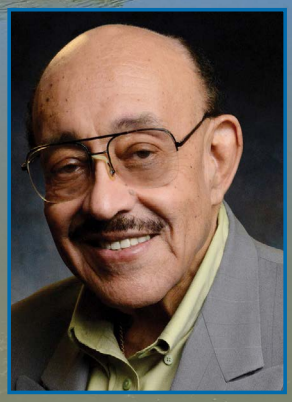
WRD
WATER REPLENISHMENT DISTRICT
OF SOUTHERN CALIFORNIA

ACHIEVEMENTS IN WATER INDEPENDENCE

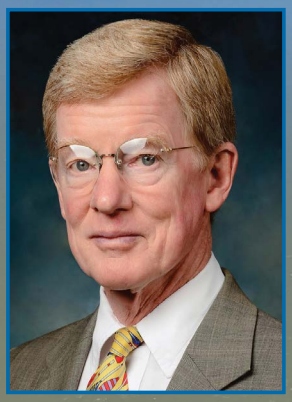
Annual Budget 2018/2019

THE WATER REPLENISHMENT DISTRICT BOARD OF DIRECTORS



Willard H. Murray, Jr.
Secretary

Rob Katherman
Director



John D.S. Allen
President

Sergio Calderon
Vice President

Albert Robles
Treasurer

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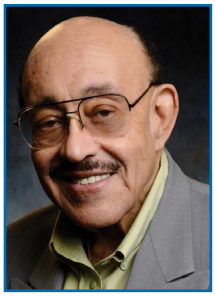
Mission Statement

"To provide, protect and preserve high quality groundwater through innovative, cost-effective and environmentally sensitive basin management practices for the benefit of residents and businesses of the Central and West Coast Basins."

Board of Directors

Division 1



Willard H. Murray, Jr.
Secretary

Division 2

Rob Katherman
Director

Division 3

John D.S. Allen
President

Division 4

Sergio Calderon
Vice President

Division 5

Albert Robles
Treasurer

Budget Team

Robb Whitaker, P.E.
General Manager

Scott M. Ota, CPA, CFF, CIRA, CGMA
Chief Financial Officer

Elizabeth Betham
Senior Accountant

Jenna Shaunessy
Manager of Financial Services

Binhyen Bui
Senior Accountant

Kathryn Burns
Senior Accountant

With special thanks:
Michael Wray

Contact

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General Manager's Report

Robb Whitaker
General Manager

As state water policy-makers have struggled for decades to figure out how to make the State Water Project (SWP) a more reliable system to export water from Northern California to the Central Valley and Southern California, WRD has implemented a step-by-step plan to eliminate our use of imported SWP as well as Colorado River water for groundwater replenishment. The final step in the Water Independence Now (WIN) program we adopted in 2003 comes later this year with the opening of ARC, WRD's signature Advanced Treated Recycled Water Facility in Pico Rivera.

FUNDING SUPPORT FOR WRD PROJECTS

External funding in the form of grants, loans and operating subsidies under MWD's Local Resources Program are increasingly important components of WRD's project finance portfolio. Since July 2016, WRD has received a total of $117,623,175 in federal, state and regional grants and a very low interest loan. Purposes, awarding authorities and funding amounts are as follows:

Table 1
2018/19 GRANT FUNDING

Description	Agency	Grant Program/ Agreement #	Award Amount
Title XVI Water Recycling Projects	USBR	Water Smart, ARC construction	$4,337,500
Feasibility Study for the West Coast Basin Brackish Water Reclamation Project	DWR	Prop 1 Water Desalination Grant Program	$700,000
Perchlorate Remediation in Los Angeles Forebay	DWR	Prop 1 Groundwater Grant	$7,275,675
Local Resources Program (LRP) (for 10,000 AF)	MWD	Fixed ARC Incentive $38/AF for 25 years	$9,310,000
Water Quality, Supply, and Infrastructure Improvement Act Grants	RMC	Prop 1, ARC landscape, storm water features	$1,000,000
DWR: Water Recycling Funding Program (CWSRF)	DWR	Prop 1 SRF Loan (1%), ARC construction	$80,000,000
DWR: Water Recycling Funding Program (CWSRF)	DWR	Prop 1 SRF Grant, ARC construction	$15,000,000

The $80 million State Revolving Fund Loan is as good as a grant. At a 1% interest rate over 30 years, the loan represents a $74 million savings when compared to the 30-year cost of AAA-rated revenue bonds.

The total value of these awards equals a one-year Replenishment Assessment of more than $470 per acre-foot, illustrating the crucial importance of external funding support for WRD projects.

FUNDING MEASURES ON THE STATE AND LOCAL BALLOT

Two measures are on the California ballot this year that, if passed by a majority of the electorate, would provide additional funding opportunities for WRD. Proposition 68 on the June ballot is a $4.1 billion measure with most funding going to conservation and state and local parks, but the proposal does have about $1.3 billion in funding for water-related projects. About $370 million is for groundwater recharge and cleanup, $250 million is for safe drinking water programs and projects, and $100 million is for water recycling, all categories of interest to WRD.

A November ballot measure would provide $8.9 billion in funding for water-related projects. $400 million is for water recycling, $400 million for groundwater desalination, and $600 million for storm water management. All of these are categories of interest for ongoing or prospective WRD projects.

A measure on the November ballot in Los Angeles County would assess a 2.5-cent per square foot tax on most private properties to generate $300 million annually to enable the County and most cities within the County to comply with Clean Water Act requirements. Compliance projects and programs often entail capturing and treating storm water runoff for percolation or injection into groundwater aquifers. While WRD is not a direct recipient of funding, some of the programs and projects undertaken by the County and 43 municipalities within WRD's service area are likely to include groundwater supply features that will invite WRD's participation. This measure requires the support of 2/3rds of the electorate for passage.

LEGISLATION REMOVES CAP ON WRD RESERVES

In response to a 1999 State Audit that found WRD's cash reserves to be "excessive," legislation adopted in 2000 placed a $10 million "cap" on WRD's operating reserve. And 80% of that reserve had to go toward water purchases.

Since 2000, WRD has relied less on "purchased" water and more on water we produce on our own. The Leo J. Vander Lans Advanced Water Treatment Facility, for example, began producing water in 2005 to replace the imported water we used to buy for injection into the Alamitos Barrier. Its original 3,500 acre-foot capacity was expanded in 2014 to nearly 9,000 acre-feet per year.

Later this year, the ARC advanced water treatment facility referenced in the President's message will produce 10,000 acre-feet that will be blended with 11,000 acre-feet of tertiary water to replace 21,000 acre-feet of imported water we used to buy from a municipal water district.

A cap on WRD's reserve fund and a requirement that most of it go to "purchased" water may have made sense in 2000. But it makes less sense as we have shifted from reliance on imported water purchased from other agencies to investing in local supplies we develop on our own. WRD's fiscal needs have changed as a result. We need to spend more on operating expenses to maintain our projects and less on water from other agencies.

SB 963 by Senator Ben Allen removes the cap altogether, thus also eliminating the 80% purchased water requirement in the reserve language.

WIN FOR ALL

WIN does not end when ARC begins. The same principles that guided WRD's implementation of WIN over the past 15 years can be applied to reduce the region's reliance on imported water as well.

The WRD Board took a significant first step this year toward what we internally call WIN for All by awarding a contract to study the feasibility of a Brackish Water Reclamation Program to treat for beneficial use the 600,000 acre-feet of saline water that intruded into West Basin aquifers before the West Coast Seawater Intrusion Barrier was built out.

As important as the purpose of the study is the fact that this planning effort is genuinely regional in nature and includes six stakeholders who pump and wholesale potable water within the basin. WRD is persuaded that regional partnerships among and between entities that historically operate in relative isolation from one another is the model that will lead to regional groundwater storage projects, regional storm water projects, a regional brackish water reclamation program, and other initiatives that will result in greatly enhanced regional self-reliance. And that will be a Win for All.

Robb Whitaker
General Manager

CORE VALUES

The Water Replenishment District executes its role in groundwater management through:

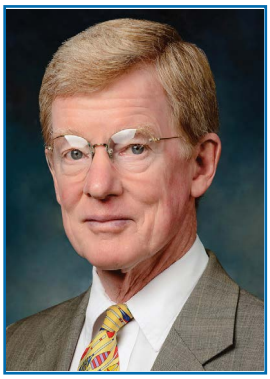
Financial Responsibility:

Long-term prudent financial decisions are made about staffing, operational expenses, rates, bonds and reserves.

Transparent Decision Making:

The board makes decisions in open meetings with the public heard in a respectful manner. Additionally, the public is encouraged to provide input through participation in a variety of focused forums and public hearings.

President's Report



John D.S. Allen
President

WRD IN THE BIG PICTURE

How and whether Southern California continues to receive a reliable supply of water from Northern California while simultaneously protecting the fragile Bay/Delta ecosystem is a question that has dominated statewide water discussion and debate since the Peripheral Canal was defeated at the ballot box 36 years ago.

While not indifferent to the ultimate outcome of that debate, WRD began moving away from imported water to meet its replenishment needs 56 years ago. In 1961/62, WRD was the single largest user of imported water in MWD's system. In 1962, WRD's investment in the Whittier Narrows Water Reclamation Plant began to pay dividends as WRD became the first regulated user of recycled water for replenishment in the United States. Steadily ever since, our reliance on imported water for spreading and barrier injection has decreased as our use of captured storm water and recycled water has increased.

Within a few months, we will not buy any imported water at all to meet our replenishment needs. None for spreading. None for barrier injection. With the completion and operation of the Albert Robles Center for Water Recycling and Environmental Learning (ARC) later this year, we will have completed the journey toward independence from imported water we began in 1962.

Since groundwater provides nearly 50% of the supply to 10% of the state's population in our service area, our complete independence from imported supply has benefits not simply for the region, but for the entire state. While the continued reliability of water from Northern California is uncertain, the reliability of water needed for WRD replenishment is assured.

ALBERT ROBLES CENTER

ARC is the crown jewel of WRD's water resource assets. It will produce 10,000 acre-feet of the highest quality water to blend with 11,000 acre-feet of high quality tertiary treated water, totally eliminating the need for 21,000 acre-feet of imported water in the San Gabriel Coastal Spreading Grounds. ARC will also be an educational destination for school kids to learn about water and how it is recycled and used to replenish groundwater, as well as for water professionals from around the world to study advanced water treatment technology.

ARC will be a community amenity for its neighbors and the City of Pico Rivera and will serve as a popular gathering place for public meetings. WRD is exceptionally proud of this facility, its well-designed public features and the neighborhood support it has received since we broke ground on September 22, 2016. ARC is on schedule to start producing advanced treated recycled water before the end of calendar year 2018. Meeting the project's substantial completion date later this year marks the culmination of WRD's ambitious Water Independence Now (WIN) initiative begun in 2003. A formal dedication of the facility is planned for early 2019.

ROBERT W. GOLDSWORTHY EXPANSION COMPLETED

Construction to double the capacity of the Goldsworthy Desalter was completed in December 2017. The original capacity of 2,200 acre-feet was expanded to 4,800 acre-feet per year. The project treats a portion of the saline plume underlying the West Coast Basin and delivers the treated water to the City of Torrance potable water system, supplying 25% of the City's total water needs.

Remarkably, nearly 80% of the total cost of the expansion was paid with grants obtained by WRD. $4 million came from the Department of Water Resources (DWR) Drought Relief funding program and $3 million came from the Water Desalination Grant program administered by DWR. That $7 million is equivalent to roughly $28 for one year on the Replenishment Assessment, a significant savings for the pumper community.

REGIONAL BRACKISH WATER RECLAMATION PROGRAM

As successful as it is, the Goldsworthy Desalter is a relatively small solution to a much larger problem. Currently, 600,000 acre-feet of groundwater in the Basin cannot be pumped for potable use because of high salinity levels. In May, the WRD Board awarded a contract to CH2M Hill/Jacobs to study the feasibility of a Regional Brackish Water Reclamation Program to examine desalinating the Basin. The feasibility study will include strategies to sustain a 20,000 per acre-foot yield for 30 years. That equates to 20 million gallons per day of new potable water supplies in the region, every day, for 30 years!

In addition to creating a new water supply, we will also reclaim the ability to store water in the Basin. The scale of this project represents a new frontier for WRD and a new collaborative model with our six stakeholder partners—the cities of Los Angeles, Manhattan Beach and Torrance, Golden State Water Company, California Water Service Company, and the West Basin Municipal Water District. One-half of the cost of the feasibility study is paid by a Desalination Grant from the Department of Water Resources.

The lead consultant for the study has characterized the project as "the most complex and the most important" in the state.

BASIN CLEANUP AND WRD'S SAFE DRINKING WATER PROGRAM

Assuring a safe and clean supply of groundwater has been part of WRD's mission since 1991. Since then, WRD has installed 16 wellhead treatment projects in the Central Basin portion of the District. These projects treat for potable use over 38,800 acre-foot per year, groundwater that would not otherwise be pumped. WRD began construction this year on three additional wellhead treatment projects—in Huntington Park, Lynwood, and in the Arlington area of Los Angeles. These three projects will treat trichloroethylene (TCE) and return to beneficial use 2,550 acre-feet annually. By virtue of these 19 projects, more than 40,000 acre-feet is produced, sparing the respective pumpers from having to purchase a like amount of imported water.

Under WRD's recently-adopted Disadvantaged Communities Pilot Program, WRD has assisted two pumpers (Bell Gardens and Maywood Mutual #2) in obtaining state funds for clean water-related projects. Six more await state funding.

BRIEFLY NOTED

To honor WRD Director Willard H. Murray's many contributions to WRD since he was first elected in 1998, WRD in September named the District's Board Room in his honor. Prior to his service on the WRD Board, Director Murray served four terms in the California State Assembly.

WRD has 19 Budget awards in the last seven years and Financial Reporting awards in each of the last 12 years. This past year, WRD received the Water Environment Federation's Public Communication and Outreach Award for ARC's outreach program, and was a finalist for the Association of California Water Agencies' Best in Blue Award for Communications Excellence for the same project.

The hard work of many hands resulted in this year's extraordinary achievements. I want to thank my colleagues on the WRD Board for their diligence and dedication, the pumpers who serve on our important Technical Advisory Committee and Budget Advisory Committee, and our superb General Manager and staff who turn Board policy into practical reality.

John D. S. Allen
President

Budget-in-Brief

Key WIN projects include Albert Robles Center, Leo J Vanders Lans AWTF Expansion, Whittier Narrows Conservation Pool Enhancements and Increased Recycled Water Purchases for Spreading and Injections.

The WRD Board of Directors established the Water Independence Now (WIN) initiative to end the District's reliance on imported water for groundwater replenishment. WIN is comprised of a suite of projects including expansions to existing water treatment facilities, spreading operations, and storm water capture facilities.

2018/2019 Budget-in-Brief

FINANCIAL OVERVIEW – REPLENISHMENT ASSESSMENT: INCREASE OF 6.6% TO $339/ACRE-FOOT

The District manages the Central and West Coast groundwater basins which provide groundwater for approximately 4 million residents in 43 cities of southern Los Angeles County. Its mission statement is "to provide, protect and preserve high quality groundwater through innovative, cost-effective and environmentally sensitive water basin management practices for the benefit of residents and businesses of the Central and West Coast Basins."

The District accomplishes this through its various projects and programs; each of which are explained in detail in other parts of this budget document. 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

Total 2018/19 Budget = $79,163,000

18/19 Budget

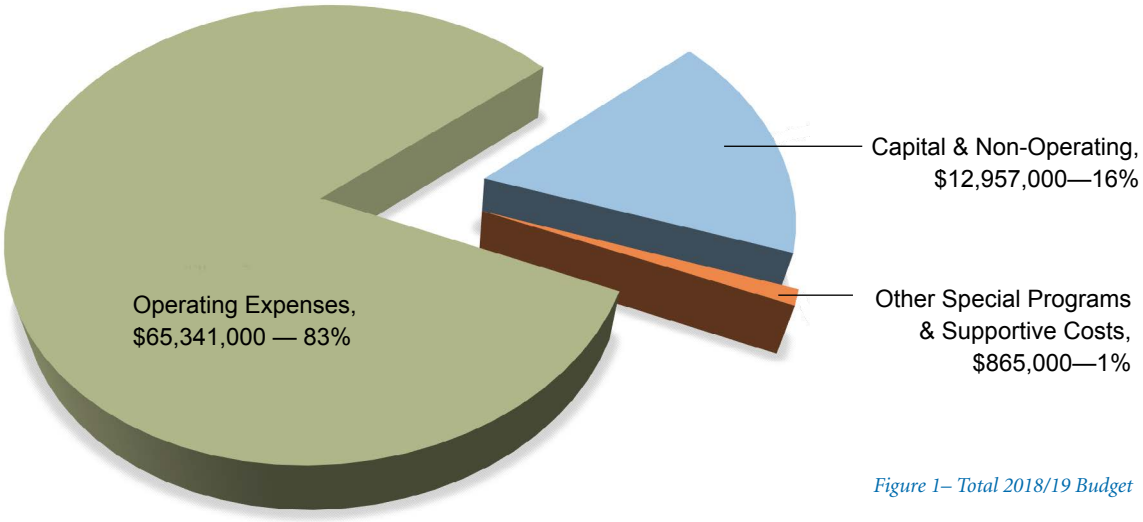


Figure 1– Total 2018/19 Budget

Project, program and administrative costs in Table 2 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 the groundwater supplies are suitable for beneficial use. Direct administrative supportive costs include the Board of Directors, Internal Services, Finance and External Affairs.

Table 2

WRD FISCAL YEAR 2018/19 BUDGET

Description	2018/19 Budget
Operating Expenses	
Water Supply Purchases	$38,745,000
Albert Robles Center (ARC)	$4,764,000
Water Conservation	$540,000
Water Supply Production - Vander Lans	$5,779,000
Water Supply Production - Goldsworthy Desalter	$2,804,000
Montebello Forebay Recycled Water	$866,000
Groundwater Resource Planning	$268,000
Water Quality Improvement Program	$1,225,000
Geographic Information Systems (GIS)	$165,000
Groundwater Monitoring	$1,031,000
Safe Drinking Water Program	$1,329,000
Dominguez Gap Barrier Recycled Water	$398,000
Replenishment Operations	$352,000
Hydrogeology Program	$937,000
Engineering Program	$351,000
Water Education	$811,000
Board of Directors	$400,000
Administration	$3,875,000
GASB 45 (Required Retirement Funding)	$701,000
Total Project, Program & Administrative Costs	**$65,341,000**
Other Special Programs & Supportive Costs	
Litigation	$150,000
Cost of Services and Notices	$15,000
Election Expense	$700,000
Total Other Special Programs & Supportive Costs	**$865,000**
Capital and Other Non-Operating	
Revenue Bond Debt Service Payments	$12,957,000
Prior Year Deficit Recovery	$-
Total Budget	**$79,163,000**
Income	
Replenishment Assessment	$73,665,000
Vander Lans Income/MWD Subsidy/OCWD	910,000
Goldsworthy Desalter Income/MWD Subsidy	3,306,000
Other Income & Expense	282,000
Carryover Conversion	$1,000,000
Total Income	**$79,163,000**

Other special programs and supportive costs include expenses related to litigation, Proposition 218 and Senate Bill 620; SB 620 costs relate to the District's efforts to comply with the law establishing the Budget Advisory Committee (BAC) and the biennial election of a seven-member committee. Water Code §60233(e) states that the BAC provision sunsets on June 30, 2019, however on June 13, 2018, the Board of Directors of the Water Replenishment District adopted a resolution to continue the BAC in perpetuity. The Board felt the BAC provides very valuable feedback to the District when reviewing its annual budget and ending reserve levels. Election expenses are also included in this category of expenses and 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 Water Revenue Bonds which are included in the third category of expenses: Capital and Other Non-Operating Revenues and Expenses.

RELATIONSHIP OF FUNDS, PROJECTS AND PROGRAMS

The District operates two major funds: the Replenishment Fund and the Clean Water Fund. Expenses are allocated to each fund through the various projects and programs. 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. WRD is enabled under the California State Water Code to purchase and recharge additional water to make up the overdraft. The Replenishment Fund is the budgetary control for all expenses related to the District's replenishment efforts. This includes the three primary expenses of the District, Water Supply Purchases, Water Supply Production and the Robles Center for Water Recycling & Environmental Learning (ARC), which make up 67.6% of all annual costs in Figure 2. Total budgeted operating expenses related to the Replenishment Fund is about $58.8 million or 88.7% (see table 9A, page 53) of the total budget.

Total Replenishment Assessment (RA) Expenses = $73,665,000

All funds

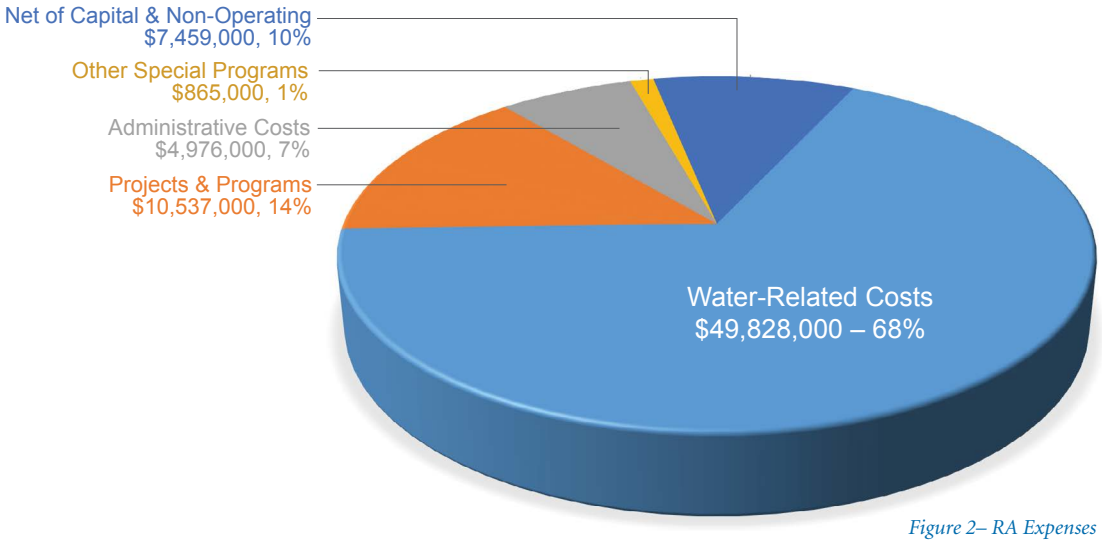


Figure 2– RA Expenses

CLEAN WATER FUND

Consistent with WRD's mission to provide, protect and preserve high quality groundwater, the District annually collects nearly 600 groundwater samples from its monitoring well network. WRD analyzes 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 effectively. 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 users of groundwater in the District's service area. Total budgeted operating expense related to the Clean Water Fund is about $7.5 million or 11.3% (see Table 9A, page 53) of the total budget.

REVENUES – SOURCES OF REVENUES REMAIN THE SAME

The District's primary source of revenue is generated by the replenishment assessment; making up 93.1% of the District's revenue or $73,665,000 in Figure 3. The Replenishment Assessment is collected based on the amount of water pumped from the Central and West Coast basins.

The District also expects to collect $910,000 or 1.1% of total revenue from water sales to the Orange County Water District (OCWD) and Metropolitan Water District (MWD) subsidies from the Leo J. Vander Lans Advanced Water Treatment Facility. This facility provides advanced treated water to the Alamitos Seawater Intrusion Barrier Project which would otherwise need more expensive non-interruptible imported water.

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 $3,306,000 increasing to 4.2% of the District revenue.

Other income and expenses account for $282,000 or 0.4% and is the net of interest income, property tax revenue and other expenses not charged to the Replenishment Assessment.

Total Operating Revenues—$79,163,000

18/19 Operating Revenue

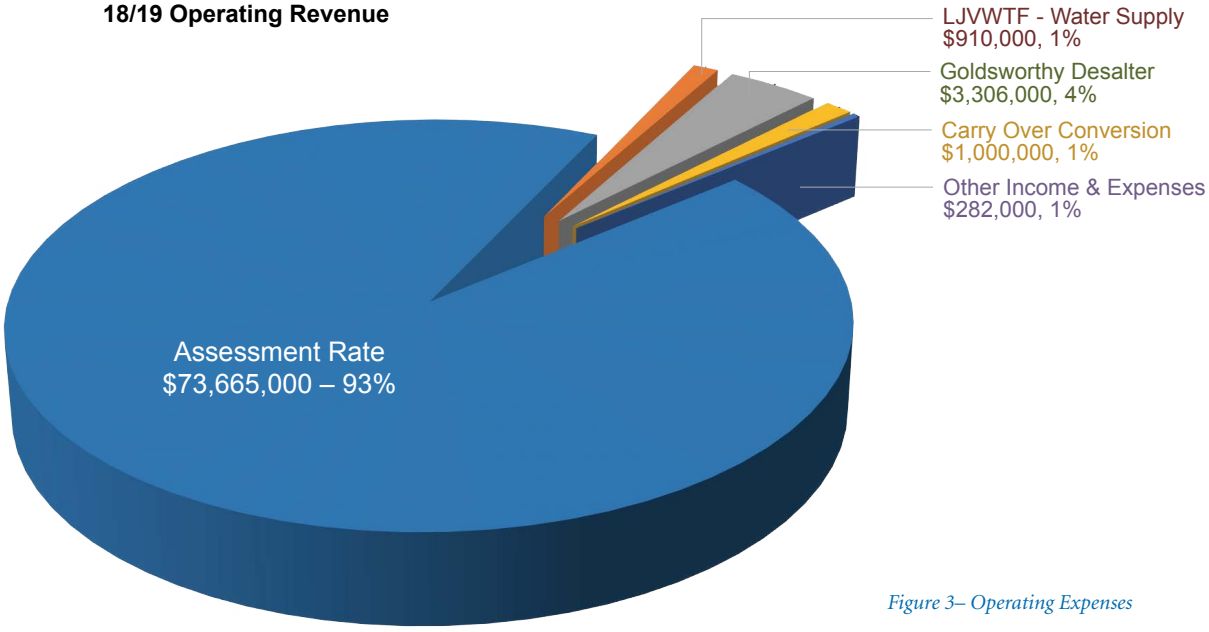


Figure 3– Operating Expenses

COMPARISON TO 2017/18 YEAR'S BUDGETED REVENUES

Budgeted revenues from the prior year slightly decreased to that of the current year. Replenishment Assessment revenues from prior year made up 94.8% of total revenues or $69,191,000 to that of 93.0% or $73,665,000 of current year. Revenues from both the Leo J. Vander Lans Advanced Water Treatment Facility and the Goldsworthy Desalter were $1,537,000 (2.1%) and $1,950,000 (2.7%) of prior year, to $910,000 (1.1%) and $3,306,000 (4.2%) respectively. Prior year's Replenishment Assessment was $318 per acre-foot. The expected revenue from Leo J. Vander Lans decreased due to planned outages of source water from the County Sanitation District of Los Angeles County. The increase in revenue from the Goldsworthy Desalter from $1,950,000 to $3,306,000 is due to the completion of the Goldsworthy Desalter Expansion Project which accounts for the increase in revenues due to the increased capacity of the plant and subsequently the sales to the City of Torrance.

EXPENSES – CONSERVATIVE FISCAL POLICY KEEPS EXPENSES RELATIVELY FLAT

The most significant budgetary item for the District is water and water-related costs. Of the District's total budgeted expenses of $79,163,000 in Table 2 and Figure 2, about $49,828,000 (67.6%) is related to either water supply purchases, production of water or water conservation efforts. Details and explanations of the various Projects and Programs are located in their specific sections of this budget document; the total budgeted costs for these replenishment and clean water projects are $10,537,000 (14.3%) of the 2018/19 adopted budget. Administration costs including GASB 45 related costs are budgeted to be $4,970,000 (6.7%), Other Special Programs & Supportive Costs $865,000 (1.2%) and Capital Improvement Program Expenses $12,957,000 (17.6%).

COMPARISON TO 2017/18 YEAR'S BUDGETED EXPENSES

Total budgeted expenses for 2017/18 were $72,965,000 with 65.2% of those costs relating to water and water-related costs. In 2018/19 total expenses increased to $79,163,000. Water and water-related costs increased 2.4% to 67.6% of total expenses.

FUND BALANCE

The District's fund balance is governed by §60290 of the California State Water Code which states that the "District may establish an annual reserve fund in an amount not to exceed ten million dollars ($10,000,000) commencing with the 2000/01 fiscal year. The maximum allowable reserve fund may be adjusted annually commencing with the 2001/02 fiscal year to reflect percentage increases or decreases in the blended cost of water from district supply sources."

Additionally, §60291 states that the limitation on the reserve established in §60290 does not apply to funds appropriated for capital projects.

If for some reason, the District has more than $10,000,000 (adjusted for the blended cost of water), §60328.1 states that the District shall apply the estimated fiscal year end balance in excess of the amount allowed in §60290 to a replenishment assessment rate reduction or to the purchase of water in the succeeding fiscal year.

SHORT-TERM FACTORS INFLUENCING THE 2018/19 BUDGET

The challenges and short-term factors which impact the development of the District's budget are different every year. For the current year, pumping from the Central and West Coast Basins remain low primarily due to water conservation efforts. The District is estimating pumping to be about 217,300 acre-feet for 2018/19; with pumping increasing modestly the next five years.

The largest impact to the 2018/19 budget relates to the completion of the Albert Robles Center (ARC) Advanced Water Treatment Facility (previously known as the Groundwater Reliability Improvement Project – GRIP). The ARC will begin operation in late December 2018 and will replace expensive imported water. The operational cost for six months has been added to the budget and has offset six months of imported water purchases.

On the revenue side, the Goldsworthy Expansion Project has been completed and revenues are expected to increase to $3,306,000 for 2018/19. Additionally, with the recommendation of the Budget Advisory Committee (BAC) and the Finance/Audit Committee, the budget includes $1.0 million of carryover conversion revenue. This is the first year the District is recognizing carryover conversion revenue for budget purposes. At the end of the fiscal year, pumpers who have available funds are able to purchase water and store it for future use. We estimate carryover conversion to be approximately $3.0 million at the end of the fiscal year and are conservatively using about a third of the estimated revenue to help stabilize the increase to the Replenishment Assessment.

PLANNING FOR THE FUTURE

Plenty of water had always been available from the Colorado River and even more would flow through the State Water Project beginning in 1972. Even so, the Board of Directors of the Water Replenishment District was skeptical about the long-term prospects for imported water. When WRD was founded in 1959, who would have guessed that claims by other states to their share of the Colorado River would shrink by half the available supply of water to Southern California within a mere 40 years? And who would have predicted that constraints on the State Water Project would also reduce in half the amount of water originally allocated to our region?

IMPACTS OF LONG-RANGE PLANS ON FUTURE BUDGETS

In the past, a large percentage of replenishment water came from sources in Northern California and the Colorado River. The District is moving toward an independence from expensive 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 will allow the District to become completely independent from imported water. In order to fund WIN, the District has obtained financing through its 2015 Series Water Revenue Bonds. With the leadership provided by the Water Replenishment District's Board of Directors, the transparency and financial stability of the District and the AA+ rating from both Standard and Poor's and Fitch Ratings, the District was able to obtain AAA pricing in December 2015. This will save the users of groundwater in the WRD service area for 30 years.

The District has also applied for and was awarded a combination of a $15 million grant and an $80 million one-percent (1.0%) loan through the California Clean Water State Revolving Fund (CWSRF) which is a federal-state partnership to help ensure safe drinking water by providing below interest-free grants and below-market interest rate loans to qualified projects. Pursuing such financing opportunities will lessen any increases to the current and future replenishment assessment rates.

The projected budget impact of principal and interest payments associated with the 2015 Series Water Revenue Bonds and funding through the Clean Water State Revolving Fund (CWSRF) is as follows:

	2018/19	2019/20	2020/21	2021/22	2022/23
2015 Water Revenue Bonds	$9.247M	$9.249M	$9.248M	$9.250M	$9.250M
CW State Revolving Fund	3.720M	3.720M	3.720M	3.720M	3.720M
Total	**$12.967M**	**$12.969M**	**$12.968M**	**$12.970M**	**$12.970M**
Projected Production (in acre-feet)	**217,300**	**221,000**	**224,000**	**224,000**	**228,000**
Impact to Assessment (per acre-foot)*	**$59.67**	**$58.68**	**$57.89**	**$57.90**	**$56.88**

* Calculation of impact to assessment is total costs divided by projected production

The offset to these capital costs will be replacing imported replenishment water with additional use of recycled water, greater storm water capture and the production of highly treated recycled water. Each year, more water is pumped from the Central and West Coast Groundwater Basins ("the 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. Once the Albert Robles Center (ARC) is complete, we will have replaced all 21,000 acre-feet of imported water. The 2018/19 cost of imported spreading water is about $16.9 million per year. Cost savings will be immediate and the value of the investment in capital assets only increases over time as the cost for imported water continues to climb steadily each year.

The District's 5-Year Capital Improvement Plan addresses projects which will need additional funding sources. To lessen the financial burden to rate payers, staff will continue to seek grant funding when available but the District will need to incur future debt to complete the planned capital construction. The projected debt service payments have been added to our 5-year financial projections and models.

STAFFING

District staffing increased three positions and has increased from 39 to 42 budgeted professional and administrative staff paid for through the collection of the Replenishment Assessment (RA); four staff positions are allocated to the District's Watermaster function and are paid for independently outside of the RA. The District's staffing on its various projects remains 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.

Scott M. Ota, CPA, CFF, CIRA, CGMA
Chief Financial Officer

ORGANIZATION CHART

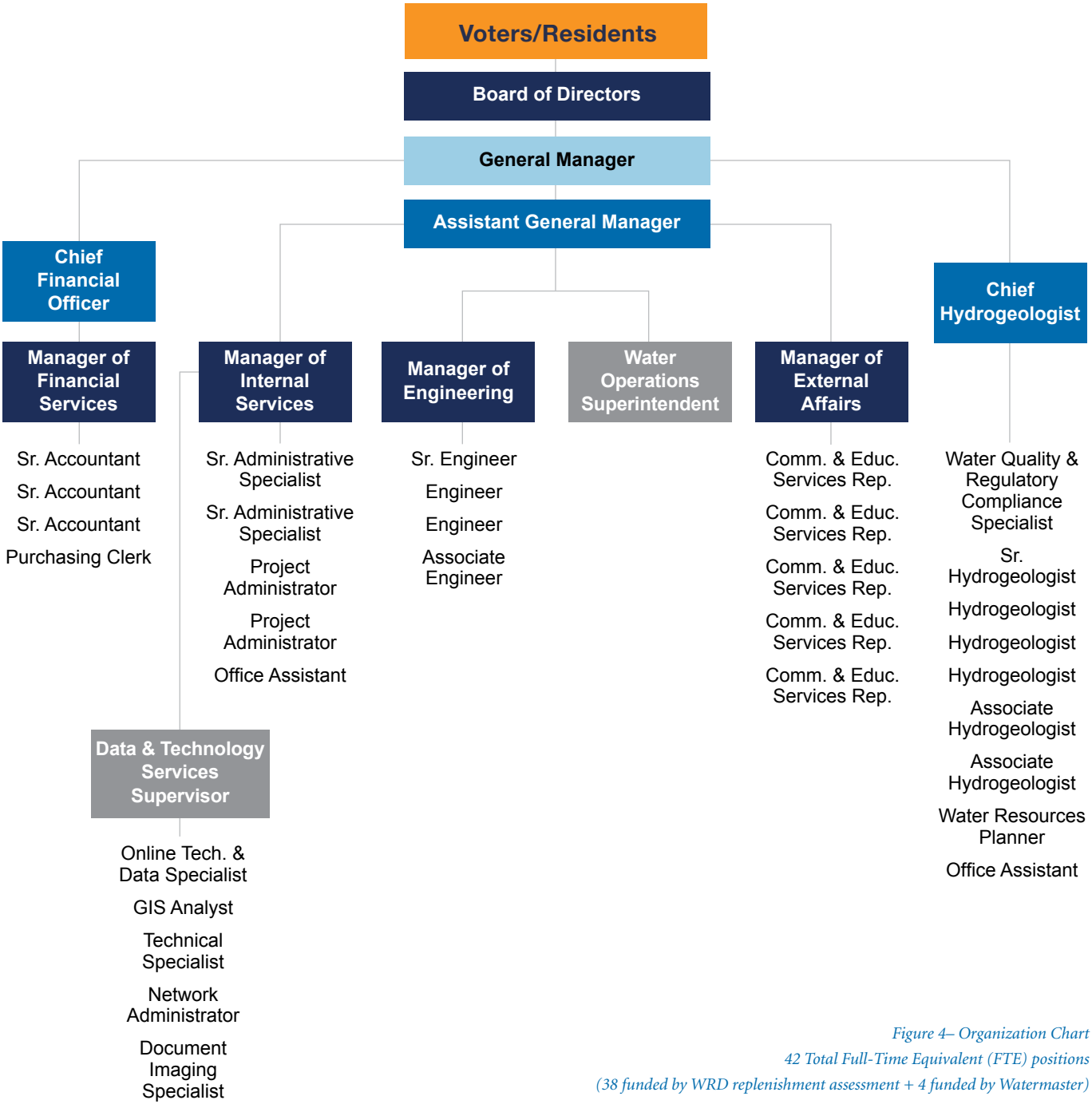


Figure 4– Organization Chart
42 Total Full-Time Equivalent (FTE) positions
(38 funded by WRD replenishment assessment + 4 funded by Watermaster)

Table 3
Summary of Personnel by Department
2018/19 Budget

	2016/17 Actual	2017/18 Budget	2018/19 Budget	Change from 2017/18 Budget
General Management				
General Manager	1	1	1	-
Hydrogeology Department				
Chief Hydrogeologist	1	1	1	-
Senior Engineer	1	-	-	-
Senior Hydrogeologist	1	1	1	-
Hydrogeologist	3	3	3	-
Associate Hydrogeologist	2	2	2	-
Water Resources Planner	1	1	1	-
Water Quality & Regulatory Compilance Specialist	-	1	1	-
Office Assistant	-	-	1	1
Engineering Department				
Assistant General Manager	1	1	1	-
Manager of Engineering	-	-	1	1
Manager of Water Resources	1	-	-	-
Senior Engineer	2	2	1	(1)
Engineering	2	2	2	-
Associate Engineer	1	1	1	-
Water Operations Superintendent	-	1	1	-
Financial Services Department				
Chief Financial Officer	1	1	1	-
Manager of Financial Services	1	1	1	-
Senior Accountant	3	3	3	-
Purchasing Clerk	-	-	1	1
External Affairs				
Manager of External Affairs	1	1	1	-
Senior Comm & Ed Services Rep	1	-	-	-
Comm & Ed Services Rep	4	5	5	-
Administrative Specialist	-	-	-	-
Internal Services and Human Resources Department				
Manager of Internal Services	1	1	1	-
Senior Administrative Specialist	1	3	2	(1)
Administrative Specialist	1	-	-	-
Technical Services Coordinator	1	-	-	-
Project Administrator	1	1	2	1
Office Assistant	-	1	1	-
Data and Technology Services				
Supervisor of Data and Technology	-	1	1	-
Online Technology and Data Specialist	1	1	1	-
Technical Specialist	1	1	1	-
Network Administrator	1	1	1	-
Geographic Information Systems Analyst	1	1	1	-
Document Imaging Specialist	-	-	1	1
Total	**37**	**39**	**42**	**3**

Background & History

History and Future of WRD

District formation and the events leading to the birth of WRD didn't just happen. They were conceived, shaped and implemented by people who were quite alert to the consequences of inaction in the face of rapidly-depleting basins and the migration of seawater contamination in an area experiencing explosive population growth and increasing demands for water.

Background & History

The Water Replenishment District of Southern California (District) was formed by a vote of the people in 1959 for the purpose of protecting the groundwater resources of the Central and West Coast Groundwater Basins (Basins) in Southern Los Angeles County.

The District provides groundwater for over 4.0 million residents in 43 cities of Southern Los Angeles County. The 420 square mile service area uses about 250,000 acre-feet of groundwater per year, which equates to 40% of the total demand for water. Prior to the formation of the District, over-pumping of both basins caused many wells to go dry and seawater to intrude into the groundwater aquifers – underground geological formations that store water. In 1957, the accumulated overdraft in the Central Basin alone was almost one million acre-feet, which translates to a tremendous withdrawal of water from aquifers in excess of the amount that naturally, or artificially, replaces it. In both basins, groundwater levels had dropped to below sea level. During the 1950's the Los Angeles County Flood Control District (LACFCD) purchased 500,000 acre-feet of imported water to artificially replenish the basins.

In 1959, the Central Basin Water Association (CBWA) and West Basin Water Association (WBWA), 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.

The District's role expanded as it developed programs to capture stormwater, recharge recycled wastewater, monitor water quality and take advantage of evolving MWD of Southern California water rates. In 1990, legislation was passed to strengthen the District's role in groundwater quality protection and to provide a special assessment ability to the District to fund clean water programs.

Figure 5 – WRD Groundwater Demand

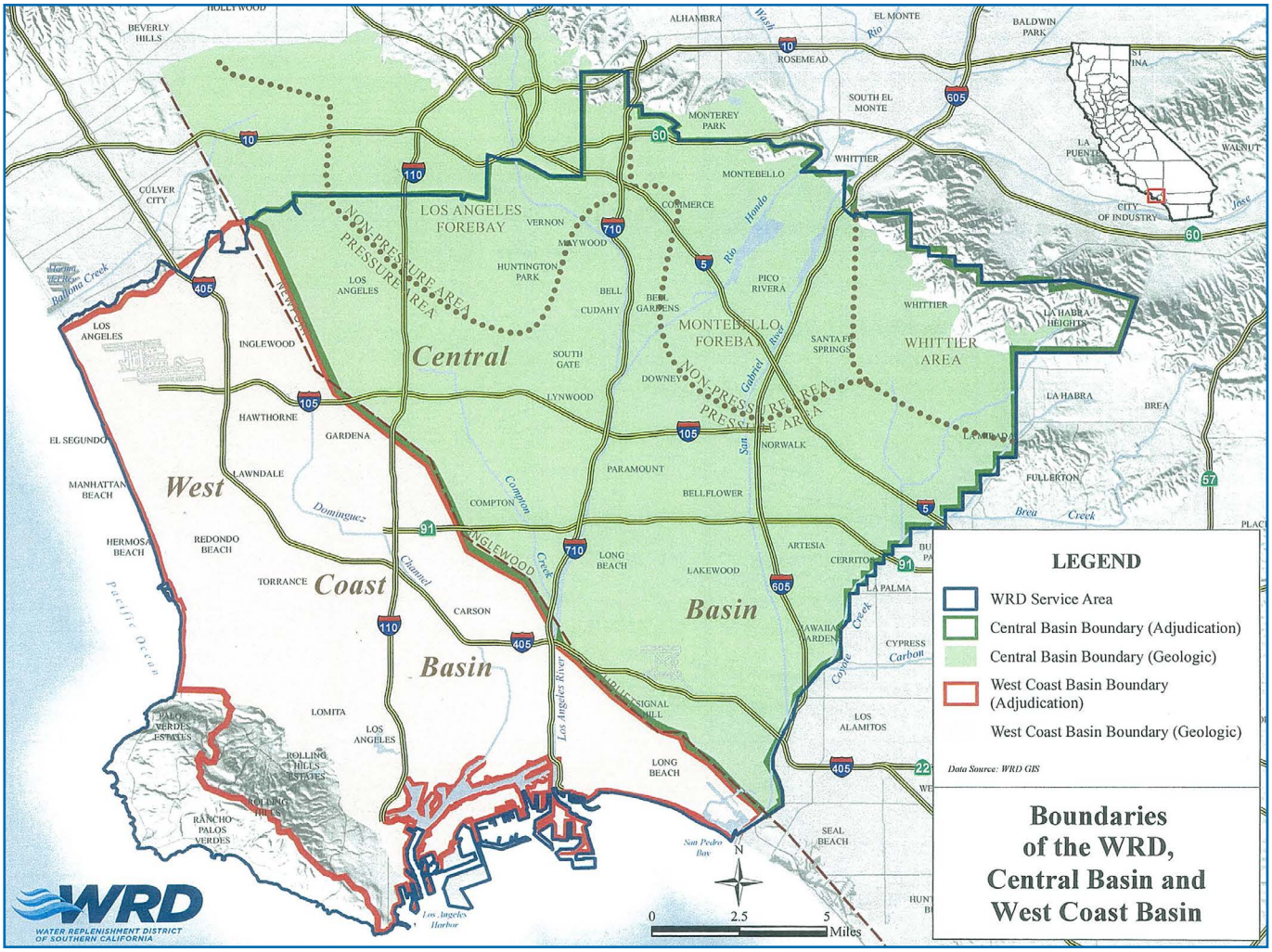


Figure 6 – Service Area Map

Local Economy

The District office is located in Los Angeles 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 County is home to more than 10 million residents and boasts a workforce of more than 5.1 million people. The county remains one of the largest manufacturing centers in the nation, is a global gateway for trade and tourism and serves as the world's entertainment hub. In 2017, real GDP in Los Angeles County grew at 3.2 percent, an uptick from the prior year when the economy grew by 2.1 percent.

In 2017, the average unemployment rate in Los Angeles County reached 4.6 percent, the lowest unemployment rate since 2000 and more than 63 percent below the postrecession peak rate of 12.5 percent reached in 2010. Job growth has been positive since 2011, averaging 2.5 percent annually. This is expected to slow to 1.9 percent for the next two years as there are fewer jobs needed to be added and as the labor market tightens. Almost all industry sectors added jobs in 2017. The largest private sector gains were in health care and social assistance (adding 21,800 jobs), leisure and hospitality (adding 7,900 jobs), and other services (6,700 jobs). Government payrolls grew by 1,200 jobs.

Personal income in Los Angeles County has been rising, posting consecutive year-over-year increases since 2013. In 2016, personal income totaled $563.9 billion and is predicted to reach $585.5 billion in 2017. We forecast this personal income growth pattern to continue, reaching $619.7 billion in 2019. Similar to total personal income, real per capita income has also been rising, reaching $48,790 in 2016 and $50,650 predicted in 2017. We expect this rise in real per capita income to continue, increasing to $52,080 in 2019

It is expected that almost all industry sectors will add jobs over the next two years. However, the strongest job growth offices and clinics, 18 percent are in hospitals, and 37 percent are in social assistance, such as child day care and in home supportive services. As the population continues to grow and age, these industries will need to keep pace to provide adequate health services. The number of health care and social assistance jobs is expected to expand by 15,100 in 2018 and an additional 9,500 jobs in 2019, annual growth rates of 2.3 percent and 1.4 percent, respectively.

Administrative and Support: Approximately 41 percent of the jobs in this sector are in employment services, such as temporary employment agencies. As more industries come to utilize and rely on staffing and employment agencies, this sector will continue to grow. It is becoming more common for firms to add workers under contractual arrangements rather than adding them to payrolls directly, providing firms more flexibility in terms of staffing needs. Employment in this sector overall is forecast to add 16, 300 jobs through 2019.

Construction: A sure sign of Los Angeles County's strengthening economy is the amount of new construction seen across the county, as businesses invest in new buildings and public infrastructure projects begin development. The construction industry is forecast to grow at 3.7 percent in 2018 and 6.4 percent in 2019, adding 14,600 jobs through 2019.

Leisure and Hospitality: Tourism has been a mainstay of the Los Angeles County economy, with almost 50 million visitors arriving into the region annually. Employment in leisure and hospitality industries has posted annual consecutive increases in employment since 2011. However, the lion's share of jobs in this sector is in food services, a relatively low-paying subsector. From 2017 to 2019, the food services subsector is projected to add 18,880 new jobs, growing by 1.8 percent annually on average. Most of the new jobs added will continue to be in food services.

Retail Trade: Retail employment in Los Angeles County has been improving since bottoming out in 2010 with a slight decline of 1,300 jobs from 2016 to 2017. The sector is expected to again add jobs in 2018 and 2019. However, this industry is also undergoing transition as more transactions are conducted online, with fewer customers visiting retail outlets. Growth will be relatively moderate with 4,500 jobs added through 2019.

Government: The public sector is a large employer in Los Angeles County. Local, state and federal governments all have a strong presence here, accounting for roughly 13 percent of all payroll jobs in the county. Unlike other private service industries, the public sector experienced employment declines well after the recession ended, reaching its lowest level in 2013 with 551,200 jobs. From 2014 through 2017, governments added 26,300 jobs to their payrolls, an increase of 4.8 percent. The sector is forecasted to lose 1,100 by the end of 2019, a downtick of 0.2 percent.

Of course, water in California remains at the top of the State's priority list. The Water Replenishment District (WRD) of Southern California was established in 1959 by a vote of the public and is tasked with ensuring a reliable supply of high quality groundwater is available for use by residents and businesses that we serve. The WRD has embraced water conservation and the use of recycled water for many years. 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 District's Water Independence Now (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. Prior to 1961/62, the West and Central Groundwater Basins received about 36% of the replenishment water from storm water and 64% from imported water. Today, the demand for imported water has dropped dramatically due to the many projects and cooperative interagency programs WRD has helped develop. The increase in replenishment

due to natural recharge is a direct result of storm water capture projects which increases the ability to benefit from local storm events. The WIN program will completely eliminate the need for imported water by replacing the current imported water needs with recycled water. This will be accomplished through completion of the Robles Center (ARC) Advanced Water Treatment Facility (AWTF) and the use of 100% recycled water at the West Coast and Dominguez Gap Seawater Intrusion Barrier Projects.

Source of economic data: Los Angeles County Profile; Los Angeles County Economic Development Corporation.

Table 4

Demographics and Economics Statistics - County of Los Angeles
Last Ten Fiscal Years

Year	Los Angeles County Unemployment Rate (1)	California Unemployment Rate (1)	U.S. Unemployment Rate (1)	Population (1)	Personal Income (thousands of dollars) (2)	Personal Income per Capita (2)
2009	11.60%	7.21%	5.80%	9,805,233	$394,980,563	$40,356
2010	12.60%	11.33%	9.30%	9,825,077	$428,019,654	$43,564
2011	12.30%	12.36%	9.60%	9,860,904	$438,356,626	$44,454
2012	11.10%	10.60%	8.20%	9,945,031	$448,142,986	$45,062
2013	9.60%	8.60%	7.60%	10,019,365	$468,615,720	$46,771
2014	8.20%	7.60%	6.10%	10,099,350	$484,859,694	$48,009
2015	7.00%	6.40%	5.50%	10,181,140	$500,117,959	$49,122
2016	4.90%	5.20%	4.70%	10,274,040	$515,037,625	$50,130
2017	4.40%	4.70%	4.30%	10,365,720	$529,335,857	$51,066
2018	4.40%	4.20%	3.80%	10,457,330	$544,136,709	$52,034

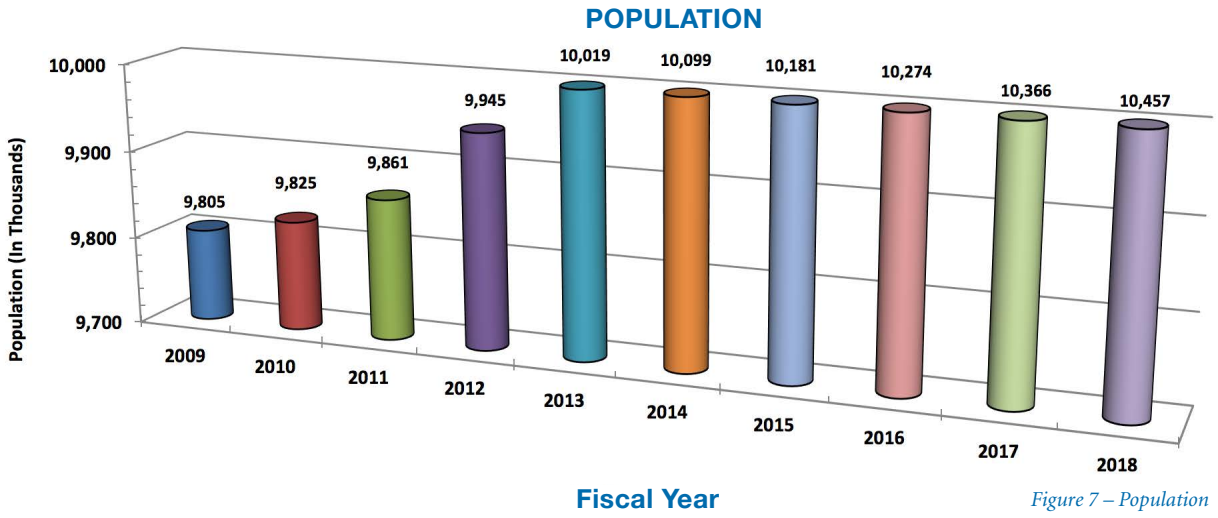


Figure 7 – Population

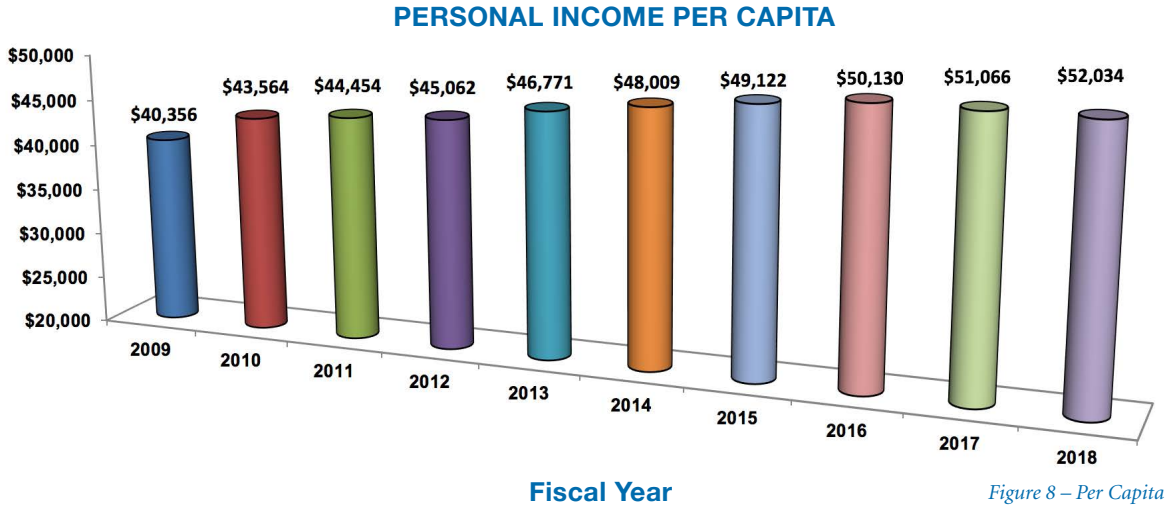


Figure 8 – Per Capita

Notes:

1. Updated annually. Table: Population Estimates and Components of Change by County.
   Sources: California Department of Finance, California Labor Market Info, Los Angeles Business Journal, U.S. Bureau of Labor Statistics

2. Personal Income per Capita was computed using Census Bureau midyear population estimates.
   Sources: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce, CalGov.com Los Angeles County Employment Forecast

Financial Policies

WRD's 2018 Annual Groundwater Festival

WRD's Groundwater Festival aims to educate the public about water, conservation, and a wide variety of environmental issues. During this period of historic drought, public education about conservation and our natural resources is more important than ever. As such, the Groundwater Festival engages people of all ages.

Relevant 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" (GASB No. 34). 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. More detail of budget control and revisions can be found in the Budget Process section of this document. 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 (RA) POLICY

On or before the second Tuesday of May each year, the Board of Directors (BOD), 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 (RA). 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

The new rate structure becomes effective each year on July 1.

INVESTMENT POLICY

The Board of Directors has adopted an investment policy that conforms to California State law, District ordinance and resolutions, prudent money management, and the "prudent person" standards. 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

This policy is approved by the Board of Directors.

PROCUREMENT POLICY

Purchases will be made in accordance with the District's Procurement Policies & Procedures as outlined in chapter 10 of 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;
   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 Proposal (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 of the Water Replenishment District of Southern California 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 RA 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 RA. 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, once a year the District hires an independent accounting firm to perform the annual financial and compliance audits of the District's basic financial statements and supplemental schedules in accordance with Generally Accepted Auditing Standards (GAAS).

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

Based on §60290 of the California State Water Code, the District may establish an annual reserve fund in an amount not to exceed ten million dollars ($10,000,000). This ten million dollars may be adjusted for the percentage increase or decrease in the blended cost of water from District water supply sources on an annual basis. Based on a percentage increase in the blended cost of water for fiscal year 2017/18 from District supply sources, the maximum allowable reserve in accordance with §60290 of the California State Water Code is $25.9 million.

Additionally, §60291 states that the limitation on the reserve established in §60290 does not apply to funds appropriated for capital projects.

If for some reason, the District has more than $10,000,000 (adjusted for the blended cost of water), §60328.1 states that the District shall apply the estimated fiscal year end balance in excess of the amount allowed in §60290 to a Replenishment Assessment (RA) rate reduction or to the purchase of water in the succeeding fiscal year.

Description of Reserve Categories:

- Water Purchase Reserve – This category of funds represents amounts carried over from previous years when imported spreading water was unavailable for purchase. The District only uses these funds to purchase water in future years when water becomes available.
- Restricted for Capital Projects – This category of funds represents amounts reserved due to commitments made by the Board of Directors for capital projects which includes the Groundwater Reliability Improvement Program, capital replacement plan for the Leo J. Vander Lans AWTF and the Goldsworthy Desalter as well as the proceeds from the 2015 Replenishment Assessment Revenue Bond held in trust by US Bank. By law, these funds can only be spent for capital projects.
- Debt Service – The debt service reserve consists of funds encumbered by the Board of Directors to help maintain the District's AA+ rating from both Standard and Poor's and Fitch Ratings.
- CalTrans Trust – These funds are held in trust by WRD with the California Department of Transportation for dewatering of the 105 freeway. The trust funds decrease to pay for the Replenishment Assessment (RA) for water pumped from below the freeway.
- GASB 45 Requirement – This category of funds accounts for the WRD's Annual Required Contribution (ARC) related to Other Post Employment Benefits (OPEB) in compliance with the Government Accounting Standards Board (GASB) Statement Number 45 enacted by the GASB due to the growing concerns over the potential magnitude of government employer obligations for post-employment benefits. This is a financial reporting provision required by all government employers.
- Unreserved – This category of funds is restricted to $10,000,000, adjusted for the annual increase or decrease in the blended cost of water from District water supply sources, as documented in §60290 of the California State Water Code. For fiscal year 2017/18, the adjusted amount is $25.9 million.

Budget Process

Leo J. Vander Lans Advanced Water Treatment Facility in Long Beach, California

The Leo J. Vander Lans Advanced Water Treatment Facility treats water from the Long Beach Water Reclamation Plant using microfiltration, reverse osmosis, and ultraviolet light. Once treated, the water will be blended with imported potable water and pumped into the Alamitos Seawater Barrier.

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

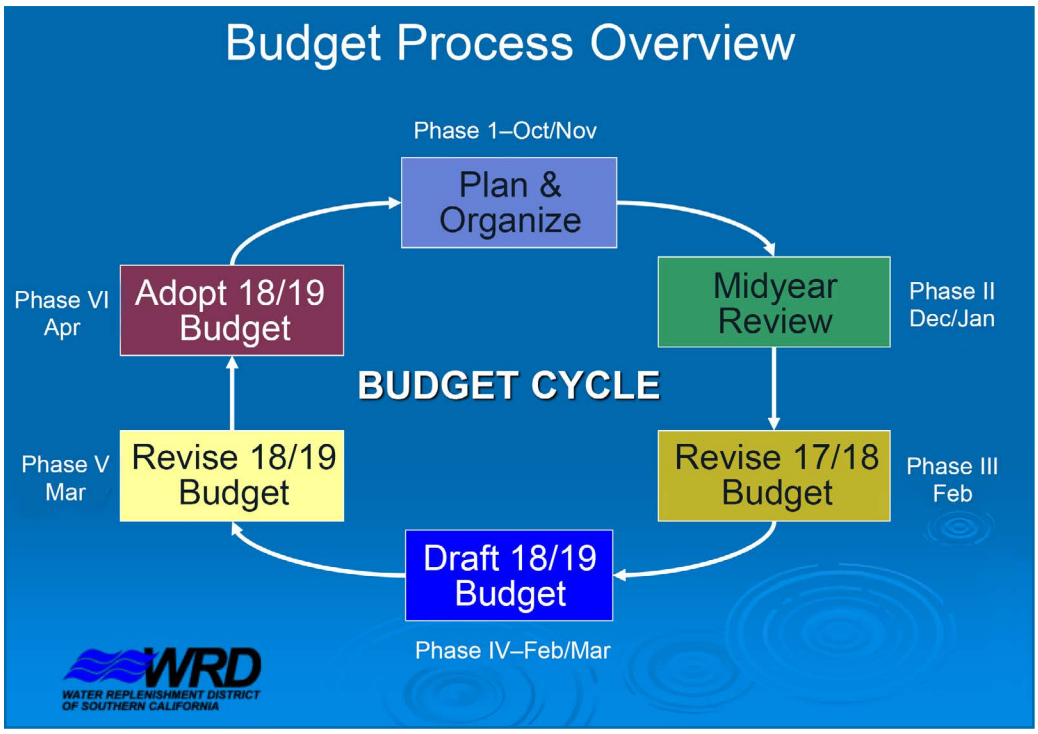


Figure 9 – Budget Process

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 midyear budget review as well as budget request forms that are provided to the Project/Program Managers.

MIDYEAR BUDGET REVIEW

The Midyear 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 midyear analysis is also a platform and guide to the ensuing year's budget.

The Midyear Review 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 and objectives.

DRAFT ENSUING YEAR'S BUDGET

With the Midyear Review and adjustments completed, staff prepares the first draft of the ensuing year's budget. Project and program managers prepare their budget requests and submits them 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 and Assistant General Manager, along with the Finance Staff, review each individual line item expense prior to submitting it to the Finance Committee for review. The Finance 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 Committee, the budget is presented to the Board of Directors.

REVISE ENSUING 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 Committee and the Board of Directors. These refinements are related to reallocation of resources to best accomplish the Board's goals and objectives.

ADOPT 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. In recent years, staff has provided more than 10 public budget workshops in an effort to maintain the highest level of transparency and accountability. These workshops give the public a chance to offer comments on the budget and the budget process. They

also provide an opportunity to present the inflow and outflow of resources and how they are applied to providing water users in the Central and West Coast Basins with clean and reliable groundwater.

The District's water sales have historically increased gradually over the years in Figure 10, due to drought and conservation. To estimate the ensuing year's groundwater pumping, WRD has made a forecast based on the current year's anticipated pumping plus expected additional or reduced pumping from discussions with purveyors. And during budget discussions and recommendations by the Budget Advisory Committee, ensuing year pumping to be 217,300 AF. The District anticipates that the net cost of its operations for FY18/19 will be $73,665,000. It anticipates that pumpers will remove 217,300 acre-feet of water from the Basins during the Fiscal Year. Therefore, the cost of providing services will be $339 per acre-foot of water removed from the Basins.

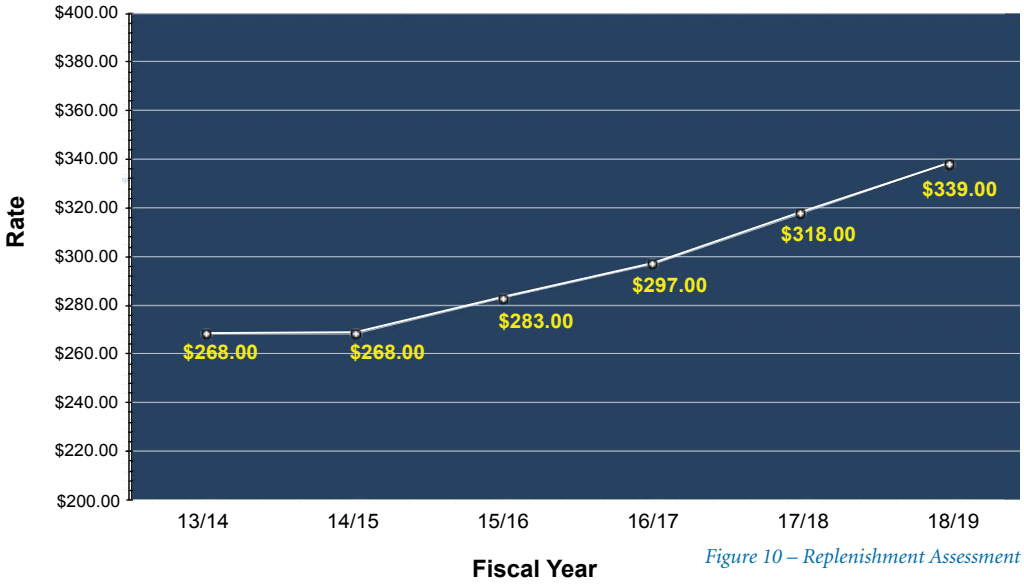


Figure 10 – Replenishment Assessment

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 midyear 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 Committee and the Board.

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 project/program require the approval of the General Manager or Department Manager.

In the District's continuing commitment to transparency and accountability, the Board established the Audit and Budget Advisory Committee (ABAC) in 2011. This Committee was established so the Board could receive input directly from its pumpers relating to the two most important financial functions of the District: the independent Comprehensive Annual Financial Audit (CAFA) and the annual budget process.
Subsequent to the Audit and Budget Advisory Committee, 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. This Committee replaces the Audit and Budget Advisory Committee (ABAC) previously established by the WRD Board of Directors.

The Budget Advisory Committee 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 Budget Advisory Committee 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 2017/18 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, Section 6(b) of the California Constitution. The Cost of Service Report has been prepared by the District to explain how the Replenishment Assessment (RA) 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 RA necessary to cover these costs. The Cost of Service Report is available via the District's web site at www.wrd.org.

The April 3, 2018 Hearing has been conducted pursuant to Article XIII D, Section 6 of the California Constitution. On March 10, 2018 the District mailed notice of the April 3, 2018 Hearing to stakeholders throughout its service area. One hundred seventy-four (174) notices were sent to water rights holders within its jurisdiction that services approximately 4 million residents in 43 cities covering over 420 square miles.

The District approved its RA of $339 for fiscal year 2018/19 at the public hearing on April 3, 2018. The RA 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 RA cover the cost of water purchased to replenish the two largest and most utilized groundwater basins in Southern California. Moreover, the new RA is critical to helping achieve the District's goal in becoming 100% independent from costly and unreliable imported water.

BUDGET CALENDAR

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

November Budget interviews with Project and Program Managers in order to complete the Midyear Budget Review of the District's operations. This review process starts with four months of actual financial data from July 1 through October 31, eight months of financial projections and a twelve month analysis of all of the data. The Midyear Budget Review serves as the basis for planning for the ensuing year's budget.

December Staff prepares their 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 **Budget Workshop #1**
February 22, 2018 – FY17/18 Midyear and FY18/19 Budget Presentation to the Budget Advisory Committee (BAC) Meeting.
In accordance with SB620, the (BAC) formed by the District and voted by the Groundwater Producers within the WRD service area reviewed the replenishment assessment, the annual budget and reserve funds maintained by the District.

March **Budget Workshop #2**
March 12, 2018 – FY18/19 Budget Presentation to Special Finance/ Audit Committee Meeting. The budget process began with the presentation of the 2017/18 Midyear Budget Review to the Finance/Audit Committee. The Midyear Review assists the District in developing the ensuing year's budget.

Budget Workshop #3
March 14, 2018 – Budget Advisory Committee (BAC) meeting.
The (BAC) adopted their budget scenario recommendation to the Board of Directors in accordance with SB620 which calls for a 6.6% increase to the replenishment assessment from $318 per acre-foot to $339 per acre-foot.

Budget Workshop #4
March 21, 2018 – FY18/19 Budget Presentation to the Board of Directors
Presentation of the first draft of the 2018/19 Budget to the Board of Directors with the BAC's recommendation.

Budget Workshop #5
March 23, 2018 – BAC Committee Recommendations and Publish of the RA Public Hearing.
Provided recommendation to the Board of Directors.

April

Budget Workshop #6
April 3, 2018 – Meeting of the Board of Directors

- Presentation of the 2018/19 Draft Budget
- Received and filed the Budget Advisory Committee recommendation
- Receive and file the Finance/Audit Committee and the Budget Advisory Committee recommendation
- Replenishment Assessment per Water Code §60306
- Open and Close Public Hearings on the Replenishment Assessment and Proposition 218
- Additional Budget Discussion
- Adopt Resolution No. 17/1053 to establish the Fiscal Year 2018/19 Replenishment Assessment
- Set 2018/19 Replenishment Assessment to $339 per acre-foot
- Adopt the FY2018/19 Budget

Financial Highlights

"Information is like water, the purer, the better."

One of the District goals is to promote organization efficiencies and provide transparency and accountability to the public.

Financial Highlights

BASIS OF ACCOUNTING

The basis of accounting refers to the timing of revenue and expense recognition for financial reporting. In preparing the budget, the District applies the same methodology. The District operates as a utility enterprise, and all enterprise funds are accounted for using the full accrual basis where revenues are recognized when earned, and expenses are recognized when they are 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).

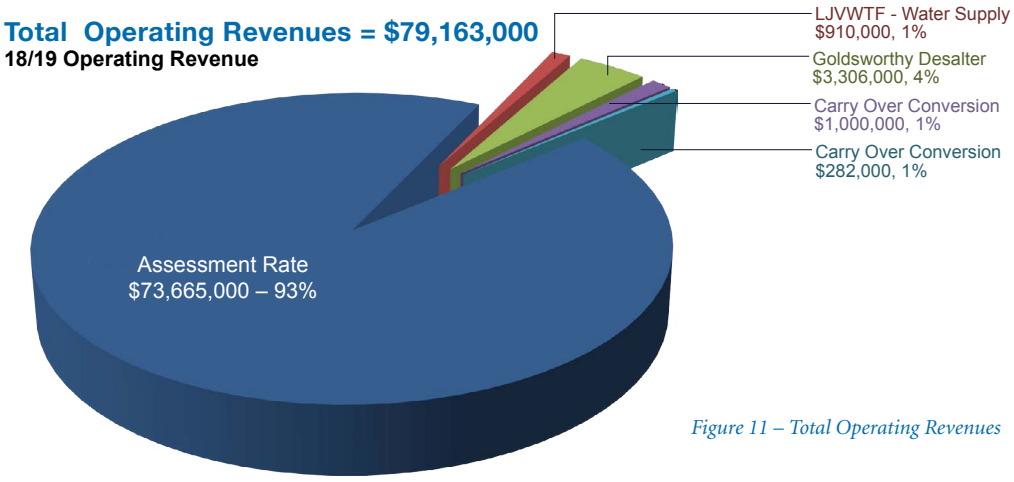


Figure 11 – Total Operating Revenues

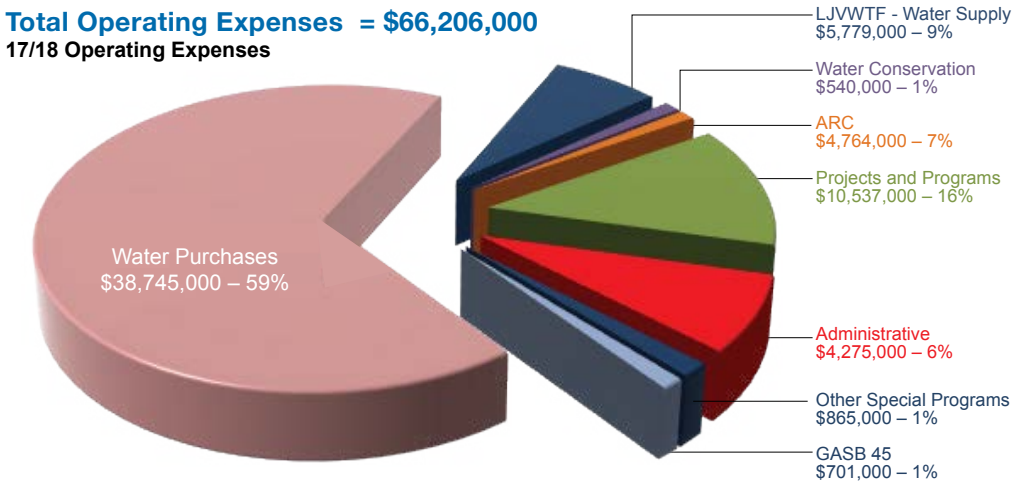


Figure 12 – Total Operating Expenses

Table 5 shows the District's comparative accrual basis 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.

Table 5

2018/19 PROPOSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS

	2016/17 Actual	2017/18 Projected	2018/19 Budget
Operating Revenue			
Replenishment Assessment	$73,822,000	$69,904,000	$73,665,000
LJVWTF - Water Supply	$750,000	$910,000	$910,000
Goldsworthy Desalter Sales	$1,000	$1,950,000	$3,306,000
Total Operating Revenue	**$74,573,000**	**$72,764,000**	**$77,881,000**
Operating Expenses			
Water Purchases	$47,086,000	$40,090,000	$38,745,000
Water Conservation	$337,000	$527,000	$540,000
LJVWTF - Water Supply	$3,276,000	$3,890,000	$5,779,000
Albert Robles Center (ARC)	$200,000	$599,000	$4,764,000
Projects/Programs	$5,659,000	$7,566,000	$10,537,000
General Administration	$4,189,000	$4,390,000	$3,875,000
Board of Directors	$294,000	$471,000	$400,000
GASB 45 (Required Retirement Funding)	$628,000	$691,000	$701,000
Other Special Programs & Supportive Costs	$1,914,000	$865,000	$865,000
Total Operating Expenses	**$63,583,000**	**$59,089,000**	**$66,206,000**
Use of Water Purchase Carryover Fund	$-	$-	$-
Prior Year Deficit Recovery	$-	$1,000,000	$-
Subtotal	**$63,583,000**	**$60,089,000**	**$66,206,000**
Operating Income (Loss)	**$10,990,000**	**$12,675,000**	**$11,675,000**
Capital and Non-Operating Revenue (Expenses)			
Interest Income	$(2,012,000)	$147,500	$147,500
Debt Service Expense & SFR Loan	0	(12,957,000)	(12,957,000)
Other (Property Tax & Misc)	$614,000	$134,500	$134,500
Carryover Conversion	$3,152,000	$-	$1,000,000
Total Other Revenue (Expenses)	**$1,754,000**	**$(12,675,000)**	**$(11,675,000)**
Replenishment of Operating Reserves	$-	$-	$-
Encumbered for Bond Compliance	$-	$-	$-
Change in Net Assets	**$12,744,000**	**$-**	**$-**

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' new top twenty pumpers are as follows:

Table 6

PRODUCTION SUMMARY

Top Twenty Pumpers / Fiscal Year 2017/18

Number	Name	Production (AF)
1	Long Beach, City of	27,753
2	Golden State Water Company	26,650
3	California Water Service Company	16,314
4	Downey, City of	13,506
5	Lakewood, City of	8,210
6	Cerritos, City of	7,686
7	South Gate, City of	7,260
8	Compton, City of	6,843
9	Paramount, City of	5,932
10	Vernon, City of	5,801
11	Tesoro Refining & Marketing Company	5,197
12	Phillips 66 Company	5,093
13	Lynwood, City of	4,972
14	Liberty Utilities Corporation	4,851
15	Bellflower Somerset Mutual Water Company	4,789
16	Pico Rivera, City of	4,067
17	Huntington Park, City of	3,453
18	Whittier, City of	3,244
19	Montebello Land and Water Company	2,795
20	La Habra Heights County Water District	2,770
	Total	**167,187**

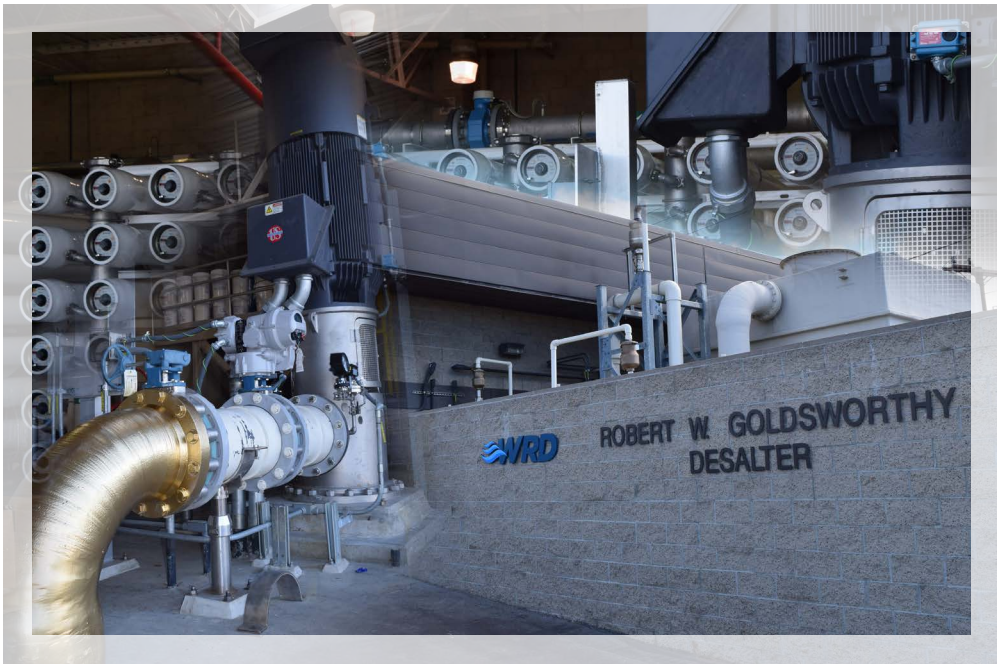
LEO J. VANDER LANS AWTF – WATER SUPPLY

The revenue from the Leo J. Vander Lans AWTF 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 (LRP) 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



Robert W. Goldsworthy Desalter in Torrance, California

The Desalter removes more than 2,000 gallons of brackish water per minute. Over a billion gallons of clean, safe drinking water will be added to the water supply annually as a result of Desalter operations.

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 2018/19, the District estimates that it will collect approximately $73.7 million from the RA based on the estimated groundwater pumping of 217,300 AF at the adopted RA of $339 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
- 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 217,300 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 FY18/19 is approximately $73,665,000 which is necessary to service the estimated 217,300 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 2018/19 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:

$$\frac{\text{Total Cost of Service (\$73,665,000)}}{\text{Total Groundwater Pumped (217,300/AF)}} = \text{Unit Cost (\$339/AF)}$$

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 $339,000 (1,000 AF x $339/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). In fiscal year 2015/16, the District completed the Leo J. Vander Lans Expansion Project 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. Based on the FY17/18 mid-year review, there is no change in revenue due to an unanticipated lack of source water from the Los Angeles County Sanitation District and operational issues is projected. The District is continuing to resolve these issues which impacted the facility production and revenue is estimated at $910,000.

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 the summer 2017. The expansion project increased the treatment capacity to 4,800 acre-feet per year. The City 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). Upon completion of the Goldsworthy Desalter Expansion, revenue is estimated to increase from $1,950,000 to $3,306,000 for FY2018/19.

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 FY2018/19 from property tax to be $410,000 and interest income to be $375,000. There are non-RA related expenses of $503,000 which off-set the above that will bring the estimated revenue from this source to $282,000.

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.

Table 7

COMPARATIVE REVENUE BY YEAR BY FUND

Description	Allocation Replenishment Fund	Allocation Clean Water Fund	2014/15 Actual	2015/16 Actual	2016/17 Actual	2017/18 Projected	2018/19 Budget
Replenishment Fund							
Replenishment Assessment	94%		$74,342,000	$56,682,000	$69,393,000	$65,710,000	$69,245,000
LJVWTF - Water Supply	100%		$444,000	$850,000	$750,000	$910,000	$910,000
Other Revenues	94%		$18,000	$2,846,000	$577,000	$265,000	$265,000
Carryover Conversion	94%		$-	$-	$2,963,000	$-	$940,000
Subtotal Replenishment Fund			**$74,804,000**	**$60,378,000**	**$70,720,000**	**$66,885,000**	**$71,360,000**
Clean Water Fund							
Replenishment Assessment		6%	$4,745,000	$3,619,000	$4,429,000	$4,194,000	$4,420,000
Goldsworthy Desalter Sales		100%	$625,000	$875,000	$1,000	$1,950,000	$3,306,000
Other Revenues		6%	$1,000	$182,000	$37,000	$17,000	$17,000
Carryover Conversion		6%	$-	$-	$189,000	$-	$60,000
Subtotal Clean Water Fund			**$5,371,000**	**$4,676,000**	**$4,467,000**	**$6,161,000**	**$7,803,000**
Total All Funds			**$80,175,000**	**$65,054,000**	**$75,187,000**	**$73,046,000**	**$79,163,000**

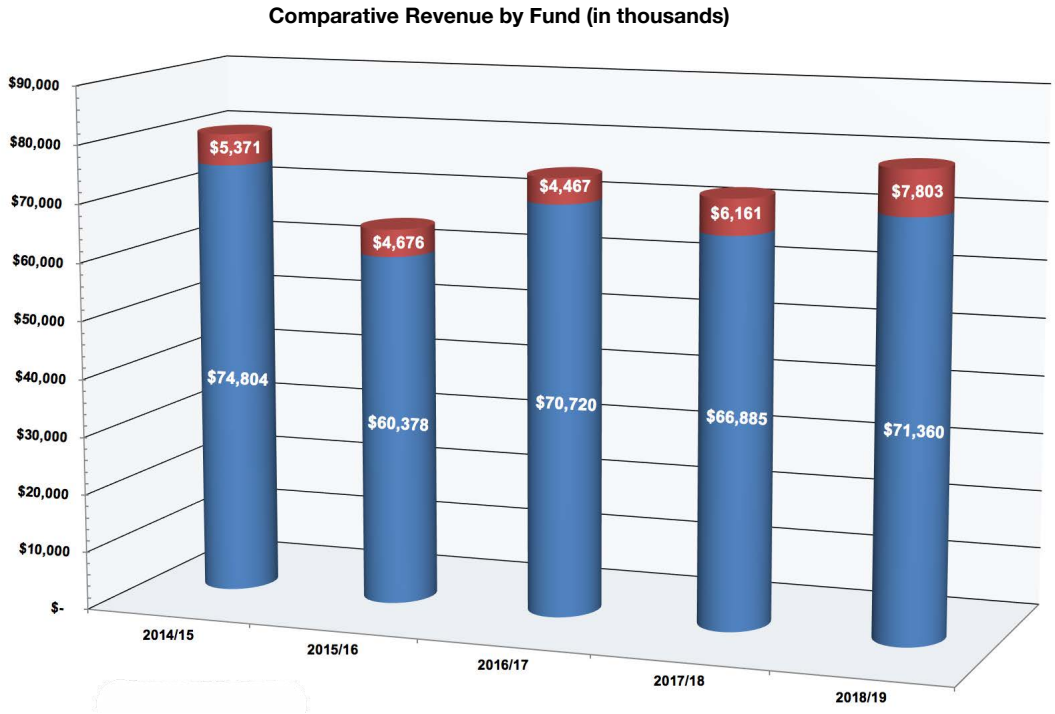


Figure 13 – Comparative Revenue by Fund (in thousands)

Groundwater is a very economical source of water. For example, the District's RA is $339 per acre-foot. The cost of pumping and treating water to bring it up to drinking water standards adds slightly to the cost. In contrast, the price for one acre-foot of treated imported water is projected to be about $1,376, resulting in a savings of approximately $1,037 per acre-foot.

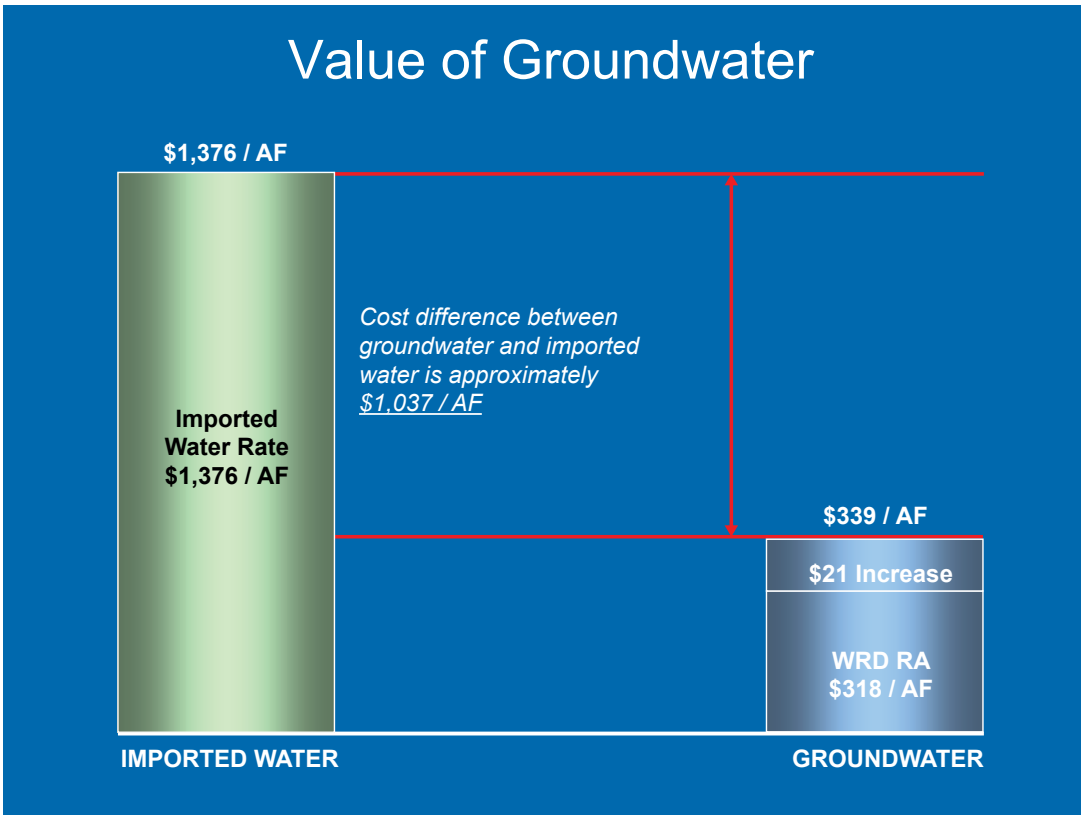
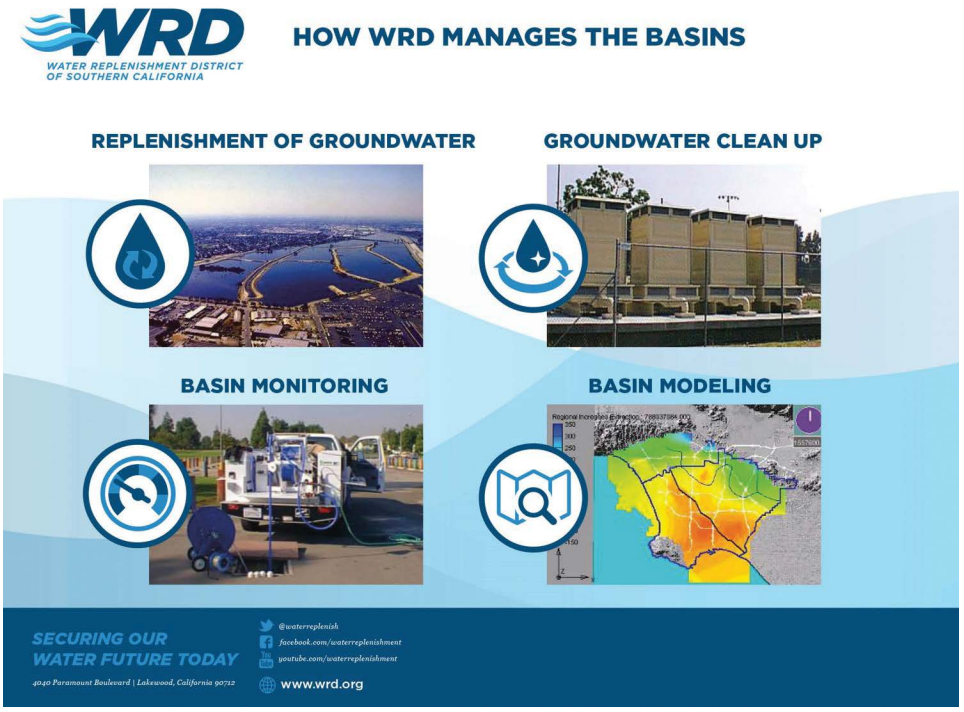


Figure 14 – Value of Groundwater

Expenses


WRD
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
HOW WRD MANAGES THE BASINS
REPLENISHMENT OF GROUNDWATER
GROUNDWATER CLEAN UP
BASIN MONITORING
BASIN MODELING
SECURING OUR WATER FUTURE TODAY
4040 Paramount Boulevard | Lakewood, California 90712
@waterreplenish
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youtube.com/waterreplenishment
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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. Tables 9A and 9B 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 CHANGES FROM 2017/18 PROJECTED TO 2018/19 BUDGET

When examining Table 8 – 2018/19 Budget Expense Analysis, it shows that budgeted expenses have increased $6,117,000 which is due to the following:

The District anticipates that the Albert Robles Center (ARC) will be completed in December 2018 and will start producing water to replace expensive imported water. This project is the cornerstone to the District's Water Independence Now (WIN) Initiative. The operating costs associated with the plant is expected to be about $4.76 million for 2018/19; a $4,165,000 increase over the prior year. However, we do not see an immediate one-for-one decrease in imported water costs due to the ramp up of operations. Water purchase costs decreased $1.35 million, due to the impact of the ARC.

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, increasing the cost of operations in 2018/19.

In 2018/19, the District plans to increase service to vital areas of its projects and programs, accounting for the $2.97 million increase over that of the prior year. The Goldsworthy Desalter will be undergoing some operational adjustments during 2018/19 to increase productivity and efficiency at a cost of about $1.01 million. The Water Quality Improvement Program will be remediating a perchlorate hot spot in the City of Vernon with

the assistance of external consultants, increasing the cost of the program by $522,000 for the year. In an effort to assist purveyors in becoming independent of imported water, the Safe Drinking Water program provides financial assistance to pumpers who are currently pumping non-potable water due to contaminants. Project assistance for wellhead treatment allows the producer to deliver potable water to customers. By assisting pumpers through the Safe Drinking Water Program, the District is helping to remediate the Central and West Coast Groundwater Basins but also ensuring a steady revenue stream for itself through increased pumping. General Administration has decreased by $586,000 primarily due to the allocation of labor to various project and program budgets. Finally, in the prior year, the District collected $1,000,000 to replenish reserves due to a budget deficit and this charge is not included in 2018/19.

Table 8
2018/19 EXPENSES ANALYSIS

Operations and Maintenance	2014/15 Actual	2015/16 Actual	2016/17 Actual	2017/18 Projection	2018/19 Budget	Change from 2017/18 Projection
Water Purchases	$46,342,000	$36,712,000	$47,086,000	$40,090,000	$38,745,000	$(1,345,000)
Water Conservation	$330,000	$329,000	$337,000	$527,000	$540,000	$13,000
Water Supply - Vander Lans	$1,994,000	$2,998,000	$3,276,000	$3,890,000	$5,779,000	$1,889,000
Albert Robles Center (ARC)	$-	$213,000	$200,000	$599,000	$4,764,000	$4,165,000
Projects/Programs	$5,710,000	$4,903,000	$5,659,000	$7,566,000	$10,537,000	$2,971,000
General Administration	$5,821,000	$4,998,000	$4,483,000	$4,861,000	$4,275,000	$(586,000)
GASB 45 (Required Retirement Funding)	$777,000	$638,000	$628,000	$691,000	$701,000	$10,000
Other Special Programs & Supportive Costs	$10,270,000	$-	$1,914,000	$865,000	$865,000	$-
Subtotal Operating Expenses	**$71,244,000**	**$50,791,000**	**$63,583,000**	**$59,089,000**	**$66,206,000**	**$7,117,000**
Other Expenses	$2,146,000	$2,149,000	$2,012,000	$13,957,000	$12,957,000	$(1,000,000)
Total Operating Expenses	**$73,390,000**	**$52,940,000**	**$65,595,000**	**$73,046,000**	**$79,163,000**	**$6,117,000**

Table 9A

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA FISCAL YEAR 2018/19
Schedule of Expenses by Fund Allocation

Description	Allocation Replenishment Fund	2014/15 Actual	2015/16 Actual	2016/17 Actual	2017/18 Projected	2018/19 Budget
Replenishment Fund (RF)						
Replenishment Fund Operating Expenses						
Water Purchases	100%	$46,342,000	$36,712,000	$47,086,000	$40,090,000	$38,745,000
Water Conservation	50%	$165,000	$165,000	$169,000	$264,000	$270,000
Water Supply - Vander Lans	100%	$1,994,000	$2,998,000	$3,276,000	$3,890,000	$5,779,000
Albert Robles Center (ARC)	100%	$215,000	$214,000	$200,000	$599,000	$4,764,000
Montebello Forebay Recycled Water	100%	$317,000	$368,000	$275,000	$659,000	$866,000
Groundwater Resource Planning	100%	$773,000	$618,000	$547,000	$317,000	$268,000
Dominguez Gap Barrier Recycled Water	100%	$188,000	$179,000	$170,000	$179,000	$398,000
LADWP Well Construction	100%	$(2,000)	$-	$-	$-	$-
Replenishment Operations	100%	$242,000	$173,000	$183,000	$301,000	$352,000
Engineering Program	100%	$6,000	$18,000	$50,000	$2,000	$351,000
Geographic Information Systems (GIS)	50%	$150,000	$112,000	$118,000	$137,000	$83,000
Groundwater Monitoring	50%	$513,000	$406,000	$477,000	$581,000	$516,000
Hydrogeology Program	50%	$300,000	$257,000	$328,000	$461,000	$469,000
Water Education	50%	$397,000	$323,000	$522,000	$357,000	$406,000
Board of Directors	94%	$332,000	$299,000	$276,000	$443,000	$376,000
General Manager	94%	$402,000	$407,000	$-	$-	$-
Administration	94%	$4,738,000	$3,992,000	$3,938,000	$4,127,000	$3,643,000
GASB 45 (Required Retirement Funding)	94%	$730,000	$600,000	$590,000	$650,000	$659,000
Other Special Programs & Supportive Costs	94%	$9,654,000	$-	$1,799,000	$813,000	$813,000
Subtotal RF Operating Expenses		**$67,456,000**	**$47,841,000**	**$60,003,000**	**$53,870,000**	**$58,758,000**
Clean Water Fund (CWF)						
CWF Operating Expenses	**Clean Water Fund**					
Water Conservation	50%	$165,000	$164,000	$168,000	$263,000	$270,000
Goldsworthy Desalter	100%	$766,000	$737,000	$811,000	$1,724,000	$2,804,000
Water Quality Improvement Program	100%	$346,000	$381,000	$228,000	$665,000	$1,225,000
Safe Drinking Water Program	100%	$55,000	$149,000	$450,000	$651,000	$1,329,000
Central Basin Watermaster	100%	$86,000	$85,000	$55,000	$-	$-
Geographic Information Systems (GIS)	50%	$149,000	112,000	118,000	136,000	82,000
Groundwater Monitoring	50%	$513,000	$406,000	$477,000	$580,000	$515,000
Hydrogeology Program	50%	$300,000	$256,000	$327,000	$460,000	$468,000
Water Education	50%	$396,000	$322,000	$522,000	$356,000	$405,000
Board of Directors	6%	$21,000	$19,000	$19,000	$28,000	$24,000
General Manager	6%	$26,000	$26,000	$-	$-	$-
Administration	6%	$302,000	$255,000	$251,000	$263,000	$232,000
GASB 45 (Required Retirement Funding)	6%	$47,000	$38,000	$38,000	$41,000	$42,000
Other Special Programs & Supportive Costs	6%	$616,000	$-	$115,000	$52,000	$52,000
Subtotal CWF Operating Expenses		**$3,788,000**	**$2,950,000**	**$3,580,000**	**$5,219,000**	**$7,448,000**
Total O&M Expenses		**$71,244,000**	**$50,791,000**	**$63,583,000**	**$59,089,000**	**$66,206,000**

Table 9B

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA FISCAL YEAR 2018/19
Schedule of Capital Expenses by Fund Allocation

Description	Allocation Replenishment Fund	2014/15 Actual	2015/16 Actual	2016/17 Actual	2017/18 Projected	2018/19 Budget
Replenishment Fund Capital Expenses						
Water Supply - Vander Lans	100%	$4,969,000	$11,000	$398,000	$1,695,000	$6,733,000
Water Conservation			$-	$-	$-	$-
Cal Trans Pipeline	100%	$-	$-	$-	$-	$-
Groundwater Resource Planning	100%	$-	$478,000	$340,000	$-	$-
Dominguez Gap Seawater Intrusion Barrier	100%	$-	$-	$4,000	$500,000	$2,200,000
Groundwater Monitoring	50%	$749,000	$-	$-	$1,020,000	$758,000
West Coast Basin Inland Injection Well System	100%	$-	$-	$-	$100,000	$2,000,000
Albert Robles Center (ARC)	100%	$2,233,000	$16,287,000	$35,380,000	$69,000,000	$5,000,000
Recharge Operations-Flow Meters	100%	$-	$-	$-	$100,000	$300,000
Whittier Narrows Conservation Pool Study	100%	$-	$-	$-	$400,000	$500,000
Asset Management Program	100%	$-	$-	$501,000	$805,000	$775,000
Replenishment Operations	100%	$173,000	$363,000	$183,000		
Supervisory Control and Data Acquisition (SCADA)	100%	$-	$421,000	$938,000	$2,024,000	$1,000,000
Paramount/Equipment/Fleet Center	100%	$-	$65,000	$55,000	$154,000	$324,000
Administration	94%	$-	$112,800	$666,000	$172,000	$80,000
Subtotal RF Capital Expenses		**$8,124,000**	**$17,737,800**	**$38,465,000**	**$75,970,000**	**$19,670,000**
Clean Water Fund Capital Expenses	**Clean Water Fund**					
Perchlorate Remediation Project	100%	$-	$-	$-	$69,000	$3,976,000
Goldsworthy Desalter	100%	$1,278,000	$5,512,877	$10,084,000	$8,000,000	$500,000
Montebello Forebay Optimization Study/Pipeline	100%		$2,000	$-	$-	$250,000
Regional Brackish Water Reclamation Phase 1	100%	$-	$-	$-	$250,000	$750,000
Groundwater Master Plan Programmatic EIR	100%	$-	$-	$-	$-	$-
Water Quality Improvement Program	100%	$591,000	$540,000	$1,000	$-	$-
Groundwater Monitoring	50%	$-	$-	$-	$1,020,000	$757,000
Enhanced-Montbello Forebay Recharge	100%	$-	$-	$-	$75,000	$190,000
Safe Drinking Water Program	100%	$1,000	$82,000	$8,000	$6,049,000	$1,325,000
Centralized Information System	100%	$-	$-	$-	$-	$-
Administration	6%	$-	$7,200	$43,000	$11,000	$5,000
Subtotal CWF Capital Expenses		**$1,870,000**	**$6,144,077**	**$10,136,000**	**$15,474,000**	**$7,753,000**
Total Capital Expenses		**$9,994,000**	**$23,881,877**	**$48,601,000**	**$91,444,000**	**$27,423,000**

Table 10

2018/19 EXPENSES BY DEPARTMENT

Description	2014/15 Actual	2015/16 Actual	2015/17 Actual	2017/18 Projected	2018/19 Budget
Water Purchases	$46,342,000	$36,712,000	$47,086,000	$40,090,000	$38,745,000
Water Conservation	$330,000	$329,000	$337,000	$527,000	$540,000
Water Supply - Vander Lans	$1,994,000	$2,998,000	$3,276,000	$3,890,000	$5,779,000
Albert Robles Center (GRIP AWTF)	$215,000	$214,000	$200,000	$599,000	$4,764,000
Goldsworthy Desalter	$766,000	$737,000	$811,000	$1,724,000	$2,804,000
Montebello Forebay Recycled Water	$317,000	$368,000	$275,000	$659,000	$866,000
Groundwater Resource Planning	$773,000	$618,000	$547,000	$317,000	$268,000
Water Quality Improvement Program	$346,000	$381,000	$229,000	$665,000	$1,225,000
Geographic Information Systems (GIS)	$299,000	$224,000	$236,000	$273,000	$165,000
Groundwater Monitoring	$1,026,000	$812,000	$954,000	$1,161,000	$1,031,000
Safe Drinking Water Program	$55,000	$149,000	$450,000	$651,000	$1,329,000
Hydrogeology Program	$600,000	$513,000	$655,000	$921,000	$937,000
Dominguez Gap Barrier Recycled Water	$188,000	$179,000	$170,000	$179,000	$398,000
Replenishment Operations	$242,000	$173,000	$183,000	$301,000	$352,000
Engineering Program	$6,000	$18,000	$50,000	$2,000	$351,000
Water Education	$793,000	$645,000	$1,044,000	$713,000	$811,000
Central Basin Watermaster	$86,000	$85,000	$55,000	$-	$-
Board of Directors	$353,000	$318,000	$294,000	$471,000	$400,000
General Manager	$428,000	$433,000	$475,000	$-	$-
Administration	$5,040,000	$4,247,000	$3,714,000	$4,390,000	$3,875,000
GASB 45 (Required Retirement Funding)	$777,000	$638,000	$628,000	$691,000	$701,000
Other Special Programs & Supportive Costs	$10,270,000	$-	$1,914,000	$865,000	$865,000
Total Operating Expenses	**$71,246,000**	**$50,791,000**	**$63,583,000**	**$59,089,000**	**$66,206,000**

Fund Balances

Recipient of grant funding from the United States Bureau of Reclamation for the ARC project

External funding in the form of grants, loans and operating subsidies are important components of WRD's project finance portfolio.

Fund Balances

FUND BALANCE, TRUST FUNDS AND RESERVE LEVEL Based on §60290 of the Water Code, the District may establish an annual reserve fund in an amount not to exceed ten million dollars ($10,000,000). This ten million dollars may be adjusted for the percentage increase or decrease in the blended cost of water from district water supply sources on an annual basis. There has been a 149% increase in the blended cost of water from District supply sources based on the rolling average calculation from the 2001-02 base year and the 2018/19 budget year. When applied to the $10,000,000 in §60290 of the California State Water Code the operating reserve increases to approximately $25,900,000.

If for some reason, the District has more than $25,900,000 (adjusted for the blended cost of water), §60328.1 states that the District shall apply the estimated fiscal year end balance in excess of the amount allowed in §60290 to a replenishment assessment rate reduction or to the purchase of water in the succeeding fiscal year. Additionally, §60291 also states that the limitation on the reserve established in §60290 does not apply to funds appropriated for capital projects.

As of June 30, 2018, the District has $5,838,000 in operating reserve. The District has also requested a reimbursement from the State of California for expenses related to the Albert Robles Center for Recycling & Environmental Learning (ARC). The total amount awaiting reimbursement from the State is $10,130,000.

The following pages provide specific breakdowns of the District cash and investments.

RESTRICTED FUNDS – Restricted by the Board of Directors to recognize future commitments of resources prior to the actual expense.

Restricted for Capital Projects – Funds committed to the Safe Drinking Water Program or set aside for long term capital replacement costs at the Leo J. Vander Lans Advanced Water Treatment Facility and the Robert W. Goldsworthy Desalter.

Safe Drinking Water Program

Source of Funds: Replenishment Assessment
Use of Funds: Encumbered for Safe Drinking Water Projects

Huntington Park Well #17 – Central Basin	$ 40,000
Restricted for Safe Drinking Water Loan Program	3,336,000
	$ 3,376,000

Well Rehabilitation Program

Source of Funds: Replenishment Assessment
Use of Funds: Encumbered for Well Rehabilitation Projects

Restricted for Well Rehabilitation Program	$ 1,500,000

Capital Replacement / Construction

Source of Funds:	Replenishment Assessment
Use of Funds:	Encumbered for Projects Below

Leo J. Vander Lans Water Treatment Facility	$ 3,602,000
Goldsworthy Desalter	453,000
	$ 4,055,000

Total Restricted for Capital Projects	$ 8,931,000

Water Purchase Carryover Fund – This category of represents funds restricted by the Board of Directors as follows:

Source of Funds:	Replenishment Assessment
Use of Funds:	Restricted for Water Purchases

Restricted Balance in Account	$ 19,971,000

Debt Service Reserve Fund – Based on the rate covenant, pursuant to the District's Master Agreement, the net revenues less payments made by the WRD for purchase and delivery of water, availability payments for water and In Lieu Payments made during the fiscal year is equal to a minimum of 120% of the Debt Service on Senior Obligations for the fiscal year.

These funds are reviewed by the Budget Advisory Committee each year during the rate setting process and are used to maintain the District's AA+ rating. We have recently experienced the value of maintaining such a fund during the issuance of the District's Series 2015 Water Revenue Bonds when the WRD obtained AAA pricing in the market due, in part, to its strong financial position.

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

Total Restricted for Debt Service	$ 15,231,000

State Revolving Fund Loan Reimbursement

The District has outstanding reimbursement requests to the State of California which will replenish District unrestricted reserve balances.

The District's reserve balances are presented as follows:

Table 11
6/30/2018 Reserve Fund Balances

Restricted Funds:	
Capital Projects	$ 8,931,000
Water Purchase Carryover Fund	19,971,000
Debt Service Reserve Fund	15,231,000
Total Restricted Funds	**$ 44,133,000**
Operating Reserve Funds	**$ 15,968,000**

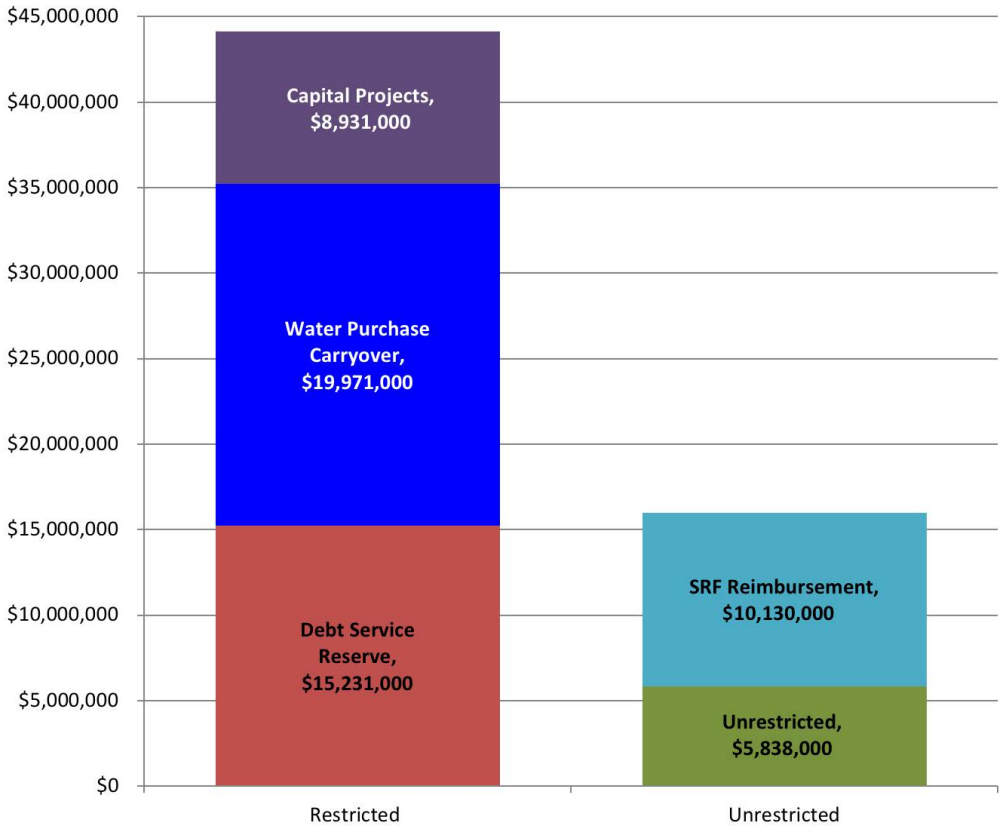


Figure 15 – Cash & Investments by Institution as of June 30, 2018

CASH AND INVESTMENTS

At the direction of the Board of Directors, on March 31, 2009 the District implemented its Community Banking Program and has invested in several community banks in addition to the Local Area Investment Fund (LAIF).

Table 12
CASH AND INVESTMENT BY INSTITUTION

	Cash and Investments:
Manufacturers Bank[1]	$ 3,661,000
First Bank[1]	4,254,000
Promerica Bank[1]	35,480,000
City National Bank[1]	1,931,000
Bank of the West 1	1,594,000
Banc of California (formally Beach Business Bank)[1]	243,000
Broadway Federal Bank[1]	246,000
US Bank (formerly CalNational Bank)[1]	243,000
Preferred Bank[1]	255,000
Union Bank[1]	240,000
Total	$48,147,000
Reconciling Items:	
Revenue Bond Reimbursement in Transit	$12,044,000
Grant Revenue to be Transferred to US Bank	(14,810,000)
Transfer of Fund from Water Master	4,590,000
Total Cash in Bank	**$49,971,000**

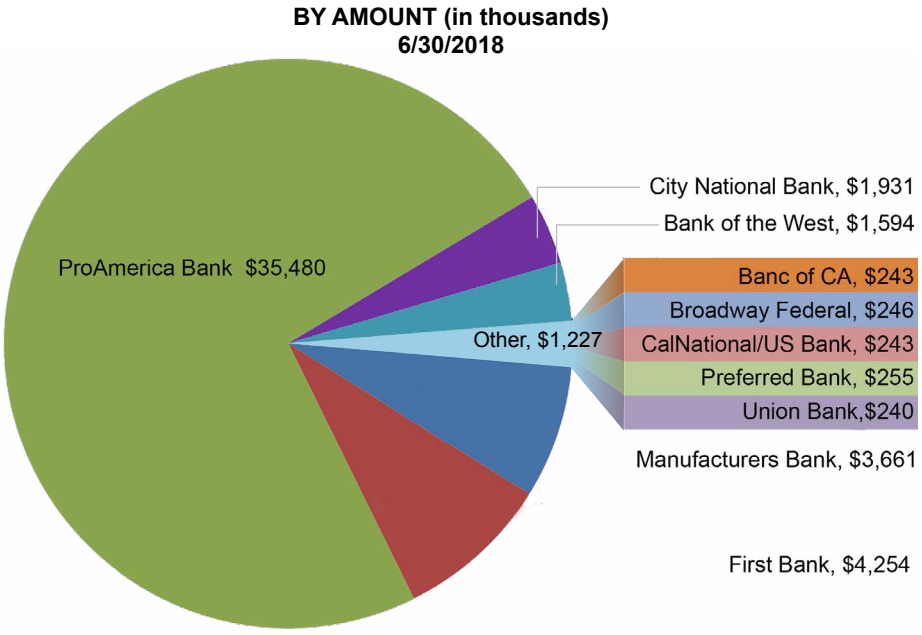


Figure 16 – Cash & Investments by Institution as of June 30, 2018

TRUST FUNDS – A relationship whereby funds are legally held and managed by another party or organization for the benefit of another person or 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 Certificates of Participation. 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, 2018 was as follows:

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

Proceeds from the 2015 Debt Issuances

Source of Funds:	2015 Debt Issuances
Use of Funds:	Restricted for Capital Projects Only

Total in Trust for Capital Projects (less: reimbursement in transit) $20,579,000

Restricted for Payment to Bond Holders – Funds held in trust with US Bank for use in accordance with the Official Statement and the Master Trust Agreement.

Source of Funds:	Replenishment Assessment
Use of Funds:	Restricted for Capital Projects Only

Total in Restricted for Payment to Bond Holders $4,892,000

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 RA

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.

In Trust for CalTrans Project $ 5,549,000

Table 13

PROJECTED UNRESERVED FUNDS BALANCES at June 30, 2019

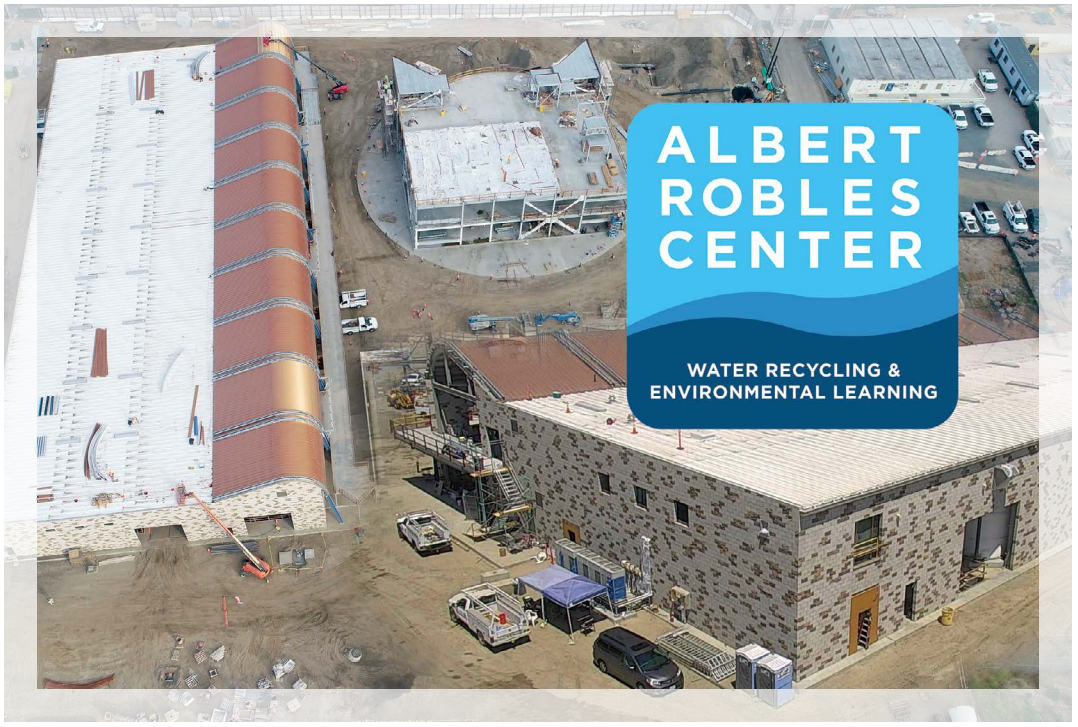
Description	Estimated Unreserved Fund Balances 6/30/2018	Estimated Revenues	Estimated Expenses	COPs Debt Services	Estimated Unreserved Fund Balances 6/30/2019
Replenishment Fund	$15,010,000	$71,360,000	$(62,228,000)	$(12,180,000)	$11,962,000
Clean Water Fund	$958,000	$7,803,000	$(3,972,000)	$(777,000)	$4,012,000
Total All Funds	**$15,968,000**	**$79,163,000**	**$(66,200,000)**	**$(12,957,000)**	**$15,974,000**

Table 14

PROJECTED UNRESERVED FUNDS BALANCES 5-Year Forecast

Description	2018/19 Forecast	2019/20 Forecast	2020/21 Forecast	2021/22 Forecast	2022/23 Forecast
Beginning Funds Balance	**$15,974,000**	**$15,974,000**	**$15,974,000**	**$16,984,000**	**$16,984,000**
Add: Estimated Revenues	$79,160,000	$84,800,000	$89,160,000	$93,450,000	$96,170,000
Total Funds Available	**$95,134,000**	**$100,774,000**	**$105,134,000**	**$110,434,000**	**$113,154,000**
Less: Estimated Expenditures	$(66,200,000)	$(69,980,000)	$(70,560,000)	$(73,080,000)	$(75,800,000)
Annual Debt Service	$(12,960,000)	$(14,820,000)	$(17,590,000)	$(20,370,000)	$(20,370,000)
Ending Funds Balance	**$15,974,000**	**$15,974,000**	**$16,984,000**	**$16,984,000**	**$16,984,000**

Capital Improvement Program



The making of the Albert Robles Center, named after Director Albert Robles as an acknowledgement of his long public service as a member of the WRD Board of Directors

The largest component of the WIN program and the crown jewel of WRD's water resources assets is the Albert Robles Center for Water Recycling & Environmental Learning (formerly known as the Groundwater Reliability Improvement Project (GRIP)). ARC's main purpose is to ensure reliable sources of high quality replenishment water for groundwater users in the WRD service area.

Capital Improvement Program (CIP)

The WRD'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.

Taking a longer view on the cost-benefit side, Figure 17 below depicts the past ten years of imported water cost versus the cost of groundwater. 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 Replenishment Assessment of $339 per acre-foot is far below the imported water rate of $1,376 per acre-foot. The District is not impacted by any fluctuations in the local economy or any financial trend indicators. Regardless of the economy, the District receives the Replenishment Assessment because the alternative to groundwater in our service area is approximately 3.75 times the cost.

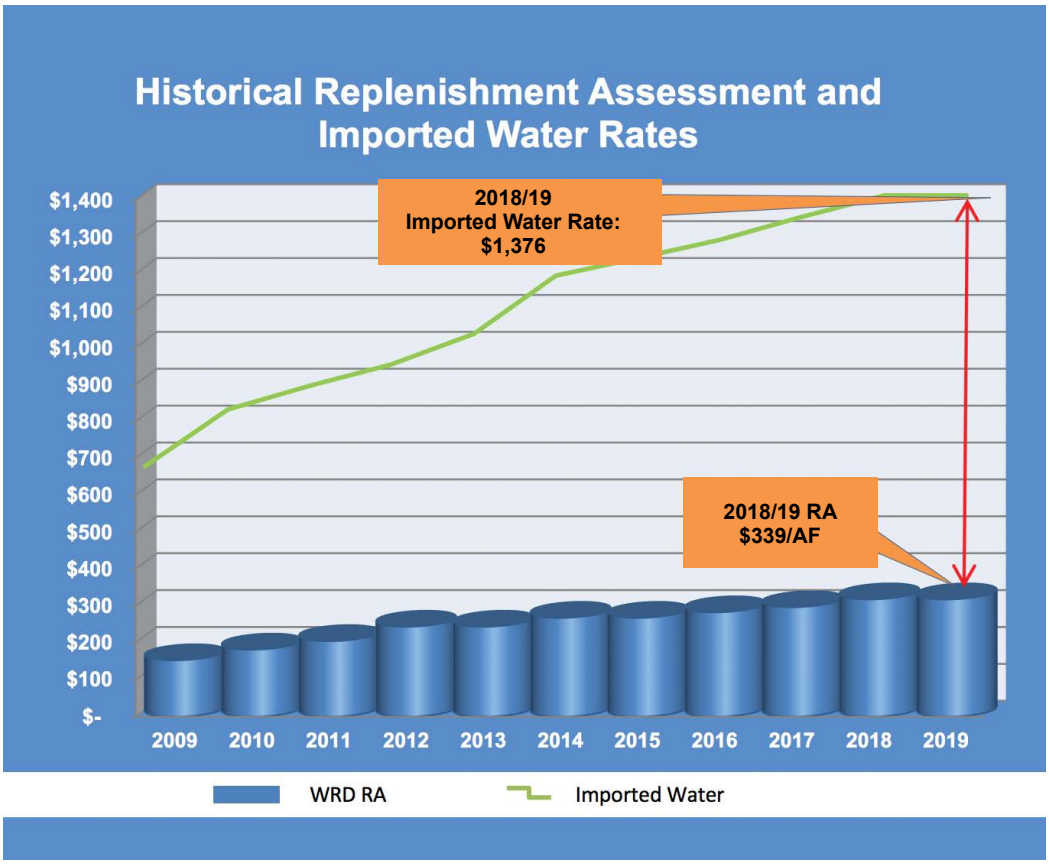


Figure 17 – Historical RA & Imported Water Rates

OVERVIEW

The District's Updated Capital Improvement Program (CIP) plan serves as a comprehensive planning document that identifies capital project expenses in conjunction with anticipated revenue sources such as grant funding. It is also an update to the District's previous five-year plan that provides information to the public regarding the upcoming capital priorities and allows for multi-year finance planning to support those priorities. Funding sources for the CIP projects depends on the nature of the projects, as the District identifies the most economical means of financing capital improvements (i.e., construction, non-construction, or partnership projects).

The need for future five-year capital funding will peak over the next capital improvement planning horizon as WRD's Albert Robles Center (ARC)-related projects transition from the advanced planning and design phase into construction and operations. The CIP includes a total of $236.8 million in capital improvement projects. The CIP reflects grant funding in excess of $37 million, a $3 million increase from last year, and an $80 million one-percent loan from the Clean Water State Revolving Fund (CWSRF) Water Recycling Program for the construction of the ARC. In addition, the CIP describes "other" and "new funding" categories, which may be fulfilled via partnerships, grants, and/or low-interest loans.

The Updated Five-Year CIP is organized into six general project categories below. Each proposed capital improvement project was assigned to a specific category. The CIP projects are shown by category in Table 15A. In addition, each project is exclusively summarized in a dedicated worksheet within the CIP. The project worksheets include a project description, capital investment on operating impacts discussion, prior year project highlights, projected five-year capital improvement project cost information and estimated project schedule.

The project categories are as follows:

- WIN: Albert Robles Center
- Basin Management Projects
- Groundwater Management Projects
- WRD Water Infrastructure Management Projects
- Groundwater Quality Protection and Remediation
- Facilities Management, Maintenance, and Repair

There are two new categories, including the "Groundwater Management Projects,"

which reflect basin management initiatives, and the “Groundwater Quality Protection and Remediation,” which describes water quality and remediation projects. In addition, there are various new projects:

- Leo J. Vander Lans Facility
- Optimization Alternatives and Onsite Improvements
- Interconnection Pipeline (Water Wheeling)
- Central Basin Groundwater Storage Phase 1
- Central Basin Groundwater Storage Phase 2 (tentative)
- West Coast Basin Injection Well Replacement Project
- Regional Brackish Water Reclamation Phase 1 (Planning)
- Goldsworthy Desalter Upgrades
- Safe Drinking Water Program (SDWP)
- SDWP Maywood Mutual 2 (grant)

Table 15A

2017/2018 TO 2021/2022 FIVE YEAR CAPITAL IMPROVEMENT PROGRAM

The Updated CIP budget includes a total of $236.8 million in capital improvement projects. The CIP reflects more than $37.4 million in grant funding. In addition, funding sources include an $80 million State Water Resources Loan for ARC, and $96 million from the 2015 Series Water Revenue Bond. The overall budget reflects a $21 million future funding need. This is summarized below:

Water Independence Now (WIN)	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	"Other (Multi-party/ Partnerships)"	New Funding
Albert Robles Center (ARC)	$58,000,000	$69,000,000	$5,000,000	$-	$-	$-	$132,000,000	$20,800,000	$31,200,000	$80,000,000	$-	$-
Albert Robles Center (ARC) Expansion	$-	$-	$-	$250,000	$500,000	$250,000	$1,000,000	$-	$-	$-	$-	$1,000,000
Whittier Narrows Conservation Pool Feasibility Study	$935,000	$400,000	$500,000	$565,000	$-	$-	$2,400,000	$576,000	$1,824,000	$-	$-	$-
Leo J. Vander Lans Facility: Hydraulic Analysis & Operational Efficiencies Study	$508,000	$175,000	$-	$-	$-	$-	$683,000	$-	$683,000	$-	$-	$-
Leo J. Vander Lans Facility: MWD Bypass Flow-Meter Assembly Improvement Project	$-	$35,000	$-	$350,000	$-	$-	$385,000	$-	$35,000	$-	$-	$350,000
Leo J. Vander Lans Facility: Optimization Alternatives and Onsite Improvements	$-	$476,000	$1,883,000	$550,000	$-	$-	$2,909,000	$-	$2,041,000	$-	$-	$868,000
Leo J. Vander Lans Facility: Interconnection Pipeline (Water Wheeling)	$-	$460,000	$2,850,000	$131,000	$-	$-	$3,441,000	$-	$3,441,000	$-	$-	$-
"Leo J. Vander Lans Facility: Central Basin Groundwater Storage Phase 1"	$-	$549,200	$2,000,000	$3,032,800	$-	$-	$5,582,000	$-	$5,582,000	$-	$-	$-
"Leo J. Vander Lans Facility: Central Basin Groundwater Storage Phase 2 (tentative)"	$-	$-	$-	$823,800	$7,549,200	$-	$8,373,000	$-	$-	$-	$8,373,000	$-
Total	$59,443,000	$71,095,200	$12,233,000	$5,702,600	$8,049,200	$250,000	$156,773,000	$21,376,000	$44,806,000	$80,000,000	$8,373,000	$2,218,000

Basin Management Projects	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Dominguez Gap Seawater Intrusion Barrier- Second Connec.	$-	$500,000	$2,200,000	$1,900,000	$-	$-	$4,600,000	$-	$4,600,000	$-	$-	$-
Groundwater Basin Optimization Pipeline: Phase 1 (Planning)	$-	$-	$250,000	$-	$-	$-	$250,000	$-	$250,000	$-	$-	$-
Montebello Forebay Injection Wells: Phase 1 (Planning)	$-	$-	$-	$-	$-	$100,000	$100,000	$-	$-	$-	$-	$100,000
West Coast Basin Inland Injection Well System: Phase 1 /MWD-San Districts (Planning)	$-	$100,000	$-	$-	$-	$-	$100,000	$-	$100,000	$-	$-	$-
Total	$-	$600,000	$2,450,000	$1,900,000	$-	$100,000	$5,050,000	$-	$4,950,000	$-	$-	$100,000

Table 15B

CAPITAL IMPROVEMENT PROGRAM BUDGET OVERVIEW

Groundwater Management Projects	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Regional Groundwater Monitoring Program	$4,400,000	$2,040,000	$1,515,000	$1,930,000	$-	$-	$9,885,000	$-	$9,885,000	$-	$-	$-
Enhanced-Montebello Forebay Recharge Enhancement Study	$-	$75,000	$190,000	$135,000	$-	$-	$400,000	$-	$400,000	$-	$-	$-
Recharge Operations-Flow Meters	$-	$100,000	$300,000	$300,000	$-	$-	$700,000	$-	$700,000	$-	$-	$-
Total	$4,400,000	$2,215,000	$2,005,000	$2,365,000	$-	$-	$10,985,000	$-	$10,985,000	$-	$-	$-

WRD Infrastructure Management Projects:	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Asset Management Program	$955,000	$805,000	$775,000	$425,000	$35,000	$35,000	$3,030,000	$-	$2,125,000	$-	$-	$905,000
Supervisory Control and Data Acquisition (SCADA) System	$1,249,100	$2,023,600	$1,000,000	$160,000	$-	$-	$4,432,700	$-	$4,432,700	$-	$-	$-
Total	$2,204,100	$2,828,600	$1,775,000	$585,000	$35,000	$35,000	$7,462,700	$-	$6,557,700	$-	$-	$905,000

Groundwater Quality Protection & Remediation	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Perchlorate Remediation Project	$-	$68,968	$3,975,751	$3,768,847	$780,707	$520,472	$9,114,745	$7,275,675	$1,839,070	$-	$-	$-
Regional Brackish Water Reclamation: Phase 1 (Planning)	$-	$250,000	$750,000	$-	$-	$-	$1,000,000	$500,000	$500,000	$-	$-	$-
Goldsworthy Desalter Expansion	$16,096,100	$8,000,000	$-	$-	$-	$-	$24,096,100	$7,000,000	$17,096,100	$-	$-	$-
Goldsworthy Desalter Upgrades	$-	$-	$500,000	$-	$-	$-	$500,000	$-	$-	$-	$-	$500,000
SDWP Program (grants)	$-	$-	$1,325,000	$2,650,000	$2,710,000	$2,771,800	$9,456,800	$-	$-	$-	$-	$9,456,800
SDWP: Maywood Mutual 2 (grant)	$-	$1,724,000	$-	$-	$-	$-	$1,724,000	$1,224,000	$500,000	$-	$-	$-
SDWP: Lynwood (grant)	$30,000	$1,325,000	$-	$-	$-	$-	$1,355,000	$-	$1,355,000	$-	$-	$-
SDWP: Huntington Park (grant)	$25,000	$1,100,000	$-	$-	$-	$-	$1,125,000	$-	$1,125,000	$-	$-	$-
SDWP: CA American Water Arlington Well (grant)	$-	$1,900,000	$-	$-	$-	$-	$1,900,000	$-	$1,900,000	$-	$-	$-
Total	$16,151,100	$14,367,968	$6,550,751	$6,418,847	$3,490,707	$3,292,272	$50,271,645	$15,999,675	$24,315,170	$-	$-	$9,956,800

Table 15C

CAPITAL IMPROVEMENT PROGRAM BUDGET OVERVIEW

Facilities Management, Maintenance, and Repair:	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Headquarters Building- Phase 1 & 2 Improvements	$509,450	$182,500	$-	$-	$-	$-	$691,950	$-	$691,950	$-	$-	$-
Headquarters Building- Roof Replacement	$-	$-	$60,000	$10,000	$-	$-	$70,000	$-	$70,000	$-	$-	$-
Headquarters Building- HVAC Improvements Project	$-	$-	$25,000	$55,000	$-	$-	$80,000	$-	$80,000	$-	$-	$-
Headquarters Building- Drought Tolerant Landscape Demon Garden Improvement	**$-**	**$-**	**$-**	**$15,000**	**$75,000**	**$-**	$90,000	**$-**	**$90,000**	**$-**	**$-**	**$-**
Field Operations and Storage Annex Facility Project	$3,944,000	$154,000	$324,000	$900,000	$-	$-	$5,322,000	$-	$4,044,000	$-	$-	$1,278,000
Total	$4,453,450	$336,500	$409,000	$980,000	$75,000	$-	$6,253,950	$-	$4,975,950	$-	$-	$1,278,000

TOTAL CIP BUDGET	Prior Year Expenses	FY17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget	Grants	2015 Bonds	Loan	Other	New Funding
Total	$86,700,000	$91,400,000	$25,400,000	$18,000,000	$11,600,000	$3,700,000	$236,800,000	$37,400,000	$96,600,000	$80,000,000	$8,373,000	$14,457,800

CAPITAL IMPROVEMENT PROGRAM ACCOMPLISHMENTS

Montebello Forebay Recharge Enhancement Study (MFRES)

The Montebello Forebay Recharge Enhancement Study (MFRES) reviewed and updated the findings of the Montebello Forebay Recharge Optimization Study (Optimization Study). The Optimization Study, completed in 2001, describes how additional local stormwater could potentially be captured for recharge if the water table could be lowered through increased pumping. The Optimization Study identifies approximately 17,000 AFY of additional stormwater to be captured as a preferred alternative from a range of 2,000 to 29,000 AFY of stormwater; however, it depends on the level of pumping and depth of the water table. The MFRES reviewed the assumptions made in the Optimization Study and assessed its finding with respect to the various physical and operational improvements to the Montebello Forebay completed since 2001.

Field Operations and Storage Annex Facility-Purchase

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 had previously leased off-site space for these uses since moving into 4040 Paramount Boulevard, Lakewood, CA. The leased space was unable to provide adequate storage space to meet the District's growing storage needs. Due to its unique proximity to the District and ability to solve WRD's immediate need for additional storage space and future areas for growing inventory of spare and replacement parts for the existing Robert W. Goldsworthy Desalter and Leo J. Vander Lans Advanced Water Treatment Facility, the District purchased the property. In addition, the new facility can be subdivided and sublet in ways that could offset current off-site lease storage space costs and costs associated with servicing debt associated with the acquisition.

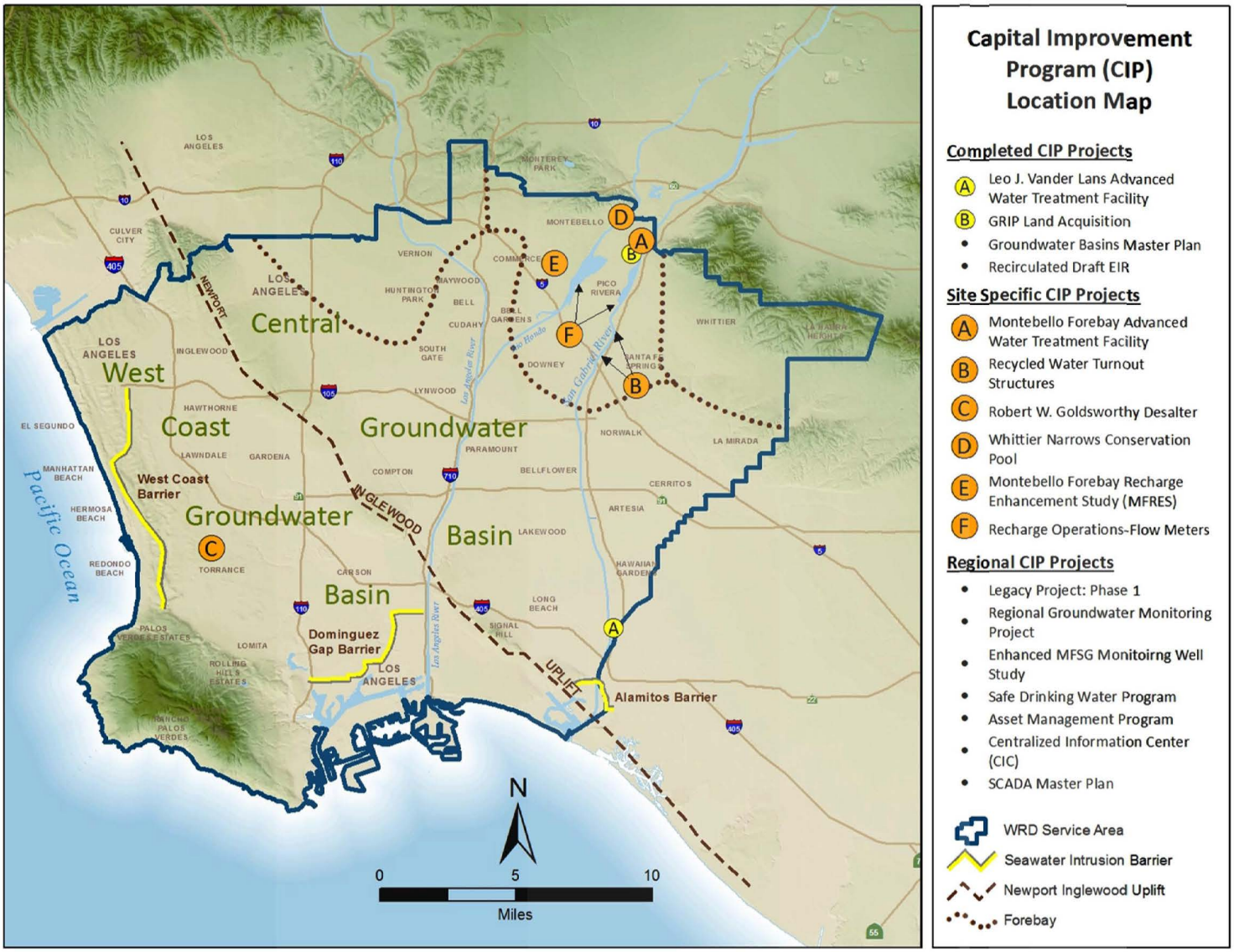


Figure 18 – Capital Improvement Program (CIP)

Water Independence Now

The Water Independence Now (WIN) is a suite of projects aimed to maximize local stormwater and recycled water sources to replenish, preserve and protect the Central and West Coast Basins. In addition, the WIN initiative strives to reduce and ultimately eliminate the District's dependence on imported water for groundwater replenishment.

ALBERT ROBLES CENTER (ARC)

Project Description

The Albert Robles Center (ARC) will offset the current use of imported water by providing up to 21,000 acre-feet per year (AFY) with the construction of an advanced water treatment facility (AWTF), supplemental recharge wells, a brine line and recently completed Recycled Water Turnout Structures. Approximately 11,000 AFY of additional tertiary treated recycled water will be purchased from the Los Angeles County Sanitation Districts (LACSD) and 10,000 AFY of advanced treated water will be generated at the proposed AWTF. The tertiary-treated recycled water would be conveyed in the existing outfall pipeline to the Montebello Forebay Spreading Grounds (MFSG). Below is a description of the various ARC components:

Advanced Water Treatment Facility (AWTF) - In Progress

The District is constructing the AWTF for advanced treatment of 10,000 AFY of tertiary treated water from the LACSD. A new influent diversion structure will be constructed to transfer tertiary-treated recycled water from the existing outfall pipeline into the proposed AWTF for further treatment. An effluent diversion structure will be constructed to transfer advanced-treated water back to the existing outfall pipeline to allow blending of advanced-treated water with the tertiary-treated recycled water prior to spreading at the Montebello Forebay Spreading Grounds.

Supplemental Recharge Wells - Completed

Three supplemental recharge wells and three monitoring wells were constructed at and near the AWTF site. The supplemental recharge wells will be operated to recharge and store up to 4.5 million gallons per day (mgd) of full advanced-treated recycled water in the underlying aquifers for replenishment. Under normal operating conditions for the ARC, the recycled water from the AWTF will be discharged to the existing MFSG for infiltration into the groundwater basin. However, when the spreading basins are unavailable, the recycled water will be directed to the three supplemental recharge wells. The supplemental recharge wells will allow the AWTF to operate at a constant minimum rate by providing alternate means to recharge the produced recycled water. The construction of the wells was completed in June 2017.

Brine Line & Off-Site Improvements- Completed

As part of the ARC project, off-site improvements are required, including the construction of a 16-inch diameter pipeline for disposal of brine concentrate that will be generated by the new treatment facility. This 16-inch diameter brine pipeline connects to an existing Los Angeles County Sanitation District 63-inch diameter sewer pipeline that runs in proximity to the ARC site. Other necessary off-site improvements included street modifications that were requested by the City of Pico Rivera, including a redesign of traffic lanes and signals at the intersection of San Gabriel River Parkway and Beverly Boulevard in the City of Pico Rivera. The construction of the brine line was completed in February 2017.

Recycled Water Turnout Structures (Turnouts) - Completed

This component of ARC included the construction of two reinforced concrete turnout structures on the existing recycled water pipeline that extends from the San Jose Creek Water Reclamation Plant (SJCWRP) to the Montebello Forebay Spreading Grounds. Specifically, these Turnouts will allow the delivery of 11,000 AFY of recycled water. The construction of the Turnouts were completed in June 2016.

Funding

In addition to Tax-Exempt Revenue Bond proceeds, the District finalized its agreement in accordance with the Water Recycling Funding Program funded by Proposition 1 and the State Revolving Fund. The District received a $1 million grant from the Rivers and Mountains Conservancy Proposition 1 Grant Program.

Impact of Capital Investment on Operating Budget

Operations are expected to start at the end of December 2018 and the District has budgeted $4.8 million for six months of operations replacing the District's need for 8,000 acre-feet of imported water at a cost of $6.5 million.

Prior Year Highlights

The District commenced construction of the AWTF on August 16, 2016. In addition, three supplemental recharge wells, three monitoring wells, the brine line and off-site street improvements, such as a new curb, sidewalk and traffic signal, were completed. In regards to public outreach, more than 250 people attended the District's ground breaking ceremony on September 22, 2016. Subsequently, a community open house was held on December 17, 2016 to provide an update to the local community on ARC construction activities. The ARC Project was awarded the 2017 National Demolition Association of Excellence in Demolition Award in the categories of sustainability, community enhancement and education for the deconstruction and site preparation work that was completed. Also, the ARC Project received the 2017 Academy of Environmental Engineers and Scientist Grand Prize in Design, for the facility and grounds.

Table 16

ALBERT ROBLES CENTER (ARC)
(includes Turnout Structures)
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$19,000,000	$-	$-	$-	$-	$-	$19,000,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$39,000,000	$69,000,000	$5,000,000	$-	$-	$-	$113,000,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$58,000,000	$69,000,000	$5,000,000	$-	$-	$-	$132,000,000
Grants	$4,800,000	$14,500,000	$1,500,000	$-	$-	$-	$20,800,000
2015 Bonds	$20,200,000	$9,500,000	$1,500,000	$-	$-	$-	$31,200,000
SRF	$33,000,000	$45,000,000	$2,000,000	$-	$-	$-	$80,000,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							

ALBERT ROBLES CENTER (ARC) EXPANSION

Project Description

The proposed advanced water treatment facility (AWTF) is in its initial stages of development. Planning for an expansion will commence until the completion of the proposed AWTF.

Funding

The Capital Improvement Program budget for Fiscal Year 2019/2020 and 2020/2021 is $1 million.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time. The ARC Expansion Project will be analyzed in the future as the current phase of the project is completed and put into service.

Prior Year Highlights

The District is in the process of initiating the development of the AWTF.

Table 17
ALBERT ROBLES CENTER (ARC) EXPANSION
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$250,000	$-	$-	$250,000
Design	$-	$-	$-	$-	$500,000	$250,000	$750,000
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$-	$250,000	$500,000	$250,000	$1,000,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$-	$-	$-	$-	$-
New Funding	$-	$-	$-	$250,000	$500,000	$250,000	$1,000,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

WHITTIER NARROWS CONSERVATION POOL FEASIBILITY STUDY

Project Description

The Whittier Narrows Dam provides flood control, recreation and a reliable means of capturing storm water flows for groundwater replenishment in the Montebello Forebay. The U.S. Army Corps of Engineers (USACE), Los Angeles County Flood Control District (LACFCD) and WRD are interested in raising the maximum conservation pool elevation from 201.6' to 205' to allow for an estimated additional 1,100 AFY of storm water conservation that would otherwise be wasted to the ocean. The elevation increase does not require capital improvements; however, it does need USACE approval and updates to various studies and environmental documents related to dam operations at an increased conservation pool elevation. The WRD and LACFCD are working closely with the USACE on a strategy to complete an updated Whittier Narrows Conservation Pool Feasibility Study (Study) to allow for a permanent change to the operating plan.

Funding

This project received a $576,000 Proposition 84 Integrated Regional Water Management (IRWM) Round 2 Grant.

Impact of Capital Investment on Operating Budget

Whittier Narrows Dam is managed by USACE and all operating changes must be approved by the USACE. The project will provide for an estimated 1,100 acre-feet per year of additional storm water capture which will offset the need for imported water.

Prior Year Highlights

The USACE provided a Project Management Plan (PMP) which outlines the scope, schedule and budget for the project.

Table 18
WHITTIER NARROWS
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Feasibility Study	$935,000	$400,000	$500,000	$565,000			$2,400,000
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$935,000	$400,000	$500,000	$565,000	$-	$-	$2,400,000
Grants	$-	$288,000	$288,000	$-	$-	$-	$576,000
2015 Bonds	$935,000	$112,000	$212,000	$565,000	$-	$-	$1,824,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Study							
Construction							
Post Construction							

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 is operated and maintained by the Long Beach Water Department (LBWD) under contract with WRD.

SUMMARY OF PROJECTS

Implementation of Optimization Alternatives and Onsite Projects

The Optimization Alternative Study (described more in detail below) has identified multiple projects (including the Emergency Interconnection and Injection Wells) for the long-term optimization of LVL. In addition, LBWD has identified several projects for onsite additions, replacements and improvements. These projects include:

Onsite Infrastructure (Additions, Replacements and Improvements)

There are numerous projects identified for LVL itself, including the replacement of all 108 pressure vessels for RO Train No. 1, two strainers, the MF filtrate tank and the Uninterruptible Power Supply (UPS) unit. Infrastructure additions include a new neutralization basin or tank, a canopy for the hydrogen peroxide system and a Dissolved Air Flotation (DAF) maintenance platform. Improvements are also necessary for the RO Clean-in-Place (CIP) system and platform, MF backwash CIP system and DAF system.

LBWD Recycled Water Storage

Increasing LVL production will cause impacts on the available supply to the LBWD recycled water system. To avoid shortages and capture all available supply from the LBWRP, ample storage must be available or existing storage highly utilized. This project would evaluate opportunities to optimize the existing LBWD recycled water storage, which ensures a stable supply to LVL.

LBWD Customer Demand Management

The amount of necessary operational storage in LBWD's recycled water system is dependent on typical diurnal customer demand patterns. It may be possible to reduce LBWD's operational storage volume and provide additional supply to LVL if these demands could be monitored, adjusted and maintained.

LVL Influent Storage

This project would examine a potential direct connection between LVL and LBWRP. By connecting LBWRP's chlorine contact tank to LVL's 216,000 gallon wet well, energy efficiency can be improved and additional operational storage provided by an existing LVL asset. Approval from LACSD would be necessary.

Metropolitan Water District (MWD)

Bypass Flow-Meter Assembly Improvements

This project would improve LVL's operational flexibility for Barrier injection and maximize LVL's output of advanced treated recycled water effluent without incurring MWD's low-flow penalty. Approval from MWD would be necessary.

Amendment of Existing Agreements

In order to implement some of the projects mentioned, modifications to existing agreements between WRD and various agencies would be necessary. These agencies include LBWD, LACSD, MWD (via LBWD) and Orange County Water District (OCWD). In addition, a new agreement with the City of Cerritos would be required for the Emergency Interconnection Project.

Interconnection Pipeline (Water Wheeling)

This project would analyze a potential connection between LBWD and the City of Cerritos recycled water distribution system. As LBWRP will be shut down for extended periods during the next three years, LVL will not receive any source water due to a lack of backup supply.

Injection Wells (Central Basin Groundwater Storage)

Phase 1 and Phase 2 (tentative)

As LVL expands production capacity, additional demands downstream from LVL must be accommodated above and beyond the Barrier injection wells. This project would install new injection wells that are operated by LBWD to recharge the underlying Central Basin, from which LBWD pumps their groundwater. The first phase would install one or two injection wells on LVL property; the second phase would install multiple wells in the adjacent El Dorado Park Golf Course

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 is $1,660,200.

Impact of Capital Investment on Operating Budget

The Leo J. Vander Lans Advanced Water Treatment Facility supplies advanced treated water to the Alamitos Seawater Intrusion Barrier. Due to shutdowns of the Sanitation District of Los Angeles County's (LACSD) facility, source water will be unavailable for six months each year for the next two years. The estimated operating costs of the capital investment is $5.8 million for fiscal year 2018/19.

Prior Year Highlights

Hydraulic Analysis, Operational Efficiencies and Optimization Alternative Study & MWD Bypass Flow-Meter Assembly Improvement Project

This work involves an analysis of LVL's hydraulic and operational efficiencies, followed by implementation of the study's recommendations for LVL optimization. The goals of this study are (1) to increase LVL effluent injection flow rates to almost 100% of the Los Angeles County portion of the Barrier while avoiding MWD's low-flow penalty and (2) to optimize operational and flow equalization strategies to allow consistent and stable 24/7 LVL operations with minimum shutdowns.

The first phase of the study began in June 2016 and was completed in February 2017. The second phase of the study focuses on the recommended improvements and will be completed by early 2018. To date, the design consultant team of Woodard & Curran (previously RMC Water and Environment) and KEH have completed the following: 1) two technical memoranda submitted to MWD on short-term and long-term concepts, 2) five documented alternatives on hydraulic smoothing, 3) three hydraulic models and 4) Tech Memo No. 3, which ranks 10 optimization alternatives for recycled water supply storage, excess LVL influent supply storage and excess LVL effluent. Remaining work includes 1) developing a fourth hydraulic model, 2) technical analyses and memoranda on selected optimization alternatives and 3) draft and final report (including schedule) for the design and construction/ implementation of selected optimization alternatives.

Table 19

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS
HYDRAULIC ANALYSIS, OPERATION EFFICIENCIES
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$508,000	$175,000	$-	$-	$-	$-	$683,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$508,000	$175,000	$-	$-	$-	$-	$683,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$508,000	$175,000	$-	$-	$-	$-	$683,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Study							
Design							
Construction							
Post Construction							

Table 20

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS
MWD BYPASS FLOW-METER ASSEMBLY IMPROVEMENT PROJECT
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$35,000	$-	$350,000	$-	$-	$385,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$35,000	$-	$350,000	$-	$-	$385,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$35,000	$-			$-	$35,000
New Funding	$-	$-	$-	$350,000	$-	$-	$350,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 21

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS
OPTIMIZATION ALTERNATIVES AND ONSITE PROJECTS
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$75,000	$50,000	$-	$-	$-	$125,000
Design	$-	$266,000	$50,000	$-	$-	$-	$316,000
Construction	$-	$135,000	$1,783,000	$550,000	$-	$-	$2,468,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$476,000	$1,883,000	$550,000	$-	$-	$2,909,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$441,000	$1,600,000	$-	$-	$-	$2,041,000
New Funding	$-	$35,000	$283,000	$550,000	$-	$-	$868,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 22

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS
INTERCONNECTION PIPELINE (WATER WHEELING)
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$460,000	$-	$-	$-	$-	$460,000
Construction	$-		$2,644,000	$-	$-	$-	$2,644,000
Post Construction	$-		$206,000	$131,000	$-	$-	$337,000
Total	$-	$460,000	$2,850,000	$131,000	$-	$-	$3,441,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$460,000	$2,850,000	$131,000	$-	$-	$3,441,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 23

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS
(CENTRAL BASIN GROUNDWATER STORAGE)- PHASE 1
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$91,600	$-	$-	$-	$-	$91,600
Design	$-	$457,600	$-	$-	$-	$-	$457,600
Construction	$-		$2,000,000	$3,032,800	$-	$-	$5,032,800
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$549,200	$2,000,000	$3,032,800	$-	$-	$5,582,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$549,200	$2,000,000	$3,032,800	$-	$-	$5,582,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 24

LEO J. VANDER LANS ADVANCED WATER TREATMENT FACILITY PROJECTS (CENTRAL BASIN GROUNDWATER STORAGE)- PHASE 2 (TENTATIVE)
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$137,400	$-	$-	$137,400
Design	$-	$-	$-	$686,400	$-	$-	$686,400
Construction	$-		$-		$7,549,200	$-	$7,549,200
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$-	$823,800	$7,549,200	$-	$8,373,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$-	$-	$-	$-	$-
New Funding	$-	$-	$-	$823,800	$7,549,200	$-	$8,373,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Basin Management Projects

This includes projects that help manage the basin efficiently by protecting current water supplies, creating operational flexibility and maximizing replenishment.

DOMINGUEZ GAP SEAWATER INTRUSION BARRIER-SECOND CONNECTION/POTABLE BACKUP SUPPLY

Project Description

The Los Angeles Department of Water and Power (LADWP) is expanding the Terminal Island Water Reclamation Plant/Advanced Water Purification Facility (TIWRP/AWPF), which produces the advanced-treated recycled water that is currently injected at the Dominguez Gap Seawater Intrusion Barrier (the Barrier). Once the TIWRP/AWPF Expansion is completed in 2017, 100% advanced treated recycled water will be injected at the Barrier, thus replacing all the imported water that is currently utilized at the Barrier. Currently, the advanced-treated recycled water is delivered by pipeline from the TIWRP/AWPF to a singular connection point at the Barrier; potable water is also delivered to a separate singular connection point at the Barrier. To allow for the increased delivery of recycled water and ensure the reliability of the delivery, a second recycled water connection and an associated pipeline must be constructed. To provide operational flexibility at the Barrier, a new potable backup connection and associated piping must also be constructed.

Design for the pipeline associated with the second recycled water connection was initiated by MWH under contract to LADWP. LADWP's contract with MWH expired and only 60% of the design had been completed. LADWP requested WRD's assistance to complete the remaining 40% of the design and manage the procurement and construction of the pipeline. This project, along with the potable backup supply, will not only increase the use of recycled water in the basin, but will also reduce dependency on imported water, which is a crucial component of WRD's Water Independence Now (WIN) Program.

Funding

The second recycled water connection at the Barrier will be financed, designed and constructed by WRD. Of the total cost of $7.98 million, it is expected that LADWP shall reimburse WRD approximately $3.37 million, which includes any contingency funds that are expended for the design and construction of the pipeline. The balance would be paid for by the District ($4.61 million including contingencies).

The potable backup supply for the Barrier will be financed, designed and constructed by WRD. It is expected that WRD shall pay $6 million, and the balance would be paid by LADWP ($3.6 million).

Impact of Capital Investment on Operating Budget

Wells are monitored by WRD staff. The new wells will be folded into the current operations plan. There is no measurable financial benefit to drilling additional groundwater monitoring wells. The benefit comes from the data collected related to groundwater levels and the quality of the groundwater to address water quality issues and replenishment in the Central and West Coast Basins.

Prior Year Highlights

Since LADPW has already commenced design of the associated pipeline with a consultant team, WRD will look to retain the same consultant team for the design of the second recycled water connection. WRD continues to work with LADWP to determine the design of the potable backup supply.

Table 25

DOMINGUEZ GAP SEAWATER INTRUSION BARRIER- SECOND CONNECTION
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$500,000		$-	$-	$-	$500,000
Construction	$-	$-	$2,200,000	$1,900,000	$-	$-	$4,100,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$500,000	$2,200,000	$1,900,000	$-	$-	$4,600,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$500,000	$2,200,000	$1,900,000	$-	$-	$4,600,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

GROUNDWATER BASIN OPTIMIZATION PIPELINE: PHASE 1 (PLANNING)

Project Description

The WRD's Groundwater Basin Master Plan (GBMP) proposes the Groundwater Basin Optimization Pipeline (GBOP), which will install new extraction wells within the Montebello Forebay and pump water to users to the south, creating storage capacity for additional storm water capture in the MFSG. The Draft GBMP estimates that an additional 17,000 AFY of storm water that currently flows to the ocean during large storm events can be captured and recharged at the MFSG with the increased storage capacity, creating a new, local water supply for the region. The GBOP will require an increase in pumping by 25,000 AFY to reduce elevated groundwater levels and allow for additional storm water recharge during/following high storm flow periods. This project will shift pumping from elsewhere in the Central Basin to the Montebello Forebay. The project will require installation of up to nine new extraction wells, pipelines and pump stations to deliver the water to existing water users downstream of the Montebello Forebay area.

Funding

The total Capital Improvement Program budget for Fiscal Years 2017/18 is $250,000

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project is in its planning stages; hence, there are no highlights at this time.

Table 26

GROUNDWATER BASIN OPTIMIZATION PIPELINE
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$250,000	$-	$-	$-	$250,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$250,000	$-	$-	$-	$250,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$250,000	$-	$-	$-	$250,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

MONTEBELLO FOREBAY INJECTION WELLS: PHASE 1

Project Description

To increase replenishment of recycled water, the WRD's Groundwater Basin Master Plan (GBMP) includes additional replenishment via injection at new wells in the Montebello Forebay. This project may require diversions to the existing sewage collection system in the vicinity of the Whittier Narrows Water Reclamation Plant. With the sewer diversions, the wastewater flow that is currently treated at Joint Water Pollution Control Plan (JWPCP) and discharged via Los Angeles County Sanitation District's existing ocean outfall off the coast of Palos Verdes would instead be recharged at the Montebello Forebay. New advanced water treatment facilities will be installed at the Montebello Forebay and Los Coyotes Water Reclamation Plant to produce approximately 18,190 acre-feet of advanced-treated water. This water will then be conveyed and injected into the Montebello Forebay through new pipelines and up to 17 new injection wells. It should be noted that since the development of the GBMP, Metropolitan Water District of Southern California (MWD) has initiated studies to develop recycled water from the JWPCP and convey it to areas of the Central Basin. If this project proceeds, the MWD recycled water would serve as an alternative source for the injection described above.

Funding

The total Capital Improvement Program budget for Fiscal Years 2021/22 is $100,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project is in its planning stages; hence there are no highlights at this time.

Table 27

MONTEBELLO FOREBAY INJECTION WELLS
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$100,000	$100,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$-	$-	$-	$100,000	$100,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$-	$-	$-	$-	$-
New Funding	$-	$-	$-	$-	$-	$100,000	$100,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

WEST COAST BASIN INLAND INJECTION WELL SYSTEM: PHASE 1

Project Description

This project increases water replenishment within the West Coast Basin through the installation of a new injection well system inland from existing injection barriers. The system will be supplied with local recycled water produced at a proposed new advanced water treatment facility at Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant (JWPCP), which will produce up to 17,000 AFY of advanced-treated water. The WRD's Groundwater Basin Master Plan assumes that 15,000 AFY can be injected into the groundwater basin at the new Inland Injection Well System, and the remaining 2,000 AFY will be used for injection at the Dominguez Gap Barrier Project. The proposed project will require construction of advanced treatment capacity at the JWPCP, new pipelines, pump stations and injection wells. Up to 16 new extraction wells with wellhead treatment facilities will be required, as determined by participating pumpers. It should be noted that since the development of the GBMP, MWD has initiated studies to develop recycled water from the JWPCP and convey it to areas of the West Coast Basin. If this project proceeds, the MWD recycled water would serve as an alternative source for the injection wells described above.

Funding

The total Capital Improvement Program budget for Fiscal Years 2017/18 is $100,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project is in its planning stages; hence, there are no highlights at this time.

Table 28
WEST COAST BASIN INLAND INJECTION WELL SYSTEM
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$100,000	$-	$-	$-	$-	$100,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$100,000	$-	$-	$-	$-	$100,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$100,000	$-	$-	$-	$-	$100,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Groundwater Management Projects

Projects under this program will assist with continuing and improving the collection and management of groundwater level and groundwater quality data, which provides the information necessary to make groundwater resources and planning adjustments in response to the conditions of the groundwater basins.

REGIONAL GROUNDWATER MONITORING PROGRAM

Project Description

The Regional Groundwater Monitoring Program (RGMP) collects groundwater level and groundwater quality data used for groundwater basin management for the Central Basin and West Coast Basin, two of the most utilized urban groundwater basins in the nation. This is achieved through groundwater monitoring, modeling and planning, which provides the basis to understanding the dynamic changes in the basins. The RGMP currently consists of a network of 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.

Funding

The capital costs are for the construction of new monitoring wells (five for regional monitoring and six for contamination investigations) and data collection equipment.

Impact of Capital Investment on Operating Budget

Wells are monitored by WRD staff. The new wells will be folded into the current operations plan. There is no measurable financial benefit to drilling additional groundwater monitoring wells. The benefit comes from the data collected related to groundwater levels and the quality of the groundwater to address water quality issues and replenishment in the Central and West Coast Basins.

Prior Year Highlights

The RGMP was awarded the 2011 Groundwater Protection Award from the National Groundwater Association. In 2011, because of the success and extensiveness of the RGMP, the State of California designated WRD as the official California Statewide Groundwater Elevation Monitoring (CASGEM) entity for the Central and West Coast Basins, making WRD responsible for providing the State's Department of Water Resources with groundwater data from the RGMP.

Table 29

REGIONAL GROUNDWATER MONITORING PROGRAM
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	
Design	$-	$-	$-	$-	$-	$-	
Construction	$4,400,000	$2,040,000	$1,515,000	$1,930,000	$-	$-	$9,885,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$4,400,000	$2,040,000	$1,515,000	$1,930,000	$-	$-	$9,885,000
Grants	$-	$-	$-	$-	$-	$-	
2015 Bonds	$4,400,000	$2,040,000	$1,515,000	$1,930,000	$-	$-	$9,885,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

ENHANCED-MONTEBELLO FOREBAY RECHARGE ENHANCEMENT STUDY (E-MFRES)

Project Description

The Enhanced-Montebello Forebay Recharge Enhancement Study (E-MFRES) will review and update the findings of the Montebello Forebay Recharge Enhancement Study (MFRES). This project will commence at the completion of the MFRES.

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 is $75,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project has not commenced; hence, there are no highlights at this time.

Table 30

ENHANCED-MONTEBELLO FOREBAY RECHARGE ENHANCEMENT STUDY (E-MFRES)
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Study	$-	$75,000	$190,000	$135,000	$-	$-	$400,000
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$75,000	$190,000	$135,000	$-	$-	$400,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$75,000	$190,000	$135,000	$-	$-	$400,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

RECHARGE OPERATIONS- FLOW METERS

Project Description

The District will install flow metering devices to facilitate rate and volume measurements of imported, recycled and storm waters entering the Montebello Forebay and the spreading grounds. Metering devices will expand the existing network of gaging stations operated by the USGS, Army Corps of Engineers and Los Angeles County Flood Control District. In addition, troublesome gaging stations may be improved or replaced.

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 is $300,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time. There is no financial benefit analysis for this project, the data obtained through this project will provide a more accurate measure of water flowing into the Montebello Forebay Spreading Grounds.

Prior Year Highlights

This project has not commenced; hence, there are no highlights at this time.

Table 31
RECHARGE OPERATIONS FLOW METERS
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$100,000	$-	$-	$-	$-	$100,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$300,000	$300,000	$-	$-	$600,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$100,000	$300,000	$300,000	$-	$-	$700,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$300,000	$200,000	$200,000	$-	$-	$700,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Water Infrastructure Management Projects

These projects help manage the District's assets. Specifically, facilitate the ability for short and long term asset management, maintenance and replacement. In addition, these projects will create a centralized information system which will improve administrative tasks, enhance security, maintain the integrity of the District's data and help manage the Districts' data more efficiently.

ASSET MANAGEMENT PROGRAM

Project Description

The District has invested more than $127 million in capital improvement projects that need to be managed and maintained over their useful life; hence, the District Board of Directors initiated the development of an Asset Management Program. The Asset Management (AM) Plan was completed in FY 15-16 and it establishes a priority list of recommended actions and projects using factors such as level of effort, business drivers, cost, staff involvement, duration and alignment to the District's strategic direction, including any future strategic plans for Supervisory Control and Data Acquisition (SCADA) and Centralized Information System (CIS), respectively. The completed AM Plan proposed initiatives that are grouped into four elements:

- Planning: Develop an AM strategy, framework, business processes and policy
- Core Service Delivery: Implement asset management program and asset maintenance practices
- Performance Management: Develop levels of service framework
- Support Services:
  - Providing Information Technology (IT) Master Plan development
  - Providing implementation of a Computerized Maintenance Management System (CMMS) software
  - Providing Geographic Information System (GIS) Software Updates
  - Providing Document Management System Updates and Reconfiguration

In addition, the District has initiated the implementation of the CIS at the District headquarters which will serve as the master SCADA System control room and the centralized data repository for the District's Enterprise AM, CMMS, Groundwater Monitoring and Modeling System(s) and GIS. Centralized information will facilitate the development of reports that show the broad range of activities that the District is engaged in, simplify administrative tasks, improve security, make data management more efficient and maintain the integrity of all the data that the District manages.

The implementation of SCADA is discussed in the following section.

Funding
The Capital Improvement Program budget for Fiscal Year 2017/18 is $805,000.

Impact of Capital Investment on Operating Budget
There are no operating impacts at this time.

Prior Year Highlights
- Planning:
  - CMMS Implementation Phase 1 Pilot Project at the Leo J. Vander Lans Advanced Water Treatment Facility completed
- Core Service Delivery
  - Selection of Cityworks, CMMS software
  - Selection of Assetic, a CMMS planning and forecasting tool
- Performance Management
  - Baseline performances evaluated within the AM Master Plan
- Support Services
  - Information Technology (IT) Master Plan Completed
  - Implementation of CMMS District-wide initiated
  - Automation of committee and board agenda process initiated
  - GIS software update initiated
  - Document Management System Update and Reconfiguration initiated

Table 32

ASSET MANAGEMENT: PLANNING
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$180,000	$80,000	$80,000		$-	$-	$340,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$180,000	$80,000	$80,000	$-	$-	$-	$340,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$180,000	$80,000	$80,000	$-	$-	$-	$340,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Phase 1 CMMS Implementation; AM Plan Implementation (GHD)

Table 33

ASSET MANAGEMENT: CORE SERVICE DELIVERY
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$35,000	$25,000	$-	$-	$-	$-	$60,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$40,000	$40,000	$20,000	$20,000	$20,000	$140,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$35,000	$65,000	$40,000	$20,000	$20,000	$20,000	$200,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$35,000	$65,000	$-	$-	$-	$-	$100,000
New Funding	$-	$-	$40,000	$20,000	$20,000	$20,000	$100,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

This includes annual cost/implementation of Cityworks and Assetic

Table 34

ASSET MANAGEMENT: PERFORMANCE MANAGEMENT
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$90,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$90,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$15,000	$15,000	$15,000	$-	$-	$-	$45,000
New Funding	$-	$-	$-	$15,000	$15,000	$15,000	$45,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 35

ASSET MANAGEMENT: SUPPORT SERVICES
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$100,000	$-	$-	$-	$-	$-	$100,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$400,000	$515,000	$515,000	$265,000	$-	$-	$1,695,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$500,000	$515,000	$515,000	$265,000	$-	$-	$1,795,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$500,000	$515,000	$150,000	$-	$-	$-	$1,165,000
New Funding	$-	$-	$-	$15,000	$15,000	$15,000	$45,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 36

ASSET MANAGEMENT: CENTRALIZED INFORMATION SYSTEM
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$100,000	$-	$-	$-	$-	$-	$100,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$125,000	$130,000	$125,000	$125,000	$-	$-	$505,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$225,000	$130,000	$125,000	$125,000	$-	$-	$605,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$225,000	$125,000	$125,000	$-	$-	$-	$475,000
New Funding	$-	$-	$-	$125,000	$-	$-	$125,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Includes 10 new servers for SCADA

SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM

Project Description

The Supervisory Control and Data Acquisition (SCADA) System project includes the completion of a needs assessment, a comprehensive SCADA System Master Plan strategy, which creates a standardized control system architecture for all of the District's respective operating facilities and a project portfolio. The SCADA System Master Plan specifies the priorities and costing of a standardized SCADA system that will meet the expanding needs of the District, as related to ongoing construction projects. These priorities include the expansion of the Robert W. Goldsworthy Desalter (Goldsworthy Desalter), expansion of the new Albert Robles Center (ARC) and anticipated upgrades to existing facilities, including the two turnout structures at the Montebello Forebay Spreading Grounds and the Leo J. Vander Lans Advanced Water Treatment Facility (LVL AWTF). The SCADA System Master Plan provides a Project Portfolio which describes a list of recommended implementation projects to achieve the intended SCADA vision and objectives set forth by the District. The Project Portfolio is outlined as follows:

- Foundational Projects
  - ARC Recycled Water Turnout Structures Base Human Machine Interface (Base-HMI), including Galaxy Repository and Historian
  - Programmable Logic Center (PLC) and Base-HMI Software Standards Creations (standards given to System Integrators for upcoming construction projects)
  - HMI Licensing and Support Renewal (Wonderware System Platform - Provides centralized configuration, deployment, communication, security, data connectivity and collaboration)
  - PLC and other Industrial Control System hardware purchasing, software licensing and support renewal
- SCADA System Integration
  - Goldsworthy Desalter Expansion - Communication and Base-HMI integration to the Centralized Information System (CIS)
  - ARC communication and HMI integration to the CIS
  - Turnout structures communication and HMI integration to the CIS
  - LVL AWTF communication and HMI integration to the CIS

- Centralized Information System (CIS) creation at the WRD headquarters
- Communications to the WRD nested groundwater monitoring well network and integration to the CIS
- SCADA system integration to WRD's Computerized Maintenance Management System (CMMS)
- Establish a SCADA Network Security and Maintenance Program

• SCADA System Upgrades and Maintenance

- Upgrades at the two turnout structures to meet WRD's new SCADA standards
- Upgrades at the LVL AWTF to meet WRD's new SCADA standards
- Troubleshooting and maintenance of SCADA systems at all WRD facilities

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 is $2,023,600.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

Foundational projects specified in the SCADA System Master Plan have been completed. SCADA system integration projects, especially in relation to ongoing construction projects, were initiated and expected to continue through 2018

Table 37

SCADA SYSTEM INTEGRATION AND MAINTENANCE
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$790,400	$323,600	$-	$-	$-	$-	$1,114,000
Design	$-						$-
Construction	$458,700	$1,700,000	$1,000,000	$160,000	$-	$-	$3,318,700
Post Construction	$-						$-
Total	$1,249,100	$2,023,600	$1,000,000	$160,000	$-	$-	$4,432,700
Grants	$-						$-
2015 Bonds	$1,249,100	$2,023,600	$1,000,000	$160,000	$-	$-	$4,432,700
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Groundwater Quality Protection & Remediation

These projects improve groundwater quality throughout the District's service area. Specifically, through clean-up projects, brackish water desalination, and a safe drinking water program, which provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells.

PERCHLORATE REMEDIATION IN THE LOS ANGELES FOREBAY PROJECT

Project Description

The District has been investigating a perchlorate groundwater plume with the assistance of various regulatory agencies in association with our Los Angeles Forebay Task Force. The groundwater impacts are located in a disadvantaged community within a deep regional aquifer system currently utilized by various water purveyors in the Los Angeles Forebay. The perchlorate concentrations are among the highest in California. The WRD has identified a "hot spot," which represents a substantial threat to the Central Groundwater Basin and will require treatment to reduce the threat to a local groundwater source within the Los Angeles Forebay region of the Central Groundwater Basin. A responsible party (RP) has not been identified by the Department of Toxic Substances Control (DTSC) or the Los Angeles Regional Water Quality Control Board (LARWQCB).

Funding

In March 2017, WRD was successful in securing a preliminary grant award of $7,275,675 from the Proposition 1 Groundwater Grant administered by the State Water Resources Control Board (SWRCB). The anticipated budget is projected for five years through FY 21/22. The current award includes treatment system design, construction and two years of functional testing with the state paying up to 80% (WRDs portion will be approximately 20%). WRDs board also approved $1,500,000 for two additional years of remediation (if needed) that will not be eligible for grant funds as the state does not reimburse applicants for treatment system operation and maintenance (O&M). The additional treatment costs are not included in the projected budget below as the work is not anticipated until FY 22-23. The grant award also provides funding for additional assessment to identify a responsible party and will be implemented in collaboration with our regulatory partners DTSC and LARWQCB. WRD is currently negotiating the contract terms, conditions and final funding amount with the SWRCB.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project is in its planning stages; hence, there are no highlights at this time.

Table 38
PERCHLORATE REMEDIATION
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$68,968	$206,904	$-	$-	$-	$275,872
Construction	$-	$-	$3,768,847	$3,768,847	$-	$-	$7,537,694
Post Construction	$-	$-	$-	$-	$780,707	$520,472	$1,301,179
Total	$-	$68,968	$3,975,751	$3,768,847	$780,707	$520,472	$9,114,745
Grants	$-	$55,052	$3,173,569	$3,008,412	$623,185	$415,457	$7,275,675
2015 Bonds	$-	$13,916	$802,182	$760,435	$157,522	$105,015	$1,839,070
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

REGIONAL BRACKISH WATER RECLAMATION: PHASE 1

Project Description

This regional project, which will consist of multiple desalter treatment plants, will remove the saline plume in the Silverado Aquifer, located in the West Coast groundwater basin in south Los Angeles County. Operation of seawater barrier injection wells has effectively curtailed seawater intrusion into the West Coast Basin; however, a large residual saline plume remains trapped inland of the barrier wells, occupying 600,000 acre-feet of volume in the West Coast groundwater basin. This project will completely remediate the saline plume over a 40-year period by pumping and desalting 15,000 acre-feet of brackish groundwater each year. This project would provide a significant new potable water supply in the West Coast Basin and also reclaim groundwater storage capacity in the basin by removing the brackish plume. The WRD's Groundwater Basin Master Plan assumes this project would operate on a regional basis, providing a new potable source of water for several groundwater pumpers located within that basin whose pumping options are currently limited by the saline plume. This effort would ultimately adjust pumping patterns to maximize containment and removal of the saline plume, which would result in groundwater contamination remediation, reclamation of significant groundwater storage volume in the basin and creation of a significant new local water supply.

Funding

The total Capital Improvement Program budget for Fiscal Years 2017/18 is $500,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

This project is in its planning stages; hence, there are no highlights at this time.

Table 39
REGIONAL BRACKISH WATER
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$250,000	$750,000	$-	$-	$-	$1,000,000
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$-	$-	$-	$-
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$250,000	$750,000	$-	$-	$-	$1,000,000
Grants	$-	$-	$500,000	$-	$-	$-	$500,000
2015 Bonds	$-	$250,000	$250,000	$-	$-	$-	$500,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

ROBERT W. GOLDSWORTHY DESALTER EXPANSION

Project Description

This project will expand the capacity of the existing desalting facility located in the City of Torrance and construct two new groundwater wells to extract water from a saline plume in the West Coast Basin. Once completed, the project will provide approximately 2,400 AFY of additional treated groundwater to supplement potable water supplies in the City of Torrance distribution system. Additional measures may be necessary in the future to fully contain and remediate the saline plume, which extends beyond the Torrance area. The District continues to work with stakeholders in the West Coast Basin to determine long term solutions for cleanup of the saline plume.

Funding

This project received a total of $7 million in grant funding, $4 million from Proposition 84 Integrated Regional Water Management (IRWM) 2014 Drought Grant and $3 million from Proposition 50, Round 3 Desalination Grant Program.

Impact of Capital Investment on Operating Budget

The City of Torrance will continue to operate the Robert W. Goldsworthy Desalter.

Prior Year Highlights

The expansion of the Robert W. Goldsworthy Desalter commenced in January 2016 and is scheduled to be completed by August 2017.

Table 40
GOLDSWORTHY DESALTER EXPANSION
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$1,000,000	$-	$-	$-	$-	$-	$1,000,000
Construction	$15,096,100	$8,000,000	$-	$-	$-	$-	$23,096,100
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$16,096,100	$8,000,000	$-	$-	$-	$-	$24,096,100
Grants	$2,166,000	$4,834,000	$-	$-	$-	$-	$7,000,000
2015 Bonds	$13,930,100	$3,166,000	$-	$-	$-	$-	$17,096,100
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

ROBERT W. GOLDSWORTHY DESALTER UPGRADES

Project Description

The Robert W. Goldsworthy Desalter Expansion is scheduled to be completed by August 2017. This project is for elements of the facility that need to be upgraded as a result of the expansion.

Funding

The total Capital Improvement Program budget for Fiscal Years 2018/19 is $500,000.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

The facility expansion is scheduled to be completed by August 2017.

Table 41
GOLDSWORTHY DESALTER UPGRADES
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$500,000	$-	$-	$-	$500,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$500,000	$-	$-	$-	$500,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$-	$-	$-	$-	$-
New Funding	$-	$-	$500,000	$-	$-	$-	$500,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

SAFE DRINKING WATER PROGRAM

(Lynwood, Huntington Park, CA American Water Arlington Well & Maywood No. 2 May Avenue Well)

Project Description

The Safe Drinking Water Program (Program) provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells. The Program offers two options: grant assistance and loan assistance to basin pumpers for wellhead treatment to remove contaminants and improve water quality. The grant assistance program provides treatment for removing groundwater contaminants from man-made sources (e.g. Volatile Organic Compounds). The loan assistance program provides ten-year, zero-interest loans for water treatment to remove or reduce to compliance standards groundwater contaminants from natural sources (e.g. iron, manganese, and arsenic). Since the Program's inception, the District has funded 13 grants, four loans and one demonstration project. This CIP project is intended to cover the costs associated with Grant Funded Projects only.

The District Board recently approved three wellhead treatment system projects for FY 16-17, including Lynwood, Huntington Park, and CA American Water Arlington Well. The wellhead treatment system at all three wells will consist of a complete granular-activated filtration system built within the boundaries of the existing well sites owned and operated by the water systems. Granulated Activated Carbon filtration is a closed system that has long been recognized as an effective means for removing Volatile Organic Compounds (VOCs), including PCE and TCE, from groundwater wells. The treatment systems will have the capacity to treat the full flow of the wells. The three wells are affected by VOCs and qualify for a Priority "A" Treatment Grant which provides District fund for the cost of design and construction. In addition, as part of Assembly Bill No. 240, the District was designated to manage and implement a water quality improvement project in the City of Maywood. The appropriated funds were assigned to the Maywood Avenue Wellhead treatment project for iron and manganese removal and the District will be reimbursed through the appropriated funds. The District will take the lead on procurement and installation of the treatment facilities. However, operation, maintenance and all permits remain the responsibility of the water system.

Funding

For Loan Assistance Projects, the District developed the Safe Drinking Water Program Revolving Loan Fund, which stabilizes funding and expands the loan assistance program's overall use.

Impact of Capital Investment on Operating Budget

By assisting groundwater producers treat contaminated groundwater rather than abandoning the well, the District; 1) helps to clean groundwater contamination, 2) secures an operating revenue stream for the life of the project and 3) assists a producer to become less reliant on expensive imported water supplies.

Prior Year Highlights

The District developed the Safe Drinking Water Program Revitalization Plan to maximize participation in the Program and the Safe Drinking Water Disadvantaged Communities (DAC) Pilot Program, which identifies DAC water systems with contaminated water issues and provides technical assistance.

Table 42

SAFE DRINKING WATER PROGRAM: OVERALL
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$75,000	$150,000	$150,000	$150,000	$525,000
Design	$-	$-	$250,000	$500,000	$500,000	$500,000	$1,750,000
Construction	$-	$-	$1,000,000	$2,000,000	$2,060,000	$2,121,800	$7,181,800
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$1,325,000	$2,650,000	$2,710,000	$2,771,800	$9,456,800
Grants	$-	$-	$-	$-	$-	$-	
2015 Bonds	$-	$-	$-	$-	$-	$-	
New Funding	$-	$-	$1,325,000	$2,650,000	$2,710,000	$2,771,800	$9,456,800
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 43

SAFE DRINKING WATER PROGRAM:
MAYWOOD MUTUAL WATER COMPANY NO. 2 MAY AVENUE WELL
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-						$-
Design	$-	$224,000					$224,000
Construction	$-	$1,500,000					$1,500,000
Post Construction	$-						$-
Total	$-	$1,724,000	$-	$-	$-	$-	$1,724,000
Grants	$-	$1,224,000	$-	$-	$-	$-	$1,224,000
2011 Bonds	$-	$-	$-	$-	$-	$-	
2015 Bonds	$-	$500,000	$-	$-	$-	$-	$500,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 44

SAFE DRINKING WATER PROGRAM: LYNWOOD
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$30,000	$-	$-	$-	$-	$-	$30,000
Design	$-	$125,000	$-	$-	$-	$-	$125,000
Construction	$-	$1,200,000	$-	$-	$-	$-	$1,200,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$30,000	$1,325,000	$-	$-	$-	$-	$1,355,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$30,000	$1,325,000	$-	$-	$-	$-	$1,355,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 45

SAFE DRINKING WATER PROGRAM: HUNTINGTON PARK
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$25,000	$-	$-	$-	$-	$-	$25,000
Design	$-	$100,000	$-	$-	$-	$-	$100,000
Construction	$-	$1,000,000	$-	$-	$-	$-	$1,000,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$25,000	$1,100,000	$-	$-	$-	$-	$1,125,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$1,125,000	$-	$-	$-	$-	$1,125,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 46

SAFE DRINKING WATER PROGRAM: CA AMERICAN WATER ARLINGTON WELL
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$100,000	$-	$-	$-	$-	$100,000
Construction	$-	$1,800,000	$-	$-	$-	$-	$1,800,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$1,900,000	$-	$-	$-	$-	$1,900,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$1,900,000	$-	$-	$-	$-	$1,900,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Facilities Management, Maintenance, & Repair

Projects under this program will provide upkeep and maintenance of the Districts various buildings and facilities, including renovations, reconfigurations of office space, and improvements of other work space needs.

HEADQUARTERS BUILDING IMPROVEMENTS PROJECTS

Project Description

The District headquarters building, located at 4040 Paramount Blvd. in the city of Lakewood, upkeep and maintenance needs are outlined in various phases and projects:

- Phase 1 and Phase 2 of Tenant Improvement Repair: includes the reconfiguration of office space, improvement and renovation of elements, such as walls, carpets, paint, etc. and other work space needs
- The Roof Replacement Project
- The HVAC Improvements Project
- Drought Tolerant Landscape Demonstration Garden Improvement

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 of $182,500 is directly related to Phase 2 of Tenant Improvement Repairs.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

Construction for Phase 1 of Tenant Improvement Repair was completed.

Table 47

HEADQUARTERS BUILDING: PHASE 1 & 2 TENANT IMPROVEMENTS
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$509,450	$182,500	$-	$-	$-	$-	$691,950
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$509,450	$182,500	$-	$-	$-	$-	$691,950
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$509,450	$182,500	$-	$-	$-	$-	$691,950
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 48

HEADQUARTERS BUILDING- ROOF REPLACEMENT PROJECT
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$60,000	$10,000	$-	$-	$70,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$60,000	$10,000	$-	$-	$70,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$60,000	$10,000	$-	$-	$70,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 49

HEADQUARTERS BUILDING- HVAC IMPROVEMENTS PROJECT
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$25,000	$55,000	$-	$-	$80,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$25,000	$55,000	$-	$-	$80,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$25,000	$55,000	$-	$-	$80,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Table 50

HEADQUARTERS BUILDING- DROUGHT TOLERANT LANDSCAPE DEMO
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$-	$-	$-	$15,000	$75,000	$-	$90,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$-	$-	$-	$15,000	$75,000	$-	$90,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$-	$-	$-	$15,000	$75,000	$-	$90,000
New Funding	$-	$-	$-	$-	$-	$-	$-
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

FIELD OPERATIONS AND STORAGE ANNEX FACILITY PROJECT

Project Description

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. The District purchased the property due to its unique proximity to the District and ability to solve WRD's immediate need for additional storage space and future areas for growing inventory of spare and replacement parts for the existing Robert W. Goldsworthy Desalter and Leo J. Vander Lans Advanced Water Treatment Facility. In addition, the Paramount Equipment and Fleet Center can be subdivided and sublet in ways that could offset current off-site lease storage space costs and costs associated with servicing debt linked to the acquisition of the property. The Field Operations and Storage Annex Project will need improvement repairs and renovations.

Funding

The Capital Improvement Program budget for Fiscal Year 2017/18 of $154,000 is directly related to improvement repairs and renovations.

Impact of Capital Investment on Operating Budget

There are no operating impacts at this time.

Prior Year Highlights

The District purchased the property and closed escrow.

Table 51

FIELD OPERATIONS AND STORAGE ANNEX FACILITY PROJECT
Projected 5-year CIP

Project Budget	Prior Year Expenses	FY 17/18 Projected Budget	FY 18/19 Projected Budget	FY 19/20 Projected Budget	FY 20/21 Projected Budget	FY 21/22 Projected Budget	Total CIP Budget
Planning	$-	$-	$-	$-	$-	$-	$-
Design	$-	$-	$-	$-	$-	$-	$-
Construction	$3,944,000	$154,000	$324,000	$900,000	$-	$-	$5,322,000
Post Construction	$-	$-	$-	$-	$-	$-	$-
Total	$3,944,000	$154,000	$324,000	$900,000	$-	$-	$5,322,000
Grants	$-	$-	$-	$-	$-	$-	$-
2015 Bonds	$3,944,000	$100,000	$-	$-	$-	$-	$4,044,000
New Funding	$-	$54,000	$324,000	$900,000	$-	$-	$1,278,000
Project Schedule							
Planning							
Design							
Construction							
Post Construction							

Long-Term Debt

REPLENISHMENT ASSESSMENT REVENUE BONDS, SERIES 2015

With water independence on the horizon, on December 10, 2015 the District issued its $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 (CMFA), 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%, 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) currently prepay the Water Replenishment District of Southern California (WRDSC) Revenue Certificates of Participation, prepay in advance in advance the WRDSC 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:

1. Improvements consisting of the Groundwater Reliability Improvement Program Advanced Water Treatment Facility and water diversion structures;
2. 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; and
6. Improvements related to the Groundwater Infrastructure Management Program

Groundwater Reliability Improvement Program Facility and Diversion Structures. A significant portion of the Project will consist of the construction costs for an advanced water treatment facility (the "Treatment Facility") and complementing diversion structures along the San Gabriel River (the "Turnout Structures") under the WRD's Groundwater Reliability Improvement Program ("GRIP. Following the completion of GRIP facilities, this project will offset the current use of 21,000 acre-feet of imported water by providing a local source of recycled water for groundwater replenishment, as follows:

- The WRD plans to construct the proposed Treatment Facility for advanced treatment of up to 10,000 acre-feet per year of tertiary treated water acquired from the Los Angeles County Sanitation Districts (the "LACSD").
- The WRD also plans to construct the Turnout Structures, which shall be reinforced concrete turnout structures on the existing recycled water pipeline, extending from LACSD's San Jose Creek Water Reclamation Plant ("SJCWRP"). Once completed, the Turnout Structures will allow an approximate delivery of 11,000 acre-feet per year of recycled water to the Montebello Forebay Spreading Grounds for groundwater replenishment.

Goldsworthy Brackish Water Reclamation Program. The Project will remediate brackish groundwater to supplement potable water supplies, which includes the expansion of a desalting facility and construction of new groundwater wells. Once completed, the expansion of the desalting facility, the Goldsworthy Desalter located in the City of Torrance, will provide approximately 2,400 acre-feet per year of additional treated, "remediated" brackish groundwater. The new groundwater wells will extract and remediate brackish groundwater from a saline plume in the West Coast Basin. It is anticipated that the City of Torrance will use the product water from the expansion and new groundwater wells.

Stormwater Conservation and Groundwater Storage Program. The Project will increase the flexibility of water delivery to the spreading grounds and groundwater storage. The WRD plans to capture additional storm water from the San Gabriel River and use it via various recharge mechanisms, such as new percolation or injection facilities within the Montebello Forebay and the Los Angeles Forebay in the Central Basin. The U.S. Army Corps of Engineers ("USACE"), Los Angeles County Flood Control District ("LACFCD") and WRD are working closely to complete an updated Whittier Narrows Conservation Pool Feasibility Study to allow for a permanent change to the operating plan to raise the maximum conservation pool elevation at the Whittier Narrows Dam and allow for an estimated additional 1,100 acre-feet per year of storm water conservation. The elevation increase does not require capital improvements,

however, it does need USACE approval and updates to various studies and environmental documents related to dam operations at an increased conservation pool elevation. To further augment groundwater storage, opportunities exist to construct a new satellite advanced water treatment facility to produce high quality recycled water for injection into the Los Angeles Forebay. In the West Coast Basin, WRD will develop new injection facilities to increase replenishment opportunities.

Groundwater Basin Management Program. The Project will drill new monitoring wells and install flow meter devices in order to continue expanding the Regional Groundwater Monitoring Program ("RGMP"). The RGMP collects groundwater level and groundwater quality data used for groundwater basin management for the Central Basin and West Coast Basin, two of the most utilized urban groundwater basins in the United States. 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 WRD 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 collected 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 Project shall include the capital costs of the construction of new monitoring wells (for regional monitoring and contamination investigations) and data collection equipment, all in furtherance of the RGMP.

Safe Drinking Water Program. The Project will continue and expand the Safe Drinking Water Program (the "Program") to construct wellhead treatment facilities to remove contaminants and improve water quality. The Program provides incentives to groundwater producers to pump and treat contaminated groundwater rather than abandoning affected wells. The Program offers two options, grant assistance and loan assistance. The grant assistance program provides treatment for removing groundwater contaminants from man-made sources (e.g., Volatile Organic Compounds). The loan assistance program provides ten-year, zero-interest loans for water treatment, and removing unacceptable levels of contaminants from natural sources (e.g. iron, manganese, and arsenic). Since the Program's inception, the District has funded 13 grants, four loans and one demonstration project. The WRD developed the Safe Drinking Water Program Revolving Loan Fund, which stabilizes funding and expands the loan assistance program's overall use. The costs of wellhead treatment facilities are prohibitive to most pumpers, specifically those serving disadvantaged communities. Accordingly, the WRD developed the Safe Drinking Water Disadvantaged Communities Pilot Program to expand the grant assistance option and maximize participation in the program.

Groundwater Infrastructure Management Program. The Project is expected to include capital improvements that will develop programs and plans to manage all of WRD's assets, data and databases and develop a standardized control system for all respective operating facilities, resulting in reduced long-term maintenance and operating costs. A centralized information system, such as the development and implementation of a computerized maintenance management system ("CMMS") and Supervisory Control and Data Acquisition ("SCADA") system is needed to centralize existing databases and progress District operations. The WRD Centralized Information System Project is intended to fully integrate WRD's Finance, Asset Management, CMMS, SCADA, and other systems and process databases into a single centralized system. The Project shall include capital costs of implementing various components of the Centralized Information System Project, in an amount of approximately $500,000.

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 (CWSRF). The savings will amount to nearly $47,000,000 to the District's customers when compared to a 30-year Replenishment Assessment Revenue Bond 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 Series Water Revenue Bonds and funding through the Clean Water State Revolving Fund is as follows:

Table 52
IMPACT OF DEBT SERVICE

	2018/19	2019/20	2020/21	2021/22	2022/23
2015 Water Revenue Bonds	$9.247M	$9.249M	$9.248M	$9.250M	$9.250M
CW State Revolving Fund	3.720M	3.720M	3.720M	3.720M	3.720M
Total	**$12.967M**	**$12.969M**	**$12.968M**	**$12.970M**	**$12.970M**
Projected Production (in acre-feet)	217,300	221,000	224,000	228,000	228,000
Impact to Assessment (per acre-foot)	**$59.67**	**$58.67**	**$57.89**	**$56.87**	**$56.87**

The offset to these capital costs will be replacing 21,000 acre-feet of imported replenishment water with additional use of recycled water, greater storm water capture and the production of highly treated recycled water. The 2018/19 cost of imported spreading water is $822.37/acre-foot saving about $17.27 million per year. Cost savings will be immediate and the value of the investment in capital assets only increases over time as the cost for imported water continues to climb steadily each year. We anticipate imported water rates for the types of water that the District purchases to increase about 8.0% each year, on average when comparing water rates over the past 30 years.

DEBT CEILING

There is currently no debt limit or ceiling documented in the California State Water Code for the WRD. The costs associated with the Capital Improvement Program projects will be primarily funded through long term debt.

Table 53

CLEAN WATER REVOLVING FUND

Future Debt Service Payments are as follows:

Fiscal Year	Principal	Interest	Total
2018	3,069,157	30,692	3,099,849
2019	3,069,157	30,692	3,099,849
2020	3,069,157	30,692	3,099,849
2021	3,069,157	30,692	3,099,849
2022	3,069,157	30,692	3,099,849
2023	3,069,157	30,692	3,099,849
2024	3,069,157	30,692	3,099,849
2025	3,069,157	30,692	3,099,849
2026	3,069,157	30,692	3,099,849
2027	3,069,157	30,692	3,099,849
2028	3,069,157	30,692	3,099,849
2029	3,069,157	30,692	3,099,849
2030	3,069,157	30,692	3,099,849
2031	3,069,157	30,692	3,099,849
2032	3,069,157	30,692	3,099,849
2033	3,069,157	30,692	3,099,849
2034	3,069,157	30,692	3,099,849
2035	3,069,157	30,692	3,099,849
2036	3,069,157	30,692	3,099,849
2037	3,069,157	30,692	3,099,849
2038	3,069,157	30,692	3,099,849
2039	3,069,157	30,692	3,099,849
2040	3,069,157	30,692	3,099,849
2041	3,069,157	30,692	3,099,849
2042	3,069,157	30,692	3,099,849
2043	3,069,157	30,692	3,099,849
2044	3,069,157	30,692	3,099,849
2045	3,069,157	30,692	3,099,849
2045	3,069,157	30,692	3,099,849
	$85,936,410	**$859,364**	**$86,795,774**

Table 54

REPLENISHMENT ASSESSMENT REVENUE BONDS, SERIES 2015

Future Debt Service Payments are as follows:

Fiscal Year	Principal	Interest	Total
2017	2,350,000	6,944,700	9,294,700
2018	2,445,000	6,850,700	9,295,700
2019	2,560,000	6,752,900	9,312,900
2020	2,690,000	6,624,900	9,314,900
2021	2,830,000	6,490,400	9,320,400
2022	2,975,000	6,348,900	9,323,900
2023	3,125,000	6,200,150	9,325,150
2024	3,285,000	6,043,900	9,328,900
2025	3,455,000	5,879,650	9,334,650
2026	3,630,000	5,706,900	9,336,900
2027	3,815,000	5,525,400	9,340,400
2028	4,015,000	5,334,650	9,349,650
2029	4,220,000	5,133,900	9,353,900
2030	4,435,000	4,922,900	9,357,900
2031	4,660,000	4,701,150	9,361,150
2032	4,900,000	4,468,150	9,368,150
2033	5,155,000	4,223,150	9,378,150
2034	5,415,000	3,965,400	9,380,400
2035	5,695,000	3,694,650	9,389,650
2036	5,985,000	3,409,900	9,394,900
2037	6,295,000	3,110,650	9,405,650
2038	6,615,000	2,795,900	9,410,900
2039	6,955,000	2,465,150	9,420,150
2040	7,315,000	2,117,400	9,432,400
2041	7,685,000	1,751,650	9,436,650
2042	8,040,000	1,367,400	9,407,400
2043	8,370,000	1,045,800	9,415,800
2044	8,710,000	711,000	9,421,000
2045	9,065,000	362,600	9,427,600
	$146,690,000	**$124,949,900**	**$271,639,900**

Replenishment Projects & Programs

Rio Hondo Spreading Grounds in Pico Rivera, California

The projects and programs identified under Replenishment Projects and Programs are ones that have been developed with the main purpose of producing an alternative source of water for the District's replenishment program.

Replenishment Projects and Programs

WATER PURCHASES

Annually, the District faces overdraft because more groundwater is pumped out of the basins than is naturally replaced. Therefore, the District purchases replenishment water from external sources (artificial replenishment water) to help make up the overdraft. The artificial replenishment water enters the basins either by percolation into the underground aquifers at the Montebello Forebay spreading grounds (Rio Hondo, San Gabriel River, and Whittier Narrows Reservoir), or through direct injection into the aquifers at the West Coast Basin, Dominguez Gap, and Alamitos seawater barrier projects.

The District currently has available to it recycled and imported water sources for use as artificial replenishment water. These two sources are described below:

Recycled Water:

Recycled water is sewer water that is treated at local wastewater treatment plants to meet high quality standards so that it can be reused as a valuable water resource instead of being wasted to the ocean. Other agencies use recycled water to irrigate parks, golf courses, plants and crops, or for industrial purposes. WRD and numerous other agencies also use recycled water for groundwater recharge. In semi-arid areas such as Southern California where groundwater and imported water are in short supply, recycled water has proven to be a safe and reliable additional resource to supplement the water supply. Recycled water is used at the spreading grounds after undergoing tertiary treatment and also at the seawater barrier wells after tertiary and additional treatment by microfiltration, reverse osmosis, and in some cases ultraviolet light.

Imported Water:

This source originates from Northern California (State Water Projects) and the Colorado River and is brought to the District by the MWD of Southern California. Raw imported water is used at the spreading grounds for aquifer replenishment. Treated imported water is used at the seawater intrusion barriers and for in-lieu replenishment when available. Because of treatment and transportation costs, it is the most expensive source for recharge water. The supply is under full upstream control, and its availability at the spreading grounds is limited and variable, especially during drought years.

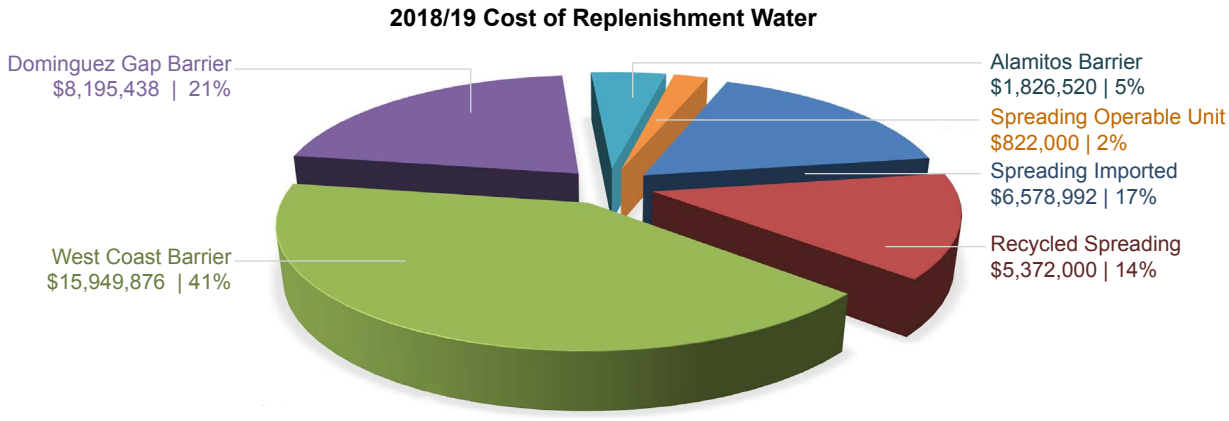


Figure 19 – 2018/19 Cost of Replenishment Water

RECOMMENDED QUANTITIES OF REPLENISHMENT WATER

WRD estimates its projected need for artificial replenishment water by calculating the annual amount of water shortage (overdraft) that is expected to occur. Details of these calculations are presented in the annual Engineering Survey and Report. The artificial replenishment water is placed into the groundwater basin at the spreading grounds or seawater barrier injection wells using recycled and imported water.

Table 55

Cost of Replenishment Water for Fiscal Year 2018/19

EXPENSE CATEGORY	2017/18 Budget	2018/19 Budget	Increase (Decrease) Over Prior Year
IMPORTED WATER			
Spreading - Tier 1 Untreated Imported			
MWD Untreated Tier 1 - Spreading	$5,504,000	$5,768,000	$264,000
MWD RTS Charge	$264,000	$177,000	$(87,000)
CBMWD Administrative Surcharge	$560,000	$560,000	$-
CBMWD Water Service Charge	$75,000	$74,000	$(1,000)
Total Spreading - Tier 1 Untreated Imported	**$6,403,000**	**$6,579,000**	**$176,000**
Alamitos Barrier - Imported			
MWD Treated Tier 1 - Alamitos Barrier	$1,630,000	$1,580,000	$(50,000)
MWD Capacity Charge	$56,000	$41,000	$(15,000)
LBWD RTS	$198,000	$198,000	$-
LBWD Administrative Surcharge	$8,000	$8,000	$-
Total Alamitos Barrier - Imported	**$1,892,000**	**$1,827,000**	**$(65,000)**
Dominguez Barrier - Imported			
MWD Tier 1 - Barriers	$887,000	$-	$(887,000)
MWD RTS Charge	$42,000	$-	$(42,000)
WBMWD Capacity Charge	$111,000	$112,000	$1,000
WBMWD Administrative Surcharge	$88,000	$-	$(88,000)
WBMWD Water Service Charge	$38,000	$38,000	$-
Total Dominguez Barrier - Imported	**$1,166,000**	**$150,000**	**$(1,016,000)**
West Coast Barrier - Imported			
MWD Tier 1 - Barriers	$1,648,000	$-	$(1,648,000)
MWD RTS Charge	$77,000	$-	$(77,000)
WBMWD Capacity Charge	$207,000	$208,000	$1,000
WBMWD Administrative Surcharge	$163,000	$-	$(163,000)
WBMWD Water Service Charge	$70,000	$70,000	$-
Total West Coast Barrier - Imported	**$2,165,000**	**$278,000**	**$(1,887,000)**
In-lieu			
MWD Member Agency	No IL Program	No IL Program	$-
WBMWD Member Agency	No IL Program	No IL Program	$-
Total for In-lieu Payments	**$-**	**$-**	**$-**
RECYCLED WATER			
Dominguez Barrier - Recycled			
LADWP Recycled Water	$6,725,000	$8,128,000	$1,403,000
Total Dominguez Barrier - Recycled	**$6,725,000**	**$8,128,000**	**$1,403,000**
Spreading - Recycled			
SDLAC - Tertiary Water (WN, SJC, Pomona)	$7,774,000	$5,372,000	$(2,402,000)
Total Spreading - Recycled	**$7,774,000**	**$5,372,000**	**$(2,402,000)**
Spreading-Whittier Narrows Operable Unit			
MSGBWM	$-	$822,000	$(822,000)
Total Spreading - WN Operable Unit	**$-**	**$822,000**	**$(822,000)**
West Coast Barrier - Recycled			
WBMWD Recycled Water	$13,204,000	$15,589,000	$2,385,000
Total West Coast Barrier - Recycled	**$13,204,000**	**$15,589,000**	**$2,385,000**
Alamitos Recycled - WRD			
WRD Recycled Water - Vander Lans	$408,000	$-	$(408,000)
Total Alamitos Recycled - WRD	**$408,000**	**$-**	**$(408,000)**
Total Water Purchases	**$39,737,000**	**$38,745,000**	**$(992,000)**

ACRONYMS:

CBMWD
Central Basin Municipal Water District

LBWD
Long Beach Water Department

LADWP
Los Angeles Department of Water and Power

MWD
Metropolitan Water District of Southern California

RTS
Readiness-to-Serve

SDLAC
Sanitation Districts of Los Angeles County

SJC
San Jose Creek

WBMWD
West Basin Municipal Water District

WN
Whittier Narrows

WRD
Water Replenishment District of Southern California

WRP
Water Reclamation Plant

Table 56

QUANTITY OF WATER PURCHASES IN ACRE-FEET FOR FISCAL YEAR 2018/19

EXPENSE CATEGORY	201718 Budget	2018/19 Budget	Increase (Decrease) Over Prior Year
BY ACRE FEET			
Imported Water:			
Spreading Imported	8,000	8,000	-
West Coast Barrier Imported	1,720	-	(1,720)
Dominguez Gap Imported	800	-	(800)
Alamitos Imported	1,620	1,500	(120)
In Lieu - MWD Member Agency	-	-	-
In Lieu - West Basin Customer	-	-	-
Recycled Water:			
Spreading Recycled (SJC & WN & Pomona)	63,000	56,000	(7,000)
Spreading Recycled (RC AWTF)	-	7,000	7,000
Spreading (Whittier Narrows Operable Unit)	-	1,000	1,000
West Coast Barrier Recycle	15,480	17,000	1,520
Dominguez Gap Recycled	7,200	8,000	800
Alamitos Recycled	3,780	2,500	(1,280)
Total Water Purchases	**101,600**	**101,000**	**(600)**

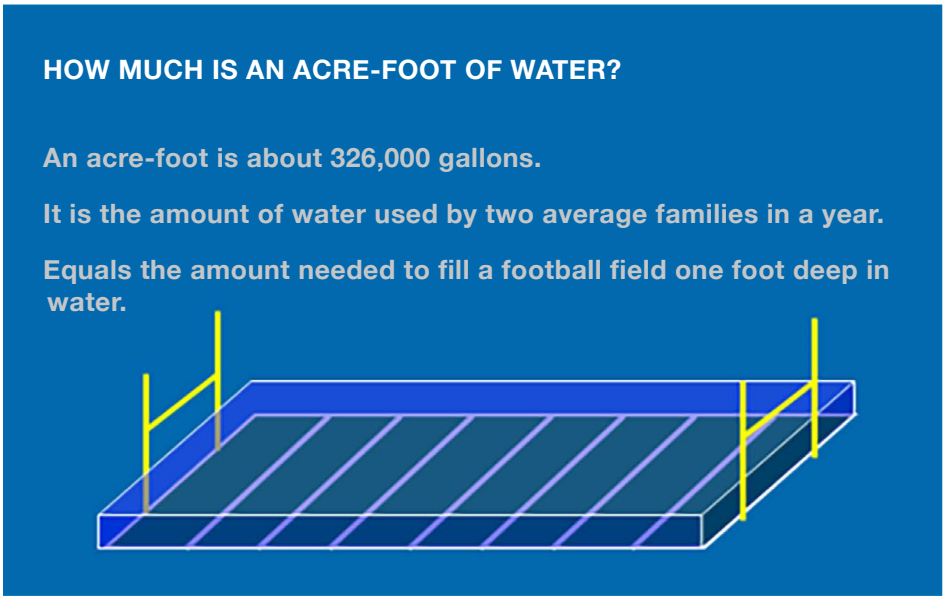


Figure 20 - Definition of Acre-Foot

PROJECT 001 LEO J. VANDER LANS WATER TREATMENT FACILITY – WATER SUPPLY

Background

This facility provides advanced treatment to recycled water through a process train that includes microfiltration (MF), reverse-osmosis (RO), and advanced oxidation (AOP) using hydrogen peroxide and ultraviolet (UV) light. The product water from this facility replaces the imported water that used to supply the Alamitos Seawater Intrusion Barrier, thereby improving the reliability and quality of supply to the barrier.

The Long Beach Water Department (LBWD) operates and maintains the treatment plant under contract with WRD. Expected costs for this budget year are primarily for the expenses of operation and maintenance of the plant and for groundwater monitoring requirements from the permit.

Because the primary purpose of this project is to provide a more reliable means of replenishing the basin through injection, 100% of the costs are considered to be drawn from the Replenishment Fund.

2017/18 Accomplishments

- Completed they hydraulic modeling operational efficiency study evaluating optimized operating strategies and increasing influent flow and reliability.
- Continued to operate and optimize facility operations and comply with regulatory requirements for monitoring and compliance.
- Continued to conduct recycled water testing to ensure satisfaction of water quality criteria for barrier injection.

2018/19 Objectives

- Based on the completed hydraulic modeling and operational efficiency study, design and construct a Recycled Water Interconnect Pipeline Project with the Cities of Cerritos and Long Beach to wheel recycled water from the Los Coyotes Wastewater Treatment Plant to the LVL Advanced Water Treatment Facility.
- Develop an Inland Injection Wellfield Storage Project with the City of Long Beach to store LVL Advanced Treated Recycled Water into the Central Basin.
- Renegotiate the existing operations agreement and develop two new agreements for water purchase and operations with the City of Long Beach.
- Continue work to optimize LVL AWTF operations, and comply with regulatory requirements for monitoring and compliance.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Additional costs for materials and equipment due to operational issues being addressed with more production expected in FY2018/19.

Table 57
Project 001 - WATER SUPPLY
Vander Lans Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Adopted Budget	18/19 Budget compared to 17/18 Projection
Professional Services	2,303,000	2,528,000	225,000
R&M / Materials / Equipment	1,204,000	2,678,000	1,474,000
Other Expenses	95,000	352,000	257,000
Other General & Administrative	288,000	221,000	(67,000)
Total	**$3,890,000**	**$5,799,000**	**$1,889,000**

Table 58A
LEO J. VANDER LANS ADVANCE WATER TREATMENT FACILITY – WATER SUPPLY
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Maximize recycled water injection at the Alamitos Barrier.				Obtain Independence from Imported Water Sources
MEASURE: AF Measurement	Planned	Planned	Planned	
2. GOAL: Comply with regulatory requirements for monitoring and compliance.				Provide Safe and Reliable Groundwater
MEASURE: Submit quarterly and annual compliance reports to RWQCB to satisfy permit compliance requirements	Planned	Planned	Planned	
3. GOAL: Conduct recycled water testing to ensure satisfaction of water quality criteria for the County of Los Angeles Department of Public Works.				Provide Safe and Reliable Groundwater
MEASURE: Submit monthly Alamitos Barrier Injection Water Quality Reports that satisfy LADPW's water quality standards	Yes	Yes	Yes	
4. **GOAL:** Operation and Maintenance of the plant with increased recycled water production.				Obtain Independence from Imported Water Sources
MEASURE: Annual Water Production by AF	2122	1935	1970	

Table 58B

LEO J. VANDER LANS ADVANCE WATER TREATMENT FACILITY – WATER SUPPLY
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
5. GOAL: Provide alternative studies to optimize and stabilize the operation of the facility..				Obtain Independence from Imported Water Sources
MEASURE: Technical Support services to optimize operation efficiency	Yes	Yes	Yes	
Perform investigation to troubleshoot issues encountered with the facility operations	Yes	Yes	Yes	
Provide training to District's facility operators to develop standard procedures of operations.	Yes	Yes	Yes	
6. GOAL: Resolve several issues/challenges that have occurred during the first few months of operations.				Obtain Independence from Imported Water Sources
MEASURE: Increase the recycled water injection flow rates to close to 100% while allowing a small portion of imported water to flow in order to avoid MWD'S low-flow penalties.	N/A	Continue to develop strategies to increase plant production	Continued	
Optimize operational and flow equalization strategies to allow consistent and stable 24/7 operations with minimum shutdowns	Continue to optimize plant operations	Continue to optimize plant operations	Continued	
7. GOAL: Construction of the Cerritos Interconnect				
MEASURE: Construct a pipeline from the Long Beach Recycled Water System to the Cerritos Recycled Water System to wheel part of WRD's Los Coyotes WRP recycled water allocation	N/A	N/A	In progress	

PROJECT 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 we just encountered with record-low rainfalls and increasing uncertainty in the future 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 groundwater replenishment sources.

WRD participates in a variety of activities to ensure that the use of recycled water for groundwater recharge purposes continues to remain safe. From an operational standpoint, the District will continue to fulfill groundwater monitoring as required by the 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 spreading grounds, WRD, in conjunction with other agencies, participates in research efforts to more fully investigate the effectiveness of soil aquifer treatment during percolation. These studies are partially sponsored by the WateReuse Foundation and the American Water Works Association Research Foundation (AWWARF). The overall objectives are to characterize the percolation process and quantify the purifying properties of the underlying soil on constituents of concern such as nitrogen, total organic compounds (TOC), biodegradable dissolved organic carbon (BDOC), and emerging contaminants, such as pharmaceuticals, endocrine disrupters, and personal care products. For the upcoming year, a research project with the Colorado School of Mines will look at the blending of different qualities of recycled water (tertiary and fully advanced treated) and the impacts, if any, on soil aquifer treatment.

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 upcoming Albert Robles Center (ARC) and Montebello Forebay recharge project.

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.

2017/18 Accomplishments

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

- Updated the Compliance Assessment Report (CAR) for the Montebello Forebay tertiary spreading project after receiving comments from Division of Drinking Water.
- Initiated the research project on using recycled water blends to test their impacts on receiving groundwater and soil aquifer treatment with Colorado School of Mines.

2018/19 Objectives

- 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, until permit amendment is obtained with modifications to this sampling plan.
- Continue to facilitate the ongoing dialogue between the Sanitation Districts of Los Angeles County and the Division of Drinking Water to help increase the amount of recycled water from the San Jose Creek Water Reclamation Plant (East and West) conveyed to the spreading grounds.
- Continue to develop use of Los Coyotes water reclamation plant water, either directly or as an offset trade with Central Basin MWD to receive their water rights for ARC.
- Collaborate with other agencies and organizations on research investigations of percolation of recycled water, including research project on using recycled water blends to test their impacts on receiving groundwater and soil aquifer treatment with Colorado School of Mines.
- Update the work plan to the Compliance Assessment Report (CAR) and initiate work on the updated Title 22 Engineering Report for the Montebello Forebay tertiary water recharge project.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Professional services increased due to consultant for new the Montebello Forebay permit. Additional staff labor costs have also been allocated to this program for FY2018/19.

Table 59
Project 004 - MONTEBELLO FOREBAY
Recycled Water Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Adopted Budget	18/19 Budget compared to 17/18 Projection
Professional Services	387,000	452,000	65,000
R&M / Materials / Equipment	26,000	24,000	(2,000)
Other Expenses	35,000	67,000	32,000
Other General & Administrative	211,000	323,000	112,000
Total	**$659,000**	**$866,000**	**$207,000**

Table 60

MONTEBELLO FOREBAY RECYCLED WATER
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Continue to comply with water recycling permit requirements for the Montebello Forebay Spreading Grounds				Provide Safe and Reliable Groundwater
MEASURE: Complied with the water recycling permit requirements for the Montebello Forebay Spreading Grounds	Yes	Yes	Yes	
2. GOAL: Continue to facilitate the ongoing dialogue between the Sanitation Districts of Los Angeles County and the Division of Drinking Water to help increase the amount of recycled water from the San Jose Creek Water Reclamation Plant (East and West) conveyed to the spreading grounds				Provide Safe and Reliable Groundwater
MEASURE: Continued facilitation	Yes	Yes	Yes	
3. GOAL: Continue to develop use of Los Coyotes water reclamation plant water, either directly or as an offset trade with Central Basin MWD to receive their water rights for ARC.				Provide Safe and Reliable Groundwater
MEASURE: Meet with CBMWD on water transfers	N/A	N/A	N/A	
4. GOAL: Collaborate with other agencies and organizations on research investigations of percolation of recycled water, including research project on using recycled water blends to test their impacts on receiving groundwater and soil aquifer treatment with Colorado School of Mines.				Provide Safe and Reliable Groundwater
MEASURE: Complete CSM Research Project	N/A	Yes	Yes	
5. GOAL: Update the work plan to the Compliance Assessment Report (CAR) and initiate work on the updated Title 22 Engineering Report for the Montebello Forebay tertiary water recharge project.				Provide Safe and Reliable Groundwater
MEASURE: Complete CAR update for DDW and RWQCB	Yes	Yes	Yes	

PROJECT 005 GROUNDWATER RESOURCE PLANNING

Background

The Groundwater Resources Planning Program was instituted to evaluate basin management issues and to provide a means of assessing project impacts over the Central and West Coast Groundwater Basins. Prior to moving forward with a new project, an extensive evaluation is undertaken. Within the Groundwater Resources Planning Program, new projects and programs are analyzed based on benefits to overall basin management. This analysis 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 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 groundwater storage programs. Meanwhile, the District will also 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 District staff.

During the coming year, work under this program will continue to focus on storage issues, operational alternatives for the Central and West Coast basins, and implementation of the District's Water Independence Now, or WIN program. The WIN program seeks to replace the District's imported water demands at the three seawater intrusion barriers and spreading grounds with locally available recycled water sources.

The District will continue to evaluate projects identified in the CIP. Specifically, funds have been allocated to perform an in-depth evaluation of projects in order to make them more competitive for grant funding opportunities.

District staff will continue to monitor and participate in the Greater Los Angeles Integrated Regional Water Management Plan (GLAC IRWMP). The District serves as the co-chair for the GLAC IRWM Lower Los Angeles and San Gabriel Rivers Subcommittee. The District also coordinates the subregion meetings and manages the outreach to subregion members. Participation in this process is necessary if the District wishes to secure grant funding under Proposition 84, Proposition 1, and other state grant funding opportunities. District staff will also continue to monitor other 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 Fund.

2017/18 Accomplishments

- Received $4.3 grant from the U.S. Bureau of Reclamation Title XVI Water Recycling funding program for ARC.
- Received $700,000 from Prop 1 Water Desalination Grant Program for the West Coast Basin Brackish Water Reclamation Feasibility Study.

- Hosted an informational workshop regarding water rights management for basin stakeholders.
- Developed agendas and provided background information for Technical Advisory Committee meetings, including the Five-Year Capital Improvement Program with detailed project summary information and economic analyses.
- 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.

2018/19 Objectives

- Identify and initiate studies that arise as a result of the development of the Groundwater Basins Master Plan, specifically maximizing the utilization of the Montebello Forebay.
- Review and update the District's Fiver-Year Capital Improvement Program.
- Continue to attend meetings of the Central and West Basin Water Associations to keep them apprised of ongoing district activities.
- Monitor local, State and Federal grant funding opportunities and assess applicability to District projects.
- Continue managing grant funding received by the District.
- Continue participation in GLAC IRWM and continued participation as the co-chair of the GLAC IRWM Lower Los Angeles and San Gabriel Rivers Subcommittee.
- Continue to monitor other water agencies and assess the impact of their actions on WRD.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Professional services increased due to consultant for the new Montebello Forebay permit.

Table 61
Project 005 - GROUNDWATER RESOURCE PLANNING
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	203,000	196,000	(7,000)
R&M / Materials / Equipment	-	-	-
Other Expenses	22,000	20,000	(2,000)
Other General & Administrative	92,000	52,000	(40,000)
Total	**$317,000**	**$268,000**	**$(49,000)**

Table 62

GROUNDWATER RESOURCE PLANNING
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Identify and Initiate studies that arise as a result of the development of the Groundwater Basins Master Plan **MEASURE:** Proposed capital improvement projects in categories to the needs of the basins	7	7	Under revision	Obtain Independence from Imported Water Sources
2. GOAL: # of Capital Projects reviewed and updated in the District's 5-year capital improvement program **MEASURE:** WRD's 5-year capital improvement program reviewed, updated and approved by BOD	29	32	Under revision	Provide Safe and Reliable Groundwater and Obtain Independence from Imported Water Sources
3. GOAL: Continue participation in GLAC IRWM Planning Process for Greater Los Angeles Region **MEASURE:** Participation in the Greater Los Angeles IRWM Planning Process (GLAC IRWM)	Yes	Yes	On-going	Provide Safe and Reliable Groundwater
4. GOAL: Monitor local, State and Federal grant and other funding opportunities and assess applicability to District projects. **MEASURE:** Total of Funding Opportunities awarded	$213M	$229M	$222M	Provide Safe and Reliable Groundwater
5. GOAL: Continue to evaluate District projects in order to make them more competitive for future grant funding opportunities. (e.g., monitoring / assessing potential grant funding opportunities) **MEASURE:** WRD's grant funding evaluation opportunities	3 DWR Prop 1	4 DWR Prop 1 Grants, 1 USBR Water Smart	2 DWR Prop 1 1 MWD LRP	Provide Safe and Reliable Groundwater
6. GOAL: Continue to attend meetings of the Central and West Basin Water Associations to keep them appraised of ongoing District activities **MEASURE:** Central and West Basin Water Associations meeting attended	24	24	24	Promote Organizational Excellence
7. GOAL: Continue to monitor other water agencies and assess the impact of their actions on WRD **MEASURE:** Number of other water agencies assessed	5	5	5	Provide Safe and Reliable Groundwater

PROJECT 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 10.0 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.

2017/18 Accomplishments

- Received regulatory approval to produce and delivery 100% recycled water to the Dominguez Gap Barrier.
- Participated in regular meetings with LABOS, LADWP, and LACDPW to measure treatment plant upgrade progress and draft a new agreement between parties.
- Continued to prepare groundwater compliance monitoring reports to provide to project permittees LADWP, LABOS, and LACDPW.
- Continued to conduct groundwater monitoring in accordance with the permit requirements.

2018/19 Objectives

- Continue to conduct groundwater monitoring and modeling as necessary in accordance with new permit requirements.
- Finalize water purchase agreement with LADWP.
- Continue to provide groundwater compliance monitoring data to project permittees LADWP, LABOS, and LACDPW.

- Finalize recycled water use agreement with LACDPW.
- Finalize four party MOU for the Dominguez Gap Barrier Project between LACDPW, LADWP, LABOS and WRD.
- Finalize construction agreement for Second Gap Connection Project. Construction is anticipated to begin in 2019.
- Finalize construction agreement for Potable Backup Project.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Increased in staff labor costs.

Table 63

Project 018 - Dominguez Gap Barrier
Recycled Water Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	88,000	100,000	12,000
R&M / Materials / Equipment	15,000	18,000	3,000
Other Expenses	9,000	11,000	2,000
Other General & Administrative	67,000	269,000	202,000
Total	**$179,000**	**$398,000**	**$219,000**

Table 64

DOMINGUEZ GAP BARRIER RECYCLED WATER PROJECT
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Prepare compliance monitoring reports and coordinate reporting reporting/compliance for submittal to permittees (LADWP, LABOS, & LACDPW) to ensure all regulatory permit requirements and deadlines are met.				Obtain Independence from Imported Water Sources
MEASURE % of regulatory permit requirements and deadlines met	100%	100%	100%	
2. GOAL: Conduct groundwater monitoring/sampling in accordance with the new permit requirements				Obtain Independence from Imported Water Sources
MEASURE: In compliance with permit requirements (Yes/No)	Yes	Yes	Yes	

PROJECT 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.

2017/18 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 Expansion, 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) Expansion to provide increased recycled water to the Dominguez Gap Barrier.
- Continued participating in bimonthly meetings with replenishment agencies to maximize groundwater recharge opportunities.
- Continued to evaluate new potential replenishment opportunities (e.g., replenishment water sources, spreading grounds improvements).
- Presented monthly updates to the WRD Water Resources Committee.

2018/19 Objectives

- Work with United States Geological Survey (USGS), United States Army, Corps of Engineers (COE), LACDPW, San Gabriel River Watermaster (SGRWM), and other applicable agencies/stakeholders on enhancement/upgrade of existing surface water gaging stations.
- Work with the LACDPW on the West Coast Barrier expansion project.
- 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 Montebello Forebay Recharge Enhancement Study (MFRES).
- Continue working cooperatively with the LADWP, LABOS, and LACDPW on the TITP Expansion to provide increased recycled water to the Dominguez Gap Barrier.
- Continue working cooperatively with the LACDPW, OCWD, LACSD, and LBWD on the LVL Plant Expansion, OCWD Barrier Expansion, and LBWTP Multi-year Maintenance Project 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).
- Continue to provide monthly updates to the WRD Water Resources Committee.

Basis for Changes 2017/18 Projected to 2018/19 Budget

No significant changes noted

Table 65
Project 023 - Replenishment Operations
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	82,000	102,000	20,000
R&M / Materials / Equipment	27,000	24,000	(3,000)
Other Expenses	44,000	48,000	4,000
Other General & Administrative	148,000	178,000	30,000
Total	**$301,000**	**$352,000**	**$51,000**

Table 66A

REPLENISHMENT OPERATIONS
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Continue working cooperatively with the LADWP, LABOS, and LACDPW on the Terminal Island Treatment Plant Expansion to provide increased recycled water to the Dominguez Gap Barrier **MEASURE:** Recycled water increased to the Dominguez Gap Barrier	4,800 AF	Maximized Recycled Water in light of TITP start-up and barrier shutdowns	8,000 AF	Provide Safe and Reliable Groundwater 100% Recycled Water
2. GOAL: Continue monitoring groundwater levels at the Rio Hondo and San Gabriel River Spreading Grounds **MEASURE:** Continued monitoring groundwater levels at the Rio Hondo and San Gabriel River Spreading Grounds	Yes	Yes	Ongoing; Quarterly Sampling	Provide Safe and Reliable Groundwater, Monitor Water Levels
3. GOAL: Continue participating in bimonthly meetings with replenishment agencies to maximize groundwater recharge opportunities **MEASURE:** Participation in bimonthly meetings	Yes	Yes	Ongoing; Bimonthly Meetings	Provide Safe and Reliable Groundwater, Maximize Recharge Opportunities
4. GOAL: Continue to evaluate new potential replenishment opportunities (e.g., replenishment water sources, spreading grounds improvements) **MEASURE:** # of successful new potential replenishment opportunities	N/A	Maximize	Continue Evaluating	Provide Safe and Reliable Groundwater, Continued Development of Replenishment Opportunities
5. GOAL: Complete the Montebello Forebay Recharge Enhancement Study (MFRES) and the spreading grounds operational model to simulate operations of the Montebello Forebay spreading grounds **MEASURE:** % completion GW Flow Model Conversion and Project Documentation	100%	Completed	MFRES Follow-up	Provide Safe and Reliable Groundwater, Evaluate Additional Opportunities to Expand the MFRES Work

Table 66B

REPLENISHMENT OPERATIONS
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
6. GOAL: Testing of Interconnection Pipeline between San Gabriel Coastal Spreading Grounds and Rio Hondo Coastal Spreading Grounds **MEASURE:** Pumps tested for minimum of five (5) consecutive days	N/A	Planned	Interconnection Pipeline (ICP) Improvements	Provide Safe and Reliable Groundwater, Evaluate Additional Opportunities to Expand the ICP Usage.
7. 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 **MEASURE:** Recycled water increased to the Alamitos Gap Barrier	4,240 AF	Maximized Recycled Water in light of LVL start-up and LBWTP shutdowns	Interconnection Pipeline (ICP) Improvements	Provide Safe and Reliable Groundwater, Maximize Recycled Water usage with the LBWTP 6-7 month shutdown
8. 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 **MEASURE:** Recycled water increased to the West Coast Barrier	17,000 AF	Maximized Recycled Water	17,000 AF	Provide Safe and Reliable Groundwater, 100% Recycled Water, New Barrier Wells
9. GOAL: Continue working cooperatively with the LACDPW and LACSD on the Montebello Forebay Spreading Grounds to provide increased recycled water. Goal is 63,000 including 56,000 tertiary and 7,000 ARC water for its first year. **MEASURE:** Recycled water increased recycled water to the Spreading Grounds	55,000 AF	Target 63000 AF	63,000 AF	Provide Safe and Reliable Groundwater, Maximize Recycled Water Usage and Opportunities at Montebello Forebay Spreading Grounds

PROJECT 033 ALBERT ROBLES CENTER FOR WATER RECYCLING AND ENVIRONMENTAL LEARNING (ARC)

Background

The Water Replenishment District of Southern California (WRD), which serves approximately 4 million people in 43 cities, currently replenishes the Central and West Coast Basins with over 95,000 acre-feet per year of water. Approximately 64,000 acre-feet of this total is met using recycled water with another 21,000 acre-feet of water being imported into the basin. The future availability of this imported water is uncertain. Given the prolonged statewide drought and uncertain future of imported water supplies for Southern California, WRD is in the process of implementing the District's Water Independence Now, or the WIN program. The WIN program seeks to replace the District's imported water demands at the three seawater intrusion barriers and spreading grounds with locally available recycled water sources.

A corner stone of the WIN program is the Albert Robles Center (ARC), previously Groundwater Replenishment Improvement Program (GRIP). The goal of the ARC is to replace imported water currently being used at the spreading grounds for replenishing the area's groundwater supplies with 21,000 acre feet per year of recycled water, a locally sustainable water resource. The ARC was instituted to identify new and reliable water supplies for use as replenishment water. One of these program's main elements includes the construction of an Advanced Water Treatment Facility (AWTF), entitled the ARC, to further purify recycled water from LACSD's San Jose Creek Water Reclamation Plant using ultrafiltration and reverse osmosis followed by disinfection with advanced oxidation (utilizing ultra-violet light and hydrogen peroxide). The highly treated recycled water will be transported through an existing pipeline to spreading basins located along the San Gabriel River for percolation into the Central Basin to offset the demand for imported water. The ARC will provide 10,000 acre-feet per year of highly treated recycled water that is currently being disposed of in the San Gabriel River, and which ultimately flows to the ocean. An additional 11,000 acre-feet per year of tertiary treated recycled water will also be directed to the spreading basins for groundwater recharge in the same manner which has been in operation for over 50 years.

During the coming year, work will continue to focus on completing construction related project activities and commissioning the ARC. Work is estimated to continue until the ARC is fully operational in FY 2018/19.

The primary purpose of this project is to identify new and reliable water supplies for use as replenishment water, therefore, it is 100% funded from the Replenishment Fund.

2017/18 Accomplishments

- Equalization Basin completed and backfilled
- Product Water Tank completed
- Pilot Plant decommissioned and final report produced
- Approved for Construction Drawings signed
- Vertical construction of Process Building and Administration and Learning Center
- Chemical Storage Area slab on grade and walls completed
- Street Improvement work commenced

2018/19 Objectives

- Complete construction of ARC project
- Energize the site with permanent power from SCE (Southern California Edison)
- Commence and complete plant startup and commissioning activities

Basis for Changes from 2017/18 Projected to 2018/19 Budget

ARC construction continues until the end of calendar year 2018. Costs include six months of operations.

Table 67
Project 033 – ALBERT ROBLES CENTER (ARC)
ARC Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	283,000	995,000	712,000
R&M / Materials / Equipment	-	978,000	978,000
Other Expenses	52,000	2,556,000	2,504,000
Other General & Administrative	264,000	235,000	(29,000)
Total	**$599,000**	**$4,764,000**	**$4,165,000**

Table 68

ALBERT ROBLES CENTER
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Design & Construction of the ARC				Obtain Independence from Imported Water Sources
MEASURE: Construction Phase of completion of the ARC for Water Recycling and Environmental Learning	40%	30%	30%	
2. GOAL: State Revolving Fund (SRF) funding agreement n Plant (East and West) conveyed to the spreading grounds				Obtain Independence from Imported Water Sources
MEASURE: Continued facilitation	Final Draft Review	Final Funding Agreement	Approx. 50% of Reimbursements Remain	
3. GOAL: Construction of three groundwater injection wells.				Provide Safe and Reliable Groundwater
MEASURE: Installation of groundwater monitoring wells	Completed	N/A	100%	
Installation Phase of three groundwater injection wells	Starting Phase	Completed well drilling		

Clean Water Projects & Programs

The projects and programs identified under Clean Water Projects and Programs have been developed primarily to preserve high quality groundwater.

Clean Water Projects & Programs

PROJECT 002 GOLDSWORTHY DESALTER

Background

The Robert W. Goldsworthy Desalter (Goldsworthy Desalter) began operating in 2002 to treat brackish groundwater associated with a saline plume stranded inland of the West Coast Basin Barrier after the barrier was put into operation. The Goldsworthy Desalter, including the three associated production wells, are operated by the City of Torrance, and the product water is delivered for potable use via the City's existing distribution system.

The District has been expanding the Goldsworthy Desalter to double its production capacity from 2.5 million gallons per day (mgd) to 5.0 mgd. The District was awarded a total of $7 million in grant funding for this expansion project, including $4 million from the Proposition 84 IRWM Round 3 Grant and $3 million from the Proposition 50 Water Desalination Grant. Plant construction/expansion activities are expected to be completed by the first quarter of FY2017/18.

The costs for this project will consist of operation & maintenance activities and replacement costs, as well as capital improvement costs (through the District's bond proceeds) for the Goldsworthy Desalter expansion. The purpose of the Desalter is directly related to remediating degraded groundwater quality, and costs are thus attributed 100% to the Clean Water Fund.

Additional measures may be necessary in the future to fully contain and remediate the saline plume. WRD is pursuing long-term solutions to this problem and continues to work with the City of Torrance, the Technical Advisory Committee, and other stakeholders to improve groundwater quality in the West Coast Basin.

2017/18 Accomplishments

- Completed construction activities for the expansion of the Goldsworthy Desalter from a production capacity of 2.5 million gallons per day (mgd) to 5.0 mgd.

2018/19 Objectives

- It is anticipated that the Goldsworthy Desalter will produce 5 million gallons per day of potable water for use by the City of Torrance. Routine operations and maintenance activities at the plant will resume.

- Renegotiate the water purchase and operations agreement with the City of Torrance.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Due to the expansion of the Goldsworthy Desalter, there are cost increases to chemical expenses used during processing, materials and equipment usage, increased electrical costs and general repairs and maintenance. The residual surcharge fees has also increased.

Table 69
Project 002 - GOLDSWORTHY DESALTER
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Adopted Budget	18/19 Budget compared to 17/18 Projection
Professional Services	275,000	379,000	104,000
R&M / Materials / Equipment	497,000	1,216,000	719,000
Other Expenses	723,000	1,117,000	394,000
Other General & Administrative	229,000	92,000	(137,000)
Total	**$1,724,000**	**$2,804,000**	**$1,080,000**

Table 70
GOLDSWORTHY DESALTER
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Construction of the Goldsworthy Expansion. **MEASURE:** % of Completion.	83%	100%	100%	Provide Safe and Reliable Groundwater
2. GOAL: Provide Grant Funding for the Expansion project. **MEASURE:** Secured Grant Funding.	$7.0 Million	N/A	N/A	Provide Safe and Reliable Groundwater
3. GOAL: Treatment of degraded groundwater from the saline plume and turn it into potable water to supply to the City of Torrance. **MEASURE:** Amount of degraded groundwater treated from the Saline Plume each year.	0 AF	1000 AF	4200 AF	Provide Safe and Reliable Groundwater
4. GOAL: Permit Compliance for Water Quality Measure: **MEASURE:** Sample for water quality and report to State regulatory agency	Yes	Yes	Yes	Provide Safe and Reliable Groundwater

PROJECT 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.

2017/18 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 investigate the extent of the regional volatile organic compound (VOC) and perchlorate plumes in the Los Angeles Forebay. WRD received a grant to remediate a groundwater plume "hot spot" within the City of Vernon. The State is covering a majority of the costs with Proposition 1 grant funding in the amount of $7,275,675 (or ~80%). WRD will be providing matching funds in the amount of $1,839,070 (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):
  - Hosted a workshop with managers of adjudicated basins led by the Department of Water Resources (DWR).
  - Participating in a group discussion regarding a sustainable solution for two fringe areas located in the 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).

- Prepared and submitted an “alternative analysis” ahead of the regulatory deadline to the DWR. The analysis presented the current conditions within the fringe areas as required by the act as administered by the DWR. As the coordinating agency, WRD continues to monitor various fringe area discussions being held across the state and potential impacts to the “alternative analysis” currently being reviewed by DWR.

- Attended multiple stakeholder meetings for the recently formed Santa Monica Basin Groundwater Sustainability Agency (SMBGSA). WRD is an interested party as the groundwater basin is located adjacent to the Central Basin and West Coast Basin.

- 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 “Well Profiling to Evaluate Groundwater Contamination in Water Supply Wells – Los Angeles, California” at the Water Education Seminar / American Water Works Association (WES / AWWA).

- Participated in a panel discussion on “Groundwater Remediation Collaboratives” at the 4th Annual Environmental Health & Enforcement Symposium. The other participants on the panel included LADWP, LARWQCB, and Del Amo Action Committee.

- Panel moderator discussing “Managed Aquifer Recharge and Soil Aquifer Treatment” at the 11th International Water Association International Conference on Water Reclamation and Reuse.

- WRD staff participated in the preparation of a perfluorinated compound (an emerging chemical of concern) guidance document entitled “Groundwater and PFAS: State of Knowledge and Practice” recently published by the National Groundwater Association (NGWA).

- WRD’s 12th annual Groundwater Quality Workshop was held on August 9th. WRD staff are in the process of planning the next annual workshop currently scheduled for June 2018.

- 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.

2018/19 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.
- Commence groundwater remediation efforts with grant funds being administered by Prop 1. Continue to pursue additional groundwater cleanup projects with available grant funds related to Prop 1.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Professional services increased for Vernon Perchlorate Hot Spot Program. Increase in Other Expenses are due to fees assessed by the Department of Toxic Substances Control (DTSC) related to the Vernon Hot Spot.

Table 71
Project 006 - GROUNDWATER QUALITY IMPROVEMENT
Program Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	301,000	616,000	315,000
R&M / Materials / Equipment	30,000	23,000	(7,000)
Other Expenses	71,000	367,000	296,000
Other General & Administrative	263,000	219,000	(44,000)
Total	**$665,000**	**$1,225,000**	**$560,000**

Table 72A

GROUNDWATER QUALITY IMPROVEMENT PROGRAM
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Coordinate and administer meetings of the Groundwater Contamination Forum as a means for key stakeholders to share data and provide updates on major groundwater contaminated sites in the Central Basin and West Coast Basin				Provide Safe and Reliable Groundwater
MEASURE: Successful coordination and hosting of 2 meetings	Yes	Yes	Yes	
2. GOAL: Work in close consultation with project managers of the USEPA, DTSC, and 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				Provide Safe and Reliable Groundwater
MEASURE: Regular meetings with regulatory agencies	Yes	Yes	Yes	
3. GOAL: Administer meetings of the Los Angeles Forebay Groundwater Task Force and work with regulatory agencies and water purveyors to investigate the extent of the regional VOC and perchlorate plumes in the Los Angeles Forebay				Provide Safe and Reliable Groundwater
MEASURE: Regular meetings with regulatory agencies	Yes	Yes	Yes	
4. GOAL: Participate in the multi-agency agency Los Angeles Basin Groundwater Restoration Convening to expedite the investigation, identification, and eventual remediation of potential sources associated with the contaminated drinking water wells in the Central Basin and West Coast Basin				Provide Safe and Reliable Groundwater
MEASURE: Regular meetings with LA Basin Groundwater Restoration	Yes	Yes	Yes	

Table 72B

GROUNDWATER QUALITY IMPROVEMENT PROGRAM
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
5. GOAL: Monitor potential impacts of pending legislation and regulations on drinking water quality **MEASURE:** Monthly review of pending water quality activities and reporting to Groundwater Quality Committee	Yes	Yes	Yes	Provide Safe and Reliable Groundwater
6. GOAL: Conduct the annual groundwater quality workshop for local water purveyors to promote professional learning and networking **MEASURE:** Hold Workshop	Yes	Yes	Yes	Promote Organizational Excellence and also to Advance Groundwater Awareness
7. GOAL: Title 22 Monitoring Program **MEASURE:** Administration of Program	On-going	On-going	On-going	Provide Safe and Reliable Groundwater
8. GOAL: Prop 1 grant funding to remediate perchlorate and VOCs in the Los Angeles Forebay. **MEASURE:** Remediate "hot spot" and identify responsible party in coordination with DTSC and LARWQCB.	N/A	Commenced	On-going	Provide Safe and Reliable Groundwater

PROJECT 012 SAFE DRINKING WATER PROGRAM

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 other 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.

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.

2017/18 Accomplishments

As an extension of the District's Safe Drinking Water Program, the District approved the creation of the Safe Drinking Water Disadvantage Communities (DAC) Pilot Program. The goal of this program is to assist water systems located in disadvantaged communities within the District's service area with state and federal funding to address the issues related to their drinking water wells. The focus of the program is to provide technical assistance and extensive outreach to help the systems secure funding that is set aside

specifically for disadvantaged communities. Currently there are eight (8) water systems participating in the program and receiving assistance and three systems have already received state funding.

2018/19 Objectives

The District will continue to assist the water systems participating in the DAC Pilot Program. The District will also continue to see other candidates for the Safe Drinking Water Program.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Increase to this program is based on three well-head treatment grants and associated consultants and staff time. There is also additional outreach related to disadvantaged communities (DAC) program.

Table 73

Project 012 - Safe Drinking Water Program
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	583,000	1,178,000	595,000
R&M / Materials / Equipment	-	-	-
Other Expenses	11,000	13,000	2,000
Other General & Administrative	57,000	138,000	81,000
Total	**$651,000**	**$1,329,000**	**$678,000**

Table 74

SAFE DRINKING WATER PROGRAM
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Identify projects and fund up to $1M to assist candidates with primary or secondary priority contamination removal				Provide Safe and Reliable Groundwater
MEASURE: # of projects funded to provide assistance to candidates with primary or secondary priority contamination removal.	3 (SDWP)	7 (DAC)	7 (DAC) 3 (SDWP) 2 (Loans	

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. The engineering department also applies, secures, and administers/manages grants from various, Federal, State, and Local organizations to supplement funds allocated by WRD.

The engineering department also provides (oversees) project planning and environmental review/entitlement services for its CIP projects. The engineering department 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.

2017/18 Accomplishments

- Formulated a cost of water model for LVLWTF, Goldsworthy Desalter, and ARC planning efforts.
- Released Regional Brackish Water Project.
- Initiated the On-Call Program for support and construction management services for WRD's facilities.

2018/19 Objectives

- Complete the Regional Brackish Water Feasibility Study.
- Update the 5-year CIP budget.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Increase in staff labor and project development.

Table 75
Project 038 – Engineering Program
Program Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	-	-	-
R&M / Materials / Equipment	-	-	-
Other Expenses	2,000	40,000	38,000
Other General & Administrative	-	311,000	311,000
Total	**$2,000**	**$351,000**	**$349,000**

Table 76
ENGINEERING PROGRAM
Performance Measures
Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Complete the Regional Brackish Water Feasibility Study.				
MEASURE: Final report with findings and recommendations for next steps received.	In progress	In progress	In progress	
2. GOAL: Update the 5-year CIP budget.				
MEASURE: 5-year CIP budget to be finalized and approved.	Updated	Updated	In progress	

Dual Purpose Projects & Programs

Rubber Dam at the San Gabriel Spreading Grounds

The projects and programs identified under Dual Purpose Projects and Programs support both replenishment activities and high quality groundwater efforts.

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 and store an extensive database of spatial information, 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 web site provides users with limited access to WRD's water quality and production database. The web-based application will be updated in FY 2018/2019 and will 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 and implement the first phase of the District's GIS-based Asset Management and CMMS system. 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.

2017/2018 Accomplishments

- Worked with newly formed Data and Technology Services Team to implement a ticketing system.
- Worked with WRD Hydrogeology Staff to spatially represent an updated Saline Plume in the West Coast Basin.
- Procured and upgraded GIS to an Enterprise GIS in order to better integrate with SQL Server data, CMMS, Asset Management and other related technologies.

- Gave a well-received presentation entitled "The Perils and Pitfalls of Implementing a fully integrated Asset Management System" at the 2018 American Water Works Association's Sustainable Groundwater Management conference in Seattle, WA in March 2018.
- Continued comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.
- Ensured full integration of GIS for presentations and analysis.
- Utilized GIS for development of annual values used in ESR.
- Performed analyses and developed graphics for use in the District's Regional Groundwater monitoring Report (RGWMR).
- Continued participation in the District's CMMS and Asset Management system development and deployment.
- Worked with District consultants to achieve goals of District's Information Management Master Plan, including:
  - Transition of WRD's extensive data (including spatial data) to a Relational Database Management System (RDBMS) in order to increase utilization and access to data and analysis capabilities.
  - Develop replacement for outdated online Interactive Well Search Tool.
- 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.

2018/2019 Objectives

1. Complete replacement for outdated online Interactive Well Search Tool and develop an in-house application for WRD Staff to easily access GIS layers and well/water data.
2. Work with WRD staff to design and develop Esri Story Maps for use in educational, promotional, and presentation materials.

3. Continue comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.

4. Work with District consultants to achieve goals of District's Information Management Master Plan Transition of WRD's extensive data (including spatial data) to a Relational Database Management System (RDBMS) in order to increase utilization and access to data and analysis capabilities.

5. Develop relationships with GIS staff in other, local water agencies with goal of sharing data.

6. Ensure full integration of GIS for presentations and analysis.

7. Utilize GIS for development of annual values used in ESR.

8. Perform analyses and develop graphics for use in the District's Regional Groundwater monitoring Report (RGWMR).

9. Continue participation in the District's CMMS and Asset Management system development and deployment.

10. Work with WRD Staff to assess and implement GIS support for new and ongoing projects.

11. Provide graphics and analyses results, as needed, for District presentation, reports, and public outreach materials.

12. Participate in regional and international GIS user groups and conferences.

13. Implement 3D technologies for visualization of District data.

Table 77
Project 010 - Geographic Information Systems (GIS)
Program Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	77,000	100,000	23,000
R&M / Materials / Equipment	-	-	-
Other Expenses	69,000	65,000	(4,000)
Other General & Administrative	127,000	-	(127,000)
Total	$273,000	$165,000	$(108,000)

Table 78A

GEOGRAPHIC INFORMATION SYSTEMS
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Complete replacement for outdated online Interactive Well Search Tool and develop an in-house application for WRD Staff to easily access GIS layers and well/water data.				Provide Safe and Reliable Groundwater
MEASURE: Complete report development and user interface design. Use well search application as base for additional applications.	N/A	Yes	Yes	
2. GOAL: Work with WRD staff to design and develop Esri Story Maps for use in educational, promotional, and presentation materials.				Provide Safe and Reliable Groundwater
MEASURE: Participate in regular meetings with Public Relations Staff to develop design and concepts	N/A	Yes	Yes	
3. GOAL: Continue comprehensive review of existing datasets and quality assurance measures to ensure continued data integrity.				Provide Safe and Reliable Groundwater
MEASURE: Perform ongoing comprehensive review of existing datasets to ensure continued data integrity.	Yes	Yes	Yes	
4. GOAL: Work with District consultants to achieve goals of District's Information Management Master Plan Transition of WRD's extensive data (including spatial data) to a Relational Database Management System (RDBMS) in order to increase utilization and access to data and analysis capabilities.				Provide Safe and Reliable Groundwater
MEASURE: Migrate existing file geodatabases to SQL Server SDE format	Yes	Yes	Yes	
5. GOAL: Develop relationships with GIS staff in other, local water agencies with goal of sharing data in order to secure the most accurate data for WRD				Provide Safe and Reliable Groundwater
MEASURE: Attend local GIS Water user group meetings and develop contacts	N/A	N/A	Yes	
6. GOAL: Ensure full integration of GIS for presentations and analysis				Provide Safe and Reliable Groundwater
MEASURE: 100% integration	100%	100%	100%	

Table 78B

GEOGRAPHIC INFORMATION SYSTEMS
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

7. GOAL: Utilize GIS for development of annual overdraft values used in the ESR **MEASURE:** Utilized GIS in developing annual overdraft values used in the ESR	Yes	Yes	Yes	Provide Safe and Reliable Groundwater
8. GOAL: Perform analyses and develop graphics for use in the District's Regional Groundwater Monitoring Report (RGWMR).s **MEASURE:** Using groundwater elevation data, perform spatial analyses to generate data for the RGWMR. Generate graphics used in the report	Yes	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence
9. GOAL: Continue participation in the District's CMMS and Asset Management system development and deployment. **MEASURE:** Assist in development of asset registry, migration to geodatabase and continuing editing and QA/QC	N/A	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence
10. GOAL: Work with WRD staff to assess and implement GIS support for new and ongoing projects. **MEASURE:** Participate in regular meeting with staff to solicit ideas and aid in project design	N/A	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence
11. GOAL: Provide graphics and analyses results, as need, for District presentation, reports, and public outreach materials. **MEASURE:** Work with all departments to prepare accurate, cartographically appealing maps and data for reports, presentations, and public outreach materials.	Yes	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence
12. GOAL: Participate in regional and international GIS user groups and conferences **MEASURE:** Attend user groups and conferences pertinent to WRD GIS goals.	Yes	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence
13. GOAL: Implementation of 3D technologies to visualization of District data **MEASURE:** Learn to use current software tools and work with staff to develop design and concepts	N/A	Yes	Yes	Provide Safe and Reliable Groundwater and also to Promote Organizational Excellence

PROJECT 011 REGIONAL GROUNDWATER MONITORING

Background

The Regional Groundwater Monitoring Program continues to be very successful and currently consists of a network of over 350 WRD and 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 GIS and provides the basis to better understand the characteristics of the Central and West Coast Basins.

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 U.S. Geological Survey (USGS) to address specific water quality issues, and update the hydrogeology 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.

2017/18 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 Central and West Coast Basins for Water Year 2016/17.
- Integrated Regional Groundwater Monitoring Program data into a salt and nutrient groundwater monitoring program that was required as part of a State-mandated basin-wide Salt and Nutrient Management Plan.

- 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.
- Installed a new deep nested monitoring well known as LA#5 with USGS.
- Performed extensive data logger testing, maintenance and repairs.

2018/19 Objectives

- Drill and install one new deep nested monitoring well with USGS (Los Angeles #6) for use in Sustainable Groundwater Management Act (SGMA).
- Collect spring and fall groundwater quality samples at WRD monitoring wells. Analyze samples for over 100 chemical constituents and contaminants.
- Collect quarterly groundwater levels at WRD monitoring wells and compile daily data logger data and prepare historical water level hydrographs.
- Identify emerging contaminants of concern to the water supply community and groundwater basin managers to assess the need for a basin-wide screening to determine whether long-term monitoring is warranted in the Central and West Coast Basins.
- Continue to report Regional Groundwater Monitoring Program data in accordance with the State-mandated Salt and Nutrient Management Plan.
- Continue to collect and report CBWCB groundwater level data to the CASGEM program.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Decrease due to reallocation of staff labor hours and reduction in some sampling to once per year vs. twice per year at those wells with steady, unchanging conditions.

Table 79

Project 011 - REGIONAL GROUNDWATER MONITORING
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	477,000	487,000	10,000
R&M / Materials / Equipment	98,000	110,000	12,000
Other Expenses	134,000	128,000	(6,000)
Other General & Administrative	452,000	306,000	(146,000)
Total	**$1,161,000**	**$1,031,000**	**$(130,000)**

Table 80

REGIONAL GROUNDWATER MONITORING
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Collect Spring and Fall groundwater quality sampling at WRD monitoring wells including analysis of over 100 chemical constituents and contaminants				Provide Safe and Reliable Groundwater
MEASURE: Complete Spring and Fall groundwater quality sampling including analysis of over 100 chemical constituents and contaminants	Completed	Yes	Yes	
2. GOAL: Collect quarterly groundwater levels at WRD monitoring wells and compile daily datalogger data to prepare historical water level hydrographs				Provide Safe and Reliable Groundwater
MEASURE: Complete collection of quarterly groundwater levels at WRD monitoring wells and compile daily datalogger data to prepare historical water level hydrographs	Completed	Yes	Yes	
3. GOAL: 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 Central and West Coast Basins.				Provide Safe and Reliable Groundwater
MEASURE: # of emerging contaminants of concern identified for screening	1	2	2	
4. GOAL: Integrate Regional Groundwater Monitoring Program data into a salt and nutrient groundwater monitoring program				Provide Safe and Reliable Groundwater
MEASURE: % of completion for the integration of Regional Groundwater Monitoring Program data into a salt and nutrient groundwater monitoring program	100%	100%	100%	
5. GOAL: Publish and share data collected for this program in the annual Regional Groundwater Monitoring Report and WRD Web sites				Provide Safe and Reliable Groundwater, Promote Organizational Excellence, and Advance Groundwater Awareness
MEASURE: Publish the annual Regional Groundwater Monitoring Report summarizing groundwater data from monitoring wells and production wells in the Central and West Coast Basins	Completed	Yes	Yes	
6. GOAL Continue to collect and report CBWCB groundwater level data to the CASGEM program				Provide Safe and Reliable Groundwater
MEASURE: Collected and reported CBWCB groundwater level data to the CASGEM program	Yes	Yes	Yes	
7. GOAL Drill and install one more nested monitoring well in data gap areas with USGS				Provide Safe and Reliable Groundwater
MEASURE: Install one more monitoring well	N/A	Yes	Yes	

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, 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 form historical information for production wells and oil wells within the District, and from seismic reflection data obtained in 2013. 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 hydro geologic 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. Other special projects include the publication of the Technical Bulletin Series, which provides hydrogeologic data to the pumpers in the basin, analysis of optimum and minimum groundwater quantities, and groundwater tracer investigations. A State-mandated Salt Nutrient Management Plan was prepared under this Program in 2014, with the Los Angeles Regional Water Board accepting the report in 2015, and now regular updates are required.

New this past year was the WRD taking continuing taking the lead on folding the unmanaged area of the northern Central Basin outside of WRD's Boundary and outside of the adjudicated Central Basin boundary into the Sustainable Groundwater Management Act (SGMA) requirements. WRD worked with stakeholders, including the City of Los Angeles, City of Beverly Hills, City of Culver City, County of Los Angeles, and Golden State Water Company to implement the "Alternative Analysis" submitted in

2016. WRD will monitor groundwater quality and water level conditions in this northern Central Basin area and incorporate findings into its annual reports which will also be provided for SGMA compliance.

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.

2017/18 Accomplishments

- Preparation of the 2018 Engineering Survey and Report leading to the adoption of the 2018/2019 Replenishment Assessment.
- Preparation of the 2018 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 2018/2019 Replenishment Assessment.
- Significant progress with USGS to update and improve the regional groundwater computer model. Updated 3-D sequence stratigraphic framework into version 5 and incorporation into EarthVision and Leapfrog software. Completed new framework for the Modflow Unstructured Grids Model with 12 layers. Implemented future management runs. Reviewed Draft Reports.
- Presentation of technical materials and papers at groundwater conferences.
- Completed submittals for Alternatives Analysis for SGMA compliance.
- Initiated modeling for MWD on recycled water supply from Carson Joint Plant.

2018/19 Objectives

- Completion of 2019 Engineering Survey and Report.
- Completion of 2019 Cost of Service Report
- Complete the USGS Modflow groundwater computer model.
- Publish and present technical papers at conferences.
- Prepare and submit the SGMA documents
- Continue well profiling program.
- Assist groundwater purveyors on data needs for new production wells.
- Complete recycled water modeling for MWD.

Basis for Changes 2017/18 Projected to 2018/19 Budget

No significant changes noted.

Table 81
Project 025 - Hydrogeology Program
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	580,000	665,000	85,000
R&M / Materials / Equipment	32,000	22,000	(10,000)
Other Expenses	88,000	71,000	(17,000)
Other General & Administrative	221,000	179,000	(42,000)
Total	**$921,000**	**$937,000**	**$16,000**

Table 82A

HYDROGEOLOGY PROGRAM
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Prepare ESR leading to the adoption of the RA.				Provide Safe and Reliable Groundwater
MEASURE: Prepared ESR which led to the adoption of the RA.	Yes	Yes	Yes	
2. GOAL: Prepare annual Cost of Service report including an in-depth analysis of the geology of the WRD service area.				Provide Safe and Reliable Groundwater
MEASURE: Prepared annual Cost of Service report which included an in-depth analysis of the WRD service area geology.	Yes	Yes	Yes	
3. GOAL: Continue to build USGS Modflow groundwater computer model				Provide Safe and Reliable Groundwater
MEASURE: Complete computer model	85%	90%	100%	
4. GOAL: Present technical materials and papers at groundwater conferences				Promote Organizational Excellence and Advance Groundwater Awareness
MEASURE: Staff to make presentations at conferences	Yes	Yes	Yes	
5. GOAL: Complete SGMA Compliance Documents				Provide Safe and Reliable Groundwater
MEASURE: Complete SGMA Compliance Documents	N/A	Yes	Yes	
6. GOAL: Continue well profiling program				Provide Safe and Reliable Groundwater
MEASURE: Perform profiling of water wells	Yes	Yes	Yes	
Complete SGMA compliance documents	N/A	Yes	Yes	
7. GOAL: Complete Recycled Water Modeling for MWD				Provide Safe and Reliable Groundwater
MEASURE: Complete Recycled Water Modeling for MWD	N/A	N/A	Yes	

Table 82B

HYDROGEOLOGY PROGRAM
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
8. GOAL: Design & Construction of the RC AWTF				Obtain Independence from Imported Water Sources
MEASURE: Construction Phase of the RC .	40%	30%	30%	
9. GOAL: State Revolving Fund (SRF) funding agreement .				Obtain Independence from Imported Water Sources
MEASURE: Update on the SRF	Final Draft Review	Final Funding Agreement	Approx. 50% of Reimbursements Remain	
10. GOAL: Construction of three groundwater injection wells				Obtain Independence from Imported Water Sources
MEASURE: Installation of groundwater monitoring wells	Complete	N/A	N/A	
Installation Phase of three groundwater injection wells	Starting Phase	Completed well drilling	100%	

PROJECT EAE – WATER EDUCATION & OUTREACH

Background

The 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, etc.

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. 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 water.

The Communication and Education Services department is tasked with the mission of leading the education and outreach programs, particularly pertaining to the Water Independence Now (WIN) Program presentations at conferences and conventions. This specific program encapsulates WRD's core projects enabling the region to become independent of imported water.

Conference and convention outreach participation includes 20 primary events, averaging 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.

WRD's implementation of Project WET (Water Education for Teachers) – a water education curriculum training for K-12 teachers – has allowed WRD to expand its involvement in the classroom by equipping public school teachers with a comprehensive academic science curriculum that focuses on the science of water and groundwater. The program has already trained and provided materials to another 100 teachers, thereby increasing the number of students being taught the curriculum to over 8,000 for the past two years. Lastly, the annual Groundwater Festival grew and drew more than 3,200 attendees.

2017/18 Accomplishments

- Produced two "Water 101" Workshops for local, state and federal legislative officials
- Hosted 11th annual groundwater festival with an attendance of over 3,200 participants, funded completely by sponsorships
- Coordinated the One-Year Countdown of the Groundwater Reliability Improvement Project, WRD's cornerstone water treatment program
- Coordinated GRIP Media Day in the City of Pico Rivera that was covered by several major news outlet
- Coordinated the three separate GRIP community update and outreach meetings
- Developed the final design and execute the procurement for the GRIP Visitor Center and the Administrative Lobby
- Participated in over 60 separate local community outreach events to educate the public about WRD and groundwater management
- Attended and presented at 15 separate industry related conferences
- Expanded social media outreach by increasing postings across all social media platforms and broadened WRD's following by a full 237%
- Expanded rebranding efforts across all WRD printed and digital materials, including production of collateral materials in 6 languages
- Expanded features of the District website, including interactive features for groundwater purveyors
- Conducted substantive meetings and discussions on water with more than 35 state legislative officials
- Implemented a fully integrated social media editorial calendar thereby doubling social media posts
- Delivered 5 new technical abstracts and presentations at industry conferences
- Four international tours of WRD facilities
- Won the Public Communications of the Year Award at the national Water Environment Federation Conference

2018/19 Objectives

- Plan, lead, and unveil the new Albert Robles Center (formerly GRIP)
- Continue to expand the District's website communication capabilities
- Host 12th annual groundwater festival at new GRIP Facility
- Expand social media outreach activities and double followers
- Assist technical team with outreach and education related to the Albert Robles Center (GRIP)
- Develop the final design and build exhibitry for the GRIP Visitor Center
- Double the Project WET participation among teachers
- Deliver 4 new technical abstracts and presentations at upcoming conferences
- Have multiple positive news articles published about Albert Robles Center
- Produces a series of education videos for online publication

Basis for Changes 2017/18 Projected to 2018/19 Budget

Increase in professional fees due to legislative consultants.

Table 83
Project EAE – Water Education & Outreach
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	28,000	113,000	85,000
R&M / Materials / Equipment	4,000	4,000	-
Other Expenses	519,000	529,000	10,000
Other General & Administrative	162,000	165,000	3,000
Total	**$713,000**	**$811,000**	**$98,000**

Table 84A

WATER EDUCATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Redesign and launch the District's website as an on-going responsibility to maintain open communication with the public it serves				Advance Groundwater Awareness
MEASURE: Number of District's web presence	9	9	9	
2. GOAL: Host Annual Groundwater Festival as an on-going Groundwater Awareness effort				Promote Groundwater Awareness
MEASURE: Number of Groundwater Festival hosted	10th	11th	12th	
3. GOAL: Social Media outreach efforts				Advance Groundwater Awareness
MEASURE:				
Number of social media platform	0	6	6	
Number of social media posts	0	780	Double	
Number of followers	*0*	8,820	Double	
4. GOAL: To assist on the Albert Robles Center (ARC) related outreach contracts and the Visitor Center unveiling				Promote the District's Albert Robles Center
MEASURE:				
Number of ARC related outreach contracts assisted	4	4	6	
Unveiling of ARC	0	Complete	Complete	
Timeline for ARC Groundbreaking	0	In progress	Complete	

Table 84B

WATER EDUCATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

5. GOAL: To assist on the ARC related outreach tasks				Advance the District's Albert Robles Center
MEASURE:				
Assistance with the following tasks:				
# of media materials and newsletter for ARC :				
Updated Tri-fold for ARC	0	1,000	Pending	
Award Summary Sheet for ARC	0	1,000	Pending	
Construction "Door hangers" for ARC	0	3,500	Pending	
Construction Notices/Letters for ARC	0	7,000	Pending	
Lead successful groundbreaking ceremony for ARC	1	2	1	
Number of support letters for ARC from public officials and environmental interest groups	0	15	Pending	
Number of times ARC was marketed at public events	0	200+	Pending	
6. GOAL: Initiative to expand its groundwater educational programs with WIN				Advance the District's WIN Program
MEASURE:				
Number of presentations at conferences and conventions	5	15	Double	
Number of new videos created for presentation	5	55	55	
7. GOAL: Increase presence at community events WIN Project				Advance Public Awareness of Groundwater management
MEASURE:				
Attend and present at diverse community events throughout Number of schools events attended including school nights, science fairs, presentations, career days etc.	10	40	50	
Number of earth day event attended	4	8	8	
Number of media materials developed:	0	1,000	Pending	
Goldsworthy Tri-fold		500	Pending	
Win Tri-fold		10,000	Pending	
Cut Sheets for media packets		30	Pending	
Large print renderings				

PROJECT EAC – WATER CONSERVATION

Background

The Water Conservation outreach activities call out tangible strategies to successfully engage constituents, pumpers, and cities the resources to meet the State mandate of 20% water savings by 2020 and to the first ever State Mandated Cutbacks. Through custom WRD conservation programs that have long term conservation achievements, stakeholders are on track to meet 20X2020. Moreover, the District's service area exceeded goals set by the state on the mandated cutbacks.

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. The Communication and Education Services Department expanded the number of Eco-Gardener classes for the public. This past year while WRD conducted ECO-Gardener and Smart Gardner courses throughout the service area, staff unveiled a new curriculum with more comprehensive information for the public. WRD continued to partner with the Los Angeles County Department of Public Works, City of Torrance and West Basin MWD to enhance water conservation awareness to the general public as well as chambers of commerce and educational institutions through special events and workshops.

2017/18 Accomplishments

- The Lillian Kawasaki ECO-Gardener programs was spread across 8 new venues within WRD's 420-square mile service area to capture broader audiences and included Spanish courses to accommodate limited-English speakers.
- Promoted a summer water conservation campaign through carefully targeted community newspaper ads and social media posts
- Revamped the ECO-Gardner courses with a modernized curriculum that includes more information on best practices for residential gardening and new water saving product ideas
- Developed a groundwater specific education campaign that was picked up by major local television news stations and newspapers to illustrate the direct impacts of the drought on groundwater levels and promoted the importance of groundwater resources

2018/19 Objectives

- Expand conservation partnerships with the cities and schools
- Continue efforts in water conservation to combat limited rainfall in 2017-18 rain season

Basis for Changes 2017/18 Projected to 2018/19 Budget

Moved majority of ECO-Gardener Program costs from Other Expenses to Professional Services. Other Expenses decreased due to reduced water conservation partnerships.

Table 85

Project EAC - Water Conservation
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	30,000	55,000	25,000
R&M / Materials / Equipment	3,000	3,000	-
Other Expenses	384,000	351,000	(33,000)
Other General & Administrative	110,000	131,000	21,000
Total	**$527,000**	**$540,000**	**$13,000**

Table 86

WATER CONSERVATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Efforts in water conservation in-line with Governor Brown's state-wide mandatory water restrictions				Advance Groundwater Awareness
MEASURE: Number ECO-Gardening Classes hosted	4	6	7 so far	
Number of Eco-Gardening Class attendees	Average 10 per class	Average 50 per class	Increase by 15%	
2. GOAL: Conservation Partnerships with the City of Torrance and West Basin Municipal Water District				Advance Groundwater Awareness
MEASURE: Co-Sponsorship Participation in Commercial, Industrial, Institutional, Residential and Educational Conservation Programs with the City of Torrance	Continue Participation	Continue Participation	Continue Participation	
Co-Sponsorship Participation in Water-Use Efficiency Programs with West Basin Municipal Water District	Continue Participation	Continue Participation	Continue Participation	
3. GOAL: Broaden ECO-Gardener education opportunities for the public				Expand Conservation Awareness
MEASURE: Develop a series of education videos	N/A	Yes	Yes	
Use of social media for ECO-Gardening Education	0 posts	8 posts	13 posts	

General Administration Department

WRD Board Room Naming

WRD's board room is now officially called the Willard H. Murray, Jr. Board Room, named after Director Willard Murray as an acknowledgement of his long public service as a member of the WRD Board of Directors..

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 officers of the Board are the President, Vice President, Secretary, Treasurer, and Deputy Secretary. Officers are elected by the Board at the first regular meeting of the Board in January following the District election. With the exception of the Deputy Secretary, all Board officers are Board members.

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. The Secretary may delegate such duties to the Deputy Secretary.

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.

The Deputy Secretary is recommended by the General Manager and approved by the Board.

2017/18 Accomplishments
See President's Message

2018/19 Objectives
See President's Message

Basis for Changes 2017/18 Projected to 2018/19 Budget
No significant changes noted.

Table 87
Board of Directors Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	-	-	-
R&M / Materials / Equipment	-	-	-
Other Expenses	82,000	102,000	20,000
Other General & Administrative	389,000	298,000	(91,000)
Total	**$471,000**	**$400,000**	**($71,000)**

ADMINISTRATION

Background

The Internal Services Department is responsible for ensuring the delivery of core District administrative functions through innovative technology driven solutions. The department's core areas of operation are Data and Technology Services, Administration and Board Support, Human Resources and Risk Management, Procurement and Contract Management, and Building Maintenance.

Highlight of 2017/2018 Accomplishments

- New Department Manager hired in September 2017
- New Data and Technology Supervisor hired in January 2018
- Combined District information assets into a common outlet called the WRD Portal, including
- Completely changed the Agenda and Agenda Packet development process, including development of an online form to process agenda items using only a web browser
- Insourced recruitment of part-time staff from various temporary agencies
- On-boarded two (2) fulltime staff persons: Engineer, Office Assistant
- On-boarded five (5) part-time staff persons: Intern (5)
- Completed the WRD Procurement Manual
- Completed the WRD Employee Handbook
- Completed two (2) updates to the Administrative Code

2018/19 Department Priorities

- Improve Internal Services Department staff coordination and efficiency through shared goal setting.
- Better coordinate 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.
- Develop a 12 month Employee Relations Program, to include an active Labor Relations component and implementation of a Human Resources Information Management System.
- Improve agency-wide coordination of large procurements, including implementation of an Electronic Procurement System.

Basis for Changes 2017/18 Projected to 2018/19 Budget

Increase in professional services is due to an increase in legal expenses, required annual financial audit and Single Audit fees and annual actuarial study cost increases. Adjustments to labor show a reallocation of labor from general administration to projects and programs, labor associated with capital projects.

Table 88
Administration
Budget Summary

EXPENSE CATEGORY	2017/18 Projection	2018/19 Proposed Budget	18/19 Budget compared to 17/18 Projection
Professional Services	817,000	1,053,000	236,000
R&M / Materials / Equipment	365,000	372,000	7,000
Other Expenses	616,000	581,000	(35,000)
Other General & Administrative	2,592,000	1,869,000	(723,000)
Total	**$4,390,000**	**$3,875,000**	**($515,000)**

Table 89A
ADMINISTRATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

	FY 2016/17 ACTUAL	FY 2017/18 ACTUAL	FY 2018/19 BUDGET	DISTRICT GOAL
1. GOAL: Create, maintain and develop a highly qualified, professional, diverse and responsive workforce; including development of the Operations Branch				Promote Organizational Excellence
MEASURE:				
a. Restructuring of the District Organization Chart in total staff	37	39	42	
b. Restructuring of the District Organization Chart in Department Lead Positions	0	2	To be decided	
2. GOAL: Promote a safe, healthy and supportive work environment for all employees.				Promote Organizational Excellence
MEASURE:				
a. Implement the Employee Relations Program (ERP) through safety audit, field safety, ergonomics evaluation, team building, employee appreciation events & All hands meetings	50% of programs implemented	80% of programs implemented	100% of programs should be implemented	
3. GOAL: Provide excellent Board and record-keeping of Board Actions				Promote Organizational Excellence
MEASURE:				
a. Agenda automation	None	40% implemented	Should be fully implemented	

Table 89B

ADMINISTRATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

4. GOAL: 4. Carry-out the goals of the Information Management Master Plan; centralize all data information from all District facilities.				Promote Organizational Excellence
MEASURE:				
a. Complete 2018/19 phases of the Information Management Master Plan.	0	40%	80%	
b. Separate Components of the IMMP;				
SCADA Automation	0	75%	100%	
CMMS Automation	0	25%	80%	
ASSETIC (Projection Model)	0	0	100%	
CIS (Centralize Information System)	0	25%	100%	
5. GOAL: Provide procurement support to all District staff based on best practices and fiscal sustainability.				Promote Organizational Excellence
MEASURE:				
a. Expand the WRD Portal Services to include according to best practices for intranet development.	0	0	2	
b. Implement process improvement towards centralized procurement	None	None	In progress	
c. Oversee the preparation and monitoring of contracts	Yes	Yes	Yes	
d. Seek an Achievement of Excellence in Procurement Award	None	None	In progress	
6. GOAL: Provide data for WRD programs, initiatives and projects.				Advance Groundwater Awareness
MEASURE:				
a. Respond to data and mapping requests from Engineering, Hydrogeology and Watermaster Programming.	Production Data GIS Data	Production Data GIS Data	Production Data GIS Data	
b. Respond to data and mapping requests from partner agencies.				

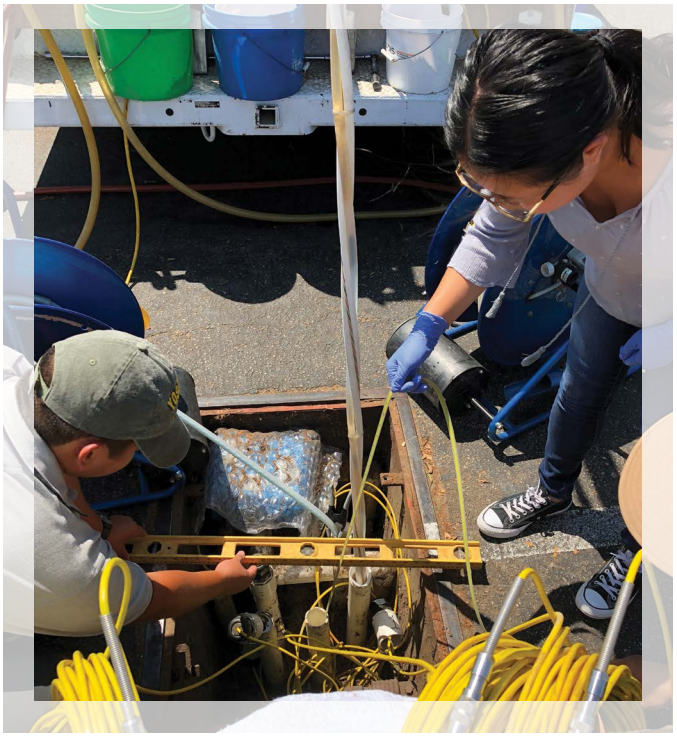
Table 89C

ADMINISTRATION
Performance Measures

Performance measurement results for the past two fiscal years in addition to goals for FY2018/19 are presented below.

7. GOAL: Improve the distribution of information internally through the development of the WRD Portal.				Promote Organizational Excellence
MEASURE:				
a. Expand the WRD Portal Services to include according to best practices for intranet development.	Yes	Yes	Improved	
b. Expand the WRD portal to include a employee facing data dashboard.	N/A	N/A	Ongoing	
8. GOAL: Improve document automation and methods of records retention.				Provide safe and reliable groundwater
MEASURE:				
a. Develop and implement a one point On-Base scanning system.	Yes	Yes	Improved System	
b. Scan all Watermaster files	Yes	Yes	Yes	
c. Scan all paper files being stored around WRD Main Administration Office building.	60%	10%	80%	
d. WRD Portal	0	0	New	
9. GOAL: Comply 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.	Yes	Yes	On-Base Scanning, WRD Portal, U-Drive	

Performance Measures



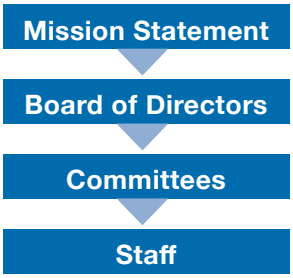
WRD field hydro-geologists are monitoring groundwater quality and water levels

WRD has been monitoring groundwater quality and water levels in the Central Basin and West Coast Basin for over 50 years. The Regional Groundwater Monitoring Program provides for the collection of basic information used for groundwater basin management including groundwater level data and water quality data.

Performance Measures

As codified in the District's Administrative Code, the Water Replenishment District of Southern California's performance metrics are guided and determined by the District's Mission Statement:

"To provide, protect and preserve high quality groundwater through innovative, cost-effective and environmentally sensitive basin management practices for the benefit of residents and businesses of the Central and West Coast Basins."



The District's mission statement is interpreted and directed by 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 every four years and accomplishes its stated goals and objectives through a Committee structure which is responsible and reports to the Board of Directors and which also delegates certain of its authority to staff in the interest of efficiency, stability and prudent management for completion.

The Board of Director's Goals for the District and staff are to:

1. Provide Safe and Reliable Groundwater
2. Obtain Independence from Imported Water Sources
3. Promote Organizational Excellence
4. Advance Groundwater Awareness
5. Foster Environmental Stewardship and Water Sustainability

The Standing Committees of the Board of Directors are as follows:

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

(Note: Completion of departmental, project and program objectives are reflected in the individual summaries. Performance measurement results for the past two fiscal years in addition to goals for FY 2018/19 are presented which link to the overall District goals enumerated above.)

WATER RESOURCES COMMITTEE

Supported by: The Engineering and Hydrogeology Departments

The Water Resources Committee shall study, advise and make recommendations with regard to 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 recycling, reuse and underground storage of water and use thereof;
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. Provide 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 California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

2017/18 Performance Metrics – Water Resources Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Authorize the General Manager to execute Amendment #1 to the Professional Services Agreement with DMJ Consulting for as-needed field services related to groundwater monitoring for an additional budget increase of $100,000 and a termination date of June 30, 2019.	Staff Progress: On-going The District is currently under contract with DMJ Consulting providing as-needed field services to support on-going groundwater monitoring projects to effectively manage the basins. The District has a continued need for similar services in the current year and amendment #1 was executed.	Perform effective basin management	1	011
Date of Board Action:7/20/17 Authorize the General Manager to execute Amendment #1 to the Professional Services Agreement with Blaine Tech Services for as-needed field services related to groundwater monitoring for an additional budget increase of $50,000 and a termination date of June 30, 2019.	Staff Progress: On-going The District is currently under contract with Blaine Tech Services providing as-needed field services to support on-going groundwater monitoring projects to effectively manage the basins. The District has a continued need for similar services in the current year and amendment #1 was executed.	Perform effective basin management	1	011
Date of Board Action:7/20/17 Authorize the General Manager to sign a 1-Year lease extension for the groundwater monitoring operations facility at 3673 Industry Avenue in Lakewood for an amount not to exceed $48,384.	Staff Progress: Complete The District's five year lease at 3673 Industry Avenue will be terminated soon. A one year lease extension is in place for storing all the groundwater monitoring supplies, equipment and vehicles until the District's owned Field Operations and Storage Annex property is complete and ready for storing all District's property.	Perform effective basin management	1	011

Date of Board Action:7/20/17 Approve an initial 10% down payment of $418,981.15 to County Sanitation Districts of Los Angeles County (SDLAC) and authorize the General Manager to enter into an agreement with SDLAC to initiate monthly payments for 3 years for a total budgetary amount not to exceed $4,502,800 for the wastewater connection fee for the Robert W. Goldsworthy Desalter.	Staff Progress: Complete Due to the expected increased flows of brine (wastewater discharge) from the expanded Goldsworthy Desalter facility, a connection fee to the existing sewer system was required by the County Sanitation District of Los Angeles County in order for the new expanded facility to be in operation. The District paid the down payment and entered into a three year monthly payment for the remaining balance.	Secure all District Assets	5	002
Date of Board Action: 8/24/17 Authorize the General Manager to approve an Access and Indemnity Agreement with EEC Environmental (on behalf of Regency Center LLC).	Staff Progress: Complete The District approved the Access & Indemnity Agreement for EEC to access its parking lot for collection of groundwater samples to better define the off-site eastern edge of an existing groundwater plume as part of an environmental cleanup.	In Compliance with environmental clean-up	1,4 & 5	006
Date of Board Action: 10/19/17 Authorize the General Manager to enter into a Memorandum of Understanding with the City of Los Angeles Department of Water and Power, the City of Beverly Hills, the City of Culver City, and the Golden State Water Company for Implementation of the Sustainable Groundwater Management Act in an unadjudicated portion of the Central Basin.	Staff Progress: On-going The District entered into a MOU with the referred parties to facilitate a cooperative effort to conduct a groundwater sustainability analysis of the un-adjudicated portion of the Central Basin to be in compliance with SGMA.	Perform effective basin management	1 & 5	011
Date of Board Action: 11/16/17 Authorize an amendment to the existing CH2M Hill professional services agreement and the Metropolitan Water District of Southern California ("MWD") agreement for additional pass-through groundwater modeling services and a budget increase of $50,000. There is no fiscal impact to WRD as MWD will reimburse WRD for any expenditures by CH2M Hill or WRD administrative costs under this agreement.	Staff Progress: On-going CH2MHill is providing technical support services for work related to the on-going development of the District's Groundwater Basin Master Plan. In addition, the District extended another scope of work for CH2MHill to perform groundwater modeling work to evaluate various options of replenishing the basins with the MWDs waste water project as a potential new supply of additional recycled water for the basins. The initial modelling has been completed, but an additional work is requested by MWD for an amendment to the existing agreement.	Perform effective basin management	1,2 & 5	025
Date of Board Action: 11/16/17 Approve the release of a Request for Qualifications (RFQ) for as needed engineering and construction management services.	Staff Progress: Complete Staff released two RFQ for engineering and construction management services for miscellaneous or small-scaled civil engineering projects that will allow the District to quickly issue task order on an as-needed basis.	Meet Engineering needs for Water Projects	1 & 2	Various projects
Date of Board Action: 12/14/17 Receive and file the report for development of a Well Construction and Rehabilitation Loan Program.	Staff Progress: Complete The District filed the Well Construction and Rehabilitation Loan Program to assist groundwater producers with its service area to increase their groundwater pumping capabilities.	Reduce the need for imported water	2	012
Date of Board Action: 02/21/18 Authorize a new Well Construction and Rehabilitation Loan Program, with an initial funding amount of $1.5 million transferred from the Safe Drinking Water Loan Program; and add the Well Construction and Rehabilitation Loan Program to the District's Five-Year Capital Improvement Plan. Preference for projects will be given to pumpers in disadvantaged communities.	Staff Progress: Ongoing The District developed the Well Construction and Rehabilitation Loan Program to assist groundwater producers within its service area to increase their groundwater pumping capabilities and reduce their need for imported water.	Reduce the need for imported water	2	006

Date of Board Action: 03/07/18 Receive and file the 2018 Engineering Survey and Report; and adopt Resolution No. 18/1074.	Staff Progress: Complete The ESR was received and filed by adopting Resolution No.18/1074. The ESR presents the necessary information on which the Board of Directors can declare whether funds shall be raised to purchase water for replenishment during the ensuing year and to finance projects and programs aimed at accomplishing groundwater replenishment.	Perform effective basin management	1	All
Date of Board Action: 06/13/18 Enter into an agreement with Eurofins Eaton Analytical, LLC for a three year term effective July 1, 2018 for professional laboratory services in the amount of $1,250,000 per year (or $3,750,000) plus a 10% contingency allowance of $375,000, for a total not to exceed budget amount of $4,125,000.	Staff Progress: On-going Eurofins Eaton Analytical provides water sample testing services for the District. Manage contract and work with EEA to obtain testing data	Perform effective basin management	1	Various projects
Date of Board Action: 06/13/18 Approve Amendment #1 to the on-call groundwater modeling professional services agreement with Intera, Inc. for an additional budgetary amount of $50,000 and a time extension through June 30, 2019.	Staff Progress: On-going The District develops and runs sophisticated computer models to represent and simulate the groundwater flow conditions under current and hypothetical future management scenarios. This contract amendment with Intera is necessary to address the District's current and immediate need for computer modeling services for several projects.	Perform effective basin management	1	025

*District Goal

1 – Provide safe and reliable groundwater
2 – Obtain independence from imported water sources
3 – Promote organizational excellence
4 – Advance groundwater awareness
5 – Foster environmental stewardship & water sustainability

GROUNDWATER QUALITY COMMITTEE

Supported by: The Engineering and Hydrogeology Departments

The Groundwater Quality Committee shall study, advise and make recommendations with regard to 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;
4. Provide input related to the District's Capital Improvement Program as it relates to water quality projects.

2017/18 Performance Metrics – Groundwater Quality Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Authorize the General Manager to approve a contract amendment with WorleyParsons for professional environmental consulting services for (1) a time extension through June 30, 2018 and (2) a budget increase of $70,000 which will be reimbursable from grant funds.	Staff Progress: On-going Work with Worley Parsons, providing environmental services on Groundwater Quality and Contamination issues that affect the quality of groundwater within the District. Additional work is needed in preparing for the grant-related work to extend the existing agreement through an amendment.	Perform Water Quality and Contamination issues	1	006
Date of Board Action:7/20/17 Authorize the General Manager to approve a no cost time extension amendment through June 30, 2018 with Aquilogic Inc. for As-Needed Professional Environmental Consulting Services.	Staff Progress: On-going Aquilogic has been providing professional environmental consulting services to the District's Groundwater Contamination Prevention Program to track contaminated sites considered to be a significant risk to drinking water supply aquifers within the Central Basin and West Coast Basins.	Perform Water Quality and Contamination issues	1	006
Date of Board Action:7/20/17 Authorize the General Manager to execute Contract Amendment No. 5 with Kennedy Communications for professional consulting services, for an additional amount not to exceed $75,000 through December 31, 2018.	Staff Progress: On-going Continue working with Kennedy Communication to assist water systems located in disadvantaged communities within the District's service area with project funding to address the issues related to their drinking water wells.	Perform Water Quality and Contamination issues	1	012
Date of Board Action:7/20/17 Authorize the General Manager to enter into an agreement with the Colorado School of Mines Advanced Water Technology Center for a ARC research project known as the "Sequel to Performance Assessment of Surface Spreading Operations Receiving Different Blends of Tertiary/Fully Advanced Treated Recycled Water" for an amount not to exceed $81,000 and a termination date no later than June 30, 2018.	Staff Progress: On-going Colorado School of Mines completed a laboratory study in 2010, of anticipated changes in subsurface water quality due to different blends of FAT water and tertiary water. With the construction of ARC approaching completion, an update to the study is required to evaluate the quality of recharged groundwater for any potential impacts of the blended FAT water and tertiary water.	Perform Water Quality issues	1 & 2	033

Date of Board Action: 8/24/17 Authorize the General Manager to execute a contract amendment with KEH & Associates and MNS Engineering for professional services related to the Safe Drinking Water Program for an amount not to exceed $500,000 each.	Staff Progress: On-going Continue working with KEH & Associates and MNS Engineering to provide technical assistance with water systems in Disadvantaged Communities to address issues related to their drinking water wells. Several of these projects move to the phases of the construction application and on-call engineering services continued to be needed thus the need for the contract amendment.	Perform Water Quality and Contamination issues	1 & 2	012
Date of Board Action: 10/19/17 Authorize the preparation and issuance of a Request for Proposals for Professional Well Profiling Services for the WRD Well Profiling Program.	Staff Progress: Complete Staff released a RFP for the WRD Well Profiling Program for the purpose of protecting and preserving the groundwater supplies from contamination within the WRD service area. The qualified company will perform testing of water supply wells to determine the flow and water quality profiles entering the wells from different zones.	Perform Water Quality and Contamination issues	1 & 2	011
Date of Board Action: 10/19/17 Authorize the preparation and issuance of a Request for Proposals for Professional Sampling & Laboratory Analytical Services for the Title 22 Groundwater Monitoring Program.	Staff Progress: Staff issued the RFP for professional sampling and laboratory analytical services in compliance with the Title 22 drinking water regulation for retail water agencies utilizing groundwater in the Central Basin and the West Coast Basin.	Perform Water Quality and Contamination issues	1 & 2	006
Date of Board Action: 10/19/17 Adopt Resolution No.17/1063 to grant a Non-Consumptive Water Use Permit to Northrop Grumman Systems Corporation for assignment to Omega Chemical PRP Group, LLC for cleanup activities at the Omega Chemical Superfund Site for an amount not to exceed 43 acre-feet per year or 215 acre-feet total for the 5-year permit term.	Staff Progress: Complete Resolution No 17/1063 was adopted to grant a Non-Consumptive Water Use Permit for a groundwater contamination clean-up at Omega Chemical..	Perform Water Quality and Contamination issues	1 & 2	006
Date of Board Action: 10/19/17 Adopt Resolution No. 17/1064 for Replenishment Assessment Exemption for groundwater clean-up at the Montrose Chemical Corporation, Los Angeles, California for a five year term.	Staff Progress: Complete Resolution No 17/1064 was adopted to grant a new exemption of replenishment assessment (RA) for five-years for groundwater clean-up at the Montrose Chemical Corporation.	Perform Water Quality and Contamination issues	1 & 2	006
Date of Board Action: 11/16/17 Adopt Resolution No. 17/1065, subject to approval of form by District counsel, to approve a Non-Consumptive Water Use Permit for groundwater cleanup at the Boeing C-1 facility site in Long Beach, California.	Staff Progress: Complete Resolution No. 17/1065 was adopted to grant a clean-up as part of an on-going groundwater clean-up at the Boeing C-1 facility and was required to reflect the abandonment and replacement of five (5) extraction wells and the increase in its annual extraction.	Perform Water Quality and Contamination issues	1 & 2	006
Date of Board Action: 11/16/17 (1)Adopt Resolution No. 17/1066 to become the Authorizing Representative to manage the financial assistance for the Maywood Avenue Treatment Project; (2)Execute a financial agreement with the State Water Resources Control Board for the Maywood Avenue Treatment Project; 3)Amend the MOU between Maywood Mutual Water Company No. 2 and the District to expand the District services to manage the installation of the Maywood Avenue Treatment Project, fulfil the requirements of AB240 and comply with State Water Resources Control Board financial assistance requirements and for Maywood Mutual Water Company No. 2 to be required to perform all operation and maintenance to ensure the fulfilment of all O&M requirements.	Staff Progress: Complete Resolution No. 17/1066 was signed and filed for the District to assist Maywood Mutual Co. #2, the participant under its SDW-DAC Pilot Program in procuring funding to address the issues related to their drinking water wells. The District served as an Authorizing Representative and recipient of funding on behalf of the participant and entered into a MOU with Maywood Mutual Co. #2 to manage the installation of the treatment system for their Maywood Avenue Well in compliance with the funding agreement.	Assist Water systems within the District service area	1 & 2	012
Date of Board Action: 11/16/17 Authorize staff to submit a grant application to the United States Geological Survey for participation in the National Groundwater Monitoring Network.	Staff Progress: On-going District's grant application to the National Groundwater Monitoring Network (NGWMN) is in the process. WRD has a very extensive groundwater monitoring network within California and joining the nationwide network would benefit both the District and the NGWMN with information for the nationwide of groundwater resources.	Provide groundwater monitoring resources	4	011

Date of Board Action: 12/14/17 Enter into an agreement with Weck Laboratory Inc. for a 3 year term effective January 1, 2018 for laboratory services for the Title 22 Monitoring Program in the amount of $225,000 plus contingencies and unencumbered funds already budgeted from the current contract, for an amount not to exceed $300,000.	Staff Progress: Complete Contracted with Weck Laboratory Inc. for sampling and analytical services for its Title 22 Groundwater Monitoring Program, monitoring water quality conditions of the selected retail water agencies within the basins, in compliance with the California Code Regulations Title 22 domestic water quality and monitoring regulations.	Protect groundwater quality against contamination	1 & 2	006
Date of Board Action: 02/21/18 Authorize the preparation and issuance of a Request for Qualifications (RFQ) for Professional Laboratory Services.	Staff Progress: Complete Staff issued a RFQ for Professional Laboratory Services to perform analytical laboratory testing for the District Water Quality Testing Program	Protect Water Quality and Contamination issues	1 & 2	Various projects
Date of Board Action: 02/21/18 Authorize execution of a Memorandum of Understanding between the District and the Los Angeles Regional Water Quality Control Board to work collaboratively on groundwater contamination issues in the Central Basin and West Coast Basin.	Staff Progress: Complete The MOU would enhance the District's ability to work together on mutually selected sites and/or areas to evaluate groundwater contamination or threat of contamination to the Basins. The work may also help identify other "high priority" sites that could be added to our existing Groundwater Contamination Program.	Protect Water Quality and Contamination issues	1 & 2	N/A
Date of Board Action: 03/07/18 Execute a no cost time extension contract amendment with KEH & Associates for professional services related to the Safe Drinking Water Program & Disadvantage Communities Pilot Program, extending the rate and term to April 2, 2019,	Staff Progress: On-going Continue working with KEH & Associates to provide on-call engineering services for a variety of projects in support of the District's Safe Drinking Program (SDW) and Capital Improvement Projects (CIP) to remove contaminants, improve water quality, and assist water systems to Disadvantaged communities within the District's service area.	Protect Groundwater quality against contamination	1 & 2	012
Date of Board Action: 03/07/18 Execute a no cost time extension contract amendment with MNS Engineers for professional services related to the Safe Drinking Water Program & Disadvantaged Communities Pilot Program, extending the rate and term to April 2, 2019.	Staff Progress: On-going Continue working with MNS to provide on-call engineering services for a variety of projects in support of the District's Safe Drinking Program (SDW) and Capital Improvement Projects (CIP) to remove contaminants, improve water quality, and assist water systems to Disadvantaged communities within the District's service area.	Protect Groundwater quality against contamination	1 & 2	012
Date of Board Action: 03/07/18 Execute a no cost time extension contract amendment with Tetra Tech for professional services related to the Safe Drinking Water Program & Disadvantaged Communities Pilot Program, extending the rate and term to April 2, 2019	Staff Progress: On-going Continue working with Tetra Tech to provide on-call engineering services for a variety of projects in support of the District's Safe Drinking Program (SDW) and Capital Improvement Projects (CIP) to remove contaminants, improve water quality, and assist water systems to Disadvantage communities within the District's service area.	Protect Groundwater quality against contamination	1 & 2	012
Date of Board Action: 03/07/18 Enter into an agreement with Intera Inc. for professional well profiling services for an amount not to exceed $340,000 and a termination date of March 31, 2019.	Staff Progress: Complete Contracted with Intera Inc for Well Profiling Services in detecting, protecting and preserving the groundwater supplies in the Basins.	Protect Groundwater quality against contamination	1 & 2	025
Date of Board Action: 03/07/18 Authorize the General Manager to execute Contract Amendment No. 6 with Kennedy Communications for professional consulting services, for an additional amount not to exceed $500,000 at a rate of $175/hour through December 31, 2021. The Committee also recommended reviewing this three year contract at the end of each year.	Staff Progress: On-going With the success of the District's SDW DAC Pilot Program in assisting basin pumpers with water contamination treatment and water quality improvement, continue working with Kennedy Communication in pursuing and processing funding opportunities and applications for the pumpers.	Protect Groundwater quality against contamination	1 & 2	012

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4 – Advance groundwater awareness
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FINANCE/AUDIT COMMITTEE, AD HOC BUDGET COMMITTEE, AD HOC BOND FINANCING COMMITTEE

Supported by: The Finance Department

The Finance/Audit & Ad Hoc Budget Committee shall study, advise and make recommendations with regard to 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. Be the oversight Committee responsible to the Board of Directors for coordinating the annual budget process and monitoring the budget as necessary to ensure that the operations of the District are conducted pursuant to it;
3. Be responsible to the Board for the District's investment policy and monitoring the District's investment portfolio. The committee is to monitor any short, intermediate, and long-term capital needs of the District;
4. Acts as the Audit Committee relating to the Comprehensive Annual Financial Audit (CAFA) conducted by the District's independent financial auditor; and,
5. Shall not make recommendations to the Board of Directors on any matters which are the purview of other committees.

2017/18 Performance Metrics – Finance/Audit Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Receive and file the demands list for February 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Receive and file the demands list for March 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Approve the Reserves Cash and Investment Report for February 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Approve the financial statements for February 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Approve the financial statements for March 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Approve the Trust Fund Report for February 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action:7/20/17 Approve expenses over 90 days.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN

Date of Board Action: 8/24/17 Receive and file the demands list for April 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Receive and file the demands over $100.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Approve the Reserves Cash and Investment Report for March 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Approve the Reserves Cash and Investment Report for April 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Approve the financial statements for April 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Approve the Trust Fund Report for March 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 8/24/17 Approve the Trust Fund Report for April 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Receive and file the demands list for July 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Receive and file the demands list for August 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Trust Fund Report for September 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Trust Fund Report for July 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Trust Fund Report for August 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Reserves, Cash and Investment Report for September 2016.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Reserves, Cash and Investment Report for July 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 10/19/17 Approve the Reserves, Cash and Investment Report for August 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Receive and file the demands list for September 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Approve the Trust Fund Report for September 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN

Date of Board Action: 11/16/17 Approve the Reserves, Cash and Investment Report for September 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Approve the financial statements for July 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Approve the financial statements for August 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Approve the financial statements for September 2017	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Approve an increase to the contract for Vasquez and Company for an amount not to exceed $3,135.	Staff Progress: Complete Approved for Vasquez to perform the District Financial Audit	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Receive and file the list of reimbursed expenses over $100 and make available for public inspection in accordance with California Government Code §53065.5.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 11/16/17 Authorize Art's Manufacturing and Supply, Inc. (AMS) to perform maintenance and repair on their skid mounted, hydraulically driven, double pump sampling system designed for WRD's Groundwater Monitoring Program for a cost not to exceed $20,000.	Staff Progress: Complete AMS is a proprietary vendor specialized in customized equipment for the District's Regional Groundwater Monitoring Program and due for a sole-source repair	Provide operation and maintenance services for the monitoring wells	1	011
Date of Board Action: 12/14/17 Approve expenses over 90 days.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 12/21/17 Approve Expenses Over 90 Days.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 02/21/18 Receive and file the demands list for November 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 02/21/18 Approve the Trust Fund Report for November 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 02/21/18 Approve the Reserves Cash and Investment Report for November 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 02/21/18 Approve the financial statements for November 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 04/03/18 Receive and file the BAC recommendation of 6.6% or $21.00 increase to the Replenishment Assessment based upon 217,300 acre-feet of production with $1,000,000 budgeted for water storage revenue.	Staff Progress: Complete Received and filed the BAC recommendation of 6.6%, or $21.00, increase to the Replenishment Assessment based upon 217,300 acre-feet of production with $1,000,000 budgeted for water storage revenue	Provide public transparency and accountability and comply with California State Water Code	3	ADMIN

Date of Board Action: 04/03/18 Open the Public Hearing on the fiscal year 2018/19 proposed replenishment assessment and close the public hearing after receiving all oral and written evidence and public testimony and considering whether a majority protest exists from active pumpers.	Staff Progress: Complete Provided the Board of Directors and the public with an open public hearing process related to the 2018/19 Replenishment Assessment and adopted the related Resolution.	Provide public transparency and accountability and comply with California State Water Code	3	ADMIN
Date of Board Action: 04/03/18 Adopt Resolution No. 18/1076 to establish the fiscal year 2018/19 Replenishment Assessment and instruct staff to file an appropriate Notice of Exemption for the action.	Staff Progress: Complete Approved the 2018/19 Replenishment Assessment at $339.00 per acre-foot of groundwater pumped, adopted the related Resolution, and filed the appropriate Notice of Exemption.	Provide public transparency and accountability and comply with California State Water Code	3	ADMIN
Date of Board Action: 04/03/18 Approve the 2018/19 Budget reflecting an increase of $21.00 to the Replenishment Assessment from $318.00 to $339.00 per acre-foot or a 6.6% increase.	Staff Progress: Complete The 2018/19 Budget was approved and filed with the related Replenishment Assessment.	Provide public transparency and accountability and comply with California State Water Code	3	ADMIN
Date of Board Action: 05/02/18 Approve the Reserves Cash and Investment Report for December 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 05/02/18 Receive and file the demands list for December 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 05/02/18 Approve the Trust Fund Report for December 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 05/02/18 Approve the financial statements for December 2017.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Receive and file the demands list for January 2018	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Approve the financial statements for January 2018.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Approve the Reserves Cash and Investment Report for January 2018.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Approve the Trust Fund Report for January 2018	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 *Approve Expenses Over 90 Days.*	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Authorize staff to issue a new RFP for the independent financial auditor contract for a three-year term.	Staff Progress: Complete Approved	Promote organization efficiencies & provide transparency and accountability	3	ADMIN

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ADMINISTRATIVE COMMITTEE

Supported by: The Internal Services Department

The Administrative Committee shall study, advise and make recommendations with regard to the following:

1. Administrative and personnel policies and procedures to be considered by the Board of Directors;
2. Be responsible for the 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 responsibility; and,
3. Periodic independent reviews and studies of the organization, classification of positions and related compensation ranges as outlined in the memorandum of understanding with the employees bargaining unit.

2017/18 Performance Metrics – Administrative Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Authorize the General Manager to purchase the 98-inch HD display manufactured by Christie from CDWG for an amount not to exceed $17,058.63.	Staff Progress: Complete The District's Board room video display was replaced with a high definition (HD) professional quality that will provide a bright and legible display for the board room audience and is able to integrate with the existing Audio/Visual control system	To provide the District with better communication technology	3	040
Date of Board Action:7/20/17 Adopt Resolution No. 17/1055 establishing Procedure for Disposal of Surplus Personal Property.	Staff Progress: Complete Resolution No 17/1055 was filed for the District's disposal of personal property such as outdated, worn-out, and unnecessary equipment.	Policy regarding unnecessary property	3	All
Date of Board Action:7/20/17 Adopt the organizational structure and associated WRD Managers Salary Schedule with a change in title of the proposed District Engineer position to instead be Manager of Engineering to be consistent with other WRD Manager titles of the same level; and to allow opening of the recruitment for the position to all qualified WRD staff.	Staff Progress: Complete The District's Organization Chart was revised and adopted to meet the needs of the District's growing operations and organizational structure.	Recruit, develop and retain high quality staff	3	All
Date of Board Action: 11/16/17 Approve payment of design fees to Frontier Communications in an amount not to exceed $12,800.	Staff Progress: Complete As part of the on-going construction of the ARC, Frontier Communication completed a design of the telecommunication system as part of the utility service connection required by building codes.	To assist with the construction of ARC	1 & 2	033
Date of Board Action: 11/16/17 Authorize the preparation and issuance of a Request for Proposals for Professional Janitorial Services for the District.	Staff Progress: Complete The District issued a RFP for janitorial services to obtain additional bids with an option to replace the current vendor due to unsatisfactory performance.	Maintain a clean District Building	3	ADMIN

Date of Board Action: 11/16/17 Authorize staff to release a Request for Qualifications (RFQ) for a Classification and Compensation Study.	Staff Progress: Complete Staff released the issuance of a RFQ for Classification and Compensation study to compare the District's current compensation and benefits practice to the labor market.	Retain High Quality Staff	3	ADMIN
Date of Board Action: 01/31/18 Adopt Resolution No. 18/1071 to set transportation and communications allowances for the WRD Board of Directors.	Staff Progress: Complete Resolution No 18/1071 was adopted to increase the Directors transportation and communication allowances to cover the cost of equipment and services needed to carry out their official duties as members of the Board of Directors.	To set transportation and communication allowances for the Board of Directors	3	ADMIN
Date of Board Action: 02/21/18 Authorize the General Manager to execute a contract with Civic Resource Group International, Inc. (dba CivicConnect) to provide enhancements to the form and function of the District's public-facing web site (Phase 2 of the Web Development Project) for an amount not to exceed budgeted amount of $39,445 with a contract expiration date of August 31, 2018.	Staff Progress: Complete Work with Civic Connect to enhance the District's public-facing web site to leveraged digital communication to reach the general public, WRD's groundwater community, and water experts around the world.	To improve the District's Web Communication	4	EAE
Date of Board Action: 06/13/18 Execute Amendment No.1 to Agreement No. 929 with Advanced Document Solutions, Inc., for a no cost time extension through December 31, 2018.	Staff Progress: On-going Advanced Document Solutions is working to automate the District's Accounts Payable workflow as part of the WRD's Asset Management Master Plan initiatives including software and implementation services. This amendment extends the timeline to 12/31/18.	Promote organization efficiencies	3	ADMIN
Date of Board Action: 06/13/18 Adopt the Resolution authorizing the inclusion of specified Johnson Controls materials in bids for district owned facilities.	Staff Progress: On-going Johnson Controls are specific controls, and staff wishes to include this company by resolution for future bidding on projects for consistency across all WRD-owned facilities	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Approve a resolution to amend the WRD District Administrative Code to include the Budget Advisory Committee.	Staff Progress: Complete This resolution is to continue the Budget Advisory committee (BAC) and adopt provisions for the same in the Administrative Code for the District.	Promote organization efficiencies & provide transparency and accountability	3	ADMIN
Date of Board Action: 06/13/18 Adopt the Resolution approving revisions to the WRD Administrative Code.	Staff Progress: Complete Provides revisions and clarity to the existing Administrative Code.	Promote organization efficiencies & provide transparency and accountability	3	ADMIN

*District Goal

1 – Provide safe and reliable groundwater
2 – Obtain independence from imported water sources
3 – Promote organizational excellence
4 – Advance groundwater awareness
5 – Foster environmental stewardship & water sustainability

EXTERNAL AFFAIRS COMMITTEE

Supported by: The External Affairs Department

The External Affairs Committee shall study, advise and make recommendations with regard to the following:

1. Proposals and recommendations concerning Local, Regional, State and Federal legislation, or amendments thereto, that may affect the District;
2. Opportunities for members of the Board to assist in outreach activities, including efforts to inform members of the Legislature or the Congress of the District's position with regard to 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.

2017/18 Performance Metrics – External Affairs Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Revise its position on SB771 from "Oppose Unless Amended" to "Watch."	Staff Progress: Complete The proposed bill would establish a continuing education requirement for employees of public agencies who have responsibility of overseeing compliance with the act. The bill would impose a state-mandated local program and the District changed its position from "Oppose Unless Amended" to "watch".	District's position with regard to proposed legislation	4	EAE
Date of Board Action: 8/24/17 Approve the sponsorship of the Daily Breeze Newspapers in Education program for the 2017/18 school year in an amount not to exceed $1,200.	Staff Progress: Complete Utilized the Daily Breeze Newspaper in Education Program as an outreach tool to educate the public of the District's Water Education Program.	Provide groundwater education to the general public	4	EAE
Date of Board Action: 8/24/17 Authorize the General Manager to enter into a Professional Services Agreement with the South Bay Cities Council of Governments in an amount not to exceed $25,000 with a contract term that ends on March 31, 2018.	Staff Progress: Complete Partnership with SBCCOG on advancing the WRD's mission in the SBCCOG's service area, in support of educational outreach for the District's water programs.	Provide groundwater education to the general public	4	EAE
Date of Board Action: 8/24/17 Approve the West Basin 2017 Water Harvest sponsorship in an amount not to exceed $2,500.	Staff Progress: Complete Participation in West Basin Water Harvest through the District's outreach program to increase awareness of the District's mission to provide and protect high-quality groundwater to the region, as well as develop key relationships and partnerships with others who share this mission.	Provide groundwater education to the general public	4	EAE

Date of Board Action: 10/19/17 Change the name of WRD's Communication and Education Services Department to External Affairs Department.	Staff Progress: Complete Name change to the External Affairs Department enabling the public to better understand the role of the department in informing the public about WRD projects and programs, conservation efforts and legislative affairs.	Provide public communica-tions, outreach and government affairs	4	EAE
Date of Board Action: 11/16/17 Adopt Resolution No. 17/1067 for the filing of the application for the California Coastal Commission Whale Tail Competitive Grants Program.	Staff Progress: Complete Approved the filing of an Application for education program funds from the CCC Whale Tail Grant Program certifying the project's consistency with the District's mission.	Provide funds for water educational program	4	EAE
Date of Board Action: 11/16/17 Approve the First Amendment to Agreement #906 for Professional Services with Pacific Atlantic Partners and the First Amendment to Agreement #905 for Professional Services with Reeb Government Relations, LLC. to move $5,000 from the federal lobbying contract (#906) to the state lobbying contract (#905) due to the increased legislative load next year.	Staff Progress: On-Going Continue working with Pacific Atlantic Partners and Reeb Government Relation as federal and state lobbyist with more focus on State level interest for the District.	To advance the mission of the District	4	EAE
Date of Board Action: 12/14/17 Approve the sponsorship for FoLAR (Friends of the LA River) in an amount not to exceed $5,000.	Staff Progress: Complete Sponsoring the FOLAR's series of community events provides opportunity to share WRD's mission of educating the public about protecting water and groundwater resources. It also broaden its outreach efforts.	To advance the mission of the District	4	EAE
Date of Board Action: 12/14/17 Approve sponsorship of the Long Beach Chamber of Commerce California visionary luncheon for an amount not to exceed $1,095 and to approve sponsorship of the San Pedro Chamber of Commerce's State of the County event in an amount not to exceed $500.	Staff Progress: Complete The event offers WRD the opportunity to educate the public about the District's programs and projects, especially the important work under way by the District, including the ARC and the Leo J. Vander Lans(AWTF).	To advance the mission of the District	4	EAE
Date of Board Action: 12/14/17 Approve issuance of a Request for Qualifications for State Advocacy Services intended to supplement existing services.	Staff Progress: Complete RFQ was issued for anticipated supplemental state advocacy work required to deliver a series of legislative goals that advance the mission of the District.	To advance the mission of the District	4	EAE
Date of Board Action: 12/14/17 Increase the Chamber of Commerce Membership budget by $5,000 to allow for a contingency amount for increases in chamber membership dues during the fiscal year.	Staff Progress: Complete The event offers WRD the opportunity to educate the public about the District's programs and projects, especially the important work under way by the District, including the ARC and the Leo J. Vander Lans(AWTF).	To advance the mission of the District	4	EAE
Date of Board Action: 12/21/17 Approve renewal of the 2017/18 membership to the Los Angeles Business Council in an amount not to exceed $5,000.	Staff Progress: Complete Memberships in the Los Angeles Business Council offers WRD the opportunity to educate high-level officials about the District's water replenishment projects and accomplishments.	To advance the mission of the District	4	EAE
Date of Board Action: 12/21/17 Approve a regional sponsorship to the California NAACP in an amount not to exceed $2,000 and to transfer this amount in an evenly divided split ($400) as reimbursement to the directors' sponsorship accounts.	Staff Progress: Complete The sponsorship offered WRD the opportunity to partici-pate in and educate the thousands of attendees about the District's efforts to become independent of imported water through its Water Independents Now (WIN) Program.	To advance the mission of the District	4	EAE
Date of Board Action: 01/31/18 Authorize the execution of a professional services agreement with Lang, Hansen, O'Malley & Miller for Advocacy Support Services in an amount not to exceed $100,000.	Staff Progress: Complete O'Malley & Miller is assisting WRD with legislative advocacy efforts in Sacramento that will impact the District in strength-ening its long term financial stability to help finance future projects.	To advance the mission of the District	4	EAE

Date of Board Action: 02/21/18 Approve renewal of the 2017/18 annual membership and all future renewals to the Southern California Water Committee in an amount not to exceed $5,000.	Staff Progress: Complete The District has been a basic member for the Southern California Water Committee Coalition as a channel to inform Southern California residents about water needs and state's water resources.	To advance the mission of the District	4	EAE
Date of Board Action: 02/21/18 Approve WRD's additional 2017/18 conference sponsorship participation to the American Groundwater Trust, Water Education for Latino Leaders, and Southwest Membrane Operator Association for a cumulative amount of $8,500.	Staff Progress: Complete WRD participated in water industry and association conferences as an opportunity to increase awareness of the District's mission and to provide key relationships and partnerships with others who share the same mission.	To advance the mission of the District	4	EAE
Date of Board Action: 02/21/18 Approve the additional regional sponsorship participation to the Torrance Chamber of Commerce events and the American Red Cross for a cumulative amount not to exceed $3,500.	Staff Progress: Complete Through these sponsorships, the District has successfully raised awareness about WRD's efforts to create locally sustainable and resilient projects that will protect the region from future droughts.	To advance the mission of the District	4	EAE
Date of Board Action: 02/21/18 Approve the budget for the Chambers of Commerce membership dues for the 2018/19 fiscal year in an amount not to exceed $57,000 and approval of the budget for Regional Sponsorships for the 2018/19 fiscal year in an amount not to exceed $56,000.	Staff Progress: Complete The District maintains annual memberships with local and regional chambers of commerce which provide WRD with a platform to educate businesses about WRD projects and programs as well as important regional groundwater planning matters.	To advance the mission of the District	4	EAE
Date of Board Action: 04/18/18 Approve a sponsorship participation with the California Latino Leadership Institute for an amount not to exceed $5,000.	Staff Progress: Complete Sponsoring the CLLI's Youth Program within the WRD's targeted cities of Vernon, Cudahy, Huntington Park, Maywood, Bell and South Gate, provides opportunity to share WRD's mission to the young generation and educate them about the work of the District. It also broaden its outreach efforts.	To advance the mission of the District	4	EAE
Date of Board Action: 04/18/18 Approve a sponsorship participation with Young Invincibles for an amount not to exceed $2,500.	Staff Progress: Complete This event allows WRD to engage an entire new generation of environmentally-minded leaders and educate them about the work of the District.	To advance the mission of the District	4	EAE
Date of Board Action: 05/02/18 Approve a sponsorship participation with the California League of Cities' Women's Caucus for an amount not to exceed $7,500.	Staff Progress: Complete This event sponsorship provided WRD an opportunity to highlight the District's effort on WIN and educate officials about the progress of ARC.	To advance the mission of the District	4	EAE
Date of Board Action: 05/02/18 Approve Amendment No. 2 with Milagro Strategy Group for an additional contract amount not to exceed $20,000 and expiring on December 31, 2019.	Staff Progress: Complete Continue working with Milagro Strategy Group to provide media presentation skills training for the Board Members and staff due to new staff members recently joined the District and additional Spanish outreach support for ARC.	To advance the mission of the District	4	EAE
Date of Board Action: 06/13/18 Execute an Amendment No.1 to Agreement No. 948 with the Colorado School of Mines for the research project known as the "Sequel to Performance Assessment of Surface Spreading Operations Receiving Different Blends of Tertiary/Fully Advanced Treated Recycled Water" for a time extension through September 30, 2018 and a budget increase of $20,000.	Staff Progress: On-going Colorado School of Mines completed a laboratory study in 2010, of anticipated changes in subsurface water quality due to different blends of FAT water and tertiary water. With the construction of ARC-AWTF approaching completion, an update to the study is required to evaluate the quality of recharged groundwater for any potential impacts of the blended FAT water and tertiary water. This amendment extends the timeline and increases the original contracted amount.	Perform Water Quality issues	1 & 2	033

Date of Board Action: 06/13/18 Enter into Amendment #1 with Schlumberger for a no cost time extension for borehole geophysical logging through June 30, 2019.	Staff Progress: On-going WRD is constructing two new monitoring wells to address data gap and help improve the monitoring network and overall coverage within the Central Basin. Working with Schlumberger to perform geophysical borehole logging at the wells to help WRD design the placement of the monitoring wells to ensure successful connection to the aquifers.	Effectively manage groundwater conditions within its service area	1	011
Date of Board Action: 06/13/18 Approve the sponsorship for the Long Beach Chamber of Commerce Visionaries Series in the amount of $750.	Staff Progress: Complete Provides WRD an opportunity to highlight the District's effort on WIN and educate officials about the progress of ARC.	To advance the mission of the District	4	EAE
Date of Board Action: 06/13/18 Approve a sponsorship in the amount of $1,000 for the Pico Rivera Installation.	Staff Progress: Complete Provides WRD an opportunity to highlight the District's effort on WIN and educate officials about the progress of ARC.	To advance the mission of the District	4	EAE
Date of Board Action: 06/13/18 Approve the District's support of AB2060 and AB2064.	Staff Progress: On-going These 2 legislative bills allow for disadvantaged community entities and small agencies to obtain advanced payments of up to $500,000 or 50% for grants for projects when the money would typically have to be paid upfront	Perform effective basin management, promote water awareness & conservation, and to foster environmental stewardship	1, 3, 4 & 5	EAC & 005

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5 – Foster environmental stewardship & water sustainability

CAPITAL IMPROVEMENT PROJECTS (CIP) COMMITTEE

Supported by: Engineering, Hydrogeology, Finance, Internal Services and External Affairs Departments

The CIP Committee shall study, advise and make recommendations with regard to all capital improvement related projects.

1. Provides systematic evaluation of all potential projects
2. Identify the most economical means of financing capital improvements
3. A communication tool for public relations and stakeholder
4. Focus on completing projects identified under the Water Independence Now (WIN)

2017/18 Performance Metrics – Capital Improvement Projects (CIP) Committee

Board Action	Staff Performance Measure	Board Objective	District Goal*	Project
Date of Board Action:7/20/17 Authorize the General Manager to execute a Professional Services Agreement with Schlumberger Technology Corporation for borehole logging, data processing, and reporting for an amount not to exceed $165,000, plus a $16,500 contingency, for a total project budget amount of $181,500.	Staff Progress: Complete WRD is constructing two new monitoring wells to address data gap and help improve the monitoring network and overall coverage within the Central Basin. Working with Schlumberger to perform geophysical borehole logging at the wells to help WRD design the placement of the monitoring wells to ensure successful connection to the aquifers.	Effectively manage groundwater conditions within its service area	1	011
Date of Board Action:7/20/17 Authorize the General Manager to purchase Microsoft and VMWare licenses from CDWG for the SCADA network, for an amount not to exceed $64,950.	Staff Progress: Complete The District is standardizing its SCADA systems at all five WRD facilities and required VMWare technology license to allow several Microsoft Windows servers to run on one physical server	To manage and monitor various water management facilities throughout the basins	3	039
Date of Board Action:7/20/17 Increase the project budget for the Robert W. Goldsworthy Desalter Expansion Project for an amount not to exceed $847,000, which consists of $770,000 plus a 10% contingency of $77,000, for a total project budget of $13,520,000.	Staff Progress: Complete The project budget for the Robert W. Goldsworthy Desalter Expansion was increased to cover anticipated changes of additional scope of work such as, addressing unforeseen issues, project delays and upgrades to SCADA,	To expand the Goldsworthy water facility	4	002
Date of Board Action:7/20/17 Authorize the General Manager to enter into a contract with Spectrum Communications for internet connection services at the ARC, Vander Lans AWTF and administration building, for an amount not to exceed $535,350.	Staff Progress: Complete Contracted with Spectrum Communication to provide internet connections at all WRD facilities as part of the District's Asset Management initiative to remotely monitor operations data and equipment at the District's various facilities.	To manage and monitor various water management facilities throughout the basins	3	040
Date of Board Action: 7/27/17 Authorize the Assistant General Manager to execute a right-of-entry permit with the City of Los Angeles, Department of Recreation and Parks for the installation of one nested groundwater monitoring well (Los Angeles 5).	Staff Progress: Complete WRD is constructing two new monitoring wells to address data gap and help improve the monitoring network and overall coverage within the Central Basin. A right-of-entry permit from the City of Los Angeles is required to access the property where one of the wells is drilled.	Effectively manage groundwater conditions within its service area	1	011

Date of Board Action: 7/27/17 Adopt Resolution No. 17/1061 approving an application for the USBR 2017 WaterSmart: Title XVI Grant Program for ARC and authorize the Assistant General Manager to enter into a cooperative agreement with the USBR.	Staff Progress: Complete WRD submitted a grant application to the USBR for their 2017 WaterSmart Title XVI Grant Program for the ARC project as part of its (WIN) water recycling program.	To develop local and sustainable sources of water	2	033
Date of Board Action: 8/24/17 Authorize the General Manager to execute a no-cost, 1-year extension to the agreement with the County of Los Angeles Flood Control District and City of Los Angeles Department of Water and Power associated with Dominguez Gap Seawater Barrier Project.	Staff Progress: Complete The District entered into an agreement with County of LA FCD and LADWP for reclaimed water service to the Dominguez Seawater Barrier Project. A no-cost 1 year extension is needed while staff are working with FCD, LADWP and LASAN on a new agreement to establish unit-cost charges for the water delivery.	Maximize use of groundwater basins to eliminate demands for imported water	1 & 2	WTR
Date of Board Action: 8/24/17 Authorize the General Manager to execute a no-cost, 1-year time extension to Agreement No. 74570 with the County of Los Angeles Flood Control District and Orange County Water District regarding recycled water deliveries to the Alamitos Seawater Barrier Project.	Staff Progress: Complete The District entered into an agreement with County of LA Flood Control District and OCWD regarding recycled water deliveries to the Alamitos Seawater Barrier Project. A no-cost 1 year extension is needed to review and negotiate the potential modifications to bring it into consistency with Agreement at the two other District barrier projects.	Maximize use of groundwater basins to eliminate demands for imported water	1 & 2	001
Date of Board Action: 8/24/17 Authorize the General Manager to execute a contract amendment with Water Compliance Solutions for an additional amount of $50,000 and a time extension through March 31, 2018.	Staff Progress: Complete Contracted with Water Compliance Solutions (WCS) to assist the District with recycled water permit compliance matters for ARC and several other projects. An amendment is required due to unanticipated compliance requirement for some projects.	Advance the District's ARC and other recycle water projects	1 & 2	033
Date of Board Action: 8/24/17 Direct staff to proceed with the process of naming the District's Lakewood headquarters Board Room the "Willard H. Murray, Jr. Board Room", and develop appropriate signage for placement outside the Board Room.	Staff Progress: Complete The District officially named its board room "Willard H. Murray, Jr. Board Room by honoring Director Murray's years of service.	To recognize Public Service	3	ADMIN
Date of Board Action: 8/24/17 Authorize the General Manager to execute a professional services contract with E & M Electrical and Machinery, Inc. dba Wonderware California for the amount of $128,000 (rounded), plus a 10% contingency of $12,800.00, for a total amount not to exceed $140,800.00, and the term ending on December 31, 2020.	Staff Progress: Complete Wonderware software are being utilized by the District's existing water facilities and also selected as a standardized software for its SCADA system program. Therefore some of the Wonderware software licenses at the existing WRD facilities required a software upgrade, additional licenses, and extended customer support services.	Advance District facilities with software technologies	3	039
Date of Board Action: 8/24/17 Authorize the General Manager to execute an Amendment No.2 to the Professional Services Agreement with Kindel Gagan, Inc. for an amount not to exceed $240,000 with a two year contract term time extension through June 30, 2019.	Staff Progress: On-going Continuing working with Kindel Gagan for providing strategic support services. The firm serves as a policy advisor to the District, providing assistance in developing and implementing District plans, programs and policy initiatives.	Instrumental to the District's Strategic Plan	4	005

Date of Board Action: 8/24/17 Authorize the General Manager to enter into a Professional Services Agreement with Kestrel Consulting for Loans and Grants Management and Writing Services in an amount not to exceed $528,000 (rounded) and with a three-year contract term that ends on June 30, 2020.	Staff Progress: Complete Working with Kestrel Consulting, in providing grant management and grant writing services to assist the District with managing various types of grant awards funded through grants, loans and a combination of both.	Provide funding sources for groundwater management, sustainability, water quality, water recycling, water desalination, and community outreach and education	1 & 2	Various projects
Date of Board Action: 8/24/17 Adopt Resolution No. 17/1058 appointing Robb Whitaker as the primary board member and Esther Rojas as the alternate member to represent the District on the Board of the GWMA.	Staff Progress: Complete Re-appointment of Robb Whitaker and Esther Rojas as the District's representatives to the GWMA was filed through Resolution No. 17/1058 to represent the District in the watershed-based coalition that will benefit the District in water management, funding sources for its projects and programs.	To develop relationships at the regional, state and federal level	1 & 2	All
Date of Board Action: 8/24/17 Adopt Resolution No. 17/1062 approving an application for the DWR 2017 Proposition 1 Water Desalination Grant Program for the Regional Brackish Water Reclamation Program and authorize the General Manager to enter into a cooperative agreement with the DWR.	Staff Progress: Complete The District submitted a grant funding application to DWR for its desalination projects (Regional Brackishwater Reclamation Program) that will remediate up to 600,000 of an existing saline plume in the West Coast Groundwater Basin as part of its WIN program initiatives.	To develop local and sustainable sources of water for use in groundwater activities	1 & 2	All
Date of Board Action: 9/21/17 Authorize the General Manager to prepare and release a Request for Qualifications (RFQ) for Business and Enterprise Network Architecture and Systems design consulting services for the Groundwater Reliability Improvement Project (ARC) facilities.	Staff Progress: Complete The Construction of ARC under the design-build contract does not cover all aspects of the interior furniture, fixtures and business and enterprise network architecture and systems of the facility. RFQ was issued for a systems designer consultant.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033
Date of Board Action: 9/21/17 Authorize the General Manager to purchase a server and storage system from DataOn Storage for an amount of $86,500, plus a 10% contingency of $8,650, for a total amount not to exceed $95,150.	Staff Progress: Complete The District's existing computer server and storage system required an upgrade to cater to the higher demand on the computing and database infrastructure of the District.	To manage the life-cycle of the District's business network.	3	ADMIN
Date of Board Action: 9/21/17 Authorize the General Manager to purchase Microsoft licenses from CDWG for $17,100, plus a 10% contingency of $1,710, for a total amount not to exceed $18,810.	Staff Progress: Complete The District's existing computer server and storage system required an upgrade to cater to the higher demand on the computing and database infrastructure of the District.	To manage the life-cycle of the District's business network.	3	ADMIN

Date of Board Action: 9/21/17 Authorize the General Manager to execute: 1) Amendment No. 5 to Agreement No. 752 with Carollo Engineers to provide additional engineering support for the Robert W. Goldsworthy Desalter Expansion Project for an amount not to exceed $87,500 and extend the term of the agreement to December 31, 2018, and 2) Amendment No. 2 to Agreement No. 787 with Carollo Engineers to provide additional construction management services for the Robert W. Goldsworthy Desalter Expansion Project for an amount not to exceed $97,500 and extend the term of the agreement to December 31, 2018.	Staff Progress: On-going Continue working with Carollo to provide construction management services to the Goldsworthy Desalter Expansion for unanticipated issues required for completion of the construction project which will provide increased saline groundwater reclamation.	Provide alternative water supply to the City of Torrance and mitigate the saline plume within the West Coast Groundwater Basin	1	002
Date of Board Action: 9/21/17 Authorize the General Manager to execute Amendment No. 1, to Agreement #919 with Mad Systems, for Phase 2 of the ARC Interpretive / Exhibitry Design, Construction, and Installation Services Project for an amount of $2,250,000, plus a 10% contingency of $250,000, for a total project budget amount of $2,500,000, and for a time extension through June 30, 2019.	Staff Progress: On-going Mad System is developing educational exhibitries for the District's facility at WRD Building, LVL and ARC, as a supplement to WRD's ongoing education program to educate the public about groundwater and replenishment operations, as an essential resource to the region's water supply. Phase 1 for the WRD Building Exhibitry is completed and continue working with Mad Systems to develop the ARC Exhibiry, (Phase 2).	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033
Date of Board Action: 10/19/17 Approve the execution of a two-year professional services agreement with Butier Engineering Inc., subject to approval as to form by District Counsel, for construction management services for three Safe Drinking Water approved projects for a total contract amount of $216,000, plus a 15% contingency allowance of $33,000, for a total project budget amount of $250,000.	Staff Progress: Complete Butier Engineering provided construction management services for construction of the District's multiple Safe Drinking Water Wellhead Treatment Projects as an effective means of removing contaminants (VOC) from groundwater wells as part of its Clean Water Program.	Promote the Safe Drinking Water Program and groundwater cleanup	1	012
Date of Board Action: 10/19/17 Approve the execution of a two-year professional services agreement with NSGIS, subject to approval as to form by District Counsel, to develop an upgraded Interactive Online GIS Mapping and Analysis Application for a total contract amount not to exceed $77,000, which includes contingency.	Staff Progress: Complete As part of the District's Information Management Master Plan, NSGIS was selected to provide professional integration and design services to replace the Districts' Online GIS software application that will meet the District's current industry standards and needs.	Provide online interactive mapping application and other GIS functions to the public	1	010
Date of Board Action: 11/16/17 Authorize the General Manager to approve funds for ArcGIS Server Consulting Services Training for a cost not to exceed $9,518.	Staff Progress: Complete As part of the District's Information Management Master Plan, ESRI was contracted to upgrade the existing GIS server to ESRI ArcGIS Enterprise Server.	Provide online interactive mapping application and other GIS functions to the public	1	010
Date of Board Action: 11/16/17 Receive and file the report of value engineering assessment of the ARC OE/OA contract.	Staff Progress: Complete Staff received and filed a report of value engineering assessment of the OE/OA verifying the fees was in line with the scope of work being performed for the construction of ARC.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033
Date of Board Action: 11/16/17 Adopt the Updated Five-Year Capital Improvement Program for Fiscal Years 2017/18 through 2021/22 and authorize staff to file a Notice of Exemption from CEQA.	Staff Progress: Complete The District's Updated Five-Year CIP for FY2017/18 was adopted and Notice of Exemption was filed.	Advance the District's Capital Improvement Projects.	ALL	ALL

Date of Board Action: 12/21/17 Accept the Office Renovation Phase II project as complete, authorize the General Manager to file a Notice of Completion with the Los Angeles County Clerk's office in accordance with the California Public Contract Code, and authorize release of construction contract retention in an amount not to exceed $8,370.00.	Staff Progress: Complete Notice of Completion of Office Renovations Phase II Project was filed with the Los Angeles County Clerk's office and retention fund was released to R Dependable Construction Inc. The District Renovated Building provided staff to better accommodation of specialized office equipment and filing needs.	Provide more space for District projects and staff to grow	3	ADMIN
Date of Board Action: 01/31/18 Execute Amendment No. 1 to Agreement No. 880 with RMC Water and Environment to provide additional scope items for the hydraulic analysis and optimization of the Leo J. Vander Lans for an amount not to exceed $179,052 and extend the term of the agreement to December 31, 2018.	Staff Progress: on-going Continue working with RMC regarding hydraulic and operational efficiencies alternative study to help address the existing supply challenges facing LVL.	Provide alternative water supply to LVL AWTF	2	001
Date of Board Action: 01/31/18 Approve naming the Groundwater Reliability Improvement Program Advanced Water Treatment Facility (ARC) as the Albert Robles Center for Water Recycling and Environmental Learning.	Staff Progress: Complete the ARC facility is now officially called Albert Robles Center named after Director Albert Robles as an acknowledgement of his long public service as a member of the WRD Board of Directors.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	ADMIN
Date of Board Action: 02/21/18 Approve the release of a Request for Proposals for the Regional Brackish Water Reclamation Program.	Staff Progress: Complete The District staff released the RFP seeking proposals from qualified firms to provide services to perform a Feasibility Study for WRD's Regional Brackish Water Reclamation Program, to evaluate ways to remediate the basin.	Protect groundwater quality against contamination	1 & 2	006
Date of Board Action: 02/21/18 Increase the project budget for the Robert W. Goldsworthy Desalter Expansion Project for an amount not to exceed $235,922, for a total project budget of $13,755,922.	Staff Progress: Complete Shimmick Construction is providing construction services for the expansion of the District's Robert W Goldsworthy Desalter. Due to unanticipated change orders related to procurement of new reverse osmosis elements, upgrades to the plant control system and implementation of the District's new SCADA standards, the District increased project budget cost to fund the change orders.	Provide alternative water supply to the City of Torrance and mitigate the saline plume within the West Coast Groundwater Basin	1	002
Date of Board Action: 03/07/18 Authorize an amendment to the professional services agreement with Environmental Science Associates for environmental monitoring services related to the construction of the ARC in the amount of 180,000, plus a 10% contingency allowance of $18,000, for a total amendment amount of $198,000; and the contract term be extended through March 31, 2019.	Staff Progress: On-going Continue working with ESA for environmental monitoring services related to the construction of ARC to ensure environmental compliance with CEQA. Since the project completion is extended to December 31, 2018, the District also extended ESA's services to reduce or avoid any potential environmental impacts through the project..	Advance the District's Groundwater Reliability Improvement Program (ARC)	1	033
Date of Board Action: 04/03/18 Receive and file the 2018 Cost of Service Report.	Staff Progress: Complete Received and filed 2018 Cost Of Service report to describe the services the District anticipates performing in fiscal year 2018/19 and to analyze the costs of providing these services.	Provide public transparency and to comply with Proposition 2018	3	Admin

Date of Board Action: 04/18/18 Accept the Office Renovation Phase II Project as complete, authorize the General Manager to file a Notice of Completion with the Los Angeles County Clerk's office in accordance with the California Public Contract Code and authorize release of construction contract retention in an amount not to exceed $13,056.47.	Staff Progress: Complete Filed Notice of Completion and released retention funds to construction contract.	Provide more space for District projects and staff to grow	3	Admin
Date of Board Action: 04/18/18 Approve Amendment No. 1 to include an extended contract term through May 25, 2020 with Assetic Strategic Asset Management.	Staff Progress: Complete Contract term with Assetic is extended to continue providing the District with services that completes the District's CMMS and the EAMS system that will improve operations, maintenance and overall management of District assets.	Advance the District's Assets	3	040
Date of Board Action: 04/18/18 Authorize individual professional service contracts with the following firms to perform As Needed On-Call Construction Management Services for a not to exceed aggregate budget amount of $1,000,000: AKM, Dudek, MNS, Butier, PMA, SAFNA.	Staff Progress: Complete WRD will utilize on-call engineering and construction services to deliver Capital Improvement, Repair & Replacement and Operations Support projects in a cost efficient and effective manner.	Provide improvement to District's treatment plants	1,2 & 3	Various projects
Date of Board Action: 04/18/18 Authorize individual professional service contracts with the following firms to perform As Needed On-Call Engineering Services for a not to exceed aggregate budget amount of $2,500,000: AKM, Hazen and Sawyer, Perc Water, KEH, CH2M/ Jacobs, CWE, Woodard and Curran, Tetra Tech, MNS, SAFNA	Staff Progress: Complete WRD will utilize on-call engineering and construction services to deliver Capital Improvement, Repair & Replacement and Operations Support projects in a cost efficient and effective manner.	Provide improvement to District's treatment plants	1,2 & 3	Various projects
Date of Board Action: 05/02/18 Authorize the General Manager to execute Facility Modification Agreement No. MOA2017007285 with Los Angeles County Flood Control District (LACFCD) to issue temporary construction authorization for construction of the ARC diversion structure and eventually establish a permanent easement for WRD for future access and maintenance of the diversion structure.	Staff Progress: Complete The modification agreement allows the District's future access and maintenance of the diversion structure	Provide improvement to District's treatment plants	1,2 & 3	033
Date of Board Action: 06/13/18 Approve Amendment No. 1 with John Schwada for an additional amount not to exceed $40,000 and a contract time extension through December 31, 2019.	Staff Progress: On-going Continue working with John Swada in the District's outreach efforts with ARC as part of the public advocacy and awareness campaign to educate and gain support from various stakeholders of the District's outreach initiatives. The timeline and schedule for ARC construction has extended beyond what was initially anticipated and additional outreach effort is needed to award an amendment to the existing contract.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	03
Date of Board Action: 06/13/18 Execute Amendment No. 1 to Contract No. 833 with Egoscue Law Group to extend the term of the contract to December 31, 2019.	Staff Progress: On-going Continue working with Egoscue Law Group in the District's outreach efforts with ARC to provide community outreach services for the Albert Robles Center AWTF Project. The timeline and schedule for ARC construction has extended beyond what was initially anticipated and additional outreach effort is needed to award an amendment to the existing contract.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033

Date of Board Action: 06/13/18 (1) Reject the bid from Cora Constructors, Inc.; and (2) Award the construction contract to Pacific Hydrotech Corporation for an amount not to exceed $1,208,574 plus a 15% contingency, for a total of $1,390,005 for the Huntington Park Well 15 Treatment Project.	Staff Progress: Complete Work with Pacific Hydrotech Corporation to repair the Huntington Park Well 15 Treatment Project under the District's Safe Drinking Water Program (SDWP), assisting basin pumpers in sustaining active production from contaminated wells.	Promote the Safe Drinking Water Program and groundwater cleanup	1	012
Date of Board Action: 06/13/18 Accept the Robert W. Goldsworthy Desalter Expansion and Completion of New Source Water Wells and Conveyance Pipelines Project (Project) as complete, authorize the General Manager to file a Notice of Completion with the Los Angeles County Clerk's office in accordance with the California Public Contract Code, and authorize release of construction contract retention in the amount of $687,796.09 to Shimmick Construction Company, Inc. (Shimmick), upon satisfaction of all applicable conditions of the contract including, without limitation, submission of Conditional/ Unconditional Waivers and Releases upon Final Payment from Shimmick and Project subcontractors who filed Preliminary Notices. If Shimmick does not timely satisfy all applicable conditions to release of retention, the Board of Directors authorize issuance of undisputed payments by joint check to Project subcontractors and suppliers from whom appropriate releases have been received in accordance with the Contract Documents. In addition, the Board of Directors release the amount of $8,497.48 to Shimmick only upon completion of the investigation by the California Department of Industrial Relations of Shimmick's subcontractor, Precision Engineering Surveyors, Inc. and a finding that no penalties are owed by Shimmick or its subcontractor.	Staff Progress: Completed Notice of completion for the Robert W. Goldsworthy Desalter Expansion and completion of New Source Water Wells and Conveyance Pipelines Project was accepted and filed. Contract retention was released to Shimmick. The existing Robert W. Goldsworthy was expanded to increase the production capacity from 2.5 million gallons (mgd) per day to 5.0 mgd. Provide alternative water supply to the City of Torrance and mitigate the saline plume within the West Coast Groundwater Basin	Provide alternative water supply to the City of Torrance and mitigate the saline plume within the West Coast Groundwater Basin	1	002
Date of Board Action: 06/13/18 Authorize the General Manager to execute a contract to Tetra Tech, Inc., in the amount to $9,955.00 to complete plans and specifications for pumping and control equipment associated with the ARC supplemental recharge wells.	Staff Progress: Complete Contracted with Tetra to perform professional services for the final design and installation of the equipment for the existing ARC Supplemental Recharge Wells. This scope of work is done outside	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033
Date of Board Action: 06/13/18 Authorize the Board President to execute Amendment No. 3 to the agreement with GHD for Phases 3 and 4: Owner's Engineer/Owner's Agent (OE/OA) services for the Albert Robles Center (ARC) for a total contract amount of $3,027,395, plus a 10% contingency allowance of $302,740, for a total project budget amount of $3,330,135.	Staff Progress: On-going Continue working with GHD to act as the District's Owner's Engineer/Owner's Agent for the next Phases 3 and 4 of ARC's construction. The amendment was awarded due to the construction being extended to December 2018.	Advance the District's Groundwater Reliability Improvement Program (ARC)	1 & 2	033

*District Goal

1 – Provide safe and reliable groundwater
2 – Obtain independence from imported water sources
3 – Promote organizational excellence
4 – Advance groundwater awareness
5 – Foster environmental stewardship & water sustainability

FULL-TIME EQUIVALENT (FTE) AND LABOR ALLOCATION

The Water Replenishment District's financial accounting system allows expenses to be tracked by fund, project, task and subtask. This allows for flexibility when determining performance measures on a project-by-project basis. Part of this flexibility allows the District to allocate its labor costs very specifically. The following tables represent the 2018/19 Budgeted Summary of Personnel by Department and by Program along with the District's 2018/19 labor allocation for all employees. Transparency is the most important aspect to the District when reporting its financial information.

The definition of a full-time equivalent (FTE) is the number of working hours that represents one full-time employee during a fixed period of time, such as one fiscal year. FTE simplifies work measurement by converting work load hours into the number of people required to complete that work. FTE calculation is a two-step process that determines how many hours of work there are in a department and how many hours one full-time employee works. The total work load hours are then divided by the working hours of one employee. This calculates the number of full-time equivalents that are needed. FTE analysis is the method of measurement of current work activities with related time and cost measures. This helps the District understand the drivers of work load levels, organizational performance and productivity improvement opportunities.

2018/19 FTE by Program

Table 91 shows a detailed analysis of the number of full-time equivalents required by each of the District's projects, programs, or administrative support department. The table shows that the District's staffing on its various projects remain relatively stable. The only increase of note is due to increased efforts within the Finance/Admin areas, specifically relating restructuring of the organization. WRD's organizational structure adjusts from time to time to make changes to operations and organizational structure in an effort to adjust to changes in District responsibilities and to provide increased efficiency.

2018/19 FTE Labor Cost

All staff labor costs includes employee compensation and benefits, and are allocated to each project as; 'Other General and Administrative Costs'. Employee compensation is based on the Memorandum of Understanding between the Board of Directors of the Water Replenishment District and the American Federation of State, County and Municipal Employee, Chapter 1902.

2018/19 Labor Allocation Worksheet

The annual labor allocation worksheet (Table 91A and B) is designed to provide an accurate cost allocation of labor and overhead to each individual project, program, and administrative departments.

Table 90
Full Time Equivalents (FTE) by Program

Program Name	2014/15 Actual	2015/16 Actual	2016/17 Actual	2017/18 Budget	2018/19 Budget
Operations and Maintenance					
Leo J Vander Lans	0.78	0.49	1.01	1.63	1.43
Water Conservation	0.92	0.51	0.04	1.13	1.13
Robert Goldsworthy Desalter	0.22	0.01	0.07	1.04	0.43
Montebello Forebay Reclaimed Water	1.00	1.08	0.40	1.36	2.46
Groundwater Resources Planning	0.70	1.67	0.94	1.47	0.85
Water Quality Program	1.22	1.53	1.12	1.55	1.35
Title 22 Program	0.42	0.26	0.00	0.20	0.20
Geographic Information System	2.17	1.48	1.57	0.51	0.95
Regional GW Monitoring Program	2.40	1.41	2.30	2.44	2.09
Dominquez Barrier Recycled Wtr	0.73	0.52	0.55	0.41	1.75
Replenishment Program	1.00	0.66	0.71	0.70	1.30
Hydrogeology	0.80	0.68	0.88	1.10	0.70
Water Education	3.95	3.75	6.66	1.36	1.31
Safe Drinking Water	0.12	0.30	0.15	0.42	0.92
ARC	0.00	0.00	0.10	2.10	2.00
West Basin Barrier	0.00	0.04	0.00	0.20	0.00
Engineering Program	0.00	0.00	0.00	0.00	0.75
Total	**16.43**	**14.39**	**16.50**	**17.62**	**19.62**
Capital Projects					
Leo J Vander Lans	0.40	0.25	0.30	0.20	0.50
Robert Goldsworty Desalter	0.90	0.71	0.57	0.40	0.50
WRD Building	0.00	0.00	0.00	0.10	0.00
Groundwater Monitoring - New Wells	0.15	0.00	0.00	0.00	0.00
ARC	3.02	3.05	2.54	2.93	2.53
Safe Drinking Water	0.00	0.00	0.00	0.20	0.30
Watermaster Services	0.00	0.53	0.47	2.80	4.00
LADWP Well Construction Program	0.00	0.05	0.00	0.00	0.00
Engineering Program	0.00	0.00	0.00	0.00	1.20
Total	**4.47**	**4.59**	**3.88**	**6.63**	**9.03**
Finance/Internal Svcs/EA					
Finance/Internal Svcs/EA	12.30	14.76	13.05	12.70	17.35
General Manager					
General Manager	1.00	1.00	1.00	1.00	1.00
Grand Total	**34.20**	**34.74**	**36.90**	**38.00**	**47.00**

Note: In fiscal year 2014/15, and 2015/16 and 2016/17, the District had staff which did not work the entire fiscal year.

Table 91A

18/19 Labor Allocation Worksheet

	Finance/ Admin/EA	GM	Board of Directors	Operating Projects	Capital Projects	Watermaster Projects	Grand Total
1010- Board of Directors							
Director			100%				100%
Director			100%				100%
Director			100%				100%
Director			100%				100%
Director			100%				100%
1005- General Manager (1 Staff)							
General Manager		10%		55%	30%	5%	100%
1000- Internal Services (6 Staff)							
Mgr of Internal Services	100%						
Sr Admin Specialist	100%						100%
Sr Admin Specialist	100%						100%
Project Administrator	15%				85%		100%
Project Administrator	100%						100%
Office Assistant	100%						100%
1040 - Finance (6 staff)							
Chief Financial Officer	80%				20%		100%
Mgr of Financial Services	80%				20%		100%
Sr Accountant	65%				15%	20%	100%
Sr. Accountant	90%				10%		100%
Sr. Accounting	90%				10%		100%
Purchasing Agent	90%				10%		100%
1020 - CES (6 Staff)							
Mgr of Comm & Ed Servuces	10%		8%	64%	18%	0%	100%
Comm & Ed Services	5%		1%	86%	8%	0%	100%
Comm & Ed Services	2%		1%	87%	10%	0%	100%
Comm & Ed Services	15%		1%	80%	4%	0%	100%
Comm & Ed Services	25%		1%	72%	2%	0%	100%
Comm & Ed Services	25%		1%	73%	1%	0%	100%

Table 91B

18/19 Labor Allocation Worksheet

	Finance/ Admin/EA	GM	Board of Directors	Operating Projects	Capital Projects	Watermaster Projects	Grand Total
1060- Hydrogeology (10 Staff)							
Chief Hydrogeologist				70%	0%	30%	100%
Water Quality & Regulatory Compliance Specialist				100%	0%	0%	100%
Sr. Hydrogeologist				100%	0%	0%	100%
Sr Hydrogeologist				90%	0%	10%	100%
Hydrogeologist				100%	0%	0%	100%
Associate Hydrogeologist				100%	0%	0%	100%
Associate Hydrogeologist				100%	0%	0%	100%
Assistant Hydrogeologist				100%	0%	0%	100%
Water Resources Planner				25%	0%	75%	100%
Office Assistant				0%	0%	100%	100%
1030 - Engineering (7) Staff)							
Chief of Engineering and Planning	10%			45%	45%	0%	100%
Manager of Engineering	0%			30%	70%	0%	100%
Senior Engineer	0%			100%	0%	0%	100%
Engineer	0%			25%	75%	0%	100%
Engineer	10%			45%	45%	0%	100%
Asssociate Engineer	0%			100%	0%	0%	100%
Water Operation Manager	10%			65%	25%	0%	100%
1070 - Enterprise Resource Planning Watermaster (6) Staff							
Database Administrator Manager				75%	0%	25%	100%
Online Tech & Data Specialist				50%	0%	50%	100%
GIS Analyst				75%	0%	25%	100%
Technical Specialist				50%	0%	50%	100%
Network Administrator	90%			0%	0%	10%	100%
Document Imaging Specialist				0%	0%	0%	0%

Resolution Adopting Replenishment Assessment

WRD's water education program in action

As part of its stewardship of the water basins, the District provides educational programs regarding our groundwater basins and the District's projects and programs to manage and protect our groundwater resources.

RESOLUTION NO. 18-1076

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, 2018 AND ENDING ON JUNE 30, 2019 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 January 18, 2018 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. 18-1070, has declared that funds shall be raised to purchase water for replenishment of groundwater supplies within the District during the ensuing fiscal year, 2018-2019, 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. 18-1070, 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 3, 2018, which has been made available to the public, describing the services the District anticipates performing in Fiscal Year 2018-2019, 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 3, 2018, 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 3, 2018 hearing was (i) published as required by law and (ii) mailed to holders of adjudicated pumping rights; 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 2018-2019 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 recommendation 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, 2016-17 was 33,000 acre-feet as provided in the 2018 ESR and any updates.

   b) The estimated annual overdraft for the current water year, 2017-18 is 86,300acre-feet as provided in the 2018 ESR and any updates.

   c) The estimated annual overdraft for the ensuing water year, 2018-19 is 72,100 acre-feet as provided in the 2018 ESR and any updates.

d) The accumulated overdraft as of the last day of the preceding water year was 748,422 acre-feet as provided in the 2018 ESR and any updates.

e) The estimated accumulated overdraft as of the last day of the current water year is 739,000 acre-feet as provided in the 2018 ESR and any updates.

f) The total production of groundwater from the groundwater supplies within the District during the preceding water year was 212,693 acre-feet as provided in the 2018 ESR and any updates.

g) The estimated total production of groundwater from groundwater supplies within the District for the current water year is 219,500 acre-feet as provided in the 2018 ESR and any updates.

h) The estimated total production of groundwater from the groundwater supplies within the District for the ensuing water year is 217,300 acre-feet as provided in the 2018 ESR and any updates.

i) Water Year 2016-17 had above normal precipitation and substantial replenishment by WRD along with reduced pumping. Therefore, District wide groundwater levels rose nearly 7.0 feet on average, although in some areas groundwater rose nearly 30 feet and in other areas fell over 10 feet. As a result, an estimated 84,400 AF of groundwater was added to storage. The 2018 ESR and any updates provide details of water levels and basin conditions.

j) In the current Water Year 2017-2018, as of this writing it is another dry year and the District has received less than half of normal rainfall to date. But WRD has been purchasing imported water and recycled water for spreading. Still, water levels in the Montebello Forebay are 26 feet lower than they were this time last year. The 2018 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 101,000 acre-feet, which includes 72,000 acre-feet at the spreading grounds (63,000 recycled; 8,000 imported; 1,000 Whittier Narrows Operable Unit) and 29,000 acre-feet at the seawater barrier wells. Details of the calculations for these amounts are presented in the 2018 Engineering Survey and Report and any updates, and on Board decisions at the April 3, 2018 public meeting.

l) The source and estimated cost of the water available for the replenishment described in Section (k) is presented in the 2018 ESR and any updates.

m) The estimated net costs of replenishing the groundwater supplies with the water so purchased are $38,745,000. The derivation of this amount is described in the 2018 ESR, the 2018 Cost of Service Report, and any updates to these documents, and on Board decisions at the April 3, 2018 public meeting. 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 $178.30 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 $32,184,000. 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 $148.11 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 2018 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 $326.41 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 2018 ESR and any updates, the April 3, 2018 Cost of Service Report 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 2018-19 fiscal year are estimated at $8,228,000. 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 $37.86 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 2018-19 will not exceed the applicable limitations provided in Water Code Sections 60290 and 60291.

2. After accounting for other revenue, possible debt financing, or use of reserves, the estimated rate of the replenishment assessment required to be levied upon the production of groundwater from the groundwater supplies within the District during the ensuing fiscal year, 2018-19, for the purpose of accomplishing such replenishment and water quality programs by the District is $339.00 per acre-foot of yearly groundwater production. After accounting for the use of an estimated $5,498,000 in other revenue, possible debt financing for capital improvement projects, and District reserve funds as necessary, said replenishment assessment will produce the approximate necessary funds to pay the following costs: $316.48 per acre-foot for the cost of purchasing water, financing capital improvement projects and other costs relating to accomplishing groundwater replenishment, and $22.50 per acre-foot for clean water programs. Of the $316.48 per acre-foot allocated to accomplishing groundwater replenishment, $56.56 per acre-foot is allocated to capital projects. Of the $22.50 per acre-foot allocated to clean water programs, $3.58 per acre-foot may be allocated to capital projects. General and administrative expenses of the District will be met on a pro tanto basis given each function's (replenishment and clean water) load factor on operations.

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

4. All of the estimated costs for the ensuing fiscal year for water replenishment programs and for groundwater quality programs by the District as found in Section 1 of this Resolution shall be paid for by a replenishment assessment levied pursuant to Water Code § 60317 and by the reserve fund maintained in accordance with Water Code § 60290. There is hereby levied on the production of groundwater from groundwater supplies within the District during the fiscal year commencing July 1, 2018 and ending June 30, 2019, a replenishment assessment in the amount of $339.00 per acre-foot produced during said fiscal year.

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

(a) That the District's groundwater replenishment program is exempt from CEQA pursuant to CEQA Guidelines §15261(a), in that it is an ongoing project commencing at a date such that an environmental impact report has not been required, and the 2018-19 program is part of that ongoing project.

(b) Funds generated by the RA will be used for (1) operating expenses, (2) financial reserve needs, (3) purchasing or leasing supplies, equipment and 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 2018 Cost of Service Report, the proposed 2018-19 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 2018-19 fiscal year to determine whether an additional environmental document must be prepared. Based on this examination, the 2018 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 2018-19 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 2018-19 fiscal year is within the scope of the groundwater replenishment program covered by the EIR and NDs and such activity is adequately described in said EIR, and no new environmental document is required.

6. The Replenishment Assessment will be imposed on persons and entities that extract groundwater from the Central Basin and West Coast Basin. Extraction of groundwater from those Basins is governed by court judgments entered in 1962 and 1965 pursuant to groundwater adjudication lawsuits. Those judgments granted certain parties an allocation to pump water based on prescriptive water

rights and not based on any aspect of ownership of land overlying either Basin. Accordingly, since the pumping rights granted by the Judgments were based on prescriptive water rights, the parties do not pump the groundwater pursuant to any tenancy or fee interest in the overlying land or any rights that attach as a result of a tenancy or fee interest in overlying land. Further, neither of the Judgments for the Central and West Coast Basins included a determination of the amount or extent to which any party to said Judgment may extract groundwater from said basin without exceeding the natural safe yield of said basin.

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

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

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

The Board also makes the following findings:

(a) Notice of the April 3, 2018 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) Such notice was mailed not less than 45 days prior to April 3, 2018.

(d) From the date such notice was mailed through the close of the public testimony portion of the April 3, 2018 Public Hearing, 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.

(e) At the April 3, 2018 Public Hearing, the Board considered all written testimony and protests and heard oral comments from all who wished to speak regarding the proposed Replenishment Assessment.

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

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

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

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

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

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

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

PASSED, APPROVED AND ADOPTED THIS 3rd day of April 2018 by the following vote:

AYES: 5
NOES: ∅
ABSENT: ∅
ABSTAIN: ∅

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

John D. S. Allen, President

ATTEST:

Willard H. Murray, Jr., Secretary

DATE April 3, 2018

APPROVED AS TO FORM:

H. Francisco Leal
Interim District Counsel

Table 92

Groundwater Conditions and Replenishment Summary

	WATER YEAR Oct 1 - Sep 30		
	2016/17	*2017/18* [a]	*2018/19* [a]
Total Groundwater Production	212,693 AF	219,500 AF	217,300 AF
Annual Overdraft	(33,000) AF	(86,300) AF	(72,100) AF
Accumulated Overdraft	(748,422) AF	(739,000) AF	
Quantity Required for Artificial Replenishment for the Ensuing Year			
Spreading			
Imported for Spreading in Montebello Forebay			8,000 AF
Recycled for Spreading in Montebello Forebay			63,000
Whittier Narrows Operable Unit Spreading Water			1,000
Subtotal Spreading			72,000
Injection			
Alamitos Seawater Barrier Imported Water (WRD side only)			1,500
Alamitos Seawater Barrier Recycled Water (WRD side only)			2,500
Dominguez Gap Seawater Barrier Imported Water			-
Dominguez Barrier Seawater Barrer Recycled Water			8,000
West Coast Seawater Barrier Imported Water			0
West Coast Seawater Barrier Recycled Water			17,000
Subtotal Injection			29,000
In-lieu [b] Subtotal In-lieu			**0**
Total 101,000 AF			

(a) Estimated values

(b) In-Lieu Program currently not established for ensuing year

Table 93

Quantity and Cost of Replenishment Water for the Ensuing Water Year

	Item	Quantity (AF)	Total Cost
Summary - All Water	Spreading - Tier 1 Untreated Imported	8,000	$ 6,578,992
	Spreading - Recycled	56,000	$ 5,372,000
	Spreading - Recycled (ARC)	7,000	$ -
	Spreading - Whittier Narrows Operable Unit	1,000	$ 822,000
	Alamitos Barrier - Imported	1,500	$ 1,826,520
	Alamitos Barrier - Recycled	2,500	$ -
	Dominguez Barrier - Imported	0	$ 67,438
	Dominguez Barrier - Recycled	8,000	$ 8,128,000
	West Coast Barrier - Imported up to 17kaf barrier total	0	$ 360,876
	West Coast Barrier - Imported up to 17kaf	0	$ -
	West Coast Barrier - Recycled	17,000	$ 15,589,000
	In-Lieu MWD Member	0	$ -
	In-Lieu WBMWD Customer	0	$ -
	TOTAL	**101,000**	**$ 38,744,826**

Detailed Breakout of Water Costs and Surcharges to WRD

	Item	Quantity	Oct-Dec	Jan-Jun	Jul-Sep	Melded	Total
Imported Water	**CBMWD**						
	MWD Untreated Tier 1 - Spreading ($/af)	8,000	$ 695	$ 730	$ 730	$ 721	$ 5,768,000
	MWD RTS ($/month)	12	$ 14,065	$ 14,065	$ 16,667	$ 14,716	$ 176,592
	CBMWD Administrative Surcharge ($/af)	8,000	$ 70	$ 70	$ 70	$ 70	$ 560,000
	CBMWD Water Service Charge ($/month)	12	$ 6,200	$ 6,200	$ 6,200	$ 6,200	$ 74,400
	Total to CBMWD						**$ 6,578,992**
	LBWD						
	MWD Treated Tier 1 - Alamitos Barrier ($/af)	1,500	$ 1,015	$ 1,066	$ 1,066	$ 1,053	$ 1,579,500
	MWD Capacity Charge ($/cfs/month)	5.0	$ 667	$ 700	$ 700	$ 692	$ 41,520
	LBWD RTS ($/af)	1,500	$ 130	$ 130	$ 137	$ 132	$ 198,000
	LBWD Administrative Surcharge ($/af)	1,500	$ 5	$ 5	$ 5	$ 5	$ 7,500
	Total to LBWD						**$ 1,826,520**
	WBMWD						
	MWD Treated Tier 1-DG/WC Barriers ($/af)	0	$ 979	$ 1,015	$ 1,015	$ 1,006	$ -
	MWD RTS ($/af)	0	$ 116	$ 120	$ 120	$ 119	$ -
	MWD Capacity Charge ($/cfs/month)	46.8	$ 550	$ 578	$ 578	$ 571	$ 320,674
	WBMWD Administrative Surcharge ($/af)	0	$ 237	$ 237	$ 246	$ 239	$ -
	WBMWD Water Service Charge ($/cfs/month)	130	$ 67	$ 67	$ 74	$ 69	$ 107,640
	Total to West Basin MWD						**$ 428,314**
	MSGBWM						
	Whittier Narrows Operable Unit Water ($/af)	1,000	$ 822	$ 822	$ 822	$ 822	$ 822,000
	Total to MSGBWM						**$ 822,000**
Recycled Water	**IN-LIEU**						
	MWD Member Agency ($/af)	0	-	-	-		No IL Program
	WBMWD Member Agency ($/af)	0	-	-	-		No IL Program
	Total for In-Lieu Payments						**$ -**
	LADWP						
	Recycled Water for Dominguez Barrier ($/af)	8,000	$ 1,003	$ 1,003	$ 1,053	$ 1,016	$ 8,128,000
	Total to LADWP						**$ 8,128,000**
	SDLAC						
	Tertiary Water - WN, SJC, Pomona ($/af) ≤50k	50,000	$ 57	$ 57	$ 63	$ 58	$ 2,900,000
	Tertiary Water - WN, SJC, Pomona ($/af) >50k	6,000	$ 408	$ 408	$ 422	$ 412	$ 2,472,000
	Tertiary Water for ARC (GRIP AWTF)	7,000	$ -	$ -	$ -	$ -	$ -
	Total to SDLAC						**$ 5,372,000**
	WBMWD						
	WBMWD Recycled Water Rate ($/af)	17,000	$ 901	$ 901	$ 963	$ 917	$ 15,589,000
	Total to WBMWD						**$ 15,589,000**
	LBWD						
	Source Water for Vander Lans Plant ($/af)	2,500	$ -	$ -	$ -	$ -	$ -
	Total to WRD						**$ -**
	TOTAL	**101,000**					**$ 38,744,826**

Table 94
WRD Projects and Programs Fund Allocation

PROJECT / PROGRAM		DISTRICT FUNCTION	
		Replenishment	Clean Water
001	Leo. J. Vander Lans Water Treatment Facility Project	100%	
002	Robert W. Goldsworthy Desalter Project		100%
004	Recycled Water Program	100%	
005	Groundwater Resources Planning Program	100%	
006	Groundwater Quality Program		100%
010	Geographic Information System	50%	50%
011	Regional Groundwater Monitoring Program	50%	50%
012	Safe Drinking Water Program		100%
018	Domiguez Gap Barrier Recycled Water Injection	100%	
023	Replenishment Operations (Spreading & Barriers)	100%	
025	Hydrogeology Program	50%	50%
033	ARC	100%	
039	Supervisory Control and Data Acquisition (SCADA)	50%	50%
040	Computerized Maintenance Management System (CMMS) and Asset Management	50%	50%
041	Paramount Equipment / Fleet Center	100%	
042	Watermaster	100%	
043	Regional Brackish Reclamation	100%	

Glossary of Terms

Legg Lakes in Whittier Narrow area.

Water produced and treated by the Whittier Narrows Operable Unit (WNOU) is a groundwater remediation project. The purpose is to pump, clean, and release water back into the streams. The treated water is being discharged to Legg Lake and overflow may reach WRD for groundwater replenishment. WRD will get the benefit of protection from the contamination plume, plus any treated water that reached WRD will count as replenishment water and dilution credits for the recycled water.

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.
Condensation:	Stage of the water cycle when water transforms from gas into a vapor and becomes a suspended in the atmosphere, visually represented by clouds.
Conservation:	Not wasting, using something wisely
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.
Evaporation:	State of the water cycle when water transforms from a liquid into a gas.
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.
Hydrologic cycle:	See "Water Cycle"
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.
Irrigation:	To supply water to crops, parks, golf courses and lawns.
Overdraft:	Groundwater extractions typically exceed the natural inflows into the groundwater basin.
Permeable:	Any material that allows water to penetrate through.
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.
Quality:	To be at a high degree of excellence; something that is good or well done.
Recharge:	To refill the groundwater basin by infiltrating rain water, imported water, or recycled water down into the aquifers.
Recycle:	To produce a new item from an old item; wastewater from the sewer systems that is reclaimed and purified through extensive treatment at water reclamation plants.
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.
Saturation zone:	The area where water fills the spaces between soil, sand and rock underground.
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.

List of Acronyms

A 2018 Los Angeles River clean-up co-sponsored by WRD and FOLAR.

WRD provides sponsorships support to community and non-profit organizations in order to partner with groups that share in WRD's mission of educating the public about protecting water and groundwater resources.

List of Acronyms

ABAC	Audit and Budget Advisory Committee
ACWA/JPIA	Association of California Water Agencies/Joint Power Insurance Authority
AF	Acre-Feet (equivalent to 325,851 gallons)
AFL-CIO	American Federation of Labor and Congress of Industrial Organizations
AFSCME	American Federation of State, County and Municipal Employees
AFY	Acre-Feet per Year
AGWT	American Groundwater Trust
AM	Asset Management
AOP	Advanced oxidation using hydrogen peroxide
ARC	Albert Robles Center
ARC	Annual Required Contribution
AWPF	Advanced Water Purification Facility
AWTF	Advanced Water Treatment Facility
AWWA	American Water Works Association
AWWARF	American Water Works Association Research Foundation
BAC	Budget Advisory Committee
BDOC	Biodegradable dissolved organic carbon
BMP	Best Management Practice
BOD	Board of Directors
CAFA	Comprehensive Annual Financial Audit
CAFR	Comprehensive Annual Financial Report
CalPERS	California Public Employee Retirement System
Caltrans	California Department of Transportation
CAR	Compliance Assessment Report
CASGEM	California Statewide Groundwater Elevation Monitoring
CBMWD	Central Basin Municipal Water District
CBWA	Central Basin Water Association
CBWCB	Central Basin and West Coast Basin
CCR	Consumer Confidence Report
CDIR	California Department of Industrial Relations
CFA	Contributed Funds Agreement
CDPH	California Department of Public Health
CDPW	California Department of Public Works
CDWR	California Department of Water Resources
CEC	Constituents of Emerging Concern
CEPRD	Coalition for Environmental Protection, Restoration, and Development
CEQA	California Environmental Quality Act
CERBT	California Employers' Retiree Benefit Trust
CES	Communication & Education Services
CFEE	California Foundation on the Environment and the Economy
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
CPR	Common Pool Resource
CPRA	California Public Records Act
CSDLAC	County Sanitation Districts of Los Angeles County
CSM	Colorado School of Mines
CSMFO	California Society of Municipal Finance Officers
CSR	Cost of Service Report
CWF	Clean Water Fund
CWH	Council for Watershed Health
CWS	California Water Service Company
CWSC	California Water Service Company
CWSRF	California Clean Water State Revolving Fund
DAC	Disadvantaged Communities
DAF	Dissolved Air Flotation
DDW	Division of Drinking Water
DGB	Dominguez Gap Barrier
DRP	Deviation Request Package
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
E-MFRES	Enhanced-Montebello Forebay Recharge Enhancement Study
EAM	Enterprise Asset Management
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESR	Engineering Survey and Report
FAT	Full Advanced Treated
FCD	Flood Control District

FDIC	Federal Deposit Insurance Corporation
FOLAR	Friends of the LA River
FTE	Full -Time Equivalent
GAAS	Generally Accepted Auditing Standards
GASB	Government Accounting Standards Board
GBMP	Groundwater Basin Master Plan
GBOP	Groundwater Basin Optimization Pipeline
GDP	Gross Domestic Product
GFOA	Government Finance Officers Association
GIS	Geographic Information System
GLAC	Greater Los Angeles County
GPS	Global Positioning System
GRAC	Groundwater Resources Association of California
GRIP	Groundwater Reliability Improvement Program
GRRR	Groundwater Replenishment using Recycled Water Regulations
GSWC	Golden State Water Company
GW	Groundwater
GWAM	Groundwater Augmentation Model
HTB	Heal the Bay
HMI	Human Machine Interface
HVAC	Heating, Ventilation, & Air Conditioning
ICA	Independent Cities Association
IRWMP	Integrated Regional Water Management Plan
IS/MND	Initial Study/Mitigated Negative Declaration
IT	Information Technology
JPA	Joint Powers Authority
JWPCP	Joint Water Pollution Control Plan
JLAC	Joint Legislative Audit Committee
LABC	Los Angeles Business Council
LABOS	Los Angeles Bureau of Sanitation
LACDPW	Los Angeles County Department of Public Works (Flood Control)
LACFCD	Los Angeles County Flood Control District
LACSD	Los Angeles County Sanitation Districts
LADWP	City of Los Angeles Department of Water & Power
LAIF	Local Agency Investment Fund
LAMS4	Los Angeles County Municipal Stormwater Permit
LARWQCB	Los Angeles Regional Water Quality Control Board
LAX	Los Angeles International Airport
LBWD	City of Long Beach Water Department
LBWTP	Long Beach Waste Treatment Plant
LCP	Labor Compliance Program
LEED	Leadership in Energy & Environmental Design
LGCR	Local Government Compensation Report
LJVWTF	Leo J. Vander Lans Water Treatment Facility
LRP	Local Resources Program
LUST	Leaking Underground Storage Tank
LVL	Leo J. Vander Lans
MAR	Managed Aquifer Recharge
MF	Microfiltration
MFI	Modified Fouling Index
MFRES	Montebello Forebay Recharge Enhancement Study
MFSG	Montebello Forebay Spreading Grounds
MFSGOM	Montebello Forebay Spreading Grounds Operational Model
mgd	Million gallons per day
MISAC	Municipal Information Systems Association of California
MODFLOW	MODular three-dimensional finite-difference groundwater FLOW model
MOU	Memorandum of Understanding
MSGBWM	Main San Gabriel Basin Watermaster
MWD	Metropolitan Water District of Southern California
N/A	Not Applicable
NCWUP	Non Consumptive Water Use Permit
ND	Negative Declaration
NEPA	National Environmental Policy Act
NGWA	National Groundwater Association
NPV	Net Present Value
O & M	Operation and Maintenance
OA	Owner's Agent
OCWD	Orange County Water District
OE	Owner's Engineers
OPEB	Other Post-Employment Benefits
PEIR	Programmatic Environmental Impact Report
PEPRA	Public Employees' Pension Reform Act
PFAS	Polyfluoroalkyl Substances

PLA	Project Labor Agreement
PLC	Programmable Logic Center
PMP	Project Management Plan
PPA	Projects, Programs, Administration
PS&E's	Plans, Specification, & Engineer's estimates
QA	Quality Assurance
QC	Quality Control
RA	Replenishment Assessment
R&M	Repairs & Maintenance
RDBMS	Relational Database Management System
RF	Replenishment Fund
RFB	Request for Bid
RFP	Request for Proposal
RFQ	Request for Quote
RGMP	Regional Groundwater Monitoring Program
RGWMR	Regional Groundwater Monitoring Report
RHSG	Rio Hondo Spreading Grounds
RO	Reverse-osmosis
RP	Responsible Party
RTS	Readiness-to-Serve
RWQCB	LA California Regional Water Quality Control Board – Los Angeles
SAT	Soil Aquifer Treatment
SBPAT	Structural Best Management Practices Prioritization and Analysis Tool
SCADA	Supervisory Control and Data Acquisition
SCE	Southern California Edison
SCWC	Southern California Water Committee
SDLAC	Sanitation Districts of Los Angeles County
SDWP	Safe Drinking Water Program
SGCBSG	San Gabriel Coastal Basin Spreading Grounds
SGMA	Sustainable Groundwater Management Act
SGSG	San Gabriel Spreading Grounds
SGRWM	San Gabriel River Watermaster
SJC	San Jose Creek
SJCWRP	San Jose Creek Water Reclamation Plant
SMBGSA	Santa Monica Basin Groundwater Sustainability Agency
SQL	Structured Query Language
SRF	State Revolving Fund
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TBD	To be determined
TDS	Total Dissolved Solids
TITP	Terminal Island Treatment Plant
TIWRP	Terminal Island Water Reclamation Plant
TLKEGP	The Lillian Kawasaki ECO Gardener Program
TOC	Total organic compounds
UCMR	Unregulated Contaminant Monitoring Rule
UPS	Uninterruptible Power Supply
USACE	U.S. Army Corps of Engineers
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
USFW	United States Fish & Wildlife
USGS	United States Geological Survey
UV	Ultraviolet
VIREO	Virtual Educational Observatory
VOC	Volatile organic compound
VoIP	Voice over Internet Protocol
WAS	Water Augmentation Study
WBMWD	West Basin Municipal Water District
WBWA	West Basin Water Association
WCBBP	West Coast Basin Barrier Project
WDR	Waste Discharge Requirement
WEF	Water Education Foundation
WES	Water Education Seminar
WET	Water Education for Teachers
WE&T	Water Environment & Technology
WEFTEC	Water Environment Federation Technical Exhibition and Conference
WIN	Water Independence Now Program
WN	Whittier Narrows
WNOU	Whittier Narrows Operable Unit
WPRSF	Water Purchase and Rate Stabilization Fund
WRD	Water Replenishment District of Southern California
WRP	Water Reclamation Plant
WRR	Water Reclamation Requirements

Figures

Tables