such as power, chemicals and brine disposal to ensure that all performance guarantees and targets outlined in the transition operations agreement are achieved.

- Continue to collaborate with the J.F. Shea team during this transition operational period to ensure that remaining operational-related issues and deliverables are addressed.

- Operations and maintenance of the ARC facility sufficient to support an increase in utilization and activities throughout the FY 2021.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The FY 2021 budget reflects the full burden cost projections associated with operations and maintenance of the ARC AWTF facility to produce the targeted 10,000 AF of advanced treatment recycled water. As a multi-use facility, the ARC budget also encompasses additional costing centers associated with the Administration Learning Center and grounds. The culmination of which accounts for the increase in Program 033 budget compared to the previous FY 2021 budget.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$2,617,000	$2,609,000	($8,000)
R&M/Materials/Equipment	1,034,000	2,508,000	1,474,000
Other Expenses	2,776,000	4,457,000	1,681,000
Other General & Administration	388,000	476,000	88,000
TOTAL	**$6,815,000**	**$10,050,000**	**$3,235,000**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Consistent and stable operations of the treatment facility to produce 10,000 AF of advanced treated recycled water that meets all regulatory specifications.				Expand Replenishment Opportunities
	MEASURE: ARC annual production (AF).	N/A	N/A	10,000 Acre Feet	
2	**GOAL:** Continue to optimize operations of the AWTF to maintain steady costing centers such as power, chemicals and brine disposal.				Expand Replenishment Opportunities
	MEASURE: Specified transition operations performance guarantees.	N/A	N/A	Planned	
3	**GOAL:** Collaborate with J.F. Shea to ensure remaining operational-related issues and deliverables are addressed.				Expand Replenishment Opportunities
	MEASURE: Significant completion and final approval.	N/A	N/A	Planned	
4	**GOAL:** Support ARC campus operations and maintenance activities for both treatment and non-treatment activities such as tours, seminars and community outreach events.				Promote Organizational Excellence
	MEASURE: Sustainable center operations and functionality.	N/A	N/A	Planned	

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 CIP projects; 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 2020 Accomplishments

- Updated the 5-year CIP Plan
- Renewed on-call engineering service programs
- Renewed on-call construction management service programs

FY 2021 Objectives

- Manage and monitor the CIP Budget closely.
- Develop a Capital Improvement Project Prioritization Process
- Update and maintain standard specifications and drawings
- Update the 5-year CIP Plan

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The reduction in FY 2021 is largely due to reallocation of staff time to other specific projects and programs.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$ -	$ -	$ -
R&M/Materials/Equipment	-	-	-
Other Expenses	42,000	34,000	(8,000)
Other General & Administration	366,000	262,000	(104,000)
TOTAL	**$408,000**	**$296,000**	**$(112,000)**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

	FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1 **GOAL:** Update the 5-year CIP Plan every 2 years to adapt to real world changes.				Expand Replenishment Opportunities Expand Extraction Capacity Promote Organizational Excellence
MEASURE: Release of updated 5-year CIP plan	October 2018	N/A	October 2020	

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 2020 Accomplishments

- Completed Agreements for both loan recipients, specifically the City of Vernon and City of Signal Hill.
- Disbursed $738,720 of loan dollars to the City of Vernon.

FY 2021 Objectives

- Project completion and full loan disbursement for the City of Vernon's project.
- Start construction and partial disbursement for the City of Signal Hill's project.
- Continue offering loan program to interested and qualified groundwater producers.

Basis for Changes FY 2020 Projection to FY 2021 Budget

No significant changes noted.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$ -	$ -	$ -
R&M/Materials/Equipment	-	-	-
Other Expenses	-	-	-
Other General & Administration	1,000	31,000	30,000
TOTAL	**$1,000**	**$31,000**	**$30,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goal
1	**GOAL:** Provide well construction and rehabilitation loans to assist pumpers increase ground-water pumping and maximize their groundwater rights..				Expand Extraction Capacity
	MEASURE: Loan recipients to increase annual groundwater extraction beyond their most recent 5-year total extraction average by at least 10%.	October 2018	N/A	10%	

Clean Water Projects and Programs

Program 002 – Robert W. Goldsworthy Desalter

Background

The Robert W. Goldsworthy Desalter (Desalter), located in the City of Torrance, began operating in 2002 to treat a brackish groundwater plume created inland of the West Coast Basin Barrier after the barrier was put into operation. The Goldsworthy Desalter 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 as well as the addition of the two aforementioned production wells.

The project's cost for this budget year center on operations and maintenance of the treatment facility. Typical expenses include labor, power, water treatment chemicals and analytical costs to ensure water quality meets all regulatory requirements. Additional cost to upgrade assets and equipment not replaced as part of the expansion project would be funded through the Capital Improvement Project. Since the overall purpose of the project is to remediate degraded groundwater quality, the costs are attributed to the Clean Water Fund.

FY 2020 Accomplishments

- Rehabilitation of the City Yard Well to restore production yield and Desalter output.
- Completion of repairs to the main pipeline conveying source water from the Delthorne Park Well to the Desalter.
- Implementation of a modified and cost-efficient cleaning regimen to extend the time needed to conduct a full chemical cleaning of the RO membranes.
- Secured a small RO pilot system to evaluate chemical pretreatment aimed at reducing the impact of fouling from organic constituents present in the source water that reduce system performance.

- Completed a comprehensive facility condition assessment and utilize the findings to develop a proactive repair and rehabilitation program that addresses assets which are approaching the end of useful life.

FY 2021 Objectives

- Continue working to optimize Desalter performance to sustainably operate at higher production rates while minimizing the deleterious effects of RO membrane fouling from the challenging source water.

- Implementation of the Computerized Maintenance Management System (CMMS), including training of the Torrance Water Department operations staff.

- Address system issues identified during routine operations, including chemical metering pump splash guards, hydraulic assessment of the RO sump discharge system, re-location of the RO cleaning system flowmeter and brine flowmeter for accuracy and ease of operator access.-

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The operational costs indicated in the FY 2020 projections are lower than the FY 2021 budget, with the difference related to a reduction in variable costs such as power and water treatment chemicals as a result of the Desalter operating at reduced production. The FY 2021 budget reflects typical and consistent operational expenditures.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$503,000	$450,000	$(53,000)
R&M/Materials/Equipment	1,021,000	822,000	(199,000)
Other Expenses	800,000	1,386,000	586,000
Other General & Administration	182,000	90,000	(92,000)
TOTAL	**$2,506,000**	**$296,000**	**$242,000**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:**				
	Optimize Desalter performance to increase production, including pilot testing to evaluate pretreatment options.				Expand Extraction Capacity
	MEASURE:				
	Goldsworthy annual production (AF).	1,820 Acre Feet	1,100* Acre Feet	3,500 Acre Feet	
	* Production through April 2020				
2	**GOAL:**				
	Implementation of a computerized maintenance management system (CMMS).				Expand Extraction Capacity
	MEASURE:				
	Utilization by City of Torrance operators.	N/A	N/A	Planned	
3	**GOAL:**				
	Resolve system issues, including chemical pump splash guards, hydraulic assessment of the RO sump discharge system, re-location of the RO cleaning system and brine flowmeters.				Expand Extraction Capacity
	MEASURE:				
	Completion of issues identified.	N/A	N/A	Planned	

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 2020 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 comingled 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 $10,658,561 (or ~80%). WRD will be providing matching funds in the amount of $2,787,359 (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 for various groundwater cleanup projects in the basin including those associated with the Del Amo / Montrose Superfund Sites and restoration of the former Norwalk Tank Farm.

- 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 as documented in a consent decree issued in April 2016 and subsequent investigation work plans issued in April 2017. 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 (Eurofins Eaton Analytical). The meetings provide an opportunity for staff to communicate directly with our vendor partners ensuring the highest quality work for the District.

- Presented "Priority Ranking System used to Evaluate Contamination Potential in a Large Groundwater Basin" at the Water Education Seminar / American Water Works Association (WES / AWWA).

- Provided groundwater contamination updates at the administrative committee and board of director meetings of the Southeast Water Coalition (SEWC) and at a board meeting for Montebello Land and Water Company.

- Presented "Groundwater Contamination Related Programs and Regional Groundwater Monitoring Program" to board members of the LARWQCB.

- Published an article entitled "At the Root: Operating a Groundwater Contamination Prevention Program While Keeping Tabs on High Priority Sites" in a quarterly magazine prepared by AWWA (Winter 2019).

- Presented on “Chemicals of Emerging Concern – Central Basin and West Coast Basin” at the Association of Ground Water Agencies / American Ground Water Trust (AGWA/AGWT) and a water quality colloquium sponsored by the Chino Basin Watermaster.

- Presented on “Monitoring Constituents of Emerging Concern during Recharge Operations” at the American Water Resources Association (AWRA).

- Continue to participate in various environmental justice events including the 5th Annual Environmental Health & Enforcement Symposium and the “Your Life is Now” event sponsored by California Safe Schools.

- WRD staff continue to track the progress of and provide updates to various pumpers regarding various perfluorinated compounds (an emerging chemical of concern) including perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), collectively per- and polyfluoroalkyl substances (PFAS). A working group was formed 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.

- 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. Quarterly meetings are held between the WRD and LARWQCB.

FY 2021 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 2020 Projection to FY 2021 Budget

Budget adjustments were made (overall decrease) to accommodate other programs and district memberships (decrease shown under other expenses) were consolidated into a single project number and will be managed / tracked by the Water Resource Department.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$197,000	$152,000	$(45,000)
R&M/Materials/Equipment	27,000	32,000	5,000
Other Expenses	73,000	14,000	(59,000)
Other General & Administration	247,000	155,000	(92,000)
TOTAL	**$544,000**	**$353,000**	**$(191,000)**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:**				
	Coordinate and administer meetings of the Groundwater Contamination Forum as a means for key stake-holders 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	1 (COVID-19)	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	1	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	

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
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 Groundwater Quality Committee.	2	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 working group developed by WRD.	2	4	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 current 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 $800,000 to over $2,000,000. 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 and four systems have already received state funding and one project is currently under construction using state funding.

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 2020 Accomplishments

- Added a 12th DAC Project, Tract 349 Mutual Water Company
- Added Lomita Well 5 as a SDWP Project. This project qualified for a Priority A District grant.

FY 2021 Objectives

- Complete construction on Granular Activated Carbon (GAC) treatment system for Huntington Park Well 15 to treat VOCs.
- Complete construction on GAC treatment system for City of Lynwood Well 11 to treat VOCs.
- Complete construction on GAC treatment system for California American Water Arlington Well to treat VOCs.
- Complete construction on Maywood Mutual Water No. 2 Well 1 for Iron/Manganese treatment.
- Pursue DAC grant funding for the current water system DAC participants
- Complete design and began construction on Iron & Manganese treatment system for Sativa Well 5 through.
- Complete construction on GAC treatment system for City of Lomita Well 5 to treat VOCs.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Decrease to this program is based on planning and designing services for the Safe Drinking Water projects and on-call engineering service for the Disadvantage Community (DAC) projects. These expenses are reimbursed through grant funding and therefore not shown in the operating budget. Any expenses for the traditional SDWP program requiring a loan or grant will be considered from WRD's reserve funds.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$1,310,000	$10,000	$(1,300,000)
R&M/Materials/Equipment	-	-	-
Other Expenses	14,000	15,000	1,000
Other General & Administration	49,000	19,000	(30,000)
TOTAL	**$1,373,000**	**$44,000**	**$(1,329,000)**

Performance Measures

Performance measures for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Identify projects and fund up to $1M from a WRD Grant to assist candidates with primary priority contamination removal through the Safe Drinking Water Program.				Expand Extraction Capacity
	MEASURE: # of projects funded to provide assistance to candidates with primary priority contamination removal.	3 (Grant)	3 (Grant)	3 (Grant)	
2	**GOAL:** Identify projects and fund up to $1M from a WRD loan to assist candidates with secondary priority contamination removal through the Safe Drinking Water Program.				Expand Extraction Capacity
	MEASURE: # of projects funded to provide assistance to candidates with secondary priority contamination removal.	2 (Loans)	0 (Loan)	1 (Loan)	
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: # of DAC projects funded to provide assistance to candidates with primary or secondary priority contamination removal.	7 (DAC)	2 (DAC)	3 (DAC)	

Dual Purpose Projects and Programs

Project 010 Geographic Information System (GIS)

Background

The District maintains an extensive database and Geographic Information System (GIS) in-house. The database includes water level and water quality 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 the California Department of Public Health 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 quality and water levels. 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 both replenishment activities and groundwater quality efforts. Accordingly, the cost for this program is equally split between the Replenishment and Clean Water Funds.

FY 2020 Accomplishments

- Expanded features in the Interactive Well Search Tool, including a version that is specific to WRD staff, enabling access to data that caters to their specific work needs.

- Development of several Story Map web applications, creating powerful interactive tools for conveying important information to the public and for presentations.
- Continued the fine-tuning of data service delivery to partners such as the United States Geological Survey (USGS).
- Continued comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.
- Utilized GIS for development of annual values used in the Engineering Survey and Report (ESR).
- Performed analyses and developed graphics for use in the District's Regional Groundwater Monitoring Report (RGWMR).
- Worked with WRD Staff to assess and implement GIS support for new and ongoing projects.
- Provided graphics and analyses results, as needed, for District presentation, reports, and public outreach materials.
- Participated in regional and international GIS user groups and conferences.

FY 2021 Objectives

- Continue developing new features to improve the District's online Interactive Well Search Tool.
- Develop in-house applications for WRD Staff to easily access GIS layers and well/water data.
- Work with WRD staff to design and develop Esri Story Maps for use in educational, promotional, and presentation materials.
- Continue comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Minor decreases in staff time due to work reallocations, and minor increases for updating related computing and printing hardware.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$80,000	$100,000	$20,000
R&M/Materials/Equipment	-	-	-
Other Expenses	31,000	61,000	30,000
Other General & Administration	146,000	99,000	(47,000)
TOTAL	**$257,000**	**$260,000**	**$3,000**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:**				
	Continue developing new features to improve the District's online Interactive Well Search Tool.				Promote Organizational Excellence
	MEASURE:				
	Updates and improvements to the technology powering the tool	1	N/A	N/A	
	Updates and improvements to the tool	3	2	2	
2	**GOAL:**				
	Develop in-house applications for WRD Staff to easily access GIS layers and well/water data.				Promote Organizational Excellence
	MEASURE:				
	Development of new applications	2	3	3	
3	**GOAL:**				
	Work with WRD staff to design and Esri develop E Story Maps for use in educational, promotional, and presentation materials.				Promote Organizational Excellence
	MEASURE:				
	Development of new Story Maps	1	2	2	
	Improvement of existing Story Maps	N/A	1	3	
4	**GOAL:**				
	Continue comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.				Promote Organizational Excellence
	MEASURE:				
	Development of data catalog	N/A	1	N/A	
	Improvements to data catalog	N/A	N/A	5	

Project 011 Regional Groundwater Monitoring

Background

The Regional Groundwater Monitoring Program continues to be very successful and currently consists of a network of 335 WRD and the United States Geological Survey (USGS)-installed monitoring wells at nearly 60 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. These water quality and water level data are available online at ***http://gis.wrd.org***. On an annual basis, staff prepares a report that documents groundwater production, groundwater level, and groundwater quality conditions throughout the District.

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.

FY 2020 Accomplishments

- Completed spring and fall groundwater quality sampling at WRD monitoring wells including analysis of over 100 chemical constituents and contaminants.

- 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 2018/19.

- 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.

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

- Continued implementation of a telemetry system at several monitoring wells as a test program.

- Planning for two new deep nested monitoring wells with USGS.

- Performed extensive data logger testing, maintenance and repairs.

FY 2021 Objectives

- Collect spring and fall groundwater quality samples at WRD monitoring wells. Analyze samples for over 100 chemical constituents and contaminants including a full round of sampling for per- and polyfluoroalkyl substances (PFAS).

- 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.

- Drill and install two new deep nested monitoring well with USGS. The wells will help evaluate recycled water transport downgradient of the Montebello Forebay.

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Anticipate an increase in facility rent and other field related items (material/equipment) of approximately 4%. Reallocation of staff labor hours due to sampling demands including PFAS.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$659,000	$694,000	$35,000
R&M/Materials/Equipment	95,000	115,000	20,000
Other Expenses	146,000	152,000	6,000
Other General & Administration	448,000	553,000	105,000
TOTAL	**$1,348,000**	**$1,514,000**	**$166,000**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
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 2020.	1	1	1	
2	**GOAL:** Drill and install nested monitoring wells in data gap areas with USGS.				Maximize Innovation and Environmental Resiliency
	MEASURE: Install of wells with USGS.	2	0	2	
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%	

Project 025 Hydrogeology Program

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 2020 Accomplishments

- Preparation of the 2020 Engineering Survey and Report leading to the adoption of the 2020/2021 Replenishment Assessment.

- Preparation of the 2020 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 2020/2021 Replenishment Assessment.

- Significant progress with USGS to finalize the regional groundwater computer model. Updated 3-D sequence stratigraphic framework and incorporation into EarthVision and Leapfrog software. Implemented future management runs. Staff continued to finalize draft reports with USGS.

- Presented on “Developing and Implementing a Robust, Deep Nested Groundwater Monitoring Program in Southern Los Angeles County, California” at a conference held by the Groundwater Resources Association of California (GRAC).

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

FY 2021 Objectives

- Completion of 2021 Engineering Survey and Report.

- Completion of 2021 Cost of Service Report

- Complete the USGS Modflow groundwater computer model, publish the final report, and convert the model to Modflow 6.

- Present technical materials and papers at groundwater conferences and various organizations related to the District.

- Complete Compliance Documents related to SGMA.

- Continue well profiling program (special emphasis on PFAS).
- 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.
- Complete county line groundwater modeling evaluation with OCWD and report results to the Board

Basis for Changes from FY 2020 Projection to FY 2021 Budget

Professional consulting service adjustments were made (overall decrease) to various groundwater modeling tasks, long range planning for an updated SNMP, and well profiling associated with PFAS. District memberships (decrease shown under other expenses) were consolidated into a single project number and will be managed / tracked by the Water Resource Department.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$664,000	$559,000	$(105,000)
R&M/Materials/Equipment	12,000	15,000	3,000
Other Expenses	178,000	61,000	(117,000)
Other General & Administration	159,000	218,000	59,000
TOTAL	**$1,013,000**	**$853,000**	**$(160,000)**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
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:** Continue well profiling program.				Maximize Innovation and Environmental Resiliency
	MEASURE: Profile two wells per Fiscal Year.	2	3	2	

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
4	**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.	2	8	6	
5	**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 report results to Board.	0	0	1	

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. On the heels of the State's historic drought, the WRD conservation program has increased outreach to proactively educate the public and make water conservation a lifestyle. However, several outreach activities in the 4th quarter of the budget year were postponed or canceled due to the COVID-19 pandemic.

The External Affairs Department expanded the number of Eco Gardener classes for the public. This past year WRD had 30 Eco Gardener courses scheduled to take place throughout the service area. Half of these featured an outdoors component where participants had the opportunity to analyze the resources used for the host location's landscaping. Due to the COVID-19 pandemic and county and state orders to shelter-at-home and cancel any group activities; 19 of those classes were canceled or postponed.

WRD continued to partner with public agencies to enhance water conservation awareness to the general public as well as non-profit organizations, chambers of commerce and educational institutions through special events and workshops. The External Affairs department also conducted outreach in areas which had been underserved by our programming in the past.

FY 2020 Accomplishments

- Scheduled 30 Eco-Gardener Classes throughout Southern Los Angeles County
- Expanded outreach to underserved areas in the WRD service area
- Received over 700 entries for the WRD Student Art Calendar Contest
- Presented 24 students with certificates for winning the art contest
- Created an online format for Student Calendar Contest entries
- Expanded outreach for Calendar Contest to include all school districts

FY 2021 Objectives

- Create web-based platform for Eco-Gardener curriculum
- Create Eco-Kids curriculum for use at schools and libraries
- Expand Conservation outreach at community events and work with local elected officials to spread conservation message

- Increase the use of social media outlets to advertise Eco-Gardener classes
- Host 30 Eco-Gardener classes

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The change in FY 2021 budget is due to increase in labor allocation to Water Conservation activities.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$65,000	$65,000	$ -
R&M/Materials/Equipment	-	-	-
Other Expenses	292,000	301,000	9,000
Other General & Administration	138,000	263,000	125,000
TOTAL	**$495,000**	**$629,000**	**$134,000**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:** Outreach in water conservation messaging.				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Number of Eco Gardening classes hosted.	15	30 scheduled	35	
	Number of Eco Gardening class attendees.	Avg 50/ class	Avg 50/ class	50/class	
2	**GOAL:** Conservation Partnerships with stakeholders including groundwater pumpers.				Promote Organization Excellence
	MEASURE:				
	Participation in commercial, institutional, residential and educational partnerships with stakeholders through the service area.	10	10	15	
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.	2	5	3	
	Use of social media for Eco-Gardening Education	25	30	40 Eco-Gardener Posts	

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 policy makers
- Federal and state regulators
- Members of the general public
- Children and Youth (schools)
- Members of the water industry
- News reporters, bloggers, other media.

Water Education and Outreach activities aim to 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 postponed or canceled, including WRD's signature Groundwater Festival.

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 policy makers.

The department is also tasked with supporting the agency's legislative affairs strategies. The agency had a successful legislative year and saw two successful legislative efforts including SB519 which was designed to expedite groundwater cleanup projects by allowing WRD to apply for funds distributed by the State Water Resources Control Board and allocated for cleanup of contamination. This year the district was poised to pass legislation to update our competitive bidding guidelines. Action on this legislation was postponed due to the California State Assembly's shift in priorities in response to the COVID-19 pandemic.

WRD Directors and staff also attended over 35 meetings with legislators to advocate for policy that ensures a safe and secure water for Southern Los Angeles County residents. The district also had a presence at two influential committee hearings focused on water policy in the United States House of Representatives. This year the district's annual Sacramento advocacy trip was postponed where 30 meetings were scheduled to take place.

WRD's implementation of its classroom and auditorium presentation program reached nearly 10,000 students throughout the WRD service area in the 2019-2020 school year. Alongside classroom visits, the External Affairs staff have hosted school field trips to WRD facilities such as the Leo J. Vander Lans Advanced Water Treatment Facility, the Albert Robles Center, and the WRD Main Office.

In March, the department transitioned outreach efforts to address the issue of tap water safety in response to the public health emergency the nation was facing. External Affairs staff led the production of 14 unique messaging videos, numerous informative social media posts, an op-ed that was placed in local newspapers, and print media that engaged the pumping community to ensure our residents in our service area that tap water does not transmit COVID-19 and is safe to drink.

FY 2020 Accomplishments

- Hosted successful Grand Opening of the Albert Robles Center featuring over 800 guests and several elected leaders
- Increased number of social media followers
- Increased number of social media posts
- Created a field trip program for the Albert Robles Center
- Conducted outreach to all school districts in the WRD Service Area
- Updated all WRD Trifolds and cut sheets highlighting WRD Projects and programs

- Completed the WRD “Road to Independence” history booklet and distributed over 2,000 throughout the service area
- Scheduled 50 presentations and school activities throughout the WRD Service Area
- Scheduled 34 Field Trips to WRD’s Albert Robles Center
- Conducted 14 Field Trips averaging 30 students at ARC
- Presented or provided support at 25 conferences and workshops
- Participated in 150 local events and promoted WRD Projects and Programs
- Executed multi-faceted outreach campaign related to COVID-19 and tap water safety

FY 2021 Objectives

- Host unveiling of the ARC Learning Center
- Increase number of social media followers, engagements, and posts
- Conduct 100 Field Trips at ARC
- Create public tour program for ARC
- Continue website updates to facilitate information sharing
- Increase number of education presentations
- Broaden Student Calendar Contest Outreach
- Create collateral for new projects
- Host Groundwater Festival
- Conduct 40 presentations at conferences and workshops
- Host Annual Groundwater Festival

Basis for Changes from FY 2020 Projection to FY 2021 Budget

The reduction in FY 2021 budget is due to reallocation of outreach contracts to another budget.

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$119,000	$65,000	$(54,000)
R&M/Materials/Equipment	-	5,000	5,000
Other Expenses	753,000	747,000	(6,000)
Other General & Administration	313,000	336,000	23,000
TOTAL	**$1,185,000**	**$1,153,000**	**$(32,000)**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1	**GOAL:**				
	Host annual groundwater festival as on on-going groundwater awareness effort				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Number of Groundwater Festival hosted	12th	Postponed due to COVID-19	13th	
2	**GOAL:**				
	Social Media Outreach Efforts				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Number of social media platforms	6	6	6	
	Number of followers	8,820	10,100	11,000	
	Number of social media posts	600	650	800	
3	**GOAL:**				
	Lead outreach on Albert Robles Center including grand opening of the treatment building and learning center				Expand Replenishment Opportunities
	MEASURE:				
	Community Update Meetings	3	3	N/A	
	Grand Opening of ARC	N/A	1	N/A	
	Unveiling of ARC Learning Center	In-Progress	In-Progress	1	
4	**GOAL:**				
	Assist with ARC-related outreach				Expand Replenishment Opportunities
	MEASURE:				
	Updated ARC Tri-fold	1,000	2,000	3,000	
	Updated ARC Cut Sheet	1,000	2,000	3,000	
	ARC Doorhangers	3,500	1,000	1,000	
	Number of times ARC was marketed at public events	200	150	250	

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
5	**GOAL:**				
	Expand WRD Groundwater Education programs highlighting WIN and WIN4ALL				Expand Replenishment Opportunities
	MEASURE:				
	Number of presentations at conferences	30	25	40	
	Multimedia presentations created	30	25	40	
6	**GOAL:**				
	Increase participation at community events promoting WRD projects and programs				Maximize Innovation and Environmental Resiliency
	MEASURE:				
	Number of School events	50	50 Scheduled/ 27 Completed	70	
	Number of field trips of WRD facilities	15	34 scheduled/ 14 completed	100	
	Number of tours led at WRD facilities	25	30	40	
	Number of Earth Day events	10	Cancelled due to COVID-19	15	
7	**GOAL:**				
	Advocate for effective groundwater policy				Expand Replenishment Opportunities
	MEASURE:				
	Number of State Government Advocacy Meetings	24	30 Scheduled	35	
	Number of Federal Government Advocacy Meetings	24	25	35	

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 Committee of the Board.

FY 2020 Accomplishments

See Board President's Report.

FY 2021 Objectives

See Board President's Report.

Basis for Changes from FY 2020 projection to FY 2021 budget

No significant changes noted.

Board of Directors

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$-	$-	$-
R&M/Materials/Equipment	-	-	-
Other Expenses	157,000	61,000	(96,000)
Other General & Administration	265,000	296,000	31,000
TOTAL	**$422,000**	**$357,000**	**$(65,000)**

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 and DTS departments include Data and Technology Services, Administration and Board Support, Human Resources, Risk Management and Building Maintenance.

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.

FY 2020 Accomplishments

- Expanded the functionality of the WRD Portal for quick access and centralization of information and processes.
- Streamlined the Agenda Management process, including web-based access to documents through a single agenda software platform integrated with our document management system.
- Expanded District's internship program across technical departments.
- On-boarded three (3) fulltime staff persons: Hydrogeologist, Accounting Technician, and Senior Government Affairs Representative.
- On-boarded two (2) managers: Chief Financial Officer, and Manager of Administration and Human Resources.
- Completion of two comprehensive classification and compensation studies.
- Secured Board approval of WRD's updated salary schedule in compliance with CalPERS regulations.
- Continued operations through the unexpected COVID-19 pandemic without service interruptions, quickly adapting to rapidly released health guidelines.
- Completed Fiscal Year 2019 financial audit and received unmodified or "clean" audit opinion.

- Streamlined budget and payroll process by automating uploaded data from the Finance system.

- Issued a Request for Proposals and selected a new provider for deferred compensation plan administration and record keeping services.

- Received Distinguished Budget Presentation Award and Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association.

FY 2021 Objectives

- Provide outstanding customer service to District's Board of Directors, management staff and the public through increased communications and responsiveness.

- Increase effectiveness and coordination of delivery of internal business services (mail delivery, document automation, retention and archival, and office management).

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

- Continue implementation of the Employee Relations Program.

- Development of Employee Recognition Program.

- Implementation of innovative human resources policies and procedures for talent management retention and continued legal compliance.

- Ensure District coordination with the Los Angeles County Registrar's office for two Board election seats in 2020 General Election.

- Develop a weekly finance report to provide the Project Mangers with regular updates on the status of the District's revenues and expenditures.

- Prepare Fiscal Year 2020 Comprehensive Annual Financial Report and Fiscal Year 2021 Budget document which meet the Government Finance Officers Association standards for excellence.

Basis for Changes from FY 2020 projection to FY 2021 budget

The changes are mainly due to increase in November 2020 General Election expense and information technology system upgrades.

Administration

Expense Category	FY 2020 Projection	FY 2021 Budget	FY 2021 Budget compared to FY 2020 Projection
Professional Services	$809,000	$876,000	$67,000
R&M/Materials/Equipment	599,000	268,000	(331,000)
Other Expenses	1,041,000	1,607,000	566,000
Other General & Administration	3,647,000	3,424,000	(223,000)
TOTAL	**$6,096,000**	**$6,175,000**	**$79,000**

Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY 2021 are presented below.

	FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
1 GOAL: Promote a safe, healthy and supportive work environment for all employees.				Promote Organizational Excellence
MEASURE:				
a. Development of procedures to ensure compliance with local and state public health officials and implementation of COVID-19 Workforce Transition Plan.		50%	100%	
b. Continued coordination of WRD safety program.		20%	80%	
2 GOAL: Hire, retain and develop a highly qualified, professional, diverse and responsive workforce.				Promote Organizational Excellence
MEASURE:				
a. Implementation of performance management system.		50%	100%	
b. Ensure Board and management's completion of AB1234 (Ethics) and AB1825 (Sexual Harassment Prevention) Training.		N/A	100%	
c. Continued implementation of Employee Relations Program.		40%	100%	
d. Development of formal Employee Recognition Program		15%	100%	
3 GOAL: Increased dissemination of information and communications with staff.				Promote Organizational Excellence
MEASURE:				
a. Maximize utilization of WRD portal and increase information access to all staff.		40%	60%	
b. Continue weekly morning briefing meetings.		60%	100%	

		FY 2019 Actual	FY 2020 Actual	FY 2021 Budget	District's Strategic Goals
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%	
	b. Post approved Board Minutes and Resolutions on website.		50%	100%	
5	**GOAL:** Ensure appropriate information technology and architecture support to all WRD administrative office and off-site facilities.				Promote Organizational Excellence
	MEASURE:				
	a. Development and implementation of Online Pumper Portal.		50%	100%	
	b. Implementation of CMMS for the Goldsworthy Desalter and the Albert Robles Center Advanced Water Treatment Facility.		50%	100%	
6	**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%	

RESOLUTION NO. 20-1130

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, 2020 AND ENDING ON JUNE 30, 2021 AS PROVIDED IN SECTION 60317 OF CALIFORNIA WATER CODE AND MAKING FINDINGS AND DETERMINATIONS REGARDING SAID ASSESSMENT IN ACCORDANCE WITH SECTIONS 60315 AND 60316 OF THE WATER CODE OF THE STATE OF CALIFORNIA

WHEREAS, the Board of Directors ("the Board") of the Water Replenishment District of Southern California ("the District") on February 6, 2020, in compliance with California Water Code § 60300, timely ordered an Engineering Survey and Report ("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. 20-1127, has declared that funds shall be raised to purchase water for replenishment of groundwater supplies within the District during the ensuing fiscal year, 2020-21, 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. 20-1127, 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 2, 2020, which has been made available to the public, describing the services the District anticipates performing in Fiscal Year 2020-21, 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 2, 2020, 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 2, 2020 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 Fiscal Year 2020-21 budget, which is directly related to the Replenishment Assessment; and

WHEREAS, the District's Budget Advisory Committee has met and the Board has received and considered recommendations from the Budget Advisory Committee; 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, 2018/19, was 16,724 acre-feet as provided in the 2020 ESR and any updates.

    b) The estimated annual overdraft for the current water year, 2019/20, is 67,800 acre-feet as provided in the 2020 ESR and any updates.

    c) The estimated annual overdraft for the ensuing water year, 2020-21, is also 67,800 acre-feet as provided in the 2020 ESR and any updates.

d) The accumulated overdraft as of the last day of the preceding water year was 766,465 acre-feet as provided in the 2020 ESR and any updates.

e) The estimated accumulated overdraft as of the last day of the current water year is 745,100 acre-feet as provided in the 2020 ESR and any updates.

f) The total production of groundwater from the groundwater supplies within the District during the preceding water year was 208,114 acre-feet as provided in the 2020 ESR and any updates.

g) The estimated total production of groundwater from groundwater supplies within the District for the current water year is 213,000 acre-feet as provided in the 2020 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 213,000 acre-feet as provided in the 2020 ESR and any updates.

i) Water Year 2018/19 had above normal precipitation and substantial replenishment by WRD along with reduced pumping. Therefore, groundwater levels rose on average 3 feet Districtwide. This led to an increase in groundwater storage of approximately 60,200 AF. The 2020 ESR and any updates provide details of water levels and basin conditions.

j) The District has received a normal amount of rainfall in the current Water Year. Water levels in the Montebello Forebay rose nearly 20 feet during the peak of the winter season, but are presently about 12 feet higher than the previous water year. Basin conditions are much improved over the previous water year, but still below pre-drought conditions. The 2020 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 91,200 acre-feet, which includes 61,400 acre-feet at the spreading grounds and 29,800 acre-feet at the seawater barrier wells. Details of the calculations for these amounts are presented in the 2020 Engineering Survey and Report and any updates, and on budget discussions with the Board of Directors and Budget Advisory Committee.

l) The source and estimated cost of the water available for the replenishment described in Section (k) is presented in the 2020 ESR and any updates.

m) The estimated net costs of replenishing the groundwater supplies with the water so purchased are $34,132,691. The derivation of this amount is described in the 2020 ESR, the 2020 Cost of Service Report, and any updates to these documents, and on Board and Budget Advisory

Committee 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 $160 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 accomplishing replenishment of the groundwater supplies, are $49,165,460. 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 $231 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 2020 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 $391 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 2020 ESR and any updates, the District's capital improvement program, and the District's draft annual budget document. The estimated costs to the District for the groundwater quality program for the 2020-21 fiscal year are estimated at $7,064,540. 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 $33 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 fiscal year of 2020-2021 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

materials, 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 Engineering Survey Report, the 2020 Cost of Service Report, the proposed 2020-21 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 2020-21 fiscal year to determine whether an additional environmental document must be prepared. Based on this examination, the 2020 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 2020-21 fiscal year 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 2020-21 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

materials, 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 Engineering Survey Report, the 2020 Cost of Service Report, the proposed 2020-21 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.

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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 April 23, 2020 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 23rd, 2020 the Board opened the Public Hearing, provided an opportunity for oral and written comment, and then close the Public Hearing.

(d) On April 23, 2020 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 April 23, 2020, 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.

[RECORD OF THE VOTE AND SIGNATURES ON FOLLOWING PAGE]

PASSED, APPROVED AND ADOPTED THIS 23rd day of April 2020 by the following vote:

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

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

Vera Robles-DeWitt, Board President

ATTEST:

Board Secretary

April 23, 2020
DATE

APPROVED AS TO FORM:

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

Proposed Capital Improvement Program

In order to perform its mission and implement the Board of Director's strategic goals, WRD prepares a Capital Improvements Program (CIP) which includes a five-year outlook and funding outlay for all of 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 a new use. The Capital Improvement Program five-year outlook identifies capital projects and equipment purchases, provides a planning schedule and identifies funding sources for financing the projects.

There are five objectives of WRD's Capital Improvement 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 prepared. Finally, the sources of funding for each capital improvement project are identified and an annual CIP budget is developed for each of the next 5 years.

The Proposed 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 Proposed CIP is a working document that will be reviewed continuously but formally updated every two years to reflect stakeholder needs, priorities and funding opportunities.

For ease of use, the CIP is organized into six general project categories. The project categories are as follows:

1. Water Independence Now (WIN)
2. Regional Water Independence Program (WIN 4 ALL)
3. Basin Management Projects
4. Water Infrastructure Management Projects
5. Groundwater Quality Protection and Remediation
6. Facilities Management, Maintenance, and Rehabilitation

Each proposed capital improvement project was assigned to a specific category. The capital improvement program includes a listing of each project within the six categories noted above.

The table below summarizes the Proposed CIP budget between FY 2021 and 2025 with a total of $218.7 million in capital improvement projects.

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Total CIP Budget
Water Independence Now (WIN)	$19,807,000	$15,085,000	$26,364,000	$17,168,000	$1,593,000	**$ 80,017,000**
Regional Water Independence Program (WIN4ALL)	3,462,000	6,273,000	19,414,000	12,795,000	1,394,000	**43,338,000**
Basin Management Projects	2,109,000	1,723,000	468,000	-	-	**4,300,000**
Water Infrastructure Management Projects	1,362,000	755,000	1,045,000	-	-	**3,162,000**
Groundwater Quality Protection & Remediation	17,917,000	26,978,000	22,241,000	2,100,000	1,000,000	**70,236,000**
Facilities Management, Maintenance, and Rehabilitation	3,086,000	1,656,000	6,327,000	6,194,000	404,000	**17,667,000**
TOTAL	**$47,743,000**	**$52,470,000**	**$75,859,000**	**$38,257,000**	**$4,391,000**	**$218,720,000**

Sources of Funding

In general, WRD has three sources of funding available for CIP projects: Paygo, Grants, or Debt. The table below includes a breakdown of funding sources for each project into the following columns:

- Appropriation of 2018 Bond Funds
  Funds in this column are already secured through a bond issuance performed in 2018.

- Secured Funding Through Other Means
  Funds in this column have already been secured through outsides sources, including state grants and loans or project partnership agreements.

- PayGo / Future Grants / Future Bonds
  Funding in this column will come from WRD's PayGo or reserve funds, or future grants and Bonds may be secured to offset the cost of the projects.

The table below summarizes the Proposed CIP funding for the six general project categories.

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Water Independence Now (WIN)	$ 31,923,000	$ 147,731,000	$ 27,282,000	**$ 206,936,000**
Regional Water Independence Program (WIN4ALL)	4,100,000	1,500,000	40,663,000	**46,263,000**
Basin Management Projects	4,299,000	135,000	-	**4,434,000**
Water Infrastructure Management Projects	2,805,000	-	595,000	**3,400,000**
Groundwater Quality Protection & Remediation	24,293,000	46,325,000	18,269,000	**88,887,000**
Facilities Management, Maintenance, and Rehabilitation	5,720,000	4,327,000	9,200,000	**19,247,000**
TOTAL	**$ 73,140,000**	**$ 200,018,000**	**$ 96,009,000**	**$ 369,167,000**

The financial impacts of each non-recurring project are presented in the sections below.

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 reliable 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 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.

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 sections below includes a tabulation of the strategic goals achieved by each project.

Water Independence Now (WIN)

WRD continues to respond to the ongoing drought with the implementation of its Water Independence Now 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 nonrecurring capital expenses. The financial and non-financial impacts for each project within this category are tabulated below.

Albert C. Robles Advanced Water Treatment Facility

The WRD completed construction of its Albert Robles Center for Water Recycling and Environmental Learning (ARC) and received final approval from the Los Angeles Regional Water Quality Control Board in January 2020 to discharge product water to the Montebello Forebay Spreading Grounds. ARC will offset the current use of imported water at the spreading grounds by providing up to 10,000 Acre Feet/Year (AFY) of advanced treated recycled water for groundwater recharge. Due to the high quality of the AWTF effluent, an additional 11,000 AFY of tertiary recycled water can also be used, offsetting the need for imported water at the spreading grounds.

The primary goals of ARC are to:

- Provide a sustainable and reliable supply for replenishing the Basins;
- Protect and improve groundwater quality;
- Minimize the environmental/energy footprint of the advanced treated water;
- Comply with pertinent regulatory requirements;
- Minimize cost to agencies using groundwater; and

Using tertiary recycled water supplied by the Sanitation Districts of Los Angeles County's San Jose Creek Water Reclamation Plant, the ARC will produce 10,000 AFY of highly treated recycled water for groundwater recharge in the Montebello Forebay. Specifically, the advanced treated water will be diverted to both the San Gabriel and Rio Hondo spreading basins via two turnout/diversion structures that were constructed by WRD in 2016. In addition, the water also will be injected using three new supplemental recharge wells that have been installed at the ARC facility. The construction project is expected to be closed out in 2021.

Leo J. Vander Lans (LVL) Facility Projects

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 capacity from 3 million gallons per day (MGD) to 8 MGD.

LVL Source Water Supply

This project will investigate options for delivering additional source water to LVL from the LACSD's Los Coyotes Water Reclamation Plant (LCWRP). One option is a potential connection between Long Beach Water District's recycled water distribution system which feeds LVL, and the City of Cerritos' recycled water distribution system which is connected to the LCWRP. Another option is a direct connection between the LCWRP to the influent of the Leo J Vander Lans Facility. Preliminary designs have been previously performed for both options.

Onsite Injection Well Storage/Replenishment

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 well on LVL property that has a capacity of approximately 2.0 MGD.

Dominguez Gap Seawater Intrusion Barrier Projects

Dominguez Gap Seawater Barrier is 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, but the existing infrastructure limits how much recycled water can be injected.

2nd Recycled Water Connection

In partnership with LADWP, this project construct a pipeline from the TIAWTP to a second point of connection within the existing barrier wells. The second recycled water connection will allow more product water to be injected into the barrier, and reduce reliance on potable water.

Potable Backup Supply

In order to ensure a constant supply of water into the Dominguez Gap Seawater Instruction Barrier from the TIAWTP, a potable backup pipeline will be designed and constructed in order to allow normal facilities shutdowns. On occasion, barrier capacity will be supplied as a blend of potable and recycled water, thus ensuring a maximum utilization of recycled water.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Water Independence Now (WIN)				
ARC: Advanced Water Treatment Facility	$ 29,923,000	$ 113,832,000	$ 7,906,000	**$ 151,661,000**
Leo J Vander Lans Facility: Source Water Supply	1,000,000	17,519,000	14,426,000	**32,945,000**
Leo J. Vander Lans Facility: Onsite injection Well Storage/Replenishment	1,000,000	-	4,950,000	**5,950,000**
Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	-	8,300,000	-	**8,300,000**
Dominguez Gap Seawater Intrusion Barrier-Potable Backup Supply	-	8,080,000	-	**8,080,000**
TOTAL	**$ 31,923,000**	**$ 147,731,000**	**$ 27,282,000**	**$ 206,936,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Water Independence Now (WIN)					
ARC: Advanced Water Treatment Facility	$ 18,370,000	$ 1,593,000	$ 1,593,000	$ 1,593,000	1,593,000
Leo J Vander Lans Facility: Source Water Supply	420,000	1,475,000	15,475,000	15,575,000	-
Leo J. Vander Lans Facility: Onsite injection Well Storage/Replenishment	495,000	4,135,000	1,320,000	-	-
Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	233,000	2,082,000	5,985,000	-	-
Dominguez Gap Seawater Intrusion Barrier-Potable Backup Supply	289,000	5,800,000	1,991,000	-	-
TOTAL	**$ 19,807,000**	**$ 15,085,000**	**$ 26,364,000**	**$ 17,168,000**	**$ 1,593,000**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Water Independence Now (WIN)				
ARC: Advanced Water Treatment Facility	X		X	
Leo J Vander Lans Facility: Source Water Supply	X	X	X	
Leo J. Vander Lans Facility: Onsite injection Well Storage/Replenishment	X	X		
Dominguez Gap Seawater Intrusion Barrier- 2nd RW Connection	X		X	
Dominguez Gap Seawater Intrusion Barrier- Potable Backup Supply	X		X	

Regional Water Independence Program (WIN 4 ALL)

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.

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. 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.

LVL Offsite injection Well Storage/Replenishment

This project would install new injection wells to recharge the underlying Central Basin, for potential augmentation or storage projects with interested stakeholders. This project considers the installation of multiple wells in the adjacent El Dorado Park Golf Course.

Regional Brackish Water Reclamation 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 through the Groundwater Basin's Master Plan to evaluate ways to remediate the basin.

Feasibility Study

WRD has now initiated a regional planning effort to evaluate the feasibility of remediating the high TDS plume with six additional stakeholders (Stakeholder Group) who pump and wholesale potable water within the basin. A Feasibility

Study has been identified as the first step to determining how to remediate this plume to allow for future groundwater use within the basin.

The Feasibility Study will evaluate 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).

Pilot Study & Full-scale Design

Following completion of the feasibility study, WRD will perform a pilot study for the development of treatment plant design parameters. The full-scale plant design is anticipated to include well designs and conveyance pipelines, pretreatment needs, reverse osmosis, post treatment needs, and brine disposal.

Dominguez Gap Seawater Barrier Inland Injection Well Field

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.

Regional Replenishment Resource Development

As WRD continues to develop a partnership with LADWP and investigates new ways to get replenishment water into the ground additional analysis may be needed to further refine or vet 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.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Regional Water Independence Program (WIN4ALL)				
Hyperion Replenishment Master Plan	$ 1,500,000	$ 1,500,000	$ -	**$ 3,000,000**
Leo J. Vander Lans Facility: Offsite injection Well Storage/Replenishment	-	-	11,350,000	**11,350,000**
Regional Brackish Water Reclamation Program Feasibility Study	2,100,000	-	-	**2,100,000**
Regional Brackish Desalter Pilot Study & Full Scale Design	-	-	28,313,000	**28,313,000**
Dominguez Gap Seawater Intrusion Barrier- Inland Injection Well Field	500,000	-	-	**500,000**
Regional Replenishment Resource Development	-	-	1,000,000	**1,000,000**
TOTAL	**$ 4,100,000**	**$ 1,500,000**	**$ 40,663,000**	**$ 46,263,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Regional Water Independence Program (WIN4ALL)					
Hyperion Replenishment Master Plan	$ 462,000	$ 213,000	$ -	$ -	$ -
Leo J. Vander Lans Facility: Offsite injection Well Storage/Replenishment	-	560,000	7,890,000	2,900,000	-
Regional Brackish Water Reclamation Program Feasibility Study	1,000,000	500,000	-	-	-
Regional Brackish Desalter Pilot Study & Full Scale Design	500,000	5,000,000	11,524,000	9,895,000	1,394,000
Dominguez Gap Seawater Intrusion Barrier- Inland Injection Well Field	500,000	-	-	-	-
Regional Replenishment Resource Development	1,000,000	-	-	-	-
TOTAL	**$ 3,462,000**	**$ 6,273,000**	**$ 19,414,000**	**$ 12,795,000**	**$ 1,394,000**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Regional Water Independence Program (WIN4ALL)				
Hyperion Replenishment Master Plan	X	X	X	
Leo J. Vander Lans Facility: Offsite injection Well Storage/Replenishment	X	X	X	
Regional Brackish Water Reclamation Program Feasibility Study		X		X
Dominguez Gap Seawater Intrusion Barrier-Inland Injection Well Field	X	X	X	
Regional Brackish Desalter Pilot Study & Full Scale Design		X		
Regional Replenishment Resource Development	X		X	X

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.

Regional Groundwater Monitoring Program - Wells

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 324 specialized monitoring wells at 58 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.

Regional Groundwater Monitoring Program – Telemetry/Supervisory Control and Data Acquisition (SCADA) System

The Regional Groundwater Monitoring Program (RGWMP) deploys automated data loggers in each of its 324 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 hand held devices to download the information, bring the hand held 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.

Recycled Water Compliance Monitoring Wells at the MFSG

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 waste water 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 in the sense that due to 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, design, and construction of the new monitoring wells are included in this CIP.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Basin Management Projects				
Regional Groundwater Monitoring Program - Wells (Paramount & Cerritos)	$ 2,050,000	$ -	$ -	**$ 2,050,000**
Regional Groundwater Monitoring Program - Telemetry/SCADA	500,000	-	-	**500,000**
Construction of Two Wells, LA5 and LA6	714,000	-	-	**714,000**
Deep Nested Well for National Groundwater Monitoring Network	535,000	135,000	-	**670,000**
Recycled Water Compliance Monitoring Wells at MFSG	500,000	-	-	**500,000**
TOTAL	**$ 4,299,000**	**$ 135,000**	**$ -**	**$ 4,434,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Basin Management Projects					
Regional Groundwater Monitoring Program - Wells (Paramount & Cerritos)	$ 855,000	$ 1,195,000	$ -	$ -	$ -
Regional Groundwater Monitoring Program - Telemetry/SCADA	5,000	495,000	-	-	-
Construction of Two Wells, LA5 and LA6	714,000	-	-	-	-
Deep Nested Well for National Groundwater Monitoring Network	535,000	-	-	-	-
Recycled Water Compliance Monitoring Wells at MFSG	-	33,000	468,000	-	-
TOTAL	**$ 2,109,000**	**$ 1,723,000**	**$ 468,000**	**$ -**	**$ -**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Basin Management Projects				
Regional Groundwater Monitoring Program - Wells (Paramount & Cerritos)			X	X
Regional Groundwater Monitoring Program - Telemetry/SCADA			X	X
Construction of Two Wells, LA5 and LA6			X	X
Deep Nested Well for National Groundwater Monitoring Network			X	X
Recycled Water Compliance Monitoring Wells at MFSG			X	X

Water Infrastructure Management Projects

Water Infrastructure Management Projects ensure that WRD's investments are monitored and maintained appropriately through a collection of projects intended to ensure the longevity of WRD's assets. Many of these projects also have the added benefit of improving or enhancing existing assets and infrastructure, or seek to modernize the way the infrastructure is utilized. The financial and non-financial impacts for each project within this category are tabulated below.

Asset Management Program

As the District continues to grow and amass assets through its capital improvement projects, it is critical that they be managed and maintained to ensure optimal usage over their life. Recognizing this, the Board of Directors initiated the development of an Asset Management (AM) Program, which outlines a priority list of recommended actions and projects using factors such as level of effort, business drivers, cost, staff involvement and alignment to the District's strategic direction. Initiatives that support the AM program are categorized into the following elements:

- Implementation of an enterprise AM program
- Performance Management: Develop levels of service framework
- Support Services: Implementation of tools that support the enterprise AM program, such as the Computerized Maintenance Management System (CMMS) software, Assetic asset predictor software, Geographic Information System (GIS) software updates, OnBase electronic agenda process, etc.

Energy Management Plan Study and Implementation

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. New projects to implement are going to be identified and then implemented starting after 2021.

Supervisory Control and Data Acquisition (SCADA) System: Leo J. Vander Lans Advanced Water Treatment Facility Upgrades

WRD completed a Supervisory Control and Data Acquisition (SCADA) System Master Plan in May 2016. This Master Plan specified projects and estimated costs

for establishing a standardized master SCADA system that will integrate all of the District's operating facilities. As part of the Master Planning efforts, SCADA standards were created in 2017, including screen templates, a graphics library, programming codes and functional descriptions, alarms and trends displays, etc. The SCADA system at the Leo J. Vander Lans Advanced Water Treatment Facility (LVL AWTF) was installed prior to the completion of these new WRD SCADA standards. Hence, the entire SCADA system at the LVL AWTF must be modernized and upgraded to meet all the new SCADA standards.

Montebello Forebay Recharge Enhancement Study – Phase 2

Phase 2 of the Montebello Forebay Recharge Enhancement Study (MFRES) will review and update the findings of Phase 1 The Project will update and enhance the previously developed Montebello Forebay Spreading Grounds Operation Model (MFSGOM) that will help the District plan and optimize its operations by reflecting recent changes in operations, additional data collected, water reclamation production uncertainties, and various operational scenarios.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Water Infrastructure Management Projects				
Asset Management Program	$ 900,000	$ -	$ -	**$ 900,000**
Energy Management Plan Study and Implementation	300,000	-	-	**300,000**
Leo J. Vander Lans: SCADA Upgrades	1,600,000	-	-	**1,600,000**
Montebello Forebay Recharge Enhancement Study - Phase 2	5,000	-	595,000	**600,000**
TOTAL	**$ 2,805,000**	**$ -**	**$ 595,000**	**$ 3,400,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Water Infrastructure Management Projects					
Asset Management Program	$ 762,000	$ -	$ -	$ -	$ -
Energy Management Plan Study and Implementation	300,000	-	-	-	-
Leo J. Vander Lans: SCADA Upgrades	300,000	700,000	600,000	-	-
Montebello Forebay Recharge Enhancement Study - Phase 2	-	55,000	445,000	-	-
TOTAL	**$ 1,362,000**	**$ 755,000**	**$ 1,045,000**	**$ -**	**$ -**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Water Infrastructure Management Projects				
Asset Management Program			X	X
Energy Management Plan Study and Implementation			X	X
Leo J. Vander Lans: SCADA Upgrades			X	X
Montebello Forebay Recharge Enhancement Study - Phase 2			X	X

Groundwater Quality Protection and Remediation

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.

Contaminated Site Investigations, Cleanup and Monitoring Wells

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 in an effort to minimize or eliminate threats to groundwater supplies.

Perchlorate Remediation Project

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.

PFAS Remediation Program

The PFAS Remediation Program provides incentives to groundwater producers to pump and treat groundwater laden with Per- and Polyfluoroalkyl Substances (PFAS) rather than abandoning affected wells. The Program offers two options: grant assistance and turnkey project delivery to basin pumpers for wellhead treatment to remove PFAS constituents and improve water quality.

Safe Drinking Water Program

The Safe Drinking Water Program (SDWP) 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 manufactured 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). SDWP also has a Disadvantaged Community (DAC) component whereby WRD assist groundwater producers in obtaining external grant funding for project delivery.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Groundwater Quality Protection & Remediation				
Contaminated Site Investigations, Cleanup and Monitoring Wells	$ 1,000,000	$ -	$ -	**$ 1,000,000**
Perchlorate Remediation Project	-	10,659,000	1,232,000	**11,891,000**
PFAS Remediation Program	15,000,000	-	19,000,000	**34,000,000**
Safe Drinking Water Program - Primary Contaminants (Grants)	8,293,000	3,963,000	(1,963,000)	**10,293,000**
Safe Drinking Water Program - Secondary Contaminants (Loans)	-	5,000,000	-	**5,000,000**
Safe Drinking Water Program - Disadvantaged Community Projects	-	26,703,000	-	**26,703,000**
TOTAL	**$ 24,293,000**	**$ 46,325,000**	**$ 18,269,000**	**$ 88,887,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Groundwater Quality Protection & Remediation					
Contaminated Site Investigations, Cleanup and Monitoring Wells	$ -	$ 33,000	$ 968,000	$ -	$ -
Perchlorate Remediation Project	237,000	927,000	68,000	-	-
PFAS Remediation Program	10,000,000	12,000,000	12,000,000	-	-
Safe Drinking Water Program - Primary Contaminants (Grants)	300,000	2,000,000	-	-	-
Safe Drinking Water Program - Secondary Contaminants (Loans)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Safe Drinking Water Program - Disadvantaged Community Projects	6,380,000	11,018,000	8,205,000	1,100,000	-
TOTAL	**$ 17,917,000**	**$ 26,978,000**	**$ 22,241,000**	**$ 2,100,000**	**$ 1,000,000**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Groundwater Quality Protection & Remediation				
Contaminated Site Investigations, Cleanup and Monitoring Wells		X	X	
Perchlorate Remediation Project		X	X	
PFAS Remediation 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	

Facilities Management, Maintenance, and Rehabilitation

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.

Operations and Storage Annex Facility

The District purchased an available 2.3 acre parcel located at 3919 Paramount Blvd (Field Operations and Storage Annex Project) in the city of Lakewood for varying uses, including office space, 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.

Headquarters Building Improvements

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 HVAC units replacements and automation upgrades

Leo J. Vanderlans AWTF Upgrades

The expansion project was completed in 2015. While a majority of new system components were installed, assets from the initial plant remained requiring replacement and rehabilitation (R&R). Examples include the microfiltration filtrate welded steel tank which requires refurbishment to extend its useful life, as well as the product water pump station pump and VFD R&R project. 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 infrastructure failure.

Robert W. Goldsworthy Desalter Upgrades

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, conducting a condition assessment and planning asset replacement will ensure the facility remains operational and not subject to shutdown associated with asset infrastructure failure.

Rio Honda and San Gabriel Spreading Grounds Improvements

This project evaluates various improvements at the interconnection pipeline and pump station located at the San Gabriel Spreading Grounds. The interconnection pipeline and pump station are utilized to send flow from the San Gabriel spreading grounds to the Rio Hondo spreading grounds.

Membrane and UV Lamp Replacements

This is a recurring capital cost which includes the replacement of the District's reverse osmosis membranes, microfiltration (MF) and ultrafiltration (UF) membranes, and ultraviolet (UV) light lamps. Membranes and UV Lamps require replacement at the end of their useful life to continue achieving treatment goals and regulatory requirements.

General Engineering (Overhead, Legislative, Legal)

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 these costs for projects are 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.

Total Project Funding

Program / Project	Appropriation of 2018 Bond Funds	Secured Funding through Other Means	PayGo / Future Grants / Future Bonds	Total Project Funding
Facilities Management, Maintenance, and Rehabilitation				
Operations and Storage Annex Facility Project	$ 800,000	$ -	$ -	**$ 800,000**
WRD Office Building- Roof Replacement	-	-	700,000	**700,000**
WRD Office Building- HVAC Improvements Project	-	-	2,350,000	**2,350,000**
Rio Hondo and San Gabriel Spreading Grounds Improvements	1,500,000	-	5,550,000	**7,050,000**
Leo J Vander Lans Upgrades	1,878,000	-	400,000	**2,278,000**
Goldsworthy Desalter Upgrades	279,000	-	-	**279,000**
Goldsworthy Desalter Pretreatment Assessment	-	-	200,000	**200,000**
Membrane and UV Lamp Replacements	-	4,327,000	-	**4,327,000**
General Engineering (Labor, overhead, legislative, legal)	1,263,000	-	-	**1,263,000**
TOTAL	**$ 5,720,000**	**$ 4,327,000**	**$ 9,200,000**	**$ 19,247,000**

Projected 5-Year Capital Improvement Program Budget

Program / Project	Projected FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025
Facilities Management, Maintenance, and Rehabilitation					
Operations and Storage Annex Facility Project	$ 611,000	$ -	$ -	$ -	$ -
WRD Office Building- Roof Replacement	-	700,000	-	-	-
WRD Office Building- HVAC Improvements Project	-	-	-	2,350,000	-
Rio Hondo and San Gabriel Spreading Grounds Improvements	-	150,000	4,720,000	2,180,000	-
Leo J Vander Lans Upgrades	1,234,000	-	-	-	-
Goldsworthy Desalter Upgrades	79,000	-	-	-	-
Goldsworthy Desalter Pretreatment Assessment	200,000	-	-	-	-
Membrane and UV Lamp Replacements	404,000	248,000	1,607,000	1,664,000	404,000
General Engineering (Labor, overhead, legislative, legal)	558,000	558,000	-	-	-
TOTAL	**$ 3,086,000**	**$ 1,656,000**	**$ 6,327,000**	**$ 6,194,000**	**$ 404,000**

Non-financial Impacts

Program / Project	Expand Replenishment Opportunities	Expand Extraction Capacity	Maximize Innovation and Environmental Resiliency	Promote Organizational Excellence
Facilities Management, Maintenance, and Rehabilitation				
Operations and Storage Annex Facility Project				X
WRD Office Building- Roof Replacement				X
WRD Office Building- HVAC Improvements Project				X
Rio Hondo and San Gabriel Spreading Grounds Improvements			X	X
Leo J Vander Lans Upgrades			X	
Goldsworthy Desalter Upgrades			X	
Goldsworthy Desalter Pretreatment Assessment		X	X	
Membrane and UV Lamp Replacements			X	
General Engineering (Labor, overhead, legislative, legal)	X	X	X	X

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

ACWA/JPIA	Association of California Water Agencies/ Joint Power Insurance Authority
AF	Acre-Feet (equivalent to 325,851 gallons)
AFY	Acre-Feet per Year
ARC	Albert Robles Center for Water Recycling and Environmental Learning
AWTF	Advanced Water Treatment Facility
AWWA	American Water Works Association
BAC	Budget Advisory Committee
BDOC	Biodegradable dissolved organic carbon
BOD	Board of Directors
Caltrans	California Department of Transportation
CASGEM	California Statewide Groundwater Elevation Monitoring
CBMWD	Central Basin Municipal Water District
CBWA	Central Basin Water Association
CBWCB	Central Basin and West Coast Basin
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CIS	Centralized Information System
CIP	Capital Improvement Program
CMFA	California Municipal Finance Authority
CMMS	Computerized Maintenance Management System
COE	Corp. of Engineers
COP	Certificates of Participation
CWSRF	California Clean Water State Revolving Fund
DAC	Disadvantaged Communities
DGB	Dominguez Gap Barrier
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
ESR	Engineering Survey and Report
ESRI	Environmental Systems Research Institute
FTE	Full -Time Equivalent
GAAS	Generally Accepted Auditing Standards
GASB	Government Accounting Standards Board
GDP	Gross Domestic Product
GIS	Geographic Information System
GLAC	Greater Los Angeles County
GRIP	Groundwater Reliability Improvement Program
GW	Groundwater
IRWMP	Integrated Regional Water Management Plan
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
LARWQCB	Los Angeles Regional Water Quality Control Board
LBWD	City of Long Beach Water Department
LBWRP	Long Beach Water Reclamation Plant
LBWTP	Long Beach Waste Treatment Plant
LJVWTF	Leo J. Vander Lans Water Treatment Facility
LRP	Local Resources Program
LVL	Leo J. Vander Lans
MF	Microfiltration
MFRES	Montebello Forebay Recharge Enhancement Study
MFSG	Montebello Forebay Spreading Grounds
MFSGOM	Montebello Forebay Spreading Grounds Operational Model
MGD	Million Gallons per Day
MODFLOW	MODular three-dimensional finite-difference groundwater FLOW model
MSGBWM	Main San Gabriel Basin Watermaster
MWD	Metropolitan Water District of Southern California
N/A	Not Applicable
NPV	Net Present Value
O & M	Operation and Maintenance
OCWD	Orange County Water District
OPEB	Other Post-Employment Benefits
PCE	Perchloroethylene Pollution
PFAS	Per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
RA	Replenishment Assessment
R&M	Repairs & Maintenance
RF	Replenishment Fund
RGMP	Regional Groundwater Monitoring Program
RGWMR	Regional Groundwater Monitoring Report
RWQCB	LA California Regional Water Quality Control Board – Los Angeles
SCADA	Supervisory Control and Data Acquisition
SDWP	Safe Drinking Water Program
SGMA	Sustainable Groundwater Management Act
SGRWM	San Gabriel River Watermaster
SJCWRP	San Jose Creek Water Reclamation Plant
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TCE	Trichloroethylene
TDS	Total Dissolved Solids
TITP	Terminal Island Treatment Plant
TOC	Total organic compounds
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UV	Ultraviolet
VOC	Volatile organic compound
WBMWD	West Basin Municipal Water District
WBWA	West Basin Water Association
WIN	Water Independence Now Program
WRD	Water Replenishment District of Southern California