



Las Vegas Valley Water District Operating and Capital **Budget 2023**



Fiscal year ending June 30, 2023

On the cover:

Additional water-waste patrols hit the streets over the past year in support of community conservation efforts. Landscape watering that flows off properties and onto the street cannot be recaptured, representing significant losses to our community's limited water supplies. Patrols don't just fine water wasters—they help teach residents proper irrigation techniques. Learn more at lvwd.com.

Las Vegas Valley Water District

**Operating & Capital Budget
Fiscal Year Ending June 30, 2023**



LAS VEGAS VALLEY WATER DISTRICT™

Board of Directors

Marilyn K. Kirkpatrick, President

James B. Gibson, Vice President

Justin Jones

William McCurdy II

Ross Miller

Michael Naft

Tick Segerblom

John J. Entsminger

General Manager

E. Kevin Bethel

Chief Financial Officer

Mariliese S. Horsewood

Director of Finance/Controller

Prepared by the Finance Department

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Note of Appreciation

We would like to express our appreciation for the Finance department staff, and staff members of other departments for their special work in the preparation of the 2022-23 budget document.

The **VISION** of the Las Vegas Valley Water District
To be a global leader in service, innovation and stewardship

The **VALUES** of the Las Vegas Valley Water District are

- **Respect for People**
- **Integrity**
- **Service**
- **Excellence**
- **Sustainability**

The **MISSION** of the Las Vegas Valley Water District is to

**Provide world-class water service in a sustainable, adaptive
and responsible manner to our customers through reliable,
cost-effective systems**

CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) presented an award of Distinguished Presentation to the **Las Vegas Valley Water District (LVVWD) for its annual budget for the fiscal year beginning July 1, 2021.**

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan and as a communication device.

The award is valid for a period of one year only. The LVVWD believes our current budget continues to conform to program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Las Vegas Valley Water District
Nevada**

For the Fiscal Year Beginning

July 01, 2021

Christopher P. Morill

Executive Director

Las Vegas Valley Water District
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SECTION 1

GENERAL MANAGER'S INFORMATION REPORT

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**LAS VEGAS VALLEY
WATER DISTRICT™**

LAS VEGAS VALLEY WATER DISTRICT

GENERAL MANAGER'S INFORMATION REPORT

DATE: April 18, 2022

NO. 177

SUBJECT: LAS VEGAS VALLEY WATER DISTRICT
PROPOSED OPERATING AND CAPITAL BUDGET FOR FISCAL YEAR 2022-23

The Tentative Operating and Capital Budget of the Las Vegas Valley Water District (LVVWD) for fiscal year 2022-23 was submitted by April 15, 2022, to the State of Nevada Department of Taxation in accordance with NRS 354.596.

The fiscal year 2022-23 tentative budget assumes ongoing impacts caused by the COVID-19 pandemic. Over the past 24 months, with the rapidly changing developments and state and local responses and directives related to the pandemic, the LVVWD continues to monitor the economic impacts and adapt accordingly to mitigate its effects.

Executive Summary

While the LVVWD continued to adapt to regional and local circumstances surrounding the COVID-19 pandemic, staff's work efforts continued to provide first-rate water service to its customers. As in prior years, the greatest priority remains increasing system reliability and cost efficiency, while providing a safe drinking water supply to more than 1.5 million residents. This same effort and service was applied to the operations of the other LVVWD-maintained rural water systems throughout Clark County, including Kyle Canyon, Blue Diamond, Searchlight, Jean and Laughlin (Big Bend Water District).

LVVWD Board of Directors

In 2021, the LVVWD Board of Directors welcomed new Clark County Commissioners William McCurdy II and Ross Miller to its board. McCurdy served in the Nevada State Assembly from 2016-20, while Miller served as Nevada Secretary of State from 2006-14. The LVVWD Board also re-appointed Marilyn Kirkpatrick as Chair and James Gibson as Vice Chair for calendar year 2022.

Pandemic Response

Like many other organizations throughout Southern Nevada, the LVVWD is continually adapting to the impacts of the ongoing COVID-19 pandemic. Since the onset of the pandemic, the organization has been able to adjust its operations as needed to protect staff and minimize COVID-19 transmission in the workplace. In addition, through coordination, the use of available technology and the implementation of telecommute agreements with staff, the organization has been able to transition to a hybrid workforce platform, where certain employees are able to work from both home and the office. Not only does this help operational status during spikes in local infection rates, but a hybrid workforce is in line with the organization's sustainability goals and reduces the need for expanding office space.

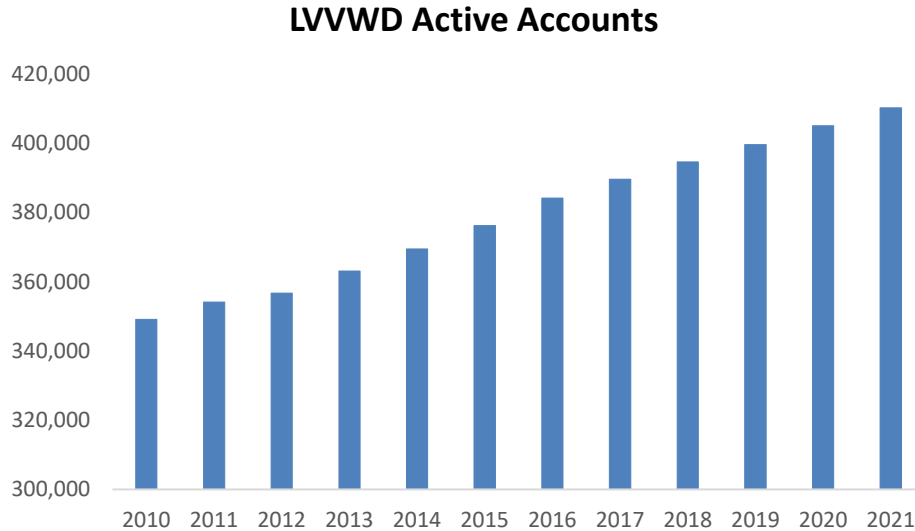
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Drought Response

In response to persistent drought conditions and climate change which have impacted flows throughout the Colorado River Basin for more than two decades, the Southern Nevada Water Authority (SNWA) has taken significant measures to increase conservation specifically related to consumptive use through policy, code, and ordinance changes. The LVVWD, as a member agency, has continued to adapt its business, operations, and communications practices to align with SNWA's initiatives.

Finance

The long-term financial implications of the COVID-19 pandemic are still to be determined, but the LVVWD continues its efforts and initiatives to maintain reliable water supplies for homes and businesses for years to come. The LVVWD serves approximately 70 percent of all Clark County residents. As such, customer account growth within the LVVWD service area is a key indicator of the community's economic health. As shown below, the number of active LVVWD service accounts has continually risen since 2010, indicating steady economic growth for more than a decade. In 2021, the LVVWD had more than 410,000 active accounts, with more than 9,000 new service points, a significant increase from prior years.



Reserve Policy

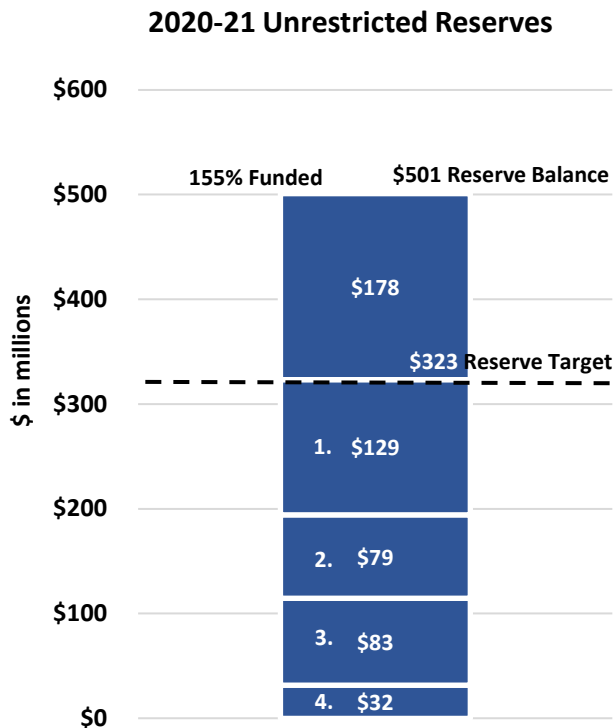
In 2016, the Board adopted a policy providing guidance for maintaining adequate cash and investment reserves. Since then, the LVVWD Reserve Policy has been a critical fixture in the organization's financial planning efforts.

The LVVWD's reserve policy includes the following components (corresponding to the numbered dollar amounts in the chart below):

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1. Adequate reserves to fund 180 days of operating and maintenance expenses
2. Adequate reserves to fund one year of the maximum annual debt service
3. Adequate reserves to fund a one-year average of future capital needs
4. Adequate reserves to fund one percent of assets subject to depreciation

During the last fiscal year, as the chart below indicates, the LVVWD met and exceeded its established unrestricted reserve target balance, an important indicator of the organization's financial health.



Project Funding

Water Rates. Tiered water rates represent a significant portion of the LVVWD's financial revenues, accounting for approximately 70 percent of the organization's operating funding sources. In accordance with a 2016 Citizens Advisory Committee recommendation, the LVVWD water rates have been adjusted annually in accordance with the Consumer Price Index (CPI) since January 1, 2019. In 2022, this resulted in a 4.5 percent increase to rates for consumptive water use and daily service charge. These dollars support day-to-day operations as well as projects set forth within the LVVWD's capital improvement plan (CIP).

Debt Reduction. To reduce interest costs, the Board adopted the 2022B LVVWD Refunding Bond Resolution in January 2022. By doing so, the LVVWD refunded General Obligation Water and Refunding Bonds, resulting in a net present value savings of \$9.9 million.

Grant Funding. To help offset project costs within the LVVWD's service area and the rural water systems, staff monitors grant and low-interest loan opportunities on both state and federal levels.

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This year, the Blue Diamond Water System was awarded a total of \$4.2 million from the State's Capital Improvement Grant Program, and the Big Bend Water District in Laughlin was awarded more than \$2.5 million in funding from the State Board for Financing Water Projects to improve its water system.

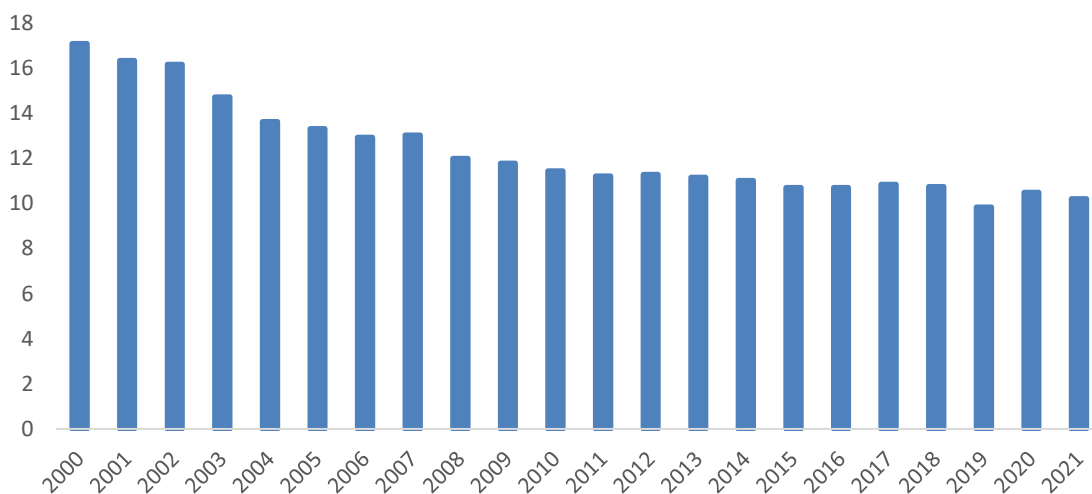
In addition, the Springs Preserve Foundation received a total of \$31,040 from several different organizations, including the Volunteer Generation Fund, Cox Charities, Wynn Employee Foundation, Nevada Humanities ARPA Relief and the One Drop Foundation to fund activities at the Springs Preserve. LVVWD received \$25,000 from the U.S. Fish and Wildlife Service for work on the Preserve's refuge ponds and another \$5,610 from the Southern Nevada Regional STEM Network for a photo exhibit at the Springs Preserve.

Water Resources and Conservation

Southern Nevada's primary water resource comes from Nevada's Colorado River allotment, as it is drawn on to meet nearly 90 percent of the community's water demands. All remaining demands are met with groundwater rights. The LVVWD purchases Colorado River water from the SNWA, which is diverted from Lake Mead and treated for municipal use.

The LVVWD's average monthly water use for residential single services, as shown in the following chart, was approximately 10,210 gallons in 2021, representing a 40 percent decrease from fiscal year 2000 consumption. Conservation efforts continue to yield positive results; however residential single-service consumption has stagnated over the past several years.

Average Monthly Single Family Residential Water Use
(thousand gallons)



LVVWD staff continues to assess and pursue opportunities to increase conservation efforts throughout the community.

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Drought

Persistent drought conditions and climate change impacts have reduced flows throughout the Colorado River Basin over the past two decades. In August 2021, the U.S. Bureau of Reclamation's Colorado River forecast led to the declaration of the first ever lower basin shortage by the federal government. Beginning January 1, 2022, and combined with existing water reductions outlined in the Drought Contingency Plan, Nevada was required to reduce its legal entitlement to the Colorado River by nearly seven billion gallons. The reduction amount will increase should Lake Mead water levels continue to decline.

Now, more than ever, the commitment to water conservation must remain steadfast. The LVVWD continues to promote and educate its customers on the importance of changing watering clocks each season to comply with watering restrictions, converting grass to water smart landscaping as part of SNWA's Water Smart Landscapes Rebate program, and responding to water waste.

Since the drought began in the early 2000s, Colorado River water use has decreased by 26 percent, despite a 49 percent population increase during that same period. Ongoing community conservation efforts are aimed to further reduce community water use moving forward.

Conservation

As it has for 20 years, conservation continues to be one of the most important components to Southern Nevada's water resource portfolio as it not only reduces existing and future demands but extends available supply. As the drought throughout the Colorado River Basin continues, and as federally declared shortages take effect in 2022, efforts to reduce consumptive water use while seeking additional water resources are imperative.

Nonfunctional Turf Removal. In June 2021, the Governor signed Nevada's Assembly Bill 356 (AB356), which prohibits the use of Colorado River water to irrigate nonfunctional turf in non-single family properties after January 1, 2027. Nonfunctional turf provides no recreational value, is decorative and is not safe to access or use. AB356 also required the formation of a Nonfunctional Turf Removal Advisory Committee (NTRAC) to help define functional and nonfunctional turf; and in January 2022, the SNWA Board of Directors approved the committee's recommendations report, which included definitions for functional and nonfunctional turf. These definitions have been incorporated into the District's Service Rules, per requirements of AB356. The LVVWD has, and will continue, to adapt its business, operations, and communications practices to align with these SNWA initiatives.

Service Rules Update. The LVVWD continues to update its Service Rules to limit consumptive water uses and require more efficient uses of its water resources. In the past fiscal year, the LVVWD Board of Directors approved revisions to the LVVWD's Service Rules that will bolster water conservation efforts by targeting non-essential water use and water theft. These changes include:

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- Prohibiting new golf courses from using Colorado River water to irrigate grass. A typical Southern Nevada golf course consumptively uses about 236 million gallons each year. By restricting water resources for these projects, LVVWD will reduce the stress on water supplies and help maintain reliable service to its customers
- Implementing penalties for water theft, or when someone takes water without payment through an unauthorized connection such as a fire hydrant, bypassing a meter, or a pipeline diversion. Water theft can threaten the integrity and reliability of our water system and pose a risk to the public's health and safety. Violators may face fees up to \$10,000 per occurrence.
- Limiting new turf applications only to parks, schools and cemeteries, as supported by the SNWA.
- Incorporating the definitions recommended by the NTRAC and approved by the SNWA Board.

New Conservation Goal. In December 2021, the SNWA Board of Directors approved the 2021 Water Resource Plan and a new community conservation goal of 86 gallons per capita per day by 2035. The new conservation goal will require an additional suite of actions that, when implemented, will help ensure water is being used in the most efficient ways possible in our shared desert community. These actions include restrictions on where turf can be installed, limits on pool sizes, limits on evaporative cooling and more.

Advanced Metering Infrastructure (AMI) and Software. Staff is in the process of implementing an AMI system, which is expected to be completed in 2023. The AMI system, coupled with the new Oracle Customer to Meter application (C2M), will optimize customer and field services communication through timely meter reads and events, and support conservation by improving staff's ability to monitor and address water consumption and leaks in a more efficient manner. This data will eventually be available on the mobile app, SMS messaging, and web portal. This technology will allow the LVVWD to provide enhanced customer service and interaction, increased support for conservation initiatives, optimized service response, and more efficient management.

Water Waste Enforcement

The LVVWD continues to increase its public outreach efforts, educate customers on sustainable practices, and help customers self-impose additional standards to conserve water. The organization has strengthened its water waste enforcement presence and has expanded its suite of tools for residents to report water waste.

Reporting Water Waste. Between the LVVWD's water waste reporting form on its website and the mobile app, more than 11,100 water waste reports were submitted in 2021, immediately notifying LVVWD staff of the date, time, location and type of water waste occurring so that proper investigation and citation procedures can take place.

Investigations. The LVVWD continues to bolster water waste enforcement efforts. Currently, there are ten full-time water waste investigation field staff. Below is a table highlighting staff's investigation efforts, with increases in 2021 compared to previous years.

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Water Waste Investigation Efforts			
	2019	2020*	2021
Water Waste Investigations	16,804	11,109	15,949
Courtesy Notices	4,729	3,194	5,397
Formal Notices	6,230	4,982	6,719
Assessed Fees	\$260,640	\$180,720	\$560,320

** There was a brief interruption in enforcement due to the COVID-19 pandemic between mid-March to mid-June 2020. Fee assessments were also paused from mid-March to mid-September 2020.*

The organization continues to improve processes by using analytical data to identify continuous flow on properties and to develop notifications for customers via different channels.

Water Quality Report

The 2021 Water Quality Report was sent to all LVVWD customers and outlines how the organization ensures the community's water quality meets, or surpasses, the standards set by the Safe Water Drinking Act. Staff conducted more than 300,000 analyses on nearly 55,000 water samples and tested for 91 regulated contaminants and 75 unregulated contaminants. In total, the current LVVWD CIP invests more than \$600 million to maintain, expand and upgrade its system to ensure safe and reliable drinking water.

LVVWD Operations

The LVVWD provides water service to customers in the City of Las Vegas, parts of unincorporated Clark County and several rural water systems that are not connected to in-valley water infrastructure. The LVVWD operates the public water systems in Blue Diamond, Jean, Kyle Canyon, Laughlin and Searchlight. In 2021, the LVVWD delivered approximately 111 billion gallons of water to customers throughout its service area.

System Profile

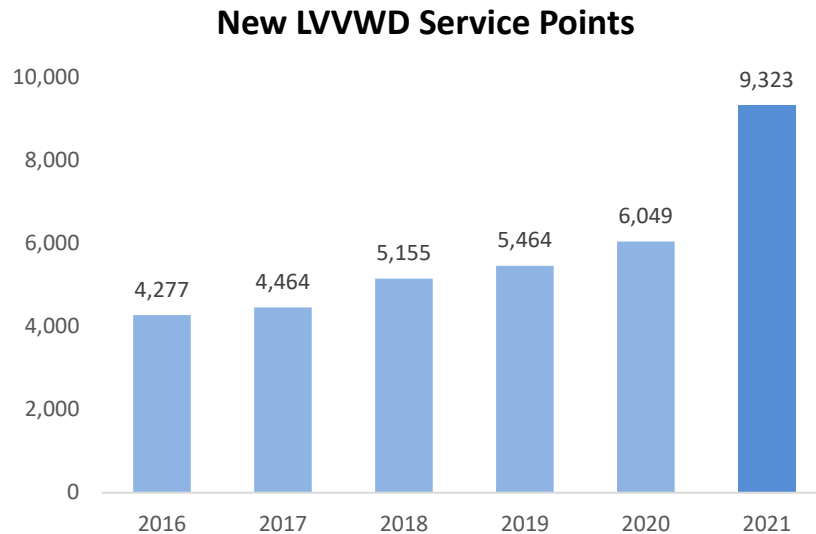
The LVVWD operates and maintains a complex water distribution system which connects over 400,000 homes and businesses to the community's water supply. Key components of the water system include:

- 6,982 miles of transmission, distribution and service lines
- 80 reservoir basins which collectively hold nearly one billion gallons of water
- 54 pump stations with the capacity to move more than 1.25 million gallons of water per minute
- 64 production wells

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These components are critical to ensure that the LVVWD's customers always have reliable access to water.

New Service Points. With the immense growth and construction development in the valley this past year, the LVVWD added 9,323 new service points to its customer base in 2021, a significant increase from prior years.



Capital Improvements and Asset Management

In 2017, the LVVWD Board of Directors approved a 10-year, \$616 million (in 2016 dollars) CIP. This document guides and directs the operation, maintenance and development of the LVVWD water distribution system, and supports the LVVWD's ongoing commitment to ensure the community water system remains stable and reliable into the future. The following projects have either been completed, are active, or will begin within the next fiscal year:

- Centennial 2635 Zone Reservoir and 2745 Zone Pumping Station
- Rome 2745 Reservoir, 2975 Zone Pumping Station, and 2975-2860 Zone Pressure Reducing Valve
- Rome Facilities Pipelines
- Egan Crest 3090 Zone North Pipeline
- Shaumber 3205 Zone North Pipeline and Pressure Reducing Valve
- Las Vegas Boulevard Improvements
- 4125 Zone North Reservoir
- 4125 Zone Pumping Station
- 4125 Zone North Facilities Pipelines
- Alpine Ridge 3090 Zone North Pipeline Phase I and II
- Cougar 3090 Zone Reservoir
- Cougar Facilities Pipeline

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- Equipping J8 Well (Jean)
- Blue Diamond Pipeline Replacements
- Equipping W124
- Searchlight Pipeline Replacements and Upgrades

These projects will increase capacity and reliability for current and future water demand throughout the valley and the rural water systems.

Blue Diamond Rate Adjustment

The LVVWD has owned and operated the Blue Diamond Water System since 1992. Blue Diamond's water rates have not been adjusted since that time, as it has been a financially self-sustaining system able to pay for maintenance, operation and upgrades through existing customer rates. A rate increase became necessary in 2021 to establish a reserve fund for the long-term maintenance of new water system components, continue funding daily system operations, and fund water conservation programs for the community.

After an extensive community engagement process, the Red Rock Citizens Advisory Committee considered a series of proposed tiered rate scenarios and recommended a five-tier rate structure, phasing in the rate increase from years 2022-2025, and then indexing the rates in each year thereafter in accordance with the Consumer Price Index (CPI). The recommendation also included an increase to the daily service charge. The rate increase was approved by the LVVWD Board of Directors in August 2021.

Customer Care

Customer service remains a top priority for the LVVWD and staff is continually pursuing opportunities to ensure customers consistently receive first-rate service.

Customer to Meter Application. The valley's water system got a boost from the LVVWD's new billing system, as the technology helps quickly identify leaks and allows Customer Care to notify customers, reducing water waste in the community. C2M was launched in early 2022 and integrates with the current metering technology and provides the Customer Care & Field Services Department with hourly water consumption data. This data helps identify issues such as leaks in near real-time to quickly address problems and reduce water waste.

Payment Options. Through C2M, the organization provides flexible options for customers to pay water bills. Further adoption of various technologies will continue to meet customer requests.

Online Chat and SMS Messaging Enhancements. Customer Care enhanced its Chat Bot & Live Agent Chat, which allows customers to conduct business without having to call. Additionally, new technology allows staff to send customized messages to specific customers about water outages, seasonal restrictions, or conservation tips, for example, giving customers relevant and timely information.

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Lobby Renovation. The LVVWD opened its newly renovated customer lobby and meeting rooms to the public and staff in 2021. These renovations included improvements to customer engagement and payment options and upgrades to technology, among other enhancements.

Field Services

Meter Maintenance. Field staff continue to develop the meter maintenance program as the AMI system comes online and resources are transitioned into a maintenance role. The maintenance program will move from an age-based system to one that is driven by data and indicates when a meter reaches its effective lifespan, focusing on specific meter-sets that show the greatest inaccuracies. These changes will also allow staff to test twice as many meters in a single test and verify accuracy at lower flow rates than the previous system. This program began operation in March 2022.

Awards and Recognition

From recognition for resourcefulness with water management to safety in operations, the LVVWD was the recipient of several awards in 2021.

Frost & Sullivan awarded the LVVWD its annual *Excellence in Resourcefulness Award* for its efforts to minimize the impact of climate change by improving its overall water management operations, proactively identifying leaks through new technologies and expanding its service capabilities to its customers.

The LVVWD also received the *American Water Works Association's National Safety Award* for displaying a strong five-year safety record, as well as health, safety and training programs that show a commitment to best practices.

Springs Preserve

The LVVWD owns and operates the Springs Preserve, a 180-acre facility built to inspire culture and community, promote environmental stewardship and bring the vibrant history of the Las Vegas Valley to life.

Due to the ongoing COVID-19 pandemic and safety measures as a result, the Springs Preserve has required that general admission tickets be reserved online in advance and that face coverings be required for indoor spaces.

Having been closed, or operating with limited hours, during most of 2020, the Springs Preserve opened its Origen Museum in 2021 and restarted traveling exhibits with *Toytopia*, celebrating the toys of yesterday and today. The facility also reopened its Butterfly Habitat in the fall of 2021 and welcomed 17,787 guests through the exhibit. The Sustainability Gallery was remodeled this past

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year through a state grant of \$1 million and \$250,000 from the Springs Preserve Foundation. The Sustainability Gallery educates guests about eco-friendly lifestyles and the natural world around them through interactive activities and unique programs.

The Youth Conservation Council, formerly the Youth Advisory Council, provides high school students an opportunity to earn community service hours and gain valuable experience while learning about water issues. This 16-week program was host to 40 students from across the valley. While this program is led by the SNWA, the Springs Preserve and its staff play a large role in its coordination and implementation.

At the beginning of the fiscal year 2021-22, the Springs Preserve Foundation was awarded a \$2 million grant through the State of Nevada to design and construct a dedicated ethnobotanical garden focusing on Southern Nevada's indigenous peoples. Facing increased resource challenges, modern Las Vegas has much to learn from the people who lived and flourished here before. Preliminary plant lists, conceptual designs, and initial stakeholder and community meetings are ongoing. Earthwork is expected to begin in the 3rd quarter of 2022.

Financial Summary

The tables and descriptions on the following pages contain a summary of operating and capital sources and uses of funds for the LVVWD's fiscal years 2020-21, 2021-22 and 2022-23.

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Operating Budget Summary



Operating Budget Summary
Fiscal Years

	Actual 2020-21	Budget 2021-22	Budget 2022-23	Budget-to-Budget Variance	
				\$	%
Sources					
Tiered Consumption	\$ 290,162,318	\$ 301,116,788	\$ 304,278,181	\$ 3,161,393	1%
Service Charge	76,379,726	77,927,344	80,802,711	2,875,367	4%
Backflow Charge	12,423,288	12,466,647	12,643,151	176,504	1%
Reclaimed Water	7,781,287	7,306,470	6,889,401	(417,069)	-6%
Other Water Bill Charges	6,406,998	5,298,535	9,970,026	4,671,490	88%
Connection Charge	33,131,272	8,273,458	10,600,923	2,327,465	28%
Application & Inspection Fees	4,311,045	979,297	1,859,555	880,258	90%
Investment Income	946,061	5,407,983	6,382,701	974,718	18%
Springs Preserve	387,554	1,895,496	1,593,302	(302,194)	-16%
Other Sources	2,457,056	-	1,943,309	1,943,309	
LVVWD Sources	434,386,605	420,672,018	436,963,261	16,291,242	4%
Uses					
Purchased Water	99,660,851	105,649,878	110,607,387	4,957,509	5%
Energy	8,536,620	9,352,000	10,284,000	932,000	10%
Payroll & Related	105,327,388	151,963,017	150,779,078	(1,183,939)	-1%
Operating Expenses	36,632,352	50,960,398	58,436,787	7,476,389	15%
Debt Service	72,709,424	79,453,301	84,623,533	5,170,232	7%
Other Uses	1,518,640	322,376	838,477	516,101	
Transfers To Reserves	110,001,330	22,971,049	21,393,998	(1,577,051)	-7%
LVVWD Uses	434,386,605	420,672,018	436,963,261	16,291,242	4%
SNWA Charges					
Infrastructure Charge	120,852,948	123,776,745	137,026,339	13,249,594	11%
Commodity Charge	50,212,998	51,307,514	55,731,130	4,423,617	9%
Connection Charge	64,198,470	18,133,026	23,565,008	5,431,982	30%
Reliability Surcharge	4,103,043	4,214,929	4,428,884	213,954	5%
SNWA Charges	239,367,460	197,432,214	220,751,361	23,319,147	12%
Total Sources	673,754,065	618,104,232	657,714,622	39,610,389	6%
Total Uses	\$ 673,754,065	\$ 618,104,232	\$ 657,714,622	\$ 39,610,389	6%

Operating Sources

The fiscal year 2022-23 tentative budget's operating sources of funds are projected to be \$657.7 million, or a six percent increase as compared to the 2021-22 Adopted Budget Plan. This is largely due to increases in pass-through charges from the SNWA.

Tiered consumption charges are projected to increase \$3.2 million, or one percent, and the service charge is anticipated to increase \$2.9 million, or four percent. Tiered consumption charges and

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service charge revenues also factored in water rate increases adopted by the Board in January 2017, and projected growth in the number of active services. Other Water Bill Charges are expected to increase by \$4.7 million, or 88 percent, largely due to an increase in water waste fees. Connection Charge revenue is expected to increase by \$2.3 million, or 28 percent, as compared to the 2021-22 Adopted Budget Plan which was significantly affected by projected impacts from the COVID-19 pandemic in Southern Nevada, and the 2022-23 amount is higher due to those projected impacts not having as negative of an effect as anticipated in the prior fiscal year.

Operating Uses

The fiscal year 2022-23 tentative budget's operating uses of funds are projected to be \$657.7 million, or a six percent increase compared to the 2021-22 Adopted Budget Plan, mostly from increases in the pass-through charges from the SNWA.

Purchased water costs are projected to rise by \$5.0 million, or five percent, largely due to a rate increase in SNWA's wholesale delivery charge. Energy costs are projected to increase by \$0.9 million, or 10 percent. Payroll costs are anticipated to decrease by \$1.2 million, or one percent. The full-time equivalent employee count across the entire organization is expected to remain steady compared to the 2021-22 Adopted Budget Plan.

Non-payroll operating expenses are projected to increase by \$7.5 million, or 15 percent, as the LVVWD continues to face cost pressures due to inflation and supply chain issues. Debt service is anticipated to increase, compared to 2021-22, largely due to the planned \$80.0 million debt issuance. Transfers to reserves are expected to total \$21.4 million, relatively similar to 2021-22.

Capital Budget Summary



Capital Budget Summary **Fiscal Years**

	Actual 2020-21	Budget 2021-22	Budget 2022-23	Budget-to-Budget Variance	
				\$	%
Sources					
Developer/Grant Funds	\$ 5,698,776	\$ 23,896,563	\$ 39,725,405	\$ 15,828,842	66%
Debt Issuance Proceeds	106,028,328	74,989,681	80,000,000	5,010,319	7%
Other Sources	4,136,553	-	-	-	
Transfers From Reserves	-	55,044,618	119,929,960	64,885,342	
LVVWD Sources	115,863,657	153,930,861	239,655,365	85,724,503	56%
Uses					
Capital Expenditures	96,727,224	153,930,861	239,655,365	85,724,503	56%
Transfers To Reserves	19,136,433	-	-	-	
LVVWD Uses	\$ 115,863,657	\$ 153,930,861	\$ 239,655,365	\$ 85,724,503	56%

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Capital Sources

The fiscal year 2022-23 tentative budget's capital sources of funds are projected to be \$239.7 million, or a 56 percent increase as compared to the 2021-22 Adopted Budget Plan. The growth is largely due to the increases in developer/grant funds, a slight increase in debt issuance proceeds, and transfers from reserves rising due to increased capital expenditures. The transfers from reserves are a combination of remaining debt proceeds and unrestricted reserves.

Capital Uses

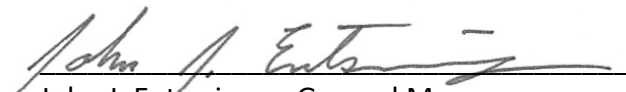
The fiscal year 2022-23 tentative budget's capital uses of funds are projected to be \$239.7 million, or a 56 percent increase compared to the 2021-22 Adopted Budget Plan. This is due to capital expenditures projected to increase by \$85.7 million in continuation of the CIP.

Summary

Overall, the LVVWD's fiscal year 2022-23 Operating and Capital Budget Plan presents a stable outlook as the LVVWD navigates through the ongoing drought and COVID-19 pandemic, with operating revenues matching operating expenses and an assortment of revenues, reserves, and debt proceeds funding capital expenditures.

Approval

The public hearing on the LVVWD's 2022-23 Tentative Budget, and adoption of the Final Budget, is scheduled for 9:45 a.m., Monday, May 16, 2022.


John J. Entsminger, General Manager

SECTION 2

INTRODUCTION AND STRATEGIC PLAN

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**LAS VEGAS VALLEY
WATER DISTRICT™**

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Introduction

Purposes and Powers

The Las Vegas Valley Water District (LVVWD) was created under a special act of the State of Nevada's legislature in 1947 for the purpose of obtaining and distributing water primarily in the Las Vegas Valley, including Blue Diamond, Jean and Searchlight, Nevada. The LVVWD also manages the water districts of Kyle Canyon, Searchlight, Coyote Springs and Big Bend under contracts with Clark County. The map on the following page shows the areas served by the LVVWD in relation to Clark County, Nevada.

The LVVWD has been granted certain powers to achieve its purpose, including the right of eminent domain, the right to cause taxes to be levied, the right to create assessment districts, the responsibility to operate and maintain the Southern Nevada Water Authority's (SNWA) regional treatment and transmission system and the right to incur indebtedness.

The LVVWD is governed by a seven-member Board of Directors (LVVWD Board), all of whom are elected Clark County Commissioners. The LVVWD Board has the sole power to set rates and charges for water, and charges cannot be put into effect until the conclusion of a public hearing process. The Las Vegas Valley Water District Act and applicable Bond Covenants provide that rates and charges should be sufficient to provide for operation and maintenance costs, general expenses of the LVVWD, and principal and interest payments on outstanding debt. Although the LVVWD Board may levy a tax on all taxable property within the LVVWD service area, such a tax never has been levied. The daily operations of the LVVWD are overseen by the General Manager, appointed by the LVVWD Board.

Intergovernmental Relationships

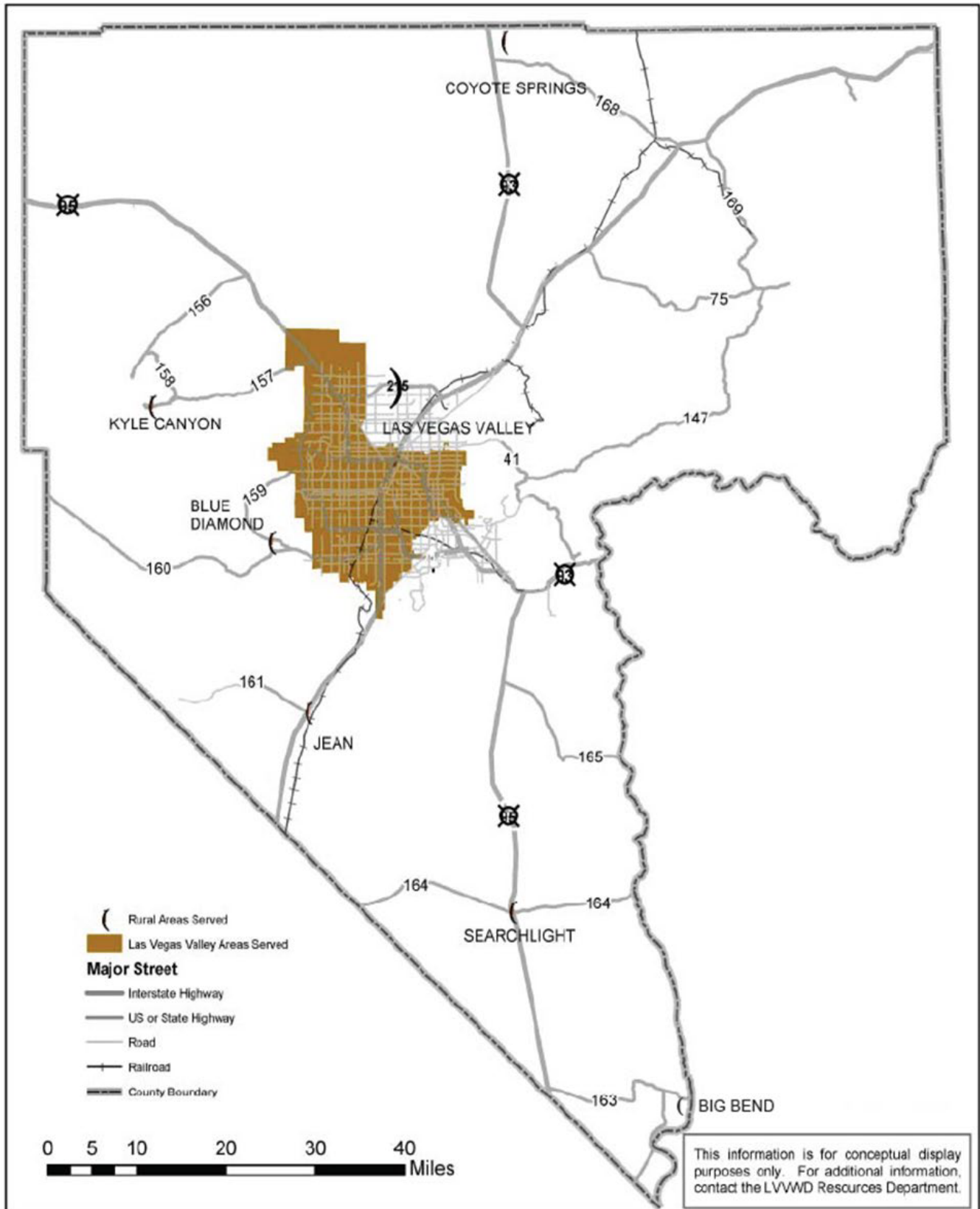
The LVVWD plays a vital role in the management of water resources in Southern Nevada. To fulfill this role, the LVVWD must work effectively and cooperate with state and federal governments, numerous local jurisdictions and other local water purveyors. These relationships play a vital role in shaping not only the demands on the LVVWD, but also the fiscal year 2022-23 Budget Plan. The following describes these intergovernmental relationships.

Las Vegas Valley Water District. The LVVWD serves potable water to customers in the City of Las Vegas and unincorporated urban areas of Clark County, Nevada. As the largest water purveyor in Southern Nevada, the LVVWD has taken a leadership role in conservation and regional water issues. The LVVWD provides the operating staff for the SNWA. The General Manager of the LVVWD serves as the General Manager of the SNWA.

Southern Nevada Water Authority. In 1991, the cities of Las Vegas, North Las Vegas, Henderson, and Boulder City, and the Big Bend Water District, Clark County Water Reclamation District and the LVVWD formed the SNWA to develop additional water resources and to address water issues on a regional basis. The Board of Directors of the SNWA (SNWA Board) consists of one member selected from each of the member agencies.

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Areas Currently Served



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Southern Nevada Water System (SNWS). The SNWS is the regional system consisting of water treatment plants, pumping and distribution facilities supplying water to the water purveyors in Southern Nevada. Prior to 1996, the SNWS was owned by the Colorado River Commission (CRC) and operated by the LVVWD. In accordance with legislation passed by the Nevada State Legislature during its 1995 session, the SNWS was transferred to the SNWA in January 1996. The LVVWD continues to operate the SNWS.

Major Water Purveyors. The major water purveyors and the percentages of Colorado River water distributed in the Las Vegas area for the fiscal year ended June 30, 2021 are as follows: Boulder City (2.4 percent), Henderson (18.1 percent), North Las Vegas (13.4 percent), the LVVWD (65.9 percent) and others (0.2 percent).

Wastewater Treatment Agencies. The wastewater treatment agencies are as follows: City of Henderson, City of Las Vegas, City of North Las Vegas and the Clark County Water Reclamation District.

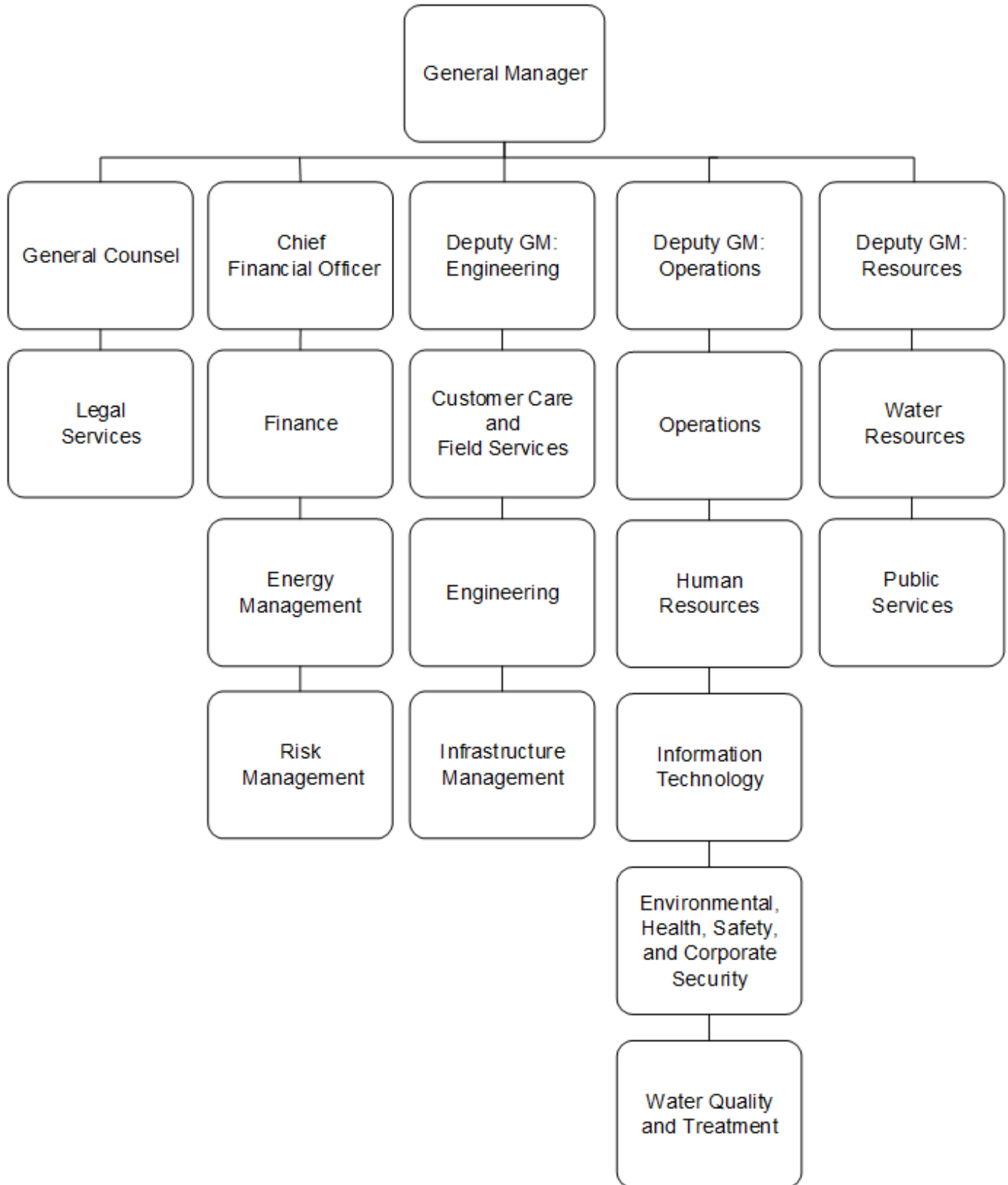
Colorado River Commission. The CRC is a Nevada State agency created in the mid-1930's to acquire and protect Nevada's right to water and power resources from the Colorado River. Colorado River water is apportioned among the seven Colorado River basin states and Mexico. The seven-member CRC consists of four members appointed by the Governor (including the Chairperson) and three SNWA Board members.

Bureau of Reclamation (BOR). The Bureau of Reclamation, within the U.S. Department of the Interior, is responsible for managing the Colorado River to benefit the users with Colorado River water rights. Any changes to the laws governing the Colorado River benefiting Nevada require the cooperation and approval of the federal government and all seven of the basin states.

Organizational Structure

The LVVWD's organizational structure has evolved to meet the demands of major water facility expansions, conservation, customer service initiatives, and special projects. The organization chart on the following page reflects the LVVWD's current organizational structure.

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Financial Structure and Controls

The LVVWD's financial reporting structure is fund based. A fund is defined as a separate, self-balancing set of accounts used to account for resources segregated for specific purposes in accordance with special regulations, restrictions, and/or limitations. The LVVWD maintains two funds, a proprietary enterprise fund and a fiduciary pension trust fund. Both funds utilize full-accrual accounting.

Proprietary Fund Type - Enterprise Fund. The Enterprise Fund is used to account for the LVVWD's operations in a manner similar to private business enterprises. The intent of the LVVWD is to establish water user rates and charges sufficient to provide for payment of general operation and maintenance expenses, capital improvements and annual debt service. Revenues are recognized when they are earned, and expenses (including depreciation) are recognized when they are incurred.

Fiduciary Fund Type - Pension Trust Fund. The Pension Trust Fund is used to report the assets and liabilities of the LVVWD's defined benefit pension plan and the additions and deductions during the fiscal reporting period. The resources of the Pension Trust Fund are held in trust for the members and beneficiaries of the plan.

Capital and Debt Service Accounting. Capital and debt service finances are accounted for separately within the overall structure of the Enterprise Fund. Bond issuance resolutions require that bond proceeds be maintained in restricted acquisition and construction accounts until they are expended. Assets restricted for specific purposes (e.g. additions to plant or repayment of bonds) and liabilities payable from such assets are accounted for separately until disposition. Earnings on these assets also are considered restricted. Fund equity is restricted for assets, less related liabilities, which are restricted by law or other externally imposed regulations, such as bond covenants.

Long-Range Operating Financial Plan. The LVVWD recognizes long-range financial planning is critical to accomplish its mission. In order to anticipate potential future financial challenges so corrective action can be taken to maintain financial stability, the LVVWD develops short-term and long-term financial forecasts to assess its overall fiscal health. These important components provide insight into future financial capacity which enable the formulation of strategies to achieve long-term sustainability in light of service objectives and financial challenges in these uncertain times.

Projecting long-term financing and operations is often tenuous despite its importance in setting the course of the overall direction of financial, operational, and capital resource allocation priorities of the organization. Major strategic policy guidelines emphasized are long-term water supply needs and infrastructure replacement goals, as well as improved resilience during unforeseen events. Careful consideration is taken to formulate long-range financial plans with increased focus on the economic environment, capital projects, and asset management. However, the LVVWD believes it is best to emphasize the short-term forecast information in the annual budget document. Prudent management of sources and uses of funds, coupled with consistent long-term financial planning, results in financial stability for the organization.

Internal Controls. In developing and evaluating the LVVWD's accounting system, consideration is given to the adequacy of internal accounting controls. These controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss from unauthorized use or disposition; and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes the cost of a control should

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not exceed the benefits likely to be derived and the evaluation of costs and benefits requires estimates and judgments by management. All internal control evaluations occur within the above framework. The LVVWD's internal accounting controls safeguard assets and provide reasonable assurance of proper recording of financial transactions. On an ongoing basis, the LVVWD evaluates its internal controls and implements changes in response to dynamic operations.

Debt Administration. It is the general intent of the LVVWD that rates and charges are adequate to provide for all costs, and reliance on taxes is to be avoided. Ad valorem taxes have never been required to support the LVVWD's operations or debt service. It is projected that as of July 1, 2022, the LVVWD will have \$835 million in outstanding general debt. All applicable bond covenants, such as ratios of net income to debt service, sinking funds and insurance coverage have been met or exceeded. The LVVWD does not have a statutory debt limit. Currently, Standard and Poor's (S&P) Corporation rating for the LVVWD's general obligation bond issues is "AA", while Moody's Investor Service, Inc. rating for outstanding LVVWD general obligation bonds is "Aa1".

Cash Management. During the year, available operating funds are invested in a variety of securities determined according to the LVVWD Investment Policy. For further information refer to Section 09 Financial Policy - Investment Policy.

Risk Management. The LVVWD employs a multifaceted approach to risk management, which includes the transfer, elimination, avoidance, reduction and/or assumption of risk of loss. The LVVWD also purchases risk insurance (including terrorism insurance) from the commercial insurance market on real and personal property, including earthquake and flood, with common policy restrictions, covering direct physical loss of or damage to buildings, fixtures, equipment, boilers, machinery and supplies.

The blanket limit of liability under the property insurance program (including industrial equipment) is \$500 million with a deductible of \$1 million for all locations except earthquake and flood insurance, which has limits of \$100 million and \$50 million respectively, and deductibles of \$1 million and \$100,000, respectively. This program also provides terrorism insurance for all locations with a blanket limit of \$250 million for all terrorist acts with a deductible of \$10,000. The LVVWD self-insures the first \$1 million for automobile and general liability exposure and purchases excess liability insurance in the amount of \$20 million over the \$1 million self-insured retention.

The LVVWD maintains cyber insurance coverage of \$10 million with a \$100,000 retention. The cyber insurance policy provides liability coverage for damages the LVVWD is legally obligated to pay resulting from incidents covered under the policy. In addition, the cyber insurance policy provides business income and extra expense insurance for covered cyber incidents. See the caption "CERTAIN RISK FACTORS—Cybersecurity Risks."

In addition, the LVVWD purchases employee fidelity insurance in the amount of \$3 million and other miscellaneous coverage. It also self-insures its workers' compensation exposure for \$750,000 per claim and purchases excess workers' compensation insurance with statutory limits.

In contracts, the LVVWD obtains indemnification and hold-harmless agreements. These agreements usually require that contractors name the LVVWD as an additional insured under the indemnitor's insurance coverage.

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In 2021, the Las Vegas Valley Water District formed the LVVWD CI (the “Captive”), a wholly owned subsidiary of the LVVWD, domiciled in the state of Nevada. The LVVWD is the sole member of this captive insurance company. The Captive is a registered limited liability company formed to advance long-term risk management program strategies through the use of a formalized self-insurance program that can access the reinsurance markets. The Captive provides retention for worker's compensation, general/auto liability, public officials liability, cyber liability, employment practices, and property.

Budget Controls and Process

Budget Controls. By state statutes, the LVVWD’s budget is approved annually, following a public hearing process, by the LVVWD Board. The LVVWD annually prepares a budget on a modified cash basis. The LVVWD also prepares and submits a budget to the Nevada State Department of Taxation in accordance with statutory laws based on a full accrual basis. Budgetary controls are established at the levels of total estimated operating and nonoperating expenses. A utility or other enterprise is a self-supporting operation of a commercial nature, and the demand for service largely determines the appropriate level of revenues and expenditures. Depending upon the timing and level of the demand for services, revenues and expenditures will vary.

Budgetary controls are established at various levels to have effective control over the necessary expenditures. These levels always include departments and divisions and, in some instances, sections. Most disbursements are made through the issuance of purchase orders. The purchasing division in the Finance department administers purchases of new furniture, vehicles, and communication equipment. Computer equipment purchases are administered under the authority of the Director of the Information Technology department. The Finance department prepares and distributes monthly budget variance reports, and division managers can electronically access their budget information using the Oracle Financial System. Division managers are accountable for variances between the budgeted and actual expenditures. The LVVWD’s staffing is controlled by the Human Resources department.

Budget Process. The LVVWD’s budget process starts in December of each year, and proceeds with a series of meetings involving department directors and/or managers. Financial analysis is done to project the revenues under the projected water rate structure. The revenue projections are based on the estimated water the LVVWD is planning to deliver in the coming year. The budget reflects the strategies and goals adopted by the LVVWD.

The LVVWD’s budget staff distributes current and historical information to managers to assist in the preparation of budgets within the budgeting guidelines. The budget process consists of three major phases. The first phase includes preparing new requests for capital equipment, construction projects and staff positions for the new fiscal year. The second phase consists of preparing department-operating budgets, including payroll and related expenditures. Estimating payroll and related expenditures are based on current approved positions and factors based on historical adjustments throughout the year. The third phase involves department directors, managers, and supervisors meeting with Executive Management to justify expenditure requests. After all the departments’ budgets have been reviewed and approved by the Executive Management Office, the budget is consolidated for the entire LVVWD, and an initial proposed budget document is submitted to the Nevada State Department of Taxation by April 15. The State then reviews the proposed budget and issues a notice of compliance or noncompliance with the statutory laws of the State of Nevada.

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The LVVWD, typically in late April, conducts a working session with the LVVWD Board to review the proposed budget in detail. On the third Monday in May, the LVVWD Board conducts a public hearing to allow the public an opportunity to discuss the proposed budget, and after discussion and/or amendments, the proposed budget receives final approval from the LVVWD Board. The approved final budget document is filed with the State of Nevada. Once approved and filed, copies of their budgets are provided to departments. The approved budget is implemented on July 1, the first day of the new fiscal year.

Budget Augmentation

Nevada Revised Statute (NRS) 354.493 defines budget augmentation as a procedure for increasing appropriations of a fund with the express intent of employing unbudgeted resources to carry out the purpose for the increased appropriations. To augment the budget, the LVVWD Board must adopt a resolution providing for an augmentation at a regular meeting of the LVVWD Board by majority vote of all members. Budget augmentation becomes effective when an executed copy of the resolution for augmentation is delivered to the State of Nevada Department of Taxation.

FISCAL YEAR 2022-23 BUDGET CALENDAR



	All Departments	Financial Services	Executive Management	Human Resources
Dec	Tue Dec 7 Budget instructions and calendar received	Tue Dec 7 Budget instructions and calendar sent to departments		Dec Organization charts available for review in Workday. Adjustments to organization charts due to Human Resources Information Systems, (HRIS) (HRIS@lvvwd.com) by Thursday, January 13, 2022
	Mon Dec 13 Budget Kick-off Meeting (Teams)	Mon Dec 13 Budget Kick-off Meeting (Teams)		
	Mon Dec 13 – Thu Dec 16 Operating expense files received	Mon Dec 13 – Thu Dec 16 Operating expense files sent. Coordination of budget process, schedule, and assigned department Analyst assistance begins		
	Mon Dec 13 – Thu Jan 13 Personnel related requests will be coordinated through each department's Director and Deputy General Manager		Mon Dec 13 – Thu Jan 13 Personnel related requests will be coordinated through each department's Director and Deputy General Manager	
Jan				Thu Dec 16 List of existing interns and summer hire positions distributed to departments. Updates, corrections and new requests due to HRIS (HRIS@lvvwd.com) by Thursday, January 13, 2022
	Thu Jan 13 Adjustments to organization charts submitted to Human Resources Information Systems, (HRIS) (HRIS@lvvwd.com)	Thu Jan 13 Major data processing and equipment requests submitted to Information Technology and Fleet Services for review and coordination		Thu Jan 13 List of existing interns and summer hire position renewals sent to Financial Services
	Thu Jan 13 Final requests for interns and summer hire positions submitted to HRIS (HRIS@lvvwd.com)	Mon Jan 24 Begin coordination with departments incurring intercompany and overtime payroll costs		
	Thu Jan 27 Final 2022-23 operating expense budgets submitted to Financial Services			
	Thu Jan 27 Final 2022-23 capital budget equipment and project requests submitted			

FISCAL YEAR 2022-23 BUDGET CALENDAR



	All Departments	Financial Services	Executive Management	Human Resources
Feb	Tue Feb 1 Budget narrative instructions received	Tue Feb 1 Budget narrative instructions sent to departments		
	Mon Feb 21 Summaries and detail of operating expense & capital expenditure budgets received	Mon Feb 21 Summaries and detail of operating expense & capital expenditure budgets sent to departments		
		Mon Feb 21 Assisting departments in preparation for the Senior Management Team (SMT) budget meeting presentations begins		
Mar		Wed Mar 2 Budget overview briefing with Executive Management (E-Team)	Wed Mar 2 Budget overview briefing	
	Tue Mar 15 Department budget meetings with SMT and overview briefing	Tue Mar 15 Department budget meetings with SMT and overview briefing	Tue Mar 15 Department budget meetings with SMT and overview briefing	
	Thu Mar 17 Budget narratives submitted to Financial Services		Wed Mar 16 – Mon Mar 21 Final budget decisions made by Executive Management (E-Team)	
Apr		Mon Apr 4 Proposed draft budgets completed for Budget Workshops with Boards of Directors	Thu Apr 21 Board of Directors Budget Workshop for SNWA	
		Thu Apr 14 Preliminary Budgets filed with the Nevada State Department of Taxation	Mon Apr 25 Board of Directors Budget Workshop for LVVWD (including BBWD & Coyote Springs)	



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FISCAL YEAR 2022-23 BUDGET CALENDAR



	All Departments	Financial Services	Executive Management	Human Resources
May		Tue May 3 LVVWD, BBWD, and Coyote Springs Public hearing notice published in LVRJ		
		Fri May 6 SNWA Public hearing notice published in LVRJ		
			Mon May 16 LVVWD Board of Directors public hearings conducted on proposed budgets of LVVWD, Big Bend, and Coyote Springs for possible adoption	
			Thu May 19 SNWA Board of Directors public hearing conducted on the proposed budget for possible adoption	
		Thu May 26 Adopted budgets sent to the Nevada Department of Taxation		Thu May 19 Organization charts updated after Boards adopt budgets
Jun		Mon Jun 20 LVVWD, SNWA, BBWD & Coyote Springs annual summary fiscal reports published in LVRJ		
Jul		Thu Jul 21 Proof of publication of fiscal reports submitted to the Nevada State Department of Taxation		
Aug		Thu Aug 4 Budget Award Application submitted to the GFOA	 SOUTHERN NEVADA WATER AUTHORITY™	

Las Vegas Valley Water District Strategic Plan

Strategic Plan Background

The LVVWD's Strategic Plan represents the latest iteration in the LVVWD's long-standing commitment to self-assessment, continuous improvement, and comprehensive planning. The Strategic Plan provides future direction for the LVVWD, both in its role as a local water purveyor and in its operational and management support of the SNWA.

To respond to a variety of rapidly changing factors impacting the LVVWD, senior management and employees of the LVVWD, with policy guidance from the LVVWD Board, completed a comprehensive Strategic Plan in 1993. The LVVWD's Strategic Plan identified forces influencing decision-making and formulated goals and strategies to guide the LVVWD in responding to the challenges, and evolve into a dynamic, responsive, and effective organization. In 1997, the LVVWD revised its original plan to reflect its evolving role in supporting and managing the SNWA, as well as meeting demands as a local water purveyor. In fiscal year 2003-04, senior management and staff completed a review and updated the goals and strategies of the LVVWD's Strategic Plan, and a revised plan with new goals and strategies was presented to and adopted by the LVVWD Board. At the same time, staff initiated strategic planning meetings with the SNWA member agencies, resulting in the identification of goals to guide the future of the SNWA, and provide a foundation for common understanding between the LVVWD and the SNWA.

In fall 2012, the Senior Management Team began meeting to develop a new strategic plan. This strategic planning process allows the LVVWD and the SNWA to continue to respond to current economic conditions, plan for future needs and implement changes to ensure efficient and effective operations. The revised strategic plan was finalized and the organization-wide implementation launched in 2013.

Strategic Plan and 2022-23 Budget Plan Preparation

The LVVWD's Strategic Plan serves as a guide in the development of the LVVWD's annual Budget Plan. The Strategic Plan is used to guide and focus operational objectives and subsequently budget plan investments for the upcoming year. In section 5 of the 2022-23 Budget Plan, each department has established objectives for the upcoming year according to the relevant and existing Strategic Plan goal it is designed to address.

The LVVWD has undergone several strategic planning initiatives over the past several decades to ensure the organization has a framework for action and is prepared to address dynamic environmental and economic challenges. The Strategic Plan developed in 2013 addresses the current economic climate, organizational realignment, and operational needs.

For the past two decades, Southern Nevada has weathered unprecedented drought conditions on the Colorado River and has survived the effects of an economic recession and COVID-19 pandemic impacts. The recession impacts included a change in the community's business environment, a decrease in water sales, and a decrease in connection charges. Some of those same impacts have been seen from the ongoing COVID-19 pandemic. During this period of economic uncertainty, organizational structure and budgetary issues have been closely evaluated to ensure the organization's focus meets current community needs. The strategic plan represents a roadmap for the next three to five years which

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realigns the organization's focus on enhancing service levels, improving asset management, providing rate stability and streamlining the organization to meet current and future community needs.

The strategic planning process developed a "blueprint" to increase communication, emphasize accountability, and continue to cut costs and eliminate duplication in a manner representative of the organization's commitment to internal efficiency and exemplary customer service. The plan also establishes goals to facilitate these objectives.

The strategic planning process involved management and employees in all departments through a comprehensive exercise to: assess the organizations and their current environment; review and clarify the organizational vision, mission and values; and develop goals and strategies to support these objectives. By involving all levels of employees in the development of measures, milestones and standards of excellence, and incorporating their input into the strategic plan, the entire workforce has had the opportunity to engage in the implementation of the new Strategic Plan. Additionally, each workgroup has the ability to monitor its own progress through an online administrative tool.

As a result of this strategic planning process, a new vision, mission and goals were developed:

VISION

To be a global leader in service, innovation and stewardship

MISSION

Provide world class water service in a sustainable, adaptive and responsible manner to our customers through reliable, cost-effective systems

GOALS

- Assure quality water through reliable and highly efficient systems.
- Deliver an outstanding customer service experience.
- Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.
- Develop innovative and sustainable solutions through research and technology.
- Ensure organizational efficiency and manage financial resources to provide maximum customer value.
- Strengthen and uphold a culture of service, excellence and accountability.

Strategic Plan Strategies

In order to implement the goals of the Strategic Plan, the LVVWD prepared the following strategies:

Assure quality water through reliable and highly efficient systems.

- Provide a high quality drinking water supply and delivery system that is sustainable and promotes the vitality and prosperity of the community.
- Maintain high levels of reliability through application of a sufficiently funded asset management program.
- Sustain operational continuity with a sufficiently staffed, well-trained and skilled workforce.

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- Continually improve operating efficiencies by benchmarking to leading industry standards.
- Ensure a high quality of local and regional water resources through comprehensive water quality and watershed management.

Deliver an outstanding customer service experience.

- Assess customer satisfaction, establish benchmarks and determine where improvements are required.
- Continuously improve service processes and practices based on customer assessments.
- Utilize appropriate technology to simplify and improve the customer experience.
- Provide necessary training and development to ensure a quality customer service experience.
- Communicate with and receive continuous feedback from employees on organizational policy changes and improvements.
- Monitor other organizations/industries to identify innovations, best practices and ways to improve the customer experience.

Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.

- Enhance understanding of climate change impacts among ourselves and our stakeholders.
- Develop and implement adaptation plans to reduce or mitigate impacts of climate change on water and environmental resources.
- Conduct long-term water resources and facilities planning to ensure adequate resources are available when needed.
- Develop and implement proactive stewardship for environmental resources to ensure access to current and future water supplies.
- Champion innovative water efficiency initiatives to maximize beneficial use of resources.
- Incorporate sustainable best practices into organization initiatives and inspire positive change.

Develop innovative and sustainable solutions through research and technology.

- Identify, prioritize and implement sustainable and cost-effective solutions to organizational challenges.
- Promote a culture that is innovative and creative, and makes effective use of technology.
- Allocate the resources necessary to advance research, technology and other innovations.
- Develop and strengthen partnerships on a global basis to leverage resources and advance innovation.

Ensure organizational efficiency and manage financial resources to provide maximum customer value.

- Increase customer communication so there is a better understanding of the value of our products and services.
- Ensure predictable rates that are aligned with community expectations.
- Seek out and deploy worldwide best practices to minimize costs.
- Establish and utilize benchmarks to explore new opportunities for improved efficiencies.
- Formulate risk assessments and develop alternatives for expenditure decisions.

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Strengthen and uphold a culture of service, excellence and accountability.

- Improve the consistency and openness of communication to ensure employees are engaged and well informed.
- Increase the effectiveness of professional development by providing additional diverse learning opportunities.
- Hold ourselves accountable for delivering quality products and services to our customers, each other and the environment.
- Identify, monitor and measure key performance areas of the organization, openly sharing results and taking appropriate action.
- Provide and seek timely feedback on individual, team and departmental performance to enhance collaboration, accountability and excellence.

Performance Measures Matrix

The following performance measurements are based on the Strategic Plan goals that tie to the overall organization's mission. These performance measurements were developed to assist in evaluating the achievement of the organization's objectives. The measurements presented include data that is both internally and externally produced. Historical data is analyzed and is used as a basis for establishing targets for the current and budget fiscal years. On an annual basis, management will review the performance measurements listed to monitor results, evaluate targets, and add or remove items as needed to reflect organizational priorities.

Strategic Plan goals and metrics, along with the actual levels achieved during fiscal year 2020-21 as well as the targets for fiscal years 2021-22 and 2022-23 are reported in the following table.

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Strategic Goal	Department	Metrics	Definition / Calculation	Fiscal Year 2020-21 Actual	Fiscal Year 2021-22 Target	Fiscal Year 2022-23 Target
Assure quality water through reliable and highly efficient systems	Water Quality & Treatment	Water quality	Meet or surpass all State of Nevada and Federal Safe Drinking Water Act standards for prior calendar year	100%	100%	100%
	Infrastructure Management	Infrastructure leak index	Ratio of actual to unavoidable real losses.	2.1	3.0	3.0
Deliver an outstanding customer service experience	Customer Care	Customer service satisfaction rating	Customer satisfaction rating average for 4 quarters in calendar year	8.01	8.01	>7.73
Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment	Water Resources	Water resource availability	Sufficient permanent, temporary and future water resources available to meet projected calendar year demands	100%	100%	100%
	Water Resources	Average water usage / consumption	Gallons per capita per day (GPCD) assumes straight-line approach to goal of 86 GPCD by 2035	110	108	106
Develop innovative and sustainable solutions through research and technology	Environmental, Health, Safety and Security	Maintain alternate fuel fleet vehicle standings	Percentage of fleet operating on alternative fuel	90%	90%	92%
	Water Quality & Treatment	Number of innovative solutions deployed	Quantity of innovative solutions working within the system for the fiscal year	3	3	3
Ensure organizational efficiency and manage financial resources to provide maximum customer value	Finance	Reserve target compliance	Amount of unrestricted reserves (unrestricted cash & unrestricted investments) as compared to the unrestricted reserves target	155%	144%	113%
	Finance	Credit ratings	Credit ratings assigned by the credit rating agencies to identify the credit worthiness of an issuer relative to their peers	AA/Aa1	AA/Aa1	AA/Aa1
Strengthen and uphold a culture of service, excellence and accountability	Environmental, Health, Safety and Security	OSHA reportable rates	Incidence rate below the reportable injury and illness rate posted by the Bureau of Labor Statistics (BLS) annually for comparable industries	2.1	2.0	1.9
	Environmental, Health, Safety and Security	EPA reportable notifications	Number of reportable occurrences	0	0	0

SECTION 3

OPERATING AND CAPITAL BUDGET PLAN

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The fiscal year 2022-23 Budget Plan reflects the continued commitment of the Las Vegas Valley Water District (LVVWD) to provide water resources and services to meet the demands of Southern Nevada. The LVVWD utilizes its Strategic Plan as a guide in shaping its annual Budget Plan.

The fiscal year 2022-23 Operating Budget total sources of funds are projected to be \$657.7 million, or a six percent increase compared to the fiscal year 2021-22 Adopted Budget Plan. The fiscal year 2022-23 Budget Plan's total uses of funds are projected to be \$657.7 million, or a six percent increase compared to the fiscal year 2021-22 Adopted Budget Plan. The table below shows the Operating Sources and Uses of Funds Summary for the 2020-21, 2021-22, and 2022-23 fiscal years.

Operating Budget Summary

	Actual	Budget	Budget	Budget-to-Budget Variance	
	2020-21	2021-22	2022-23	\$	%
Sources					
Tiered Consumption	\$ 290,162,318	\$ 301,116,788	\$ 304,278,181	\$ 3,161,393	1 %
Service Charge	76,379,726	77,927,344	80,802,711	2,875,367	4 %
Backflow Charge	12,423,288	12,466,647	12,643,151	176,504	1 %
Reclaimed Water	7,781,287	7,306,470	6,889,401	(417,069)	(6)%
Other Water Bill Charges	6,406,998	5,298,535	9,970,026	4,671,490	88 %
Connection Charge	33,131,272	8,273,458	10,600,923	2,327,465	28 %
Application & Inspection Fees	4,311,045	979,297	1,859,555	880,258	90 %
Investment Income	946,061	5,407,983	6,382,701	974,718	18 %
Springs Preserve	387,554	1,895,496	1,593,302	(302,194)	(16)%
Other Sources	2,457,056	—	1,943,309	1,943,309	
LVVWD Sources	434,386,605	420,672,018	436,963,261	16,291,242	4 %
Uses					
Purchased Water	99,660,851	105,649,878	110,607,387	4,957,509	5 %
Energy	8,536,620	9,352,000	10,284,000	932,000	10 %
Payroll & Related	105,327,388	151,963,017	150,779,078	(1,183,939)	(1)%
Operating Expenses	36,632,352	50,960,398	58,436,787	7,476,389	15 %
Debt Service	72,709,424	79,453,301	84,623,533	5,170,232	7 %
Other Uses	1,518,640	322,376	838,477	516,101	160 %
Transfers To Reserves	110,001,330	22,971,049	21,393,998	(1,577,051)	(7)%
LVVWD Uses	434,386,605	420,672,018	436,963,261	16,291,242	4 %
SNWA Charges					
Infrastructure Charge	120,852,948	123,776,745	137,026,339	13,249,594	11 %
Commodity Charge	50,212,998	51,307,514	55,731,130	4,423,617	9 %
Connection Charge	64,198,470	18,133,026	23,565,008	5,431,982	30 %
Reliability Charge	4,103,043	4,214,929	4,428,884	213,954	5 %
SNWA Charges	239,367,460	197,432,214	220,751,361	23,319,147	12 %
Total Sources	673,754,065	618,104,232	657,714,622	39,610,389	6 %
Total Uses	\$ 673,754,065	\$ 618,104,232	\$ 657,714,622	\$ 39,610,389	6 %

Operating Sources

The fiscal year 2022-23 Operating Budget total sources of funds are projected to be \$657.7 million, which is a six percent increase compared to the 2021-22 Adopted Budget Plan.

The LVVWD revenue-based operating sources of funds are projected to rise by \$16.3 million, or four percent. This increase is largely due to projected increases in tiered consumption and other water bill charges.

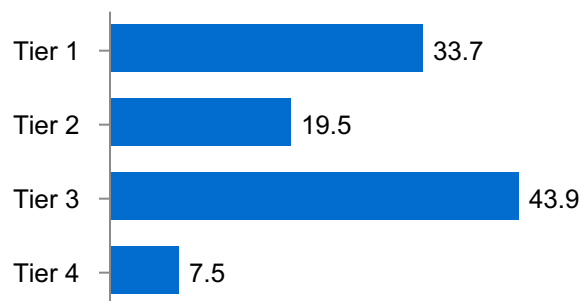
The LVVWD revenue-based operating sources of funds are impacted by the implementation of water rate adjustments. These water rate adjustments, as adopted by the LVVWD Board in January 2017, are inflation-indexed annually.

Tiered Consumption

The LVVWD service rules have consumption rates of four tiers with thresholds for each tier varying by meter size and customer class. In establishing water rates, the LVVWD strives to set reasonable rates and considerations for the equitable allocation and recovery of costs of providing facilities and delivery of water service are made, except that the rates may be established in such a way as to encourage the conservation of water. Construction water and reclaimed water are sold at uniform rates. The historical 10-year average mix of actual water deliveries between the consumptive tiers is as follows:

- Tier 1 – 30%
- Tier 2 – 17%
- Tier 3 – 43%
- Tier 4 – 10%

**2022-23 Budgeted Water
Deliveries by Tier (gallons in
billions)**



Tier 1. Tier 1 rates have typically been considered the rate for “lifeline” water (i.e. the amount of water a small residence needs to satisfy typical indoor water uses such as bathing, washing clothes, toilets, etc.). The tier 1 consumption rate is currently set at \$1.40 per 1,000 gallons.

Tier 2. Tier 2 rates allow a typical small residence with very limited outdoor water use to avoid the 3rd tier. In addition, tier 2 thresholds have been compressed for residential services with a meter size of ¾”

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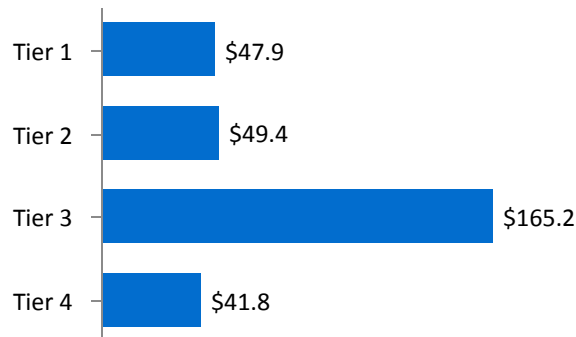
or above in order to encourage conservation. The tier 2 consumption rate is currently set at \$2.50 per 1,000 gallons.

Tier 3. Tier 3 typically delivers 40 – 45 percent of the water sold. The tier 3 consumption rate is currently set at \$3.71 per 1,000 gallons.

Tier 4. Tier 4 rates are designed to encourage conservation. The tier 4 consumption rate is currently set at \$5.51 per 1,000 gallons.

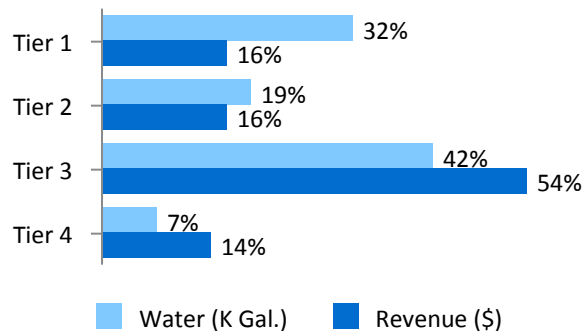
Construction Water. Construction water is sold at a uniform rate equal to the tier 3 rate. This water is typically delivered through a fire hydrant and is often used for dust suppression at construction sites.

2022-23 Budgeted Revenue by Tier
(\$ in millions)



The following chart shows the percent of budgeted water deliveries and revenue by tier for the fiscal year 2022-23. This chart illustrates the revenue impact on the water flowing through the tiers. In tiers 1 and 2, the percentage revenue impact is less than the percent of water delivered, and the reverse is true in tiers 3 and 4. While conservation is important, from a revenue perspective, it is financially beneficial to the LVVWD to deliver water in the upper tiers.

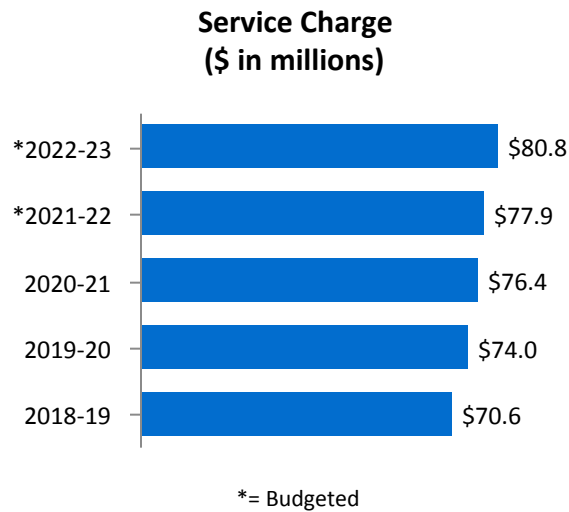
Percent Budgeted Water Deliveries
& Revenue by Tier



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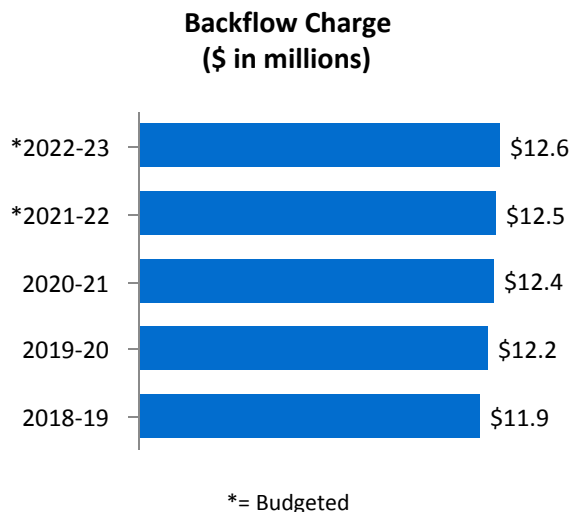
Service Charge

The daily service charge is a fixed charge designed to cover the costs of servicing an account, regardless of the amount of water consumed. For example, costs like meter reading, meter maintenance, preparing the bill, postage, and remittance processing are approximately the same regardless of the amount of water consumed, and almost regardless of the size of the service.



Backflow Charge

The backflow charge is a fixed charge applied to customers with a backflow device. In the event of negative water pressure (a rare occurrence), a backflow device prevents water from flowing from pipes on the customer's premises back into the potable water system and thereby potentially contaminating the potable water system. The backflow charge is designed to cover the cost of maintaining those devices.



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Reclaimed Water

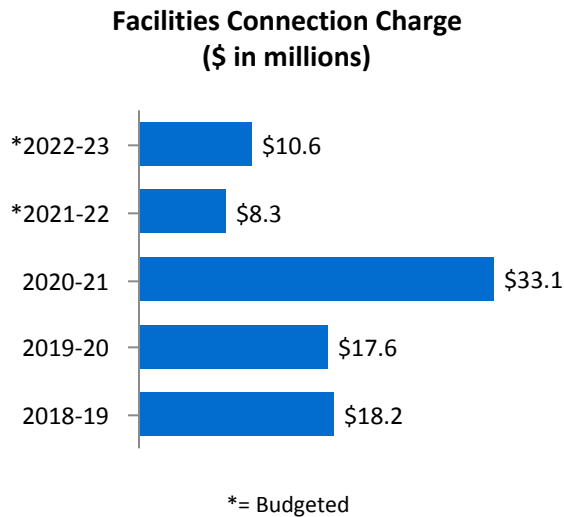
Reclaimed water is treated effluent from water reclamation centers, typically blended with potable water, and delivered to golf courses. The flat rate for reclaimed, or non-potable, water is \$2.33 per 1,000 gallons. Reclaimed water services are not subject to the daily service charge, the SNWA Commodity Charge or the SNWA Reliability Surcharge, but they are subject to the SNWA Infrastructure Charge. For the fiscal year 2022-23 Budget Plan, reclaimed water revenues are estimated to be \$6.9 million.

Other Water Bill Charges

The water bill may contain various other charges which appear on customers' water bills, such as turn on charges, late fees, delinquent processing charges, lockout fees, returned check charges, etc. Also, the allowance for doubtful accounts is included in other water bill charges. For the fiscal year 2022-23 Budget Plan, other water bill charges are anticipated to total \$10 million.

Connection Charge

The connection charge is based on meter size and is designed to offset costs of providing and/or expanding the LVVWD's water facilities. For the fiscal year 2022-23 Budget Plan, connection charges are anticipated to be \$10.6 million, which represents a \$2.3 million increase compared to the fiscal year 2021-22 Adopted Budget Plan. The facilities connection charge will be increased annually each March based on the Engineering News Record Construction Cost Index. These annual increases ensure the charged fee keeps pace with the expenditures required to render services.



Application & Inspection Fees

The application and inspection fees are developer fees charged at the time a customer applies to connect to the water system or applies for changes in water service connection. These fees cover the costs associated with handling the application, setting up the service and reviewing plans. Inspection fees are those developer fees charged for the inspection of all new water facility installations and water services constructed by private contractors. In the fiscal year 2022-23 Budget Plan, application and inspection fees total \$1.9 million, an increase of \$0.9 million compared to the fiscal year 2021-22

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Adopted Budget Plan. This increase reflects anticipated growth and development in the LVVWD's service area.

Investment Income

Investment income represents earnings on accumulated reserve balances. For the fiscal year 2022-23, interest earnings are anticipated to be \$6.4 million, a \$1 million increase compared to the fiscal year 2021-22 Adopted Budget Plan estimate. The increase is mostly the result of fluctuations in the reserve balances.

Springs Preserve

In 1998, the LVVWD entered into a partnership with the Las Vegas Springs Preserve Foundation, a tax-exempt charitable organization founded to provide funding for the Springs Preserve.

The Springs Preserve is a cultural and historic attraction located on the LVVWD property. The 180-acre national historic site is widely known as the "birthplace" of Las Vegas. The presence of an abundant water supply at the site was the original catalyst for the growth, development, and the resulting economic prosperity of the Las Vegas area. The Springs Preserve opened in June 2007.

For the fiscal year 2022-23 Budget Plan, revenues for the Springs Preserve are anticipated to total \$1.6 million, a 16 percent decrease compared to the fiscal year 2021-22 Adopted Budget Plan. This decrease is as a result of ongoing impacts due to the COVID-19 pandemic.

Other Sources

The 2022-23 Operating Budget Plan includes other sources of \$1.9 million. This amount reflects nonoperating revenues for amounts charged to SNWA for its portion of certain costs as required by the Governmental Accounting Standards Board (GASB) Statements No. 87, *Leases*, and No. 96, *Subscription-Based Information Technology Arrangements*.

SNWA Infrastructure Charge

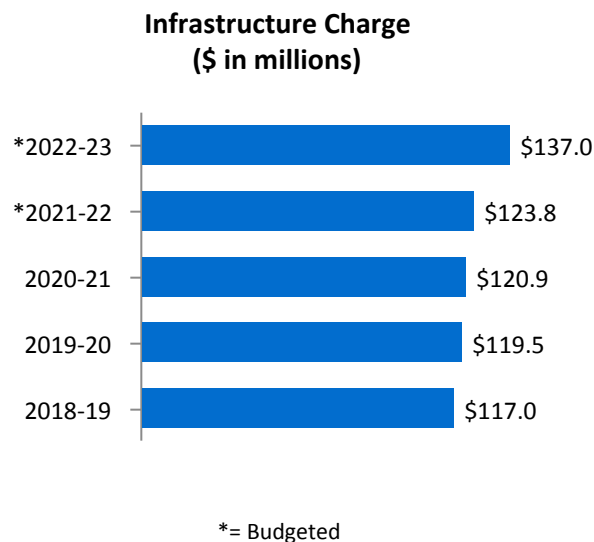
In October 2011, the SNWA Board of Directors (SNWA Board) authorized an extensive rate study and a public outreach process to study various alternative rate structures to service the SNWA's outstanding debt. Debt had been issued to fund capital projects and additional debt was issued to fund ongoing capital needs. After the completion of a rate study and a public outreach process, the SNWA Board on February 29, 2012, unanimously approved an infrastructure charge to help offset declines in other sources of revenue. Subsequently, on March 6, 2012, the SNWA infrastructure charge was unanimously approved by the LVVWD's Board.

In October 2019, the SNWA Board appointed a citizens advisory committee, named Integrated Resource Planning Advisory Committee (IRPAC 2020), to examine Southern Nevada's long-term water planning efforts. One of the IRPAC 2020's recommendations was to implement a six-year annual increase effective January 2022 to phase-in an inflationary catch up, as well as adjust for annual inflation. All of the IRPAC 2020's recommendations were approved by the SNWA Board in September 2020, and the rate adjustments themselves were adopted by the SNWA Board in November 2020 after a public hearing. These rates were fixed increases of 1.6 percent annually for six years to catch up the rate to current day dollars, as well as three percent to account for current year inflation. Due to

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unexpected inflation, IRPAC 2020 reconvened in December 2021 to ensure that fees charged maintained pace with current and future inflation. Subsequently, IRPAC 2020 recommended to the SNWA Board to amend the previously approved current year fixed rate increases to variable rates. The variable rates would be the actual Engineering News Record Construction Cost Index, which will allow the cost of services to keep pace with the associated fee structure. The recommendation was approved by the SNWA Board in February 2022. In addition to the new rates, the SNWA Board also approved limiting future increases to a floor of 1.5 percent and a ceiling of seven percent, excluding catch-up increases in years 2023 through 2027.

This source of revenue for the SNWA is projected to generate \$137 million from the LVVWD customers. This represents an increase of \$13.2 million, or 11 percent, in the fiscal year 2022-23 Operating Budget Plan when compared to the fiscal year 2021-22 Adopted Operating Budget Plan. This charge is on the LVVWD customers' water bills and the funds pass directly to the SNWA. The infrastructure charge receipts have no impact on the LVVWD's net surplus or deficit.

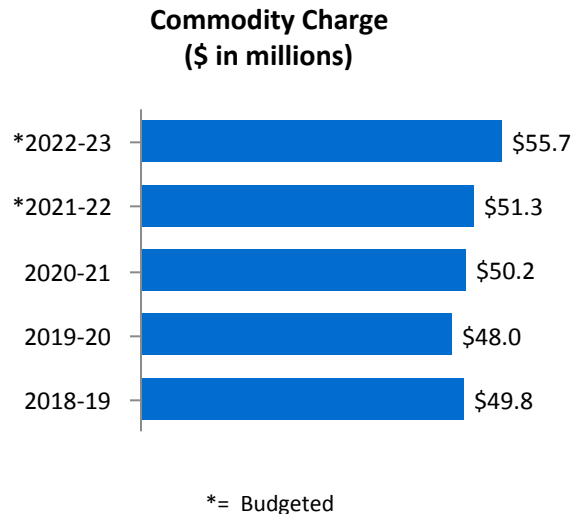


SNWA Commodity Charge

The commodity charge was approved by the SNWA Board and the LVVWD Board in December 1995 and went into effect on purveyor water bills beginning in November 1996. This charge consists of a usage cost per 1,000 gallons sold by each of the SNWA's participating purveyor members to their customers. The commodity charge was implemented as a fixed fee per 1,000 gallons consumed. In November 2020, the SNWA Board approved tying the commodity charge to future annual increases in the Consumer Price Index (CPI) starting in 2028, with a six-year set rate schedule for current year inflation as well as catch-up inflation which accounts for inflation since the last increase in January 2017. Catch-up inflation was set at 2.3 percent for six years starting in January 2022. Due to unexpected inflation, IRPAC 2020 reconvened in December 2021 to ensure that fees charged maintained pace with current and future inflation. Subsequently, IRPAC 2020 recommended to the SNWA Board to amend the previously approved current year fixed rate increases to variable rates. The variable rates would be the actual Consumer Price Index (CPI), which will allow the cost of services to keep pace with the associated fee structure. The recommendation was approved by the SNWA Board in February 2022. In addition to the new rates, the SNWA Board also approved limiting future increases to a floor of 1.5 percent and a ceiling of seven percent, excluding catch-up increases in years 2023

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through 2027. The charges are paid by the purveyors' customers based on the benefit they will accrue from the expansion of the SNWA's regional water treatment and transmission system. For fiscal year 2022-23, commodity charge revenues are anticipated to be around \$55.7 million, an increase of \$4.4 million, or nine percent, compared to the fiscal year 2021-22 Adopted Operating Budget Plan. The commodity charge receipts have no impact on the LVVWD's net surplus or deficit.

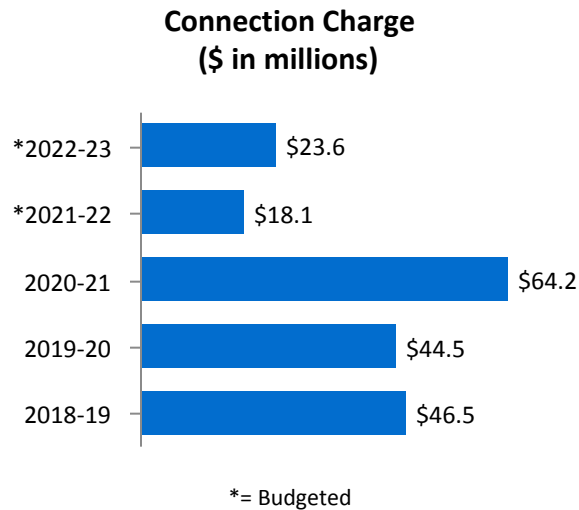


SNWA Connection Charge

The connection charge was approved by the SNWA Board and the LVVWD Board in December of 1995 and became effective March 1, 1996. It was established to pay the majority of the costs of expanding the SNWA's regional water treatment and transmission system. It assesses new development to partially pay the costs of the system's current and future expansions. Similar to the infrastructure and commodity charges, the IRPAC 2020 recommended to implement a six-year annual increase effective March 2022 to phase-in catch up inflation, as well as adjust for annual inflation. These revenues are passed directly from the LVVWD to the SNWA and are offset in the LVVWD's sources of funds with an equal amount of uses of funds.

The fiscal year 2022-23 Budget Plan anticipates the SNWA connection charge collections of \$23.6 million, an increase of \$5.4 million compared to the fiscal year 2021-22 Adopted Budget Plan. As with other sources of development-based revenue, this increase reflects the projected growth and development in the LVVWD's service area. The connection charge receipts have no impact on the LVVWD's net surplus or deficit.

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SNWA Reliability Surcharge

The reliability surcharge was approved by the SNWA Board and the LVVWD Board in November 1997 and went into effect on purveyor water bills beginning in April 1998. It is applied to the total dollar amount of customers' bills, excluding the SNWA infrastructure charge. Residential customers are charged 0.25 percent of their total bill, while all other customers are charged 2.5 percent. The reliability surcharge is an additional charge to be paid by the purveyors' customers based on the benefit they will accrue from the expansion of the SNWA's regional water treatment and transmission system. In the fiscal year 2022-23 Budget Plan, it is estimated this charge will total \$4.4 million, an increase of \$0.2 million compared to the fiscal year 2021-22 Adopted Budget Plan. The reliability charge receipts have no impact on the LVVWD's net surplus or deficit.

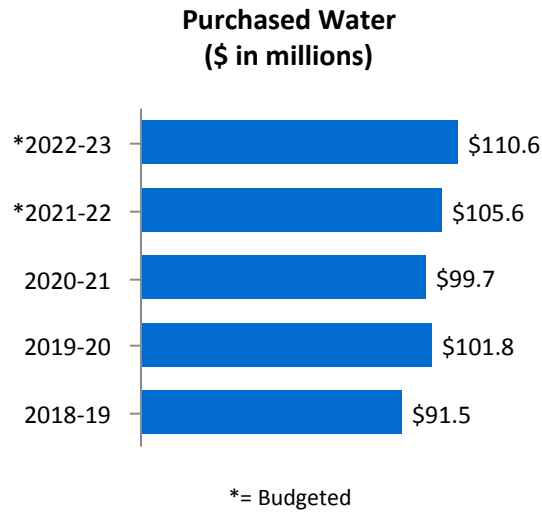
Operating Uses

The fiscal year 2022-23 Budget Plan's total uses of funds are projected to be \$657.7 million, which is a six percent increase compared to the 2021-22 budget.

Purchased Water

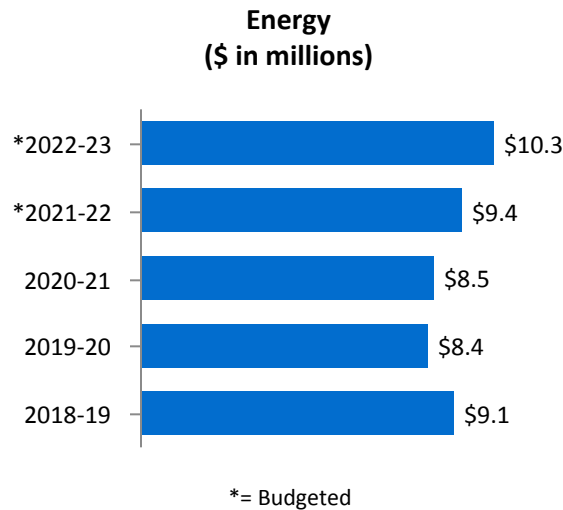
The LVVWD purchases approximately 90 percent of its water from the SNWA. For the fiscal year 2022-23 Budget Plan, water costs are projected to be \$110.6 million, which is a five percent increase compared to the fiscal year 2021-22 Adopted Budget Plan. The increase is predominantly a result of increases in purchased water. A portion of the increase can be attributed to increases in the wholesale water rate on water purchased from the SNWA.

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Energy

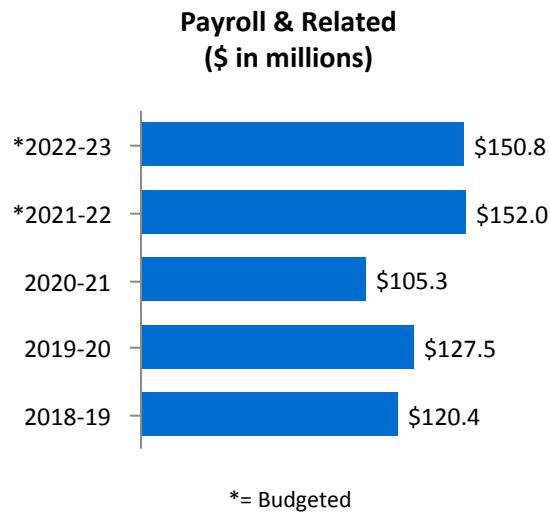
The cost of energy for fiscal year 2022-23 is projected to be \$10.3 million. This is an increase of \$0.9 million over the prior fiscal year 2021-22.



Payroll & Related

Payroll and related costs include wages, salaries and benefits. For the fiscal year 2022-23 Budget Plan, payroll and related expenses are anticipated to be \$150.8 million. This represents a decrease of \$1.2 million, or one percent, compared to the fiscal year 2021-22 Adopted Budget Plan.

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Full-time equivalent (FTE) is a unit of measurement which represents the workload of one full-time employed person. The LVVWD's FTE count is expected to decrease by approximately 8 employees over the fiscal year 2021-22 Adopted Budget Plan.

FTE Summary

Department	Actual 2020-21	Budget 2021-22	Budget 2022-23
Executive Management	8.5	7.9	6.9
Legal Services	5.2	5.5	5.5
Finance	59.8	32.8	29.2
Energy Management	0.0	0.0	0.0
Risk Management	2.0	3.0	2.5
Customer Care & Field Services	140.2	172.0	159.7
Engineering	73.0	95.8	93.5
Infrastructure Management	89.6	101.0	101.7
Operations	174.0	195.4	198.6
Human Resources	20.3	25.5	56.2
Information Technology	78.4	95.4	90.6
Environmental Health Safety & Corporate Security	62.0	68.5	61.8
Water Quality & Treatment	0.6	0.5	0.7
Water Resources	11.7	16.5	24.2
Public Services	57.0	75.5	56.0
Total	782.1	895.2	886.9

*Totals may vary slightly due to rounding

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Operating Expenses

Operating expenses include materials and supplies, maintenance and repairs, rental and certain leases, other employee expenses, and other expenses, which are described in detail after the following table.

Category	Operating Expense Detail		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 13.6	\$ 19.8	\$ 14.8
Maintenance & Repairs	18.6	24.5	26.3
Rental & Leases	2.6	2.6	1.0
Other Employee Expenses	1.0	2.3	2.4
Other Operating Expenses	0.8	1.8	13.9
Total	<u>\$ 36.6</u>	<u>\$ 51.0</u>	<u>\$ 58.4</u>

Materials and Supplies. This classification includes, but is not limited to, pipe, asphalt, concrete, office supplies, and materials required for the normal operation of the LVVWD's facilities. The fiscal year 2022-23 Budget Plan anticipates total expenditures of \$14.8 million for this expense category. This represents a decrease of five million, or 25 percent, compared to the fiscal year 2021-22 Adopted Budget Plan.

Maintenance and Repairs. This classification includes, but is not limited to, the outside purchase of goods and services associated with maintaining and repairing the water transmission system; buildings and grounds; and computer equipment. The fiscal year 2022-23 Budget Plan anticipates this expense will total \$26.3 million, an increase of \$1.8 million, or seven percent, compared to the fiscal year 2021-22 Adopted Budget Plan.

Rental and Leases. The fiscal year 2022-23 Budget Plan anticipates expenses of \$1 million, which includes rent/lease office space, communication equipment and outside storage facilities. This expense decreased by \$1.6 million when compared to the fiscal year 2021-22 Adopted Budget Plan.

Other Employee Expense. This classification includes such items as safety equipment, dues, travel and training, and tuition reimbursement. The Budget Plan anticipates a total of \$2.4 million spent within this category. This amount represents an increase of \$0.1 million when compared to the fiscal year 2021-22 Adopted Budget Plan.

Other Operating Expense. This classification includes, but is not limited to postage, legal fees and professional services. For the fiscal year 2022-23 Budget Plan, other operating expenses are anticipated to total \$13.9 million, an increase of \$12.1 million compared to the fiscal year 2021-22 Adopted Budget Plan.

Debt Service

This classification includes debt service payments made for debt that the LVVWD has issued, or expects to issue, for funding capital projects as well as ongoing capital needs. For the fiscal year 2022-23 Budget Plan, total debt service payments are expected to total \$84.6 million. The increase of \$5.2 million, compared to the fiscal year 2021-22 Adopted Budget Plan, is largely due to the planned \$80 million debt issuance in 2022-23.

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Other Uses

This classification typically includes nonoperating revenues and expenses. For the fiscal year 2022-23 Budget Plan, total other uses are expected to total \$0.8 million. The increase of \$0.5 million is predominately related to the amortization of right-to-use assets as required by the Governmental Accounting Standards Board (GASB) Statements No. 87, *Leases*, and No. 96, *Subscription-Based Information Technology Arrangements*.

Transfers To Reserves

The fiscal year 2022-23 Operating Budget Plan's Transfers To Reserves are projected to be \$21.4 million, a decrease of \$1.6 million compared to the 2021-22 Adopted Budget Plan. The decrease is a result of higher sources of revenue and lower uses (expenditures) creating a higher surplus.

SNWA Charges

As described in the Sources section previously, the overall SNWA Charges for the fiscal year 2022-23 Budget Plan are expected to be \$220.8 million. This amount represents an increase of \$23.3 million, or 11.8 percent, when compared to the fiscal year 2021-22 Adopted Budget Plan.

The fiscal year 2022-23 Capital Budget total sources of funds are projected to be \$239.7 million, or a 55.7 percent increase compared to the fiscal year 2021-22 Adopted Capital Budget Plan. The fiscal year 2022-23 Budget Plan's total uses of funds are projected to be \$239.7 million, or a 55.7 percent increase compared to the fiscal year 2021-22 Adopted Budget Plan. The table below shows the Capital Sources and Uses of Funds Summary for the 2020-21, 2021-22, and 2022-23 fiscal years.

Capital Budget Summary						
	Actual	Budget	Budget	Budget-to-Budget Variance		
	2020-21	2021-22	2022-23	\$	%	
Sources						
Developer/Grant Funds	\$ 5,698,776	\$ 23,896,563	\$ 39,725,405	\$ 15,828,842	66 %	
Debt Issuance Proceeds	106,028,328	74,989,681	80,000,000	5,010,319	7 %	
Other Sources	4,136,553	—	—	—	— %	
Transfers From Reserves	—	55,044,618	119,929,960	64,885,342	118 %	
LVVWD Sources	115,863,657	153,930,861	239,655,365	85,724,503	56 %	
Uses						
Capital Expenditures	96,727,224	153,930,861	239,655,365	85,724,503	56 %	
Transfers To Reserves	19,136,433	—	—	—	— %	
LVVWD Uses	\$ 115,863,657	\$ 153,930,861	\$ 239,655,365	\$ 85,724,503	56 %	

Capital Sources

The fiscal year 2022-23 Capital Budget total sources of funds are projected to be \$239.7 million, which is a 55.7 percent increase compared to the 2021-22 Adopted Budget Plan. This increase is related to the increase in capital expenditures.

Developer/Grant Funds

The 2022-23 Operating Budget Plan includes developer/grant funds of \$39.7 million. This amount is comprised of \$39.7 million of sources from the oversizing fund. The oversizing fund in other sources matches the amounts in their corresponding uses of funds within capital expenditures.

Debt Issuance Proceeds

Municipal Bond Proceeds. The LVVWD plans to issue \$80 million in bonds during 2022-23. The bond proceeds are to fund capital expenditures, which is discussed in further detail later in this section.

Other Sources

The 2022-23 Capital Budget Plan includes no other sources. This grouping of revenue reflects other capital sources such as contributed capital.

Transfers From Reserves

The 2022-23 Capital Budget Plan includes Transfers From Reserves of \$119.9 million. This amount is the required funds to fund the current years capital budget.

Capital Uses

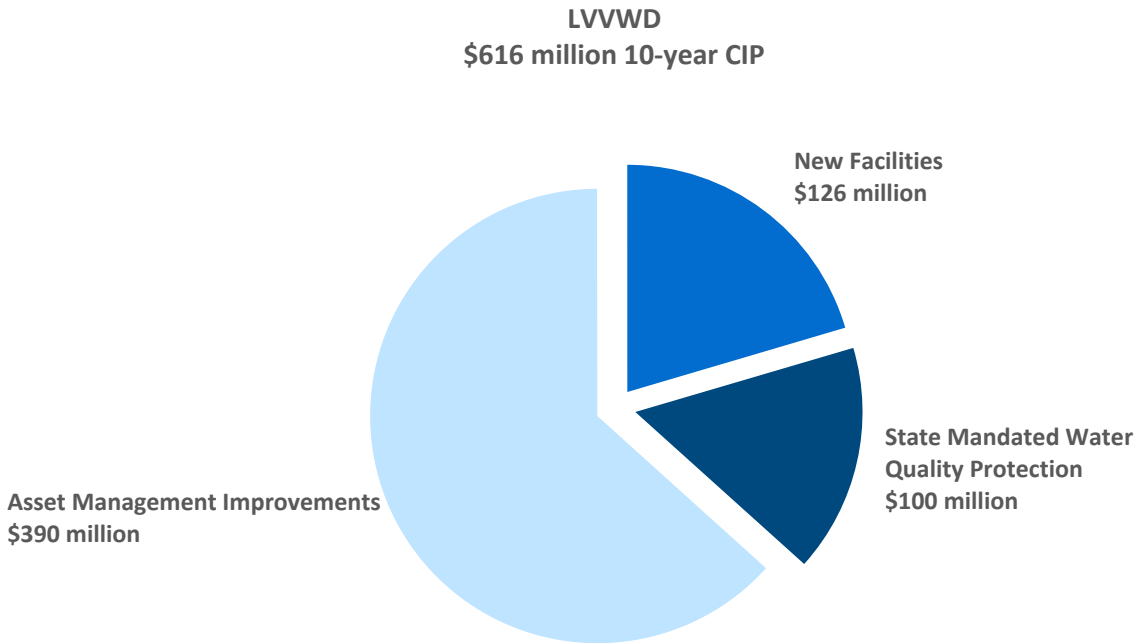
The fiscal year 2022-23 Budget Plan's total uses of funds are projected to be \$239.7 million, which is a 55.7 percent increase compared to the 2021-22 budget.

Capital Expenditures

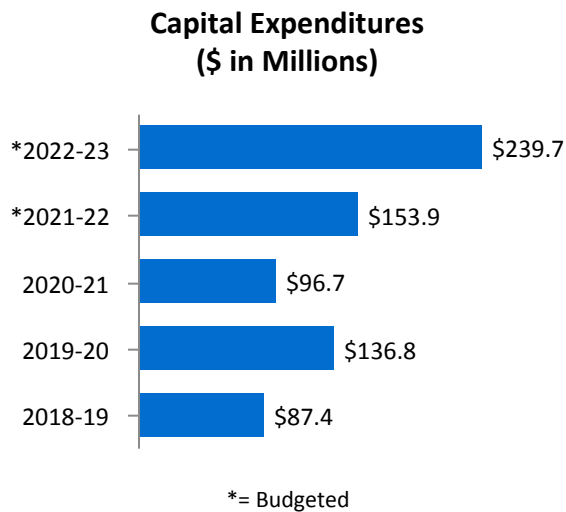
Capital expenditures are primarily driven by the need to expand and maintain the LVVWD's water storage, pumping, distribution system, facilities and equipment.

As mentioned earlier, in January 2017, the Board adopted the \$616 million (in 2016 dollars) 10-year CIP with the major components shown in the chart below.

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget
 Fiscal Year Ending June 30, 2023



For the fiscal year 2022-23 Budget Plan, the CIP and continued focus on asset management efforts to replace and maintain the LVVWD's essential equipment and water distribution facilities resulted in an increase in construction expenditures and capital equipment. For the fiscal year 2022-23 Budget Plan, total construction expenditures and equipment are budgeted at \$239.7 million, or an increase of 56 percent, compared to the fiscal year 2021-22 Adopted Budget Plan.



Capital Equipment and Vehicles. For the fiscal year 2022-23 Budget Plan, equipment purchases are anticipated to total \$12.0 million, an increase of \$8.0 million, or 203 percent, compared to the fiscal year 2021-22 Adopted Budget Plan.

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2023

Capital Projects. For the fiscal year 2022-23 Budget Plan, the adopted CIP enhances the emphasis in capital projects, along with asset management, maintenance, and improvement of the LVVWD's water distribution system. In the fiscal year 2022-23 budget, the LVVWD anticipates spending \$227.7 million on capital projects, an increase of \$77.7 million, or 52%, compared to the fiscal year 2021-22 Adopted Budget Plan. The increases are prudent and necessary to fund new facilities and a number of large water distribution system projects. Both in the fiscal year 2022-23 Budget Plan, and in the fiscal year 2021-22 Adopted Budget Plan, expenditure increases for included projects are considered to be crucial for the continued operation of the water distribution system and include reservoir, well, pump, vault, pipe, motor and valve renovation and replacement projects.

Transfers To Reserves

This classification includes transfers of capital funds in excess of the capital budget. For the fiscal year 2022-23 Budget Plan, LVVWD does not anticipate any transfers to reserves.

Summary of Sources and Uses of Funds and Changes in Net Assets

An enterprise fund's year-end balance differs dramatically from other government agencies' fund balances. The enterprise net asset balance closely approximates a private corporation's retained earnings section. As such, net assets are affected by operating items as presented in this document as well as other financial resources and expenditures. The LVVWD accounts for its Net Assets in accordance with GASB Statement No. 33, *Exchange or Non-exchange Transaction*. The following table summarizes the estimated sources and uses of funds and changes in net assets for the fiscal year 2022-23 Budget Plan.

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2023

Estimated Net Assets Detail
Fiscal Year 2022-23 Budget

	Invested in Capital Assets Net of Related Debt	Restricted for Debt Service	Restricted for Capital Projects	Unrestricted Net Assets	Total Proprietary Fund Net Position	Pension Trust Fund	OPEB Trust Fund	Total Net Assets
Estimated Equity 6/30/2022	\$ 839,087,011	\$ 31,584,682	\$ 209,212	\$ 447,061,242	\$ 1,317,942,147	\$ 811,554,670	\$ 27,371,374	\$ 2,156,868,191
Capital Acquisitions	(239,655,365)	—	—	—	(239,655,365)	—	—	(239,655,365)
Bond Payments								
Principal	45,760,213	(45,760,213)	—	—	—	—	—	—
Interest	—	(38,863,320)	—	—	(38,863,320)	—	—	(38,863,320)
Transfer for Debt Service	—	84,623,533	—	(84,623,533)	—	—	—	—
Operating Revenues	—	—	—	459,705,042	459,705,042	57,340,375	2,500,004	519,545,421
Operating Expenses	—	—	—	(330,945,729)	(330,945,729)	(28,400,000)	(2,200,004)	(361,545,733)
Nonoperating Revenue	—	—	—	16,983,624	16,983,624	—	—	16,983,624
Estimated Equity 6/30/2023	\$ 645,191,859	\$ 31,584,682	\$ 209,212	\$ 508,180,646	\$ 1,185,166,399	\$ 840,495,045	\$ 27,671,374	\$ 2,053,332,818

Invested in Capital Assets, Net of Related Debt. This classification is composed of donated capital. Cash is received from the facilities connection charge. Property and other non-cash items represent mains and services constructed to the LVVWD's standards by developers and then donated to the LVVWD.

Restricted for Debt Service. Assets from this classification are transferred from Unrestricted Net Assets to the Debt Service classification on a monthly basis. Total transfers (\$84.6 million) are used to pay current portions of general obligation bonds.

Unrestricted Net Assets. Many different classifications make up this category including:

- **Transfer to Debt Service** - Described in preceding section.
- **Operating Revenue** - This represents the cumulative financial results of operations. Operating revenue consists of water revenue, application and inspection fees, other revenues (backflow and hydrant service charges; delinquent charges, late charges and returned-check charges), and Springs Preserve revenues. For the fiscal year 2022-23, these revenues are anticipated to total approximately \$459.7 million.
- **Operating Expense** - Operating expenses include all categories in the Uses of Funds, excluding pension expense, which is listed separately in preceding table, bond payments, capital equipment, major construction expenditures, and the SNWA charges (regional connection, commodity, reliability surcharge and the infrastructure charge). For the fiscal year 2022-23, these expenses are anticipated to total approximately \$330.9 million.
- **Pension Expense** - For the fiscal year 2022-23, this expense has been separated from the payroll expense listed in the Uses of Funds, and is shown as a separate operating expense in the preceding

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2023

table in order to clarify and better track the transfer of this expense from the LVVWD's Proprietary Fund to the Pension Trust Fund.

- **Other Post Employment Benefits (OPEB) Expense** – For the fiscal year 2022-23, this expense has been separated from the payroll expense listed in the Uses of Funds, and is shown as a separate operating expense in the preceding table in order to clarify and better track the transfer of this expense from the LVVWD's Proprietary Fund to the OPEB Trust Fund.
- **Nonoperating Revenues (net)** - Nonoperating revenue consists of facilities connection charge and investment income.

Pension Trust Fund. This is cumulative activity in the LVVWD's pension plan. The plan is a single-employer pension trust fund, established to provide pension benefits for the LVVWD's employees. Anticipated operating revenues shown for this fund include contributions from the operating revenues discussed above and are expensed within the operating expenses discussed above as part of overall payroll expenses. For the purpose of estimating the impact of the LVVWD's operations on the Pension Trust Fund, the pension expense included as part of the LVVWD's operations is shown.

OPEB Trust Fund. LVVWD contributes to a single-employer defined benefit OPEB Trust Fund. During 2018-19, the OPEB Trust Fund was established to provide a means to fund the post-retirement benefits provided by the LVVWD. Anticipated operating revenues shown for this fund include contributions from the operating revenues discussed above and are expensed within the operating expenses discussed above as part of overall payroll expenses. For the purpose of estimating the impact of the LVVWD's operations on the OPEB Trust Fund, the OPEB expense included as part of the LVVWD's operations is shown.

SECTION 4

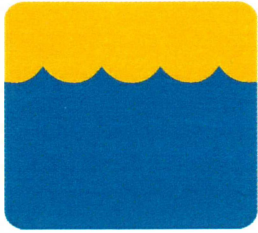
STATE OF NEVADA

BUDGET DOCUMENTS

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**LAS VEGAS VALLEY
WATER DISTRICT™**



LAS VEGAS VALLEY WATER DISTRICT™

Nevada Department of Taxation
1550 College Parkway, Suite 115
Carson City, NV 89706-7937

Las Vegas Valley Water District herewith submits the final budget for the
fiscal year ending June 30, 2023

This budget contains 0 funds, including Debt Service, requiring property tax revenues totaling \$ 0

The property tax rates computed herein are based on preliminary data. If the final state computed revenue limitation permits, the tax rate will be increased by an amount not to exceed 0. If the final computation requires, the tax rate will be lowered.

This budget contains 0 governmental fund types with estimated expenditures of \$ 0 and
1 proprietary funds with estimated expenses of \$ 684,693,775

Copies of this budget have been filed for public record and inspection in the offices enumerated in NRS 354.596 (Local Government Budget and Finance Act).

CERTIFICATION

I, E. Kevin Bethel
(Print Name)
Chief Financial Officer
(Title)
certify that all applicable funds and financial
operations of this Local Government are
listed herein

Signed:

Dated:

5/16/22

Phone:

(702) 822-8809

APPROVED BY THE GOVERNING BOARD

Only necessary for **FINAL** Budget
(Signature by DocuSign is acceptable)

Marilyn Kirkpatrick, President

James Gibson, Vice President

Justin Jones

William McCurdy II

Ross Miller

Michael Naft

Tick Segerblom

SCHEDULED PUBLIC HEARING:

(Must be held from May 16, 2022 to May 31, 2022 this year)

Date and Time: Monday, May 16, 2022 at 9:45 AM

Publication Date: May 3, 2022

Place: Clark County Government Center, Grand Central Parkway, Las Vegas, NV

**LAS VEGAS VALLEY WATER DISTRICT
BUDGET DOCUMENT INDEX**

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FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

	ACTUAL PRIOR YEAR YEAR 06/30/21	ESTIMATED CURRENT YEAR YEAR 06/30/22	BUDGET YEAR YEAR 06/30/23
General Government			
Judicial			
Public Safety			
Public Works			
Sanitation			
Health			
Welfare			
Culture and Recreation			
Community Support			
TOTAL GENERAL GOVERNMENT			
Utilities	782.2	895.2	886.9
Hospitals			
Transit Systems			
Airports			
Other			
TOTAL	782.2	895.2	886.9

POPULATION (AS OF JULY 1)	1,620,217	1,655,862	1,695,602
SOURCE OF POPULATION ESTIMATE*	NV Dept. of Taxation (https://tax.nv.gov/) Publications, Population Statistics & Reports	Population Statistics & Reports Figure Increased by Demographer's annual % increase projection for Clark County	
Assessed Valuation (Secured and Unsecured Only)			
Net Proceeds of Mines			
TOTAL ASSESSED VALUE			
TAX RATE			
General Fund			
Special Revenue Funds			
Capital Projects Funds			
Debt Service Funds			
Enterprise Fund			
Other			
TOTAL TAX RATE			

*** Use the population certified by the state in March each year. Small districts may use a number developed per the instructions (page 6) or the best information available.**

Las Vegas Valley Water District
(Local Government)

SCHEDULE S-2 - STATISTICAL DATA

SCHEDULE A-2 PROPRIETARY AND NONEXPENDABLE TRUST FUNDS

Budget For Fiscal Year Ending June 30, 2023

Budget Summary for Las Vegas Valley Water District
(Local Government)

FUND NAME	*	OPERATING REVENUES (1)	OPERATING EXPENSES (2) **	NONOPERATING REVENUES (3)	NONOPERATING EXPENSES (4)	OPERATING TRANSFERS		NET INCOME (7)
						IN (5)	OUT(6)	
Las Vegas Valley Water District	E	\$ 638,787,689	\$ 644,991,977	\$ 58,652,338	\$ 39,701,798	\$ -	\$ -	\$ 12,746,252
TOTAL		\$ 638,787,689	\$ 644,991,977	\$ 58,652,338	\$ 39,701,798	\$ -	\$ -	\$ 12,746,252

* FUND TYPES: E - Enterprise
 I - Internal Service
 N - Nonexpendable Trust

Page: 4
SCHEDULE A-2

** Include Depreciation

FORM 4404LGF

PROPRIETARY FUND	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/23	
	ACTUAL PRIOR YEAR ENDING 6/30/2021	ESTIMATED CURRENT YEAR ENDING 6/30/2022	TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Water Sales	\$ 393,153,616	\$ 403,369,022	\$ 414,583,470	\$ 414,583,470
Application & Inspection Fees	4,311,045	3,684,288	1,859,555	1,859,555
Springs Preserve	387,554	1,552,926	1,593,302	1,593,302
Other Operating Revenue	11,845	-	-	-
SNWA Infrastructure Charge	120,852,948	123,776,745	137,026,339	137,026,339
SNWA Commodity Charge	50,212,998	51,307,514	55,731,130	55,731,130
SNWA Connection Charge	64,198,470	18,133,026	23,565,008	23,565,008
SNWA Reliability Charge	4,103,043	4,214,929	4,428,884	4,428,884
Total Operating Revenue	637,231,520	606,038,450	638,787,689	638,787,689
OPERATING EXPENSE				
Purchased Water	99,660,851	101,413,251	110,607,387	110,607,387
Energy	8,536,620	9,352,000	10,284,000	10,284,000
Payroll & Related	105,327,388	144,364,866	150,779,078	150,779,078
Operations & Maintenance	36,632,352	43,590,358	51,042,920	51,042,920
SNWA Infrastructure Charge	120,852,948	123,776,745	137,026,339	137,026,339
SNWA Commodity Charge	50,212,998	51,307,514	55,731,130	55,731,130
SNWA Connection Charge	64,198,470	18,133,026	23,565,008	23,565,008
SNWA Reliability Charge	4,103,043	4,214,929	4,428,884	4,428,884
Depreciation/Amortization	85,575,785	94,062,386	101,527,230	101,527,230
Total Operating Expense	575,100,456	590,215,075	644,991,977	644,991,977
Operating Income or (Loss)	62,131,063	15,823,375	(6,204,288)	(6,204,288)
NONOPERATING REVENUES				
Capital Contributions	58,775,620	28,273,458	50,326,328	50,326,328
Investment Income - Unrestricted Funds	(621,173)	(5,512,658)	5,169,988	5,169,988
Investment Income - Restricted Funds	1,567,235	(1,293,093)	1,212,713	1,212,713
Other Nonoperating Revenue	2,445,211	-	1,943,309	1,943,309
Total Nonoperating Revenues	62,166,892	21,467,708	58,652,338	58,652,338
NONOPERATING EXPENSES				
Interest Expense	19,675,280	37,224,847	39,435,398	39,435,398
Other Nonoperating Expenses	-	-	266,400	266,400
Total Nonoperating Expenses	19,675,280	37,224,847	39,701,798	39,701,798
Net Income before Operating Transfers	104,622,676	66,236	12,746,252	12,746,252
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 104,622,676	\$ 66,236	\$ 12,746,252	\$ 12,746,252

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND ENTERPRISE

<u>PROPRIETARY FUND</u>	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/23	
	ACTUAL PRIOR YEAR ENDING 6/30/2021	ESTIMATED CURRENT YEAR ENDING 6/30/2022	TENTATIVE APPROVED	FINAL APPROVED
ADDITIONS				
Contributions - Employer	\$ 45,116,398	\$ 48,000,000	\$ 48,000,000	\$ 48,000,000
Contributions - Employee	1,020,477	600,000	600,000	600,000
Net Investment Earnings	168,350,654	6,471,932	8,740,375	8,740,375
Total Additions	214,487,529	55,071,932	57,340,375	57,340,375
DEDUCTIONS				
Administrative & General Expenses	383,043	400,000	400,000	400,000
Benefits Paid	25,067,547	28,000,000	28,000,000	28,000,000
Total Deductions	25,450,590	28,400,000	28,400,000	28,400,000
Net Increase in Net Position before Operating Transfers	189,036,939	26,671,932	28,940,375	28,940,375
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 189,036,939	\$ 26,671,932	\$ 28,940,375	\$ 28,940,375

Las Vegas Valley Water District

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND _____ PENSION TRUST _____

FORM 4404LGF

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Schedule F-1.1

<u>PROPRIETARY FUND</u>	(1)	(2)	(3)	(4)
	ACTUAL PRIOR YEAR ENDING 6/30/2021	ESTIMATED CURRENT YEAR ENDING 6/30/2022	BUDGET YEAR ENDING 06/30/23	
			TENTATIVE APPROVED	FINAL APPROVED
ADDITIONS				
Contributions - Employer	\$ 2,388,632	\$ 2,000,004	\$ 2,000,004	\$ 2,000,004
Contributions - Employee	-	-	-	-
Net Investment Earnings	5,008,793	500,000	500,000	500,000
Total Additions	7,397,425	2,500,004	2,500,004	2,500,004
DEDUCTIONS				
Administrative & General Expenses	1,000	200,000	200,000	200,000
Benefits Paid	2,388,632	2,000,004	2,000,004	2,000,004
Total Deductions	2,389,632	2,200,004	2,200,004	2,200,004
Net Increase in Net Position before Operating Transfers	5,007,793	300,000	300,000	300,000
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 5,007,793	\$ 300,000	\$ 300,000	\$ 300,000

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND OTHER POST EMPLOYMENT BENEFITS (OPEB) TRUST

FORM 4404LGF

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Schedule F-1.2

PROPRIETARY FUND	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/23	
	ACTUAL PRIOR YEAR ENDING 6/30/2021	ESTIMATED CURRENT YEAR ENDING 6/30/2022	TENTATIVE APPROVED	FINAL APPROVED
A. CASH FLOWS FROM OPERATING ACTIVITIES:				
Cash Received from Customers	\$ 386,656,267	\$ 408,606,236	\$ 418,036,328	\$ 418,036,328
Cash Payments to Suppliers for Goods and Services	(149,357,658)	(154,355,609)	(171,934,307)	(171,934,307)
Cash Payments to Employees for services	(122,638,274)	(144,364,866)	(150,779,078)	(150,779,078)
Other Cash Receipts	850,163	-	1,943,309	1,943,309
Other Cash Payments	(1,397)	(10,000,000)	(10,000,000)	(10,000,000)
a. Net cash provided by (or used for) operating activities	115,509,101	99,885,761	87,266,251	87,266,251
B. CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:				
b. Net cash provided by (or used for) noncapital financing activities	-	-	-	-
C. CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
Acquisition and Construction of Capital Assets	(77,765,268)	(115,448,146)	(239,655,365)	(239,655,365)
Capital Contributed for Construction	45,199,579	23,896,563	50,326,328	50,326,328
Proceeds from Sale of Property and Equipment	405,374	-	-	-
Proceeds from Sale of Bonds	106,028,328	80,000,000	80,000,000	80,000,000
Bond Issue Costs	-	-	(266,400)	(266,400)
Principal Paid on Bonds	(38,817,752)	(42,228,454)	(45,760,213)	(45,760,213)
Interest Paid	(35,410,311)	(37,224,847)	(38,863,320)	(38,863,320)
Construction Deposits	1,759,481	-	-	-
Right-of-use Leases	-	-	(7,965,944)	(7,965,944)
c. Net cash provided by (or used for) capital and related financing activities	1,399,431	(91,004,884)	(202,184,914)	(202,184,914)
D. CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchase of Investment Securities	(647,328,622)	(845,344,249)	(619,840,530)	(619,840,530)
Proceeds from Maturities of Investment Securities	505,695,274	838,137,692	728,206,848	728,206,848
Investment Income	8,005,004	(6,805,750)	6,382,701	6,382,701
d. Net cash provided by (or used in) investing activities	(133,628,344)	(14,012,307)	114,749,019	114,749,019
NET INCREASE (DECREASE) in cash and cash equivalents (a+b+c+d)	(16,719,812)	(5,131,430)	(169,644)	(169,644)
CASH AND CASH EQUIVALENTS AT JULY 1, 20xx	17,263,457	543,645	(4,587,785)	(4,587,785)
CASH AND CASH EQUIVALENTS AT JUNE 30, 20xx	\$ 543,645	\$ (4,587,785)	\$ (4,757,430)	\$ (4,757,430)

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-2 STATEMENT OF CASH FLOWS

FUND ENTERPRISE

FORM 4404LGF

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Schedule F-2

ALL EXISTING OR PROPOSED
GENERAL OBLIGATION BONDS, REVENUE BONDS,
MEDIUM-TERM FINANCING, CAPITAL LEASES AND
SPECIAL ASSESSMENT BONDS

* - Type
1 - General Obligation Bonds
2 - G.O. Revenue Supported Bonds
3 - G.O. Special Assessment Bonds
4 - Revenue Bonds
5 - Medium-Term Financing

6 - Medium-Term Financing - Lease Purchase
7 - Capital Leases
8 - Special Assessment Bonds
9 - Mortgages
10 - Other (Specify Type)
11 - Proposed (Specify Type)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NAME OF BOND OR LOAN List and Subtotal By Fund	TYPE *	TERM	ORIGINAL AMOUNT OF ISSUE	ISSUE DATE	FINAL PAYMENT DATE	INTEREST RATE	BEGINNING OUTSTANDING BALANCE 7/1/2022	INTEREST PAYABLE	PRINCIPAL PAYABLE	(9)+(10) TOTAL
LVVWD 2008 Clean Energy	2	14 Years	\$ 2,520,000	07/15/08	12/15/22	1%	\$ 168,000	\$ 1,092	\$ 168,000	\$ 169,092
LVVWD 2010A BABS	2	30 Years	75,995,000	06/15/10	03/01/40	5.6%-5.7%	75,995,000	4,311,398	-	4,311,398
LVVWD 2014 \$20 Million SRF	10	20 Years	19,929,329	12/01/14	07/01/34	2.6%	15,459,939	390,532	1,063,404	1,453,936
LVVWD 2015A	2	11 Years	172,430,000	06/01/15	06/01/27	2.0-5.0%	79,630,000	3,981,500	15,995,000	19,976,500
LVVWD 2016B	2	20 Years	108,220,000	04/06/16	06/01/36	2.5-5.0%	86,050,000	4,231,250	4,440,000	8,671,250
LVVWD 2016 \$15 Million SRF	10	20 Years	15,000,000	09/15/16	07/01/36	1.8%	13,116,633	229,930	800,417	1,030,347
LVVWD 2017 \$15 Million SRF	10	20 Years	15,000,000	05/03/17	01/01/37	2.4%	13,196,826	313,612	739,992	1,053,604
LVVWD 2017A	2	21 Years	130,105,000	03/14/17	02/01/38	4.0-5.0%	112,460,000	5,103,400	4,810,000	9,913,400
LVVWD 2018A	2	30 Years	100,000,000	06/26/18	07/01/48	5.0%	92,705,000	3,596,413	2,090,000	5,686,413
LVVWD 2020B	2	18 Years	22,240,000	03/03/20	03/01/38	2.0-5.0%	20,575,000	783,625	890,000	1,673,625
LVVWD 2020D	2	16 Years	98,080,000	04/01/20	06/01/36	2.0-5.0%	89,930,000	3,408,019	4,710,000	8,118,019
LVVWD 2020C	2	30 Years	100,000,000	07/16/20	07/16/50	2.0-5.0%	96,480,000	2,822,163	2,015,000	4,837,163
LVVWD 2021B	2	7 Years	32,795,000	03/03/21	06/01/27	2.0-5.0%	27,975,000	1,398,750	5,065,000	6,463,750
LVVWD 2022D	11	30 Years	80,000,000	06/26/22	06/30/52	2.0-5.0%	80,000,000	3,688,889	1,495,000	5,183,889
LVVWD 2022B	2	10 Years	31,495,000	03/03/22	06/01/32	2.0-5.0%	31,495,000	1,574,750	-	1,574,750
LVVWD 2022-23 Proposed	11	30 Years	80,000,000	2022-23	2051-52	3.79%	80,000,000	3,028,000	1,478,400	4,506,400
TOTAL ALL DEBT SERVICE							\$ 915,236,397	\$ 38,863,320	\$ 45,760,213	\$ 84,623,533

SCHEDULE C-1 - INDEBTEDNESS

Las Vegas Valley Water District Budget Fiscal Year 23
(Local Government)

FORM 4404LGF

Page: 9
Schedule C-1

LOBBYING EXPENSE ESTIMATE

Pursuant to NRS 354.600 (3), **each** (emphasis added) local government budget must obtain a separate statement of anticipated expenses relating to activities designed to influence the passage or defeat of legislation in an upcoming legislative session.

Nevada Legislature: 82nd Session; February 1, 2023 to May 31, 2023

1. Activity:	<u>Legislature 2023 - Las Vegas Valley Water District</u>
2. Funding Source:	<u>OPERATING REVENUES</u>
3. Transportation	\$ <u>35,558</u>
4. Lodging and meals	\$ <u>52,682</u>
5. Salaries and Wages	\$ <u>63,605</u>
6. Compensation to lobbyists	\$ <u>-</u>
7. Entertainment	\$ <u>-</u>
8. Supplies, equipment & facilities; other personnel and services spent in Carson City	\$ <u>2,600</u>
Total	\$ <u><u>154,446</u></u>

Entity: Las Vegas Valley Water District

Budget Year 2022-2023

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-822-8809

Total Number of Existing Contracts: 237

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Reason or need for contract:
1	Acme Underground, Inc.	11/01/20	10/31/22	\$ 235,000	\$ -	Miscellaneous Vault Repairs
2	Adobe Communications Electronics Inc.	12/05/17	12/03/22	5,000,000	-	Network Infrastructure Upgrade Services
3	AJNC Industries LLC dba Clark Welding & Fabricating	01/21/20	01/20/25	100,000	100,000	As Needed Welding And Fabricating Services
4	Alarmco	10/01/18	09/30/23	15,000	15,000	Fire Alarm Monitoring
5	Altour	07/01/20	06/30/27	22,000	22,000	Travel Services
6	Annadatha V.M. Rao	03/21/19	03/20/26	60,000	60,000	Water Distribution Plan Software Development Services
7	Arthur J Gallagher & Co. Insurance Brokers	03/10/20	03/09/25	75,000	75,000	Insurance Brokerage Services For Casualty Lines Of Coverage
8	Atkins North America	12/15/18	12/15/23	114,000	114,000	Engineering Design Services
9	Atkins North America	07/06/19	07/08/26	301,000	301,000	Professional Design/Engineering Services
10	Baker & Hostetler LLP	03/01/17	02/28/25	15,000	15,000	Cyber Security Data Breach Prevention
11	BancTec Inc	01/29/20	05/04/24	180,000	180,000	Remittance Processing Services
12	BancTec USA	07/01/14	06/30/24	160,000	160,000	Check Payment Processing Services For Customer Care
13	Black & Veatch	02/05/19	02/04/24	34,000	34,000	Professional Design/Engineering Services
14	Black & Veatch	02/06/18	02/05/25	426,000	426,000	Engineering Design Services
15	Blue Locker Commercial Diving	10/01/19	09/30/25	100,000	100,000	Diver Inspection And Cleaning Services For Tanks And Reservoirs
16	Booky Oren Global	01/01/20	12/31/23	100,000	100,000	Professional Services To Provide Assistance With Water Related Innovation Solutions
17	Bridge Works Iii, LLC	10/15/18	10/14/25	91,000	91,000	Consulting Services For Human Resources
18	Broniec Associates	08/21/17	08/20/23	-	-	Auditing Services - Accounts Payable
19	C.A. Group Inc	09/05/17	09/04/22	84,400	84,400	Engineering Design Services
20	Capitol North American	10/13/18	10/12/22	20,000	-	Transport And Storage Of Exhibits
21	Cardino Inc	01/10/19	01/09/26	14,000	14,000	Horizontal & Vertical Utility Location Services
22	Carollo Engineers Inc	07/15/19	07/14/26	15,000	15,000	Professional Design/Engineering Services
23	Carolyn S. Fowler	09/26/19	09/26/26	5,000	5,000	Decor Installation And Strike Services At The Springs Preserve Gift Shop
24	Carpenter Seleers Del Gatto Architects	05/20/20	05/04/27	62,208	62,208	Design Services For L0088
25	Chem-Aqua	08/15/18	08/14/23	25,000	25,000	Maintenance And Repairs
26	Clark Welding And Fabricating (Ajnc Industries LLC)	01/21/20	01/20/23	109,320	109,320	As-Needed Welding and Fabricating Services
27	Cloud Carpet One	02/03/20	02/02/25	25,000	25,000	On-Call Carpet And Vinyl Flooring Installaton Services
28	CMMCM dba Muller Construction	04/19/18	04/19/23	220,000	220,000	Misc. Concrete & Restoration Services
29	Communication Electronic Systems	04/17/18	04/16/23	50,000	50,000	Fire Alarm System Inspection, Testing, And Repairs
30	Construction Product Marketing	11/01/17	10/31/23	26,200	26,200	CCTV Inspections and Other Pipeline Assessment Services
31	Corporate Air Mechanical Services Inc	10/07/19	02/06/24	50,090	50,090	HVAC Services
32	Cosco Fire Protection Inc	12/01/20	02/10/25	100,000	100,000	Fire System Repairs
33	Crawford & Company	01/23/19	01/22/24	25,000	25,000	Claims Adjusting Services
34	Custard Insurance Adjusters, Inc.	02/25/18	02/24/23	25,000	25,000	Claims Adjusting Services
35	D & L Roofing LLC	09/18/18	09/17/23	60,000	60,000	Bldg Maintenance
36	D&R Hydrant Inc	08/09/18	08/08/24	23,930	23,930	Testing Of Below Ground And Rural Area Backflow Assemblies
37	Darrel W. Cook & Associates	10/30/19	10/29/26	30,000	30,000	Legal Services, representation and collection efforts
38	DC Plumbing & Heating LLC Dba Purified Plumbing	11/08/20	11/06/26	20,000	20,000	Plumbing On-Call Services - Distribution
39	Dielco Crane Service	03/20/18	03/19/23	25,000	25,000	On-Call Crane Services For LVVWD
40	Digital Mapping Inc	03/04/20	03/03/27	40,000	40,000	Aerial Survey And Digital Mapping Services
41	DJA Inspection Services	09/06/18	09/05/24	50,000	50,000	Storage Tank Inspection Services For Condition Assessment For Asset Management
42	Dons Window Washing Service	06/07/18	06/06/23	25,000	25,000	Window Washing Services For Facilities
43	Douglas L. Wild	09/26/19	09/25/26	5,000	5,000	Decor Installation And Strike Services At The Springs Preserve Gift Shop
44	DR Backflow Services	08/09/18	08/08/24	33,058	33,058	Testing Of Below Ground And Rural Area Backflow Assemblies
45	Dyno Plumbing	11/14/18	11/13/23	25,000	25,000	On-Call Plumbing Services LVVWD
46	Echologics LLC (Echologics LLC)	07/01/20	06/30/23	100,000	100,000	Large Pipeline Leak Detection and Assessment Services.
47	Epiq Ediscovery Solutions Inc	11/21/19	10/31/26	500,000	500,000	Mgmt of Automated Systems Recordkeeping
48	Epiq Ediscovery Solutions Inc	12/04/19	12/03/24	250,000	250,000	Exterro Software Legal Hold Technical Svs
49	Experian Information Solutions, Inc.	11/01/20	10/31/23	132,511	95,000	Risk Credit Assessment
50	FHN Financial	01/27/20	12/31/25	167,742	167,742	Cash Flow And Investment Manager Services
51	Fiserv Solutions, Inc	01/01/19	12/31/23	4,320,000	5,184,000	Electronic Payments And Related E-Bill Services
52	Fleet Management Solutions Inc	07/01/19	06/30/24	28,000	28,000	District's Vehicle Tracking System Services
53	Fracta	03/14/19	upon notice	24,999	24,999	Pipeline Breakage Risk Assessment Services

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-822-8809

Total Number of Existing Contracts: 237

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Reason or need for contract:
54	Frasco Investigative Services	02/02/18	02/01/23	15,000	15,000	Investigative Services
55	FTN Financial Main Street Advisors	01/25/20	12/30/25	171,000	171,000	Fixed Income And Cash Investment Management Services
56	General Networks Corporation	05/07/19	09/30/27	1,800,000	50,000	Information Governance Services -Open Text
57	General Networks Corporation	06/01/20	05/31/28	1,000,000	1,000,000	Enterprise Content Services Platform
58	Geotechnical & Environmental Services	11/13/18	11/12/25	14,000	14,000	Geotechnical Engineering Services
59	Geotechnical & Environmental Services	08/20/20	08/19/27	300,000	300,000	Legal Consulting And Expert Testimony Svs
60	Grantworthy Funding & Strategy	03/21/19	upon notice	24,000	24,000	Professional Grant Writing Services
61	Gutic Enterprises	09/15/16	09/14/22	35,000	-	PSA For Springs Preserve
62	Harris Forms dba Harris Computer Systems	07/01/18	06/30/23	12,000	-	Form Printing
63	HDR Engineering Inc	01/22/20	01/21/27	45,000	45,000	Professional Design/Engineering Services
64	HDR Engineering Inc	01/22/20	01/21/27	137,000	137,000	Professional Design/Engineering Services
65	HDR Engineering, Inc	01/22/20	01/21/27	52,705	52,705	Design Services For C1517 Operations Building Power Improvements
66	HDR Engineering, Inc	01/22/20	01/21/27	160,141	160,141	Design Services For C1561 Rome Facilities Pipeline
67	Henderson Engineers	04/11/20	04/10/24	90,000	90,000	Engineering Services
68	Holland And Hart	09/23/08	upon notice	100,000	100,000	Environmental Legal Services
69	Hooks, Meng, Schaan, Clement	10/30/17	Upon notice	30,000	30,000	Nevada OSHA Matters
70	Horrocks Engineers	02/20/20	02/20/27	4,750	4,750	Design Services For C1518
71	Hunton Andrew Kurth	01/15/20	01/14/27	30,000	30,000	Cybersecurity And Data Privacy Legal Advice
72	Isle Inc	06/20/20	06/20/27	69,000	69,000	Large Scale Utilities Survey of CMMS Systems
73	IZ Design Studio	11/08/18	11/07/23	270,513	270,513	West Administration Building Lobby And Interior Remodel Design Services
74	IZ Design Studio	03/13/19	upon notice	90,000	90,000	LVVWD East Remodel Design Services
75	Jacobs Engineering Group Inc	04/08/20	04/07/25	142,147	142,147	Design Services For Karen Ave Project
76	Jeff Solomon	05/04/20	05/03/27	100,000	100,000	Scada System Services
77	Johnson Controls Inc	12/01/19	12/31/26	100,000	100,000	Ongoing Maintenance Of The Hardware And Software For The District'S Johnson Controls' Access Security System
78	Joshua Tree Productions	07/01/18	06/30/23	25,000		Video Production Services
79	Joshua Tree Productions	7/1/2018	07/16/23	80,000	8,000	Spring Elemental Professional Video Services
80	Kimley Horn & Assoc	10/03/18	10/01/22	842,523	-	Engineering Design Services
81	Kimley Horn & Assoc	04/16/18	04/15/25	123,000	123,000	Engineering Design Services
82	Kone Inc	03/06/19	03/05/24	150,000	150,000	Elevator Maintenance Services
83	Las Vegas Paving Corp.	11/09/17	11/08/24	1,395,490	1,400,000	On-Call Oper. & Main. Svc-LVVWD
84	Lebenson Actuarial Services, Inc.	06/01/16	05/31/23	40,000	40,000	Actuarial Services
85	LED Unplugged	04/15/19	04/14/23	20,000	20,000	Decorative Lighting Set-Up Services Sp
86	Lincoln County Telephone Sys Inc	02/18/18	02/17/25	30,250	30,250	Meet-Point Circuits
87	Louis Berger	01/07/19	01/06/24	27,000	27,000	Pipeline Replacement Engineering Services
88	Lynn Belcher Lnc Associates	01/26/18	01/25/23	15,000	15,000	Nursing Consulting Services
89	Maile Concrete	08/03/20	08/02/25	240,000	240,000	Cathodic Test Station Install & Repair
90	Mainspring Consulting Group	06/30/20	06/29/27	54,906	54,906	CLM Project Assessment (Aptus)
91	Marcus G. Faust PC	07/01/18	06/30/24	90,000	90,000	Memorandum Of Agreement, For Assisting In Matters And Proceedings In Washington, D.C.
92	Marsh USA	11/24/20	01/23/27	65,000	65,000	Captive Management Services
93	McDermott, Will & Emery, LLP	04/02/20	04/01/27	25,000	25,000	Consulting Services
94	MCS Inspection Group	06/07/18	06/06/23	90,000	90,000	Prof. Services. For Nace Level 3 Welding Insp.
95	Moapa Valley Telephone Company	03/15/19	03/14/26	14,500	14,500	T1 Communication Lines
96	Mobile Mini Inc	10/01/18	09/30/23	25,000	25,000	Communication
97	Mr Camera Inc	04/24/18	04/30/25	60,000	60,000	Video Services
98	My Next Career Path Staffing, LLC	05/28/19	08/31/26	50,000	50,000	Spring Preserve Summer Camp Counseling Services
99	NDL Group Inc	04/04/18	04/03/23	25,000	-	General Contracting Services At The Springs Preserve
100	Nevada Division Of Forestry	07/01/19	06/30/23	262,500	-	Grounds Maintenance
101	Nevada Pneumatic	04/11/19	04/10/25	20,000	20,000	Maintenance/Repairs
102	Nevada Tap Master	12/31/19	01/01/24	33,626	33,626	Large Diameter Pipeline Hot Tap Services For Asset Management
103	Nevada Tap Master Inc CCR	03/16/20	03/15/23	50,000	-	Pipeline Hot Tapping and Valve Installation Service
104	Ogletree Deakins	07/20/16	Upon notice	100,000	100,000	Counsel on ADA Issues
105	Olson Precast Company	12/04/17	12/04/22	100,000	-	Misc. Vault Pipe Coatings
106	Opportunity Village	05/01/19	04/30/26	438,918	438,918	Custodial Services
107	Pacific Surveys	09/11/17	09/10/24	46,835	46,835	Geophysical Inspection And Well Profiling Services
108	Par 3 Landscape & Maintenance Inc	02/20/20	02/19/25	25,000	25,000	Landscaping Services
109	Parson Water & Infrastructure	07/08/21	07/07/27	98,000	98,000	Consulting Services Related To Prevailing Wage For Various Construction Projects

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-822-8809

Total Number of Existing Contracts: 237

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Reason or need for contract:
110	Parson Water & Infrastructure	06/23/20	06/22/27	98,000	98,000	Construction Inspections Support Services
111	Parsons Transportation Group Inc.	12/04/18	12/04/25	657,143	657,143	Implementation Of A New Project Management Information System
112	Peconic Solutions Inc	08/20/20	08/19/22	123,970	-	Consulting Services for Legal Dept
113	Peconic Solutions, Inc.	08/20/20	08/19/27	107,800	107,800	IT Consulting Services
114	Perficient Inc	09/06/18	09/05/24	20,000	20,000	Dell Integration Software Implementation Services
115	Precision Electric Inc	07/24/18	07/23/23	25,000	2,500	On-Call Electrical Services
116	Precision Plumbing Inc (AAA Precision Plumbing)	10/28/20	10/27/26	23,017	23,017	Miscellaneous Plumbing Services for Field Services
117	Precision Plumbing Inc (AAA Precision Plumbing)	10/29/20	10/28/26	20,000	20,000	Miscellaneous Plumbing Services for Distribution
118	Purcell Tire Company dba Purcell Tire And Service Center	08/15/19	03/30/24	135,000	135,000	Tires, Tubes & Services
119	Pyro Combustion & Controls	11/14/18	11/13/23	25,000	25,000	Boiler Pm And Repair Services
120	Rebel Party Rentals	09/27/18	09/26/23	20,000	20,000	Event Set-Up And Fixture Rental Services
121	Red Clay Consulting Inc	01/30/19	06/30/25	500,000	500,000	C2M Software Implementation Services
122	Rinkus Consulting Group Inc	09/29/20	09/28/27	272,156	20,000	Legal Consult/Expert Testimony - C1576 Claim
123	River Valley Air Conditioning Inc	01/01/18	12/31/23	25,000	25,000	HVAC Maintenance, Filter Changes And Related Non-Construction Services
124	Roadsafe Traffic Systems	08/05/19	08/04/25	690,969	690,969	Traffic Control And Barricade Services For Distribution, Asset Management, And Field Services
125	Robert Gower	09/24/19	09/23/27	100,000	100,000	Independent Hearing Officer Services
126	S&S Concrete And Materials	08/03/16	08/02/23	25,000	2,500	Type II Material And Waste Disposal Services
127	Santoro Whitmire Ltd	11/06/19	11/05/26	493,732	500,000	Legal Services - Coyote Springs
128	Sherman & Howard Llc	07/30/15	07/29/24	100,000	100,000	Miscellaneous Bond and Financing Related Services
129	Simplifile LLC	01/01/18	12/31/25	39,457	39,457	Lien Filing Service For Customer Care
130	Simpson Gumpertz & Heger Inc	01/01/20	12/31/25	80,000	80,000	Pipeline Leak Analysis For Asset Management
131	Sirius Computer Solutions Inc	11/19/20	11/18/27	200,000	200,000	Software Managed Security Services & Implementation
132	So. Nevada Tba Supply Co dba Ted Wiens Tire And Auto	08/15/19	03/30/24	135,000	135,000	Tires, Tubes & Services
133	Spatial Tech Admin & Dev	04/22/19	04/21/26	90,000	90,000	GIS Software Training Services
134	Standard Automation & Control Lp dba Wonderware West	06/13/18	06/30/25	426,709	426,709	Scada Software And Implementation Services
135	Stantec Consulting	06/10/19	06/10/26	57,000	57,000	Professional Design Services For Pipe Replacement
136	Stantec Consulting	08/07/19	08/06/26	635,000	635,000	Professional Design/Engineering Services
137	Statewide Fire Protection Inc	04/18/19	04/17/24	25,000	25,000	Fire Hydrant Testing And Repair Services
138	Stradling Yocca Carlson & Rauth	12/05/17	12/05/24	100,000	100,000	Bond Disclosure Counsel Services
139	Sunbelt Controls	08/13/18	08/12/23	25,000	25,000	EMS Maintenance
140	Sunflower Construction	03/28/18	03/27/23	24,500	-	Painting Services At The Springs Preserve
141	Switch Inc	09/03/19	upon notice	750,000	750,000	Co-location, Internet Access Services
142	T&M Controls	03/06/18	03/05/25	240,000	240,000	On-Call Elec. Services For LVVWD
143	Technical Inspection Agency USA	08/01/18	07/30/23	15,000	15,000	Elevator Inspection Services
144	Top Bird Entertainment	09/20/18	09/19/23	14,000	14,000	Extreme Parrot Shows At The Springs Preserve
145	Total-Western, Inc.	06/07/18	06/06/24	200,000	200,000	Misc. Mechanical Services For LVVWD
146	TRC Solutions	08/23/18	08/22/24	20,000	20,000	Annual Compliance Testing For Campbell Station Natural Gas Engines
147	Unifirst Corp	03/21/19	03/13/25	11,500	11,500	Cleaning Of Towels And Dust Mops
148	United Site Services	10/02/18	09/30/24	25,000	25,000	Sewage Waste Removal
149	University Of Utah	01/02/19	01/01/24	25,000	25,000	Research/Testing Services
150	VTN Nevada	08/12/19	08/11/26	11,000	11,000	Professional Design/Engineering Services
151	West Charleston Upholstery	05/01/20	04/30/27	12,000	12,000	Vehicle Upholstery Work
152	Westwood Professional Services	06/27/19	06/26/26	141,000	141,000	Professional Design/Engineering Services
153	Wilson Elser Moskowitz Edleman & Dicker	10/06/15	upon notice	100,000	100,000	Legal Services 5412
154	Xebialabs Inc	06/30/18	06/29/23	140,000	-	Application Development Software And Implementation Services
155	A&B Security Group Inc (A&B Security Group Inc)	10/06/21	09/30/28	58,000	58,000	Medeco Locks & Cylinders Maintenance Services
156	Ace Fire Systems Llc	11/01/21	10/31/26	35,733	35,733	Annual Fire Extinguisher Inspections and Services
157	A-Check Global	04/27/21	04/26/28	25,000	25,000	Background Checks
158	Aerotech Mapping Inc	09/04/21	09/03/25	98,000	98,000	Aerial Photography & Photogrammetric Services
159	Agilent Technologies Inc	04/01/21	03/31/25	500,000	500,000	Equipment PM Services
160	American Bio Engineers	10/11/21	10/10/26	25,000	25,000	Accident Reconstruction and Biomechanical Analysis Services
161	AMWA	01/01/21	12/31/22	66,418	-	Administrative Support for WUCA Climate Change
162	Annadatha Venkata Mallikarjuna Rao	05/01/21	03/20/22	90,000	-	Upgrade and Enhance OPSTOOL, IMM and Remain Maint

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-822-8809

Total Number of Existing Contracts: 237

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Reason or need for contract:
163	Automatic Door & Glass LLC	08/12/21	08/11/22	25,000	-	LVSP On-Call Door Repair Services
164	Beckman Coulter	01/01/21	12/31/27	18,000	18,000	Equipment PM Services
165	BrightView Landscape Services Inc	01/01/22	06/30/25	250,000	499,050	Landscape & Grounds Maintenance Services
166	Clark County Collection Service	04/01/22	03/31/28	500,000	500,000	Debt Collection Services
167	Community Strategies Inc	08/25/21	08/24/26	49,500	49,500	Advisory Service on Community-Based Issues and Outreach Initiatives
168	Cool Dog Productions, LLC	12/15/21	01/02/23	42,000	-	LVSP Entertainer Services
169	Crosscountry Consulting Llc	02/01/21	06/30/23	50,000	50,000	Coupa Post Production Support Services
170	D&L Roofing, LLC	10/20/21	10/19/24	100,000	100,000	On Call Roofing Repairs
171	Desert Fire Protection	04/08/21	04/07/27	25,000	25,000	Fire Extinguisher Inspection and Service
172	Desert Research Institute	11/18/21	11/17/26	50,000	50,000	Spring Mountains Cloud Seeding Agreement
173	DigiStream Nevada, Inc	04/01/21	03/31/27	15,000	15,000	Investigative Services
174	Digital Mapping Inc (DMI)	03/02/21	03/01/28	40,000	40,000	Digital Mapping Spatial Technologies Service
175	DR Backflow Services LLC	03/31/21	05/30/23	355,885	-	Backflow Testing
176	Dyntek Services Inc	08/11/21	10/09/25	239,347	239,347	Network Security Appliance Upgrade(s) of Fire Eye
177	Environmental Resource Associates	01/09/21	01/08/27	56,000	56,000	Water Testing Samples and Software
178	Epiq eDiscovery Solutions, Inc.	11/02/21	11/01/27	200,000	200,000	Technical Assistance for IT Project Initiatives
179	Epiq eDiscovery Solutions, Inc.	11/02/21	06/30/28	200,000	200,000	Development, Validation, and Execution of Technical Upgrades, Extensions, and Data Migrations
180	Epiq eDiscovery Solutions, Inc.	11/2/2021	06/30/28	500,000	200,000	Technology Assisted Review and Data Hosting & Storage Services
181	ESRI Inc LLC	03/01/21	04/21/28	90,000	90,000	Training Services for ESRI Software Products
182	Eurofins Eaton Analytical LLC	11/01/21	10/31/28	20,000	20,000	Other Lab Service Projects
183	FHN Financial Main Street Advisors	01/07/20	06/30/25	162,000	162,000	Institutional Fixed Income Cash and Investment Manager Services
184	Fingerprinting Express, LLC	03/01/21	02/28/28	10,000	10,000	Employee Fingerprinting
185	Fireeye Inc	05/26/21	03/14/24	100,000	100,000	Penetration Assessment for PCI Compliance
186	Fiserv (Fiserv Inc)	11/29/21	11/29/21	79,112	80,000	Electronic Bill Presentation and Payment Services
187	General Networks Corporation	06/01/20	05/31/27	49,784	49,784	Enterprise Content Services Platform
188	Guardian Elite Medical Services, LLC	11/01/21	10/31/28	15,000	15,000	LVSP Event EMT Services
189	Harris Las Vegas LLC	05/13/21	06/30/22	18,601	-	Ronzon & Gowen HVAC Replacement Services
190	Harris Las Vegas LLC	05/13/21	06/30/22	13,988	-	Rice Pump Station HVAC Replacement Services
191	Harris Las Vegas LLC	05/13/21	06/30/22	23,436	-	Bermuda, Carlton Square & Airport HVAC Replacement Projects
192	Harris Las Vegas LLC	05/13/21	06/30/22	18,592	-	Beltway HVAC Replacements Services
193	Harris Las Vegas LLC	06/10/21	06/30/22	26,720	-	AC No. 3 Emergency Compressor Replacement
194	Harris Las Vegas LLC	6/8/2021	06/30/22	11,408	-	Warm Springs HVAC Replacement Services
195	HCI Advertising (Prodajsa Usa Inc)	07/01/21	06/30/24	450,000	450,000	Spanish-Language Conservation and Water Quality Advertising & Marketing Services
196	HDR Engineering Inc	7/1/2021	06/30/22	250,000	-	Eng Services - Misc civil, electrical, mechanical, and control systems projects
197	Henderson Engineers	04/10/20	04/09/24	90,000	90,000	Engineering Services
198	Hireright LLC	11/13/21	11/12/22	25,000	-	Employee Background Screening
199	Hobbs Ong & Associates Inc	07/01/01	06/30/25	150,000	150,000	Independent Financial Advisory Services
200	Horiba Instruments Inc	01/04/21	01/03/27	100,000	100,000	Equipment PM Services
201	Humanizing Work (The Humanizing Work Company Llc)	01/01/21	12/31/24	71,540	71,540	Agile for All Software, Training and Support
202	Hydromax Usa LLC (Hydromax Usa LLC)	10/01/21	09/30/27	100,000	100,000	Pipeline Inspection Services
203	IR Ashleman	9/9/2021	09/08/26	25,000	25,000	Legal Services for LVVWD Retirement Plan
204	IZ design studio	03/03/21	03/03/23	26,538		Springs Preserve, Origen Museum, Restroom Remodel Project
205	J&J Enterprises Services Inc	01/23/21	01/22/22	43,725	-	As-Needed Asphalt Milling Service
206	Jacobs Engineering Group Inc	07/01/17	06/30/22	350,000	-	Misc Engineering Services
207	Jacobs Engineering Group Inc	01/27/20	01/26/27	1,200,000	1,400,000	Misc Engineering Services
208	Las Vegas Plumbing Inc	03/01/21	02/28/26	20,000	20,000	Miscellaneous On-Call Plumbing Services For Distribution
209	Las Vegas Plumbing Inc	03/01/21	02/28/26	25,000	25,000	Miscellaneous On-Call Plumbing Services For Field Services
210	Les Olson Company	10/01/20	09/30/22	426,744	-	Enterprise-Wide Multifunction Printers Services
211	Link Tech, LLC	08/11/21	12/30/22	10,800		Backup and Recovery Infrastructure
212	Lou Reinbold	10/06/21	10/05/22	100,000	-	SNWA HR Contracted Services
213	Mainspring Consulting Group LLC	01/06/21	01/05/22	270,948	-	CLM Implementation Services
214	Mainspring Consulting Group LLC	09/30/21	09/30/28	231,764	130,000	LVVWD Apttus TSA Consulting Contract

FORM 4404LGF

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-822-8809

Total Number of Existing Contracts: 237

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Reason or need for contract:
215	Manpower	05/17/21	06/30/22	250,000		Temporary Employment Services
216	MDC Research (Market Decisions Corporation)	01/01/22	12/31/28	500,000	500,000	Data Collection Services
217	Milliman Inc	03/12/21	12/31/27	100,000	100,000	Investment Advisory Services for the District Retirement Plan
218	Milliman Inc	05/06/21	06/30/22	18,000	-	Actuarial Services for Captive
219	Milliman Inc	12/09/21	12/31/22	25,000	-	Actuarial Consulting Services Associated with a Third Party Pipe Warranty Program
220	Nancy Weaver APR LLC	07/01/21	06/30/25	98,000	98,000	Communications Consulting Services
221	Oasis Pool Maintenance, LLC	10/14/21	10/13/26	25,000	25,000	Springs Preserve On-Call Rockwork
222	Opportunity Village	04/01/21	03/31/28	18,000	18,000	Shredding and Recycling Services - All Sites
223	Parsons	06/23/21	06/22/27	98,000	98,000	Construction Inspection Support Services - MCCP Projects
224	Peconic Solutions Inc	08/12/20	08/11/28	300,000	300,000	Consulting Services for IG Initiatives
225	Precision Electric Inc	06/17/21	06/16/28	25,000	25,000	LVSP On-Call Electrical Services
226	R&R Partners Inc.	07/01/21	06/30/24	3,750,000	3,750,000	Integrated Marketing and Communication Services
227	Red Rock Window Cleaning Inc	10/20/21	10/19/27	25,000	25,000	Window Cleaning Services
228	Reward Strategy Group Inc	10/29/21	10/28/23	100,000	100,000	LVVWD Job Classifications & Compensation Plans
229	Sierra Environmental Monitoring	11/01/21	10/31/28	50,000	50,000	BOR Grant Funded Wash Water Sampling Analysis Services
230	Simons Hall Johnston PC	08/04/21	08/04/28	20,000	20,000	Legal Services
231	Simplifile LC	01/01/21	12/31/25	39,457	39,457	Electronic Liens Filing with Clark County
232	Striegel Associates LLC	12/13/21	12/12/28	100,000	100,000	Legal Case Services
233	Sunstone Building Specialties	03/05/21	03/04/24	25,000	25,000	Operable Partitions Preventative Maintenance and Repair Services
234	Swartz Consulting, LLC	06/01/21	05/31/27	49,999	499,999	Telecom Design Consulting Services
235	Universal Protection Service Llc Dba Allied Universal Security Services	02/01/22	06/30/26	2,000,000	2,000,000	Contract Security Services
236	Veterinarian Aquarium Group	3/2/2021	03/01/25	85,000	85,000	Springs Preserve Veterinarian Services
237	Wex Bank	12/29/20	03/31/25	125,000	125,000	Automated Retail Fuel Dispensing
Total Proposed Expenditures				\$ 46,249,252	\$ 36,081,242	

Additional Explanations (Reference Line Number and Vendor):

SCHEDULE OF PRIVATIZATION CONTRACTS

Budget Year 2022-2023

Local Government: Las Vegas Valley Water District

Contact: E. Kevin Bethel

E-mail Address: kevin.bethel@lvvwd.com

Daytime Telephone: 702-882-8809

Total Number of Privatization Contracts: None

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Duration (Months/ Years)	Proposed Expenditure 2022-2023	Proposed Expenditure 2023-2024	Position Class or Grade	Number of FTEs employed by Position Class or Grade	Equivalent hourly wage of FTEs by Position Class or Grade	Reason or need for contract:
1	None									
2										
3										
4										
5										
6										
7										
8	Total									

Page: 12

Attach additional sheets if necessary.

Schedule 32

FORM 4404LGF

AFFIDAVIT OF PUBLICATION

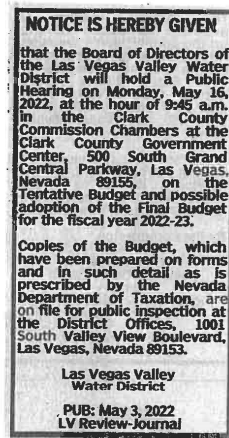
STATE OF NEVADA)
COUNTY OF CLARK) SS:

LV WATER DISTRICT
1001 S VALLEY VIEW BLVD
ATTN: A/P MS340
LAS VEGAS NV 89153-0001

Account # 22455
Ad Number 0001189346

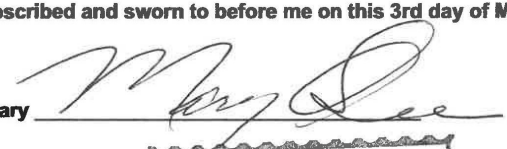
Leslie McCormick, being 1st duly sworn, deposes and says: That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for, was continuously published in said Las Vegas Review-Journal and / or Las Vegas Sun in 1 edition(s) of said newspaper issued from 05/03/2022 to 05/03/2022, on the following days:

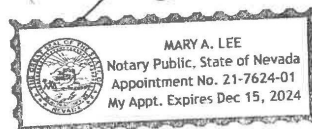
05 / 03 / 22



/s/ 
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 3rd day of May, 2022

Notary 





STATE OF NEVADA
DEPARTMENT OF TAXATION

Web Site: <https://tax.nv.gov>

1550 College Parkway, Suite 115
Carson City, Nevada 89706-7937
Phone: (775) 684-2000 Fax: (775) 684-2020

Call Center: (866) 962-3707

STEVE SISOLAK
Governor
ANTHONY WREN
Chair, Nevada Tax Commission
SHELLIE HUGHES
Executive Director

LAS VEGAS OFFICE
700 E. Warm Springs Rd, 2nd Floor
Las Vegas, Nevada 89119
Phone: (702) 486-2300 Fax: (702) 486-2373

RENO OFFICE
4600 Kietzke Lane
Building L, Suite 235
Reno, NV 89502
Phone: (775) 687-9999
Fax: (775) 688-1303

May 25, 2022

Mr. E. Kevin Bethel, Chief Financial Officer
Las Vegas Valley Water District
1001 South Valley View Blvd.
Las Vegas, NV 89153

Re: Final Budget – Fiscal Year 2022-2023
Las Vegas Valley Water District

Dear Mr. Bethel:

The Department of Taxation has examined your final budget in accordance with NRS 354.598. We find the budget to be in compliance with the law and appropriate regulations.

Please be advised the following tax rates will be presented to the Nevada Tax Commission on June 27, 2022 for certification:

Operating tax rate	\$ 0.0000
Voter approved rate	0.0000
Legislative override rate	0.0000
Debt service rate	<u>0.0000</u>
	\$ 0.0000

If you should have any questions, please do not hesitate to call me at (775) 684-2073. My e-mail address is klangley@tax.state.nv.us.

Sincerely,

Kelly S. Langley, CTP
Supervisor
Local Government Finance
Division of Local Government Services

SECTION 5

DEPARTMENT BUDGETS

Summary of Department Expenditures	5 - 1
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**LAS VEGAS VALLEY
WATER DISTRICT™**

Las Vegas Valley Water District
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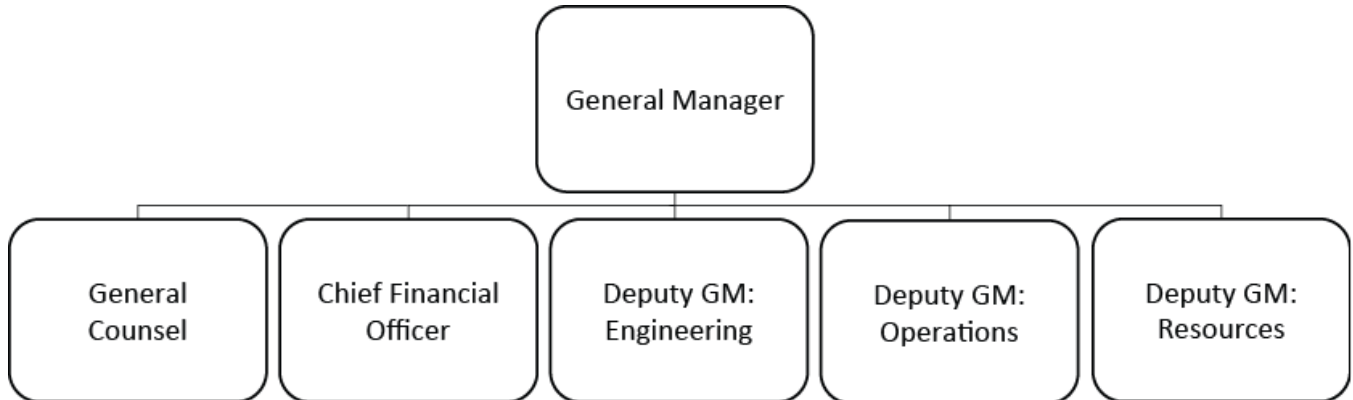
This section contains summaries of budgets for each of the Las Vegas Valley Water District's (LVVWD) departments. Each department's budget narrative contains detailed budget information and other highlights of the 2022-23 Budget Plan. The following table presents the 2020-21 actual, 2021-22 Adopted Budget and 2022-23 Budget Plan for each of the departments.

LVVWD
Summary of Department Expenditures

Departments	Actual 2020-21	Budget 2021-22	Budget 2022-23	Budget-to- Budget Variance
Executive Management	\$ 2,441,172	\$ 2,213,435	\$ 2,106,460	\$ (106,975)
Legal Services	2,145,968	2,883,257	2,960,529	77,272
Finance	312,444,470	295,769,801	333,146,226	37,376,425
Energy Management	—	—	—	—
Risk Management	1,615,740	2,665,211	3,351,517	686,306
Customer Care & Field Services	33,857,752	56,346,664	45,145,773	(11,200,891)
Engineering	64,744,303	110,870,031	178,842,841	67,972,810
Infrastructure Management	33,889,597	56,212,060	63,553,273	7,341,213
Operations	62,134,298	54,506,914	56,023,378	1,516,464
Human Resources	4,590,429	6,057,920	9,843,198	3,785,278
Information Technology	37,715,177	42,200,642	47,011,892	4,811,250
Environmental Health Safety & Corporate Security	17,569,087	20,646,316	22,927,822	2,281,506
Water Quality & Treatment	181,081	181,588	320,756	139,168
Water Resources	2,970,651	3,793,724	7,637,065	3,843,341
Public Services	11,470,808	15,263,181	18,481,725	3,218,544
Total Department Expenditures	587,770,533	669,610,744	791,352,455	121,741,711
Debt Service	72,709,424	79,453,301	84,623,533	5,170,232
Total Uses of Funds	\$ 660,479,957	\$ 749,064,045	\$ 875,975,988	\$ 126,911,943

EXECUTIVE MANAGEMENT

Level: 1000



Mission Statement

Provide world class water service in a sustainable, adaptive and responsible manner to our customers through reliable, cost-effective systems.

The Executive Management Team

The Executive Management Team is responsible for strategic planning, general administration, and operational oversight of the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA). The function is staffed by a General Manager, who has responsibility for managing the two organizations. Three Deputy General Managers, a Chief Financial Officer and a General Counsel also oversee administrative and operational activities.

The Executive Management Team implements policy as established by the LVVWD and the SNWA Boards of Directors. The team is responsible for anticipating organizational needs and implementing appropriate strategies to ensure these needs are met. To fulfill the missions of both organizations, the Executive Management Team petitions the respective boards for direction and approval of funding or other support and directs staff accordingly. It also interacts with other local, national, and international entities in developing strategies to meet demands and responsibly manage resources.

Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
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Fiscal Year Ending June 30, 2023

Expenditures

LVVWD Uses	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 1,718	\$ 5,600	\$ 5,600
Maintenance & Repairs	—	—	—
Rental & Leases	—	—	—
Other Employee Expenses	76,899	79,180	83,450
Other Operating Expenses	115,648	66,750	67,400
Total Operating Expenses	194,265	151,530	156,450
Capital Expenditures	—	—	—
Payroll & Related Costs	2,246,907	2,061,905	1,950,010
Total Department Expenditures	\$ 2,441,172	\$ 2,213,435	\$ 2,106,460
FTE Positions	8.5	7.9	6.9

Major Activities

The Executive Management Team continues to direct efforts to ensure that Southern Nevada has access to a safe, reliable, and sustainable water supply. This is achieved by implementing and overseeing initiatives to mitigate the ongoing impacts of drought and climate change, bolstering community-wide water conservation efforts, and identifying present and future infrastructure and resource needs. Significant initiatives over the past year include support and completion of:

- Development and implementation of new conservation programs and initiatives to sustain the community.
- Implementation of SNWA's Major Construction and Capital Plan (MCCP).
- Continued implementation of LVVWD's 10-year Capital Improvement Plan.
- Continued response to the Coronavirus Pandemic.
- Ongoing implementation of Integrated Resource Planning Advisory Committee (IRPAC) 2020 recommendations.
- Updated the community's water conservation goal.
- Continued collaboration with Colorado River partners on conservation programs to help protect Lake Mead water elevations, including execution of the Lower Colorado River Drought Contingency and 500+ Plan.
- Continued progress towards Nevada's Renewable Portfolio Standard of 50 percent by 2030.
- Continued participation in the WaterStart partnership.

Capital Planning

SNWA Major Construction and Capital Plan

The Major Construction and Capital Plan (MCCP) is the SNWA's vehicle for identifying and authorizing capital initiatives, including water resource acquisition; system expansion; and construction, repair and replacement of water facilities. Projects outlined in the MCCP are funded by the SNWA's bond proceeds and revenue generated by the SNWA's water bill charges, connection charges, sales tax proceeds and Southern Nevada Public Land Management Act funds when available. Major facility-related projects currently in progress are described in the table below:

Project	Status	Estimated Cost	Estimated Completion
Large Scale Solar PV Project	Construction slated for late 2022	\$20 m	2023
Garnet Valley Wastewater System	Design	\$120 m	2027
Garnet Valley Water System	Design	\$120 m	2028
Horizon Lateral	Design/Permitting	\$1.6 B	2030

Integrated Resource Planning Advisory Committee (IRPAC) 2020 Reconvene

Among the IRPAC 2020 recommendations adopted by the SNWA Board of Directors in September 2020 were inflationary-based rate increases to SNWA charges to fund a \$3.2 billion amendment to the SNWA MCCP. However, in the one year since the recommendations were approved, the Engineering News Record Construction Cost Index (ENR) and the Consumer Price Index (CPI) increased by 8.4 percent and 5.0 percent, respectively—significantly more than originally projected. Consequently, the gap between the IRPAC 2020-approved inflation rates and actual inflation rates would have resulted in a revenue shortfall of nearly \$152 million over the next 10 years.

In response, IRPAC 2020 reconvened in December 2021 to discuss and recommend a funding strategy to maintain pace with current and future inflation rates. The funding recommendations were approved by the SNWA Board of Directors in February 2022, and included:

- Increasing the 2022 approved Connection, Infrastructure and Commodity Charges;
- Implementing an indexed rate component to the SNWA Infrastructure Charge and Connection Charge (in accordance with the ENR) and Commodity Charge (in accordance with the CPI) annually, effective January 1, 2023; and
- Limiting future increases to the Infrastructure and Commodity Charges to a floor of 1.5 percent and a ceiling of 7.0 percent.

LVVWD Capital Improvement Plan

In 2017, the LVVWD Board of Directors approved a 10-year, \$616 million (in 2016 dollars) Capital Improvement Plan. This document guides and directs the operation, maintenance and development of the LVVWD water distribution system, and supports the LVVWD's ongoing commitment to ensure the

Las Vegas Valley Water District
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community's water system remains stable and reliable into the future. The following projects have either been completed, are active, or will begin within the next fiscal cycle:

- Centennial 2635 Zone Reservoir and 2745 Zone Pumping Station
- Rome 2745 Reservoir, 2975 Zone Pumping Station, and 2975-2860 Zone Pressure Reducing Valve
- Rome Facilities Pipelines
- Egan Crest 3090 Zone North Pipeline
- Shaumber 3205 Zone North Pipeline and Pressure Reducing Valve
- Las Vegas Boulevard Improvements
- 4125 Zone North Reservoir
- 4125 Zone Pumping Station
- Alpine Ridge 3090 Zone North Pipeline Phase I and II
- Cougar 3090 Zone Reservoir
- Cougar Facilities Pipeline
- Equipping J8 Well (Jean)
- Blue Diamond Pipeline Replacements
- Equipping W124
- Searchlight Pipeline Replacements and Upgrades

Drought and Water Resources

While historically low snowfall and runoff into the Colorado River Basin continues to create uncertainty throughout the region, the SNWA continues its efforts to develop and manage a water resource portfolio that can be used flexibly to meet short- and long-term water demands. These options allow the SNWA to assess water demand conditions and resource options, and make appropriate decisions based on timing, resource availability and community needs.

SNWA Water Resource Plan

In December 2021, staff presented an updated Water Resource Plan to the SNWA Board of Directors. The new plan provides a comprehensive overview of available water resources to meet regional water demands over a 50-year planning horizon and considers current, near- and long-term factors that could influence long-term water demands and future resource availability.

The 2021 plan considers water supply restrictions associated with declining Lake Mead water levels, the impact of changing water use patterns on future demands, and ongoing per capita water use reductions. While significant and sustained conservation progress and adaptive use of the SNWA's water resource portfolio will be required, the Resource Plan demonstrates sufficient permanent, temporary, and future resources to meet projected demands under all planning scenarios.

500+ Plan

Reduced Colorado River runoff has exacerbated already poor hydrologic conditions in the Colorado River Basin's primary storage reservoirs, Lake Powell and Lake Mead. Worsening conditions triggered a provision within the existing Drought Contingency Plan, calling for additional action by the Lower Basin States to protect Lake Mead from declining below elevation 1,020'.

These additional efforts—known as the 500+ Plan—contemplate additional conservation and storage in Lake Mead, along with funding commitments from California, Arizona, Nevada and the federal

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government to implement the plan. The Plan's goal is to conserve an additional 500,000 acre-feet of water each year, through new system water conservation; new intentionally created surplus (ICS); leaving existing ICS in Lake Mead that has been scheduled for withdrawal; and voluntary, compensated reductions by each state. The 500+ Plan also includes the intent to continue these efforts through 2026 as necessary.

Future Resources

The SNWA continues to evaluate additional opportunities to further diversify its water resource portfolio. To that end, the amended M CCP includes potential investment in water recycling projects with other Colorado River partners. By participating in these efforts, the SNWA would partially fund the construction of facilities in exchange for a portion of the partnering state's Colorado River allocation.

The Metropolitan Water District of Southern California (MWD) is moving forward with the planned development of a Regional Recycled Water Advanced Purification Center. Once complete, it is anticipated that the program will recover and treat up to 168,000 acre-feet of water per year. While the project is still in the early phase of development, SNWA is pursuing opportunities with MWD to participate in this project, which would likely involve a Colorado River water transfer/exchange in return for a financial contribution from SNWA. Once approved by regulators, the facility will take about 11 years to design and construct.

Conservation

Community water conservation reduces existing and future demands, extends available supplies, and remains one of the most critical components of SNWA's water resource portfolio. Since 1991, the SNWA and its member agencies have worked to set and achieve aggressive water goals. Community efforts to meet these goals have led to remarkable conservation gains over the past two decades; however, progress has remained stalled in recent years. Any pause in conservation progress can have significant implications for Southern Nevada, which faces two immediate and compounding challenges: upward pressure on water demands and reductions in water supply.

As such, the SNWA and LVVWD have identified additional actions that will aim to increase the community's conservation gains. Some of these actions stem from IRPAC 2020 committee recommendations, while others have been identified as part of ongoing strategic planning efforts.

New Conservation Goal

To help safeguard the community water supply, the SNWA Board of Directors recently established a new conservation goal of 86 GPCD by 2035 (down from the previously established 105 GPCD). The new goal recognizes the significant and sustained conservation effort that will be required from all sectors of the community to reduce water use and maximize available water supplies.

Nonfunctional Turf Removal

In 2021, the Nevada State Legislature passed Assembly Bill 356 (AB 356), which restricts the use of Colorado River water to irrigate nonfunctional turf in non-single-family properties by the end of 2026. The new law largely focuses on useless turf found in streetscapes, medians, parking lots, traffic circles

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and other areas that are not used for recreation. The removal of this nonfunctional turf will help the community make progress toward its conservation goal.

AB 356 also required the formation of a Nonfunctional Turf Removal Advisory Committee, which was appointed by the SNWA Board of Directors to help the SNWA develop its plan for nonfunctional turf removal. The committee was comprised of the nine voting members, representing office parks, businesses, industrial or commercial facilities, golf courses, common-interest communities, multi-family housing facilities, environmental organizations, and local governments. The committee met four times from August 2021 to November 2021 to formulate recommendations to the SNWA Board of Directors on defining “functional turf” and “nonfunctional turf,” and outlined a process for waivers to the nonfunctional turf removal requirements.

Prohibition of Turf in New Development

In December 2021, the SNWA Board adopted a resolution to restrict the installation of new turf and spray irrigation in all new developments (except schools, parks and cemeteries). This policy was also adopted by the LVVWD Board of Directors in April 2022.

Prohibit New Golf Course Development

Restricting new golf course development aims to further reduce per capita consumptive water use. A typical Southern Nevada golf course consumptively uses about 236 million gallons each year. By restricting water resources for these projects, LVVWD will reduce the stress on water supplies and help maintain reliable service to its customers. Future efforts to prohibit the development of new golf course construction may require changes to service rules, codes and ordinances.

Cooling Efficiency Standards

Aside from turf, evaporative cooling is the largest consumptive water use in Southern Nevada. Deployment of alternative cooling technology presents a significant, yet complex water savings opportunity. As recommended by IRPAC 2020, the SNWA Board of Directors recently adopted a resolution supporting a moratorium on evaporative cooling in all new developments. The resolution also urged the immediate revision of local regulatory codes, ordinances, and policies applicable to evaporative cooling. The SNWA is working with affected stakeholders to implement the resolution in applicable codes and ordinances.

Water Efficient Technologies (WET) Projects

In calendar year 2021, SNWA partnered with the Clark County School District (CCSD) to complete the conversion of 27 high school football fields from live turf grass to artificial turf, saving 135 million gallons of water. CCSD has also started to upgrade cooling towers at 62 schools as part of the WET program, which will yield an average of 253,000 gallons of water savings per school.

Septic Conversion Program

Colorado River water discharged to septic systems is lost and cannot be returned to Lake Mead for return flow credits. In March 2021, the Board of Directors approved development of and initial funding for a financial assistance program for the estimated 14,500 septic users throughout the Las Vegas

Valley to abandon their septic tanks and connect to the municipal sewer system. Additional future code changes may limit the development of new septic systems in the Las Vegas Valley.

Water Waste Enforcement

The LVVWD continues to bolster its water waste enforcement presence and has expanded its suite of tools for residents to report water waste. Between the water waste reporting form on LVVWD.com and the mobile water waste reporting app, more than 11,100 water waste reports were submitted in 2021. Upon submittal, LVVWD staff is notified of the date, time, location and type of water waste occurring so that proper investigation and citation procedures can take place.

Operations

As the wholesale water provider, the SNWA is responsible for water treatment and delivery, as well as acquiring and managing long-term water resources for Southern Nevada. Collectively, SNWA member agencies serve more than 2.2 million residents in Southern Nevada.

The LVVWD provides water service to customers in the City of Las Vegas, parts of unincorporated Clark County and several rural water systems that are not connected to in-valley infrastructure. The LVVWD operates the public water systems in Blue Diamond, Jean, Kyle Canyon, Laughlin and Searchlight. In 2021, the LVVWD delivered approximately 111 billion gallons of water to customers throughout its service area. With the immense growth and construction development in the valley this past year, the LVVWD added 9,323 new service points to its customer base in 2021, a significant increase from prior years.

Pandemic Response

Like many other organizations throughout Southern Nevada, the SNWA is continually adapting to the impacts of the ongoing COVID-19 pandemic. Since the onset of the pandemic, the organization has been able to adjust its operations as needed to protect staff and minimize COVID-19 transmission in the workplace. In addition, through coordination, the use of available technology and the implementation of telecommute agreements with staff, the organization has been able to transition to a hybrid workforce platform, where employees are able to work from both home and the office. Not only does this help operational status during spikes in local infection rates, but a hybrid workforce is in line with the organization's sustainability goals, reduces the need for expanding office space and provides a benefit to current employees and those looking to join the organization.

Blue Diamond Rate Adjustment

The LVVWD has owned and operated the Blue Diamond Water System (BDWS) since 1992. BDWS water rates have not been adjusted since that time, as it has been a financially self-sustaining system able to pay for maintenance, operation and upgrades through existing customer rates. A rate increase became necessary in 2021 to establish a reserve fund for the long-term maintenance of new water system components, continue funding daily system operations, and fund water conservation programs for the community.

After an extensive community engagement process, the Red Rock Citizens Advisory Committee considered a series of proposed tiered rate scenarios and recommended a 5-tier rate structure,

phasing in the rate increase from years 2022-2025, and then indexing the rates in each year thereafter in accordance with the Consumer Price Index (CPI). The recommendation also included an increase to the daily service charge. The rate increase was approved by the LVVWD Board of Directors in August 2021.

Advanced Metering Infrastructure and Software

Staff is in the process of implementing Advanced Metering Infrastructure (AMI), which is expected to be completed in 2023. The AMI system coupled with a Customer to Meter (C2M, discussed below) application, will optimize customer and field services communication through timely meter reads, and support conservation by improving staff's ability to monitor and address water consumption and leaks in a more efficient manner. This technology will allow the LVVWD to provide enhanced customer service and interaction, increased support for conservation initiatives, optimized service response, and more efficient management.

Customer to Meter (C2M Application)

The Oracle Customer to Meter application (C2M) was launched in early 2022 and integrates with the current metering technology and provides Customer Care & Field Services hourly water consumption data. This data helps identify issues such as leaks in near real-time to quickly address problems and reduce water waste.

Meter Maintenance

Field staff continue to develop the meter maintenance program as the AMI system comes online and resources are transitioned into a maintenance role. The maintenance program will move from an age-based system to one that is driven by data and indicates when a meter reaches its effective lifespan, focusing on specific meter-sets that show the greatest inaccuracies. These changes will also allow staff to test twice as many meters in a single test and verify accuracy at lower flow rates than the previous system. This program began operation at the end of March 2022.

Strategic Plan Objectives and Accomplishments

The Executive Management Team oversees and manages the implementation of the strategic plan goals identified by the LVVWD and the SNWA.

Strategic Plan Goal - Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Develop and maintain existing state, federal and international partnerships to advance and promote water-related technical development and innovative water-resource solutions.
- Implement IRPAC 2020 recommendations.
- Continue to identify opportunities for increased efficiency and enhanced customer service.
- Continue to work with federal, state, and local agencies to develop and operate joint facilities that provide regional solutions to water quality, water supply and environmental issues on the Colorado River.

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Executive Management
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- Demonstrate national and international leadership in water research, conservation, and water quality efforts.
- Implement the LVVWD and the SNWA Capital Plans.

2021-22 Major Accomplishments

- The SNWA Board of Directors approved an updated Water Resource Plan in 2021. The plan provides a comprehensive overview of projected water demands in Southern Nevada over a 50-year planning horizon, as well as the resources available to meet those demands over time.
- Staff continued efforts to implement IRPAC 2020 recommendations revolving around turf removal and evaporative cooling efficiencies.
- Continued progress on asset management, necessary system expansion and water quality compliance projects provided within the LVVWD's 10-year Capital Improvement Plan.
- Continued collaboration with Metropolitan Water District to provide financial support for its regional recycling program in exchange for a portion of its Colorado River allotment.
- Continued design work on major components of the SNWA M CCP, including Horizon Lateral and the Garnet Valley water and wastewater systems.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Identify and implement further operational and management practices to maintain service levels with greater efficiency.
- Continue implementation and increase use of analytics software to detect potential leaks and notify customers.

2021-22 Major Accomplishments

- Implementing the usage of Advanced Metering Infrastructure and Software as well as Customer to Meter (C2M) Application that enhance conservation through rapid leak detection and customer notification.
- Continued installation of various customer self-service technologies, such as payment kiosks, to provide flexibility in meeting customer needs.

Strategic Plan Goal - Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.

2022-23 Performance Objectives

- Continue leadership on Colorado River issues to ensure Southern Nevada's needs are addressed.
- Participate in national and industry discussions and planning on climate change, including active membership in the Water Utility Climate Alliance.
- Continue effective management of the Spring Valley ranch properties.
- Continue conservation education and incentive programs to maximize available water supplies.

2021-22 Major Accomplishments

- More than 200 million square feet of turf have been replaced through the Water Smart Landscapes rebate program, saving an estimated 152 billion gallons of water.
- Enhanced water waste enforcement efforts to stimulate sustained water conservation throughout the community.
- The LVVWD received Frost & Sullivan's annual *Excellence in Resourcefulness Award* for its efforts to minimize the impact of climate change by improving its overall water management operations, proactively identifying leaks through new technologies and expanding its service capabilities to its customers.
- Continued efforts to decrease consumptive water use in Southern Nevada by adopting the nonfunctional turf resolution into local codes and ordinances, prohibiting turf installation in new development, prohibiting septic systems in new development, and examining the potential water savings associated with efficiencies in evaporative cooling.
- Ongoing implementation of water conservation and efficiency measures, such as customer compliance with watering schedules, data sharing and amending development agreements to include up-to-date efficiency measures.

Strategic Plan Goal - Develop innovative and sustainable solutions through research and technology.

2022-23 Performance Objectives

- Continue to lead the implementation of the Las Vegas Wash Comprehensive Adaptive Management Plan.
- Continue participation with the WaterStart initiative to identify and adopt innovative solutions to water resource challenges.

2021-22 Major Accomplishments

- Continued conducting groundbreaking research on genetic markers of COVID-19 in wastewater.
- Completed various Water Efficient Technologies projects at local high schools in 2021, including football field turf replacement and cooling tower upgrades. Total water savings as a result of all WET projects in 2021 was more than 205.6 million gallons.
- Continued management of the Warm Springs Natural Area, including aquatic fish habitat restoration, control and eradication of invasive species, fire prevention and general property maintenance. These efforts help to provide mitigation benefits for water development. for water development.

Strategic Plan Goal - Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Continue to establish and maintain responsible reserve policies to ensure both the SNWA and the LVVWD can weather unanticipated expenditures and maintain positive bond ratings.
- Continue to evaluate opportunities to save ratepayer dollars through bond refunding and other activities.

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- Plan and develop opportunities to increase the LVVWD and the SNWA investments in alternative and renewable energy supplies.

2021-22 Major Accomplishments

- The LVVWD ended fiscal year 2020-21 with \$501 million in reserves, exceeding its fund balance target by 55 percent.
- The SNWA ended fiscal year 2020-21 with \$884 million in unrestricted reserves, exceeding its fund balance target by 33 percent.
- Reconvened the IRPAC 2020 committee to develop a recommendation so that SNWA's Infrastructure, Connection and Commodity Charges maintain pace with unanticipated inflation rates and continue to provide sufficient funding to support the M CCP.

Strategic Plan Goal - Strengthen and uphold a culture of service, excellence and accountability.

2022-23 Performance Objectives

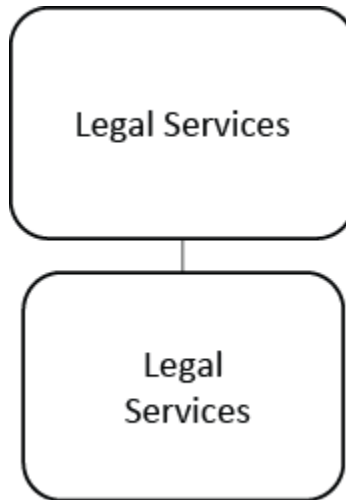
- Ensure continual security and safety of the LVVWD and the SNWA facilities and promote an organizational climate and culture of safety and security for employees, customers, and the community.
- Identify opportunities to strengthen a culture of accountability and efficiency throughout the organization.

2021-22 Major Accomplishments

- The LVVWD was recognized as one of America's best mid-size employers in 2022 by Forbes Magazine.
- The LVVWD received the *American Water Works Association's National Safety Award* for displaying a strong five-year safety record, as well as health, safety and training programs that show a commitment to best practices.
- The Springs Preserve held its in-person Black History Month celebration in February 2022 welcoming more than 3,500 persons onsite. The event featured music and dance performances, educational children's activities and informational speakers and presentations.

LEGAL SERVICES

Level: 1200



Mission

To provide expert legal counsel in support of the organization's mission, policies, goals and strategies.

Department Description

Legal Services acts as corporate counsel to the organization, providing legal review of policies and procedures to ensure compliance with applicable laws and regulations. The department represents the organization in court proceedings and before administrative boards and hearing panels in a variety of natural resource, property, personnel, and other litigation matters. The department reviews contract documents and provides services for land and natural resource acquisitions associated with capital development programs. Legal Services coordinates and monitors efforts of outside counsel who represent the organization. The department is involved in resource planning and continues to advise on electrical power issues.

The department works closely with the General Manager and Deputy General Managers in providing legal advice and in the development and review of proposed legislation and regulations at the local, state, and federal levels.

Budget Objectives and Highlights

Attorneys in the department are performing a steadily increasing practice before Nevada courts, federal courts, and state and federal administrative agencies. The 2022-23 budget contains continuing funding to support these efforts and for outside counsel who perform a variety of other legal services for the organization.

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Legal Services
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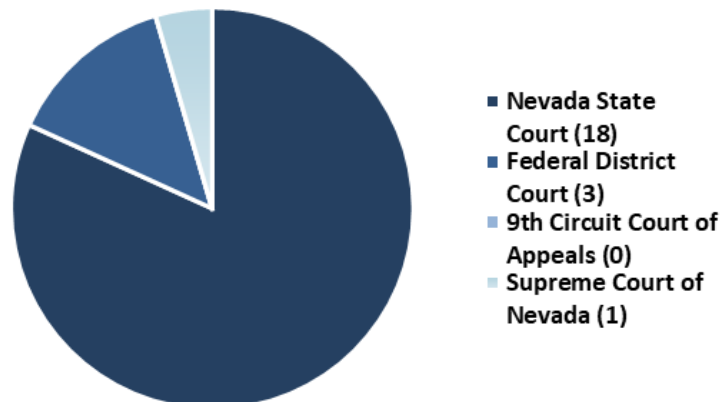
Expenditures

LVVWD Uses	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 789	\$ 10,046	\$ 9,206
Maintenance & Repairs	—	—	—
Rental & Leases	—	—	—
Other Employee Expenses	13,916	40,836	41,916
Other Operating Expenses	710,668	1,389,416	1,399,416
Total Operating Expenses	725,373	1,440,298	1,450,538
Capital Expenditures	—	—	—
Payroll & Related Costs	1,420,595	1,442,959	1,509,991
Total Department Expenditures	\$ 2,145,968	\$ 2,883,257	\$ 2,960,529
FTE Positions	5.2	5.5	5.5

Department Performance

Representing the organization in litigation is only a small part of what Legal Services does. In addition to litigation, department attorneys support the organization by giving advice and counsel on transactional matters and on sensitive personnel issues.

Pending Litigation Matters
Number of Cases: Federal, State, or Administrative Forum



Strategic Plan Objectives and Accomplishments

Deliver an Outstanding Customer Service Experience

The department will continue to focus on client satisfaction to ensure our internal clients receive highly responsive, clear, and accurate legal opinions.

Strengthen and Uphold a Culture of Service, Excellence and Accountability

Legal Services has provided and will continue to provide training sessions to organization staff to develop internal capacity and strengthen the culture of excellence.

2022-23 Performance Objectives

- To be highly responsive to the needs of our clients and provide concise, clear, and accurate legal opinions.
- To increase communication between Legal Services and organization staff in a coordinated response to legal issues.
- To provide proactive contract reviews to minimize the threat of extended and costly litigation.
- To take an active role regarding resource acquisition and management with regard to legal issues and strategy concerning water and power.
- To support the organization's Information Governance initiative.

2021-22 Major Accomplishments

- Negotiated water and power resource positions and agreements, as well as renewable resource agreements.
- Kept construction on schedule without costly delays due to litigation and arbitration.
- Prevailed in adversarial proceedings.
- Minimized the need for any construction project condemnations.
- Continued implementation of the District/SNWA Contract Management Software.
- Maintained efficiency and responsiveness during work at home directive.

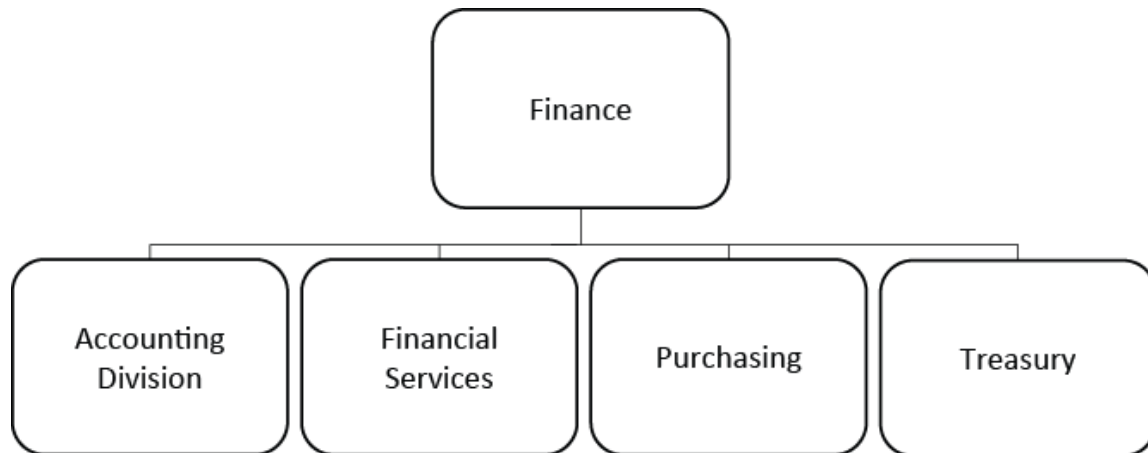
Las Vegas Valley Water District
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FINANCE

Level: 2100



Mission

Ensure the financial integrity and safeguard the assets of the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA) by providing strategic planning and utilizing effective finance, budgeting, debt management, treasury, accounts payable, and purchasing procedures and processes.

Department Description

The Finance department is responsible for accounting, financial reporting, financial planning, debt and treasury management, budgeting, centralized purchasing activities, and all aspects of financial operations of the LVVWD and the SNWA. Following the principles of governmental accounting, the department maintains, on an accrual basis, an Enterprise Fund for the LVVWD and the SNWA, and Pension and Other Employee Benefits Trust Funds. In the Enterprise Funds, financial activities are recorded in a similar manner to that of a private business. The Pension and Other Employee Benefits Trust Funds are used to account for the investments, earnings, contributions, expenses, and projected pension and other employee benefits of the LVVWD Plans. The department also coordinates the LVVWD and the SNWA budget processes in compliance with Nevada State Law. Internal accounting controls, as required under Generally Accepted Accounting Principles (GAAP), are strictly enforced for safeguarding property and in preparing financial statements.

The Finance department budget also includes the LVVWD's costs for water supply and charges that are made on behalf of the SNWA (pass-through costs).

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Budget Objectives and Highlights

The 2022-23 Finance department budget contains funding to maintain the necessary functions that the LVVWD and the SNWA require to provide quality services to both internal and external customers.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Purchased Water	\$ 99,640,886	\$ 105,610,878	\$ 110,583,387
Materials & Supplies	1,072,426	2,311,080	1,210,350
Maintenance & Repairs	1,049,718	1,261,500	1,611,000
Rental & Leases	—	5,500	—
Other Employee Expenses	30,442	82,548	65,248
Other Operating Expenses	224,551,525	180,533,757	213,593,349
Total Operating Expenses	326,344,997	289,805,263	327,063,334
Nonoperating Exp.	1,518,639.61	322,376.00	838,477.31
Capital Expenditures	—	—	—
Payroll & Related Costs	(15,419,166)	5,642,162	5,244,414
Total Department Expenditures	\$ 312,444,470	\$ 295,769,801	\$ 333,146,226
FTE Positions	59.8	32.8	29.2

Department Performance

Accounting. The Accounting division supports and provides accounting services for the following entities: Las Vegas Valley Water District (LVVWD), Southern Nevada Water Authority (SNWA), Big Bend Water District (BBWD), Kyle Canyon Water District (KCWD), Coyote Springs Water Resources District (CSWRD), three additional rural systems that are a part of the LVVWD, and the Springs Preserve. The financial reporting includes monthly and quarterly financial statements, as well as both the LVVWD and the SNWA Annual Comprehensive Financial Reports with their corresponding audit reports. In addition, the division prepares and submits the financial reporting related to grant activities for the LVVWD, SNWA, and BBWD.

The Accounting division supports both senior management and other workgroups with financial analysis. Some areas include construction-related activities, groundwater management programs,

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conservation-related activities, Las Vegas Wash activities, energy management, and various activities related to water rights.

Accounting functions include: ensuring financial statements and reports are accurate, complete and consistent; various financial analyses, revenue billing, maintaining the general ledger, inventory, fixed asset and other system records; controls over revenues, expenditures, assets, and liabilities, cash management and the accounting and reporting of investments for both the LVVWD and the SNWA funds; reconciling bank statements; accounts receivable, and federal and state agency grant accounting that require preparing and submitting reports to obtain reimbursements.

While the company outsources its mail payment remittance processing, the Accounting division researches and resolves mail payment exceptions, records and reconciles payments received by direct debit, electronic funds transfer, credit card payments by phone, internet payments, recurring credit card transactions and payments received from over 270 satellite pay station locations throughout the Las Vegas Valley.

This division is also responsible for monitoring and supporting all cashier functions at the Springs Preserve, including managing the cash vault, daily preparation, distribution and reconciliation of cashier banks and bank deposits. In addition, the Accounting division coordinates and processes group sales and vendor payments for special events as well as providing revenue-based reports and analysis for organizational departments.

Financial Services. A broad range of financial services are provided by this division, including oversight of annual budgets; designing, analyzing, and recommending water rates; providing short and long-term financial plans.

Financial Services is responsible for preparing the annual operating and capital budgets for the LVVWD, SNWA, BBWD, and CSWRD. This includes budget development, implementation, and monitoring. Financial Services prepares variance reports by department, and directors are accountable for expenditures over and under budget.

The division also performs a variety of strategic and long-range financial forecasts, financial and water rate scenario analyses and develops water rates, connection, and other fee recommendations for the organization. On an annual basis, this division conducts a survey of water rates from over 50 cities located in the Western United States, closely monitors water production and consumption data, and prepares statistical reports.

Purchasing. The Purchasing division is responsible for the centralized purchasing activities of the LVVWD and the SNWA. These activities include market analysis, developing and identifying new, expanded, or alternative suppliers, systems contracting, formal and informal solicitation/bidding processes, sustainable purchasing, disposition of company property, and the support of a diversified supplier program. The development of supply agreements containing appropriate contract terms and conditions, in conjunction with the Legal department, are an integral function of the Purchasing division. Ensuring compliance with all applicable purchasing statutes, obtaining quality products and services to serve our customers, and cost savings are among the division's priorities.

Treasury. The Treasury group is responsible for debt management, investments, and banking. Debt management includes supporting management with the issuance of debt, continuing disclosure

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requirements, and other analysis. Investments include the investment of operating monies and reserves as well as investments related to post-employment benefits. Treasury serves as a point of contact for banking issues.

Strategic Plan Objectives and Accomplishments

By the very nature of its activities, the Finance department either directly or indirectly impacts all the Strategic Plan Goals through the prudent and strategic funding of the various activities and services provided by the LVVWD and the SNWA.

Strategic Plan Goal - Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Identify and secure funding for critical infrastructure.
- Provide timely and accurate financial reporting.
- Provide timely and accurate support for the LVVWD, SNWA and small water system rate proceedings.
- Develop long-term financial plans to ensure a sustainable revenue base to support operations.

2021-22 Major Accomplishments

- The LVVWD continues to have strong credit ratings, which helps in securing funding for critical infrastructure. Currently, the LVVWD is rated AA by Standard & Poor's (S&P) and Aa1 by Moody's. The ratings reflect the LVVWD's strong financial management practices and policies, maintenance of robust cash reserves, and continued economic growth in the Las Vegas area.
- Developed updated monthly financial reports with enhanced distribution, leveraging the existing Workiva and GL Connect systems.
- Collaborated with Information Technology in the upgrade of the Budget Dashboard to an enhanced cloud-based platform.
- Improved the financial reporting from the organization's e-Builder capital project management system.
- Provided financial modeling analysis and support in small water system rate proceedings (i.e. Blue Diamond Water System).
- Continued development of the organization's financial forecast model.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Continue to optimize the procure-to-pay system and develop key performance indicators to more effectively manage the purchase of goods and services.
- Pursue process and system improvement initiatives to shorten the financial month-end close and complete the process before the end of the following month.
- Continue to improve and streamline day-to-day accounting practices, specialized processes, improved financial analyses, reporting, and information sharing to departments.
- Continue to efficiently procure and contract for products, equipment, and services.

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2021-22 Major Accomplishments

- Increased electronic payment to suppliers by 10 percent to 73 percent.
- Began receiving invoices electronically from suppliers with the implementation of the procure-to-pay system.
- Continued collaboration with all Departments, including conducting the annual budget kickoff meeting on Microsoft Teams. A recording of the meeting was made viewable by posting on our Hydroweb/SharePoint Budget Help page.
- Updated the Purchasing Guidelines to reflect new processes and procedures due to implementation of new sourcing system and processes.

Strategic Plan Goal - Develop innovative and sustainable solutions through research and technology.

2022-23 Performance Objectives

- Select vendor and implementer for the replacement of the Oracle financial system through a Request for Proposal (RFP) effort.
- Actively participate in the selection and planning for the implementation of an Enterprise Asset Management system and its integration into financial and purchasing systems.
- Expand use of Fairmarkit quote-to-procure system to increase supplier competition in quoting and increase efficiency for the procurement of goods and services that do not require formal solicitation.
- Implement Workiva data connectors and integrations to improve efficiency and accuracy of data transfers from existing financial systems and sources to the Workiva financial reporting software.

2021-22 Major Accomplishments

- Completed an internal reporting assessment and established changes to the technology roadmap to include recommendations to enhance system reporting capabilities.
- Implemented improvements to the general ledger system to promote efficiencies in workflows, intercompany transactions and allocations.
- Expanded use of the Workiva financial reporting software to produce new design of monthly financial reports and BBWD annual report.
- Facilitated in-depth technical and super-user training sessions during the upgrade of Splash BI and GL Connect reporting tools
- Actively participated in defining financial information requirements to new system implementations or enhancements, which include but are not limited to, the Apttus contract management, Customer-to-Meter (C2M), and SharePoint file management.
- Implemented Fairmarkit quote-to-procure system to manage the quoting process more efficiently for smaller dollar purchases that do not require a formal solicitation.
- Expanded use of Lease Query tool to manage compliance with GASB 96 *subscription-based information technology agreements*.
- Initiated a business process review with the Government Finance Officers Association (GFOA) Research and Consulting Center to evaluate options for the replacement of the Oracle financial system.

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Strategic Plan Goal - Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Continue to evaluate opportunities to issue refunding bonds for both the SNWA and LVVWD to generate savings.
- Implement Government Accounting Standards Board Statement No. 87 related to new lease accounting standards.
- Assess technological changes and new practices to ensure the processing of SNWA vendor payments directly from its own funds.
- Continue to enroll suppliers on electronic payments to further increase the overall efficiency of the procure-to-pay process.
- Lead comprehensive financial planning and analytical support for various organizational initiatives.

2021-22 Major Accomplishments

- Issued the LVVWD General Obligation (Limited Tax) (Additionally Secured by SNWA Pledged Revenues) Series 2022A Water Improvement Bonds generating \$350 million of new monies to fund the next tranche of the SNWA's capital improvements plan.
- Issued the LVVWD General Obligation (Limited Tax) (Additionally Secured by Revenues) Series 2022B Water Refunding Bonds generating net present value savings of \$9.9 million.
- Issued the LVVWD General Obligation (Limited Tax) (Additionally Secured SNWA by Pledged Revenues) Series 2022C Water Refunding Bonds generating net present value savings of \$76.6 million.
- Issued the LVVWD General Obligation (Limited Tax) (Additionally Secured by Pledged Revenues) Series 2022D Water Bonds generating \$100 million of new monies to fund the next tranche of the District's capital improvements plan.
- Issued the Clark County General Obligation (Limited Tax) Bond Bank Refunding Bonds (Additionally Secured by SNWA Pledged Revenues) Series 2021 generating net present value savings of \$5.7 million.
- Issued the Clark County General Obligation (Limited Tax) Bond Bank Refunding Bonds (Additionally Secured by SNWA Pledged Revenues) Series 2022 generating net present value savings of \$8.4 million.
- The long-term credit ratings of AA/Stable were affirmed by Standard and Poor's and Moody's affirmed their Aa1/Stable rating. These ratings help keep rates affordable and acknowledge LVVWD's strong financial management practices and policies and maintenance of robust cash reserves.
- Processed approximately 20,000 supplier payments annually, earning more than \$130,000 in discounts on invoices processed in fiscal year 2020-2021, and achieved a rebate of \$50,000 on annual credit card spend.
- Continued to provide comprehensive financial planning and analytical support for the SNWA's Integrated Resource Planning Advisory Committee 2020.

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Strategic Plan Goal - Strengthen and uphold a culture of service, excellence, and accountability.

2022-23 Performance Objectives

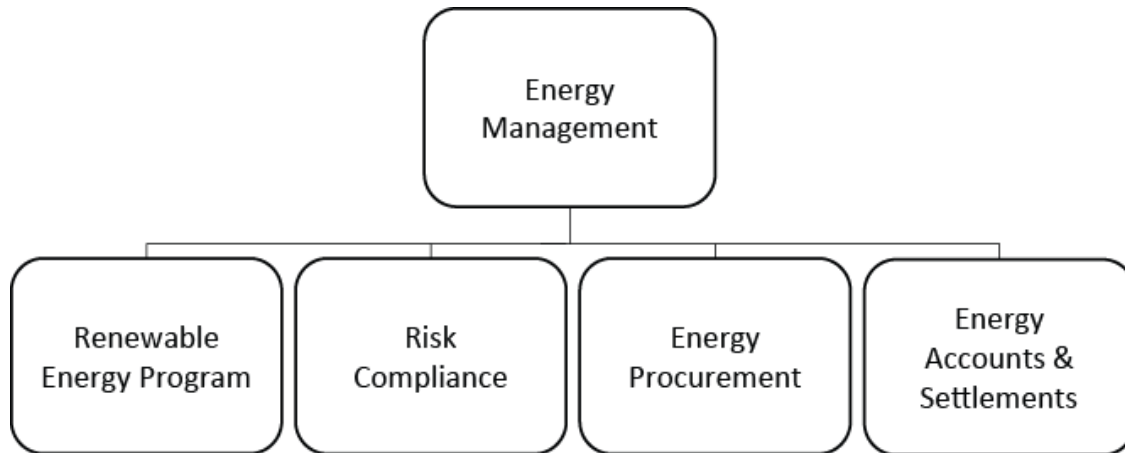
- Submit the LVVWD and SNWA Annual Comprehensive Financial Report for the year ending June 30, 2022, to the GFOA to receive the Certificate of Excellence in Financial Reporting.
- Receive unmodified opinions from external auditors for the LVVWD, SNWA and BBWD fiscal year 2022 audits.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the fiscal year beginning July 1, 2022.

2021-22 Major Accomplishments

- Received the Certificate of Excellence in Financial Reporting from the GFOA of the United States and Canada for the 43rd consecutive year for the LVVWD Comprehensive Annual Financial Report for the ended June 30, 2021.
- Received the Certificate of Excellence in Financial Reporting from the GFOA for the 26th consecutive year for the SNWA Comprehensive Annual Financial Report for the year ended June 30, 2021.
- Received an unmodified opinion from external auditors for the LVVWD, SNWA and BBWD fiscal year 2021 audits.
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the fiscal year beginning July 1, 2021.

ENERGY MANAGEMENT

Level: 2200



Mission

The mission of the Energy Management department is to manage an energy resources portfolio for the members of the Silver State Energy Association (SSEA), including the Southern Nevada Water Authority (SNWA) and its member agencies, which yields predictable prices; considering the overall value of sustainability and cost minimization.

Department Description

The Energy Management department was established in fiscal year 2005-06 to manage the procurement and utilization of energy resources necessary to pump, treat, and deliver water to the member agencies. The SNWA, in collaboration with the Colorado River Commission of Nevada (CRC), initially purchased energy supplies for its own water pumping needs and later began supplying power for the water pumping and wastewater needs of the SNWA member agencies, including the Las Vegas Valley Water District (LVVWD), the City of Las Vegas, the City of Henderson, the Clark County Water Reclamation District and the City of North Las Vegas.

In 2007, the SNWA, along with the CRC, Lincoln County Power District No. 1, Overton Power District No. 5 and the City of Boulder City, formed the SSEA, a joint action agency charged with procuring and managing power resources for its members. Today, Energy Management personnel and CRC personnel, acting as the staff of the SSEA, manage the procurement and utilization of energy resources for the SNWA and its member agencies.

Key functions performed by Energy Management personnel on behalf of the SSEA include energy trading and procurement, accounting and settlements, energy risk management, forecasting, analytical support, and project planning and development. In addition to the functions performed on behalf of the SSEA, Energy Management personnel also support the renewable energy initiatives of the SNWA and the LVVWD.

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Budget Objectives and Highlights

The fiscal year 2022-23 Energy Management department budget contains funding for all expenses associated with the procurement and management of energy resources for the SNWA's electrical loads. Expenses for the LVVWD, other SNWA member agencies, and other SSEA members, are not included in this budget. The majority of budget funding is for energy commodities and services purchased by the SSEA from the energy and financial marketplace to meet the SNWA's needs. Other expenditures include transmission, distribution and ancillary services; operation and maintenance expenses associated with transmission and generating assets; and administrative and general expenses for CRC and the personnel of the SNWA.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ —	\$ —	\$ —
Maintenance & Repairs	—	—	—
Rental & Leases	—	—	—
Other Employee Expenses	—	—	—
Other Operating Expenses	—	—	—
Total Operating Expenses	—	—	—
Capital Expenditures	—	—	—
Payroll & Related Costs	—	—	—
Total Department Expenditures	\$ —	\$ —	\$ —
FTE Positions	0.0	0.0	0.0

Department Performance

Silver State Energy Association (SSEA). The SNWA has been instrumental in the formation and development of the SSEA, which has brought significant benefits to the SNWA, its member agencies and the SSEA members. In order to properly manage the energy needs of the SNWA, a certain minimum size of labor and infrastructure is required. The employees and systems of the Energy Management department and the CRC Energy Services group have met this need for many years now.

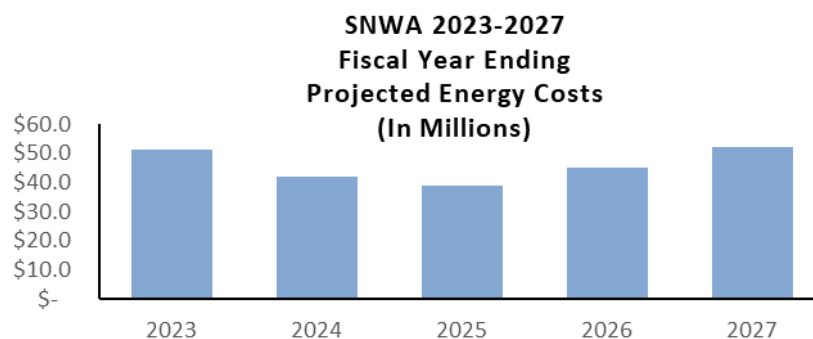
Expanding the energy portfolio managed by this group to include the SNWA member agencies and the members of the SSEA has brought significant economies of scale and portfolio synergies to each of the participants, including the SNWA. Furthermore, the energy portfolio has been able to be expanded in this way with only a minimal increase in the size of the labor and overhead required to properly

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manage it. Over \$1 million per year of general overhead and operating costs are now being paid for by non-SNWA entities, costs that otherwise would be paid for by the SNWA.

Some of the benefits the SNWA realizes by participating in the SSEA include 1) economies of scale when purchasing energy; 2) lower overhead costs; 3) lower balancing, imbalance and ancillary services costs due to the synergies of serving a single larger portfolio vs. serving the different load shapes of each individual entity; 4) federal hydropower optimization, which can only be realized by serving the combined portfolio; 5) economies of scale, shared resources, and shared costs of project development work; and 6) additional opportunities to work cooperatively with the other public entities in the overall energy portfolio.

Energy Price Stability. Energy Management measures its success based on how well it is meeting its objective to provide energy to the SSEA members yielding stable, low, and predictable prices. Consistent with the SSEA's Energy Risk Procedures the price exposure of the SNWA's energy portfolio has largely been eliminated through calendar year 2024. The SSEA locks in its energy portfolio costs by securing a combination of physical market resources (generation assets or contracts for the delivery of electricity) as well as electric and natural gas financial products to meet the needs of its members. Physical contracts for electricity are secured whenever there are sufficient buyers and sellers to create liquid markets. Financial products are secured when physical contracts are unavailable, or market liquidity is unacceptably low. Financial products protect against price movements in the market and can be converted to physical supplies at a later time when physical power markets are more liquid. Because the SNWA portfolio cost is substantially fixed through calendar year 2024, changes in the market price of energy are expected to have little effect on the SNWA's expected costs during this period. The chart below shows the SNWA's actual and projected energy costs through fiscal year 2027 as of the end of February 2022.



Energy Management has met its objective of providing energy at stable and predictable prices. This long-term management approach has allowed the SNWA and its members to budget for energy costs with a high degree of confidence years in advance. To ensure the commitment to long-term price stability is met, a Risk Control Committee comprised of the SNWA and its member agencies meets quarterly to review standardized reports produced by the SSEA, and to monitor the SSEA's adherence to its Risk Control Procedures.

The SNWA's energy costs are expected to be approximately \$51 million, excluding the estimated cost of capital associated with the SNWA's energy assets for the fiscal year 2022-23. This amount is recovered through the SNWA wholesale water delivery charge.

Boulder Flats Solar and 230 kV Transmission Project. The SNWA is working with ibV Energy Partners on a large 113-megawatt (MW) solar photovoltaic (PV) energy project located in the El Dorado Valley, including a 10-mile 230 kV transmission line extension to allow for interconnection with our existing transmission system. The SNWA is planning on purchasing most of the energy output, but all its member agencies that receive power from us are also planning to purchase some of the output. This strategic resource will be a critical renewable energy resource for meeting our renewable energy targets and will provide a low fixed price resource for many years.

SNWA and LVVWD Sustainability Initiatives. The Nevada legislature passed a new higher energy portfolio standard in 2019 that raises the requirement of 20 percent renewables in 2019 to 50 percent renewables by 2030. The SNWA and the LVVWD will just meet that target in 2021 and participation in the Boulder Flats Solar Project will enable the SNWA and the LVVWD to meet the increasing standard in the years to come.

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Coordinate all permitting, transmission studies and line crossings required to be able to build a transmission line interconnecting delivery of the Boulder Flats Solar energy facility with our existing transmission system.
- Work with CRC to design and construct a 10-mile transmission line extension to connect the Boulder Flats Solar project to the SNWA's existing transmission system.
- Work with SunPower and its maintenance contractor to replace solar panels under warranty on the LVVWD reservoirs to achieve expected performance levels.
- Evaluate various renewable energy options to satisfy the next increment of renewable generation with the goal of reaching net zero carbon emissions by 2050.

2021-22 Major Accomplishments

- Replaced the Excel-driven, single-day Solar Generation Morning Report with an active dashboard report that allows filtering over any period of time. The dashboard is also sharable for remote viewing, giving SunPower personnel visibility into performance metrics previously unattainable.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Develop a multi-phased approach to the restructuring and modernization of settlement reporting and performance metrics. Phase 1 objectives include the replacement of Excel formula-driven reporting with dynamic and consistent data sources, the decommissioning of antiquated CRC-owned data systems, and providing training to incorporate backup for exposed mission-critical processes.
- Work with CRC staff to provide consultation to the Engineering department teams on how to best provide power to their water infrastructure projects.

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- Migrate current client-side, server-based QuickBooks system to the Intuit cloud-based product while ensuring that all foundational attachments remain and system performance is on par or better.
- Transition to a new auditing firm, Baker Tilly, and initiate them on the SSEA accounting and settlement procedures.
- Provide analytical support to member agencies as needed regarding their energy needs.
- Keep abreast of new legislative initiatives for the 2023 legislative session and provide input to corporate representatives concerning any implications.

2021-22 Major Accomplishments

- Worked with the SNWA member agencies to develop and execute power purchase agreements for Boulder Flats solar power commitments.
- Maintained a managed portfolio of energy resources for all SNWA and member agency requirements within all hedge guidelines and procedures.
- Expanded the use of MongoDB to encompass trade capture and settlement reporting, improving analytical and reporting functions in both scope and efficiency.
- Successfully renewed the E-TRM contract with Hitachi Energy USA, Inc. (formerly Pioneer Solutions, LLC) for a term of five years. This was accomplished with collaboration from LVVWD legal, IT security compliance, and Risk Management.
- Took over the monthly settlement responsibilities for Boulder City's power purchase agreement with Townsite Solar LLC, incorporating it into their monthly customer settlement process.
- Developed and implemented monthly procedures for the settlement of the LVVWD solar carports. This included generation volume reporting, Renewable Energy Credit reporting and certification, and monthly invoice payment on behalf of LVVWD.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Monitor, evaluate and capture new hydropower allocation opportunities or layoffs as they become available.
- Evaluate alternatives to obtain value for the Eastern Nevada Transmission Project right-of-way. Work with other providers to see if there are some ways of partnering to create value.
- Work with the Operations department on a summer pumping profile to minimize high peak-period power prices.
- Begin strategic planning for required transition to a Regional Transmission Organization (RTO). Identify potential options and perform preliminary feasibility evaluations for them.
- Evaluate the financial and reliability risk factors involved in Western Area Power Administration's (WAPA's) move to the California Independent System Operator (CAISO) Energy Imbalance Market regarding SSEA's power scheduling, generation, and asset optimization.
- Reduce the digital storage footprint of Energy Management by engaging the group to diligently seek mission critical files while purging obsolete or redundant files. Develop and encourage the use of sensible SharePoint library protocols, providing time for training as needed across SNWA and CRC personnel.
- Modify long-term price hedging strategy to accommodate the changing fundamental wholesale market for power and the anticipated shift to organized wholesale markets.

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2021-22 Major Accomplishments

- Completed a comprehensive review of Risk Management Procedures that resulted in a rewrite to include industry changes and remote/pandemic related work.
- Added additional Parker-Davis hydropower assets by acquiring a long-term layoff through the CRC for the entirety of the 2021-2022 hydro year. Additionally, secured additional Parker-Davis and Hoover hydropower assets on a monthly basis.
- Successfully met the Nevada Renewable Portfolio Standard for 2021 for both SSEA and SNWA. Worked with member agencies to utilize their Portfolio Energy Credits and to exchange them among each other.
- Transitioned the department back to an “in-office” work status and successfully worked through another year of COVID-19 work modifications.
- Identified a saving opportunity and worked with the Operations department to modify the summer daily water-pumping profile to avoid high peak-period power prices.
- Developed a new accounting approach and hedge effectiveness test to comply with Government Accounting Standards regarding derivative transactions.
- Developed an energy imbalance payback plan with WAPA that maximized energy cost savings for SNWA.
- Recognized a fundamental market change in the correlation of natural gas prices to power prices and modified our hedging strategy in response.

RISK MANAGEMENT

Level: 2600



Mission

Provide best of class risk management solutions for the LVVWD and the SNWA to achieve the best balance between risk and opportunities.

Department Description

Oversees the LVVWD's and SNWA's risk management processes; coordinates insurance coverage and risk financing; manages claims; coordinates with legal counsel; compiles and analyzes risk management data; and conducts risk management educational programs.

Budget Objectives and Highlights

Risk Management reassesses the SWOT on an annual basis to evaluate the strengths, weaknesses, opportunities, and threats to the department. The SWOT analysis is a useful technique to maximize opportunities and minimize threats of the department reaching its goals.

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LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 1,017	\$ 5,040	\$ 2,800
Maintenance & Repairs	—	—	—
Other Employee Expenses	2,762	28,100	28,100
Other Operating Expenses	1,214,991	2,049,578	2,824,695
Total Operating Expenses	1,218,770	2,082,718	2,855,595
Capital Expenditures	—	—	—
Payroll & Related Costs	396,969	582,493	495,922
Total Department Expenditures	\$ 1,615,740	\$ 2,665,211	\$ 3,351,517
FTE Positions	2.0	3.0	2.5

Department Performance

Enterprise Risk Management. The value proposition of this program will connect strategy and performance, enhance decision making, improve cross-company communications, support asset management processes, including rate cases and business continuity; and finally, create good governance for the organization.

Captive Insurance. In 2021, the Las Vegas Valley Water District formed LVVWD CI (the “Captive”), a wholly owned subsidiary of the Las Vegas Valley Water District, domiciled in the state of Nevada. The Las Vegas Valley Water District is currently the sole member of this captive insurance company. The Captive is a registered limited liability company formed to advance long-term risk management program strategies through the use of a formalized self-insurance program that can access the reinsurance markets. The Captive provides retention for worker's compensation, general/auto liability, public officials liability, cyber liability, employment practices, and property.

In addition, the Captive could be used to provide necessary capacity, plug gaps in existing coverage policies, and create leverage in pricing negotiations with incumbent markets. Other benefits include broader coverage, pricing stability, improved cash flow and increased control over the program.

Risk Management Information System. Origami has grown from having workflows in two departments to eleven departments; from paying for 21 users to 250; from 9 incident types to 26; from 1 audit type to 30; daily usage from an average of ten users to sixty; averaging 12 entries a day through anonymous portals to 63 entries; daily portal usage from 4 entries a day to 81; and from 12 data updates creating 4 automated events a day to more than 147 data updates averaging 210 automated events in a day. There are currently 109 registered full users, 72 light users with an average of 45 daily users; portal usage averages 75 entries a day.

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Liability Claims. The annual number of claims processed by the department has been consistent over the past three years. The Risk Management team continues to evaluate ways to increase efficiencies and decrease in claims costs. Key practices are:

- Utilization of outside vendor to take recorded statements.
- Reduce cost of medical records review by utilizing a nurse case manager versus physician.
- Index all bodily injury claims.
- Creation of a Case Analysis report to evaluate exposure.
- Monthly meeting with Senior Attorney to strategize.
- Monthly meeting with Risk/Legal/EHS to review all open litigated claims.

Renewal Comparison				
Line of Coverage	2018-2019	2019-2020	2020-2021	2021-2022
Operational Property & Builders Risk	\$ 394,925.00	\$ 390,002.00	\$ 620,000.00	\$ 713,000.00
Terrorism	N/A	N/A	\$ 46,755.00	\$ 46,755.00
Excess Liability	\$ 144,323.00	\$ 144,323.00	\$ 342,566.48	\$ 340,848.00
Excess Worker's Compensation	\$ 106,898.00	\$ 106,897.00	\$ 113,748.00	\$ 129,444.00
Employee Fidelity	\$ 19,366.00	\$ 19,137.00	\$ 19,604.00	\$ 22,583.00
Public Officials & Employees Liability	\$ 132,978.00	\$ 135,196.00	N/A	N/A
Employment Practices Liability	\$ 53,538.00	\$ 53,538.00	\$ 65,760.00	\$ 71,740.00
Digital Technology Liability	\$ 59,000.00	\$ 63,639.00	\$ 68,989.60	\$ 107,485.00
Ocean Marine	\$ 9,147.00	\$ 9,137.00	\$ 9,250.00	\$ 10,300.00
Non-owned Aviation	\$ 3,268.00	\$ 3,430.00	N/A	N/A
Pollution Liability (3-year premium)	\$ 158,838.00	N/A	N/A	\$ 132,338.47
Captive*	N/A	N/A	N/A	\$1,042,125
Total	\$ 1,082,281.00	\$ 925,299.00	\$ 1,286,673.08	\$ 2,616,618.47

*6-month premium (2021-2022)

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal - Strengthen and uphold a culture of service, excellence, and accountability.

2022-23 Performance Objectives

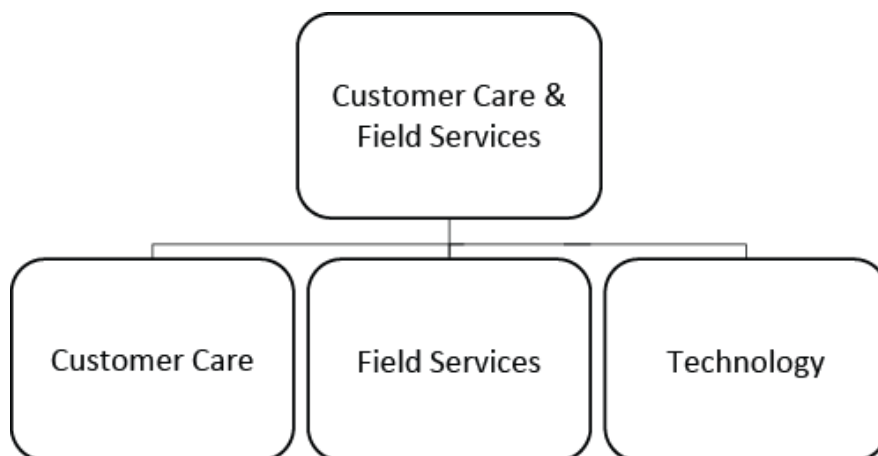
- Origami
 - ERM control and mitigation implementation (2022)
 - EHS Safety Training and Testing (2022)
 - Forklift
 - Aerial Platform
 - Big Five
 - EHS Certificate Tracking for CDL (2022)
 - EHS JHA/SOP Annual Review (2022)
 - EHS Lockout/Tagout Process (2022)
 - EHS Hearing Conservation Program and Respirator Certification Program (2022)
 - EHS Chemical Management System (2023)
 - Mobile Application use for Audits and Incidents (2023)
- Captive Insurance Company
 - Third Party Pipe Warrantee
 - Cyber Insurance
- Enterprise Risk Management
 - Reassess Risks
 - Incorporate Emerging Risks

2021-22 Major Accomplishments

- Enterprise Risk Management
 - Identify KPIs, KRIs, and Mitigation Strategies for Risks to the Organization.
 - Update Origami ERM Module to support program.
 - Development platform and procedure for Emerging Risk to be reported.
- Origami
 - Continue to work with IT to promote utilization of Origami.
 - Create Total Cost of Risk reporting Matrix.
 - Support other Department's utilization of the system.
- Captive Insurance Company
 - Form LLC.
 - Create insurance policies.
 - Identify future lines of coverage for the captive.
- Increase Industry Knowledge
 - Provide opportunities for team to continue learning activities.

CUSTOMER CARE AND FIELD SERVICES

Level: 3100



Mission

To deliver an outstanding customer experience by providing accurate service data to ensure timely billing and responsible customer concern resolution.

Department Description

The Customer Care and Field Services department was created with the express goal of developing a customer facing department dedicated to delivering world class service. The department handles all customer transactions from meter to cash.

Budget Objectives and Highlights

The 2022-23 budget for the Customer Care and Field Services department is consistent with the organization's efforts to reduce costs where possible while continuing to improve departmental efficiencies through both technological and performance-based enhancements to provide the optimum customer experience.

Customer Care. Continuing efforts to reengineer business processes and implement new technology to support the meter to cash philosophy, minimizing field impacts, and enhancing the overall customer experience.

Field Services. The 2022-23 Budget Plan contains funding for meter maintenance, advanced metering infrastructure, and operational costs. The objectives for the division continue to ensure the accuracy of our metering infrastructure and provide our partners with near real-time data to support community conservation goals.

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Technology. Identify, explore, and implement new solutions supporting on-going efforts to reengineer business processes while being innovative in the approach, leveraging both existing and emerging technologies.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 840,134	\$ 4,969,760	\$ 565,500
Maintenance & Repairs	4,907,255	6,096,500	6,947,000
Rental & Leases	—	—	—
Other Employee Expenses	37,349	75,570	135,720
Other Operating Expenses	2,471,285	2,445,400	2,360,600
Total Operating Expenses	8,256,023	13,587,230	10,008,820
Capital Expenditures	3,159,907	16,729,816	11,313,500
Payroll & Related Costs	22,441,823	26,029,619	23,823,453
Total Department Expenditures	\$ 33,857,752	\$ 56,346,664	\$ 45,145,773
FTE Positions	140.2	172.0	159.7

Department Performance

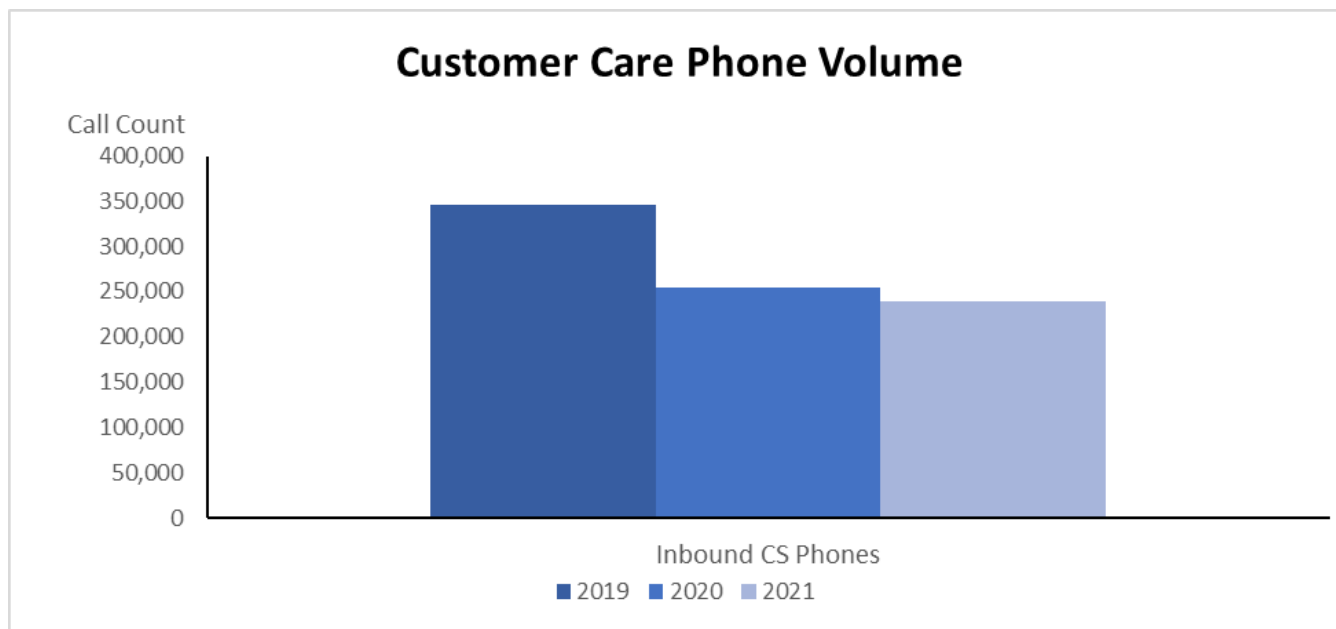
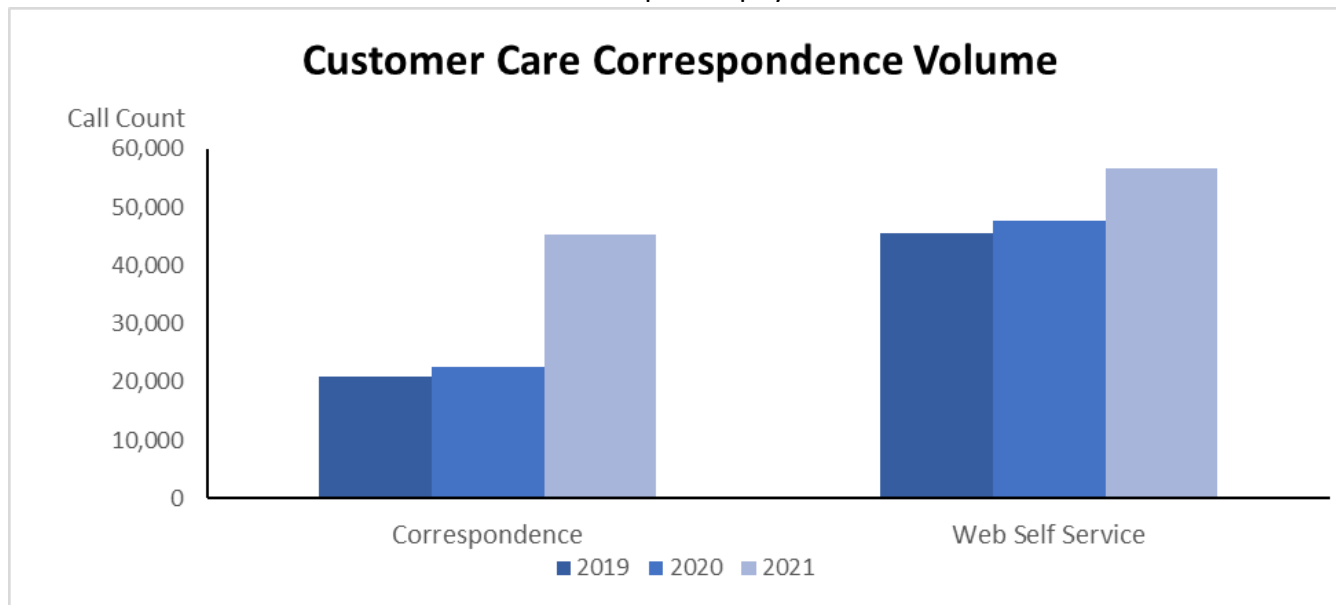
In 2021-22, the Customer Care and Field Services department continued to refine business processes and advance technology in service to the Las Vegas Valley Water District's (LVVWD) customers. The department focused efforts on maximizing the customer experience through four strategic goals: Delivering an Outstanding Customer Experience; Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship for our Environment; Develop Innovative and Sustainable Solutions through Research and Technology; and Strengthen and Uphold a Culture of Service, Excellence, and Accountability.

Customer Care. The Customer Care division serves as the primary point of contact for internal and external service inquiries—supporting approximately 414,000 active services. The division manages the customer care interactions which include phone, kiosk, chat, web requests, correspondence, and appointment requests. Customer Care handles payments, pay arrangements, courtesy collection calls, delinquent account processing, high consumption requests, water-waste complaints, conservation inquiries, Springs Preserve customer support, 24/7 emergency phone coverage, along with providing monthly billing to LVVWD's customers.

Customer Care continues its proactive approach to customer education and service through outbound customer service calls and customer notifications.

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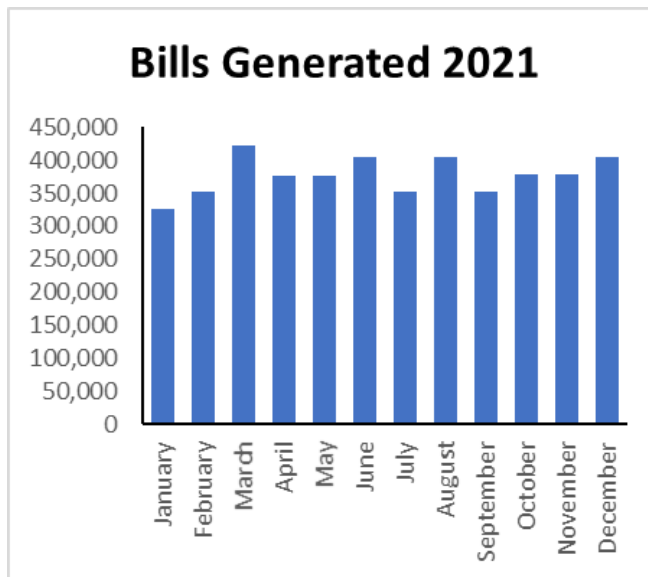
The following graph illustrates the shift in volume distribution over the past three years as process and technical innovations advance the meter to cash philosophy.



Advancements in processes and technology have improved service performance and bill outcomes. These efforts are best illustrated in a low percentage of estimated bills. Customer Care and Field Services manages the monthly billing process from meter to cash for residential customers, large services, developer accounts, adjustments, investigations, quality control, supplemental, fire protection services, consumption notifications and mobile meters.

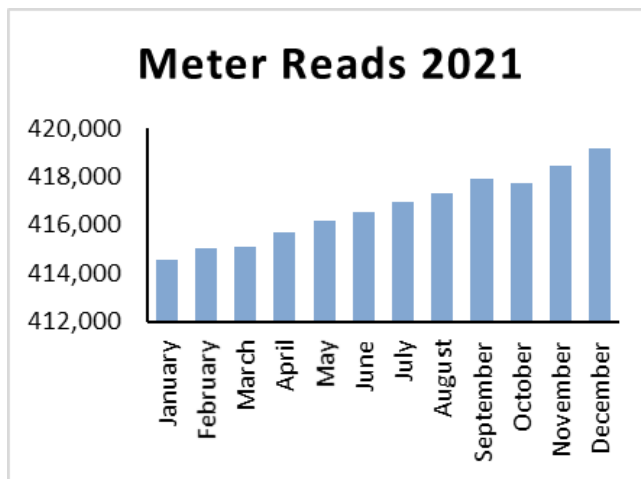
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The following chart depicts the total number of bills generated monthly in 2021.



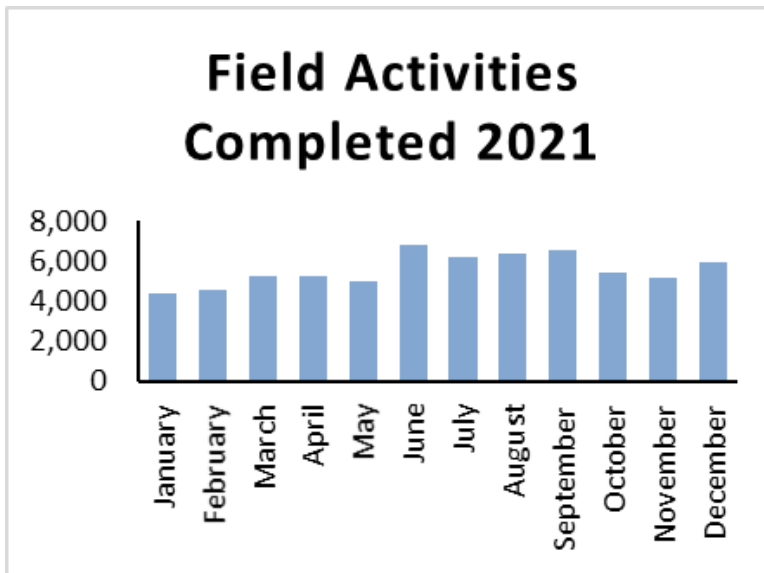
Field Services. The Field Services division is responsible for reading, testing, and maintaining residential and commercial meters for approximately 430,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle Canyon, Laughlin, and Jean. The division also responds to leak investigations, low pressure, high consumption, water waste inquiries, billing requests, and turn ons/shut offs.

The Meter Reads chart illustrates the number of meter reads processed by Field Services in 2021 (Over 4.9 million total).



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The Field Activities chart illustrates the number of work orders processed by Field Services in 2021 (Over 66,000 processed).



Technology. The Technology division is responsible for implementing new technologies, software, and processes to modernize service offerings. The CCFS Technology Roadmap outlines the accomplishments in 2021 as well as current initiatives.

Current initiatives include installation of Advanced Metering Infrastructure (AMI) valley-wide, upgrading the Customer Care & Billing System (CC&B) to the latest Oracle customer information system, Customer-to-Meter (C2M). Accomplishments in 2021 include the deployment of Genesys chat bot along with asynchronous chat and deployment of walk-up and drive-up kiosks.

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Deliver on Outstanding Customer Service Experience.

2022-23 Performance Objectives

- Establish a culture of continuous improvement of processes and practices using feedback from our customers, customer care stakeholders, as well as affiliated departments throughout the LVVWD.
- Work with IT for continued integration of state-of-the-art technologies to enhance the customer experience, increase efficiencies, create multi-channel platform capabilities, as well as eliminate external vendor dependencies.
- Monitor and collaborate with other organizations/industries to identify innovations, best practices, and ways to improve the customer experience.
- Enhancement of the Quality Assurance initiatives to improve call assessment, incorporate more feedback, and interactional based development.
- Convert drive by reading system to an Advanced Metering Infrastructure, bringing on demand reads to our customer base.

2021-22 Major Accomplishments

- Created meter maintenance program based on testing and benchmarking meter service life expectancy according to AWWA (American Water Works Association) and collected data.
- Expanded Callback accessibility within our Interactive Voice Response (IVR system) creating an enhanced customer experience.
- Collected 3.7 billion hourly reads to allow for outreach and education of customers on their consumptive use patterns. Upgraded our AMI head end system Network Administrative Application (NAA).

Strategic Plan Goal – Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship for our Environment.

2022-23 Performance Objectives

- Reduce and dispose of waste responsibly.
- Maintain proper disposal of scrap and waste products, especially lithium batteries.
- Continue to support organizational water conservation efforts through improved technology, as well as customer and interdepartmental communication.
- Educate customers on water usage and trends through all contact center activities.
- Adjust Meter Maintenance Program to highlight and prioritize meter removal based on accuracy rather than age to maximize life and reduce non-revenue water.
- Incorporate Advanced Metering Infrastructure technology that will reduce our fleet carbon footprint.

2021-22 Major Accomplishments

- Mailed 9,735 Excessive Leak Letters in 2021. Resulting in \$321,760 in fees assessed.
- Completed over 66,725 field activities in 2021.
- Used data analytics to notify customers that they are watering on Sunday and a variety of compliance scenarios.

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- Used data analytics to improve efficiencies around residential zero consumption on active accounts.

Strategic Plan Goal - Develop Innovative and Sustainable Solutions through Research and Technology.

2022-23 Performance Objectives

- Continue improvements to “My Account” to support conservation efforts including watering groups and customer notifications for leaks.
- Develop use of SMS technology to provide additional communication channels.
- Improve technology solutions for revenue protection and greater collection gains.
- Continue to educate customers using advanced meter reading data.
- Continue to use data analytics to identify equipment nearing failure to allow for proactive maintenance and replacement.
- Continued enhancement of notification preference options for customers.

2021-22 Major Accomplishments

- Lobby payments and transactions continued to decline with successful expanded payment and self-service options, reducing lobby traffic and carbon footprint.
- Leveraged existing meter read and interval data to significantly reduce field work.
- Identified leaks through the excessive leak program resulting in nearly 90% resolution rate within less than 100 days.
- Continued Sunday Watering Letter Program and compliance pilot program.
- Launched letter outreach to inactive customers reducing truck rolls and the number of unsigned services directly reducing consumption that would have otherwise been written-off.

Strategic Plan Goal – Strengthen and Uphold a Culture of Service, Excellence, and Accountability.

2022-23 Performance Objectives

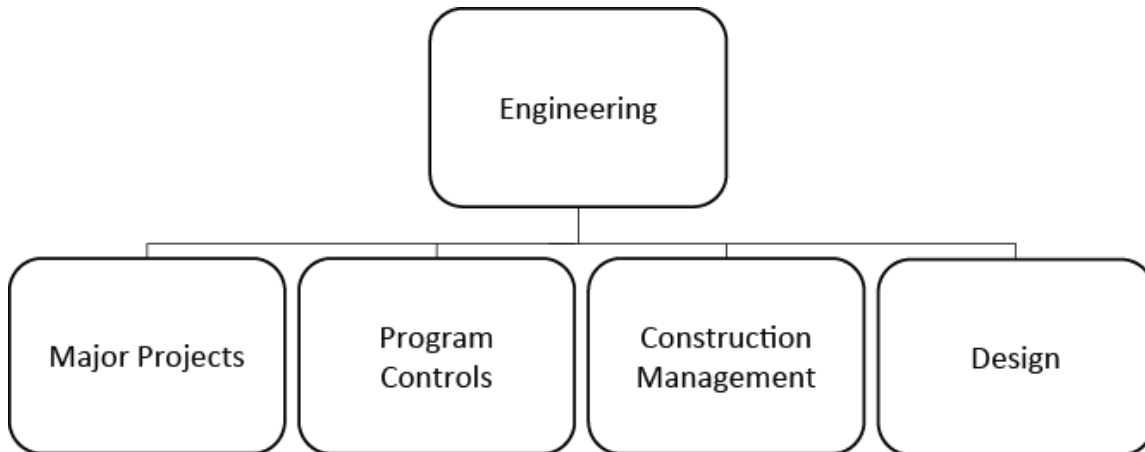
- Provide and seek timely feedback on individual, team, and departmental performance to enhance collaboration, accountability, and excellence.
- Ensure timely and consistent communication with the team to provide feedback and solicit recommendations.
- Continuous communication forum between workgroups to address interdepartmental challenges and business impacts.
- Coordinate with outside departments for knowledge sharing and training.
- Leverage the existing resources for expert training classes to employee skill development.

2021-22 Major Accomplishments

- Utilized various subject matter experts throughout the department to support training initiatives for the C2M implementation.
- Restructured Credit & Collections processing to improve field operations and increase communications with past due customers.
- Incorporated other workgroups into Agile methodologies to improve project management and collaboration.
- Added a new channel to engage with customers through agent chat and chat bot.

ENGINEERING

Level: 3400



Mission

The mission of the Engineering department is to provide excellence in the field of engineering and related support services for a reliable and cost-effective water system.

Department Description

The Engineering department is responsible for implementing capital improvements projects for the Las Vegas Valley Water District (LVVWD), the Southern Nevada Water Authority (SNWA), and Big Bend Water District (BBWD). Presently, the functions under the Engineering department include: Major Projects, Program Controls, Construction Management, and Design.

The LVVWD's capital projects are currently focused on the rehabilitation and replacement of aging pipelines, along with design and construction of new reservoirs, pumping stations, and related components of the large water distribution system spread across the Las Vegas Valley and in nearby rural areas. These projects are described in the LVVWD Capital Improvements Plan (LVVWD CIP). Several new facilities are also being designed and constructed to meet long term operational requirements. In coordination with the Operations, Resources and Facilities, and Infrastructure Management departments, Engineering provides design and construction services for many of the LVVWD CIP projects.

The SNWA owns and operates the regional water supply system, the Southern Nevada Water System (SNWS), which treats Colorado River water and delivers it to SNWA purveyor members in the Las Vegas Valley. Improvement projects for the SNWS are identified in the Major Construction and Capital Plan (MCCP). The MCCP describes ongoing projects and initiatives related to establishing and maintaining reliable system capacity, providing necessary support facilities, and developing access to new water resources. In coordination with the Operations, Resources and Facilities, and Infrastructure Management departments, Engineering provides design and construction services for many of the MCCP projects.

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The SNWA is also responsible for the facilities providing erosion protection in the Las Vegas Wash, as defined in the Las Vegas Wash Capital Improvements Plan (Wash CIP). Engineering accomplishes the planning, design and construction of all projects defined by the Wash CIP.

Engineering also provides project controls, construction management, inspection, permitting, surveying, and rights-of-way support services to other departments for their operating and capital projects.

Budget Objectives and Highlights

The 2022-23 Engineering department budget demonstrates significant ongoing commitment for LVVWD CIP, development needs, Lower Las Vegas Wash Restoration Plan, and the SNWA MCCC Amendment. In addition, a major portion of the department staff will continue to be focused on many projects directly supporting the Operations, Resources and Facilities, and Infrastructure Management departments in preserving the facilities needed to assure a reliable, quality water supply.

Work continues on the Alfred Merritt Smith Water Treatment Facility (AMSWTF) filter media replacement with 20 filters completed. Remaining ancillary contract work is scheduled for completion in Fall 2021.

The Engineering department will also advance various capital projects for the LVVWD by designing and managing construction of projects to install new facilities, replace water mains, rehabilitate valve or meter vaults, install backflow prevention devices and perform other necessary system improvements.

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Expenditures

LVVWD Uses	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 46,896	\$ 107,400	\$ 66,400
Maintenance & Repairs	405,294	1,000,000	700,000
Rental & Leases	—	—	—
Other Employee Expenses	41,206	99,892	107,915
Other Operating Expenses	1,618,934	923,812	1,133,270
Total Operating Expenses	2,112,331	2,131,104	2,007,585
Capital Expenditures	48,769,590	91,108,025	159,657,792
Payroll & Related Costs	13,862,382	17,630,902	17,177,463
Total Department Expenditures	\$ 64,744,303	\$ 110,870,031	\$ 178,842,841
FTE Positions	73.0	95.8	93.5

Department Performance

The Engineering department is organized around five functional areas. Teams are organized to successfully manage completion of major capital projects of the LVVWD, SNWA, and Las Vegas Wash capital plans.

Major Projects. Currently, the active major projects are the Lower Las Vegas Wash Stabilization, the Horizon Lateral and the Garnet Valley Water and Wastewater Systems. Professional services agreement and construction manager at risk agreement for the Lower Las Vegas Wash Stabilization were executed on May 20, 2021. Professional services agreement for preliminary design of Horizon Lateral was executed on April 19, 2021. Professional services agreements for preliminary design of the Garnet Valley Water System and the Garnet Valley Wastewater System were executed on July 15, 2021.

Design. The design team is comprised of professional engineers, technicians, permit coordinators, and support staff who work with operators, planners and asset managers in other departments to define project requirements and incorporate those requirements into design and construction packages. These packages are generally prepared for public bidding to construction contractors. The design team members work closely with their clients and the construction managers to assure design requirements are clear, compliant with the approved scope of work, align with schedule and budget, and consistent with generally accepted engineering standards. Design also coordinates with in-house Legal, Safety, Risk Management, and Purchasing staff to ensure contract provisions are appropriate.

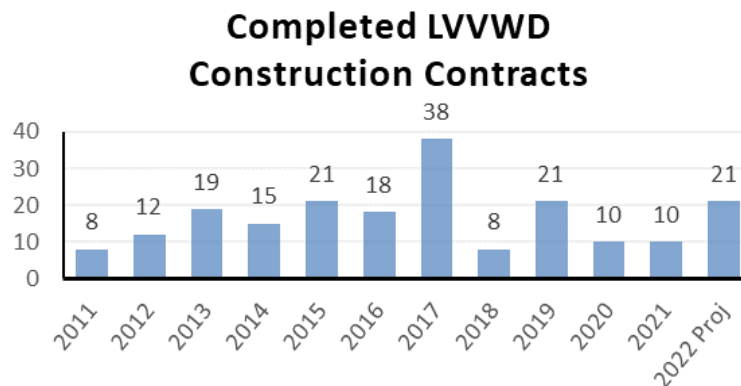
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Construction Management. The construction management team is comprised of engineers, inspectors, technical, and support staff who have extensive experience in the construction of public works for water utilities and manage the construction of necessary facilities and inspection of new developer-installed facilities. These team members also participate in the development of design packages to assure construction complexities are properly considered and addressed prior to inviting contractor bids. They also coordinate with the Legal department to assure laws, regulations, and contract provisions are properly observed.

Program Controls. A technical team organized to assist with the implementation and management of the LVVWD, SNWA, and Las Vegas Wash capital programs through establishment of best practices for effective cost and schedule management and reporting. This team manages the Project Management Information System (e-Builder) and analyzes capital program project data from various departments to identify trends and evaluate project performance. This team also performs a vital function in quality control and reporting of projected capital expenditures as a tool for forecasting future funding requirements and coordinates closely with the Finance department.

Survey, Property Management and Infrastructure Mapping Services. Professional staff within the department support design and construction of infrastructure by providing land surveying, water rights surveying, line location, right of way acquisition and property management and as-built record drawings for both the LVVWD and SNWA systems. These services are vital to the efficient management of property controlled by the LVVWD and SNWA and the infrastructure installed within public rights of way.

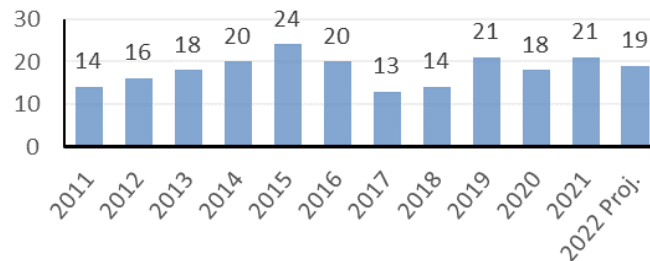
The chart below (Completed LVVWD Construction Projects) represents the number of the LVVWD construction projects completed by Engineering since 2011 and the number expected to be completed in 2022.



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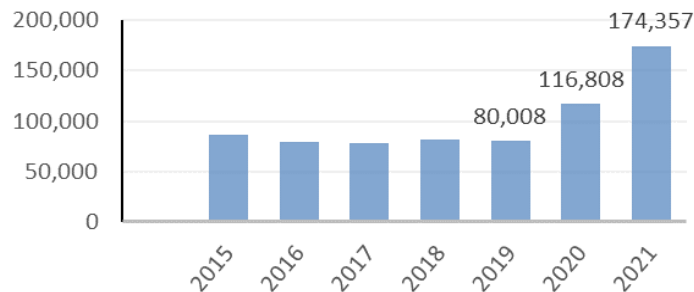
The following chart (Completed LVVWD Design Projects) illustrates the number of projects Engineering has designed since 2011 to support the infrastructure management requirements of the LVVWD.

Completed LVVWD Design Projects



The chart below (Number of GIS Project-Related Feature Edits) shows how many thousands of features related to water facility assets constructed under capital projects for both the LVVWD and SNWA that have been edited (added or updated) within the geographic information system facility database over the past six years. The chart mirrors the increase in development activities experienced in the service area over this time.

Number of GIS Project-Related Feature Edits



Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Complete design and construction of projects in accordance with forecasted capital budgets, the cost estimates and schedules identified in the capital plans.
- Provide the Infrastructure Management, Resources and Facilities, and Operations departments with a high level of technical services and capital project support.
- Continue to implement program management applications and processes to improve consistency, accountability and reporting.
- Continue design efforts to support projects in the SNWA 2020 M CCP Amendment.

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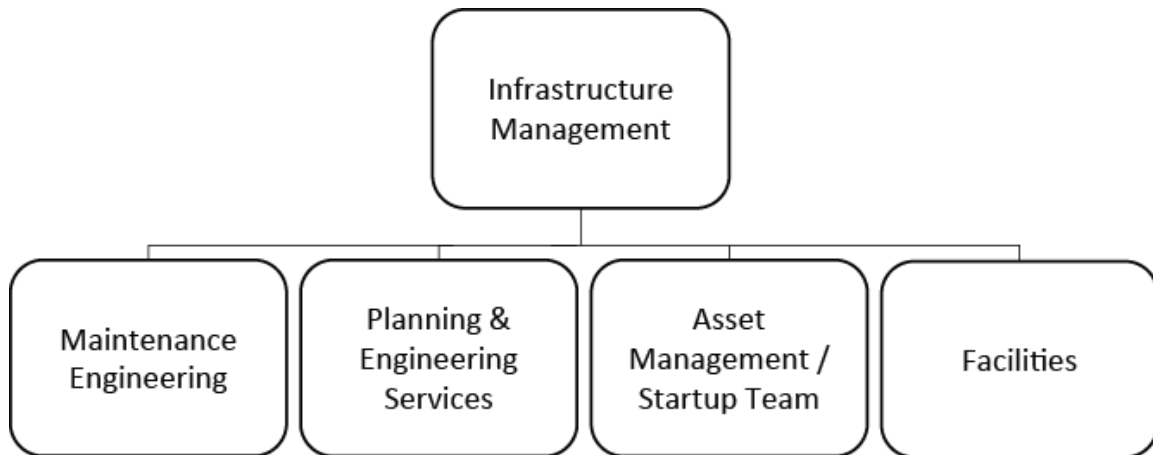
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2021-22 Major Accomplishments

- Completion of all capital projects and transition to long term operation and maintenance for the Las Vegas Wash CIP.
- Completed construction of 10 LVVWD projects valued at \$6.9 million related to improvement of the LVVWD's facilities.
- Awarded 10 LVVWD construction contracts valued at \$90.6 million related to improvement of the LVVWD's facilities.
- Performed inspections on approximately 790 different developer related projects, involving over 34,000 individual inspection actions.
- Received the Outstanding Civil Engineering Achievement Silver Award from the American Society of Civil Engineers for the Low Lake Level Pumping Station.

INFRASTRUCTURE MANAGEMENT

Level: 3700



Mission

To provide world-class stewardship of the existing water system infrastructure through comprehensive asset assessment, protection, and renewal in the most fiscally responsible manner possible.

Department Description

The primary responsibility of the Infrastructure Management department is to manage the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA) assets by developing and maintaining the asset management program. To accomplish this, the Planning and Engineering Services division reviews water plan submittals for proposed development to ensure they meet the LVVWD's design and construction standards. They also ensure new developments have adequate water pressure and fire flow, evaluate future system requirements, and develop future capital cost projections. The Maintenance Engineering (ME) division provides technical support and develops capital projects for the Operations, Resources, Facilities, and Water Quality and Treatment (WQ&T) departments. The Asset Management (AM) division conducts pumping unit efficiency tests, provides inspection support, tests for leaks on large diameter pipelines, and maintains the LVVWD and the SNWA cathodic protection (CP) systems. The Startup Team coordinates the safe integration of new equipment, components, and facilities in the LVVWD, SNWA, and the Big Bend Water District (BBWD) operating systems. These efforts are directly in support of the department's mission. The Facilities division performs daily grounds keeping and janitorial tasks for all LVVWD and SNWA buildings and properties. Facilities also performs work improvements and preventive maintenance with respect to building support and life safety systems such as plumbing, heating, ventilating, and air conditioning (HVAC), structural, roofs, elevator, fire sprinkler, and fire alarms.

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Budget Objectives and Highlights

The 2022-23 Infrastructure Management department budget contains a comprehensive view of ongoing efforts to maintain existing service levels, provides funding to continue the development and maintenance of the asset management program, and demonstrates a commitment to providing daily operational support for the LVVWD's and SNWA's projects.

Infrastructure Management's total operating expense budget between the LVVWD and the SNWA increased \$2,419,201 from budget year 2021-22 to 2022-23. Contributing factors to the operating expense budget include increased economic pricing versus last year, multi-site SCADA software and support subscriptions, replacement of IoT devices due to 3G sunset, increase in on-call operating and maintenance contracts, painting projects moved to operating, purchase of RMWTF Tunnel remotely operated vehicle and leak ball equipment, added a lateral repair construction contract, and inflated economic pricing for contract maintenance service providers. The department will continue to focus efforts on infrastructure condition assessments, Supervisory Control and Data Acquisition (SCADA) programming, and the developer review process.

Expenditures

LVVWD Uses	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 1,038,228	\$ 1,739,956	\$ 1,697,970
Maintenance & Repairs	2,518,233	4,021,500	6,621,700
Rental & Leases	1,648,807	1,648,000	100,500
Other Employee Expenses	48,746	140,358	194,621
Other Operating Expenses	303,606	448,050	691,460
Total Operating Expenses	5,557,621	7,997,864	9,306,251
Capital Expenditures	12,461,494	30,577,704	36,186,345
Payroll & Related Costs	15,870,482	17,636,492	18,060,677
Total Department Expenditures	\$ 33,889,597	\$ 56,212,060	\$ 63,553,273
FTE Positions	89.6	101.0	101.7

Department Performance

Maintenance Engineering. The Maintenance Engineering responsible for the engineering design enhancements and modifications needed to operate and maintain pumping stations, rate-of-flow-control stations, reservoirs, water treatment facilities, the distribution and transmission pipelines, and wells in a safe and efficient manner. Specific responsibilities of ME include Programmable Logic Controller/Human Machine Interface/SCADA (PLC/HMI/SCADA) programming and 24/7 support, SNWA communications network management and 24/7 support, engineering design, project management, construction management, and operations engineering support. Specific projects include

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trihalomethanes (THM) mitigation, motor control center (MCC) and switchgear upgrades, vault and pipeline repairs/replacements, cathodic protection installations, tank re-coating, pump and valve installations and facilities improvements. The division provides engineering analysis in the form of electrical coordination studies, arc flash studies, load analyses, structural integrity evaluations, new equipment and technology evaluations, and water treatment tracer tests. The division also provides day-to-day engineering support for the LVVWD, SNWA, BBWD, Alfred Merritt Smith Water Treatment Facility (AMSWTF), River Mountains Water Treatment Facility (RMWTF), and the small systems.

The division is currently managing over 80 active projects between the LVVWD and the SNWA, with a capital budget of more than \$20 million. Major projects include the BBWD SCADA upgrade; conventional and LED UV well disinfection system installations, 1130 Zone Tank refurbishment; BBWD Raw Water Well installation; Jean J-8 Well installation; West Admin cooling tower replacement; Angel Park MCC upgrade; Blue Diamond pipeline replacement; PP1A and Decatur electrical equipment upgrades, PP1A and PP2A crane replacements; new SNWA communications room; and the Rainbow well discharge line relocation.

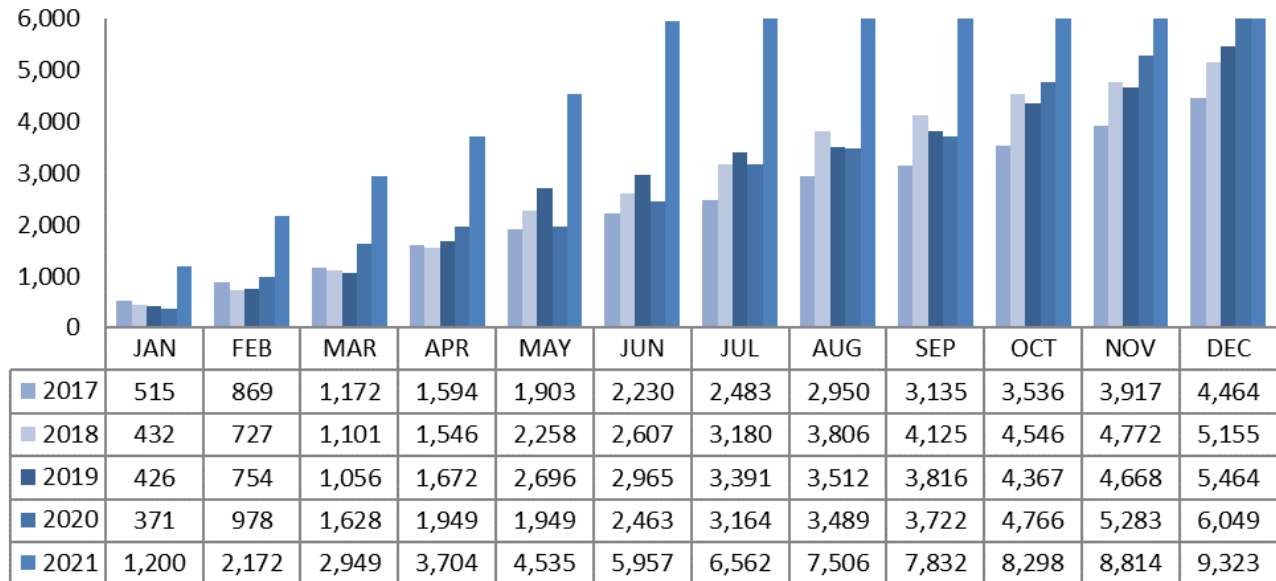
Planning and Engineering Services. The Planning and Engineering Services division provides research, analytics, modeling, and projections to support several activities at both the LVVWD and the SNWA. The division evaluates near-term and long-term demands and changing operating conditions for infrastructure planning, operations planning, and small system analyses; maintains an industry leading hydraulic model of the distribution system, with cutting edge modeling capabilities, which is utilized in conducting engineering analysis and decision support for system additions and modifications initiated by LVVWD, SNWA or developers, developing pumping plans, shutdown analysis, emergency response and water quality analysis; locates, sizes, and schedules new pumping stations, reservoirs, wells, and major pipelines; maintains the AM model which is used to prioritize asset renewal projects and provide capital cost projections and conducts hy-draulic criticality assessment of the distribution system to ensure system reliability; reviews pressure and fire flow availability for new developments and writes cost sharing agreements for the design and construction of major water facilities; collaborates with the WQ&T and Operations departments to address water quality compliance issues, to research and develop alternative technologies applicable to the LVVWD and SNWA systems, and to plan for capital improvements and required monitoring for regulatory compliance; conducts distribution system pressure and flow investigations in support of Customer Care and Field Services, Operations and Public Information; and also performs planning for small systems, recycled water distribution systems, and out-of-valley transmission systems.

In addition, the division is also responsible for reviewing plans for additions and modifications to the systems of the LVVWD and the SNWA, initiated by developers, utilities, and public entities; approves the water plans for these system additions or modifications and ensures they meet the LVVWD's and the SNWA's requirements for reliability and maintainability, calculates fees, processes agreements, commit water resources to new developments, and ensures water facility construction is per the LVVWD's or the SNWA's standards; supports the water conservation initiatives including the recent water service refusal on septic systems and coordination with Conservation for landscape review and approval; coordinates with AM to identify segments of existing water lines that are in poor condition that can be replaced within active public works projects within a betterment agreement to assist in cost saving measures related to permits, pavement, traffic control and other construction related items that would otherwise fall to the organization; assists developers, engineers, and contractors with the progression of their projects through meetings or onsite field visits; coordinates with other public works construction to minimize both the LVVWD costs and inconvenience to the public; is responsible

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for the evaluation and testing of products for use in the water distribution system and oversees the LVVWD Approved Products List; and reviews vacation requests for public right-of-way, utility easements, and patent easements as well as fire sprinkler permits with sites that utilize chemical additives. The following chart represents the LVVWD's cumulative data representing new service points.

New Service Points
2017-2021 Cumulative New Service Points Received



Asset Management. The AM division assesses infrastructure conditions and forecasts short and long-term capital renewal needs to meet service level expectations. AM performs condition assessments on pipelines with the latest technology such as acoustic leak detection, pipe wall measurements, and closed-circuit television (CCTV) internal inspections to determine the remaining useful life of the pipelines and identify pipelines in need of rehabilitation. Reservoirs are inspected while in service with divers or the Remote Operated Vehicle (ROV) or are inspected while out of service with Magnaflux Leakage Technology (MFL) and a visual assessment. Pump performance evaluations are conducted utilizing SCADA data without the need for field testing to determine the current pump efficiency. The division is responsible for managing the corrosion control program for the LVVWD, SNWA, and associated small systems. The goal of the corrosion control program is to extend the life of steel pipe and other steel structures by applying and maintaining cathodic protection. Corrosion Control Systems Technicians collect annual corrosion data on over 3,900 CP test stations and 100 impressed current rectifiers. The division also maintains CP system components, installs new anodes and test stations, and performs corrosion assessments.

Startup Team. The Startup Team was formed to coordinate the safe integration of new equipment, components, and facilities into the LVVWD, SNWA, and BBWD operating systems. The team provides appropriate plans, policies, procedures, and instructions for the control and performance of the systematic testing, startup, and initial operations of new facilities, systems, and equipment. The team also established a contract 'Warranty Management' tracking process during startup, continuing through the contract warranty period, for each project. The team supports the LVVWD and SNWA new construction projects that require integration into the existing control systems (SCADA). The team will

continue to support the increase in ME projects and the Major Construction and Capitol Plan (MCCP) project expansion.

Facilities. The Facilities division consists of Facilities Maintenance, Facilities Services, and Building and Grounds. The division is responsible for ensuring the four major epicenters and the 224 offsite properties totaling 1,463 acres exceed the LVVWD standards for appearance, quality, and cost-effectiveness. Additionally, Facilities supports numerous rural system sites including the BBWD, Warm Springs, Mt. Charleston, Jean, Searchlight, Northern Resource Properties. The division provides support during the design and construction of new facilities, as well as site remodeling and/or retrofit support for existing structures. The average YTD performance for the division has been 891 work tasks per month, which is an increase of 21 work tasks per month over the prior year.

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Develop a Conservation Strategic Plan to improve water system efficiency through AM.
- Expand the leak detection program to leak test all pipelines 36-inches and greater every five years. The program will prioritize the 350 miles identified by a number of factors such as leak history, hydraulic criticality, and corrosion data.
- Continue to research and pilot innovative leak detection equipment to expand our current capabilities to meet our goals.
- Identify and develop repair plans to mitigate the Tropicana 60-inch leaks.
- Continue to work with Operations to reduce transient events utilizing the remote pressure monitoring equipment.
- Complete the installation of UV equipment at five wells pending the Nevada Division of Environmental Protection (NDEP) Authority to Construct permit.
- Complete the equipping of the BBWD raw water well. This project has been waiting for the State Revolving Fund funding.
- Complete SCADA upgrade at the Big Bend Water Treatment Facility.
- Complete the rebuild of the vacuum pressure swing adsorption (VPSA) oxygen compressors at AMSWTF and RMWTF.
- Complete the installation of AMSWTF backwash pumps. Pump delivery is expected June 2022.
- Complete the installation of actuators on AMSWTF Filters 21-26.
- Complete Chlorine Feeder System configuration modification project at AMSWTF.
- Work with Construction Management (CM) early in the course of a project to develop a workable startup plan to commission all facility/systems efficiently and with the final product having a minimum open punch list or any warranty issues at substantial completion.
- Plan capital improvement projects for the LVVWD, SNWA, and small systems to keep pace with increasing water demands and to enhance water system reliability.
- Review and approve development submittals in a timely manner, and to develop design standards for services with higher pressures.
- Continue evaluating water quality in the distribution system and collaborate with other departments for improvements in response to changing water quality and regulatory conditions.
- Hire a water loss professional to work with purveyor members to develop a uniform approach to defining and conducting a water loss audit for compliance.

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- Work with purveyor members to define the Major Construction and Capital Plan (MCCP) scope of the upcoming regional facilities recommended through IRPAC.
- Continue to work with Operations to conduct Pump Station (PS) performance evaluations.

2021-22 Major Accomplishments

- Performed a CCTV inspection using the steerable pipe ranger (SPR) to inspect the 60-inch pipeline that routes along Tropicana. Forty-one areas of interest were identified, and seven internal joint seals were installed as a result of the subsequent internal manned inspections to verify the extent of the identified defects.
- Distribution and AM crews successfully installed a Primus liner inside 1,350 feet of 18-inch asbestos cement pipe (ACP). The pipeline crossed the I-15 just south of Blue Diamond and the Oasis RV Resort. Crews overcame many obstacles to accomplish the installation that were not experienced in other installations mainly due to the extra length and pipe geometry.
- Improved system reliability in the Distribution system by identifying pressure transients and implementing operational changes that have reduced approximately ten main breaks on aging pipelines.
- Crews identified a leak on a 24-inch pipeline located on Vegas Drive at Torrey Pines. Once the pipeline was excavated and repaired, AM estimated the leak rate of 61 GPM that totals 32 MG/year.
- Reduced influence on Southwest Gas Facilities by reducing the output of our cathodic protection system to minimum protection levels.
- Improved water quality at the Grand Teton Reservoir by cleaning and inspecting with divers while in service.
- Improved system reliability for the Equestrian PS and R-8 Lateral by identifying and mitigating pressure surges during operation.
- Obtained NDEP's approval for the LVVWD Ground Water Rule Triggered Source Water Monitoring Plan – 2022 Update.
- Assisted the Laboratory in completing the 2022 water quality monitoring plan maps for all SNWA member agencies, and assisted in evaluating possible sources for a problem water sample.
- In collaboration with ME, an emergency pressure reducing valve (PRV) was installed at the Bruce Woodbury PS to improve emergency storage availability in the Laughlin resort corridor and the 750 Pressure Zone.
- Achieved 99.9 percent system availability of the SONET carrier communications network. Only outage was on redundant fiber so no user lost communications.
- Completed the equipping of Well J8 in Jean. This will replace failing Well J4 in support of the Jean community.
- Completed the second round of State Revolving Fund funding for equipping of the BBWD raw water well. Construction to start July 2022.
- Completed installation of Chlorine Building Utility Water Isolation Valve at AMSWTF.
- Completed AMSWTF filter leak repairs.
- Completed WTF chlorine detector upgrades.
- Completed specification and purchase of control panels, disconnect switches and actuators for AMSWTF drying bed influent valves. Installation to be done in-house.
- Installed a water quality monitoring station at L3PS.
- Completed remediation of hatch and replacement of a drain valve at Reg Tank 2.
- Completed sodium hypochlorite and fluorosilicic acid piping replacement at RMWTF.

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- Completed utility water pump installation at RMWTF. This will allow the South Valley Lateral to be taken out of service without disrupting the treatment plant.
- Completed the replacement of Water Softeners 1-3 at RMWTF.
- Completed overflow piping modifications at rate of flow control (ROFC) 6A.
- Utilized the CCTV equipment to successfully locate a leak on a 20-inch pipeline. The pipeline was rehabilitated using an innovative lining technology Primus with in-house staff.
- Completed the 4125 Zone South Reservoir and the Design Agreement, and completed a master facility plan for the District's northern 4300 and 4520 Pressure Zones.
- Executed the design and construction assistance agreement with the US Army Corps of Engineers for the Blue Diamond Water System rehabilitation Project and received reimbursement No. 1 for the design expenses.
- Completed the improvement plans for the existing Gowan Well Field and the future Aloha North and Aloha South well sites.
- Coordinated with the developer to install a PRV in the northwest 2860 Pressure Zone at Moccasin Road to improve the reliability and redundancy of the system.
- Coordinated with the developer to install a PRV in the 2975 Pressure Zone at Alpine Ridge Way and Hammer Lane to improve the reliability and redundancy of the system.
- Implemented the VODA artificial intelligence pipeline failure prediction tool to provide information on the likelihood of failure (LOF) for all pipelines within the LVVWD Distribution system.
- Upgraded wireless field pressure and flow data equipment to 5G.
- Performed a study and optimized PRV settings in the 2860 Zone north to provide better pressures and reliability to the system.
- Collaborated with Distribution and Public Information to resolve a system hot water issue in the 2300 Pressure Zone.
- Conducted system pressure and flow monitoring using field data logging equipment at 32 LVVWD and SNWA locations to resolve pressure complaints and troubleshoot system issues.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Work with Facilities to install a water saving air cooled chiller at the Valley View West Admin Building.
- Work with Treatment to install ultraviolet (UV) equipment at Well 101. This equipment is intended to prevent legionella formation.
- Continue to develop relationships with ME, Operations, SCADA, and the various shops to coordinate support for commissioning and be a resource to them for warranty and operation information.
- Maintain efficiency in reviewing water plan submittals, network analyses, and hydraulic grade line requests.
- Continue to work with other agencies to include water facility upgrades and replacements in road improvement projects.
- Work with Information Governance (IG) to streamline the process of digitally accepting water plans in Bluebeam digitally signing plans to remove the extra steps of manually signing mylars and scanning plans.
- Complete crane upgrade project at Broadbent PS to allow Operations to safely pick and lift existing pumps.

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- Complete installation of Welder Shop ventilation improvement at LVVWD campus per Operations request.
- Complete installation of HVAC unit in the pump repair shop at LVVWD campus per Operations request.
- Complete subsidence remediation at AMSWTF to include clearwell drainage improvements.
- Complete AMSWTF single line drawings.
- Complete crane replacements at PP1A and PP2A.
- Train dedicated staff to review and respond to Clark County and CLV building permit applications in a timely manner.
- Achieve an 80 percent or greater satisfaction rating for facilities related customer interactions.
- Minimize equipment down time through the use of technology, technician training, and availability of parts.
- Collaborate with Fleet Services to better assess vehicle/equipment needs and improve end products provided.
- Collaborate with Spatial Technologies to provide hydraulic model results in the Spatial Information Portal (SIP).
- Collaborate with developers to obtain sites and cost to effectively install PRVs in the distribution system to increase reliability.
- Prepare facility sizing and cost sharing agreements to serve the future Bureau of Land Management (BLM) disposal area in the northwest portion of the District's service area and development north of Iron Mountain and Moccasin Road.
- Collaborate with the Legal Department to streamline the process of generating developer agreements.

2021-22 Major Accomplishments

- Partnered with fuel pipeline operator Kinder Morgan to bond our CP systems to protect our pipelines without stray current interference.
- Completed the startup of the El Capitan electrical upgrades.
- Approved 6,049 new water service connections, 637 hydraulic grade line and fire flow information requests, 377 water network analyses, and 409 sets of development plan requests.
- Reviewed 6,641 sets of developer, utility, and public works plans for the LVVWD and the SNWA, including brand new submittals, re-submittals, and revisions.
- Seventy-eight percent of first reviews were completed within the four-week goal (369 out of 472) for compliance with the 4-1-1 review process.
- Eighty percent of secondary reviews were completed within the one-week goal (1,845 out of 2,311) for compliance within the 4-1-1 review process.
- Ninety-nine percent of mylar reviews were completed within the one-week goal (775 out of 785) for compliance within the 4-1-1 review process.
- Coordinated with Public Services in responding to questions and inquiries.
- Implemented the water moratorium in Blue Diamond, Nevada.
- Timely responses to customer questions regarding the water moratorium in Blue Diamond, Nevada.
- Completed a water quality analysis and the plan for initial operations of the District's 3895 and 4125 Pressure Zone facilities, coordinated internally and externally regarding construction phasing and sequencing, and worked with Customer Care for new water meters with higher pressure ratings.

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- Coordinated with GIS staff to exhibit the high-pressure pipelines on the civil drawings and in the SIP system to manage potential field risks associated with high water pressures.
- Ensured that landscape plans for new developments are reviewed by Conservation Services, and that new developments connect to a municipal wastewater system.
- Conducted extensive research of existing vacant parcels in septic areas that have services, and reached out to property owners to share information on new Service Rules regarding public sewer requirements.
- Refurbished BBWD 1130 Zone Tank. This required preparatory work and planning to create a closed zone to take this tank out of service for an extended time.
- Replaced actuators at Anasazi Pumping Station 3090 Zone per request from Operations.
- Completed Carlton Square motor operated valve (MOV) to Pneumatic Actuator Conversion per request from Operations.
- Completed installation of chemical injection equipment modification at Jean per request from Operations.
- Completed Gowan site motor control center installation.
- Completed the electrical distribution equipment upgrade at the Warm Springs PS.
- Completed variable frequency drive (VFD) 10 replacement at Booster PS 2.
- Completed vault access upgrade project on the West Valley Lateral site.
- Coordinated multiple system/ equipment integrations working with the contractors, consultants, and internal staff for the benefit of our system. Completed the integration of Stewart
- Migrated the development review process from Autodesk Design Review format (DWF) to Bluebeam, which allows plans to be digitally signed by engineers as required by the Nevada Board of engineers and Land Surveyors.
- Facilities completed 9,393 work orders over the past 12 months.
- Completed the Alpine Ridge 3090 Zone Pipeline Agreement to extend the 36-inch and 24-inch pipeline in the northwest portion of the District's 3090 Pressure Zone. The pipelines provide additional capacity for future development.
- Completed an amendment to the Centennial 3205 Zone North Pipeline Agreement for the BLM 270 development to address delays in acquiring a BLM right-of-way grant for a portion of the pipeline.
- Prepared pipeline oversizing agreements for the construction of a 24-inch pipeline in Moccasin Road.
- Analyzed facilities required to deliver water to Lake Las Vegas, the City of Henderson Water Treatment Plant, and the Nevada Division of Wildlife Fish Hatchery, as well as provided cost estimates for each connection/scenario.
- Collaborated with Operations and the City of Henderson to evaluate phasing options for the Horizon Lateral Project.
- Analyzed requirements and prepared conceptual criteria to extend water facilities to serve the Sloan area and the future Southern Nevada Supplemental Airport.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Continue to utilize the latest condition assessment technologies to determine the true condition and expected remaining life of the infrastructure.
- Further develop the Sedaru application to increase efficiency collecting cathodic protection and infrastructure assessment data.

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- Support the update of the master specifications to consolidate LVVWD and SNWA Specifications.
- Collect additional construction cost data and update the cost estimation tool.
- Continue to collaborate with Operations and Information technology to upgrade and enhance daily pumping plan and hydraulic modeling tools. The upgrades will result in improved system reliability, asset protection, emergency response, energy management and water quality.
- Complete laydown area adjacent to PS1C to help make the Mechanical Shop work process easier.
- Complete generator installation at the Elkhorn 3205 Zone PS. This is a developer funded project to support development in the Northwest valley.

2021-22 Major Accomplishments

- Integrated the Sedaru collected cathodic protection data into the LVVWD's SIP System. All historical CP data collected by Avantis can be analyzed utilizing our in-house developed applications.
- Submitted revised startup specifications for contract startup section to support new MCCC requirements and consolidation of LVVWD and SNWA specifications to ensure accurate and thorough integration of new facilities and upgraded equipment and systems.
- Completed the Blue Diamond Water System pipeline replacement design with construction scheduled to complete September 2022. This is partially funded by the Army Corps of Engineers.
- Completed a work plan including sizing and cost estimation for the Blue Diamond Water System to resolve urgent leak and fire protection issues and applied the federal funding through the Army Corps of Engineers.
- In collaboration with Operations, conducted a preliminary investigation on the capacities of SNWA laterals to determine options for meeting future demands on South Valley Lateral.
- Investigated possible secondary supply options to feed potable water to Boulder City. Worked with ROW to complete grant requests for reservoir sites to serve future BLM disposal areas in the LVVWD northwest service area.
- Completed a study to identify facilities and preliminary costs required to serve future development in pressures zones in the LVVWD northwest service area.
- Coordinated with NEDP to complete the Drinking Water Infrastructure Needs Survey and Assessment (DWINSA) and submitted to the Environmental Protection Agency (EPA).
- Completed a desktop analysis reviewing the feasibility of SNWA taking ownership of the Basic Water Company (BWC) system.
- Worked with Operations to develop an operating plan to reduce peak flows at the South Valley Lateral.

Strategic Plan Goal - Strengthen and uphold a culture of service, excellence, and accountability.

2022-23 Performance Objectives

- Complete project to replace Fleet Services paint booth.
- Complete Well 124 installation at the request of Water Resources. This well will replace Well W027 with a new well (Well 124) to be located at the Las Vegas Springs Preserve, east of Valley View Boulevard, south of the existing steel tanks and north of the NV Energy Substation.
- Complete installation of coating and blast booth per Operations request.
- Complete installation of NaOCL main storage building shade structure.
- Complete PS1A flooring replacement.
- Start construction on new SNWA communication room.
- Complete upgrade of Decatur PS electrical equipment.

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- Complete upgrade of PS1A electrical equipment.
- Complete installation of Pumps 2-5 at PS4 and PS5.
- Collaborate with Operations and Engineering on assessing and upgrading infrastructure.
- Provide Operations and ME with updated O&M techniques through hands-on training and site-specific documents (Operating Manuals, Drawings and Warranty certificates) on the newly commissioned equipment and facilities.
- Aid the organization in utilizing economic research and analytics.
- Maintain an industry leading hydraulic model, with state-of-the-art modeling tools, of the distribution system for effective decision support and further automate the hydraulic model and tools for maintenance, calibration, asset rehabilitation, emergency response, shutdown analysis, and water quality applications.
- Continue collaboration with the Cities of Henderson, North Las Vegas, and Boulder City to finalize the update of the Uniform Design and Construction Standards (UDACS).
- Maintain critical equipment and building systems to ensure a safe and comfortable work environment, and measure equipment uptime percentage.

2021-22 Major Accomplishments

- Provided inspections support for all cathodic protection installations.
- Provided updated O&M Manuals at two newly constructed sites and four updated facilities at the LVVWD and SNWA.
- New Construction Warranty program monitoring system is starting to accumulate the project/contract certificates for equipment and components. Facility and piping systems warranty are being coordinated with AM.
- Used constant demand elasticity models to estimate the impact of consolidating all single-family customers on same tier sizes.
- Provided conservation data regarding local water use to assist in targeting outreach programs and to develop new targeted conservation programs.
- Assisted Resources to estimate the impact of climate change on water demands over the next 50 years.
- Worked with the City of Henderson to install four air vacuum air release valves (AVARs) on pipeline to the R-8 Tank. This simplified pipeline configuration and will reduce pressure surges.
- Completed Angel Park MCC upgrade at the request of Operations. This equipment reached its anticipated end of service life.
- Completed MOD 4 electrical upgrade for the new emergency command center.
- Completed the installation of the first two pumps for PS4 and PS5. The replacement of these 45 year old pumps will help ensure reliable service to the Boulder City Potable Water lateral.
- Replaced Pumping Station 2C VFD 8. VFD is no longer needed operationally and was replaced with a less maintenance intensive reduced voltage soft starter (RVSS). These new units will also take up less space.
- Completed upgrade of PS1B medium voltage equipment.
- Completed single line diagrams for RMWTF. Adjusted to a new environment during the pandemic, implementing new procedures and protocols that ensured the safety of the workforce and the public who may be present in our facilities.
- Purchased and trained on electrostatic misting systems and delivery of effective viricidal chemicals to prevent infection.
- Improvements to security structures and lighting at facility entrances and grounds.

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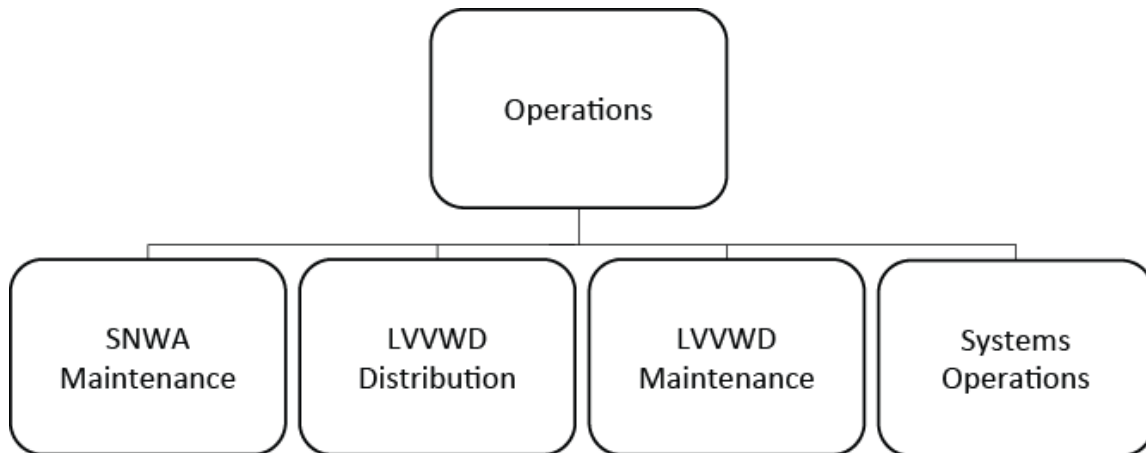
Strategic Plan Goal – Develop innovative and sustainable solutions through research and technology.

2021-22 Major Accomplishments

- Designed and installed a zero-water waste facility cooling system for the West Admin Building at the LVVWD. This chiller system will be a showcase for large-scale resort customers as an example of one option to cool large buildings without the evaporative loss that is customary in the area.
- Piloting free swimming leak detection technologies to help identify leakage in our critical infrastructure.

OPERATIONS

Level: 4100



Mission

To serve the Southern Nevada Water Authority (SNWA) customers by delivering high quality drinking water to the greater Las Vegas area through efficient, reliable, state-of-the-art delivery systems. To support the Las Vegas Valley Water District's (LVVWD) mission by delivering water to customers that is adequate to meet their needs and proven safe through a system that is effectively operated and maintained.

Department Description

The LVVWD system is comprised of a wide variety of facilities which includes various pumping stations ranging in size from 1,500 gallon per minute (GPM) to 108,500 GPM and various reservoirs ranging in size from 4.5 million gallon (MG) to 50 MG, for a total storage of just over 900 MG. The LVVWD has 62 potable wells capable of producing 182 MGD, and 26 specially constructed wells dedicated to recharging the groundwater basin with treated Colorado River water during the winter months.

The SNWA system consists of 33 pumping plants, 36 rate-of-flow control stations (ROFCS) also referred to as metering sites, 163 miles of large diameter pipeline, and 32 regulating tanks, reservoirs, and forebays.

Operations also serves customers located not only in the metropolitan Las Vegas area, but also the small service areas of Blue Diamond, Jean, Kyle Canyon, Searchlight, Eldorado Valley, Coyote Springs/Moapa, Sloan, and Laughlin.

Budget Objectives and Highlights

The Operations department is responsible for the day-to-day and long-term operations of a complex network of pumping stations, reservoirs, ROFCS, sodium hypochlorite facilities, and ground water wells

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necessary to meet water delivery demands. Wholesale customers of the SNWA include the LVVWD, City of Henderson, City of North Las Vegas, Boulder City, Nellis Air Force Base, and the National Park Service. Retail customers of the LVVWD receiving water from Lake Mead include residents of unincorporated Clark County and the City of Las Vegas. The department also operates small ground water systems for the communities of Blue Diamond, Jean, Mt. Charleston, Searchlight, the Sloan Army Reserve Center (SARC), and the Moapa Water Treatment Plant.

Equipment and Project Budget. The Operations department's combined equipment and project budget reflects the new items to establish improved maintenance practices, replacement of existing equipment items no longer supportable by the manufacturer, and capital projects the divisions manage. The total request is \$11,841,738 for the fiscal year 2022-23 Budget Plan between the LVVWD and the SNWA.

Operating Expense Budget. The department's Operating Expense budget continues to focus on Reliability Centered Maintenance (RCM) aspects of keeping the overall water delivery system fully operational and reliable. The Operating Expenses for fiscal year 2022-23 Budget Plan are shown on the following table.

Operations' fiscal year 2022-23 overall budget totals \$77,864,573 between the LVVWD and the SNWA.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Purchased Water	\$ 19,965	\$ 39,000	\$ 24,000
Energy	8,536,620	9,352,000	10,284,000
Materials & Supplies	6,033,016	5,270,110	5,961,610
Maintenance & Repairs	847,715	1,043,600	1,223,600
Rental & Leases	24,433	—	—
Other Employee Expenses	162,075	213,476	208,476
Other Operating Expenses	20,994	430,376	433,876
Total Operating Expenses	15,644,820	16,348,562	18,135,562
Capital Expenditures	15,923,969	5,112,718	4,859,145
Payroll & Related Costs	30,565,510	33,045,634	33,028,671
Total Department Expenditures	\$ 62,134,298	\$ 54,506,914	\$ 56,023,378
FTE Positions	174.0	195.4	198.6

Department Performance

SNWA Maintenance. *The SNWA Maintenance division* is responsible for the repair and maintenance of the production facilities and distribution system. The division ensures the system, facilities and equipment are maintained at a level to fulfill the SNWA's contracted water delivery commitments. This is a large, complex system consisting of 33 pumping plants, 36 metering sites called rate-of-flow control stations (ROFCS), 163 miles of large diameter pipeline, and over 32 regulating tanks, reservoirs and surge towers.

The Electrical/Electronics section consists of two teams of technicians responsible for all levels of reactive, preventive and predictive maintenance, emergency repair, new construction, retrofitting and installation, and upgrading of all equipment and process control systems belonging to the SNWS. All the SNWS pumping stations and ROFCS are fully automated and remotely controlled. This allows the SNWS to operate a 900 million-gallon per day water system with minimal staff. The Electrical/Electronics section is comprised of a workforce to maintain systems from 24 VDC to 13.8KV, working closely with the Colorado River Commission (CRC).

The Mechanical section, consists of two teams of technicians responsible for the maintenance and repair of the large pumping units, pneumatic/hydraulic valve actuating systems for the pump discharge control valves, the rate of flow valves, and operators at the system pumping stations delivery points. These sections are also responsible for the heavy support maintenance and repair of all the in- and out-valley SNWS mechanical equipment consisting of motors and gear reduction units, valves and valve actuators, canal gates, air compressors, and chemical feed systems utilized by Treatment. A full capacity machine shop provides for in-house repair and fabrication of equipment needed to support the mission.

LVVWD Distribution. *The Distribution division* (Distribution) is responsible for maintaining 6,928.6 miles of pipeline and laterals, 136,222 valves, 419,910 service laterals, 41,110 fire hydrants, and all related appurtenances comprising the LVVWD's distribution system. In fiscal year 2019-20, Distribution crews completed 7,644 work orders consisting of repairs to pipelines and the repair and replacement of valves and fire hydrants. Additionally, 1,797 leaking service laterals were replaced. Distribution is in the process of replacing the estimated 80,000 polyethylene services installed within the LVVWD's distribution system between 1971 and 1989. These services have been problematic and very unreliable, with multiple failures. Approximately 66,912 of these services have been replaced. Distribution also assists other LVVWD workgroups, such as Asset Management and Inspections, with cathodic test station installations, valve corrections, and water quality testing. Distribution continues the preventive maintenance valve program which locates, operates, and maintains valves within the distribution system. Distribution located and exercised 11,637 valves in fiscal year 2019-20, keeping them in good working order and improving Distribution staff's ability to quickly perform main shutdowns in case of a leak or large emergency. This has helped Distribution staff lower the average time to shut down a leaking water main in an emergency and reduce non-revenue water losses.

The Backflow Prevention section administers the LVVWD's Backflow Prevention Program. This is a service protection program involving annual testing and repair of all backflow assemblies in the LVVWD distribution system. An active backflow program ensures contaminated water cannot enter the potable water system if a backflow, backpressure or back siphonage condition exists. The backflow technicians are certified by the California/Nevada section of the American Water Works Association (AWWA). They are currently managing approximately 31,303 backflow prevention devices.

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LVVWD Maintenance. The LVVWD Maintenance division is comprised of five sections:

Field Booster Pump/Valve Repair
Pump System Repair Shop
Electrical
Telemetry
Well Crew

The Field Booster Pump/Valve Repair section maintains, repairs, and installs mechanical equipment found at major pumping stations, select small system sites, and recycled water systems. The section also implements the predictive maintenance tool of vibration analysis on the LVVWD's motors.

The Pump System Repair Shop expedites repair of major pumps and motors. This is accomplished using machining, mechanical, and coating and painting skills of the section members. This section also maintains the natural gas industrial engines at the Campbell Pumping Station and field deployed emergency generators.

The Electrical section maintains, repairs, and installs electrical equipment for pump stations, well sites, and other LVVWD locations. This involves performing preventive maintenance as determined by the Reliability Centered Maintenance process, implementing infrared predictive maintenance technology, maintaining the controls, power and mechanics of the water system, and having a working knowledge of the LVVWD's pumping strategies.

The Telemetry section maintains and repairs all instrumentation pertaining to water system operation and security, including monitoring water pressure, flow, level, drawdown, and chlorination instrumentation and systems, field computer systems, and associated devices for the SCADA system, multiple address and spread spectrum radios and repeater systems, microwave radio communications equipment, and security equipment in support of field sites.

The Well Crew section performs predictive, preventive, and corrective maintenance on all well pumps, artificial injection wells, and control valves. This section further plays a significant role in the evaluation of pump efficiencies and works in concert with Maintenance Engineering within Infrastructure Management to recommend well rehabilitation schedules for the well bore and pumping equipment.

Systems Operations. The Systems Operations division is comprised of the management team, LVVWD Systems Operations, SNWS Systems Operations, the Disinfection Reservoir shop, and the Small Systems section.

The Management team is responsible for ensuring the sections have the necessary resources to accomplish their specific functions. Along with the section supervisors, the team consists of a manager, administrative staff, and two senior operations analysts. The analysts are integral in compiling the monthly water usage for which the SNWA bills its customers, tracking energy and maintenance costs, monitoring non-revenue water trends, and liaising with other departments and divisions.

The LVVWD SCADA Operations section provides around-the-clock monitoring and control of all retail water distribution systems using the SCADA computer system. Daily tasks include coordinating water deliveries from SNWS and operating pumps and wells to maintain reservoir levels and water system pressure. This section remains dedicated to preparing daily pumping plans to fine tune pumping decisions which improve distribution system water quality and save electricity costs.

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The SNWS SCADA Operations section provides around-the-clock monitoring and control of wholesale water transmission and distribution system equipment using the SCADA computer system. Daily tasks include coordinating water orders from the LVVWD and ordering power. They also operate pumps and valves at all pumping stations, and monitor flows, tank levels, system pressures, chlorine residuals and other information through the SCADA network. Purveyor, wholesale customer demands are met by pumping water through the distribution system to the ROFCS, where the water is metered for billing. The SCADA system data is used to develop trends, reports and statistical information required for effective system operation.

The Disinfection and Reservoir section is a vital part of the potable delivery system for the LVVWD. They manage and maintain reservoir networks that represent most assets of a water utility. Their principal responsibilities are the management and disinfection of the potable water storage network of reservoirs and wells to meet Safe Drinking Water standards. These networks are managed to achieve long-term sustainability of the LVVWD's critical assets. They continually find ways to incorporate innovative water technologies to optimize operational performances of the disinfection systems, including injection principles and methods to reduce or eliminate current water quality concerns. Just as important are the sodium hypochlorite storage and delivery systems that are maintained and operated to a standard that meets or exceeds current AWWA and National Sanitation Foundation standard 60 protocols.

The Small Systems section oversees operations and maintenance of the rural water systems located in Blue Diamond, Coyote Springs (Moapa), Jean, Kyle Canyon, Searchlight, and Sloan. This group is comprised of two rural systems operators (RSOs) and a Small Systems Superintendent. The RSOs perform daily inspections of rural sites to operate, maintain, and repair water distribution mains, service lines, meters, tanks, reservoirs, chemical feed systems, and other related appurtenances. The Superintendent handles the day-to-day administrative aspects of the rural areas, including planning, budgeting, supervising the RSOs, and correlating the Small Systems' needs with other maintenance work groups. The Superintendent also leads the Small Systems Cross Departmental Team (CDT), which is comprised of personnel from the LVVWD and SNWA organizations. The CDT's purpose is to ensure sound decision-making and transparency for each of the rural water systems.

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Both SCADA groups will continue to collaborate on the final SCADA system alarm philosophy, displays, and control strategy to allow for the installation of a common SCADA system for both groups.
- LVVWD SCADA operations will continue to fine-tune the new Aveva SCADA system, which was deployed in March 2021. This system will be the model for the Laughlin and SNWA SCADA upgrades in future years. Significant effort is being made to monitor and adjust Aveva SCADA alarms to meet industry best practices.
- LVVWD SCADA Operations will continue to upgrade the current Ops Tool used to create the daily pumping plans. A new Intelligent Water (iWater) tool will provide additional features, making it easier to create pumping plans, and will incorporate PRV and pressure station data for model calibration.

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- SNWS SCADA operations will continue to run/exercise L3PS pumping equipment for use in extracting Lake Mead water to deliver to the treatment plants.
- SNWA SCADA operations will prepare to transition low lift pumping from IPS-1 to L3PS low lift pumps.
- SNWS SCADA operations will continue to work with Xylem to implement a Real Time Decision Support System for Drinking Water Network Operations Management. The work will be done in three phases: developing a “Digital Twin” for the SNWS system; an individual pumping facility operational optimization; and the entire network operational optimization. The success of this program will be measured in reduced energy costs and safeguarding against losing institutional knowledge with an aging workforce.
- The Disinfection Shop will continue its efforts in standardizing the sodium hypochlorite rooms, including chemical storage tank and plumbing modifications and floor coatings, bringing all sodium rooms up to a new standard.
- The Disinfection Shop has taken on the responsibility of on-site reservoir critical valve preventive maintenance that establishes readiness for unforeseen reservoir isolation needs.
- The Disinfection Shop will continue to assist Engineering, Water Quality Research and Development, and Well Crew teams with development and implementation of ultraviolet disinfection at several well sites.
- Small Systems will partner with Maintenance Engineering, Distribution, and the Army Corps of Engineers (ACE) to replace the steel and AC pipelines of Blue Diamond, as well as upgrade the 3630 Zone booster pumping station, with the total cost of the projects being covered by ACE and State Revolving Fund grant monies.
- Small Systems will partner with Maintenance Engineering, Distribution, and ACE to perform a complete replacement and upgrade of the mains located on Gaviland and Waterspout streets in Searchlight. The costs of these projects will be reimbursed at 75 percent by ACE.
- Small Systems will partner with Water Resources, Maintenance Engineering, and the Well Crew to equip the new J8 Well for service in 2022.
- Small Systems will partner with Maintenance Engineering, Distribution, and contractors to reroute the Rainbow Well discharge line.
- Small Systems and Distribution will create a service lateral inventory to document the material of all service lines, in accordance with the Revised Lead and Copper Rule.
- LVVWD Maintenance will continue a multi-year effort to install fiber optic and make security camera upgrades at all primary LVVWD locations.
- LVVWD Maintenance will continue upgrading control valves and actuators that have reached the end of their useful lives.
- SNWA Maintenance will make motor control center upgrades at Decatur Pumping Station; change the valves at Sloan ROFCS to REXA valves; change all pumps to Rotork at Bermuda Pumping Station; replace inlets at Warm Springs with REXA and Rotork control valves; and change ball valves at Horizon Ridge.
- SNWA Maintenance will perform the valve actuator replacement project.
- SNWA Maintenance will remove and reinstall the IPS2 Unit No. 6 pump.
- SNWA Maintenance will install new isolation valves at Horizon Ridge ROFC and an automatic transfer switch at Foothills Pumping Station to provide redundant power to critical items within the station.
- SNWA Maintenance will replace Bermuda ROFC inlet and outlet valves and actuators.

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- SNWA Maintenance will replace PS2A/PS2B forebay isolation gates.
- SNWA Maintenance will replace Warm Springs ROFC isolation valves and actuators.
- SNWA Maintenance will update DC excitation systems at various plants.
- SNWA Maintenance will upgrade medium voltage electrical equipment at multiple sites.
- SNWA Maintenance will replace Sloan Pumping Station inlet isolation valves.

2021-22 Major Accomplishments

- LVVWD SCADA operations worked in close collaboration with Maintenance Engineering to upgrade to the new AVEVA System Platform for SCADA control, replacing the old, outdated Telvent system.
- LVVWD SCADA operations worked in tandem with SNWS SCADA operations to support several main lateral outages lasting more than seven days, and also supported two five-day AMSWTF outages and one five-day RMWTF outage. Water orders were adjusted and internal pumping plans were altered to ensure no impact to customers.
- SNWS SCADA operations oversaw the planning and execution of 123 individual site and equipment outages. These included two five-day AMS outages to repair a filter influent channel leak, inspect River Mountains Reservoir inlet piping and miscellaneous electrical and controls work; a five-day RMWTF outage for Reg Tank 2 repairs, Filter No. 1 gearbox repair, CCTV inspection of the River Mountains Tunnel No. 1 from Reg Tank 2, and miscellaneous electrical work; installation of a new water service pump for River Mountains to be used during SVL outages; outage to replace Pump No. 1 at PS04 and PS05; a three-month PS-1B outage to replace the station's electrical gear; replacement of all valves, actuators and venturis at ROFC 6B; and installation of new comms battery chargers and inverter and battery backup at six sites.
- Disinfection Shop staff completed three sodium room rehabilitations and planned and installed a prototype entry hatch on Reno Reservoir with the assistance of Asset Management and the welding shop.
- Small Systems staff assisted in negotiating the first rate increase in Blue Diamond since LVVWD took over the system.
- Small Systems staff replaced and upgraded mains located on Desert Sage and Orlando in Searchlight. These mains have been responsible for a large amount of water main breaks over the last several years.
- Distribution completed the Tropicana Inline Valve Replacement project to replace four 48-inch butterfly valves in existing valve vaults. The work included saw cutting and removal of asphalt, excavation and removal of existing deck segments, casting and installation of new deck segments, new concrete vault floor, recoating of facilities within the vault, backfill, dense grade pavement, and restoration. Distribution inspected 1,000 feet of pipeline and installed eight internal seals. The project was completed prior to the repaving of Tropicana Avenue and will enable better isolation of the 60-inch line for future assessments and leak remediation.
- Distribution installed 1,400 feet of Primus liner to rehabilitate an 18-inch AC pipeline crossing interstate I-15 south of Blue Diamond.
- Distribution replaced 360 polyethylene service lines in Spring Valley, Los Prados and Desert Shores.
- Distribution replaced a 36-inch valve at Lamb and Wyoming that was restricting flow through the transmission line. This included bolstering area connections to prepare for outages and performing an internal inspection of the 42-inch pipeline.
- LVVWD Maintenance installed and tested UV treatment system prototypes at Wells 101 and 97 for enhanced disinfection.

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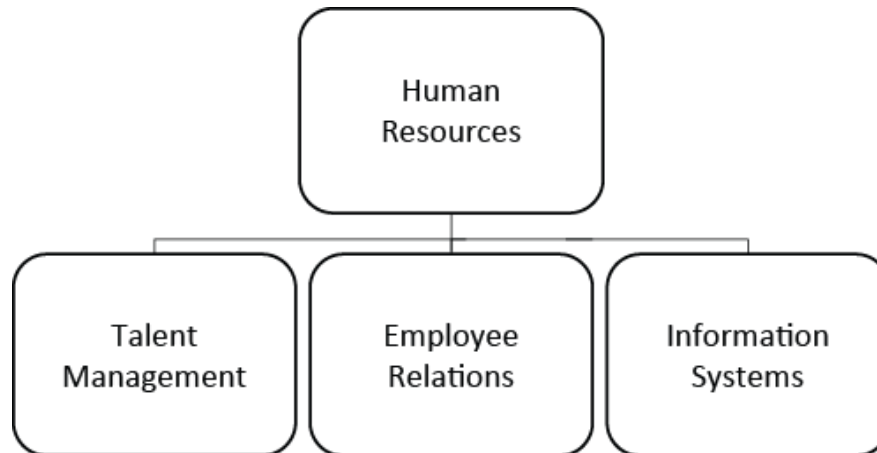
Operations

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- LVVWD Maintenance restored and recoated multiple pumping stations and pumping equipment, including lead abatement where necessary.
- LVVWD Maintenance upgraded communications and reservoir sample analyzers at over 20 reservoir locations.
- LVVWD Maintenance upgraded multiple pumping stations with efficient LED lighting to enhance safety and reduce electrical consumption.
- LVVWD Maintenance upgraded outdated PLC5 to Control Logix field instrumentation at all reservoirs.
- SNWA Maintenance established a temporary generator power emergency preparedness program for all in-valley ROFCS.
- SNWA Maintenance performed BC lateral motor refurbishments (PS 1-ABC, PS04, and PS05).
- SNWA Maintenance installed the final control valve and REXA operator at Flamingo ROFCS.
- SNWA Maintenance installed new venturis at Unit No. 6B.
- SNWA Maintenance refurbished Motor No. 4 at Pumping Station No. 6.
- SNWA Maintenance replaced failing VFD No. 1 at BPS2 and failed VFD No. 8 at PS2C.

HUMAN RESOURCES

Level: 4200



Mission

To recruit, develop and retain the best employees to accomplish the organization's vision, mission, and goals in accordance with the organization's values and ethics.

Department Description

The Human Resources department is responsible for payroll, recruitment and selection; engagement and employee development; employee relations; benefit plans; compensation and classification plans for the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA). The department also administers fair employment policies and procedures and negotiates all collective bargaining agreements. Presently, there are three service groups within the department: HRIS, Employee Relations, and Talent Management.

Budget Objectives and Highlights

The Human Resources department continues to monitor budgetary expenditures, while still pursuing its efforts towards progress with the Human Capital Management System, Talent Management program, diversity and inclusion, recruitment, engagement, employee development, and productive employee relations.

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LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 90,885	\$ 120,480	\$ 120,480
Maintenance & Repairs	27,278	25,480	25,480
Other Employee Expenses	180,230	503,280	503,280
Other Operating Expenses	565,718	855,856	855,856
Total Operating Expenses	864,110	1,505,096	1,505,096
Capital Expenditures	—	—	—
Payroll & Related Costs	3,726,319	4,552,824	8,338,102
Total Department Expenditures	\$ 4,590,429	\$ 6,057,920	\$ 9,843,198
FTE Positions	20.3	25.5	56.2

Department Performance

Talent Management. Provides recruitment and selection services; strategies to increase employee retention, engagement, appreciation, and wellness. Provides opportunities for employee professional and personal development. This group develops and administers recruitment and selection methods.

Employee Relations. Responsible for light duty and return to work program; administration of collective bargaining agreements; consultation regarding federal, state and local employment laws; and internal mediation services designed to improve communication and understanding between employees. Provides support for HR management programs, activities, and processes.

HR Information Systems. Responsible for the administration of various employee benefit plans and all employee personal records and payment data. Responsible for the administration and support of the Human Capital Management System (Workday) and Legal Hold, Matter Management and Public Records Request applications (Exterro and LawBase/Worldox) for the organization. This team processes payroll and benefits, prepares data in response to Workday requests for employee information; implements organizational changes; provides employee application training and bi-annual updates.

Strategic Plan Objectives and Accomplishments

The Human Resources department provides a foundation for all departments to reach the goals of the Strategic Plan through appropriate recruitment; employee engagement; and productive employee relations. The Human Resources department is dedicated to supporting work environments where employees are encouraged to perform at their highest potential.

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Strategic Plan Goal – Strengthen and uphold a culture of service, excellence and accountability.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

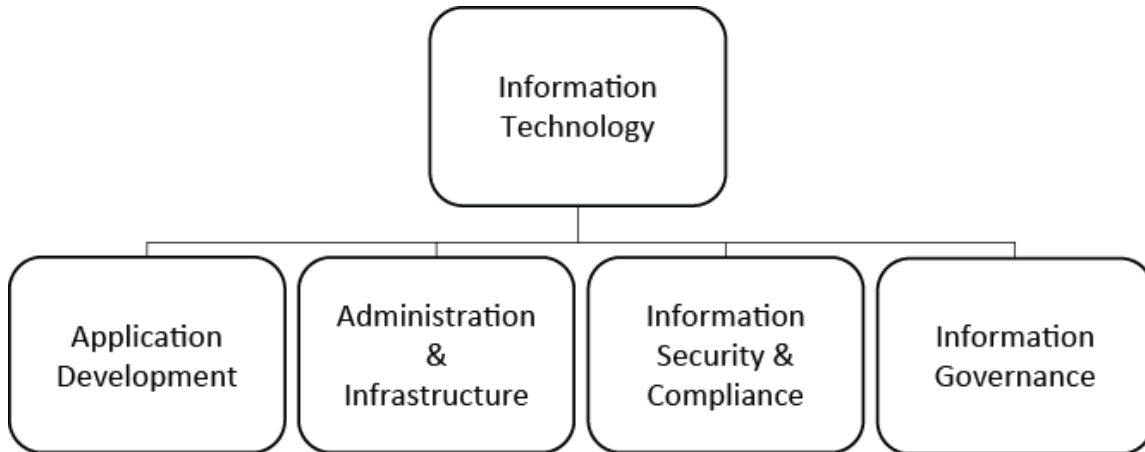
- Continue the implementation and refinement of Workday modules, including Performance and Talent and Workday Help.
- Continue to streamline Workday business processes and reporting, with a focus on employee self-service.
- Continue to develop our Talent Management strategy, focusing on employee development and succession planning.
- Develop opportunities that support the professional advancement and leadership skills of employees (TAP 2.0) and develop and deploy an internal mentor program.
- Integrate recruitment, engagement and development into a comprehensive talent management strategy.
- Continue to develop and implement employee engagement initiatives, with a focus on employee wellness and appreciation.
- Continue training for management on performance assessments and ratings, including managing hybrid staff.
- Continue to conduct comprehensive classification and compensation studies to maintain internal structure alignment.
- Complete digitization of personnel files to Workday.
- Launch initiative for a centralized review of the LVVWD wide Standard Operating Procedures.

2021-22 Major Accomplishments

- Deployed and successfully implemented Milliman’s MARC employee self-service system for employee retirement planning and projections.
- Coordinated and updated organization wide guidance on COVID procedures and protocols, including safe return-to-campus and a hybrid workforce platform.
- Successfully finalized certification requirements based on NDEP recommendations.
- Relaunched Talent Management strategy, post COVID, focusing on employee development.
- Completed comprehensive classification and compensation study for two large departments, including organizational structure alignments.
- Initiated digitization of personnel files to Workday.
- Developed leadership training and a development program to include curriculum for new and seasoned leaders.
- Implemented a 12-month Employee Wellness plan.
- Implemented new Clark County PPO and EPO benefits into our Workday system.
- Configured Succession Planning in Workday.
- Successfully completed External Payroll Audit.
- Implemented Performance and Talent in Workday.

INFORMATION TECHNOLOGY

Level: 4300



Mission

We create trusted systems and solutions through investments in people, processes, and technologies to serve our community, our partners, and each other.

Department Description

The Information Technology department is responsible for the Las Vegas Valley Water District's (LVVWD), Southern Nevada Water Authority's (SNWA), Springs Preserve's, and the Big Bend Water District's (BBWD) acquisition, administration, and maintenance of software products, installation and maintenance of all computer-related and office management hardware products, cybersecurity, Payment Card Industry (PCI) Compliance, Geographic Information Systems (GIS), telecommunications and the organization's Information Governance Initiative. The department is also responsible for the acquisition and maintenance of spatial data in support of ongoing projects, such as the Clark County Imagery Project. Specific support activities are noted for each division herein.

The Information Technology Steering Committee was established in 2015 and is comprised of customer representatives throughout the organization. The committee evaluates projects of relative importance using an objective and quantifiable system that directs Information Technology initiatives to meet business needs.

The Information Governance Steering Committee was established in 2018 and is comprised of representatives from throughout the organization. The committee was charged with developing content management strategies and capabilities for the organization as well as selecting the capabilities and features for an Enterprise Content Management system.

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Budget Objectives and Highlights

The 2022-23 Information Technology department budget contains funding to continue the development and implementation of technology projects and provide daily operational support to the LVVWD, SNWA, the Springs Preserve, and BBWD information technology systems.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 1,523,345	\$ 1,525,150	\$ 1,349,800
Maintenance & Repairs	8,472,911	9,939,931	8,097,143
Rental & Leases	711,664	720,500	679,900
Other Employee Expenses	53,811	267,904	301,733
Other Expenses	5,685,021	5,154,500	5,110,722
Total Operating Expenses	16,446,751	17,607,985	15,539,298
Capital Expenditures	3,533,162	5,257,200	12,939,049
Payroll & Related Costs	17,735,264	19,335,457	18,533,545
Total Department Expenditures	\$ 37,715,177	\$ 42,200,642	\$ 47,011,892
FTE Positions	78.4	95.4	90.6

Department Performance

Information Technology completed many projects to improve business processes, functionality, system operations, and security, while reducing expenses and risk to the organization. Major projects during the year included providing infrastructure equipment and support for the telecommute workforce to support the Covid19 Pandemic, upgrading corporate Firewalls, implementation of a new customer care, billing and meter management system, completion of a comprehensive capital project management system, major enhancements to the Water Smart Landscape Program systems in support of Assembly Bill 356, major enhancements to the Organization's contract lifecycle management application, new payment kiosks for LVVWD and BBWD, continuation of the endpoint equipment (PCs, monitors, iOS devices, and Laptop) refresh programs, and deployment of a business intelligence system.

Application Development. This multi-division team performs software development, upgrades and version testing, and validation of key operational systems utilized throughout the organization.

Applications supporting Operations, Customer Care, Water Resources and Finance are targeted for upgrades and enhancements.

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The implementation of a new Enterprise Asset Management System will kick-off in fiscal year 2022-2023 with the selection of a solution provider that was completed in March 2022. The system will replace an aging application reaching end-of-life with a modern full functioning asset and work management system. Key features include preventative and predictive maintenance, inventory and material management, work management, reporting and analytics. The system is projected to be completed by 2025.

Efforts to support the organization's conservation initiatives will include leveraging meter data management systems and Advanced Metering Infrastructure (AMI) for automated leak and non-compliance usage notifications, development of business intelligence tools and data analytics, new rates for BBWD and LVVWD and initiating a project to develop a new application in support of water waste enforcement, to be completed in 2024.

The implementation of a new Financial Management System will start in fiscal year 2022-2023 with an initial phase to include a business process review followed by a request for proposal process to identify a replacement system. Vendor selection is anticipated in July 2024 with completion of the project in 2027. In addition to the Financial Management System implementation, the corporate chart of accounts will be reviewed for restructuring.

Administration and Infrastructure. This multi-division team is comprised of the Customer Support division, the Technical Services division, and the Spatial Technologies division.

The Customer Support division is responsible for many diverse functions within the company. This group is responsible for the infrastructure needed to remotely update, secure, manage and support over 7,100 work-from-home and on-premises desktops, field and personal laptops, iOS devices, and upwards of 350 iOS & desktop applications.

The Technical Services division is responsible for the application administration of business systems utilized throughout the organization. It is also responsible for the architecture and administrative support for the corporate infrastructure to include server, storage, and database administration, e-mail, web services, network infrastructure, and telecommunications. Additionally, this division is responsible for the maintenance of the SCADA systems for LVVWD, SNWA, and BBWD and the Laboratory Information Management System (LIMS).

Enterprise application support focuses on providing uninterrupted application services to customers, while providing planned and unplanned infrastructure outages. Efforts encompass design and implementation of off-site redundant configurations for critical applications, formalized change management processes, quality assurance testing procedures, and implementation of proactive monitoring and alerting tools.

Major on-going initiatives include completion of telecommunications migration to the Districts new VoIP solution, continued implementation of our contact center features, including the introduction of chat and SMS communications, selection and beginning implementation of new Laboratory Information Management System (LIMS), upgrade of the corporate wide area network backbone to support 100 GB between campuses, and upgrades to the enterprise backup and recovery infrastructure.

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The Spatial Technologies division is responsible for the acquisition and delivery of high-resolution imagery, GIS application development and maintenance, GIS data management and infrastructure to support the organization.

Ongoing initiatives include upgrades and additional functionality to the Spatial Information Portal (SIP) Application, remote sensing analyses for Conservation programs and regional climate studies, mapping and geospatial data support for the organization, and mobile GIS application and data collection efforts.

Information Governance. The Information Governance division is responsible for managing the maintenance, retention, preservation, and disposition of the Records of the District in a uniform manner and that it is done in accordance with federal, state, and local laws, ordinances, regulations, or rules, contractual requirements, and regular business practices. Ongoing activities in 2021 included the review of the federal and state changes to the retention schedule that will be submitted to the General Manager for approval in 2022. Work with Legal Services and other divisions in IT was ongoing to retire legacy applications and either disposition or migrate data to new applications.

Another work stream managed by the Information Governance division is Public Records Requests (PRRs). This includes processing some Summons and Subpoenas. During the CY 2021, PRRs increased 34% compared to 2020. The team works in conjunction with Legal Services on processing these and worked to fully implement a PRR Lifecycle Management Application in 2021, along with tracking methods to fully account for personnel time being spent, across the board on various work streams and PRR types. Support of Legal Services work-stream includes the day-to-day management of the Agenda Item System including the Board Pack Management workflow process, access control and all related items. Additionally, the team supported Contract Management development work in 2021 and saw an increase of work in that application in terms of contract search and activations as more contract-types are now in that system. More work is anticipated in the application in 2022 along with more development in both applications.

Strategic Plan Objectives and Accomplishments

Information Technology provides support to all departments to achieve Strategic Plan goals through the acquisition, development, administration, and maintenance of technology-related products and services.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- The organization's native mobile application will incorporate AMI data that includes daily consumption, leak notifications and other alerts enabling timely notifications to customers on potential leaks, excessive water use and other important water usage information.
- Optimize our infrastructure to support a hybrid mobile and telecommute workforce.
- Bring Phase One of the digital records management project to completion.

2021-22 Major Accomplishments

- A new customer care, billing and meter management system was implemented that incorporates utility customer management with support for Advanced Metering Infrastructure (AMI). The system will enhance customer service, better support conservation initiatives, further optimize service response and improve device management.
- A new interactive portal for submission of Building Permits for review and approval was implemented on LVVWD.com. The portal allows customers to digitally submit their requests, make changes, ask questions, view latest statutes, and receive automatic notifications related to their application.
- New kiosks were added for LVVWD and BBWD customers to provide enhanced self-service options for in-person payments.
- Built and enhanced various GIS mobile applications to support field data collections and dissemination of data, supporting important Organizational projects like Lead & Copper Revised Rule, Water Smart Landscape (WSL) Program, and Non-Functional Turf (NFT) Project.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- The implementation of a new Enterprise Asset Management System will officially kick-off in fiscal year 2022-2023. The system, which is estimated to be completed in 2025, will replace a system reaching end-of-life.
- Efforts to replace the organization's financial management system will begin with a needs assessment and a request for proposal process to identify a replacement system.
- The development of enterprise data warehouses will empower staff to use information from many systems to run their own reports and discover trends and gain knowledge that was previously unobtainable. The warehouse will encapsulate data from financial, SCADA and capital project management systems.
- Upgrade the current LIMS software to the latest release to support the Water Quality and Research Lab to allow better automation, data reporting, workflows, and instrument integration.

2021-22 Major Accomplishments

- The Project Management Information System was completed improving auditing, efficiency, and transparency of the capital project management processes.
- Completed a major upgrade to the organization's key financial reporting platform, to improve performance and ensure accuracy of information.
- Completed a Technology Purchase Review project that covers all procurement avenues for the organization. This project will help to ensure that technology purchases are reviewed by Information Security, Legal Services, Risk Management and Information Governance reducing risk for this organization.
- Various systems were developed and enhanced to support Conservation's Nonfunctional Turf removal program in response to Assembly Bill 356. Key products included a public facing web site for accepting Assembly Bill 356 turf conversion applications from customers; enhancements to the Conservation system for program management; development of a mobile turf mapping application and work supporting program waivers.

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- Made enhancements to cybersecurity which include the implementation of a department-wide change management program, additional threat monitoring tools, and further data separation to support latest changes to PCI compliance.

Strategic Plan Goal – Strengthen and uphold a culture of service, excellence and accountability.

2022-23 Performance Objectives

- Implementation of a new LIMS application for the River Mountains Lab. The new application is scoped to have minimal customizations and provide high availability and compliance monitoring.
- Complete 2023 Las Vegas Valley Imagery Project, including acquisition, performing quality assurance, and making imagery available for analysis related to water conservation programs.
- Complete 2023 Clark County LiDAR Digital Elevation Project, in conjunction with the USGS, to obtain updated elevation data to assist with a variety of Engineering, Planning, and Water Resources projects.

2021-22 Major Accomplishments

- Completed imagery analysis and GIS mobile application related to the new Assembly Bill 356 in identifying areas where Non-Functional Turf exists as relayed in the Bill.
- The Organization's contract management system was upgraded to the newest version with a migration of over 8,000 legacy agreements. Enhancements were also made to include improved workflows and centralized templates.
- Gathered data and provided support and metrics regarding Public Records Requests, summons and subpoenas based on type.

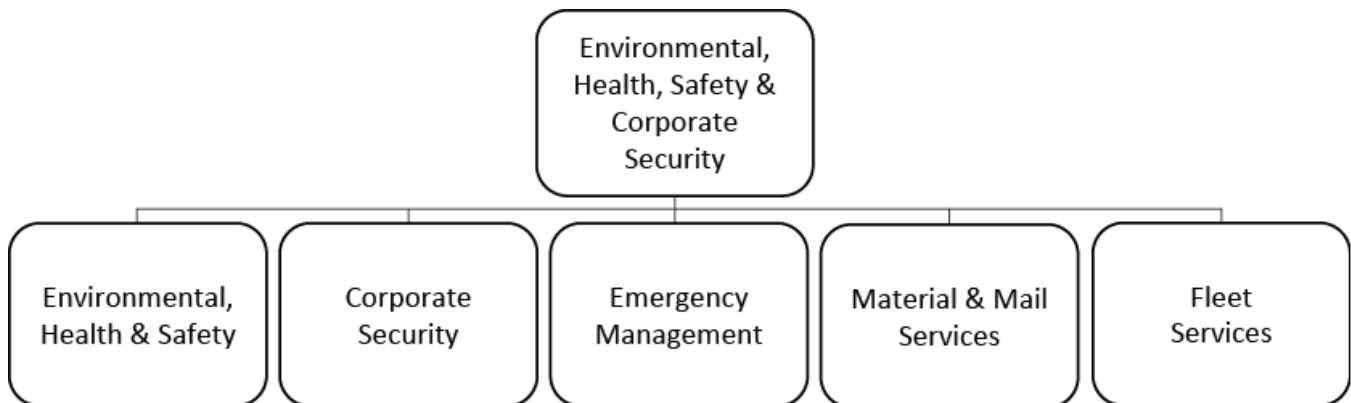
Strategic Plan Goal – Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.

2022-23 Performance Objectives

- Implement new water rates to comply with conservation initiative to further protect water resources in the Las Vegas valley.
- Provide support to the Conservation Strategic Plan by creating business intelligence tools to support various water efficiency goals including water waste reduction, leak notification, and expansion of communications and services.
- Communication channels from the Native Mobile Application, LVVWD.com and other sources will be leveraged with data from the AMI system to provide customers with more timely notification of high-water usage, leaks, and other events in support of conservation initiatives.
- Continue Turf and Vegetation Analysis to support ongoing water conservation efforts, including the Water Smart Landscape (WSL) Program and the Non-Functional Turf (NFT) Project.
- Provide support and metrics regarding Public Records Requests, summons and subpoenas associated with Assembly Bill 356, sewer to public septic conversions and any other items that may arise.

ENVIRONMENTAL, HEALTH, SAFETY & CORPORATE SECURITY

Level: 4400



Mission

Provide world-class logistical support and customer service in a safe, resilient environment.

Department Description

The Environmental, Health, Safety and Corporate Security (EHS&CS) Department is the organization's compliance, safety and security arm, and is made up of Environmental, Health and Safety (EHS); Corporate Security; Emergency Management; Fleet Services; and Material and Mail Services (MMS). Together, these divisions work to eliminate or mitigate organizational risk.

More specifically:

- EHS ensures a safe workplace by promoting accident prevention; conducting employee training; monitoring trends; and performing permitting and compliance functions.
- Corporate Security maintains organizational security by providing 24-hour patrol, protection, response, and monitoring across all facilities.
- Emergency Management safeguards the organization through year-round mitigation, planning, prevention, response, and recovery activities.
- Material and Mail Services keeps the organization reliably stocked in maintenance, repair, operations, and critical spare parts inventory.
- Fleet Services supports the organization's mission by procuring and delivering safe and reliable vehicles, equipment, tools, communications equipment, and ample fuel supplies.

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Budget Objectives and Highlights

The 2022-23 EHS&CS budget contains the funding necessary to support the safety and security of our organization's workforce, customers, and facilities. Our departmental strategic planning efforts have allowed us to streamline processes, reduce costs and focus on sustainability, while skillfully maintaining goods, vehicle, and equipment inventory.

LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 2,743,756	\$ 2,827,500	\$ 2,961,500
Maintenance & Repairs	251,415	406,000	367,400
Rental & Leases	180,915	213,000	196,000
Other Employee Expenses	275,379	505,000	452,700
Other Operating Expenses	1,590,793	3,000,200	3,487,338
Total Operating Expenses	5,042,258	6,951,700	7,464,938
Capital Expenditures	2,927,699	3,356,500	6,017,949
Payroll & Related Costs	9,599,130	10,338,116	9,444,935
Total Department Expenditures	\$ 17,569,087	\$ 20,646,316	\$ 22,927,822
FTE Positions	62.0	68.5	61.8

Department Performance

Environmental, Health and Safety Division. The Environmental, Health and Safety (EHS) division is responsible for overall management of LVVWD's environmental, health and safety program which governs employee safety in the workplace. EHS tracks leading and lagging indicators in the program, making necessary adjustments to ensure a positive safety culture is maintained, and provides ongoing EHS training for employees. The division employs an aggressive accident prevention program, investigating on-the-job accidents and injuries, and manages a comprehensive fleet safety program comprised of vehicle and heavy equipment, defensive driving, and commercial driver license training. Additional EHS responsibilities include drafting and publishing Occupational Safety and Health Administration (OSHA) and state compliant safety procedures; managing all federal, state, and local permitting and compliance activities; maintaining the Alfred Merritt Smith Water Treatment Facility's Process Safety Management program; conducting monthly EHS Steering Committee meetings; and managing the organization's asbestos, lead awareness and hearing conservation programs.

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Recordable Injury Rates

The EHS division tracks recordable injuries and illnesses annually and compares them to the Bureau of Labor Statistics (BLS) annual averages for similar industries. The recordable injury rate decreased over the last year, from 2.3 to 2.1.

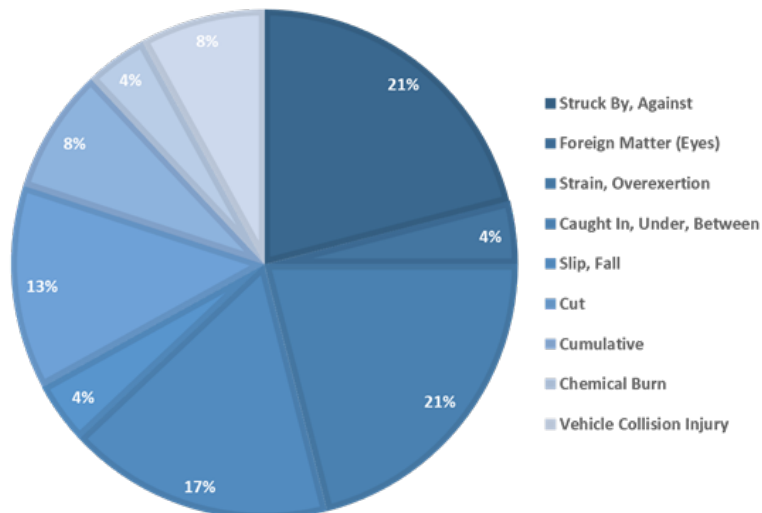


Recordable Injuries by Category

In 2021, five *Struck By* and five *Strain* recordable injuries were reported, accounting for half of all recordable injuries.

Injuries that result from an employee being struck by an object on the worksite, and repetitive stress conditions on an aging workforce, continue to be special interest items. Increased employee engagement and focused spot audits are planned to help identify factors contributing to injuries and prevent recurrence.

Recordable Injuries by Category



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Vehicle Accidents

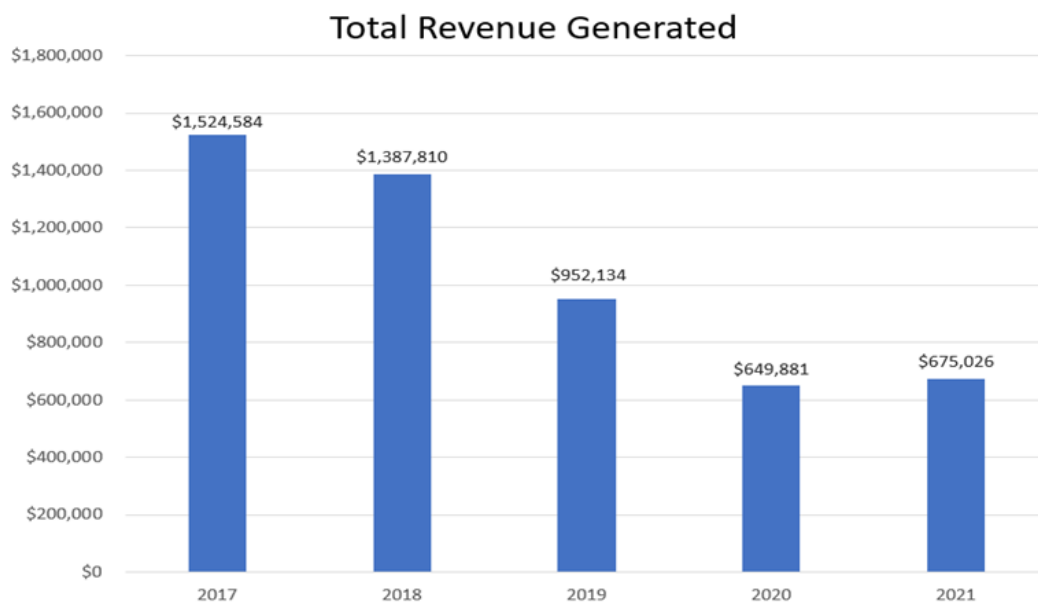
LVVWD experienced an increase in at-fault vehicle accidents from 33 in 2020 to 47 in 2021, increasing the cost from \$129,760 in 2020 to \$183,343 in 2021.

Health Assessments

Remarkably, the organization achieved 100 percent audiometric testing compliance of its 199 hearing conservation participants, and respirator fit-tested 358 employees during the reporting period. The number of health assessment requests increased in 2021 and included asbestos, mold, and lead sampling.

Recycling Program

LVVWD recycled a combined total of 1,288,866 pounds of materials in 2021, down 15 percent from 2020, but generated \$675,026 as a result (scrap = \$42,140, auctions = \$6,218, vehicles = \$626,668).



Corporate Security Division. Corporate Security’s mission is to ensure the protection of people, property, facilities and water treatment/delivery systems by providing 24-hour security services and response, including intrusion alarm and service-call response; field crew escort and standby support during water service shut-off; reservoir and pumping station site patrol; LVVWD-involved vehicle collision investigation; emergency first aid and police/fire escort; fire protection equipment and alarm system inspection; customer parking assistance; customer, vendor and visitor escort; information assistance and facility access; emergency evacuation and active shooter training; and vendor access monitoring and control of restricted-area access. Physical security networks and systems, including electronic access control, security cameras, alarms and locks are in place to assist officers in maintaining campus control, in conjunction with a 24/7 centralized security call center. Additionally, Corporate Security has formed partnerships with federal, state, and local law enforcement authorities and other utilities in a collaborative effort to guard against malicious acts toward the organization.

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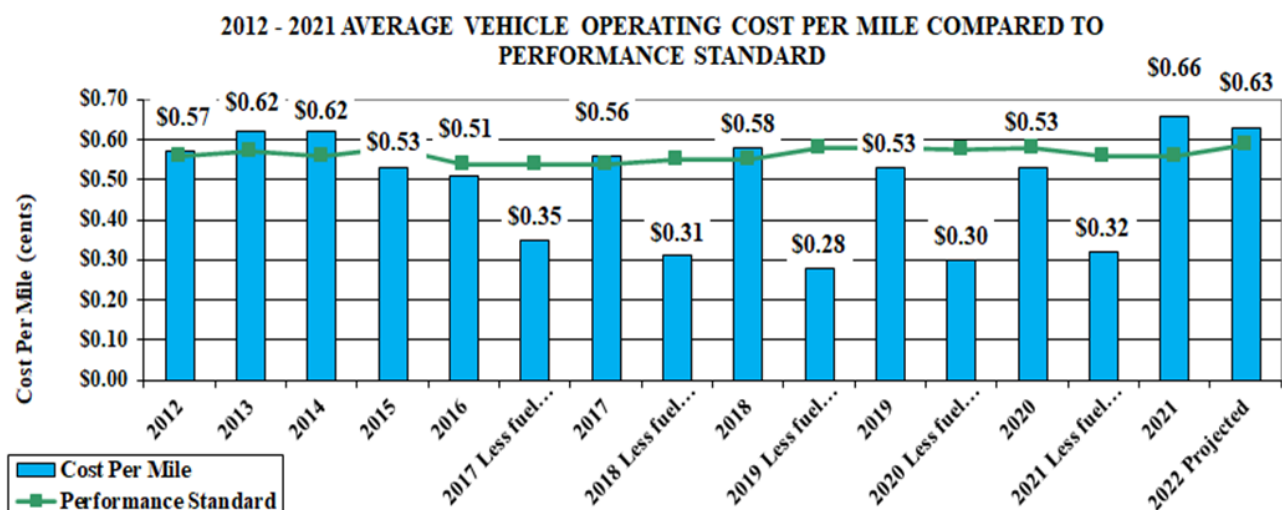
Emergency Management. Emergency Management works to assure a water system that adapts to or withstands the effects of a malevolent act or natural hazard without interruption to the asset or system's function, or, if interruption occurs, to rapidly return the system to normal operating conditions. To meet or exceed federal guidelines for water sector preparedness and increase organizational resiliency, emergency management staff conduct work in all five phases of emergency management: mitigation, planning, prevention, response, and recovery.

Material Services. Material Services is customer focused as it provides quality operating and maintenance products, material requirement planning, inventory management and storage and retrieval services to the organization. In 2021, Material Services managed 14,000 inventory assets valued over \$15M. Material Services partners with internal customers to identify, forecast and schedule capital and operations project material requirements and ensure delivery to all LVVWD facilities. Material Services also processes and delivers all items intended for auction, manages recycled metals, and administers the uniform process for employees.

Mail Services. Mail Services processes incoming and outgoing intercompany and United States Postal Service (USPS) mail, and office supply deliveries across LVVWD's service network. Mail Services delivers and posts public notices, administers LVVWD's postage budget and processes special communication campaign projects for Public Services as well.

Fleet Services. Fleet Services provides safe, reliable, and functional vehicles, equipment, tools, fuel, and communications equipment that directly support water delivery. Currently, the division maintains more than 1,500 vehicles and support equipment pieces, and 1,000 pieces of communications equipment. Division responsibilities include repair service and maintenance, and acquisition/disposition of all vehicles, communications and support equipment and loanable tools. Fleet Services also operates seven service facilities and seven fueling facilities in Las Vegas, Boulder City, Henderson, and White Pine County.

The following chart reflects LVVWD's average vehicle operating cost per mile compared to accepted performance standards.



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Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Environmental, Health and Safety
 - Conduct weekend/after-hour spot audits of industrialized work activities supporting water treatment, water quality, water distribution or other activities.
 - Complete two comprehensive audits of departments involved in high-hazard activities to measure regulatory compliance.
 - Review and update the EHS Manual and all internal EHS procedures.
 - Maintain a formalized training schedule for all EHS instructor-led courses.
 - Benchmark accident/injury standards to BLS comparable industries.
 - Obtain all required operational water pollution control permits and continually monitor water discharge parameters to reduce pollutants discharged.
 - Review maintenance and professional services contracts to ensure EHS operational compliance.
- Corporate Security
 - Operate the Security Center and continue to implement automated security systems to improve facility protection.
 - Expand the use of card activated access control and security system technologies to enhance efficiency.
 - Purchase automated security gate with card readers for Foothills pumping complex main entrance.
 - Increase use of automated security camera analytics to distinguish more accurately between an actual incident and normal activity.
 - Install fixed thermal analytics camera at Foothills pumping complex.
 - Increase lighting at the Foothills complex access gate and service roads in preparation for the Lakemoor housing development.
 - Update all employee badges with current photos and positions.
- Emergency Management
 - Train key employees and conduct drills on LVVWD's Emergency Response Plan (ERP).
 - Continue partnership with the Department of Homeland Security (DHS) and Southern Nevada Counter-Terrorism Center (SNCTC) to prepare for potential threats to facilities or the water industry.
 - Continue building relationships with Federal Emergency Management Agency (FEMA) municipal and partner agencies.
 - Continue to migrate emergency management response, planning and support documents to the organization's document management system.
 - Collaboratively develop, maintain, and revise rigorous training and emergency exercise programs.
 - Utilize new Emergency Operations Center (EOC) to engage with Incident Management Team.
 - Continue to grow NvWARN network to support Nevada safe drinking water/wastewater facility resilience.

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- Lead community effort and plan for drinking water distribution in the event of supply disruption.

2021-22 Major Accomplishments

- Environmental, Health and Safety
 - Conducted first virtual Safety Stand Down Day during the pandemic shutdown.
 - Completed over 120 documented audits (spot and comprehensive).
 - Conducted over 80 investigations related to recordable injuries, preventable vehicle accidents and preventable property damage incidents, and made corrective action recommendations, as appropriate, to reduce chance of recurrence.
 - Achieved recordable injury incidence rate of 2.3, compared to BLS rate of 5.1, extending LVVWD's history of falling below BLS rates.
 - Renewed 175 environmental permits.
 - Received no citations from OSHA or Environmental Protection Agency.
- Corporate Security
 - Completed installation of Medeco locks at all campuses.
 - Completed comprehensive Corporate Security Manual review and update.
 - Improved security and guest safety by conducting bag screenings and deploying walkthrough metal detectors at board meetings and major Springs Preserve events.
 - Completed security camera installations at Valley View campus: Operations, Human Resources, Fleet Services, West Administration building and payment kiosks.
 - Consolidated all site inspection checklists and visitor logs to increase officer efficiency and information retention.
 - Continued supporting and promoting the Department of Homeland Security's national "If You See Something, Say Something™" campaign.
 - Provided increased security checks at critical sites, including water treatment plants and pumping stations.
 - Relocated main gate access control card readers to allow for safer entry by larger work trucks.
- Emergency Management
 - Completed and submitted Big Bend Water District Risk and Resilience Assessment and ERP to fulfill American Water Infrastructure Act 2018 requirements.
 - Hosted local first responder liaison days at AMSWTF.
 - Established incident management hot EOC to improve response, preparedness, and recovery work.
 - Participated in state and community Threat Hazard Identification and Risk Assessment workshops, exercise planning meetings and threat/risk exercises.
 - Managed NvWARN response to Tamarack and Caldor fires.
 - Supported LVVWD's COVID-19 pandemic response and maintained Incident Support Plan.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Environmental, Health and Safety
 - Provide evaluation forms for instructor-led courses to assess customer satisfaction.

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- Participate in local association meetings to gather information on best management practices to support the Safety Management System and adopt and implement proven work methods.
- Corporate Security
 - Explore and test new security technology and systems.
 - Implement a visitor management system to enhance customer experience.
 - Conduct ride-along training with Operations, Distribution, and water enforcement teams.
 - Enhance virtual training platform to deliver active shooter and building evacuation training
- Emergency Management
 - Attend briefings, meetings, training, and support groups: Utility Pipeline and Coordinating Group, InfraGard, SNCTC, DHS, LEPC, Southern Nevada Health Preparedness Coalition, American Water Works Association, etc.
 - Lead community effort and plan for drinking water distribution in the event of supply disruption.
- Material and Mail Services
 - Conduct monthly planning and review meetings with Field Services to monitor and ensure consistent materials management and inventory replenishment for short- and long-term projects.
- Fleet Services
 - Partner with internal customers on new and replacement vehicle/equipment specification process, striving for 100 percent vehicle equipment availability.
 - Minimize equipment downtime using technology, technician training and good parts availability.
 - Expand telematics system use to assess vehicle condition and reduce downtime.

2021-22 Major Accomplishments

- Environmental, Health and Safety
 - Conducted survey of the first virtual Safety Stand Down event to obtain feedback and improve future training courses.
 - Collected student evaluation forms after each EHS instructor-led course to improve future course curriculums.
 - Participated in meetings with Safety Action Teams, EHS Steering Committee and Specifications and Sustainability cross-department committees.
 - Updated electronic materials on the Hydroweb to ensure that all employees have access to useful health and safety literature, information, and training videos.
- Corporate Security
 - Provided additional security presence for employees during heightened customer interactions on campus and at job sites.
 - Increased on-site training and strengthened partnerships with other emergency responders by allowing use of District facilities for rescue and emergency response training.
 - Increased security patrols in areas of high backflow theft and developed partnerships with local scrap metal yards to identify and seize stolen backflows.
 - Transitioned active shooter preparedness training to Microsoft Teams to accommodate employees working off-site.
 - Utilized walkthrough metal detectors for increased employee and guest safety at public meetings and special events.

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- Executed comprehensive preventative maintenance program for the Medeco lock system to ensure error-free operation for all employees.
- Emergency Management
 - Educated workgroups on COVID-19 protocols to protect employees from illness and spread.
- Material and Mail Services
 - Worked closely with Distribution, Field Services and Big Bend Water District staff to ensure sufficient supply of on-hand parts and safe disposal of surplus materials.
 - Received 100 percent accuracy rating during LVVWD warehouse audit.
 - Processed 84,798 material issues and return, 44,445 individual receipts and delivered 8,416 packages District-wide.
- Fleet Services
 - Completed over 15,000 work orders and 18,000 vehicle/equipment repair tasks.
 - Enhanced customer service in outlying areas through technology, improved parts availability, and on-site technician scheduling.
 - Involved customers in the vehicle/equipment specification process to ensure the best possible products were provided.
 - Maintained automotive service excellence “Blue Seal of Service Award” and “World Class Technician” status.
 - Maintained “I-Car Platinum” status for the fleet paint and body operation.
 - Provided customers with 3D drawings of special build vehicles prior to order to ensure best equipment fitment and usability of final product.
 - Utilized telematics system to identify equipment failures and reduce operator downtime.

Strategic Plan Goal – Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.

2022-23 Performance Objectives

- Environmental, Health and Safety
 - Prepare and submit environmental reports to regulatory agencies.
 - Review current recycling and waste streams to identify new recycling opportunities.
- Corporate Security
 - Increase water enforcement patrols and coordinate with Conservation to enforce service rules related to water theft.
 - Provide security oversight to construction projects associated with the Horizon Lateral project.
- Fleet Services
 - Improve fleet vehicle/equipment utilization to reduce costs and resources.
 - Continue to recondition and reuse service bodies and vehicle up-fit equipment for LVVWD vehicles and equipment, when feasible.
 - Develop alternate fuel vehicle program, expand the District’s plug-in electric vehicle fleet, and add electric vehicle charging infrastructure.
 - Continue to lead and develop environmentally friendly practices in automotive paint and body repair.
 - Retrofit fleet paint booth with more environmentally friendly technology.
 - Use telematics and best management practices to reduce unnecessary vehicle fuel burn across the District’s vehicle fleet.

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- Continue to recycle vehicle and equipment maintenance waste, and expand recycling activities, when feasible.

2021-22 Major Accomplishments

- Environmental, Health and Safety
 - Tracked and submitted environmental permits on time.
 - Monitored recycling program which yielded \$675,026 (scrap = \$42,140, auctions = \$6,218, vehicles = \$626,668).
 - Generated 2,403 pounds of hazardous waste—a 73 percent reduction due in large part to COVID-19—at a cost of \$7,999.
- Corporate Security
 - Provided security awareness and safety training to field employees who respond to water theft incidents.
 - Provided security escorts to Conservation employees during water theft investigations.
- Material Services
 - Recycled 164,000 pounds of scrap brass, copper and wire which sold at auction for \$311,000.
 - Recycled 674,000 pounds of miscellaneous scrap metals producing revenues of \$42,000.
- Fleet Services
 - Replaced older diesel and gasoline powered vehicles with alternative fuel and more efficient vehicles, which lowered capital cost and reduced carbon footprint.
 - Reduced volatile organic compound usage within fleet paint and body operation by more than 57 percent over the past 10 years.
 - Reduced vehicle idling and associated fuel usage by 4.5 percent.
 - Selected as one of the 100 best fleets, earning recognition in the “Top 100 Fleets in North America” ranking.
 - Completed and equipped new lube storage and dispensing room at the northern resources fleet repair facility.

Strategic Plan Goal – Develop innovative and sustainable solutions through research and technology.

2022-23 Performance Objectives

- Corporate Security
 - Enhance security blotter system to accurately track theft, vandalism, and suspicious activity.
 - Conduct monthly security meetings with Information Technology to monitor security risks and threats.
 - Explore modern technologies and methods of utilizing the security surveillance system.
 - Evaluate low-cost solar lighting to illuminate security checkpoints and Springs Preserve service roads.
 - Install automatic gate at SNWA Foothills complex and Tropical satellite location.
- Fleet Services
 - Continue to equip fleet facilities with state-of-the-art testing and diagnostic equipment to accurately diagnose and repair vehicle and equipment failures.
 - Continue to provide online technical and diagnostic training to technicians.
 - Utilize advanced telematics and fleet management tools to lower liability, reduce costs, improve efficiency, and better manage fleet assets.

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Department Budgets
Environmental, Health, Safety & Corporate Security
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2021-22 Major Accomplishments

- Environmental, Health and Safety
 - Completed Origami Phase IV update, including development of Hot Work permit, Safety Shoe program and OSHA 300 reporting modules.
- Corporate Security
 - Completed multi-year Medeco electronic lock conversion project at all campuses, installing over 5,500 locks and distributing 1,000 keys.
 - Deployed Traction Guest visitor screening system at LVVWD main campus as part of Customer Care lobby grand reopening.
 - Deployed towable, trailer-mounted thermal imaging security camera with instant-alert analytics for vehicle and pedestrian intrusion and fire detection at Springs Preserve.
 - Monitored over 800 cameras in the Security Center using video analytics.
- Material and Mail Services
 - Created paperless process for UPS and FedEx shipping to increase efficiency and simplify customer application.
- Fleet Services
 - Utilized telematics system for early detection of equipment failures to improve safety, reduce operator downtime, and fuel usage.
 - Upgraded all District two-way radios to P-25 phase-2 operating protocol.
 - Equipped all fleet repair facilities with state-of-the-art diagnostic equipment, reducing vehicle downtime and repair costs.
 - Provided online technical training and diagnostic information to technicians at all repair locations.
 - Completed Asset Works Fleet Management System integration with Coupa purchasing system.
 - Supported Purchasing in the integration of Coupa as the primary system for ordering and receiving District related materials.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Environmental, Health and Safety
 - Identify new environmental, health and safety regulations and policy changes, and collaborate with other pertinent agencies.
- Corporate Security
 - Continue partnership with Southern Nevada Counter Terrorism Center and Las Vegas Metropolitan Police Department Area Commands and attend classified briefings on critical infrastructure threats.
 - Continue partnership with FBI InfraGard and Utility Pipeline Coordination Group to stay informed about current water sector threats.
 - Collaborate with Las Vegas Metropolitan Police Department to explore drone technology for use in security, emergency management and remote-site inspections.
- Material and Mail Services
 - Continue to develop and implement best-practice inventory management and reporting to minimize duplications and realign materials management.

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- Fleet Services
 - Without compromising safety or level of service, reduce fleet operating costs through standardization opportunities, inactive inventory reduction and continuous process improvement.
 - Reduce overall cost per mile/hour of operation for LVVWD vehicles and equipment.
 - Lifecycle vehicles and equipment to ensure fleet efficiency and best return on investment.

2021-22 Major Accomplishments

- Corporate Security
 - Hosted local police and fire departments at AMSWTF and RMWTF to increase responder knowledge of water system criticality.
 - Conducted over 150 security readiness drills to prepare security officers to better respond to unauthorized vehicles and persons, suspicious packages, and medical emergencies.
 - Increased security officer training for better response to collisions involving District vehicles.
 - Completed security officer cross-training at all locations.
 - Repurposed Valley View modular building for use as centralized security station for officers to brief critical information between shifts and complete investigations.
- Material and Mail Services
 - Received and distributed over \$112M in materials.
 - Received “no major findings” warehouse audit reports: July 2021 audit by BDO USA Accounting Company and November 2021 comprehensive safety audit by EHS.
- Fleet Services
 - Replaced 45 vehicles and equipment pieces that were no longer cost effective to operate and maintain and added 20 pieces to accommodate growth and improve organizational capabilities.
 - Recovered \$670,000 through vehicle and equipment auction and \$10,395 in vehicle warranty repairs through in-house warranty programs.
 - Maintained COVID-19 inventory item list to ensure uninterrupted supply of pandemic related resources.

Strategic Plan Goal – Strengthen and uphold a culture of service, excellence, and accountability.

2022-23 Performance Objectives

- Environmental, Health and Safety
 - Conduct instructor led EHS training for LVVWD employees.
 - Provide EHS information updates through ePipeline, Hydroweb and electronic Management Advisory and Safety Alert messaging.
- Corporate Security
 - Provide security refresher training to returning off-site employees on active shooter awareness and Nightlock safe-room operations.
 - Expand installation of night lock devices for additional safe rooms at all campuses and BBWD.
 - Educate employees on the importance of safeguarding themselves and company property while crews are working in the field.
 - Engage in future construction and maintenance contracts to ensure security issues and concerns are proactively addressed.

Las Vegas Valley Water District
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Environmental, Health, Safety & Corporate Security
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- Emergency Management
 - Foster relationships with local municipal and emergency management professionals to reinforce the importance of including LVVWD in local planning activities.
- Fleet Services
 - Continue to partner with departments to better assess needs and improve design and capability of specialty vehicles and equipment.
 - Provide comprehensive preventive and predictive maintenance on vehicles and equipment to ensure optimum uptime.
 - Train and certify fleet maintenance and service personnel in modern technology and repair techniques.
 - Maintain Automotive Service Excellence (ASE) Blue Seal certification and “World Class Technician” status.
 - Maintain I-CAR Platinum Class Certification for paint and body operations.

2021-22 Major Accomplishments

Environmental, Health and Safety

- Completed EHS Annual Report highlighting major accomplishments in 2021.
- Received and monitored four Safety Action Requests to ensure corrective actions were implemented.
- Developed and implemented the 101 Critical Days of Summer safety campaign.
- Applied Origami software risk accident/incident tracking and reporting processes through the Security Center.

Corporate Security

- Continued 100 percent ID badge checks at all facility entrance points and maintained tighter control of access points.
- Participated in the internal audit process to identify and address potential deficiencies.
- Cross-trained officers in all posts and duties and maintained proficiency through weekly rotation.

Emergency Management

- Provided support for Clark County mutual assistance partners by providing water utility expertise at the Multi-Agency Coordination Center (MACC) for large-scale events—e.g., New Year’s Eve, NASCAR, Life is Beautiful.
- Completed BBWD Risk and Resilience Assessment (RRA) to identify highest risk facilities and areas to best use resources and improve resilience.

Material and Mail Services

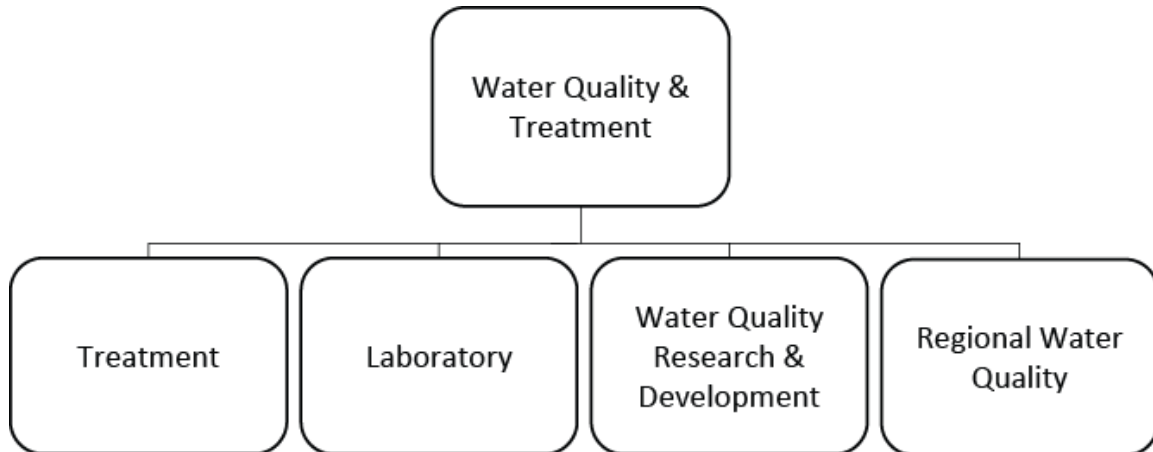
- Partnered with key internal customers to better assess customer needs and improve distribution of products.

Fleet Services

- Received Automotive Service Excellence (ASE) “Blue Seal of Service Award” and “World Class Technician” status.
- Maintained I-CAR Platinum Class Certification for paint and body operation.
- Completed over 15,000 work orders and 17,650 repair tasks on vehicles and equipment.

WATER QUALITY & TREATMENT

Level: 4500



Mission

To provide world-class water service through innovative and effective water quality stewardship and reliable and efficient treatment operations.

Department Description

The functions under the Water Quality and Treatment (WQ&T) department include: Treatment, Laboratory, Water Quality Research and Development, and Regional Water Quality. The primary responsibility of the WQ&T department is to ensure the water quality provided to the Southern Nevada Water Authority (SNWA) purveyor members meets or surpasses all Safe Drinking Water Act (SDWA) standards. In order to do this, each division of the WQ&T department have specific roles. The Treatment division is responsible for the operation and maintenance of the treatment process to supply high quality drinking water to the Las Vegas Valley. The Laboratory division is responsible for ensuring the finished water quality is compliant with the SDWA monitoring and reporting requirements. The Research and Development (R&D) division is responsible for performing research and process optimization studies to ensure the Treatment division is prepared for changing and emerging water quality (WQ) challenges. The Regional Water Quality division is responsible for monitoring, coordinating, and projecting water quality in the SNWA source waters. All these efforts are in support of the primary responsibility for the department.

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LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 2,820	\$ —	\$ —
Maintenance & Repairs	—	—	—
Rental & Leases	—	—	—
Other Employee Expenses	4,558	—	50,000
Other Operating Expenses	(1,273)	—	—
Total Operating Expenses	6,106	—	50,000
Capital Expenditures	—	—	83,333
Payroll & Related Costs	174,976	181,588	187,422
Total Department Expenditures	\$ 181,081	\$ 181,588	\$ 320,756
FTE Positions	0.6	0.5	0.7

Department Performance

Treatment. The Treatment division is responsible for the operation and maintenance of three treatment facilities: the Alfred Merritt Smith Water Treatment Facility (AMSWTF); the River Mountains Water Treatment Facility (RMWTF); and the Big Bend Water District (BBWD). The three facilities have the capacity to treat approximately one billion gallons of water per day.

Laboratory. The Laboratory division is responsible for routine water quality monitoring, testing, and reporting. The analytical capabilities of the Laboratory cover a broad spectrum including: trace organic, trace inorganic, macro constituent, physical, wet-chemical, bacteriological, virological, protozoan, amoebas, and limnological analyses. With 37 employees, approximately 55,361 samples were collected, and 318,076 analyses performed in 2021. The number of analyses can fluctuate year-to-year depending on the year's monitoring requirements.

Water Quality Research and Development. The R&D division is involved in cutting-edge investigations of low-level environmental contaminants, investigation of emerging approaches to microbial analysis and water treatment plant processes. The low-level environmental contaminant research is generally in support of existing or future compliance monitoring requirements mandated by the U.S. Environmental Protection Agency (EPA) under the SDWA. The water treatment plant process research involves bench or pilot plant investigations to optimize existing treatment or evaluate alternative treatment technologies to meet future regulatory requirements. The R&D division is comprised of Research and Development, Microbiological Research and Development, Analytical Research and Development, and Applied Water Quality Research sections.

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Regional Water Quality. The Regional Water Quality division is responsible for monitoring and coordination of regional WQ issues within the SNWA and other local, state, and federal agencies. To accomplish this, the division also analyzes data in the Muddy and Virgin Rivers and the Las Vegas Wash; compiles, validates, and analyzes all water quality data collected in these water bodies, as well as the data collected from Lake Mead and Lake Mohave by other agencies and the SNWA. All data collected is uploaded into the Lower Colorado River Regional Water Quality Database (snwawatershed.org/members). The division also operates and expands the Lake Mead Model, a 3D mathematical model for water movement and quality in Lake Mead with an emphasis on the potential impacts on the raw water supply.

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems

2022-23 Performance Objectives

- Complete the replacement and standardization of the Alfred Merritt Smith Water Treatment Facility (AMSWTF) and River Mountains Water Treatment Facility (RMWTF) filter gallery water quality instrument stations.
- Complete replacement of four critical use chlorine feeders at the AMSWTF.
- Complete replacement of one large backwash pump, motor, and motor control center (MCC) at the AMSWTF.
- Complete refurbishment of two Base Load Oxygen Compressors (BLOC) at both AMSWTF and RMWTF.
- Complete replacement of all three fluorosilicic acid storage tanks at RMWTF.
- Recoat the interior of the 1130 zone tanks at the BBWD.
- Complete electrical upgrades at the BBWD raw water pump station.
- Complete all Safe Drinking Water Act (SDWA) monitoring requirements for AMSWTF, RMWTF, BBWD, Las Vegas Valley Water District (LVVWD), North Las Vegas, Henderson, Boulder City, Nellis Air Force Base, Blue Diamond, Kyle Canyon, Jean, Searchlight, Sloan Army Reserve, and Kapex.
- Support water quality monitoring activities of the source water, including supporting compliance monitoring and analyses for *Escherichia coli* (*E. coli*), *Cryptosporidium*, algal toxins and *Legionella pneumophila*.
- Collaborate with member agencies to prepare and plan for the final Lead and Copper Rule Revisions (LCRR) that all Public Water Systems (PWS) must comply by October 16, 2024.
- Implement the new Laboratory Information Management System (LIMS) software, Labworks.
- Complete follow-up of the laboratory's gap assessment under The NELAC Institute (TNI) by incorporating practices to meet TNI accreditation.

2021-22 Major Accomplishments

- Continued to analyze Lake Mead and Mohave water quality data and to advise management on possible environmental impacts to the treatment system. Autonomous water quality monitoring platforms continue to provide additional information to supplement sampling by personnel. These analyses have become increasingly focused on predicting the impact of falling lake levels on future water quality.
- Completed the refurbishment of the AMSWTF filters 1-20 including replacing all filter valves, underdrains, launderers, and deeper bed filter media.

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- Completed additional anthracite to AMSWTF filters 21-26 to bring back levels to original specifications.
- Completed refurbishment and installation of a return wash water (RWW) pump at the AMSWTF.
- AMSWTF staff designed and installed a water quality station in the LSPS low lift vault. The instrument station will be necessary when we lose pumping capability at IPS 1.
- Completed refurbishment and installation of a backwash water pump at the AMSWTF.
- Replaced aging chemical transfer and feed lines at the RMWTF.
- Completed replacement of original three water softening units at the RMWTF.
- Participated with consultants in the electrical assessment of critical electrical distribution equipment at the RMWTF.
- Completed installation of new programmable logic controller (PLC) and MCC for Casino Drive Pump Station at the BBWD.
- Completed installation of new variable frequency drive (VFD) at the 1000 zone tank enable the 1130 one tank to be taken out of service for refurbishment.
- Completed clean out of the upper and lower decant lagoons at the BBWD.
- R&D staff continued the weekly wastewater surveillance effort at all of the major treatment facilities in Southern Nevada. Summary reports were submitted to SNWA Management, the collaborating wastewater agencies, the Southern Nevada Health District (SNHD), the press, the Governor's Pandemic Response Coordinator, and the CDC's National Wastewater Surveillance System.
- Initiated lab-scale and field-scale evaluations of conventional and innovative Ultra-Violet (UV) treatment technologies to inactivate *Legionella pneumophila*.
- Implemented, updated, and improved deoxyribonucleic acid (DNA) / ribonucleic acid (RNA) extraction technologies for viruses, free living amoebas and pathogenic bacteria.
- Hosted workshops for the Lead and Copper Rule Revisions (LCRR) for State of Nevada and member agencies to create an open forum for questions and discussions about the upcoming changes to the existing rule.
- Met or surpassed Safe Drinking Water Act (SDWA) monitoring requirements for AMSWTF, RMWTF, BBWD, Las Vegas Valley Water District (LVVWD), North Las Vegas, Henderson, Boulder City, Nellis Air Force Base, Blue Diamond, Kyle Canyon, Jean, Searchlight, Sloan Army Reserve, and Kapex.
- Completed RFP process to procure a new Laboratory Information Management System (LIMS) software for the laboratory. Labworks was chosen as the selected vendor.
- Implemented the procedure and software to upload Safe Drinking Water Act (SDWA) data from the laboratory's LIMS to the EPA's new Compliance Monitoring Data Portal (CMDP). Data was successfully uploading to CMDP by June 2021.

Strategic Plan Goal – Deliver an outstanding customer service experience

2022-23 Performance Objectives

- Continue serving Water Research Foundation (WRF) on various Project Advisory Committees and Technical Advisory Committees.
- Continue serving the International Ozone Association – Pan American Group (IOA-PAG) on several committees.
- Implement advanced water quality monitoring technology and real-time data transfer capabilities for Lake Mead to support the activities of the Las Vegas Valley Watershed Advisory Committee (LVVWAC) and partner agencies.

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- Provide laboratory support in sample collection and analyses of various new and ongoing research projects and provide quality data in a timely manner, including extensive lake and sources monitoring, complex storage/distribution system trihalomethane (THM) monitoring, UV/LED disinfection projects for LVVWD groundwater wells, as well as any ad hoc water quality monitoring requests.
- Provide outstanding customer service to the community via water quality investigations by responding to water quality complaints in a timely manner, educate customers about water quality, and provide a positive experience to help them resolve their problem. This also incorporating more robust responses on the Customer Care chat bot feature and improving information on the water quality frequently asked questions website.

2021-22 Major Accomplishments

- Operators and maintenance staffs' schedules were adjusted to continue safe operations of all three treatment facilities in a socially distanced manner with essential staff throughout the pandemic.
- Laboratory staff supported new and ongoing R&D projects, such as WRF 5035 (Bromate Control), the Well Legionella Disinfection project, preparation for the CDM project, the manganese control project, and the ongoing Ketos-Searchlight project.
- Implemented a new digital form for water quality general requests on the SNWA and LVVWD websites to help provide an electronic option for members of the community.
- The Laboratory team answered 257 water quality phone calls from the community and the Water Quality Monitoring team responded to water quality investigations throughout the Las Vegas Valley Water District's distribution system, collecting a total of 34 samples.

Strategic Plan Goal – Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment

2022-23 Performance Objectives

- Staff will continue to use the Aquatic Ecosystem Model 3D (AEM3D)-driven Lake Mead Model (LMM) to evaluate changes due to climate drivers in the quality of water leaving Lake Mead and entering Lake Mohave at various lake surface elevations. The LMM will specifically predict the impact of continued warming of waters entering Lake Mead in 2022, and how warming affects raw water quality, eutrophication, and downstream releases.
- Investigate ways for more efficient water treatment of the Laboratory's main reagent grade water system that supplies type-1 ultrapure reagent-grade water, which is used to prepare standards, blanks, reagent chemicals, and microbiology media.

2021-22 Major Accomplishments

- Regional Water Quality developed scenarios for water quality at the drinking water intakes for a range of lake surface elevations down to dead pool. This information was provided to guide the Enterprise Risk Management work. Simulated scenarios included the impacts of drawdown, projected rising air temperature from peer-reviewed climate models, Federal inflow and outflow projections, and turbidity.
- Laboratory management participated in a tabletop exercise with EPA's Water Laboratory Alliance (WLA). Several laboratory members also gave presentations and spoke with other public entities regarding experiences in emergency response planning and activities.

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- Laboratory management began the process to create a reference document for the Laboratory's Continuation of Operations Plan (COOP).

Strategic Plan Goal – Develop innovative and sustainable solutions through research and technology

2022-23 Performance Objectives

- Continue evaluation of conventional and innovative technologies to inactivate *Legionella* in LVVWD groundwater supplies (e.g., Ultra-Violet-Low Pressure, High Output, Ultra-Violet-Light Emitting Diodes).
- Complete development of a linked model to describe water quality in Lake Mead and the treatment of this water through the drinking water treatment process. Once completed, the impact of various water quality changes in inflowing Colorado River water can be assessed through the lake and treatment processes, including quantifying worst-case turbidity entering SNWA's treatment plants and the potential changes to filter processes that may be necessary.
- Continue work on externally funded projects by WRF (Projects: 4960, 4913, 4833, 4958, 5035, 5031, 5048, 5053, 5082, 5104, 5122), Bureau of Reclamation (BOR) WaterSmart, National Science Foundation (NSF), and Department of Defense (DOD) Strategic Environmental Research and Development Program (SERDP).
- Utilize the use of Next Generation Sequencing to help in the monitoring of SARS-CoV-2 from ongoing wastewater monitoring.
- Review and implement new Digital PCR Technology for routine monitoring of viruses, free-living amoeba, SARS-CoV-2, and other microbial pathogens.
- Supported R&D in testing of ultra-violet (UV) systems for controlling *Legionella pneumophila* at LVVWD well sites.
- Continue to develop the wastewater epidemiology capabilities for COVID-19 as well as other constituents of interest to public health.

2021-22 Major Accomplishments

- R&D was awarded new externally funded projects: WRF 5082, 5104, 5122, Environmental Protection Agency STAR (EPA), Center for Disease Control (CDC) and Bureau of Reclamation (BOR) projects.
- Implemented the use of Next Generation Sequencing to identify organism that impact our source waters, raw water, and treatment plant effectiveness.
- Continued support in analytical testing for SARS-CoV-2 in finish and source waters to ensure the safety of the drinking water supplied to the community.
- Completed externally funded projects: WRF 4691, 4912

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value

2022-23 Performance Objectives

- Enhance pandemic response with efforts to explore and accommodate remote operation capabilities of the three water treatment facilities.

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2021-22 Major Accomplishments

- R&D Division received over \$200,000 from external grants.
- Laboratory staff worked with Purchasing staff to streamline procuring of materials and service contracts that include improved discounts and tracking of services.

Strategic Plan Goal – Strengthen and uphold a culture of service, excellence and accountability.

2022-23 Performance Objectives

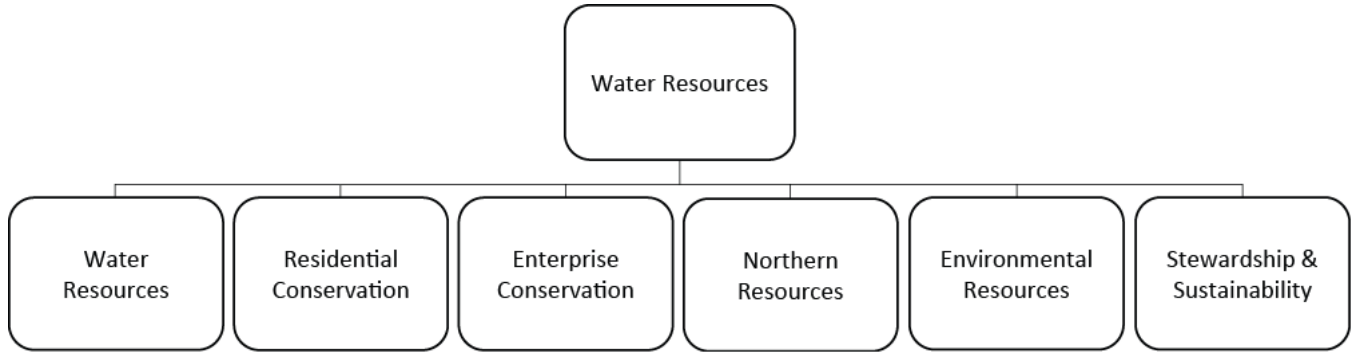
- Continue to work with diverse federal, state, local, and utility partners to share Lake Mead water quality conditions and potential changes.
- Continue to be a world-class leader in water quality and treatment research as demonstrated by scientific journal and report publications, industry presentations and service on advisory committees.
- Support and complete all Water Quality Monitoring Requests (WQMR) from internal and external customers and report data to customers in timely manner.
- Receive accreditation under The NELAC Institute (TNI) International Organization for Standardization (ISO) 17025.
- Continued stewardship and support with changes involving the EPA's proposed revisions to the Lead and Copper Rule.
- Ensure a safe workplace and encourage a safety culture by promoting and supporting suggestions that help maintain an incident and accident-free work environment.
- Retrofit laboratory hood controls to safeguard the work environment for employees and provide more efficiency and cost savings in operation of the ventilation system.

2021-22 Major Accomplishments

- R&D published more than 12 articles in scientific journals, gave over 20 conference presentations, and reports for all completed projects.
- Regional Water Quality continues to work with staff from Lake Mead National Recreation Area, US Bureau of Reclamation, US Geological Survey, State of Nevada, the Colorado River Commission of Nevada, the cities of Las Vegas and Henderson, Clark County Water Reclamation, the Las Vegas Valley Watershed Advisory Committee and others to collect analyze and disseminate water quality data and trends.
- Maintained status as an AWWA Presidential Award facility at both AMSWTF and RMWTF.
- Completion of three laboratory audits: virtual State of Nevada biannual audit, internal audit by the LVVWD Senior Auditor, and an independent third-party assessment of the laboratory's quality and management programs as well as laboratory processes against the NELAC Institute (TNI) International Organization for Standardization (ISO) 17025.

WATER RESOURCES

Level: 7100



Mission

Manage the Southern Nevada Water Authority's (SNWA) water, land and natural resources through sound policy, applied science and advanced technology, ensuring a reliable water supply for our community.

Department Description

The Water Resources department manages the SNWA's water resource portfolio to ensure a reliable water supply for the community. Primary responsibilities include long-range planning for sustainable use of current and future water resources; developing and administering regional water conservation programs; stewardship of land and environmental resources managed by the SNWA; and climate change planning. The department also supports policy initiatives on the Colorado River and other natural resource areas. Work efforts include monitoring regional hydrologic and water quality conditions and providing environmental and hydrologic support for Las Vegas Valley Water District (LVVWD) and SNWA operations at the Las Vegas Wash, Warm Springs Natural Area, Great Basin Ranch and LVVWD small systems. The department includes six divisions, including Water Resources, Residential Conservation, Enterprise Conservation, Stewardship and Sustainability, Northern Resources and Environmental Resources.

Budget Objectives and Highlights

The 2022-23 Water Resources department budget of \$137,782,587 contains funding to maintain and enhance the necessary functions required by SNWA to provide quality services to internal and external customers. Funding will support water and environmental resource management efforts and conservation initiatives designed to help the community meet its conservation goal. Planned expenditures reflect SNWA's long-term commitment to increased water conservation.

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LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 1,022	\$ 129,250	\$ 111,700
Maintenance & Repairs	79,170	52,000	57,500
Rental & Leases	—	—	—
Other Employee Expenses	2,345	37,000	36,900
Other Operating Expenses	2,929	45,150	36,300
Total Operating Expenses	85,467	263,400	242,400
Capital Expenditures	515,303	300,000	3,120,000
Payroll & Related Costs	2,369,881	3,230,324	4,274,665
Total Department Expenditures	\$ 2,970,651	\$ 3,793,724	\$ 7,637,065
FTE Positions	11.7	16.5	24.2

Department Performance

Water Resources. The Water Resources Division is responsible for securing and managing regional and local groundwater and surface water resources to ensure a reliable water supply for Southern Nevada. Work efforts include managing existing Colorado River allocations and agreements; conducting regional water resource planning; identifying, evaluating, and developing sources of additional groundwater and surface water supplies; managing banked resources and establishing hydrologic and climate monitoring networks. Other efforts include securing water rights from the Nevada State Engineer's Office, conducting water quality and hydrologic monitoring in the Las Vegas Wash, Muddy River and Lake Mead, and ensuring all water-resource assets remain in good standing.

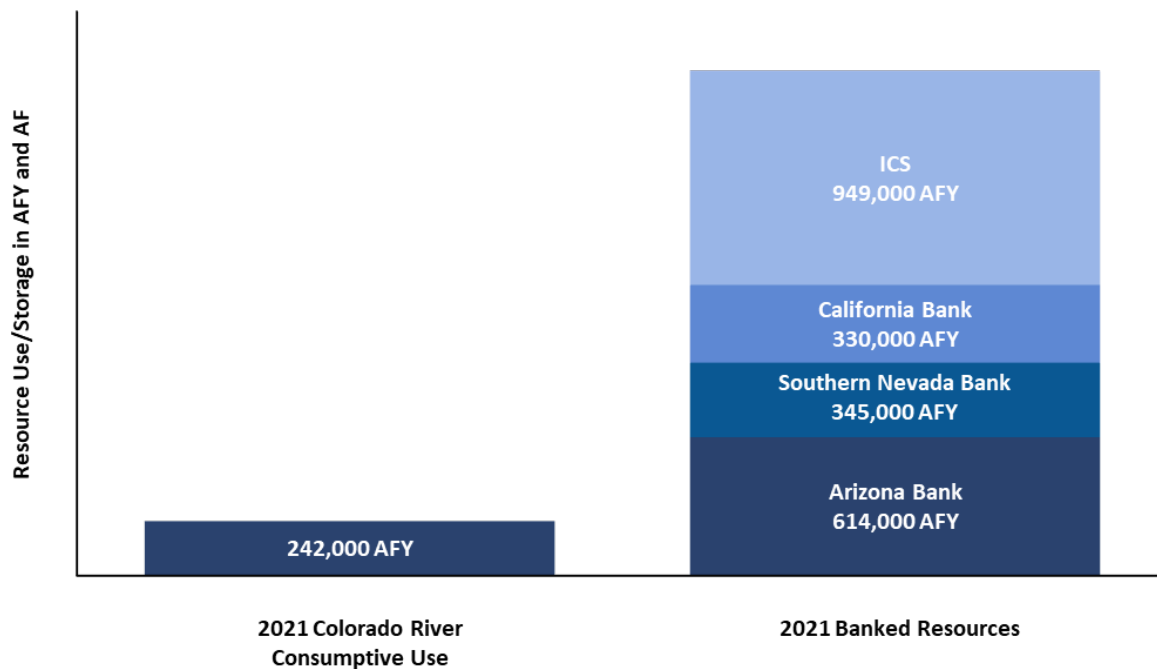
The division continued to monitor local and regional hydrologic conditions in 2021-22 and worked with Colorado River Basin states to implement the 2019 Drought Contingency Plan (DCP). Through local and collaborative efforts, the SNWA banked approximately 84,000 acre-feet of water in calendar year 2021, expanding the storage of temporary resources that can be used flexibly to meet the community's water resource needs.

The SNWA has stored 2.2 million acre-feet of water in total through 2021, more than nine times Nevada's 2021 consumptive Colorado River water use.

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The chart below compares 2021 consumptive water use with temporary resource supplies banked through 2021.

**SNWA Banked Resources
Through Calendar Year 2021**



Residential Conservation. The Residential Conservation division is responsible for developing and implementing demand management programs and strategies that target consumptive water use reductions among single-family residential homeowners. The division administers rebate and incentive programs for residential customers, including the Water Smart Landscapes (WSL) program. It also implements water waste and water theft enforcement programs for the LVVWD. The division expanded water waste enforcement efforts in 2022 to support Henderson and North Las Vegas compliance activities.

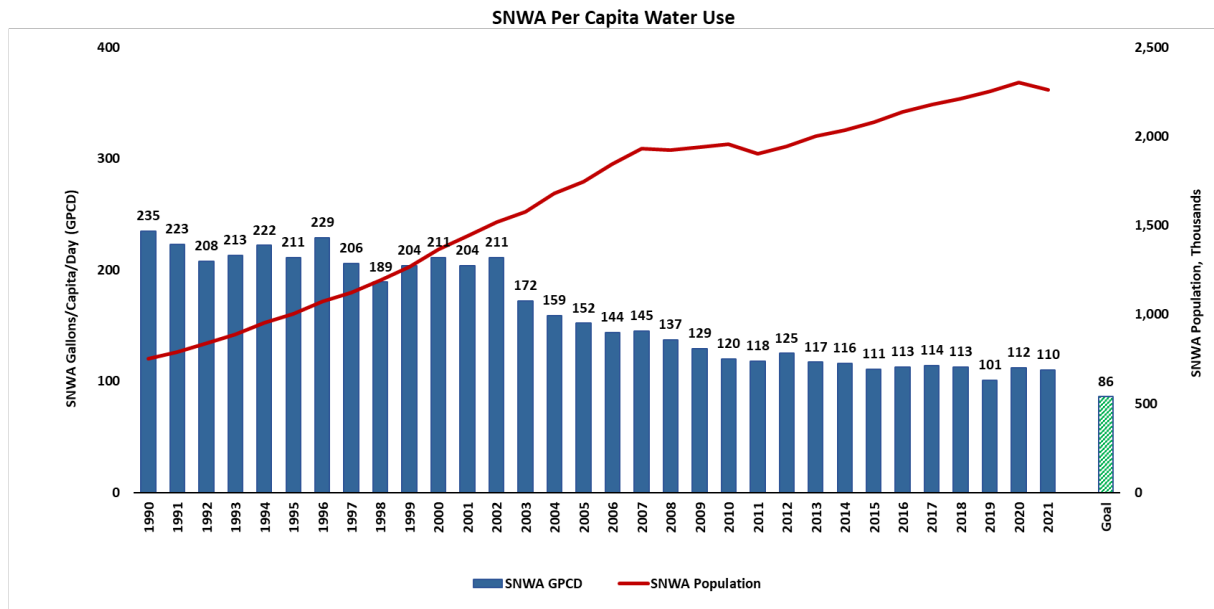
Enterprise Conservation. The Enterprise Conservation division was formed in 2021 to administer outreach, engagement and incentive programs that target all sectors except single-family residential. The division aggressively promotes turf conversions and administers the Water Efficient Technologies (WET) incentive program. The division is also responsible for planning and implementation activities associated with Assembly Bill 356 (AB356), which effectively prohibits non-functional turf in non-single-family sectors, effective January 1, 2027.

The two conservation divisions worked collaboratively to develop and administer regional conservation programs aimed at helping the community achieve its new water conservation goal of 86 gallons per capita per day (GPCD) by 2035. The SNWA monitors regional water demand trends and calculates GPCD by dividing annual SNWA Colorado River water diverted (excluding off-stream storage) and

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member well production, less corresponding Colorado River return-flow credits by the total SNWA resident population served per day.

This chart shows 2021 per capita water use at 110 GPCD, a 1.8 percent reduction from the prior year and the lowest per capita water use level experienced to date except for 2019, which was an atypically cool and wet year.



Northern Resources. The Northern Resources division maintains the physical and natural resource assets of the 950,000-acre Great Basin Ranch. The ranch produces agricultural products, including beef calves, lambs, wool, and alfalfa. These commodities represent approximately \$3.09 million in projected ranch revenue for fiscal year 2022-23. Improvements in agricultural practices, livestock genetics and husbandry have increased efficiency and effectiveness in utilizing federal range-land and private forage. The ranch continues to produce and deliver quality products and services, exhibit scientific-based stewardship, and demonstrate financial and organizational efficiency.

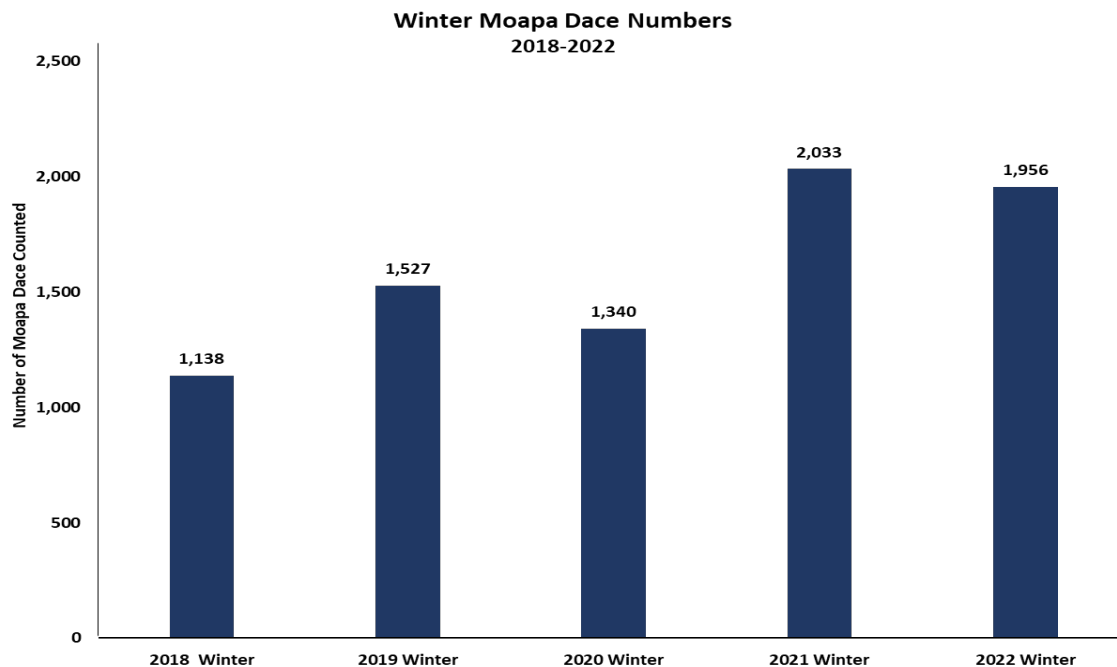
Environmental Resources. The Environmental Resources division conducts environmental planning, compliance, and natural resource management for SNWA, LVVWD, and small systems. The division supports policy initiatives on the Colorado River and other resource areas; coordinates with federal and state agencies on environmental and regulatory issues; prepares environmental compliance documents; conducts biological and environmental monitoring, restoration, and reporting for existing facilities and new capital construction; and coordinates climate change adaptation initiatives.

Stewardship and Sustainability. The Stewardship and Sustainability division manages Las Vegas Wash (Wash) programs and the Warm Springs Natural Area (WSNA), including restoration, monitoring, compliance, and outreach activities. The Wash Team is responsible for the Wash Coordination Committee, implementing the Wash Comprehensive Adaptive Management Plan (CAMP) and

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coordinating the Lower Las Vegas Wash Stabilization Plan and associated environmental compliance. The WSNA Team is responsible for the WSNA Stewardship Plan and conducts management activities to benefit the Moapa dace and other sensitive species on site. The division also coordinates the Sustainability Cross-Departmental Team to implement the organization's Sustainability in Action Plan.

Restoration efforts at the Warm Springs Natural Area (WSNA) have bolstered Moapa dace populations. This federally endangered fish is endemic to the upper Muddy River. After a period of steady decline, fish populations are on the rise. This chart shows the Moapa dace population increasing from 1,138 individuals in 2018 to nearly 2,000 in 2022.



Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Assure quality water through reliable and highly efficient system.

2022-23 Performance Objectives

- Acquire and manage resources to meet current and future water demands, including implementation of conservation initiatives that improve efficiency and reduce water waste.
- Support collaborative partnerships and implement policy and program actions to address and mitigate Lake Mead water level declines.
- Support the development, operation and maintenance of groundwater facilities for the LVVWD, small water systems and Great Basin Ranch. Prepare water resource assessments, evaluate system vulnerabilities, and take actions to improve system reliability.
- Conduct water-quality sampling and hydrologic monitoring to evaluate aquifer and water quality conditions and trends affecting LVVWD and SNWA resources.

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- Provide environmental compliance and monitoring activities in accordance with permit requirements to operate existing SNWA, LVVWD and small systems facilities. Prepare and manage environmental compliance processes to support the development of new projects.

2021-22 Major Accomplishments

- Reviewed and updated the SNWA Water Resource Plan and SNWA Water Budget; stored approximately 84,000 acre-feet of temporary resources in calendar year 2021 and supported the development and implementation of a Septic System Conversion Program in the Las Vegas Valley to expand reuse and recovery of available resources.
- Supported the development of new policies and programs to achieve consumptive water use reductions. Administered existing conservation programs, expanded conservation staffing to support Henderson and North Las Vegas compliance activities and reduced per capita water use by two GPCD between 2020 and 2021.
- Supported the implementation of the policies and programs designed to protect critical Lake Mead elevation, including the 2019 Drought Contingency Plan (DCP), 500+ Plan and Colorado River Pilot System Conservation Program. Water banking and other collaborative drought response actions reduced Lake Mead's water level decline by an estimated 65 feet.
- Managed, supported, and collaborated with internal, external, and international partners to implement water and environmental management programs along the Wash, WSNA and Colorado River. Efforts include implementation of the Lower Colorado River Multi-Species Conservation Program and Glen Canyon Adaptive Management Program.
- Provided environmental compliance and monitoring support for the operation of existing facilities and the development of new projects, including the Metropolitan Regional Recycled Water Program, the Lower Las Vegas Wash project, the Horizon Lateral project, the Boulder Flats Solar project, and Garnet Valley water and wastewater systems.
- Conducted water quality sampling and hydrologic monitoring of surface water and groundwater resources; represented Nevada as a member of the Colorado River Basin Salinity Control Forum and collaborated with other stakeholders to protect Nevada Colorado River return flows by ensuring continued compliance with U.S. Environmental Protection Agency salinity standards for the Colorado River.

Strategic Plan Goal – Deliver an Outstanding Customer Service Experience.

2022-23 Performance Objectives

- Administer incentive programs and provide other services to the community to support water conservation goal achievement.
- Engage with internal and external stakeholders and participate in the administration of public processes to enhance information sharing and build support for major initiatives.
- Leverage new and emerging technology to refine our understanding of consumptive water use, enhance operational efficiency and improve customer service.

2021-22 Major Accomplishments

- Administered conservation incentive programs, including the Water Smart Landscapes (WSL) and Water Efficient Technologies (WET) programs. Overall efforts resulted in 433-million-gallon water savings for 2021. Achieved a 94 percent customer satisfaction rating for the WSL program, with 72 percent of respondents awarding the highest satisfaction rating.

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- Converted 27 high school football fields to artificial turf and upgraded cooling towers at 62 schools through the WET program.
- Participated in more than 40 Homeowner Association (HOA) meetings, conducted more than 12,377 residential property visits, conducted state-certified Community Manager training involving 300 HOAs in partnerships with the Nevada Division of Real Estate and taught nine irrigation and landscape courses for the public.
- Developed text and video communication tools to improve customer outreach; contacted 100 HOAs to increase program awareness and identify participation barriers in SNWA conservation incentive programs.
- Provided support for the Nonfunctional Turf Removal Advisory Committee (NTRAC) process and conducted activities to support implementation of AB356. Created a waiver application process, began pre-mapping large parcels subject to the regulation and implemented new mapping technologies to expedite service to program applicants.

Strategic Plan Goal – Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship of our Environment.

2022-23 Performance Objectives

- Assess climate change impacts in long-term planning efforts, collaborate on local and regional climate change initiatives relevant to SNWA and pursue research to inform or enhance predictive modeling tools.
- Maximize the use of available resources through implementation of water conservation programs and support Enterprise Risk Management efforts related to water demands and resource planning.
- Support conservation plans that benefit endangered and threatened species to ensure access to current and future water supplies. Monitor external activities that might interfere with the SNWA's access to permanent, temporary and future water resources.
- Work across the organization to mitigate water supply and demand risks due to climate change and hydrologic variability. Ensure reliability of Colorado River supplies through long-range resource planning and actively participate in environmental compliance and management programs.
- Support collaborative partnerships and implement policy and program actions to address and mitigate Lake Mead water level declines.

2021-22 Major Accomplishments

- Conducted research and analysis to support the establishment of a new conservation goal (86 GPCD) and continued implementation of the Conservation Strategic Plan.
- Worked with stakeholders to implement the 2019 DCP and 500+ Plan, administered Colorado River water delivery and interstate banking agreements and provided technical support for regional water recycling efforts. Expanded SNWA water banking opportunities and continued to explore collaborative resource projects to develop future resources.
- Worked with the U.S. Bureau of Reclamation (BOR) to revise the Colorado River Simulation System model to allow for the simulation of storage and recovery of banked water resources. Partnered with Colorado River stakeholders to identify, prioritize and fund select climate change research; led stakeholder programs and developed informational resources to improve prediction and understanding of water supply and demand uncertainty related to climate change and hydrologic variability.

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- Tracked the organization's carbon emissions footprint and developed key risk indicators and controls to provide an early warning of climate change risks to SNWA. Identified actions to mitigate those risks.
- Maintained regional monitoring networks to collect long-term hydrologic and climate data. Funded the installation of a ground-based weather modification generator to increase precipitation in the Spring Mountains. Initiated a tree canopy study to combat heat island effects following turf removal and developed a list of heat-resilient trees.
- Collaborated with state, local, and international partners to implement water and environmental management programs on the Colorado River from Lake Powell to the Colorado River Delta. Continued to support environmental monitoring and management programs at the Las Vegas Wash and WSNA, including species monitoring, habitat restoration, fuels removal and firebreak management.
- Continued to develop streamflow forecasts, SNOTEL sensitivity project, and MODIS Snow Water Equivalent projects and coordinated with central Arizona Project N-drip water irrigation conservation initiative. Participated in, reviewed, managed, and reported on the BOR Lower Basin AG Water Savings pilot project.

Strategic Plan Goal – Develop innovative and sustainable solutions through research and technology.

2022-23 Performance Objectives

- Collaborate with water efficiency technology incubators and accelerators, including WaterStart, ImagineH2O, the Metropolitan Water District of Southern California, the Alliance for Water Efficiency, and others.
- Conduct research to refine our understanding of HVAC system evaporative use. Evaluate cooling technologies with the potential to reduce consumptive water use and develop stakeholder partnerships that facilitate cooling water efficiency.
- Research and implement new technologies or other practices to support consumptive water use reductions and improve water efficiency.
- Explore best practices for quantifying agricultural water conservation.
- Study smart irrigation controller performance to quantify potential water savings.

2021-22 Major Accomplishments

- Completed collaborative research on cooling technologies through a partnership with the Alliance for Water Efficiency and peer utilities.
- Conducted research to advance implementation of a Water Smart Plumber program and evaluated the cost/benefit of a water service line warranty program.
- Explored use of Advanced Metering Infrastructure (AMI) to support improved compliance goals, used metering technology to notify customers of potential watering restriction violations and used AMI data to assess customer watering patterns. Used metering data to guide the deployment of water waste investigators for improved effectiveness.
- Continued a project to compile and integrate existing well-systems and groundwater data into a Common Data Repository to enhance cross-departmental collaboration. Augmented Business Intelligence software solutions to enhance organizational communication and collaboration related to well systems and water-usage information.

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- Supported development of pilot studies to assess water-quality treatment technologies at production wellheads. Initiated pilot studies to evaluate potential water savings associated with compliance programmed smart controllers.

Strategic Plan Goal – Ensure Organizational Efficiency and Manage Financial Resources to Provide Maximum Customer Value.

2022-23 Performance Objectives

- Implement hydrologic monitoring efficiencies with remote data collection.
- Partner with Colorado River Basin stakeholders to jointly fund water and environmental management investigations and programs and pursue and secure grants to support department initiatives.
- Implement a new business system to streamline workflows, maintain accountability, reduce labor intensity through automation and expand the use of electronic documents. Pilot the use of mobile devices in field operations to streamline data collection, increase productivity and reduce paper-based information management.
- Provide demand analysis and forecasts to reduce uncertainty in system operations, infrastructure planning and financial planning.
- Leverage volunteer and docent support when practical to support staff-guided restoration projects and other outreach activities.

2021-22 Major Accomplishments

- Continued to install Geostationary Operational Environmental Satellite telemetry systems to monitor and provide real-time access to important hydrologic sites in remote locations. Developed Power BI reports and other applications to improve access to information and enhance internal data sharing.
- Secured \$1 million in funding from Colorado River Basin partners to support climate change and hydrologic forecasting efforts; obtained more than \$217,500 in federal and state grant funding to support conservation and Wash initiatives; obtained and expended \$242,824 in grant funding for the WSL program and received an \$800,000 SNPLMA grant to improve the trail network at the WSNA.
- Collaborated with Information Technology to develop new versions of program management software to utilize mobile devices.
- Participated in the ATLAS project redundant, obsolete, and trivial (ROT) analysis, reorganization, and migration of department files.

Strategic Plan Goal – Strengthen and uphold a culture of service, excellence and accountability

2022-23 Performance Objectives

- Lead an interdepartmental team to develop a comprehensive annual groundwater management and well operations plan.
- Implement the Conservation Strategic Plan and meet or exceed annual benchmarks for SNWA conservation programs.
- Improve communication and coordination within the organization and among SNWA member agencies.

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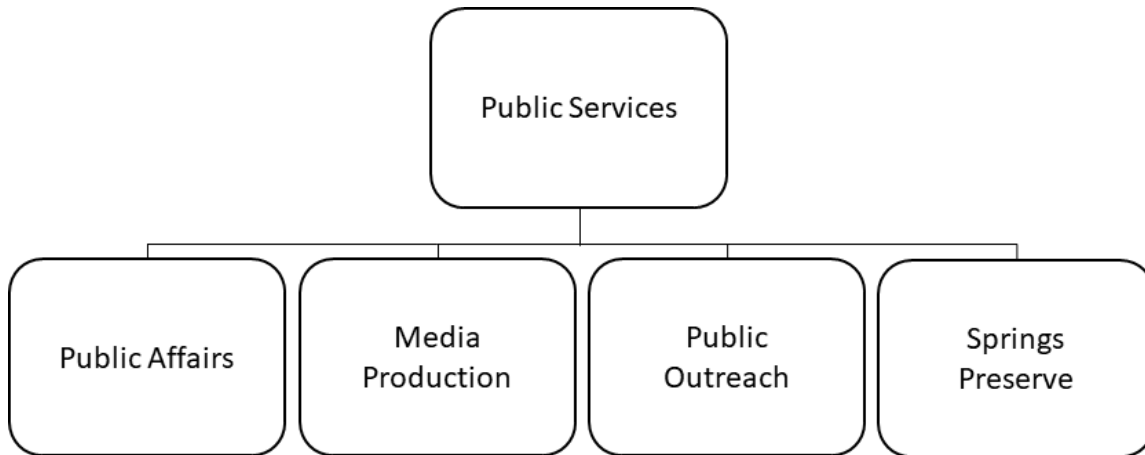
- Sustainably operate the Great Basin Ranch and implement department/division priorities within budget.

2021-22 Major Accomplishments

- Worked collaboratively with an interdepartmental team to update a comprehensive annual groundwater management and well maintenance and operations plan.
- Established performance benchmarks for conservation programs and reported progress to internal and external stakeholders. Exceeded 2021 program benchmarks for single-family residential WSL program participation and WET program water savings.
- Developed work plans to support the implementation of Conservation Strategic Plan initiatives and tracked progress.
- Developed and implemented an internal conservation training program in five topic areas. Trained all conservation staff and extended participation to SNWA member agencies and allied divisions through more than 20 training sessions.
- Met the projected ranch revenue budget and operated the department within budget.

PUBLIC SERVICES

Level: 7200



Mission

The Public Services department is responsible for communicating the organization's goals and initiatives to the community and educating the public about water issues. This effort is accomplished through government relations, stakeholder and customer outreach, and operation of the Springs Preserve.

Department Description

The department is comprised of four divisions: Public Affairs; Media Production; Public Outreach; and the Springs Preserve. Together, these divisions work to support customer service efforts to the organization's internal and external customers and communicate organizational initiatives to various audiences.

The Public Affairs division oversees the organization's government affairs, agenda processes, public participation efforts and committees, grant writing, conference coordination and support, and provides analysis and support to senior management.

Media Production is responsible for producing organizational messaging through the development and maintenance of websites, social media platforms, video production, and various printed materials such as bill inserts.

The Public Outreach division is responsible for providing information to the media and customers.

The Springs Preserve's mission is to build culture and community, inspire environmental stewardship, and celebrate the vibrant history of the Las Vegas Valley.

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LVVWD Uses	Expenditures		
	Actual 2020-21	Budget 2021-22	Budget 2022-23
Materials & Supplies	\$ 246,597	\$ 790,188	\$ 770,930
Maintenance & Repairs	72,144	645,930	672,110
Rental & Leases	1,225	19,000	16,500
Other Employee Expenses	49,864	185,778	169,533
Other Operating Expenses	1,328,563	1,880,844	2,664,594
Total Operating Expenses	1,698,392	3,521,740	4,293,667
Capital Expenditures	1,507,783	1,488,898	5,478,250
Payroll & Related Costs	8,264,633	10,252,543	8,709,809
Total Department Expenditures	\$ 11,470,808	\$ 15,263,181	\$ 18,481,725
FTE Positions	57.0	75.5	56.0

Budget Objectives and Highlights

The 2022-23 budget remains consistent with the organization's efforts to enhance efficiency and service to internal and external customers.

Department Performance

In fiscal year 2021-22, with most department staff working a hybrid at-home/in-office schedule and adhering to safety guidelines due to COVID-19 surges, the Public Services department continued to provide service and support to the organization, its initiatives and priorities:

Public Affairs. Public Affairs is responsible for board administration, public processes, special events, tours, meeting monitoring, presentations, coordination of special processes and offering support to organizational initiatives through a wide variety of activities.

As water conservation remained a top priority, Public Affairs supported several efforts on behalf of both organizations. The division coordinated an update to the LVVWD Service Rules with conservation-related initiatives that prohibited non-essential water use at golf courses and addressed water theft violations and penalties. These two additions to the Service Rules aim to strengthen the system's integrity and reliability and will help conserve millions of gallons annually from consumptive uses of water.

During the 2021 legislative session, Public Affairs was successful in helping spearhead the passage of Assembly Bill 356 (AB 356), which aims to remove all nonfunctional turf in Southern Nevada and prohibits water from the Colorado River to be used to irrigate turf beginning in 2027. This legislation also required the creation of the Nonfunctional Turf Removal Advisory Committee (NTRAC) to help

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SNWA define nonfunctional turf and develop a turf removal plan. Division staff was instrumental in leading the effort to coordinate this committee and its meetings. As a result, and after a series of committee meetings, the SNWA Board of Directors supported all NTRAC's recommendations and implementation plan.

Division staff engaged with the Southern Nevada Health District and SNWA member agencies to draft regulations pertaining to the construction, management, and abandonment of septic systems in the valley and to create a pilot septic conversion program, modeled after SNWA's well conversion grant program. Septic systems pose a water quality issue with contaminants being detected in some groundwater, and a water resource issue as wastewater discharged to septic systems cannot return to Lake Mead for return flow credits. There are approximately 14,500 septic systems in the Las Vegas Valley and their estimated annual consumptive water use is more than 15,000 acre-feet.

In an effort to increase awareness of water-related issues, educate the public and gain community support, Public Affairs coordinated a speakers bureau program to give presentations and engage in discussions with community businesses and groups. In addition, the Colorado River Water Users Association's conference resumed in December of 2021 after being cancelled in 2020 due to COVID-19 restrictions and had a successful turnout with more than 1,100 attendees.

Division staff also supported the organization's funding initiatives through grant development and fundraising activities to help offset programming, capital and operational expenses. Staff applied for and was awarded \$2.5 million in funding from the State Board for Financing Water Projects to improve Big Bend Water District's system and \$4.2 million from the State's Capital Improvement Grant Program for the Blue Diamond Water System. These funds will be used to address issues of system reliability and operational efficiency for both systems. In addition, the Springs Preserve Foundation received a total of \$31,040 from several different organizations to fund activities at the Springs Preserve. LVVWD received \$25,000 from the U.S. Fish and Wildlife Service for work on the Preserve's refuge ponds and another \$5,610 from the Southern Nevada Regional STEM Network for a photo exhibit at the Springs Preserve.

Media Production. Media Production is responsible for developing materials that reach customers through websites, social media, television, email and print. Over the past year, the division distributed a year-round watering schedule and seasonal watering reminders in fall, summer and winter with a combined circulation of more than 2.1 million pieces. Concurrent with mailings, the division leveraged free USPS Informed Delivery promotion campaigns to generate nearly 460,000 additional impressions to postal service email subscribers.

In addition, division staff launched a direct-mail, water-waste campaign reaching nearly 90,000 LVVWD customers who were out of compliance with the year-round watering schedule, resulting in significant water savings in targeted zip code areas. Staff also assisted in publishing the annual LVVWD Water Quality Report, with mailings to more than 360,000 households, noting research efforts into tracing COVID-19 in wastewater.

Over the past year, the division launched a social media campaign emphasizing the need for increased water conservation in the face of a federally declared water shortage. The campaign featured more than 1,300 social media posts that mentioned removing nonfunctional turf, complying with mandatory watering restrictions or reporting water waste garnered 6.9 million impressions by Southern Nevada

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residents and resulted in more than 41,000 likes, shares and comments. To make it easier for businesses and HOAs to apply for turf conversion rebates, staff launched an online application to increase the efficiency of coordinating rebate interactions between SNWA and applicants. Staff also added resources for these key audiences, such as galleries of suggested desert plants and trees, as well as examples of water-smart landscaping on slopes and along streetscapes.

Media Production played a large role in creating the ability to chat with LVVWD customers online in an effort to answer customer questions quickly. The online chat capability has reduced the volume of calls to Customer Care as well as customer call waiting times.

Staff also implemented a redesign of the Las Vegas Wash website to make the content viewable on mobile devices and accessible to those with hearing and visual impairments. Content was also streamlined to focus on topics of highest interest, and the new site is more visually impactful.

In an effort to help employees feel connected and continuously updated on the organization's work and status during the COVID-19 pandemic, staff continued with the weekly video series featuring the general manager, executive team and special guests.

Public Outreach. The Public Outreach division is responsible for developing and implementing public awareness and educational campaigns that support organizational initiatives, managing communications with media and journalists.

Marketing

Public Services brought some marketing efforts in-house to enhance the creative development of social media and content, while also giving more control of media strategies and ad revisions. These in-house efforts also included all media planning and buying for the Springs Preserve's special events and is estimated to save the organization \$500,000 annually. Staff developed and launched an interim compliance campaign in fall 2021, highlighting shortage conditions and watering schedules, and began developing two new outreach campaigns for compliance and water waste that will launch next fiscal year. In addition, staff developed and placed dozens of advertorials focusing on Water Smart Landscaping, water waste, compliance, AB 356, and Water Efficient Technologies, while also implementing water waste blitzes in non-compliant zip codes through targeted social media posts, mobile billboards, postcards, and additional water waste enforcement. In addition, staff negotiated, secured and implemented several sports and business partnerships to help spread conservation messaging.

Conservation Outreach and Events

Over the past year, staff coordinated efforts with realtors, HOAs, property management companies, the City of Las Vegas, Clark County School District and other entities to enable water conservation messaging to be disseminated throughout the community. Staff also expanded its outreach efforts and tools by utilizing the LVVWD's voice messaging system to reach all customers informing them of the shortage declaration by the federal government and watering restrictions. Letters for both shortage information and watering schedule compliance were also mailed to all LVVWD residential customers. In an effort to support AB 356 legislation, staff began executing related outreach and implementation plans.

Operation and Construction Outreach

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Staff conducted community outreach for multiple LVVWD operations and construction projects, including the Centennial, Cougar and Rome Reservoirs, the Horizon Lateral, Lower Las Vegas Wash improvements, and Garnet Valley wastewater system. In addition, staff created a communications plan for water theft, which was adopted into the LVVWD Service Rules, and distributed more than 2,000 outreach packages to increase awareness of water theft among construction contractors.

Springs Preserve. Springs Preserve staff is responsible for overall facility operations, programming and events that enhance the visitor experience. The property is consistently evolving to better support the community by focusing on more meaningful projects, programs and onsite experiences. Due to the ongoing COVID-19 pandemic and safety measures implemented, the Springs Preserve required that general admission tickets be reserved online in advance and that face coverings be worn indoors until mandates changed.

After being closed or with limited hours of operation in 2020, the Springs Preserve opened its Origen Museum in 2021 and restarted traveling exhibits with *Toytopia*, celebrating the toys of yesterday and today. The property also reopened its Butterfly Habitat in the fall and welcomed 17,787 guests through the exhibit, which was made free for visitors thanks to the Springs Preserve Foundation. The Sustainability Gallery was remodeled this past year through a state grant of \$1 million and \$250,000 from the Springs Preserve Foundation and educates guests about eco-friendly lifestyles through interactive activities and unique programs. The Springs Preserve was also featured on Vegas PBS for its STEAM programs with staff teaching viewers how certain animals adapt and survive in the harsh Mojave Desert.

The Youth Conservation Council provides high school students an opportunity to earn community service hours and gain valuable experience while learning about water issues. This 16-week program was host to 40 students from across the valley. While this program is led by the SNWA, the Springs Preserve and its staff play a large role in its coordination and implementation.

At the beginning of the fiscal year, the Springs Preserve Foundation was awarded a \$2 million grant through the State of Nevada to design and construct a dedicated ethnobotanical garden focusing on the indigenous people of Southern Nevada. Preliminary plant lists, conceptual designs, and initial stakeholder and community meetings are ongoing for the project and construction is expected to begin in the third quarter of 2022.

Springs Preserve staff continued to support Springboard, a virtual education program that offers real-time interaction with conservation and water resource experts, chemists, biologists, zoologists, archaeologists and naturalists from the Springs Preserve. Any licensed teacher employed by a public, private, or charter school in Nevada can book a visit through the Springboard platform.

Strategic Plan Objectives and Accomplishments

The Public Services department is committed to help accomplish the goals and objectives outlined in the organization's Strategic Plan. The department works to support these goals through the coordination and administration of support functions.

Strategic Plan Goal – Assure quality water through reliable and highly efficient systems.

2022-23 Performance Objectives

- Provide a high-quality water supply and delivery system that is safe, sustainable and promotes the vitality and prosperity of the community.
- Maintain high levels of reliability through the application of a sufficiently funded asset management program.
- Sustain operational continuity with a sufficiently staffed, well-trained and skilled workforce.
- Continually improve operating efficiencies by benchmarking to leading industry standards.
- Ensure a high quality of local and regional water resources through comprehensive water quality and watershed management.

2021-22 Major Accomplishments

- Assisted in updating the LVVWD Service Rules with conservation initiatives related to non-essential water use (golf courses) and water theft.
- Distributed more than 2,000 outreach packages to increase awareness of water theft among construction contractors.
- Worked with SNWA member agencies and other jurisdictions to draft regulation and create a pilot septic conversion program for individuals on septic systems to improve water quality and water resources.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2022-23 Performance Objectives

- Assess customer satisfaction, establish benchmarks and determine where improvements are required.
- Continuously improve service processes and practices based on customer assessments.
- Utilize appropriate technology to simplify and improve the customer experience.
- Provide necessary training and development to ensure an exceptional customer service experience. Communicate with and receive continuous feedback from employees on organizational policy changes and improvements.
- Monitor other organizations and industries to identify innovations, best practices and ways to improve the customer experience.

2021-22 Major Accomplishments

- Assisted in creating the ability to chat with LVVWD customers online which has reduced the volume of calls to Customer Care as well as customer call waiting times.

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- Distributed more than 2.1 million year-round watering schedule and seasonal watering reminders to single-family residences in the Las Vegas Valley.
- Launched a direct-mail, water waste campaign reaching nearly 90,000 LVVWD customers who were out of compliance with the year-round watering schedule, resulting in significant water savings.
- Published the annual LVVWD Water Quality Report and mailed it to more than 360,000 households, noting research efforts into tracing COVID-19 in wastewater.
- Continued to revamp Springs Preserve operations including online reservations and other methods to increase safety but allow guests to continue to enjoy the experience.
- Executed both in-person and virtual special events hosted by the Springs Preserve.

Strategic Plan Goal – Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment.

2022-23 Performance Objectives

- Enhance understanding of climate change impacts among ourselves and our stakeholders.
- Develop and implement adaptation plans to reduce or mitigate impacts of climate change on water and environmental resources.
- Conduct long-term water resources and facilities planning to ensure adequate resources are available when needed.
- Develop and implement proactive stewardship for environmental resources to ensure access to current and future water supplies.
- Champion innovative water efficiency initiatives to maximize beneficial use of resources.
- Incorporate sustainable best practices into organizational initiatives and inspire positive change.

2021-22 Major Accomplishments

- Continued to educate and inform the LVVWD and SNWA Board of Directors on water-related issues, policies and initiatives throughout Southern Nevada.
- Spearheaded the passage of AB 356, which prohibits the irrigation of nonfunctional turf in Southern Nevada with water from the Colorado River; and as per legislation, created and coordinated the meeting of the NTRAC, resulting in its recommendations being adopted by the SNWA Board of Directors.
- Continued educating the community about SNWA's research on genetic markers of COVID-19 in wastewater, promoting the organization's major contribution to an international effort to explore these markers as a warning for the virus' presence in communities.
- Participated in the Sustainability Cross-Departmental Team to examine internal processes and develop sustainable practices within the organization.
- Began preliminary planning of a new ethnobotanical garden at the Springs Preserve which will focus on the indigenous people of Southern Nevada.

Strategic Plan Goal – Ensure organizational efficiency and manage financial resources to provide maximum customer value.

2022-23 Performance Objectives

- Increase customer communication so there is a better understanding of the organization's products and services.

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- Ensure predictable rates that are aligned with community expectations.
- Seek out and deploy worldwide best practices to minimize costs.
- Establish and utilize benchmarks to explore new opportunities for improved efficiencies.
- Formulate risk assessments and develop alternatives for expenditure decisions.

2021-22 Major Accomplishments

- Launched a pilot septic conversion program to offer financial assistance to septic system users to abandon their septic tanks and connect to municipal sewer systems.
- Brought some marketing efforts in-house to enhance the creative development and media strategies, and secure partnership negotiations. These efforts are estimated to save the organization \$500,000 annually.
- Secured \$4.2 million in state grant funding for improvements to the Blue Diamond Water System and more than \$2.5 million in state funding for improvements to the Big Bend Water District's system in Laughlin.
- Applied for and received a total of \$31,040 from several different organizations for the Springs Preserve and the LVVWD received \$25,000 from the U.S. Fish and Wildlife Service for work on the Preserve's refuge ponds.

Strategic Plan Goal – Develop innovative and sustainable solutions through research and technology.

2022-23 Performance Objectives

- Identify, prioritize and implement sustainable and cost-effective solutions to organizational challenges.
- Promote a culture that is innovative, creative, and makes effective use of technology.
- Allocate the resources necessary to advance research, technology and other innovations.
- Develop and strengthen partnerships on a global basis to leverage resources and advance innovation.

2021-22 Major Accomplishments

- Launched a redesigned Las Vegas Wash website that improved user experience, was mobile-friendly and ADA compliant and has increased visitor engagement.
- Continued to establish relationships with local businesses to help educate and promote water conservation and seasonal watering restrictions.
- Launched a social media campaign emphasizing the need for increased water conservation. The more than 1,300 conservation related posts garnered 6.9 million social media impressions, resulting in more than 41,000 likes, shares and comments.
- Utilized the LVVWD's messaging system to inform all customers about the federally declared shortage and seasonal watering restrictions.

Strategic Plan Goal – Strengthen and uphold a culture of service, excellence and accountability.

2022-23 Performance Objectives

- Improve the consistency and openness of communication to ensure employees are engaged and well informed.

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- Increase the effectiveness of professional development by providing additional diverse learning opportunities.
- Hold ourselves accountable for delivering quality products and services to our customers, each other and the environment.
- Identify, monitor and measure key performance areas of the organization, openly sharing results and taking appropriate action.
- Provide and seek timely feedback on individual, team and departmental performance to enhance collaboration, accountability and excellence.

2021-22 Major Accomplishments

- Successfully adapted to restrictions due to the COVID-19 pandemic. Staff worked a remote hybrid model which allowed them to work from home during viral surges and work from the office when it was safe to do so.
- Continued a weekly video series designed to help employees feel connected and up to date on the organization's goals and initiatives.

SECTION 6

CAPITAL PLANS

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**LAS VEGAS VALLEY
WATER DISTRICT™**

Capital Budget

The Las Vegas Valley Water District (LVVWD) maintains a long-range facility planning process to determine the type, size and location of water distribution facilities needed to meet the water services demands of the areas in Clark County served by the LVVWD. As water system facilities are defined, they are added to the LVVWD's overall construction program. The ongoing capital equipment and construction program is a dynamic program, with projects added, changed, or deleted as necessary to meet the changing conditions in the LVVWD's service areas. The construction program consists of new pumping stations, reservoirs and wells, land acquisition, new water pipelines, and other distribution system facilities. The capital equipment budget consists of vehicles, Information Technology equipment, water works and diverse industrial equipment. The LVVWD is planning to acquire approximately \$12.0 million in capital equipment during the next fiscal year. Some of the capital projects will become operational by the end of fiscal year 2022-23, while other projects will be completed in subsequent fiscal years.

In January 2017, the LVVWD Board of Directors approved a 10-year Capital Improvement Plan (CIP) that will guide decisions related to asset management, necessary water system expansion and water quality compliance activities. The plan represents an investment of \$616 million (2016 dollars) over a 10-year planning horizon to construct new facilities and make improvements to key system components, ensuring a reliable water system for the LVVWD's customers.

Impact of Construction Program on Operation and Maintenance Expenses

For the LVVWD water distribution facilities, in the near term, the LVVWD does not anticipate any impact on maintenance expenses and only minimal expenses associated with the operation of the new facilities added to the LVVWD's water distribution system through its overall construction program. This is due to the following three factors:

- First, the facilities being added to the LVVWD's system are new and typically require minimal maintenance.
- Second, the facilities are designed and constructed with the latest available technology and are not accepted by the LVVWD until they are fully inspected and tested and ready for operation.
- Third, over the past several years the LVVWD has conducted numerous process improvement investigations and adopted recommendations that have resulted in significant on-going operational and maintenance efficiencies and savings.

Over the long term, the LVVWD anticipates incurring maintenance expenses for the rehabilitation of facilities such as reservoirs, pump stations, and pipelines. However, these costs are minimized through the LVVWD's use of state-of-the-art diagnostic equipment and testing procedures, which significantly lower maintenance costs and reduces the rate of catastrophic failures. Finally, these facilities were, and are being constructed, for new customers who generate additional operating revenues. These revenues in the past have offset, and in the future are anticipated to continue to offset, the added long-term maintenance expenses.

Projecting long-term additional operating expenses driven by the addition of capital assets to the LVVWD's water system is not easily quantified.

Las Vegas Valley Water District
Operating and Capital Budget
Capital Plans

Fiscal Year Ending June 30, 2023

The LVVWD's overall construction program is funded by debt proceeds and pay-as-you-go funding sources. The projects consist of new pumping stations, reservoirs and wells, land acquisition, new water pipelines and recycled water distribution system facilities. The LVVWD capital project-related expenditures for the fiscal year 2022-23 Budget Plan are estimated to be approximately \$240 million.

Prioritization of Capital Projects

New capital projects are submitted for review and approval for consideration of prioritization to the asset owner department Director with supporting documentation that identifies scope of the work, project schedule, and estimated project budget and an initial establishment of project criticality. The project is also reviewed against existing projects to identify any project scope overlap. If approved, the project is forwarded to the Deputy General Manager for concurrence and the project is included in the criticality evaluation as part of the annual capital budget process.

During the annual capital budget process, data in the project management system is updated by project participants to reflect changes in project schedules and funding requirements. This may also lead a project to fall out of the budget year review, but still be prioritized and ranked for future fiscal years. In addition, the project participants also conduct a criticality evaluation to prioritize and rank projects based on the risk of deferring and impacts to water quality, operations, and system reliability using the criteria outlined below. While the project management system houses data for long-range project planning, detailed reviews are largely focused on the upcoming three fiscal years to coincide typical capital project schedules.

Category 4: The projects in this category cannot be deferred.

- The project is active (in construction) and ongoing; or
- The project draws funds from sources other than the Capital Budget and cannot be deferred. Other funding sources for these projects include the oversizing fund, grants, and developer contributions.

Category 3: The projects in this category have a high risk of deferring and have been deemed required or critical to:

- Meet a statutory or regulatory requirement, court order or consent decree; or
- Correct an immediate threat to public health and safety; or
- Correct an immediate threat to worker health and safety; or
- Correct an immediate failure of water quality and treatment systems; or
- Correct an immediate failure of transmission or distribution systems; or
- Strengthen, protect, and/or secure the community's water supply.

Category 2: The projects in this category have a medium risk of deferring and have been deemed necessary to:

- Ensure public health and safety; or
- Maintain worker health and safety; or
- Sustain water quality and treatment systems; or
- Support transmission or distribution systems; or
- Strengthen, protect, and/or secure the community's water supply; or
- Directly reduce costs and/or increase revenues.

Las Vegas Valley Water District
Operating and Capital Budget
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Category 1: The projects in this category have a low risk of deferring and are desired to enhance or provide improved:

- Water quality and treatment systems; or
- Transmission or distribution systems; or
- Service to customers.

Category 0: The projects in this category have no risk of deferring.

The listed criteria present a framework for project prioritization. The senior management team may modify these guidelines or re-prioritize projects based on current needs at any time.

The tables on the following pages show a listing of the specific capital equipment and capital projects included in the LVVWD's capital expenditures for the next fiscal year.

LVVWD: CAPITAL BUDGET 2022-23

CAPITAL EQUIPMENT

3100 - Customer Care & Field Services

Water Meters	\$ 4,500,000
Subtotal	\$ 4,500,000

3400 - Engineering

Base Stations (Survey)	\$ 60,000
Subtotal	\$ 60,000

3700 - Infrastructure Management

SHURE MXCW Wireless Microphone System (LVVWD)	\$ 20,000
LVVWD - Miscellaneous office furniture	40,000
Replacement Remote Operated Underwater Vehicle	45,000
Insertion Flowmeter to measure large diameter pipeline flow	50,000
LVVWD Necessary Unforeseen Equipment	200,000
LVVWD HVAC Replacement	250,000
Subtotal	\$ 605,000

4100 - Operations

Overhead cranes for welding/fabrication shop	\$ 40,000
Storage mezzanine for well equipment and parts at Tropical Satellite	50,000
Subtotal	\$ 90,000

Las Vegas Valley Water District
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4300 - Information Technology

Imagery Server Replacement	\$ 46,800
Solaris Hardware Replacement	60,000
Additional Virtual Server Infrastructure	108,000
Storage Replacement	180,000
General Infrastructure Support	300,000
Subtotal	\$ 345,000

4400 - EHS & CS

1 Lot of 2 Utility Cart additions for LID 3787	\$ 30,000
1 EA Crew Cab Midsize Truck 4X4 or SUV	40,000
3 Ton Forklift addition for LVSP	50,000
Re-budgeted Utility Tractor with Loader	82,455
2 Each of Crew Cab 1/2 Ton 4x4 Pickup or Midsize SUV	86,000
Mobile Self Contained Tower Camera	100,000
1 lot of 4 Mid-size Sedans (LID 4490 G/L 11000)	128,000
Re-budgeted 1 EA Regular Cab 10 Yard Dump Truck 10X8	181,908
1 EA 19500 LB Ext Cab Chassis Truck Equipped w/ CCTV Equipment	285,000
1 Lot of 7 Re-budget vehicles (LVVWD GL 11000)	357,615
Re-budgeted 1 EA Regular Cab 12 Yard Hydro Excavator	464,989
Re-budgeted Lot of 2 Reg Cab Utility w/Crane 6x4 Trucks	499,982
1 Lot of 22 Replacement Pieces of Equipment	1,104,000
1 Lot of 24 Replacement Vehicles	2,608,000
Subtotal	\$ 6,017,949
TOTAL CAPITAL EQUIPMENT	\$ 11,967,749

Las Vegas Valley Water District
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CAPITAL PROJECTS

3100 - Customer Care & Field Services

AMI Endpoint Replacement	\$	1,813,500
Advanced Metering Systems (AMI)		5,000,000
Subtotal	\$	6,813,500

3400 - Engineering

SHAUMBER 3205 NORTH PIPELINE PHASE II AND PRV (C1504)	\$	6
3435 ZONE NORTH PIPELINE, PHASE V (C1573)		4,220
Farhills 3435 Zone Reservoir Site Modifications		4,751
4125 ZONE PUMPING STATION DISCHARGE PIPELINE, PHASE 1 (C1558)		7,789
4125 ZONE PUMPING STATION DISCHARGE PIPELINE, PHASE II (C1559)		31,549
Elkhorn Site - Install Permanent THM System		35,759
EAST ADMIN ROOF REPLACEMENT (C1516)		41,906
4125 Zone North Reservoir Inlet/Outlet Pipeline (C1557)		56,954
Living Machine Decommissioning (C1577)		97,819
Pipeline Installation and Zone Conversion near Warm Springs Road and		121,712
FAYLE RESERVOIR PERIMETER FENCE IMPROVEMENTS (C1562)		147,426
Las Vegas Boulevard Improvements Phase 1		186,365
WELL DERRICK RESTORATION (C1518)		200,000
4125 Zone South Reservoir		213,296
Sloan 2975 Zone Pumping Station Discharge Pipeline		223,800
Blue Diamond 3630 Zone Pumping Station		231,944
Cactus Site - THM Mitigation System Installation		250,000
Sloan 2975 Zone Tanks Inlet/Outlet Pipeline		254,880
Beltway Site - Beltway THM Mitigation System Installation (MEPS6613)		259,528
Blue Diamond Well Discharge Pipeline		261,818
Pipeline Installation in Desert Inn Road at Arville Street		295,969
LVVWD - Miscellaneous Small Backflow Installations, Phase XVI (C1555)		344,160
Meranto Pumping Station Sewer Lateral Installation		376,000
Pipeline Installation in Tamarus Street from Flamingo Road to Rochelle		395,698
Sloan 2745 Zone Reservoir and 2975 Zone Pumping Station		438,298
Blue Diamond 3530 Tank and Power Upgrade		500,000
Northwest Reliability PRVs		504,000
Pipeline Replacements, Viking Road, Topaz Street and Pacific Street		505,424
MISCELLANEOUS VAULTS, RECONSTRUCTION AND REPAIR, PHASE XXIII		513,389
REHAB SCCP IN SAHARA AVENUE (C1509)		518,503
MEDICAL DISTRICT ZONE CONVERSION (C1515)		544,171
REPLACE SCCP & ACP ON FLAMINGO ROAD (C1510)		649,936

Las Vegas Valley Water District
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Power Extension for Rome 2745 Reservoir, 2975 Zone Pumping Station & Springs Preserve Cienega Modifications, PHASE II	661,360
New Facilities Fiber Optic Cable Installation	732,404
Sloan 2745 Zone Reservoir Inlet Outlet Pipeline	753,367
Septic Sewer Conversion - Tioga and La Madre	828,097
Sloan 2975 Zone Tanks	881,443
LAS VEGAS BOULEVARD IMPROVEMENTS, PHASE III (C1497)	1,000,000
MISCELLANEOUS LARGE BACKFLOW INSTALLATIONS PHASE VIII (C1505)	1,030,716
Centennial 3205 Zone North Pipeline, Phase II (C1588)	1,114,146
MISCELLANEOUS LARGE BACKFLOW INSTALLATIONS PHASE IX (C1506)	1,148,300
2150 ZONE & CHRISTY LANE EMERGENCY PRVS (1521)	1,148,599
4125 Zone South Pipelines Phase 2	1,341,873
EAST ADMIN HUMAN RESOURCES RENOVATION (C1500)	1,603,137
4125 Zone South Pipelines	1,753,548
Miscellaneous Pipeline Replacements, Phase IV (C1564)	1,830,551
MISCELLANEOUS PIPELINE INSTALLATIONS, PHASE II (C1574)	2,051,320
MISCELLANEOUS LARGE BACKFLOW INSTALLATIONS, PHASE XI (C1556)	2,094,202
WEST ADMIN BUILDING 3RD FLOOR IMPROVEMENTS	2,231,168
MISCELLANEOUS PIPELINE REPLACEMENTS, PHASE V (C1567)	2,360,000
Backflow Retrofit Program (L0089)	3,187,044
Backflow Retrofit Survey and ROW Support (G0999)	5,253,565
4125 ZONE NORTH RESERVOIR (C1548)	5,593,842
PIPELINE REPLACEMENT IN PARADISE ROAD BETWEEN TWAIN AVE AND 4125 Zone Pumping Station (C1547)	6,459,484
Paving Work Order Project	8,373,020
COUGAR 3090 ZONE INLET/OUTLET PIPELINE (C1551)	8,999,652
Rome Facilities Pipelines (C1561)	9,753,660
ROME 2745 RESERVOIR, 2975 ZONE PUMPING STATION & 2975-2860 ZONE CENTENNIAL 2635 ZONE RESERVOIR AND 2745 ZONE PUMPING STATION	10,044,430
COUGAR 3090 ZONE RESERVOIR (C1550)	12,781,926
Subtotal	\$ 159,597,792

3700 - Infrastructure Management

Pipeline Participation Projects (Orig Funded Bucket)	\$ 106
DDG/AGAVE trailer cart fencing	35,000
Valley View Central Campus Chiller Plant	35,211
Multi-site - Add Sodium delivery at Rice and Underhill Reservoirs	60,000
Springs Preserve Art for upper parking lot (L0181)	65,000
LVVWD Miscellaneous Projects	91,422
LVVWD - SCADA - PC/Server Hardware Upgrades	100,000
District Service Area - Install PRVs to Support SVL Outages	100,000
District Service Area - Misc. Vault Repair	100,000

Las Vegas Valley Water District
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District Service Area - Miscellaneous Concrete and Restoration	100,000
Annual Transformer Replacements	100,000
PRV 196 and 197 - Install Data Monitoring	100,000
Charleston Heights to Ronzone Valve Replacement	112,000
District Service Area - Cathodic Protection Test Station Installation/Repair	120,000
Operations Building AC7 Replacement	120,000
Springs Preserve - Renovation of 3 sets of restrooms on the Springs	120,000
VV Campus admin staff electrical vehicle charging area	125,000
Water reclaimers for conservation of water in wash bays	125,000
LVVWD - Network Switch Upgrades	150,000
Campus/Valley AC units	150,000
Multi-Site Fence Installations	150,000
Multi-Site Large Backflow Installations	150,000
Fiber Vault Lid Replacements FY22/23	184,000
LVVWD ControlLogix Hardware Upgrades (MEPS-8395)	200,000
Springs Preserve Miscellaneous	200,000
Rainbow Well Discharge Line Relocation	200,000
Developer Assisted Service Upgrades	200,000
LVVWD - Replace PLC 5 Remote Racks From Sites	300,000
West Charleston Site - Electrical Equipment Replacement	300,000
Springs Preserve Site - Landscape Lighting Installation	400,000
Electric Vehicle Charging Infrastructure	405,000
Elkhorn 3205 Zone Pumping Station Generator	500,000
Repave Exploration Loop	500,000
Infrastructure Management Innovation Projects	500,000
Washington 2035 Zone Tank Rehabilitation	531,131
District Service Area - Replace Wells at End of Service Life	800,000
Miscellaneous Vault Rehabilitations	1,580,633
UV Installation at Five Well Sites	1,696,959
Miscellaneous High Risk Pipeline Replacements	1,699,883
Steel Pipeline Renewals	3,000,000
Pipeline Participation Projects (City/County)	6,000,000
Oversizing Project	14,175,000
Subtotal	\$ 35,581,345

4100 - Operations

Repair or Replace System Valves	\$ 50,000
Motor Control Center, Starters, Transformers, and Other Repairs	50,000
Replace Large Magnetic Flow Meters	50,000
Electric Motors Repair or Replace	60,000
Annual Pump Repair	75,000
Searchlight Pipeline Replacements and Upgrades (L0170)	200,000

Las Vegas Valley Water District
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Replace Aging/Failed Surveillance and Networking Equipment	475,889
LVVWD Distribution Division Pipeline Rehabilitation, Replacement, &	524,718
Well and Pump Rehabilitation	1,053,069
Service Line Replacement	2,230,470

Subtotal	\$ 4,769,145
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4300 - Information Technology

Venue Booking System Software	\$ 100,000
Water Waste (SNWA/LVVWD 50/50 split)	219,887
Oracle Financials + Chart of Accounts (SNWA/LVVWD 50/50 split)	250,000
ATLAS Content Services Platform Classification and Search for M365	1,375,246
Oracle Supercluster (SNWA/LVVWD 50/50 split)	1,464,067
Mobile Workforce Management (SNWA/LVVWD 50/50 split)	2,083,750
Conservation CDT with C2M & AMI	2,341,300
Enterprise Asset Management Software Replacement (SNWA/LVVWD)	4,410,000

Subtotal	\$ 12,244,249
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4500 - Water Quality & Treatment

Backflow Meter Box Retrofit	\$ 83,333
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Subtotal	\$ 83,333
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7100 - Water Resources

Land Acquisition for New LVVWD Production Well Sites	\$ 1,500,000
Construct LVVWD Replacement / New Wells	1,620,000

Subtotal	\$ 3,120,000
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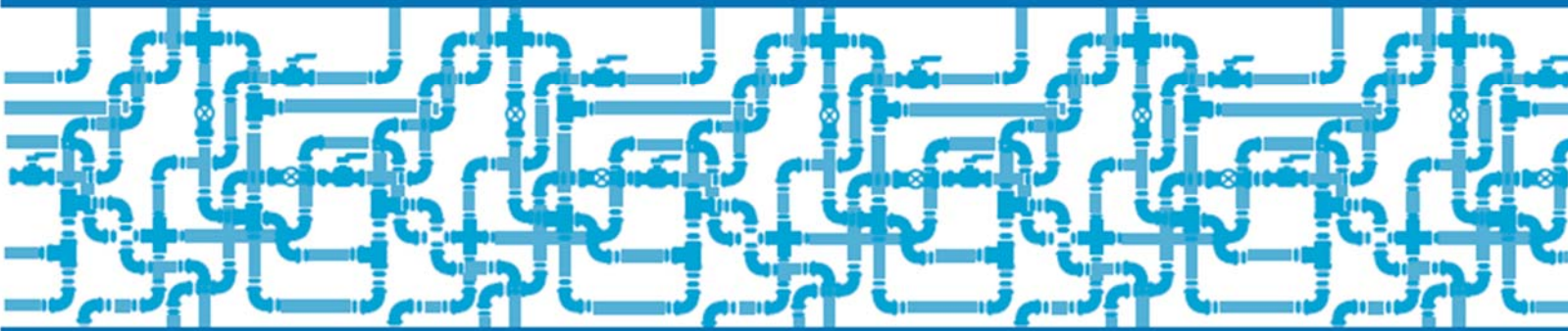
7200 - Public Services

Springs Preserve door replacement (L0182)	\$ 12,000
Springs Preserve Garden Pathway Paving (C1579)	20,100
Refugia Pond Electrical Support	25,000
Courtyard Renovation	100,000
HVAC in Boomtown Bank and Hotel	100,000
Springs Preserve Origen loading dock safety upgrades (L0144)	122,167
Playground Floor Replacement	250,000
Restore Garden Wetlands Area	250,000
Springs Preserve Gardens speakers and low voltage wiring installation	250,000
Origen Remodel	500,000

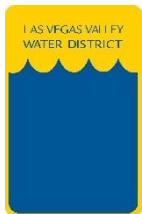
Las Vegas Valley Water District
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Security Gates	500,000
Springs Preserve Misc. Capital 22-32	800,000
SPRING PRESERVE EVENT SITE (C1525)	1,048,983
Springs Preserve Native American Exhibit/Ethnobotanical Garden (L0184)	1,500,000
Subtotal	\$ 5,478,250
TOTAL CAPITAL PROJECTS	\$ 227,687,615
TOTAL CAPITAL BUDGET	\$ 239,655,365

LAS VEGAS VALLEY WATER DISTRICT
CAPITAL IMPROVEMENTS PLAN
2017



LAS VEGAS VALLEY
WATER DISTRICT



LAS VEGAS VALLEY WATER DISTRICT
Capital Improvement Plan 2017-2027

About the Las Vegas Valley Water District

The Las Vegas Valley Water District (LVVWD) is a subdivision of the State of Nevada. The agency was created by a special act of the Nevada Legislature in 1947 to acquire and distribute water, primarily in the Las Vegas Valley. The not-for-profit LVVWD commenced operations in July 1954 and has served as the Southern Nevada region's largest municipal water provider since that time. As of 2017, the water distribution system comprises more than 6,500 miles of pipeline, 53 pumping stations, 70 reservoirs/tanks, 76 production wells, approximately 400,000 water meters and a 3.1 megawatt solar-electric system.

Vision

The Las Vegas Valley Water District's aims to be a global leader in service, innovation and stewardship.

Mission

The Las Vegas Valley Water District's strives to provide world class water service in a sustainable, adaptive and responsible manner to our customers through reliable, cost effective systems.



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CAPITAL IMPROVEMENT PLAN

EXECUTIVE SUMMARY

The Capital Improvement Plan (CIP) outlines the District's plan for achieving organizational goals and objectives. The plan outlines the projected capital needs over a 10-year period.

Doing Business

For much of its past, the District focused on developing new facilities to meet the evolving needs of the community. Between 1980 and 1998, Clark County was among the fastest-growing communities in the nation, which necessitated major capital investments in new infrastructure. However, beginning in late 2007, these conditions changed significantly when much of the nation began to experience significant economic disruption. Local expansion efforts halted abruptly and many projects in progress were put on hold.

During this time and continuing today, the Water District's focus shifted from system expansion to asset management, with an increased emphasis on customer care. In accordance with its mission, the District works to provide a safe, reliable water supply to more than 1.4 million residents within the City of Las Vegas and unincorporated portions of Clark County, Nevada. All functions in support of this mission—from maintaining infrastructure to ensuring accurate metering and protecting water quality—require properly functioning physical assets.

Capital Improvement Plan

Capital improvements are needed to reliably operate and maintain the District's extensive water distribution system, as well as to address state-mandated water quality issues and new development needs. This 10-Year Capital Improvement Plan serves to guide decisions related to maintaining and, as required, replacing those assets, as well as necessary water system expansion and water quality compliance activities.

The following provides a brief introduction to system needs, which are further detailed in the latter portions of this document. Costs represented herein are intended only to detail the size and scope of improvements needed over the 10-year planning

horizon. Cost authorizations for improvements will be considered by the Board of Directors annually as part of the organization's regular budget process.

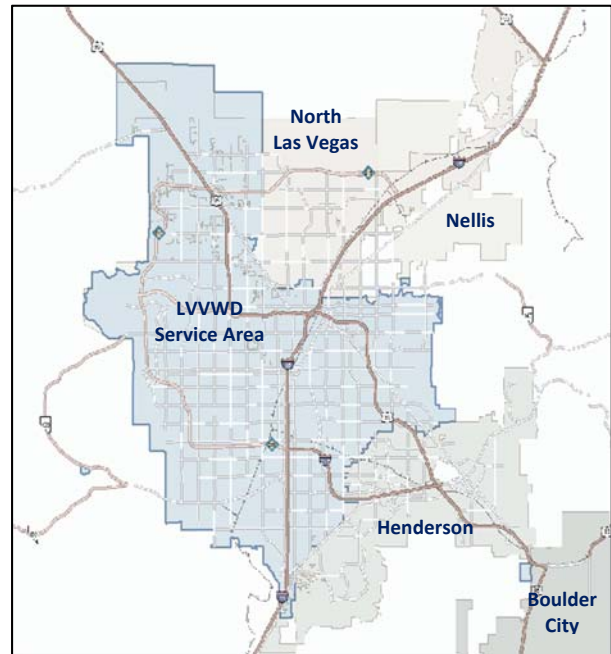


Image: LVVWD Service Area

Asset Management Improvements

The Infrastructure Management department is primarily responsible for overseeing the organization's physical assets, with considerable input and support from the Engineering, Operations, Water Quality and Finance work groups. Because the service life of individual components comprising a large water system can vary by decades, Infrastructure Management uses sophisticated planning tools to develop repair/replacement schedules, allowing for orderly and fiscally prudent implementation.

The agency's infrastructure management strategy is based on five foundational principles:

- Extend infrastructure life and prevent failures through timely maintenance and repairs
- Protect system assets through continual condition assessments
- Assess and prioritize projects to ensure critical

system operations remain functional

- Minimize financial impacts through orderly, phased implementation
- Minimize financial outlays by maximizing asset life cycle

A substantial percentage of the community's water system was constructed in the 1980s to address increasing demands. As a result, numerous facilities now exceed 30 years of age. Research has demonstrated that replacing or repairing utility components under emergency conditions—for instance, a broken water main—is both more expensive and disruptive to customers than affecting maintenance through a systematic approach. Key system components that must be addressed during the 10-year planning horizon include:

- Reservoirs
- Pumping Stations
- Pipelines and Service Laterals
- Valves and Vaults
- Meters
- Water Quality Systems
- Groundwater Wells
- Facilities and Building Improvements
- Electrical Systems
- Communication Systems

Cumulative costs associated with the repair and/or replacement of these hundreds of thousands of components—measures necessary to maintain current service levels, system reliability and water quality—are projected to be approximately \$390 million over the next decade.

Maintaining Water Quality

As a Public Water System, the LVVWD is responsible for ensuring compliance with all water quality regulations, enforced by the Environmental Protection Agency and the Nevada Division of Environmental Protection's Bureau of Safe Drinking Water. In addition to rigorous testing for more than 100 constituents—the Water District collects more than 33,000 water samples annually for analysis—it must comply with mandates from these agencies designed to protect water quality.

Chief among these mandates is what is termed "backflow protection," a mechanism that prevents the reintroduction of water from private properties into the

municipal water system. Compliance with this State requirement will entail the installation of approximately 35,000 backflow prevention devices on meters throughout the District's service area.

New Development Improvements

During the recession, the District deferred all non-essential construction projects. While this decision was fiscally prudent, it required engineers to devise mid-term solutions that could provide access to the municipal water supply for residents and businesses in newly developed areas without investing in additional reservoirs and pumping stations. While those solutions proved effective, the absence of core infrastructure in affected areas undermines system reliability and subjects customers to vulnerability that is inconsistent with organizational standards.



Image: LVVWD Field Repair

To address this issue and ensure these customers receive the same level of reliability as their counterparts in other parts of the valley, the District plans to construct a total of four reservoirs, four pumping stations and associated appurtenances during the planning horizon. The District anticipates to expend approximately \$125.7 million to design and construct these facilities, which will both serve existing customers and support additional development. Additional costs associated with facilities needed to support new communities will be borne by developers.

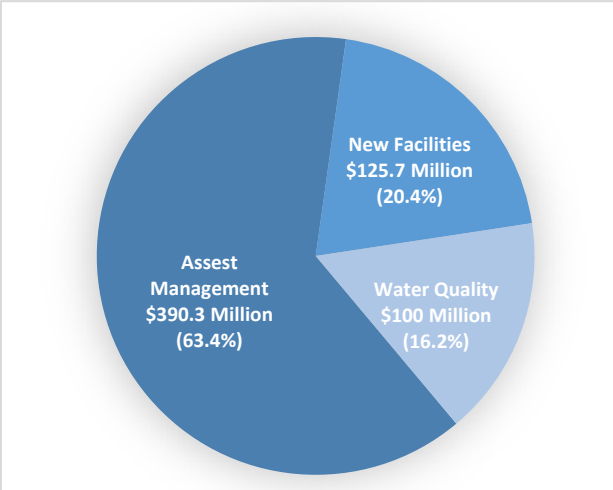


Figure 1.2: Cost Distribution by Improvement Type

10-Year Capital Planning

In total, the asset management, water quality protection and system expansion activities outlined in this document represent an investment of \$616 million over the 10-year planning horizon. These improvements will help the District to maintain current service and water quality standards, ensuring continued reliability for the residents and businesses that depend upon this vital resource.

CAPITAL IMPROVEMENT PLAN

ORGANIZATIONAL OVERVIEW

Introduction

The Nevada State Legislature created the Las Vegas Valley Water District in 1947 to help manage local groundwater supplies. The newly-formed agency acquired the assets of its predecessor and began operations in 1954 as the municipal water provider for Las Vegas and unincorporated Clark County.

Transition and Growth

In the period between its creation and the early 1970s, the District got to work repairing and expanding the water system to meet the growing needs of the community. These efforts included installing more than 800 linear miles of pipeline and increasing reservoir storage to approximately 160 million gallons. At the same time, the District also entered into an agreement with what is now known as Basic Management Inc. for expansion of its small industrial line to deliver Colorado River water to the District's service area. These efforts decreased the community's reliance on groundwater supplies and marked the organization's first major initiative to help stabilize the local water table.

Post-war expansion paled in comparison to the unprecedented population growth that occurred over the years that followed. In the 1980s and '90s, Las Vegas ranked as the nation's fastest-growing city virtually every year. In response and to fulfill its mission of meeting the community's water needs, the District engaged in an infrastructure construction initiative without parallel in the United States. At the same time, water demands soared, necessitating a cohesive, regional approach to resource management. This resulted in the creation of the Southern Nevada Water Authority (SNWA), of which the District serves as the administrative entity.

Current Environment and Operating Priorities

Beginning in 2007, the nation began to experience the most significant economic downturn since the Great Depression. Southern Nevada was hit harder than almost any other region in the nation, and this period of recession marked the first time in decades

that the Las Vegas area experienced a sustained period of little or no growth. During this time, most new residential and commercial development projects came to a halt. While economic recovery is occurring, the massive booms of prior decades have not returned. As a result, the District's operational priorities have changed in response to meet the evolving needs of the community. While expanding the water system to accommodate new customers remains a core responsibility, the emphasis has shifted to ongoing operations and infrastructure management.

Today, the District provides water service to an area approximately 300 square miles in size, serving more than 375,000 residential and commercial customers through a network of approximately 6,500 linear miles of pipelines and service laterals. Accomplishing this task requires the agency to maintain millions of individual components, ranging in size from the small service laterals that deliver water to individual homes to massive pumping stations and reservoirs.

Strategic Approach

As a public, not-for-profit water agency, the District is committed to managing its finances and assets responsibly. The system represents a significant community investment; in total, the agency's capital assets were valued at \$1.7 billion as of the last fiscal year. As with all capital assets, depreciation is inevitable, although the rate and degree thereof are influenced by many factors. The responsibility for optimizing the value of these assets—maximizing service life while maintaining the reliability of water delivery—rests with the LVVWD's infrastructure management and maintenance programs.

Calculating the necessary rate of replacement for water facilities is the responsibility of the District's Infrastructure Management department, which maintains an inventory of water system components categorized by type, age and material. The service life of a given pipeline, pump or valve is influenced by a variety of factors, but knowing when to replace assets is the key to operational efficiency, as well as minimizing leaks and service interruptions. These engineering professionals also work to optimize

infrastructure value by refurbishing equipment when possible instead of prematurely replacing it.

Given that the community's water system comprises millions of discrete components—from small 5/8" laterals serving individual homes to massive pumping stations that move water to the Las Vegas Strip—fully accounting for the entirety of an infrastructure network is a significant challenge. Infrastructure Management, Operations and Engineering work in concert to ensure that facilities are maintained in working condition and upgraded or replaced when needed.

As shown in Figure 1.3, the LVVWD evaluates the condition of its assets to identify potential issues, manage operational risks and reduce costs. By maintaining a comprehensive infrastructure inventory and reflecting factors such as age, material type, operating environment and historical failure rates, LVVWD is able to project capital reinvestment needs over decades, phasing projects to minimize spikes in financial outlays while maintaining the system's integrity. This strategy has proven highly effective; LVVWD customers enjoy one of the nation's most reliable water systems, with a leak rate far below the national average and an efficiency rating that has been classified as "world-class" by the International Water Association.

As with all systems, age is becoming a factor for the LVVWD infrastructure network. Some system components are now approaching or are more than 50 years old. The issue of aging infrastructure is hardly unique to Southern Nevada. To the contrary, the LVVWD's system is relatively young compared to other metropolitan communities. It is incumbent upon the LVVWD to undertake strategically guided rehabilitation and replacement initiatives in order to assure that Las Vegas does not experience similar service outages and leak rates such as have befallen other metropolitan communities. In total, current estimates by the American Water Works Association indicate that communities in the United States will need to collectively invest more than \$1 trillion over the next 25 years to restore and expand public water systems.

To finance capital projects associated with system maintenance and expansion, the LVVWD uses funds generated through a combination of bond proceeds, water rate revenue and low-interest loans from the State Revolving Fund for drinking water systems. These three revenue streams provide access to funds for necessary improvements and save ratepayers money by reducing interest costs, a benefit of the LVVWD's AA Standard & Poor's rating and Aa1 Moody's rating.

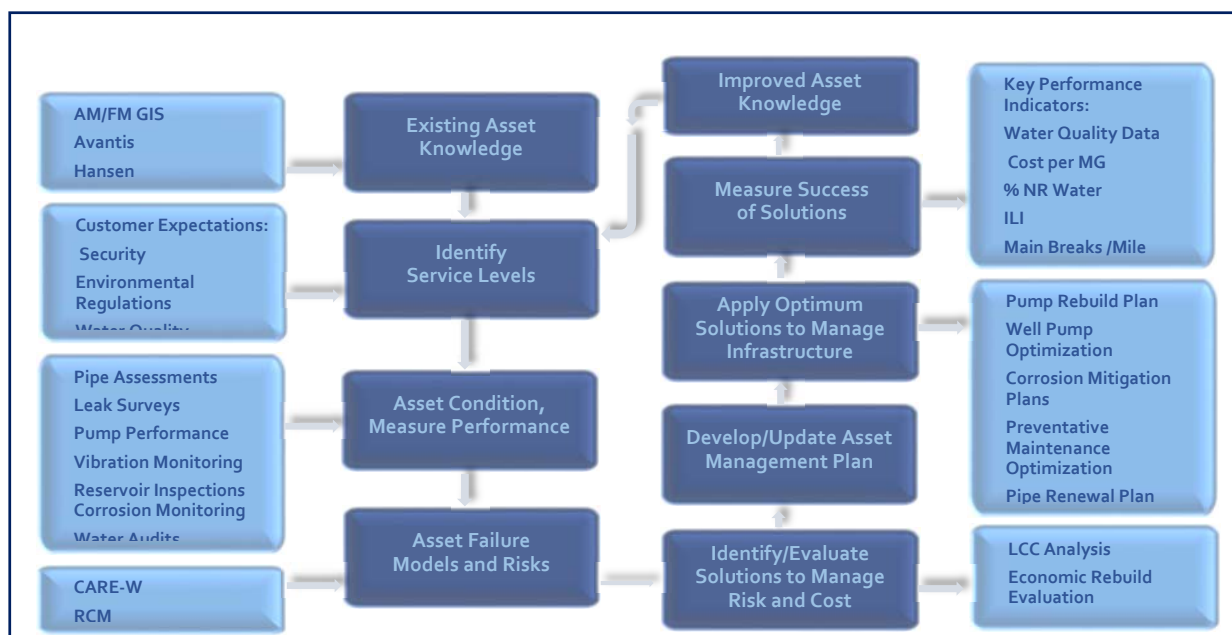


Figure 1.3: LVVWD Asset Management Life Cycle

Maintaining a fiscal balance between the “pay-as-you-go” approach and long-term financial instruments is key. Overuse of bonds can negatively impact the agency’s credit rating, resulting in higher interest rates, while funding all projects as they occur results in financial instability and significant rate fluctuations. Another important aspect related to project financing is maintaining appropriate reserves; strong reserves positively impact credit ratings and improve the agency’s ability to respond to short-term capital needs or economic fluctuations.

This Capital Improvement Plan is intended to reflect projected capital improvement needs in the LVVWD service area over a 10-year planning horizon (2017 – 2027). The precise timing and cost of individual elements will be prioritized from year to year based on need and accounted for as part of the LVVWD’s annual budget process. The following section provides an overview of purpose and need, and estimated cost in the areas of asset management, new facilities and water quality improvements.

CAPITAL IMPROVEMENT PLAN

ASSET MANAGEMENT

Introduction

In the context of a public water system, asset management refers to the proactive approach employed by utilities to reduce the life-cycle cost of infrastructure while maintaining high levels of reliability and meeting water-quality standards. At the District, this initiative is spearheaded by the Infrastructure Management department with considerable support and input from the Engineering, Operations and Finance work groups. Given the millions of individual water system components that must be evaluated based upon age, materials and projected service life, the District's asset management process is complex. However, the objective is simple: optimize system efficiency and the use of ratepayer dollars.

Achieving this goal requires the District to balance several factors, including cost, quality, reliability and safety. An excessively conservative approach could result in higher cost, particularly if equipment and facilities are replaced well before the end of their useful life cycle. Conversely, too little vigilance opens the door to frequent service outages, high leak rates and compromised water quality.

The LVVWD's infrastructure management strategy is based on several foundational principles:

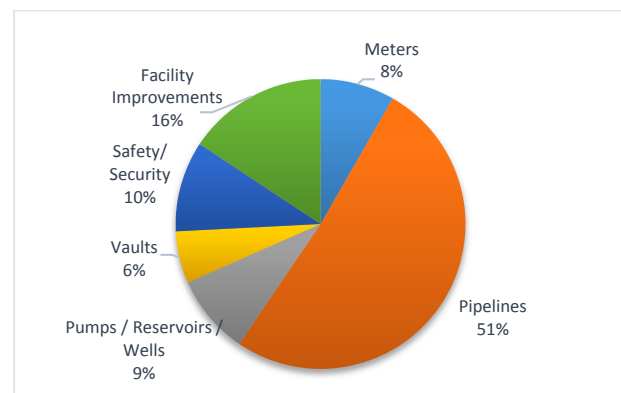
- Extend infrastructure life and prevent failures through timely maintenance and repairs
- Protect system assets through continual condition assessments
- Assess and prioritize projects to ensure critical system operations remain functional
- Minimize financial impacts through orderly, phased implementation
- Minimize financial outlays by maximizing asset life cycle

While it is not unusual to implement numerous asset management-related projects simultaneously, the overall program must be managed on a longer-term basis to execute activities in an orderly manner. For the LVVWD, that means anticipating needs and

scheduling work over a 10-year planning horizon. On an annual and ongoing basis, the LVVWD will conduct assessments to gauge progress and identify any necessary course adjustments.

The agency projects that an investment of approximately \$390 million will be required over the planning horizon to maintain system infrastructure in a manner that meets current service levels and water quality standards. As shown in the Figure 1.5, key projects include: reservoir and pumping station maintenance and rehabilitation; replacement and renewal of vaults and valves; pipeline and service lateral replacement; cyclical water meter replacement; upgrades to the Supervisory Control and Data Acquisition (SCADA) operations control system and improvements to existing facilities throughout the valley.

Figure 1.5: Cost Distribution (%) by Asset Type



Asset Management Activity Detail

A detailed overview of major asset management activities included in the District's 10-year Capital Improvement Plan is provided below. While this plan reflects long-term projected expenditures, it does not represent a blanket authorization of funding for these improvements. Projected expenditures will be considered before the Board of Directors through an annual budgeting process for consideration and authorization. Each individual project also requires further authorization, with a majority of the projects requiring Board approval. This ensures that the Board is provided timely and complete information about asset management priorities and associated annual

costs, and has the opportunity to assess progress related to the plan's implementation.

Reservoirs

The Las Vegas Valley's bowl-like topography features approximately 2,000 feet of elevation change from downtown to the far reaches of the community, effectively precluding a "direct delivery" water system. Instead, water is pumped to higher-elevation storage reservoirs and delivered to customers via gravity. Reservoirs provide far greater reliability than direct-delivery systems, which are vulnerable to service interruptions caused by outages. In total, the District maintains more than 70 reservoir basins and tanks throughout the Las Vegas Valley. Collectively, these facilities hold nearly a billion gallons of water for delivery to customers.

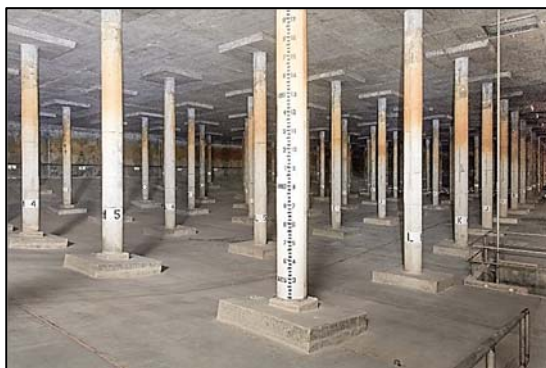


Image: Alta Reservoir

District reservoirs are typically constructed of concrete and installed below ground. This design protects them from the elements, helps safeguard water quality, stabilizes temperatures and provides for an exceptionally long service life if properly maintained. The District also maintains a small number of above-ground steel tanks as dictated by operating conditions and location. In addition to regular inspections of reservoir components critical to protecting water quality, these facilities are fully assessed every five years and serviced as needed. Typical capital reinvestment needs associated with these facilities include replacement of basin inlet and outlet valves, cathodic protection anodes, valve actuators, mixers, aeration systems, vent screening and back-up electrical generators. Over the next 10 years, the District projects that annual costs associated with maintaining reservoirs will be less than \$500,000, bringing the cumulative 10-year total to approximately \$4.65 million.

Pumping Stations

Most of Southern Nevada's drinking water comes from the Colorado River, drawn from pipelines within Lake Mead. The regional entity responsible for treating this water, the Southern Nevada Water Authority, sells water to local purveyors like the District at a wholesale rate and delivers it through facilities called Rate-of-Flow-Control Stations into receiving reservoirs.



Image: LVVWD Pumping Station

For most customers, this is only the beginning of their water's journey. From these receiving reservoirs, water is pumped to dozens of District-operated reservoirs located

throughout the valley. During summer months, when water use is highest, the District delivers more than 400 million gallons a day to its customers. To accomplish this, the agency operates more than 50 pumping stations that collectively produce 90,000-plus horsepower and have the capacity of 1.2 million gallons of water per minute. This is sufficient to meet even the highest "peak" demand. The ability to move water quickly around the valley is especially critical for fire suppression; there are approximately 30,000 fire hydrants within the District service area.

While variables such as the manufacturer and usage patterns affect the service life of individual pumps and ancillary equipment, a full pumping station is estimated to have a 100-year service life. The District evaluates pump performance semiannually by using an analysis of SCADA data to identify any issues. Major rehabilitation is typically performed at intervals of 35 and 65 years, while individual pumps undergo regular preventative maintenance. Performance monitoring systems automatically shut pumps down if anomalies occur, minimizing the impact of a failure. Several of the LVVWD's major pumping stations are

at or beyond the 35-year threshold and require refurbishment.

Expenditures associated with pumping stations are expected to be relatively modest given the District's successful ongoing maintenance activities. The cumulative 10-year cost associated with asset management on these facilities will be approximately \$6.7 million.

Pipelines and Service Laterals

If pumping facilities represent the water system's heart, pipelines and service laterals are the veins that keep the community's lifeblood flowing. From the 5/8" service laterals that connect homes to the water mains beneath neighborhood streets to enormous 7-foot pipelines, the District must maintain approximately 6,500 miles of pipes, all constructed during different decades from a variety of materials.

The type of material from which pipelines are manufactured largely dictates their service life. In many parts of the District's service area, water mains are more than 40 years old. Where feasible, engineers incorporate auxiliary interconnections into the design that allow water to be rerouted to a property in the event of a pipeline break. Areas without such interconnections are most vulnerable to service outages, making their maintenance or replacement an even greater priority.

Given the immensity of the pipeline and service lateral network, it is not surprising that this category of infrastructure represents the largest reinvestment need for the organization. The pipeline system consists primarily of ACP (cement), PVC, steel and ductile-iron, while service laterals are fabricated largely from copper with a small percentage of polyethylene lines. Service life projections vary dramatically by material. For instance, polyethylene (an industry standard during the 1970s and '80s) has a far shorter service life than copper, exemplified by a failure rate 50 times that of copper. As a result, the District is aggressively replacing these laterals, which pose an unacceptable risk to the organization's high service reliability standards.

The District uses an array of tools—including acoustic wave technology—to perform pipe condition assessments, often without excavation. Based upon data collected in the field and service life status, the

Asset Management team prioritizes replacement activities. To minimize disruption to customers and commuters during replacement, the District coordinates with other entities that may be executing construction projects such as road repaving or sewer system upgrades. For example, the District has developed a comprehensive master plan for replacement of the major pipelines serving the Las Vegas Strip; given the implications of major construction-related traffic impacts to employees and businesses in that corridor, the District will work in tandem with other agencies to minimize the duration of construction windows.



Image: LVVWD Pipeline Repair

Throughout the distribution system, the LVVWD is scheduling replacement of older sections of pipeline based upon leak incidence, breakage history and direct assessments. Addressing these issues systematically and proactively is critical given the implications of a prolonged service interruption for residential and commercial customers. Over the next decade, the LVVWD projects pipeline replacement costs of \$130 million, with an additional \$70 million required for service lateral replacements.

Valves

Most people are familiar with the water valves used in their landscape irrigation system. Within the context of a community water system, valves serve much the same function, but on a far larger scale—allowing water to be quickly shut off or rerouted in the event of a pipeline break or other failure. Given the importance of an uninterrupted water supply in this desert community, the ability to isolate a failed pipeline or appurtenance does more than simply reduce water loss. It also expedites the repair or replacement of the faulty component, minimizing the duration of service interruptions. Operations crews work to ensure that

the system's approximately 120,000 valves are maintained in working condition, "cycling" them periodically to prevent seizing and replacing them as necessary. Valves are also systematically changed out when the water main they serve is replaced. As a result of these efforts, the average elapsed time between notification of a pipeline break and shutdown is less than one hour.

Valves associated with large-diameter pipelines are housed in below-ground concrete structures called vaults; within the District's service area, there are approximately 2,300 vaults, which allow working access to underground equipment for testing, maintenance and replacement without excavating streets or private property. There are two categories of vaults: system vaults and meter vaults. System vaults house the isolation valves and are installed in public rights-of-way. Meter vaults, which house equipment used for accounts with meters sized 3" and larger, are located on individual properties. While both types of vaults are structurally designed to withstand traffic and soil loadings, they do have a finite service life. Inspections are conducted on a three-year cycle, with repair/replacement conducted as warranted by conditions.

On average, the District anticipates the need to replace 240 valves and execute 40 vault rehabilitation projects per year, in addition to "cycling" nearly 10,000 valves annually to ensure that they remain functional. The total cost associated with these activities is cumulatively projected at \$22.5 million during the next decade.

Meters

In the early days of the District, the introduction of meters to measure water use was controversial, which is not surprising given that the average person used more than 600 gallons per day. Today, our community is among the world's leaders in water conservation, and meters are the foundation of a system that rewards efficiency by directly linking costs with water consumption. In addition to providing an equitable way to share costs for both the water and the infrastructure necessary to deliver it, metering encourages water efficiency. Allowing customers to track their water consumption is one of the tools Southern Nevada has used to cumulatively save more than half a trillion gallons of water during the current Colorado River drought.

The LVVWD is responsible both for installing meters at new services and for maintaining approximately 375,000 water meters already installed in the LVVWD service area. There are currently 11 different meter sizes in the system, ranging from the 5/8" units that serve many homes to 12" meters that support large-scale water users such as resort properties. New technology allows meter reading to be performed remotely, saving on labor costs.

However, as with all mechanical devices, meters have a finite service life and must be replaced

periodically. Additionally, because meter technology has changed significantly over time, many meters—particularly large meters serving businesses—can no longer be repaired because the parts have become obsolete and are no longer



Image: Valve/Vault Repair

manufactured. As meters age, they can begin to under-report usage, resulting in customers using more water than is accounted. Potential revenue loss associated with this is estimated to be as much as \$1 million annually.

To address failing meters, the District has implemented a Preventative Maintenance Program to replace aging metering equipment. In addition to ensuring that customers' bills are commensurate with their demand, replacing high-volume meters with new technology—such as turbine meters—mitigates pressure loss, improving those properties' level of service. The LVVWD anticipates that costs associated with this program will be approximately \$3.25 million annually over the next decade. A portion of those outlays will be recovered as those customers' water use is more accurately billed through the new meters.

Water Quality Controls

Although water delivered to the District from the Southern Nevada Water Authority and groundwater wells has been treated and tested to ensure it meets all state and federal health standards, the integrity of customers' drinking water must be maintained and carefully monitored all the way to the tap. For instance, chlorine levels dissipate over time, requiring periodic rechlorination to prevent bacteria from entering the water. Conversely, levels of chlorination byproducts—which themselves can have harmful effects—must be carefully managed.

To maintain water quality in the distribution system, the District operates scores of sampling stations, from which more than 30,000 samples are drawn annually for analysis. Additionally, the centralized Supervisory Control and Data Acquisition (SCADA) center allows operators to monitor the water system 24 hours a day, including the use of in-line sensors to detect subtle changes in water quality.

Costs associated with this critical function are relatively modest. The high-tech SCADA center, for instance, is projected to require approximately \$6 million in upgrades over the planning horizon—much of it associated with upgrades to rapidly-advancing computer hardware and software. Other investments in water quality are embedded in broader facility maintenance initiatives that cover security enhancements and a host of other water quality protection-oriented projects.



Image: Supervisory Control and Data Acquisition (SCADA) center.

Groundwater Wells

Originally the sole source of water for Las Vegas residents, groundwater today represents about 10 percent of the District's supply. Despite its relatively modest role as a resource, groundwater is integral to meeting summer peak demand. The ability to supplement water from Lake Mead with this renewable supply reduces the strain on the region's water treatment facilities and extends our community's Colorado River allocation. Additionally, wells—which can be operated if necessary by generators—represent an excellent emergency water source.

To prevent adverse hydrologic impacts associated with withdrawals, groundwater pumping is distributed through more than 70 wells, largely located in the central and western parts of the Las Vegas Valley. Some of these wells are also used to store water saved through the community's successful conservation efforts; by reversing the powerful pumps, water can be injected into the aquifer for storage and future use.

A well system is comprised of two major components: the pumping equipment, and the wellbore itself. The service life expectancy of a wellbore can vary significantly depending upon its composition. Newer



Image: LVVWD Groundwater Well

wells have an expected lifespan of 75 years, while older wells typically last between 40 and 60 years. Pumping equipment has a far shorter service life, rarely exceeding 13 years. Technicians monitor pumping efficiency to determine the optimal replacement or refurbishment window.

Over the next 10 years, 13 wellbores will require significant rehabilitation or redrilling, while five well pumps require replacement or rebuilding annually. During the 10-year planning horizon, the District anticipates that well- and pump-related costs will be approximately \$15.6 million.

Facilities and Capital Improvements

Treating and delivering water requires a tremendous amount of electrical energy; from pumping stations and reservoirs to well facilities and the LVVWD's main campus, maintaining the reliability of the power supply is critical to the agency's operations. This entails assessing and servicing transformers and electrical panels throughout the valley. In support of its sustainability initiatives, the LVVWD also operates several solar photovoltaic generation facilities, which are co-located with existing infrastructure and provide electrical power to support operations.

Information systems also play a crucial role in ensuring that the community's water supply remains both reliable and safe. As noted above, the SCADA control center—which monitors water quality and production levels in virtually real-time—relies upon an extensive communications network. In addition, electronic facility intrusion detection and cyber-security are central to the ongoing protection of the community's water system.

The District maintains a fleet of more than 600 automotive vehicles and a similar number of heavy machines, including cranes, used to support facility maintenance and replacement, respond to emergency service outages, and conduct routine functions like valve cycling and meter reading. This award-winning fleet is housed at the District's main campus on Valley View Boulevard, which also serves as the base for the agency's customer service center,

equipment warehouse, fleet maintenance center, administrative offices and other core functions. This 300,000-square-foot complex encompasses numerous buildings with all of the associated electrical, HVAC, communications and office infrastructure, and equipment.

Security, safety and fleet-related expenditures are projected at approximately \$3.9 million annually over the next decade. Costs associated with electrical, telemetry and other related infrastructure is budgeted at \$3.45 million per year over the next 10 years, with an additional \$2.7 million annually for repair, replacement, and upgrades to infrastructure and equipment housed at the primary campus.

Asset Management Summary

A summary of forecasted Asset Management activities and associated costs over the 10-year planning horizon is detailed in Figure 1.6. Costs are represented in aggregate; however, LVVWD work efforts will be executed in a phases based on asset assessment results and need. Proposed expenditures to support this work will be presented to the Board of Directors for consideration and authorization as part of the annual budget process.

Figure 1.6: Projected Asset Management Activity and Cost by Asset Type

ACTIVITY	10-YEAR	PERCENTAGE
Meter Program	\$32.4 million	8%
Vault Program	22.5 million	6%
Service Laterals	70.0 million	18%
Pipeline Rehabilitation and Replacement	130.0 million	33%
Facilities Improvements	27.0 million	7%
SCADA	6.0 million	2%
Pump Stations	6.7 million	2%
Reservoirs	4.65 million	1%
Wells	15.6 million	4%
Reclaimed Water	1.7 million	<1%
Fleet, Safety and Security	39.3 million	10%
Misc. Capital	34.5 million	9%
TOTAL	\$390.3 million	

CAPITAL IMPROVEMENT PLAN

WATER QUALITY

The District is responsible for ensuring that municipal water supplies meet strict state and federal health standards. To accomplish this, the agency collects more than 33,000 water samples a year and analyzes them for more than 100 regulated and unregulated contaminants. The instrumentation used to test water quality can detect some compounds at one part per trillion, the equivalent of one teaspoon of water in 2,100 Olympic-size swimming pools. Additionally, the LVVWD's high-tech SCADA operations center uses advanced instrumentation to detect minute changes in water quality, providing a greater degree of protection.

To support its mission of providing customers with a safe, reliable water supply, the District works closely with the State of Nevada to identify and reduce any potential vulnerabilities to water contamination, including conditions known as backsiphonage or backpressure, more commonly referred to as backflow. This occurs when negative pressure in the system causes water to reverse its flow. There are a number of situations that can potentially cause this to occur. For example, a sudden decrease of water pressure due to a main break or a significant draw on hydrants for firefighting efforts can potentially cause backflow conditions. When this occurs, water from an individual property's plumbing system can be drawn back into the public portion of the water distribution network.

To prevent this from occurring, the State of Nevada in the mid-1990s began requiring the installation of backflow prevention devices on all new properties except single-family homes. These valve-like devices protect the community's drinking water system by preventing water from being siphoned back into water mains from private properties. This mandatory program is managed by the Nevada Division of Environmental Protection and requires that all backflow devices be tested annually by a certified technician.

System Needs

Approximately 35,000 meters within the District's service area require backflow protection. To fulfill state requirements, the District prioritized backflow installations based on their degree of risk to the system and has begun systematically retrofitting properties that require backflow protection. An annual cost of \$10 million is needed over the 10-year planning horizon to implement its backflow retrofit program. The cost of individual retrofits varies by meter size and range from approximately \$3,000 for small meters to more than \$33,000 for 10" meters. The projected cost is anticipated to address approximately one-third of outstanding retrofit needs over the next decade. The quantity of devices involved and labor-intensive nature of the installations precludes a more aggressive approach.



Image: Commercial Backflow Assembly

CAPITAL IMPROVEMENT PLAN

NEW FACILITIES

Since its inception, the District has worked to develop, operate and maintain its water distribution system in a manner that meets the needs of the community. This includes ensuring the reliable delivery of high-quality water to all customers. Over the decades, this has required the agency to install thousands of miles of water mains, hundreds of millions of gallons worth of reservoir storage and massive pumping stations necessary to move water around the valley.

When the recession that began in 2007 brought commercial and residential development to a virtual standstill, the District quickly responded by curtailing facility expansion and reliability enhancement projects, and by deferring many of the major asset management needs discussed in the preceding section. In total, hundreds of millions of dollars' worth of construction activities were postponed, which increased the strain on the community's water system. Given the uncertain financial climate, it was determined this action to be in the best interest of both ratepayers and the organization.

System Needs

Today, development activity has resumed in Southern Nevada, although certainly not to the degree experienced in the decades prior to the recession. Accordingly, the LVVWD has resumed planning activities associated with expansion of the community's water delivery system. This action is necessary for the organization to fulfill its mission of providing a safe, reliable water system to all municipal water customers in its service area.

Below is a summary of three major system improvement projects planned for development within the 10-year planning horizon. None of these projects are being constructed exclusively for prospective development; rather, all simultaneously benefit existing customers while facilitating access to the municipal water supply for planned developments.

NEW FACILITIES

Northwest Major Facilities (NW)

Within the northwest portion of the Las Vegas Valley, approximately 21,000 customers in three separate pressure zones are serviced by a single pumping

station and a single reservoir; a major development currently under construction is anticipated to bring that number to nearly 30,000 customers. In the event of a service interruption, current reservoir storage is inadequate to support customers for extended periods of time. New facilities are needed to address the strain on existing infrastructure and to reduce residents' vulnerability to service interruptions associated with scheduled or emergency outages.

New facilities planned for construction include the development of two new water storage reservoirs—one with a capacity of 10 million gallons, the other with a capacity of 5 million gallons—along with two pumping stations and associated appurtenances. The estimated cost of these improvements is \$61.8 million.

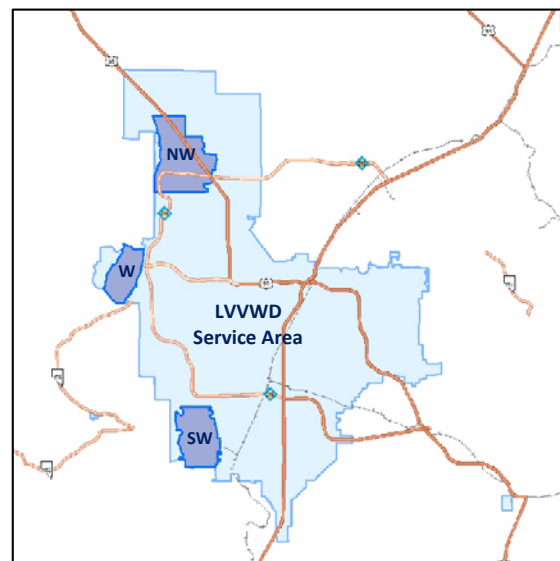


Figure 1.7: Customers to be served by new facilities

West Major Facilities (W)

Unlike the vast majority of customers in the District's service area, residents and businesses in this portion of the valley depend on direct delivery for their water service. As discussed previously, direct delivery is less reliable and impacts could arise in the event of scheduled and unanticipated outages, such as a water main break. Without storage or other redundant systems, customers could experience immediate service impacts.

New facilities planned for construction in this service area include the development of a 10-million-gallon water storage reservoir, a pumping station and associated appurtenances. Constructing this long-planned but deferred reservoir will reduce vulnerability and enhance overall system reliability. Additionally, it will provide additional capacity and emergency storage for any additional residential or commercial expansion that may occur in the area. The estimated cost of these improvements is \$30.1 million.

Southwest Major Facilities (SW)

Within the southwest portion of the valley, there are more than 6,600 customers served by a single water storage reservoir and pumping station. These facilities are located approximately 3 miles away from

their furthestmost service connection. In the event of a service interruption, current reservoir storage is inadequate to support customers for extended periods of time. New facilities are needed to address the strain on existing infrastructure and reduce residents' vulnerability to service interruptions associated with scheduled or emergency outages.

New facilities planned for construction include a 10-million-gallon water storage reservoir, pumping station and associated appurtenances. In addition to providing an emergency water supply in close proximity to customers, the proposed reservoir will alleviate pressure variability issues associated with the current engineering configuration. This benefits existing customers not only in terms of reliability, but in service quality as well. The estimated cost of these improvements is \$33.8 million.

Figure 1.8: Projected Activity and Cost by Asset Type

ACTIVITY	COST
Northwest Facilities	
5 MG Reservoir & Associated Inlet/Outlet Pipeline	\$10.6 million
10 MG Reservoir & Associated Inlet/Outlet Pipeline	26.0 million
Pumping Station & Discharge Pipeline	13.6 million
Pumping Station & Discharge Pipeline	10.9 million
Pressure Reducing Valves	700,000
<i>Subtotal</i>	<i>\$61.8 million</i>
Summerlin Facilities	
10 MG Reservoir & Inlet/Outlet Pipeline	\$22.5 million
Pumping Station	7.6 million
<i>Subtotal</i>	<i>\$30.1 million</i>
Southwest Facilities	
10 MG Reservoir	\$20.8 million
Pumping Station	12.3 million
Pressure Reducing Valves	700,000
<i>Subtotal</i>	<i>\$33.8 million</i>
TOTAL	\$125.7 million

SECTION 7

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**LAS VEGAS VALLEY
WATER DISTRICT™**

Debt Management Policy

In Accordance With
NRS 350.013



**LAS VEGAS VALLEY
WATER DISTRICT™**

June 30, 2022

Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2023

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Debt Management Policy

NRS 350.013 Subsection 1(c)

Introduction

The Las Vegas Valley Water District (LVVWD) is a quasi-municipal corporation created by the State of Nevada (State) pursuant to a Special Act (the Act) of the Legislature in March 1947. The Las Vegas Valley Water District Act is available online at:

<https://www.leg.state.nv.us/SpecialActs/62-LasVegasValleyWater.html>

The LVVWD was created for the purpose of obtaining and distributing water, primarily in the Las Vegas Valley, which includes the metropolitan area of Clark County (County) and the City of Las Vegas. Because the County Board of Commissioners serves as the LVVWD Board of Directors (Board), the LVVWD is included as a blended component unit within the County's Comprehensive Annual Financial Report. A component unit can be a legally separate organization for which the elected officials of the primary government are financially accountable. For purposes of this report, the LVVWD alone is the reporting entity.

The LVVWD's current debt structure is presented in the appendix. The LVVWD has three options to issue debt:

- The LVVWD can issue debt in its own name. Standard & Poor's rates the LVVWD bonds "AA", and Moody's Investors Service rates them "Aa1". This rating makes the LVVWD Bonds "high investment" grade.
- The LVVWD can issue debt through the Clark County Bond Bank. Standard & Poor's rates County bonds "AA+", and Moody's Investors Service rates them "Aa1".
- The LVVWD can issue debt through the State Bond Bank. Standard & Poor's rates State bonds "AA+", and Moody's Investors Services rates them "Aa1".

By contract, the LVVWD operates the Southern Nevada Water Authority (SNWA), and the LVVWD has issued debt for the SNWA, which is additionally secured by the SNWA's Pledged Revenues. See the appendix for a listing of the LVVWD debt secured by the LVVWD revenues, and debt the LVVWD has issued for the SNWA, additionally secured by the SNWA's Pledged Revenues.

The proceeds of debt issued by the LVVWD is restricted for the purchase and/or construction of capital assets. The LVVWD Capital Improvement Plan (CIP) is a phased construction program outlining current construction expenditures, as well as projected future expenditures for construction of capital assets. In addition to issuing debt to fund the purchase and/or construction of capital assets, the LVVWD also budgets a portion of operating revenues to fund capital assets on a pay-as-you-go basis.

Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2023

This document is not intended to review the LVVWD's total financial position. In addition to being required by state law, this analysis of the LVVWD's debt position is important for capital asset planning purposes, and to determine if the LVVWD rates and charges are sufficient to cover current and future operating expenses and debt service. Decisions regarding the use of debt will be based in part on the long-term needs of the LVVWD and the amount of funds dedicated in a given year to capital expenditures.

Below are excerpts from Nevada Law which requires local governments to submit a debt management policy:

NRS 350.013 Municipalities to submit annually statement of current and contemplated general obligation debt and special elective taxes, statement of debt management policy, plan for capital improvement or alternate statement and certain information regarding chief financial officer; update of information; exceptions.

(1) Except as otherwise provided in this section, on or before August 1 of each year, the governing body of a municipality which proposes to issue or has outstanding any general obligation debt, other general obligations or special obligations, or which levies or proposes to levy any special elective tax, shall submit to the department of taxation and the commission:

(c) A written statement of the debt management policy of the municipality, which must include, without limitation;

(1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt;

(2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit;

(3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in the state;

(4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality;

(5) Policy regarding the manner in which the municipality expects to sell its debt;

(6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and

(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (d), if those costs and revenues are expected to affect the tax rate.

(d) Either:

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(1) Its plan for capital improvement for the ensuing 5 fiscal years, which must include any contemplated issuance of general obligation debt during this period and the sources of money projected to be available to pay the debt; or

(2) A statement indicating that no changes are contemplated in its plan for capital improvement for the ensuing 5 fiscal years.

(e) A statement containing the name, title, mailing address and telephone number of the chief financial officer of the municipality.

(2) The governing body of a municipality may combine a statement or plan required by subsection 1 with the corresponding statement or plan of another municipality if both municipalities have the same governing body or the governing bodies of both municipalities agree to such a combination.

(3) Except as otherwise provided in subsection 4, the governing body of each municipality shall update all statements and plans required by subsection 1 not less frequently than once each fiscal year.

(4) In a county whose population is 100,000 or more, the governing body of each municipality shall update all statements and plans required by subsection 1 not less often than once each fiscal year and not more often than twice each fiscal year, except that a municipality may update a statement or plan required by subsection 1 more often than twice each fiscal year.

Affordability of Debt

Response to NRS 350.013 1(c):

(1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and

(6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt

Existing, Authorized and Proposed General Obligation/Revenue Supported Bond Indebtedness of the LVVWD Supported by Water System Pledged Revenues ("LVVWD Water Bonds")

The LVVWD Water Bonds constitute direct and general obligations of the LVVWD, and the full faith and credit of the LVVWD is pledged to the payment of principal and interest due thereon. The LVVWD Water Bonds are payable from general property taxes on all taxable property in the LVVWD service area, subject to Nevada constitutional and statutory limitations on the aggregate amount of property taxes. The LVVWD Water Bonds are secured additionally by certain pledged

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revenues described below. The LVVWD has never levied a property tax because the LVVWD's revenues have been sufficient to pay debt service on all of the LVVWD's bonds and obligations secured by such revenues.

In any year in which the total property taxes levied within the LVVWD service area by all applicable taxing units (e.g. the State of Nevada, Clark County, the Clark County School District, any city, or any special district including the LVVWD) exceed such property tax limitations, the reduction to be made by those units must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness.

Nevada statutes provide that no act concerning the LVVWD Water Bonds or their security may be repealed, amended, or modified in such a manner as to impair adversely the Bonds or their security until all of the Bonds have been discharged in full or provision for their payment and redemption has been fully made.

The payment of the LVVWD Water Bonds is not secured by an encumbrance, mortgage, or other pledge of property of the LVVWD, and no property shall be liable to be forfeited or taken in payment of the LVVWD Water Bonds, provided the payment of the bonds is secured by the proceeds of general (*property*) taxes and the LVVWD's revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act provides that no recourse shall be had for the payment of principal or interest, or any prior redemption premiums due in connection with municipal securities such as the LVVWD Water Bonds, or for any claim based thereon or otherwise upon the resolution authorizing their issuance, against any individual trustee, officer, employee or other agent of the LVVWD, past, present or future, either directly or indirectly by virtue of any statute or rule of law.

Pledged Revenues. The LVVWD Water Bonds are additionally secured by the revenue received from the sale and distribution of water, connection charges or otherwise derived from the works or property of the LVVWD, after payment of reasonable and necessary costs of the operation and maintenance expenses of the water system (Water System) and the general expenses of the LVVWD (Net Pledged Revenues). Operation expenses generally include the costs of the purchase of water from the SNWA, power and pumping, purification, transmission and distribution, materials and supplies, maintenance, and repairs, purchased and professional services, and customer accounting and collection.

The LVVWD Act authorizes the Board to establish, from time to time, reasonable rates and charges for the products and services furnished by the LVVWD's works and properties. Subject to the limitation that rates and charges must be reasonable, the Board must fix rates and charges which will produce sufficient revenues to pay (1) operating and maintenance expenses of the Water System, (2) the general expenses of the LVVWD, and (3) the principal of and interest on the LVVWD's first lien bonds and second lien bonds (the "Superior Lien Bonds") including any

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required sinking fund payments, and (4) debt service on all other securities payable from Net Pledged Revenues. It is the general intent of the LVVWD Act and policy of the Board that rates and charges be adequate to provide for all costs and that reliance on property taxes is to be avoided. There has, historically, been no reliance on property taxes to support the LVVWD's operations and there is no current plan or intention to call upon property taxes to support the LVVWD's financial requirements.

Authorized and Proposed Future LVVWD Water Bonds. The LVVWD intends to issue approximately \$80 million debt in fiscal year 2022-23. In addition, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

Bonded Indebtedness. The following table sets forth the LVVWD's outstanding general obligation bonded indebtedness supported by water system pledged revenues as of June 30, 2022.

Debt Service Requirements. See appendix for a table showing the debt service to maturity on the LVVWD Water Bonds.

Property Tax Rate Impact. Principal and interest on the LVVWD Water Bonds is payable from the Water System pledged revenues. There will be no direct impact on the property tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds. See appendix for a table illustrating the LVVWD's historic pledged revenues and debt service coverage

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EXISTING GENERAL OBLIGATION INDEBTEDNESS
SUPPORTED BY WATER SYSTEM PLEDGED REVENUES
Las Vegas Valley Water District, Nevada
As of June 30, 2022

Description	Issued	Original Amount	Outstanding
LVVWD 2008 Clean Energy	Jul-08	\$ 2,520,000	\$ 168,000
LVVWD 2010A BABS	Jun-10	75,995,000	75,995,000
LVVWD 2014 SRF Loan #1	Dec-14	19,929,329	15,459,939
LVVWD 2015A	Jun-15	172,430,000	79,630,000
LVVWD 2016B	Apr-16	108,220,000	86,050,000
LVVWD 2016 SRF Loan #2	Sep-16	15,000,000	13,116,632
LVVWD 2017 SRF Loan #3	May-17	15,000,000	13,196,826
LVVWD 2017A	Mar-17	130,105,000	112,460,000
LVVWD 2018A	Jun-18	100,000,000	92,705,000
LVVWD 2020B	Mar-20	22,240,000	20,575,000
LVVWD 2020D	Mar-20	98,080,000	89,930,000
LVVWD 2020C	Jul-20	100,000,000	96,480,000
LVVWD 2021B	Mar-21	32,795,000	27,975,000
LVVWD 2022B	Mar-22	31,495,000	31,495,000
LVVWD 2022D	Jun-22	80,000,000	80,000,000 *
			<u>\$ 835,236,397</u>

* The LVVWD 2022D bonds are expected to close on June 29, 2022.

SOURCE: Las Vegas Valley Water District

Existing Authorized and Proposed General Obligation Indebtedness of the LVVWD Supported by the SNWA Pledged Revenues ("SNWA Water Bonds")

The LVVWD has issued general obligation bonds for the SNWA. The SNWA Water Bonds constitute direct and general obligations of the LVVWD, and the full faith and credit of the LVVWD is pledged to the payment of principal and interest due thereon. The SNWA Water Bonds are payable from property taxes on all taxable property within the LVVWD service area, subject to Nevada constitutional and statutory limitations on the aggregate amount of property taxes. The SNWA Water Bonds are additionally secured by certain pledged revenues (the "SNWA Pledged Revenues") as set forth in NRS 350.13 (4). The SNWA Pledged Revenues currently consist of fees and charges for water imposed by the SNWA upon its wholesale water customers (the LVVWD, Henderson, North Las Vegas, and Boulder City). Under the SNWA Revenue Act, the SNWA is required to maintain its fees and charges for water at a level sufficient to allow it to meet its

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obligations to the LVVWD to pay the LVVWD's SNWA Water Bonds.

Nevada statutes provide that no act concerning the SNWA Water Bonds or their security may be repealed, amended, or modified in such a manner as to impair adversely the Bonds or their security until all of the Bonds have been discharged in full or provision for their payment and redemption has been fully made.

The payment of the SNWA Water Bonds is not secured by an encumbrance, mortgage, or other pledge of property of the SNWA (other than the SNWA Pledged Revenues) and no property shall be liable to be forfeited or taken in payment of the SNWA Water Bonds, provided the payment of the Bonds is secured by the proceeds of general (property) taxes and the SNWA Pledged Revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act provides no recourse shall be had for the payment of the principal of, interest on, or any prior redemption premiums due in connection with municipal securities such as the SNWA Water Bonds, or for any claim based thereon or otherwise upon the resolution authorizing their issuance, against any individual trustee, officer, employee or other agent of the LVVWD, past, present or future, either directly or indirectly by virtue of any statute or rule of law.

The LVVWD has never levied a property tax to pay the SNWA Water Bonds because SNWA Pledged Revenues have always been sufficient to pay debt service on all the LVVWD's bonds and obligations secured by such revenues.

Debt Service Requirements. See appendix for a table that shows the debt service to maturity for the SNWA Water Bonds.

Property Tax Rate Impact. Principal and interest on the SNWA Water Bonds are payable from the SNWA Pledged Revenues. There will be no direct impact on the property tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds.

The following table sets forth the LVVWD's bonds issued for the SNWA as of June 30, 2022.

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EXISTING GENERAL OBLIGATION INDEBTEDNESS
SUPPORTED BY SNWA PLEDGED REVENUES
Las Vegas Valley Water District, Nevada
As of June 30, 2022

Description	Issued	Original Amount	Outstanding
SNWA 2015 Refunding Bonds	Jan-15	\$ 332,405,000	\$ 332,405,000
SNWA 2015B	Jun-15	177,635,000	105,560,000
SNWA 2015C	Jun-15	42,125,000	24,595,000
SNWA 2016A	Apr-16	497,785,000	425,425,000
SNWA 2017B Refunding Bonds	Mar-17	22,115,000	17,040,000
SNWA 2018B Refunding Bonds	Mar-18	79,085,000	43,490,000
SNWA 2019A Refunding Bonds	Mar-19	107,975,000	100,365,000
SNWA 2019B Refunding Bonds	Oct-19	90,280,000	75,085,000
SNWA 2020A Refunding Bonds	Mar-20	123,860,000	110,835,000
SNWA 2021A Refunding Bonds	Mar-21	144,685,000	132,880,000
SNWA 2021C Refunding Bonds	Mar-21	208,145,000	196,120,000
SNWA 2022A	Feb-22	292,240,000	292,240,000
SNWA 2022C Refunding Bonds	Mar-22	253,820,000	253,820,000
			<u><u>\$ 2,109,860,000</u></u>

SOURCE: Las Vegas Valley Water District

Debt Capacity

Response to NRS 350.013 1(c):

(2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit.

The LVVWD does not have a specific debt limit dollar amount threshold. The LVVWD has no power to incur debt in excess of express authorization granted by the Nevada Legislature in Chapter 167, Statutes of Nevada 1947, as amended. The LVVWD's ability to issue debt is a function of its capital needs and revenues generated from LVVWD facilities.

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Debt Comparison (per capita and assessed valuation)

Response to NRS 350.013 1(c):

(3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in the state.

(4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality.

Currently, the LVVWD does not have any outstanding bonds payable directly from property taxes. The existing LVVWD Water Bonds and SNWA Water Bonds are payable from pledged water revenues.

Policy Statement for Sale of Debt

Response to NRS 350.013 1(c):

(5) Policy regarding the manner in which the municipality expects to sell its debt.

There are two ways bonds can be sold: competitive (public) or negotiated sale. NRS 350.105 to 350.195 sets forth the circumstances under which a local government will sell its bonds at a competitive or negotiated sale. The LVVWD will follow the statutory requirements in determining the method of sale for its bonds. The Government Finance Officers Association also urges “competitive sales should be used to market debt whenever feasible”.

Competitive and negotiated sales provide for one or more pricings, depending upon market conditions or other factors. Either method can provide for changing sale dates, issue size, maturity amounts, term, bond features, etc. The timing of any sale is generally related to the requirements of the Nevada Open Meeting Law.

Competitive Sale

In a competitive sale, all underwriter(s) are invited to submit a proposal to purchase an issue of bonds. The bonds are awarded to the underwriter(s) presenting the best bid according to stipulated criteria set forth in the notice of sale. The best bid is determined based on the lowest overall interest rate.

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Negotiated Sale

In a negotiated sale, an exclusive arrangement is made between the issuer and an underwriter or underwriting syndicate. At the end of successful negotiations, the issue is awarded to the underwriter.

A negotiated underwriting may be considered based upon one or more of the following criteria:

- Extremely large issue size.
- Complex financing structure (i.e. new security feature, variable rate financings, new derivatives, and certain revenue issues, etc.) which provides a desirable benefit to the LVVWD.
- Difficulty in marketing due to credit rating or lack of bids.
- Private placement, or sale to a municipality, to the state, or a federal agency.
- Other factors which lead the LVVWD to conclude that competitive sale would not be effective, including market conditions.

It is the policy of the LVVWD to provide minority owned business enterprises, women owned business enterprises and all other business enterprises an equal opportunity to participate in the performance of all LVVWD contracts. At a competitive sale, bidders are requested to assist the LVVWD in implementing this policy by taking all reasonable steps to ensure all available business enterprises, including minority and women business enterprises, have an equal opportunity to participate in the LVVWD contracts.

Underwriter Selection for Negotiated Sale

- The Chief Financial Officer (CFO) will establish a list of pre-qualified underwriters when a negotiated sale is anticipated. The list will be based, in part, on the firms who have submitted bids for LVVWD's competitive issues over the prior five years. In addition, the list may contain firms that have participated in other financings in Nevada (in competitive bids or negotiated sales), demonstrated ability and interest in LVVWD financings, or have submitted financing ideas and concepts for LVVWD's consideration over the past five years.
- The CFO will distribute, or request that LVVWD's Financial Advisors distribute on behalf of LVVWD, a Request for Proposal (RFP) to underwriting firms on the list. The RFP will include, at a minimum, information regarding the firm's qualifications, staffing and personnel assigned to LVVWD, fees (including takedown and management fee - if any), debt structuring, marketing, expected yield, and credit strategies. Before selecting a firm or firms, the CFO may, but is not required, conduct interviews of firms who submit responses to the RFP.
- The selection of underwriter(s) will be based on the overall quality of the response, qualifications of the firm, demonstrated success in pricing bonds, understanding of the LVVWD's objectives, qualifications of the banking and underwriting team to be assigned to

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the LVVWD, fees, applicability of the marketing and credit strategy, and relevance and quality of structuring proposals.

- The CFO will designate the senior manager and book-running senior manager if there are co-senior managers, as well as the co-managers from the firms selected through the RFP process. The CFO will determine the length of time that the selected firms will serve as the syndicate for the LVVWD. Such a selection can be for a single transaction or multiple transactions, but the syndicate will be reviewed, and a new RFP will be issued at intervals not greater than every five years.

Syndicate Policies

- The CFO will establish designations and liabilities. At a minimum, in a syndicate with three or more firms serving as co-managers, the designation rules will include a minimum of three firms to be designated, with a minimum of 5 percent to any firm. The CFO will also determine the maximum amount to be designated to single firm (typically 50 percent, but this can be higher or lower, depending upon the size of the syndicate and the par amount of the transaction.) In addition, the CFO will determine the appropriate allocation of liabilities and equivalent share of compensation for group net orders.
- Prior to the sale of the bonds, the senior book-running manager will submit a Syndicate Policy Memo to the CFO for approval. At a minimum, the Syndicate Policy Memo will include:
 - Average Takedown and takedown by maturity.
 - Details of Underwriter expenses, including the cost of Underwriter's Counsel.
 - Designation rules.
 - Liabilities.
 - Order priority (unless otherwise agreed by the CFO, the order priority will be Nevada Retail, National Retail, Group Net or Net Designated, Member).
 - Definition of a retail order (unless otherwise determined by the CFO) will include orders placed by individuals, bank trust departments, financial advisors and money managers acting on behalf of individuals with a maximum of \$1 million per account.
 - Assignment of SDC Credit.
- The Syndicate Policy Memo may include other relevant information (e.g., management fee or other fees, description of the sale timeline, etc.).

Selling Group

The CFO may establish a selling group to assist in the marketing of the bonds as warranted (based on market conditions and size of the transaction.)

Allocation of Bonds

The book-running senior manager is responsible for allotment of bonds at the end of the order period. The CFO and the LVVWD's Financial Advisors will review allotments to ensure the senior manager distributes bonds in a balanced and rational manner.

Operation Costs and Revenue Sources for Projects in Capital Improvement Plan

Response to NRS 350.013 1(c):

(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (c), if those costs and revenues are expected to affect the tax rate.

As illustrated in the Net Pledged Revenues table in the appendix of this document, operational costs are funded with water revenues. It is the LVVWD's intent to finance future operational costs with water revenues and will therefore have no effect on property taxes. New capital improvement projects will allow the LVVWD to expand the service area, thereby expanding the revenue base. New capital improvement projects will be funded with water revenues or bonds payable from water revenues.

Miscellaneous Items

Refundings

A refunding is generally the underwriting of a new bond issue whose proceeds are used to redeem an outstanding issue. Key definitions are described as follows:

- **Advance Refunding** - A method of providing for payment of debt service on a bond until the first call date or designated call date from available funds. Advance refundings are done by issuing a new bond or using available funds and investing the proceeds in an escrow account in a portfolio of U.S. government securities structured to provide enough cash flow to pay all debt service on the refunded bonds.
- **Current Refunding** - The duration of the escrow is 90 days or less.
- **Gross Savings** - Difference between debt service on refunded bonds less debt service on refunding bonds less any contribution from LVVWD's reserves or debt service fund.
- **Present Value Savings** - Present value of gross savings discounted at the refunding bond arbitrage yield to the closing date plus accrued interest less any contribution from LVVWD's reserves or debt service fund.

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Prior to beginning a refunding bond issue the LVVWD will review an estimate of the savings achievable from the refunding. The LVVWD may also review a pro forma schedule estimating the savings assuming that the refunding is done at various points in the future.

The LVVWD will generally consider refunding outstanding bonds if one or more of the following conditions exist:

- For advance refundings, present value savings are estimated to be at least 5 percent of the par amount of the refunded or refunding bonds (whichever is greater) when initially presented to the Board and escrow efficiency is at least 60 percent.
- Escrow efficiency is defined as net present value savings divided by the sum of net present value savings and negative arbitrage in the escrow.
- For current refundings, present value savings are at least 3 percent of the par amount of refunded or refunding bonds.
- The bonds to be refunded have restrictive or outdated covenants.
- Restructuring debt is deemed to be desirable.

The LVVWD may pursue a refunding not meeting the above criteria if:

- Present value savings exceed the costs of issuing the bonds and the date of the option to call is 3 years or less.

Debt Structure

Maturity Structures. The term of the LVVWD debt issues will not extend beyond the useful life of the project or equipment financed. As appropriate, debt issued by the LVVWD should be structured to provide for level debt service. Deferring the repayment of principal should generally be avoided except in instances where it will take a period of time before project or other revenues of the LVVWD are sufficient to pay debt service, or where the deferral of principal allows the LVVWD to achieve combined level debt service on all outstanding bonds.

Bond Insurance. The purchase of bond insurance may be considered as part of the structure of a bond issue. A bond insurance policy may be purchased by either an issuer or by an underwriter for either an entire issue or specific maturities to guarantee the payment of principal and interest. While this security provides a higher credit rating and thus a lower borrowing cost for an issuer, such cost savings must be measured against the premium required for such insurance. The decision to purchase insurance directly versus bidder's option is based on:

- Market volatility
- Current investor demand for insured bonds
- Level of insurance premiums
- Ability of the LVVWD to purchase bond insurance from bond proceeds

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Bond insurance can be purchased directly by the LVVWD prior to the bond sale (direct purchase) or at the underwriter's option and expense (bidder's option).

When insurance is purchased directly by the LVVWD, the present value of the estimated debt service savings from insurance should be greater than the insurance premium. The bond insurance company will usually be chosen based on an estimate of the greatest net present value insurance benefit (present value of debt service savings less insurance premium).

Fixed and Variable Rate Debt

The LVVWD may issue fixed rate debt or variable rate debt, including (but not limited to) Commercial Paper, Variable Rate Demand Obligations, Index Bonds, or Extendible Commercial Paper.

- Fixed rate debt includes bonds that are issued generally for terms of 1 year to 30 years at a rate that does not change over the life of the bond.
- Variable rate debt includes debt that will pay an interest rate which varies, and is generally reset either daily, weekly, or monthly. This rate may be based on remarketing or on a generally accepted index, such as LIBOR or SIFMA. In most markets, the interest rate on variable rate debt will be lower than the interest rate on fixed rate debt since the interest rate is based on a shorter term. But variable rate debt has more interest rate risk as the interest rate is not set for the life of the bonds. In times of market stress, short-term interest rates have suffered significant increases, albeit for short periods of time.

Since variable rate debt has more interest rate risk, the LVVWD will not issue more than 25 percent of its debt in the form of variable rate debt. The CFO, in consultation with the General Counsel and the LVVWD's Financial Advisors, will determine the appropriate form of variable rate debt, subject to the approval of the Board.

Financing Sources. The LVVWD will evaluate available State and County bond financing programs before choosing the financing source. The LVVWD will consider utilizing a State or County program if bonds can be sold by the State or County in a manner meeting the LVVWD's timing needs and if it is determined by the CFO that such program is the most cost-effective financing vehicle, and such determination is approved by the Board.

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Chief Financial Officer Information

NRS 350.013 Subsection 1(e)

A statement containing the name, title, mailing address and telephone number of the chief financial officer of the municipality.

NAME: E. Kevin Bethel

TITLE: Chief Financial Officer

ADDRESS: 1001 South Valley View Boulevard
Las Vegas, NV 89153

TELEPHONE: (702) 822-8809

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Appendix

Debt Service and Pledged Revenue Tables

1. Five Year Schedule of Existing and Proposed Debt Service Requirements
2. Combined Schedules of Existing Debt Service Requirements
3. Net Pledged Revenues
4. Existing and Proposed Debt Service
5. Existing Debt Service by Company

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Five Year Schedule of Existing and Proposed Debt Service Requirements
As of June 30, 2022

Type of Debt	Fiscal Year				
	2023	2024	2025	2026	2027
G/O Revenue/LVVWD ¹	\$ 84,623,533	\$ 84,495,053	\$ 84,529,303	\$ 84,564,803	\$ 75,477,053
G/O Revenue/SNWA ²	208,844,125	208,849,050	199,346,675	199,253,300	189,771,375
Total	<u>\$ 293,467,658</u>	<u>\$ 293,344,103</u>	<u>\$ 283,875,978</u>	<u>\$ 283,818,103</u>	<u>\$ 265,248,428</u>

¹ This is debt service on the existing and proposed outstanding principal balance of LVVWD debt secured by LVVWD water system revenues. In addition, this includes the LVVWD 2022D bonds, which are expected to close on June 29, 2022.

² This is debt service on the outstanding principal balance of LVVWD debt secured by SNWA pledged revenues in accordance with interlocal agreements.

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Combined Schedule of Existing Debt Service Requirements
As of June 30, 2022

Fiscal Year	Principal	Interest	Total
2023	\$ 154,736,813	\$ 134,224,446	\$ 288,961,258
2024	161,858,570	126,979,133	288,837,703
2025	160,434,729	118,934,848	279,369,578
2026	168,492,325	110,819,378	279,311,703
2027	158,276,390	102,465,638	260,742,028
2028	121,066,961	95,045,942	216,112,902
2029	113,734,073	89,407,700	203,141,772
2030	118,317,763	83,866,332	202,184,095
2031	113,418,069	78,088,628	191,506,697
2032	135,255,030	72,725,522	207,980,553
2033	146,233,685	66,807,797	213,041,483
2034	152,364,076	60,673,504	213,037,580
2035	124,759,275	54,758,220	179,517,495
2036	129,353,149	49,429,528	178,782,677
2037	117,615,490	43,863,246	161,478,736
2038	145,715,000	38,679,156	184,394,156
2039	176,255,000	32,050,168	208,305,168
2040	77,295,000	23,595,438	100,890,438
2041	62,525,000	20,041,763	82,566,763
2042	65,210,000	17,362,763	82,572,763
2043	48,970,000	14,560,213	63,530,213
2044	51,125,000	12,395,313	63,520,313
2045	53,405,000	10,126,600	63,531,600
2046	55,775,000	7,753,500	63,528,500
2047	27,865,000	5,271,763	33,136,763
2048	28,940,000	4,195,638	33,135,638
2049	24,380,000	3,076,363	27,456,363
2050	25,315,000	2,139,275	27,454,275
2051	21,465,000	1,152,600	22,617,600
2052	4,940,000	247,000	5,187,000
Totals	<u>\$ 2,945,096,397</u>	<u>\$ 1,480,737,410</u>	<u>\$ 4,425,833,807</u>

Secured by:

LVVWD Water Revenues	\$ 835,236,397	\$ 378,074,947	\$ 1,213,311,344
SNWA Pledged Revenues	\$ 2,109,860,000	\$ 1,102,662,463	\$ 3,212,522,463

(Includes the LVVWD 2022D bonds, which are expected to close on June 29, 2022.)

**Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy**
Fiscal Year Ending June 30, 2023

**Net Pledged Revenues
For Fiscal Years Ended June 30**

	2017 (Actual)	2018 (Actual)	2019 (Actual)	2020 (Actual)	2021 (Actual)
Revenues ⁽¹⁾					
Water Sales	\$ 349,945,542	\$ 366,696,687	\$ 368,415,325	\$ 367,251,189	\$ 393,153,616
Inspection/Application Fees	2,097,655	2,788,421	3,106,856	3,091,750	4,311,045
Springs Preserve	2,784,944	2,756,528	3,047,093	1,965,658	387,554
Facilities Connection Charges	12,241,154	16,171,119	18,185,794	17,628,602	33,131,272
Investment Earnings ⁽²⁾	1,042,888	2,256,083	17,227,950	20,110,119	(681,187)
Other	60,374	66,489	76,631	12,260	11,845
Total Revenues	\$ 368,172,557	\$ 390,735,327	\$ 410,059,649	\$ 410,059,578	\$ 430,314,145
Operating Expenses ⁽³⁾	\$ 250,732,755	\$ 255,815,010	\$ 240,742,943	\$ 276,072,659	\$ 250,157,212
Net Revenues	\$ 117,439,802	\$ 134,920,317	\$ 169,316,706	\$ 133,986,919	\$ 180,156,933
Add Beginning Unrestricted Fund Balances	\$ 225,452,811	\$ 276,864,411	\$ 350,525,644	\$ 422,313,800	\$ 421,854,132
Amounts Available for Debt Service	\$ 342,892,613	\$ 411,784,728	\$ 519,842,350	\$ 556,300,719	\$ 602,011,065
Parity and Subordinate Lien Obligations Debt Service ⁽⁴⁾	\$ 60,744,879	\$ 60,064,751	\$ 66,939,561	\$ 67,560,760	\$ 74,228,063
Coverage	5.64	6.86	7.77	8.23	8.11

⁽¹⁾ Excludes the SNWA Regional Commodity Charge, the Regional Reliability Surcharge, the Regional Connection Charge and the Regional Infrastructure Charge. The District excludes SNWA charges and operating expenses from its financial statements.

⁽²⁾ Includes market value adjustments in accordance with GAAP.

⁽³⁾ Excludes depreciations expense. Decrease in fiscal year 2019 reflects a favorable settlement of claims of approximately \$20.8 million which was credited against operating expenses. Decrease in fiscal year 2021 is primarily attributable to decreased pension and OPEB expenses resulting from gains on asset investments and lower power and purchased water costs and reductions in expenses in response to the COVID-19 pandemic.

⁽⁴⁾ The debt service includes the federal subsidy for the District's Build America Bonds. The District did not have any Superior Lien Obligations outstanding in fiscal years 2017 through 2021.

**Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2023**

Existing and Proposed Debt Service

As of June 30, 2022

Existing Debt ¹				Proposed Debt in FY23			
Fiscal Year	Principal	Interest	Total	Fiscal Year	Principal	Interest	Total
2023	\$ 44,281,813	\$ 35,835,321	\$ 80,117,133	2023	\$ 1,478,400	\$ 3,028,000	\$ 4,506,400
2024	45,978,570	34,010,083	79,988,653	2024	1,534,358	2,972,042	4,506,400
2025	48,239,729	31,783,173	80,022,903	2025	1,592,433	2,913,967	4,506,400
2026	50,542,325	29,516,078	80,058,403	2026	1,652,707	2,853,693	4,506,400
2027	43,906,390	27,064,263	70,970,653	2027	1,715,262	2,791,138	4,506,400
2028	37,136,961	24,945,942	62,082,902	2028	1,780,184	2,726,216	4,506,400
2029	38,919,073	23,177,200	62,096,272	2029	1,847,564	2,658,836	4,506,400
2030	40,762,763	21,321,220	62,083,982	2030	1,917,495	2,588,905	4,506,400
2031	42,718,069	19,375,003	62,093,072	2031	1,990,072	2,516,328	4,506,400
2032	44,650,030	17,432,522	62,082,553	2032	2,065,396	2,441,004	4,506,400
2033	39,318,685	15,500,597	54,819,283	2033	2,143,571	2,362,829	4,506,400
2034	40,809,076	14,010,754	54,819,830	2034	2,224,706	2,281,694	4,506,400
2035	41,554,275	12,542,770	54,097,045	2035	2,308,911	2,197,489	4,506,400
2036	42,328,149	11,032,828	53,360,977	2036	2,396,303	2,110,097	4,506,400
2037	26,595,490	9,463,696	36,059,186	2037	2,487,003	2,019,397	4,506,400
2038	26,025,000	8,463,306	34,488,306	2038	2,581,136	1,925,264	4,506,400
2039	26,580,000	7,437,718	34,017,718	2039	2,678,832	1,827,568	4,506,400
2040	27,875,000	6,144,288	34,019,288	2040	2,780,226	1,726,174	4,506,400
2041	10,920,000	4,783,363	15,703,363	2041	2,885,457	1,620,943	4,506,400
2042	11,310,000	4,395,313	15,705,313	2042	2,994,672	1,511,728	4,506,400
2043	11,720,000	3,986,863	15,706,863	2043	3,108,020	1,398,380	4,506,400
2044	12,135,000	3,561,963	15,696,963	2044	3,225,659	1,280,741	4,506,400
2045	12,590,000	3,115,350	15,705,350	2045	3,347,750	1,158,650	4,506,400
2046	13,055,000	2,650,500	15,705,500	2046	3,474,462	1,031,938	4,506,400
2047	13,535,000	2,166,963	15,701,963	2047	3,605,971	900,429	4,506,400
2048	14,035,000	1,664,038	15,699,038	2048	3,742,457	763,943	4,506,400
2049	8,880,000	1,140,963	10,020,963	2049	3,884,109	622,291	4,506,400
2050	9,195,000	823,875	10,018,875	2050	4,031,122	475,278	4,506,400
2051	4,700,000	482,000	5,182,000	2051	4,183,700	322,700	4,506,400
2052	4,940,000	247,000	5,187,000	2052	4,342,053	164,347	4,506,400
Totals	\$ 835,236,397	\$ 378,074,947	\$ 1,213,311,344	Totals	\$ 79,999,991	\$ 55,192,009	\$ 135,192,000

Existing & Proposed Combined			
Fiscal Year	Principal	Interest	Total
2023	\$ 45,760,213	\$ 38,863,320	\$ 84,623,533
2024	47,512,928	36,982,125	84,495,053
2025	49,832,163	34,697,140	84,529,303
2026	52,195,031	32,369,771	84,564,803
2027	45,621,652	29,855,401	75,477,053
2028	38,917,145	27,672,157	66,589,302
2029	40,766,637	25,836,035	66,602,672
2030	42,680,258	23,910,125	66,590,382
2031	44,708,141	21,891,331	66,599,472
2032	46,715,426	19,873,526	66,588,953
2033	41,462,257	17,863,426	59,325,683
2034	43,033,781	16,292,449	59,326,230
2035	43,863,186	14,740,259	58,603,445
2036	44,724,451	13,142,925	57,867,377
2037	29,082,493	11,483,093	40,565,586
2038	28,606,136	10,388,570	38,994,706
2039	29,258,832	9,265,285	38,524,118
2040	30,655,226	7,870,462	38,525,688
2041	13,805,457	6,404,305	20,209,763
2042	14,304,672	5,907,041	20,211,713
2043	14,828,020	5,385,242	20,213,263
2044	15,360,659	4,842,704	20,203,363
2045	15,937,750	4,274,000	20,211,750
2046	16,529,462	3,682,438	20,211,900
2047	17,140,971	3,067,392	20,208,363
2048	17,777,457	2,427,981	20,205,438
2049	12,764,109	1,763,254	14,527,363
2050	13,226,122	1,299,153	14,525,275
2051	8,883,700	804,700	9,688,400
2052	9,282,053	411,347	9,693,400
Totals	\$ 915,236,388	\$ 433,266,956	\$ 1,348,503,344

¹ Excludes debt issued on behalf of SNWA. In addition, this includes the LVVWD 2022D bonds, which are expected to close on June 29, 2022.

**Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2023**

Existing Debt Service by Company

As of June 30, 2022

Supported by LVVWD Pledged Revenues ¹				Supported by SNWA Pledged Revenues			
Fiscal Year	Principal	Interest	Total	Fiscal Year	Principal	Interest	Total
2023	\$ 44,281,813	\$ 35,835,321	\$ 80,117,133	2023	\$ 110,455,000	\$ 98,389,125	\$ 208,844,125
2024	45,978,570	34,010,083	79,988,653	2024	115,880,000	92,969,050	208,849,050
2025	48,239,729	31,783,173	80,022,903	2025	112,195,000	87,151,675	199,346,675
2026	50,542,325	29,516,078	80,058,403	2026	117,950,000	81,303,300	199,253,300
2027	43,906,390	27,064,263	70,970,653	2027	114,370,000	75,401,375	189,771,375
2028	37,136,961	24,945,942	62,082,902	2028	83,930,000	70,100,000	154,030,000
2029	38,919,073	23,177,200	62,096,272	2029	74,815,000	66,230,500	141,045,500
2030	40,762,763	21,321,220	62,083,982	2030	77,555,000	62,545,113	140,100,113
2031	42,718,069	19,375,003	62,093,072	2031	70,700,000	58,713,625	129,413,625
2032	44,650,030	17,432,522	62,082,553	2032	90,605,000	55,293,000	145,898,000
2033	39,318,685	15,500,597	54,819,283	2033	106,915,000	51,307,200	158,222,200
2034	40,809,076	14,010,754	54,819,830	2034	111,555,000	46,662,750	158,217,750
2035	41,554,275	12,542,770	54,097,045	2035	83,205,000	42,215,450	125,420,450
2036	42,328,149	11,032,828	53,360,977	2036	87,025,000	38,396,700	125,421,700
2037	26,595,490	9,463,696	36,059,186	2037	91,020,000	34,399,550	125,419,550
2038	26,025,000	8,463,306	34,488,306	2038	119,690,000	30,215,850	149,905,850
2039	26,580,000	7,437,718	34,017,718	2039	149,675,000	24,612,450	174,287,450
2040	27,875,000	6,144,288	34,019,288	2040	49,420,000	17,451,150	66,871,150
2041	10,920,000	4,783,363	15,703,363	2041	51,605,000	15,258,400	66,863,400
2042	11,310,000	4,395,313	15,705,313	2042	53,900,000	12,967,450	66,867,450
2043	11,720,000	3,986,863	15,706,863	2043	37,250,000	10,573,350	47,823,350
2044	12,135,000	3,561,963	15,696,963	2044	38,990,000	8,833,350	47,823,350
2045	12,590,000	3,115,350	15,705,350	2045	40,815,000	7,011,250	47,826,250
2046	13,055,000	2,650,500	15,705,500	2046	42,720,000	5,103,000	47,823,000
2047	13,535,000	2,166,963	15,701,963	2047	14,330,000	3,104,800	17,434,800
2048	14,035,000	1,664,038	15,699,038	2048	14,905,000	2,531,600	17,436,600
2049	8,880,000	1,140,963	10,020,963	2049	15,500,000	1,935,400	17,435,400
2050	9,195,000	823,875	10,018,875	2050	16,120,000	1,315,400	17,435,400
2051	4,700,000	482,000	5,182,000	2051	16,765,000	670,600	17,435,600
2052	4,940,000	247,000	5,187,000	2052	-	-	-
Totals	\$ 835,236,397	\$ 378,074,947	\$ 1,213,311,344	Totals	\$ 2,109,860,000	\$ 1,102,662,463	\$ 3,212,522,463

LVVWD & SNWA Combined Debt Service			
Fiscal Year	Principal	Interest	Total
2023	\$ 154,736,813	\$ 134,224,446	\$ 288,961,258
2024	161,858,570	126,979,133	288,837,703
2025	160,434,729	118,934,848	279,369,578
2026	168,492,325	110,819,378	279,311,703
2027	158,276,390	102,465,638	260,742,028
2028	121,066,961	95,045,942	216,112,902
2029	113,734,073	89,407,700	203,141,772
2030	118,317,763	83,866,332	202,184,095
2031	113,418,069	78,088,628	191,506,697
2032	135,255,030	72,725,522	207,980,553
2033	146,233,685	66,807,797	213,041,483
2034	152,364,076	60,673,504	213,037,580
2035	124,759,275	54,758,220	179,517,495
2036	129,353,149	49,429,528	178,782,677
2037	117,615,490	43,863,246	161,478,736
2038	145,715,000	38,679,156	184,394,156
2039	176,255,000	32,050,168	208,305,168
2040	77,295,000	23,595,438	100,890,438
2041	62,525,000	20,041,763	82,566,763
2042	65,210,000	17,362,763	82,572,763
2043	48,970,000	14,560,213	63,530,213
2044	51,125,000	12,395,313	63,520,313
2045	53,405,000	10,126,600	63,531,600
2046	55,775,000	7,753,500	63,528,500
2047	27,865,000	5,271,763	33,136,763
2048	28,940,000	4,195,638	33,135,638
2049	24,380,000	3,076,363	27,456,363
2050	25,315,000	2,139,275	27,454,275
2051	21,465,000	1,152,600	22,617,600
2052	4,940,000	247,000	5,187,000
Totals	\$ 2,945,096,397	\$ 1,480,737,410	\$ 4,425,833,807

¹ This includes the LVVWD 2022D bonds, which are expected to close on June 29, 2022.

SECTION 8

STATISTICAL INFORMATION

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**LAS VEGAS VALLEY
WATER DISTRICT™**

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

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Demographic Statistics

Clark County, Nevada

Five Calendar Years

Calendar Year	Clark County Population (1)	Per Capita Income (2)	Clark County Personal Income (In Million \$)(2)	Median Household Income (3)
2021	2,333,092	N/A	N/A	N/A
2020	2,376,683	51,244	118,679	62,043
2019	2,325,798	49,225	112,031	60,365
2018	2,284,616	47,184	105,171	57,598
2017	2,248,390	45,444	99,218	55,434

Calendar Year	LVVWD Service Area Population	School Enrollment (4)	Total Labor Force(5)	Unemployment Rate (6)
2021	1,539,067	305,750	N/A	N/A
2020	1,583,746	318,226	1,123,582	14.7%
2019	1,551,304	320,703	1,150,076	4.1%
2018	1,527,068	322,436	1,103,345	4.6%
2017	1,502,604	322,122	1,067,135	5.2%

Sources:

(1) Clark County Comprehensive Planning Department.

(2) U.S. Bureau of Economic Analysis as reported for the Las Vegas-Paradise MSA (which is comprised of Clark County).

(3) U.S. Census Bureau, American Community Survey.

(4) Clark County School District, Count Day Enrollment History.

(5) Bureau of Labor Statistics (Local Area Unemployment Statistics).

(6) Bureau of Labor Statistics (annual averages).

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Top Ten Employers⁽¹⁾
Clark County, Nevada
Calendar Year 2021

Employer Trade name	Employees ⁽²⁾	Ranking
Encore Spa & Salon	10,000 or More	1
US Nellis Air Force Base	10,000 or More	2
Las Vegas Metropolitan Police	5,000 to 9,999	3
Flamingo Las Vegas Hotel-Casino	5,000 to 9,999	4
MGM Grand	5,000 to 9,999	5
Orleans Hotel & Casino	5,000 to 9,999	6
Las Vegas Sands Corp	5,000 to 9,999	7
Mandalay Bay	5,000 to 9,999	8
Caesars Palace Las Vegas	5,000 to 9,999	9
Aquarius Casino Resort	5,000 to 9,999	10

Total Labor Force ⁽³⁾	1,123,582
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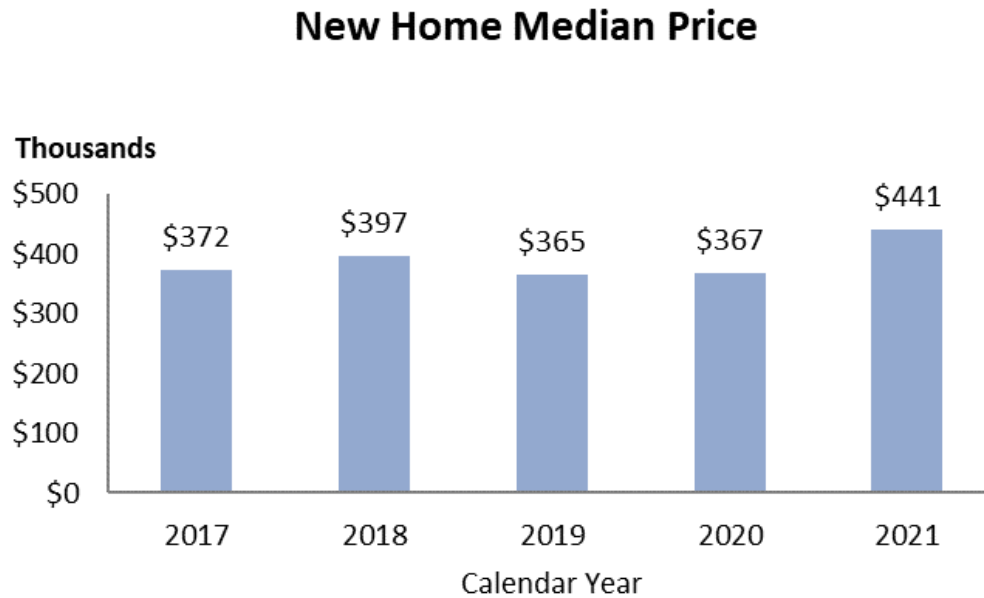
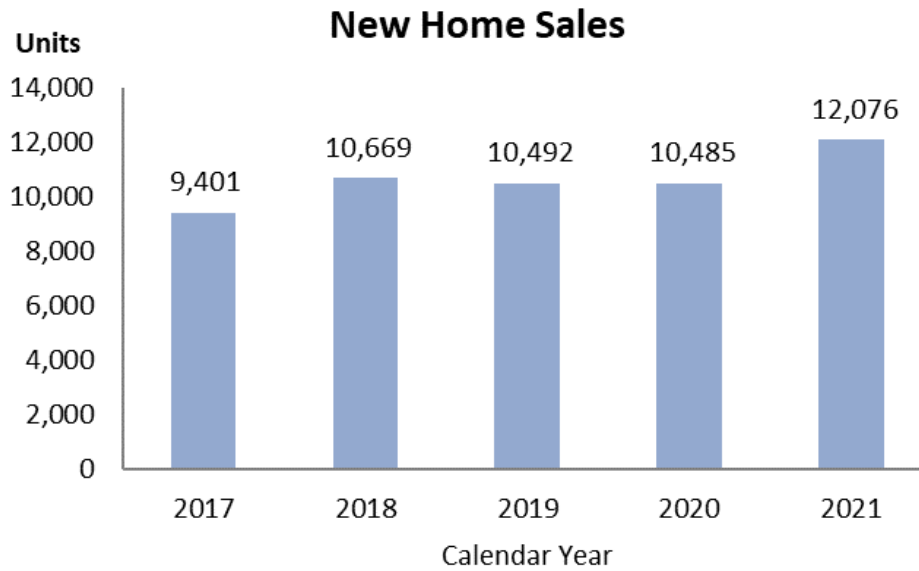
Sources:

(1) Nevada Department of Employment, Training & Rehabilitation (DETR). The data is as of 2nd release of 2021 (as of March 22, 2022). In 2018, DETR changed the data source from internally created to a third party provider (Infogroup). Infogroup collects the data at the establishment level not rolled up into a collective whole. For example in the current method, the data set lists each school and/or department separately instead of aggregating it.

(2) Nevada law prohibits the disclosure of exact employee counts. All employee counts are shown in ranges.

(3) Total Labor Force is sourced from Bureau of Labor Statistics (Local Area Unemployment Statistics) for calendar year 2020 annual average.

Residential Real Estate Clark County, Nevada



Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Secured Tax Roll
Clark County, Nevada
2021 - 22

	<u>Taxpayer</u>	<u>Taxable Assessed</u>	<u>Taxable Appraised</u>
1.	MGM Resorts International	\$ 2,867,425,223	\$ 8,192,643,493
2.	NV Energy	1,841,698,342	5,261,995,263
3.	The Blackstone Group	1,315,451,146	3,758,431,847
4.	Caesar's Entertainment Corp.	1,169,711,872	3,342,033,921
5.	Las Vegas Sands Corporation	1,163,859,805	3,325,313,728
6.	Wynn Resorts Limited	897,132,496	2,563,235,702
7.	Station Casinos LLC	845,559,409	2,415,884,025
8.	Genting Group	781,747,466	2,233,564,189
9.	VICI Properties Inc	718,497,837	2,052,850,963
10.	Howard Hughes Corporation	508,061,570	1,451,604,486
		<u>\$ 12,109,145,166</u>	<u>\$ 34,597,557,617</u>

Source: Clark County Assessor's Report Dated December 31, 2021

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Temperature and Rainfall

Average Maximum and Minimum Daily Temperature
in Degrees Fahrenheit and Monthly Rainfall in Inches

Month	2016			2017			2018		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	57	40	0.5	57	42	0.9	64	44	1.5
February	70	46	0.1	65	49	0.6	64	44	0.0
March	75	53	0.0	77	54	0.0	70	50	0.3
April	79	58	2.3	81	59	0.0	84	61	0.0
May	86	65	0.0	89	66	0.1	90	68	0.2
June	105	81	0.5	105	79	0.0	103	79	0.0
July	107	84	0.2	107	85	0.1	107	85	0.8
August	102	80	0.2	103	81	0.2	105	84	0.1
September	93	71	0.0	92	72	0.5	100	77	0.0
October	84	64	0.2	84	60	0.0	79	61	0.1
November	71	51	0.0	73	53	0.0	68	48	0.2
December	57	40	0.8	63	42	0.0	59	42	0.2
Average Annual Temperature/ Total Rainfall	82.1	61.0	4.8	82.9	61.7	2.4	82.6	61.7	3.4

Month	2019			2020			2021		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	59	42	1.0	60	41	0.0	59	40	0.2
February	56	39	2.1	64	44	0.3	64	45	0.0
March	70	51	0.4	67	50	1.6	68	47	0.6
April	82	60	0.4	80	59	0.4	83	60	0.0
May	82	61	0.8	92	69	0.0	90	67	0.0
June	99	77	0.0	99	75	0.0	104	81	0.0
July	105	83	0.0	107	83	0.0	106	84	0.5
August	107	82	0.0	107	84	0.0	104	82	0.0
September	95	73	0.2	99	74	0.0	97	75	0.1
October	78	55	0.0	88	62	0.0	78	57	0.1
November	69	48	1.1	69	48	0.0	74	53	0.0
December	57	42	0.9	59	38	0.0	58	41	0.3
Average Annual Temperature/ Total Rainfall	79.7	59.3	6.9	82.5	60.5	2.4	82.1	61.0	1.9

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Average Monthly Consumption Per Active Service
Thousands of Gallons

Month	2017	2018	2019	2020	2021	Average
January	13.6	15.1	14.1	12.8	13.9	13.9
February	12.3	13.3	13.2	14.8	13.0	13.3
March	17.1	17.6	14.6	16.3	16.6	16.5
April	22.7	20.3	20.2	15.9	20.3	19.9
May	25.6	26.0	24.0	21.8	24.9	24.5
June	33.0	31.0	26.6	31.0	32.1	30.7
July	34.0	32.7	31.5	30.6	30.2	31.8
August	34.7	32.3	32.9	32.8	29.9	32.5
September	29.6	30.2	29.4	30.0	28.1	29.5
October	24.1	25.9	23.1	23.5	22.7	23.9
November	19.5	18.4	18.5	18.3	17.1	18.4
December	15.3	15.3	12.6	13.2	14.4	14.2
Total for Year	281.5	278.1	260.7	261.0	263.3	268.9
Average Month	23.5	23.2	21.7	21.8	21.9	22.4
Maximum Month	34.7	32.7	32.9	32.8	32.1	32.5
Minimum Month	12.3	13.3	12.6	12.8	13.0	13.3

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Average Annual Water Billed Per Active Service By Class of Service Thousands of Gallons

Class of Service	2017	2018	2019	2020	2021
Residential - Single Service	133	133	126	124	129
Residential - Duplex/Triplex/Fourplex	248	242	233	234	233
Apts. Condos, & Townhomes	3,747	3,837	3,819	3,773	3,956
Residential, Other	5,144	5,184	5,292	5,382	5,513
Subtotal (Residential)	9,272	9,396	9,470	9,513	9,831
Hotels	40,962	40,558	37,998	30,860	29,816
Motels	4,780	4,781	4,680	4,261	4,583
Community Facilities	2,144	2,105	1,988	1,964	2,006
Schools	2,627	2,532	2,442	2,235	2,159
Fireline	97	100	100	109	108
Irrigation	2,245	2,133	1,995	2,061	2,153
Commercial/Business	1,048	1,056	1,059	980	995
Recreational	3,190	3,187	3,059	2,922	2,859
Industrial	1,077	1,114	1,106	1,011	1,032
Construction Water	294	395	414	350	593
Other	1,900	1,368	2,012	3,418	3,243
Subtotal (Non-Residential)	60,364	59,329	56,853	50,171	49,547
TOTAL	69,636	68,725	66,323	59,684	59,378

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Percent of Total Water Billed by Class of Service

Class of Service	2016	2017	2018	2019	2020	2021
Residential - Single Service	43.5%	43.3%	43.6%	43.1%	43.7%	43.9%
Residential - Duplex/Triplex/Fourplex	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%
Apts. Condos, & Townhomes	15.0%	15.1%	15.4%	15.9%	16.0%	16.2%
Residential, Other	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%
Subtotal (Residential)	60.2%	60.0%	60.7%	60.6%	61.4%	61.7%
Hotels	9.4%	9.0%	9.0%	9.0%	7.6%	6.8%
Motels	1.2%	1.1%	1.1%	1.1%	1.0%	1.0%
Community Facilities	1.9%	2.1%	2.0%	2.0%	2.0%	2.0%
Schools	1.6%	1.7%	1.6%	1.6%	1.6%	1.5%
Fireline	0.6%	0.5%	0.5%	0.5%	0.6%	0.6%
Irrigation	13.4%	14.0%	13.4%	13.2%	14.1%	14.4%
Commercial/Business	8.3%	8.2%	8.3%	8.6%	8.2%	8.1%
Recreational	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Industrial	1.3%	1.3%	1.3%	1.3%	1.2%	1.2%
Construction Water	1.4%	1.5%	1.4%	1.3%	1.3%	1.8%
Other	0.6%	0.6%	0.6%	0.5%	0.8%	0.8%
Subtotal (Non-Residential)	39.8%	40.0%	39.3%	39.4%	38.6%	38.3%
TOTAL	100%	100%	100%	100%	100%	100%

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

**Average Consumption and Monthly Revenue from Water Sales
Per Active Account (kgal)**

Month	2016		2017		2018	
	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>
January	14.8	\$72.3	13.5	\$73.1	15.1	\$83.8
February	13.5	72.4	12.3	71.0	13.3	78.4
March	19.3	89.7	17.1	88.7	17.6	93.9
April	22.2	98.4	22.7	105.6	20.3	102.8
May	21.7	97.7	25.6	118.8	26.0	124.0
June	30.7	140.8	33.0	150.8	31.0	151.6
July	34.0	135.4	33.2	145.3	32.7	147.1
August	34.7	149.4	34.0	154.5	32.3	153.1
September	29.6	128.3	28.5	133.3	30.2	142.8
October	24.1	105.8	23.4	110.8	25.9	124.7
November	19.5	89.7	20.2	97.3	18.4	95.4
December	15.3	75.7	16.5	85.0	15.3	85.7
Monthly Average	23.3	\$104.6	23.3	\$111.2	23174.1	\$115.3

Month	2019		2020		2021	
	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>
January	14.1	\$83.5	12.8	\$80.7	13.9	\$84.9
February	13.2	79.3	14.8	86.3	13.0	79.7
March	14.6	86.5	16.3	92.8	16.6	95.1
April	20.2	104.7	15.9	87.7	20.3	108.0
May	24.0	119.7	21.8	111.6	24.9	126.1
June	26.6	140.9	31.0	155.8	32.1	161.3
July	31.5	141.5	30.6	143.5	30.2	149.4
August	32.9	157.7	32.8	159.1	29.9	152.4
September	29.4	143.2	30.0	149.1	28.1	141.2
October	23.1	114.8	23.5	120.3	22.7	118.2
November	18.5	98.2	18.3	99.2	17.1	96.9
December	12.6	78.6	13.2	81.6	14.4	86.7
Monthly Average	21.7	\$112.4	21.8	\$114.0	21.9	\$116.7

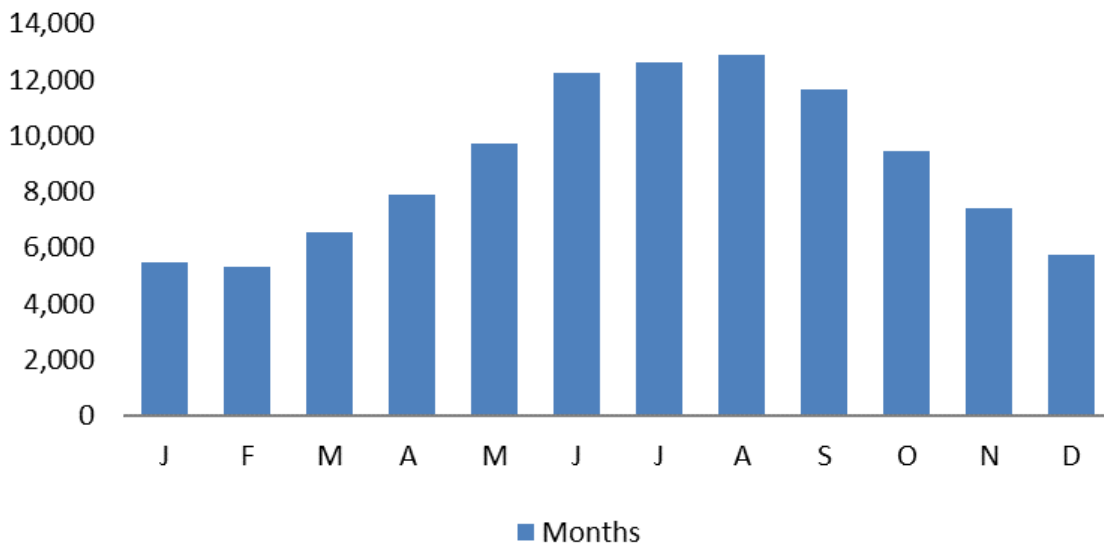
Las Vegas Valley Water District
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2023

Water Billed by Month
Millions of Gallons

Month	2017	2018	2019	2020	2021
January	5,205	5,880	5,577	5,139	5,636
February	4,749	5,217	5,234	5,950	5,297
March	6,602	6,900	5,803	6,570	6,749
April	8,786	7,961	8,013	6,387	8,291
May	9,927	10,207	9,539	8,778	10,168
June	12,783	12,169	10,559	12,490	13,129
July	12,873	12,856	12,535	12,359	12,360
August	13,214	12,699	13,082	13,246	12,236
September	11,079	11,918	11,708	12,134	11,527
October	9,105	10,196	9,226	9,533	9,292
November	7,880	7,249	7,404	7,407	7,028
December	6,425	6,031	5,034	5,355	5,921
Total	108,628	109,283	103,713	105,345	107,635

Millions
of Gallons

2017 - 2021 Average Water Billed by Month



SECTION 9

FINANCIAL POLICIES

Financial Policy	9 - 2
Reserve Policy	9 - 5
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**LAS VEGAS VALLEY
WATER DISTRICT™**

Financial Policy

The Las Vegas Valley Water District (LVVWD) conducts a process to update and improve its operating policies and procedures on an ongoing basis. The attached financial policies represent a portion of the approved operating policies of the LVVWD.

LAS VEGAS VALLEY WATER DISTRICT DEPARTMENT POLICY	SUBJECT: FINANCIAL POLICY	NUMBER: 1
	APPROVED BY: <i>Lina Neilson</i>	ISSUE: 1
ISSUING DEPARTMENT: FINANCE	DIRECTOR OF FINANCE June 1, 2015	PAGE: 1 OF 3

I. PURPOSE

The purpose of this policy is to establish guidelines for the planning and monitoring of financial activities in a responsible manner.

II. SCOPE

This policy applies to the Las Vegas Valley Water District (LVVWD) and other entities for which the LVVWD has fiduciary responsibility i.e., Southern Nevada Water Authority (SNWA).

III. FINANCIAL PLANNING

- A. BALANCED BUDGET – Under normal circumstances, the organization shall strive to prepare and adhere to a balanced operating budget, meaning sources of funds are greater than or equal to the uses of funds.
- B. LONG-TERM PLANNING – A long-term, entity-wide Strategic Plan shall be adopted and maintained to guide the decisions of the organization. Preparation of operating and capital budgets, as well as other financial planning activities, shall consider their long-term financial implications and reflect the Strategic Plan. Also, the organization shall strive to obtain the highest credit ratings.
- C. ASSET INVENTORY – The organization shall maintain an inventory of major capital assets and periodically assess the condition of those assets to plan for ongoing financial commitments necessary to ensure services in support of the Strategic Plan.

IV. REVENUE

- A. REVENUE DIVERSIFICATION – To the extent reasonable, revenues shall be diversified in order to improve the ability to handle fluctuations in individual sources.
- B. FEES AND CHARGES – Fees and charges are set to cover the cost of the services provided. For example:
- Water Rates pay for current water system operation and maintenance.
 - Connection Fees pay for water system infrastructure expansion to support population growth.
 - Fees pay for the annual inspection and maintenance of system facilities.
 - Fees pay for any additional administrative or operating cost burden generated by certain customer activities.
 - Deposits assure customer payment of financial obligations.
- C. USE OF ONE-TIME REVENUES – One-time revenues shall generally be matched to one-time expenditures. Ongoing financial commitments shall not be dependent upon anticipated one-time revenues.
- D. USE OF UNPREDICTABLE REVENUES – Ongoing programs or expenditure commitments shall not be dependent upon revenues that cannot be reasonably predicted. Reasonable prediction involves the use of historical data, projected data, and prudent judgment.

V. EXPENDITURES

- A. DEBT CAPACITY – The organization has no fixed aggregate monetary debt limit. The ability to issue debt is governed by state law allowing for the pledge of revenues and the assessment of ad valorem taxes with the requirement that the Board of Directors establish reasonable rates and charges for the products and services provided. The assessment of ad valorem taxes shall be avoided and emphasis shall be placed on the reliance of revenues to pay debt obligations.

- B. DEBT ISSUANCE AND MANAGEMENT – Debt shall be issued by either negotiated or competitive sale in accordance with Nevada law. Competitive sale awards shall be made to the underwriter(s) presenting bids resulting in the lowest interest rate. Negotiated sales may be utilized and underwriters will be selected in accordance with specific criteria specified in the Debt Management Policy. The Debt term shall not exceed the useful life of the project or equipment being financed and bond insurance may be utilized.
- C. RESERVES – The organization shall maintain sufficient reserves to protect against the need to reduce service levels or raise rates and fees due to temporary revenue shortfalls or unpredicted one-time expenditures. ‘Sufficient reserve’ is defined as 180 days of operating expenditures. A reserve study shall be conducted at least once every five years to determine if 180 days remains sufficient.
- D. OPERATING/CAPITAL EXPENDITURE ACCOUNTABILITY – Actual expenditures shall be periodically compared to the budget. Each department Director shall be primarily responsible for keeping their actual expenditures from exceeding their budget. Department Directors shall provide timely notification to the Director of Finance when it appears that their actual expenditures for the fiscal year will exceed their budget. Also, the Director of Finance shall monitor the actual expenditures of the entire organization and provide timely notification to the General Manager when it appears that the actual expenditures for the fiscal year may exceed the Board approved budget.

LAS VEGAS VALLEY WATER DISTRICT BOARD POLICY	SUBJECT: LAS VEGAS VALLEY WATER DISTRICT RESERVE POLICY	NUMBER: 11
	APPROVED BY: BOARD OF DIRECTORS	ISSUE: 1
ISSUING DEPARTMENT: FINANCE	January 5, 2016	PAGE: 1 OF 2

Purpose

The purpose is to establish a policy for maintaining adequate reserves of cash and investments. Maintaining adequate and prudent cash reserves is an important tool in mitigating the risks of significant and unexpected decreases in sources of funds and/or increases in the uses of funds. The benefits include stable services and fees. This policy applies to all unrestricted cash and investments of the Las Vegas Valley Water District (LVVWD).

Authority

The Government Finance Officers Association (GFOA) recommends local governments adopt a target amount of working capital to maintain in each of their enterprise funds. Because the purposes, customers, and other characteristics of enterprise funds can vary widely, the GFOA recommends that governments develop a target amount of reserves that best fits local conditions for each fund. The following are some of the key considerations for the LVVWD's reserve policy:

1. Volatility in Sources of Funds – Some of the LVVWD's sources of funds have experienced significant volatility; for example, connection charges and sales tax, in periods where the local economy suffers.
2. Likelihood of Successful Rate Increases – Although the LVVWD has enjoyed tremendous support from its Board of Directors and the community, it is possible that these conditions could change in the future, thus impacting the LVVWD's ability to adjust rates to meet increasing costs.
3. Asset Age and Condition – As the infrastructure ages, maintenance and replacement costs will increase. Also, there is the possibility of unexpected failures that can be quite expensive. Such failures could result from age-related causes, terrorism, or natural disasters.

4. Control Over Expenses – Although most of the LVVWD's expenses are predictable, there remains the possibility of large, unexpected expenditures; for example, litigation, natural disasters, increases in water, energy and chemical costs.

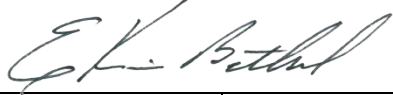
Reserve Components

The following four components identified for the LVVWD's reserves listed by funding priority:

1. Base Operating Reserve – Adequate reserves to fund 180 days of operating and maintenance expenses. This will help insulate the LVVWD and its customers from volatility in operating revenues and expenses, as well as from other casual factors that could interrupt cash flow or impose unforeseen costs.
2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, the LVVWD should strive to achieve this level of reserves to ensure access to lower cost capital in future years, help mitigate the impact of disruptions in the credit markets on operations, and provide assurances to investors that the LVVWD has the financial resources necessary to make its ongoing debt service payments.
3. Capital Related Reserve – Adequate reserves to fund a one year average of future capital needs. As a method to determine future capital needs, a capital improvement plan may be used. This reserve will fluctuate over time as projects change. This level of capital reserve will enable the LVVWD to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable the LVVWD to continue with uninterrupted critical capital improvements during times of difficulty within the capital markets.
4. Unforeseen Events Reserve – Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.

Reporting

The General Manager shall notify the Board of Directors of the status of reserves at least annually and more often as significant changes occur.

LAS VEGAS VALLEY WATER DISTRICT DEPARTMENT POLICY			
SUBJECT:	CAPITALIZATION POLICY		
ISSUING DEPARTMENT:	FINANCE		
APPROVED BY:	CHIEF FINANCIAL OFFICER		
ISSUE DATE & INFORMATION:	MARCH 1, 2022	NUMBER 2	PAGES 9

I. Purpose

This policy establishes the standards and procedures for ensuring that accounting for capital assets and depreciation follow management's objectives and generally accepted accounting principles ("GAAP").

II. Scope

This policy applies to the Las Vegas Valley Water District (LVVWD), the Southern Nevada Water Authority (SNWA) and other entities for which the LVVWD has fiduciary responsibility.

III. Capital Assets

Capital assets are defined as tangible and intangible assets used in operations that generally provide benefits well beyond a single reporting period.

Costs related to capital assets can be classified into one of two categories. The accounting treatment of the same type of cost will vary depending on which of the two categories it falls under.

1. A cost related to the original purchase/construction of an asset.
2. A cost related to an already existing asset, such as a repair or an improvement.

1. For costs related to the original purchase/construction of an asset - All land, improvements to land, buildings, building improvements, vehicles, machinery, equipment, works of art and historical treasures, infrastructure, and all other tangible or intangible assets other than software (assets that lack physical substance such as easements, water rights, etc.) that are used in operations, with an initial individual cost greater than \$10,000 and an estimated useful life of at least three years should be capitalized.

- Cost includes freight, taxes, fees, installation, labor, materials, as well as any other allowable costs necessary to place the asset into service in its intended location.

- Identifying details of any new capital asset will be gathered by Finance and added to the capital asset subledger when applicable. Examples of identifying details consist of, but are not limited to, Model, Manufacturer, General Description, Serial Number, Capital Project Number, Physical Location, and Department Owner.
- Generally, the capitalization threshold is applied to individual items rather than groups of items. However, groups of assets with individual unit costs equal to or less than \$10,000 have been identified as significant to our operations and are capitalized regardless of individual unit cost. These groups of assets include meters, service laterals, and pipelines. Assets / asset groups deemed significant may be revised only with written approval of the Chief Financial Officer.

2. For costs related to an already existing asset, such as a repair or an improvement - A decision must be made as to whether the cost can be capitalized as an improvement to the original asset or should be recorded as an operating maintenance expense.

Capital asset related costs are deemed improvements and should be capitalized only if:

- A. The costs exceed the capitalization dollar threshold, and
- B. At least one of the following criteria is met:
 - The useful life of the asset is significantly extended past its original estimated life, or
 - The capacity of the asset is significantly increased, or
 - The quality of the output of the asset is significantly increased, or
 - The efficiency of the asset is significantly increased.

Otherwise, the cost is considered normal maintenance and repairs since it does no more than return a capital asset to its original condition and does not qualify for capitalization. Costs related to normal maintenance and repairs are expensed and not capitalized. See attachment A for a decision-tree to assist in determining whether expenditures are capital or operating and maintenance.

IV. Computer System Software

Major on-premises computer software and Software-as-a-Service (SaaS) that includes a software license component that allows both the contractual right to take possession of the software at any time during the hosting period without significant penalty and the ability to run the software on our own hardware or contract with another party unrelated to the vendor to host the software, whether purchased or internally developed, should be capitalized if the capitalizable cost exceeds \$100,000 and the useful life is at least three years.

Software-as-a-Service (SaaS) that does not include a perpetual software license component will be expensed as a service contract and does not qualify as a capital asset.

Internally developed software has three phases of development. The accounting treatment of internally developed software costs depend heavily on both the nature of the activity and what phase of the project the cost is incurred. The type of costs typically found in each phase of the project and its proper accounting treatment are listed in each phase below.

1. Preliminary Project Stage (Period before the date a commitment was made to purchase the software) – Expensed as incurred
 - a. Due diligence leading up to selection of software, including evaluation of alternatives and conceptual formulation
2. Application Development Stage (Period starting after the date a commitment was made to purchase the software, but before the software is deemed substantially complete and operational)– Capitalized into the cost of software and amortized over useful life
 - a. Initial cost of software
 - b. Design of chosen path
 - c. Software configuration and software interfaces
 - d. Coding
 - e. Installation of software to hardware
 - f. Testing – Including parallel processing phase
 - g. Data conversion (Only to the extent it is determined to be necessary to make the software operational)
3. Post-Implementation/Operation Stage (Period after the date that the software is considered substantially complete and operational) – Depends on the situation, see below.
 - a. Software support/maintenance agreement costs – Expense
 - b. Application training costs – Expense
 - c. Annual licensing fees - Expense
 - d. Data conversion – Expense (Only for data conversion that takes place after the software is determined to be operational)
 - e. Modifications/updates – Depends on the situation, see below.

Modifications made to the software post implementation that exceed \$100,000, by either internal parties such as IT, or an outside party, that do any of the following should be capitalized as an improvement to the existing software.

 - i. An increase in the functionality of the computer software, that is, the computer software can perform tasks that it was previously incapable of performing.
 - ii. An increase in the efficiency of the computer software, that is, an increase in the level of service provided by the computer software without the ability to perform additional tasks.
 - iii. An extension of the original useful life of the software.

- iv. However, if the modification/update does not result in any of the above outcomes (i, ii, or iii, the modification should be considered maintenance, and the associated costs should be expensed as incurred.)

NOTE: The activities within the stages of development may occur in a sequence different than described above. The recognition guidance for costs associated with the development of internally generated software should be applied based on the nature of the activity as the overriding factor, not the timing of its occurrence. For example, costs associated with application training activities that occur during the application development stage should still be expensed as incurred.

V. Donated Facilities

Donated developer facilities are capitalized at the engineering estimates of acquisition value at the time the assets are donated.

VI. Disposal of Capital Assets

Departments should notify Finance, via the Capital Asset Change Form found in Attachment B, when disposing of capital assets so that Finance can remove the disposed assets from the capital asset system and properly calculate any gain/loss on disposal.

VII. Transfer of Capital Assets

Departments should notify Finance, via the Capital Asset Change Form found in Attachment B, when an asset under their custody is being transferred to another department / location. This allows for Finance to update the location of the asset in the capital asset system.

VIII. Impairment or Loss of Capital Assets

An impairment of a capital asset is defined as a significant, unexpected decline in the service utility of a capital asset. A capital asset should be tested for impairment by Finance when any one of the following triggering events occurs:

- Significant decline in the market value of the asset
- Significant change in the way the asset is used or a physical change in the asset
- Adverse changes in legal factors or business climate that affect the asset
- Current expectation that the asset will be disposed of significantly before the end of its useful life
- Project cancellation for capital asset still in development/construction
- An asset is lost or stolen

If it is determined that a significant and unexpected decline in service utility has occurred that is more than temporary, it must be measured and reported in the financial statements. Departments should

notify Finance, via the Capital Asset Change Form found in Attachment B, of any potentially impaired or lost assets.

IX. Construction Work-in-Process

In process capital project costs, will be recorded as Construction Work-in-Process (CWIP) until the project is deemed ready to be placed into service. Departments should notify Finance of any capital projects that reach substantial or final completion as soon as possible. Costs to be capitalized include material costs, labor, as well as any allowable ancillary costs that are necessary to place the asset into service in its intended location.

X. Depreciation

Capital assets will be depreciated in the month placed into service using the straight-line method over the assets estimated useful life. Useful lives are determined by asset category, see below for a list of asset types and their useful lives. Assets with indefinite lives, such as land, will not be depreciated.

Major Capital Asset Categories

LWWWD, and other entities for which LWWWD has fiduciary responsibility	Global #	Useful Life (Years)
Collect/Impounding Structure	10201	20-50
Land / Land Rights	10101	Indefinite
Office Furniture/Equip (Excluding Computer System Software)	10901	5-10
Office Furniture/Equip (Computer System Software)	10901	5
Org & Improvements	10001	20-50
Pump Station/Wells	10401	11-30
Purification Equipment	10501	15-25
Services / Meters	10801	20-30
Telemetry / Valves / Miscellaneous	10701	10-75
Transportation / Work / Equipment	11001	3-10
Transmission / Distribution / Mains	10601	75

SNWA	Global #	Useful Life (Years)
SNWA-Land Warm Springs Ranch	19513	Indefinite
SNWA- Communication Equipment	19556	12
SNWA- Distribution Reservoirs	19526	50
SNWA-Laboratory Equipment	19552	15
SNWA- Lakes, Rivers, Other Intake	19512	75
SNWA- Land/Land Rights	19506	Indefinite
SNWA- Leasehold Improvement	19500	10
SNWA- Miscellaneous Equipment	19558	15
SNWA- Office Furniture/Equip (Excluding Computer System Software)	19548	5
SNWA- Office Furniture/Equip (Computer System Software)	19548	5
SNWA- Power Operated Equipment	19554	10
SNWA- Pumps & Pumping Equipment	19518	40
SNWA- Silverhawk Power Plant	19564	30
SNWA- Stores Equipment	19560	15
SNWA- Structures & Improvement	19508	20
SNWA- Supply Mains	19514	50
SNWA- Tool Shop/Garage Equipment	19550	15
SNWA- Transmission & Distribution Mains	19528	75
SNWA- Transportation Equipment	19562	5-10
SNWA- Water Treatment Equipment	19534	15
SNWA- Ranch Fencing	19576	7
SNWA- Ranch Machinery & Equipment	19577	7
SNWA- Ranch Miscellaneous	19582	5-7
SNWA- Ranch Office/Computer Equipment	19583	5
SNWA- Ranch Pumping Equipment	19580	7
SNWA- Ranch Residential Property	19579	27
SNWA- Ranch Structures	19578	10
SNWA- Ranch Vehicles	19581	5
SNWA- Ranch Wells	19575	15

XI. Physical Inventory

Departments who are in custody of major capital asset equipment or vehicles perform, at least once every five years, physical inventories of those assets compared to their internal listings and/or listings provided from Finance from the capital assets subledger. The results of these inventories are shared with Finance personnel responsible for updating the asset listing in the capital assets subledger. Those counts are reconciled to the capital asset subledger by Finance.

XII. Annual Review

This policy is to be reviewed annually to ensure compliance with accounting standards, evaluate efficiency of capitalization-related processes, and periodically review established capitalization thresholds.

XIII. Glossary

Capital Assets: Capital assets are acquired for use in operations and not for resale. They are long term in nature.

Depreciation: The systematic and rational allocation of the historical cost of a capital asset, (or if donated, the acquisition value of the capital asset at the time of donation), over its estimated useful service life.

Estimated Useful life: The estimated amount of time that an asset is expected to be useful, it is the period over which an asset's cost will be depreciated.

Historical Cost: The actual exchange value in dollars at the time the asset was acquired. It is measured by cash or cash equivalent price of obtaining the asset and any charges necessary to bring it to its intended location and to place the asset in its intended condition for use.

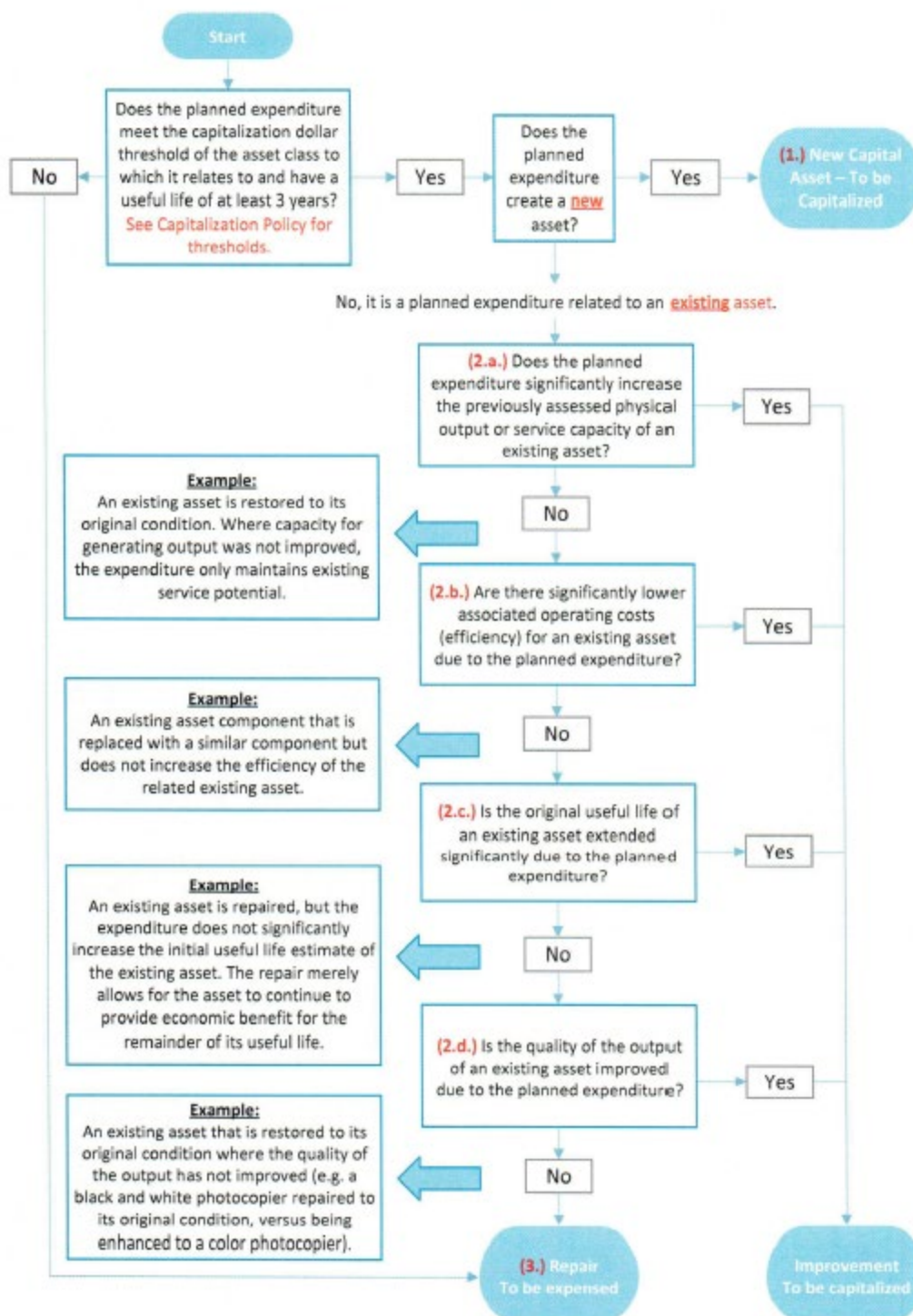
Straight-Line Depreciation Method: Is determined by the formula: $\text{Cost} - \text{Salvage Value} / \text{Estimated useful life} = \text{Depreciation per period}$.

XIV. Guidance Referenced

- GASB Statement No. 34: Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments
- GASB Statement No. 42: Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries
- GASB Statement No. 51: Accounting and Financial Reporting for Intangible Assets
- GFOA Best Practices "Capitalization Thresholds for Capital Assets"
- GFOA Best Practices "Inventories of Tangible Capital Assets"

Attachment A

New Asset vs. Improvement vs. Repair Decision Tree





Three companies, one job:
Working for a sustainable Nevada
LVVWD • SNWA • SPRINGS PRESERVE

Capital Asset Change Form

Date of Action: _____

Reason for disposal/move action:

☐ Damaged Beyond Repair

☐ Obsolete

☐ Destroyed

☐ Donated to: _____ Please attach documentation.

☐ Lost/Stolen

☐ Sold, Sale Price \$ _____ Please attach sales paperwork.

☐ Transfer

☐ Traded In

☐ Other

Explain:

Property Detail				
Asset Manufacturer	Serial #/VIN	Asset Description	Physical Location Before Action Date	New Physical Location

(Attach additional pages if necessary)

Person Completing this form

Date

Transfer Details (If Transferring)

From Department _____ To Department _____

Approvals

Signature of Department Releasing the Capital Asset

Date

Signature of Department Receiving the Capital Asset
(If Transferring)

Date

Please send the completed form to Finance at AssetAccounting@lvvwd.com. Contact Finance with any questions regarding completion of this form:

SECTION 10

GLOSSARY

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**LAS VEGAS VALLEY
WATER DISTRICT™**

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Accrual Basis Accounting. An accounting method that measures the performance and position of a company by recognizing revenue or expense events regardless of when cash transactions occur.

Acre-Foot (AF). A water measurement equating to 325,851 gallons or 43,560 cubic feet. An acre foot will supply the annual water needs of approximately 2 single family homes in the LVVWD's service area.

Advanced Metering Infrastructure. (AMI)

Alfred Merritt Smith Water Treatment Facility (AMSWTF). Built in 1971, the Alfred Merritt Smith Water Treatment Facility currently treats most of the Las Vegas Valley's drinking water. The facility can treat up to 600 million gallons a day (MGD).

American Water Works Association (AWWA). A 50,000-member nonprofit dedicated to science, technology, education, and the managing and treating of water.

Amortization. Amortization is paying off a debt with a fixed repayment schedule in incremental installments over a period of time.

Association of Metropolitan Water Agencies (AMWA). An organization of the largest publicly owned water utilities in the USA speaking on water policy issues and programs that foster sustainable innovation.

Automated Mapping / Facilities Management (AM/FM). The term AM/FM/GIS mostly refers to Geographic Information Software (GIS) that allows utility users to digitize, manage and analyze their utility network data. This data is stored in an underlying GIS database which also maintains the associations between the graphical entities and the attributes.

Automatic Transfer Switch (ATS). An electrical switch that switches a load between two sources.

Automatic Vehicle Locator (AVL). An automatic vehicle locator (AVL) is a device that makes use of a Global Positioning System (GPS) to enable a business or agency to remotely track the location of its vehicle fleet by using the Internet.

Balanced Budget. A budget where sources of funds are equal to uses of funds. The LVVWD is not required to issue a balanced budget.

Big Bend Water District (BBWD). A general improvement district created in 1983 to supply water to Laughlin, Nevada.

Beginning Balance. Cash and cash equivalent balances at the beginning of an accounting period. For budget years this amount is an estimate. For actual years this amount is the actual amount of cash either in demand deposits or investments.

Bond. A certificate of debt issued by a government or corporation guaranteeing payment of the original investment plus interest by a specified future date.

Bond Funds. Monies raised through debt issuance that are used for the acquisition or construction of capital assets.

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Budget. Proposed financial plan over a given period of time, usually one year.

Budget Calendar. The schedule of key dates or milestones the LVVWD follows in the preparation and adoption of the budget.

Budgetary Control. The management or control of a governmental unit or enterprise in accordance with an approved budget to keep expenditures within limitations of available appropriations and available revenues.

Budget Document. The official written document prepared by the LVVWD and approved by the LVVWD's Board of Directors.

Budgeted Positions. A position that has been authorized (created by action of the LVVWD Board of Directors) and may be specifically funded through the budget process.

Bureau of Labor Statistics (BLS). A unit of the United States Department of Labor that serves as a statistical resource to the United States Department of Labor, and conducts research into how much families need to earn to be able to enjoy a decent standard of living.

Bureau of Reclamation (BOR). A federal agency under the U.S. Department of the Interior. The BOR oversees water resource management, specifically as it applies to the oversight and operation of the diversion, delivery, and storage projects that it has built throughout the western United States for irrigation, water supply, and attendant hydroelectric power generation.

Cathodic Protection (CP). A technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.

Capital Budget. Used to evaluate potential investments or expenditures for specific projects or purposes. Fixed assets to be acquired during a fiscal year, with a value of over \$10,000 and an estimated life of over three years.

Capital Expenditure. Funds used by a company to acquire, upgrade, and maintain fixed assets during a fiscal year, generally with a value of over \$10,000 and an estimated life of over three years.

Capital Improvement Plan (CIP). A multi-year project portfolio that identifies the time, cost and scope of capital projects and identifies options for financing.

Citizens Advisory Committee (CAC). A group of citizens convened to seek recommendations and help guide decision-making of the organization.

Captive Insurance. An alternative to self-insurance in which a parent group or groups create a licensed insurance company to provide coverage for itself.

Clark County Water Reclamation District (CCWRD). Nevada's largest wastewater agency, treating wastewater from 248,000 accounts with over 2,000 miles of pipeline and 27 pumping stations.

Closed-circuit Television (CCTV). Also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors.

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Colorado River Commission (CRC). The CRC is an executive agency of the State of Nevada responsible for acquiring and managing Nevada's share of water and hydropower resources from the Colorado River.

Comprehensive Annual Financial Report. A set of U.S. government financial statements comprising the financial report of a state, municipal or other governmental entity that complies with the accounting requirements promulgated by the Governmental Accounting Standards Board (GASB).

Computer Maintenance Management System.(CMMS)

Computerized Work Order Maintenance Management System.(CWOMMS)

Conservation. The act of reducing demands for water in the most efficient manner. Encompassing policies, strategies and activities to manage water as a sustainable resource and protect the environment while meeting current and future demands. The LVVWD achieves the benefits of conservation through education of the end user, promoting water efficient hardware, and pricing signals.

Construction Expenditures. Generally, expenses made to build, supervise, or provide materials used in the construction of capital assets.

Coyote Springs Water Resources General Improvement District (CSWRD). Created in 2006 to provide necessary water and wastewater services to the Coyote Springs community.

Cross Departmental Team. (CDT)

Customer to Meter System. (C2M)

Debt Issuance Proceeds. Principal amount or face value of debt issues. These proceeds are used to pay for major construction expenditures incurred by the LVVWD.

Debt Service Payments. Funds used for the repayment of annual principal and interest charges on debt the LVVWD has issued.

Department. A basic organizational unit of the LVVWD that is functionally unique in its delivery of services.

Depreciation. A reduction in the value of a physical asset with the passage of time.

Deoxyribonucleic Acid (DNA). A self-replicating material which is present in nearly all living organisms as the main constituent of genetic information.

Disbursements. Funds actually expended.

Dissolved Air Flotation (DAF). A water treatment process that clarifies wastewaters (or other waters) by the removal of suspended matter such as oil or solids.

Division. Organizational component of a department.

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Drought Contingency Plan (DCP). Due to the historic drought conditions since 2000, the Department of the Interior requested State Governors along the Colorado River to submit Drought Contingency Plans (DCPs) to reduce the risks the Colorado River Basin is facing for Lake Powell and Lake Mead.

Eastern Nevada Transmission Project (ENTP). A 230 kV transmission system that would allow for the interconnection of SSEA members' electrical systems with each other and with the mead substation.

Escherichia coli (EC). A bacterium commonly found in the intestines of humans and other animals, some strains of which can cause severe food poisoning.

Emergency Response Plan (ERP). A plan created by the EHS&CS department to prepare for and mitigate risk.

Endangered Species Act (ESA). Signed into law by President Richard Nixon on December 28, 1973, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development un-tempered by adequate concern and conservation."

Ending Balance. Cash and cash equivalent balances at the ending of an accounting period. For budget years this amount is an estimate. For actual years this amount is the actual amount of cash either in demand deposits or investments.

Energy. Collective name for electricity and natural gas purchases used to treat and distribute water throughout the LVVWD's service area as well as power office buildings and other ancillary locations.

Engineering Department Management System. (EDMS)

Engineering Project Management. (EPM)

Engineering Project Scheduling and Management System. (EPSM)

Enterprise Funds. Funds used to account for operations: 1) that are financed and operated in a manner similar to private business enterprises - where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods and services to the general public on a continuing basis be financed or recovered primarily through user charges; or 2) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

Environmental, Health, Safety & Corporate Security (EHS&CS). A department of the LVVWD and SNWA. Also abbreviated as EHS.

Environmental Protection Agency (EPA). An agency of the U.S. federal government which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Expenditure. The payment of cash on the transfer of property or services for the purpose of acquiring an asset, service or settling a loss.

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Fiscal Year (FY). For the Las Vegas Valley Water District, the 12-month period begins with July 1, and ends with June 30 of the designated fiscal year, e.g. FY 2019-20 ends on June 30, 2020.

Fringe Benefits. Various types of non-wage compensation provided to employees in addition to their normal wages or salaries.

Full-Time Equivalent (FTE). The number of positions that equate to a 40-hour work week for 52 weeks, or one full year. For example, two part-time positions, each working 20 hours per week, equals one FTE.

Full-Time Equivalent Employee (FTE). A person employed in the capacity of a Full-Time Equivalent.

Fund. A fiscal and accounting tool with a self-balancing set of accounts to record revenue and expenditures.

Fund Balance. Also known as beginning balance and ending balance. This represents the estimated cash balance in a specific fund at the beginning or ending of an accounting period.

Fund Equity. The excess of an entity's assets over its liabilities.

Gallons Per Minute (GPM). Also known as 'flow rate', GPM is a measure of how many gallons of water flow out of your shower head each minute.

General Obligation Debt. Bonds where the full faith and credit of the issuer is pledged to the repayment of the bonds.

Generally Accepted Accounting Principles (GAAP). A body of accounting and financial reporting standards set by the Governmental Accounting Standards Board (GASB) for state and local governments, and by the Financial Accounting Standards Board (FASB) for private sector organizations.

Geographical Information Systems (GIS). Geographical Information System is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

Global Positioning System (GPS). The Global Positioning System is a space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

Government Finance Officers Association (GFOA). A professional association of more than 21,000 state, provincial, and local government finance officers in the United States and Canada. In 1984, the GFOA signed an agreement with the Financial Accounting Foundation that gave them a voice and appointments in the creation of the Governmental Accounting Standards Board (GASB).

Governmental Funds. The General Fund, Special Revenue Funds, Debt Service Funds, and Capital Projects Funds.

Grant. A contribution by a government or other organization to support a particular function. Grants may be classified as categorical or block, depending upon the amount of discretion allowed the grantee.

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Great Recession. A global economic decline which began after 2005 and lasted roughly through the end of 2010.

Groundwater Management Fees. Fees imposed on municipalities and individual well owners. The proceeds of these fees are used to implement artificial recharge to benefit well users, provide financial assistance to well owners who are required to connect to municipal water by the Nevada State Engineer, and pay for general maintenance costs of the groundwater management program.

Home Owner Association (HOA). An organization in a subdivision, planned community or condominium that makes and enforces rules for the properties within its jurisdiction.

Intake No. 3. One of the largest municipal water projects in the United States constructed to draw water from Lake Mead at levels as low as 1,000 feet, 75 feet lower than SNWA's highest intake.

Intentionally Created Surplus. A type of surplus water that has been created or credited to a water agency through actions that conserve water and increase Lake Mead storage.

Interest Earned. Monies earned by investing idle funds in the open market.

Intergovernmental Revenue. Revenue received from other governments in the form of grants, entitlements, shared revenues, or payments in lieu of taxes.

International Ozone Association – Pan American Group (IOA-PAG). A nonprofit educational and scientific organization dedicated to the collection and dissemination of information on, and to promote research in, any and all aspects of ozone and related oxygen species technologies.

Investment. Securities and real estate purchased and held for the production of income in the form of interest, dividends, rentals or base payments.

Labor. A budget category that includes all LVVWD employee salaries including overtime, longevity pay, and benefits. Labor can either be paid by operating funds or capital funds according to then activity/project in which it was expended.

Laboratory Information Management System (LIMS). A laboratory information management system is a software-based laboratory and information management system with features that support a modern laboratory's operations.

Las Vegas Metropolitan Statistical Area (MSA). Las Vegas metropolitan area, is in the southern part of the U.S. state of Nevada, coextensive since 2003 with Clark County, Nevada. A central part of the metropolitan area is the Las Vegas Valley, a 600 sq. mi (1,600 km²) basin that includes the metropolitan area's largest city, Las Vegas.

Las Vegas Valley Groundwater Management Program (LVVGMP). In 1997, the Nevada Legislature directed the Southern Nevada Water Authority (SNWA) to develop the Las Vegas Valley Groundwater Management Program to protect and manage the valley's primary groundwater supply. The program protects the local groundwater basin from over-drafting and potential sources of contamination.

Las Vegas Valley Water District (LVVWD). The largest water retailer in southern Nevada with a customer base of more than 1.5 million people. The LVVWD is the operating agent of the Southern

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Nevada Water Authority although the two companies are autonomous and produce financial records and statements independent of each other.

Las Vegas Wash Comprehensive Adaptive Management Plan. (LVWCAMP)

Leading Utilities of the World (LOUW). A global network of the world's most successful and innovative water and wastewater utilities.

Lease. A contract that conveys control of the right to use another entity's nonfinancial asset (the underlying asset) as specified in the contract. Lease contracts are bound by a period of time.

Line Item. Unique identification number and title for an expenditure category; represents the most detailed level of budgeting and recording expenditures.

Lower Colorado River Multi-Species Conservation Program.(LCRMSCP)

Low Lake Level Pumping Station (L3PS). A significant component of the entire Intake No.3 Project, this portion includes the construction of a pumping station which will facilitate drawing water from lower levels of Lake Mead.

Maintenance Improvement Team.(MIT)

Major Construction and Capital Program (MCCP). A schedule of approved capital projects for SNWA, their estimated costs, and funding sources.

Major Construction and Program (MCP). A schedule of approved capital projects, their estimated costs, and funding sources.

Megawatt Hour (MWh). A unit of power equal to one million watt hours. Energy in watt hours is the multiplication of power in watts and time in hours.

Million-Gallon per Day (MGD). A unit of flow measurement. MGD is a standard measurement in the water utility industry.

Mission. A description of the basic purpose and responsibility of an organizational unit.

Mobile Data Dispatch System and Mobile Data Terminals.(MDT)

Mobile Workforce Management System.(MWFMS)

Mobile Workforce Management Team.(MWM)

Modified Accrual Accounting. A basis of accounting in which expenditures are accrued when liability is incurred, but revenues are recognized only when they are measurable and available as net current assets. This method of accounting is statutorily required in Nevada.

National Environmental Policy Act (NEPA). A United States environmental law that established a U.S. national policy promoting the enhancement of the environment.

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Net Gallons per Capita per Day (GPCD). Measurement of water used in comparison between communities.

Net Position. Financial liabilities minus cash and cash equivalents. Net position was formerly known as fund equity until the application of GASB 65.

Nevada Division of Environmental Protection (NDEP). State of Nevada agency whose mission is to preserve and enhance the environment of the State in order to protect public health, sustain healthy ecosystems, and contribute to a vibrant economy.

Nevada Revised Statutes (NRS). The current codified laws of the State of Nevada.

Nevada State Engineer (NSE). Leader of the Nevada Division of Water Resources and responsible for administering and enforcing Nevada Water Law.

Occupational Health and Safety Administration (OSHA). An agency of the United States Department of Labor. OSHA's mission is to "assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance".

Operating Budget. Authorized expenditures for on-going day-to-day services, e.g., maintenance, materials, supplies, etc.

Operating Expenses. This classification contains expenses such as professional services, rental expenses, research and studies, etc. that are projected to be spent in the course of operations. On a GAAP prepared financial statement, these costs will appear on the Statement of Revenues, Expenses and Changes in Net Position.

Other Post-Employee Benefits. (OPEB)

Payroll and Related. A budget category that includes all LVVWD employee salaries including overtime, longevity pay, and benefits. Labor can either be paid by operating funds or capital funds according to then activity/project in which it was expended.

Period. The date (usually a 12-month span) that expenditures, encumbrances, etc. are recorded for reporting purposes.

Period Ending. The last date any expenditures, encumbrances, etc. are recorded for reporting purposes. Any data received after this date will be reflected in the next report. A Period Ending may be the end of a pay period, the end of the last pay period of a month, or the end of a calendar month.

Polymerase Chain Reaction (PCR). A method widely used in molecular biology to make many copies of a specific DNA segment.

Positions. Authorized (created by the LVVWD Board of Directors) employee slots (either currently filled or vacant) that are specifically funded through the budget process.

Potable water. Water that has been treated and meets or exceeds standards set by the Safe Water Drinking Act.

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Power. Electricity and natural gas costs that are used for the transportation and transmission of water throughout the LVVWD distribution system.

Power Purchase Agreement. (PPA)

Proprietary Funds. Enterprise Funds and Pension Funds.

Rate-of-Flow Control Systems (ROFCS). Flow control in a hydraulic system is to regulate speed. The device control the speed of an actuator by regulating the flow rate.

Recharge. Lake water injected directly into the aquifer by wells to store it for future use.

Reclaimed Water Distributions (RWDS). This is wastewater that has been treated to specific standards.

Reliability Centered Maintenance.(RCM)

Remote Operated Vehicle (ROV). Unoccupied, highly maneuverable underwater robots, typically operated by at, or above, the water surface.

Remote Terminal Unit, Programmable Logic Controller (RTU/PLC). A microprocessor-controlled electronic device that interfaces objects in the physical world to a distributed control system or SCADA.

Research and Development (R&D). Work directed toward the innovation, introduction, and improvement of products and processes.

Revenues. Funds received from various sources and treated as income to LVVWD to finance expenditures.

Revenue Bonds. Bonds where pledges are made to dedicate specific revenue sources to repay the bonds.

Right-of-Way (ROW). A right of way is a type of easement granted or reserved over the land for transportation purposes, this can be for a highway, public footpath, rail transport, canal, as well as electrical transmission lines, oil and gas pipelines.

Risk Management. An organized attempt to protect organization's assets against accidental loss in the most economical method.

River Mountains Treatment Plant (RMTP). Facility treats up to 300 million gallons of water per day. The facility provides additional reliability and capacity to Southern Nevada's municipal water treatment and distribution capabilities. It began delivering treated water in October 2002.

Rural System Operator.(RSO)

Safe Drinking Water Act (SDWA). Act is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the Environmental Protection Agency (EPA) is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards.

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Significant Financial Impact. Five years immediately following when a capital item is placed into service. The term is required by the Government Finance Officers Association.

Silver State Energy Association (SSEA). A cooperative association created to purchase energy for members consisting of the SNWA, City of Boulder Nevada, Overton Power District, Lincoln County Power District and the Colorado River Commission of Nevada.

Southern Nevada Water Authority (SNWA). Formed in 1991 to manage Southern Nevada's water needs on a regional basis. The Authority comprises seven member agencies including the city of Henderson, city of Las Vegas, city of North Las Vegas, Big Bend Water District (Laughlin), the Clark County Water Reclamation District and the Las Vegas Valley Water District. SNWA provides wholesale water treatment and delivery for the greater Las Vegas Valley and is responsible for acquiring and managing long-term water resources for Southern Nevada.

Southern Nevada Water System (SNWS). Refers to the system of distribution facilities that delivers raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water providers.

Solar Photovoltaic (PV). A technology that converts sunlight (solar radiation) into direct current electricity by using semiconductors.

Special Assessments. Fees that are charged to property owners in certain geographical areas for improvements. A fee is levied only to those property owners that receive direct benefit.

State Revolving Fund (SRF). A fund administered by a U.S. state for the purpose of providing low-interest loans for investments in water and sanitation.

Streamlined Reliability Centered Maintenance (SRCM). A systematic evaluation of plant equipment and maintenance requirements.

Subscription Based Information Technology Arrangements (SBITA). A SBITA is defined as a contract that conveys control of the right to use another party's information technology software, alone or in combination with tangible capital assets for a period of time specified in the contract.

Supervisory Control and Data Acquisition (SCADA). Water operations control systems.

Tax Exempt Commercial Paper Program. (TECP). Tax-exempt commercial paper is short-term debt for which the interest payments are tax-exempt at the federal, state or local level.

Total Coliform (TC). A group of related bacteria that are (with few exceptions) not harmful to humans.

Uniform Design and Construction Standards (UDACS). The Uniform Design and Construction Standards for Potable Water Distribution Systems represent the minimum design and construction criteria for water distribution systems within the participating Agency's jurisdiction.

Water Smart Landscape (WSL). The SNWA's rebate of \$3 per square foot of grass removed and replaced with desert landscaping up to the first 10,000 square feet converted per property, per year.

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Warm Springs Natural Area (WSNA). A facility opened in 2017 that includes public access walking trails and interpretive signage to educate and inform the public about its environmental resources.

Water Quality Process Improvement Team.(WQPIT)

Water Quality and Treatment (WQ&T). A department of the LVVWD/SNWA that ensures the quality of the water meets or surpasses SDWA standards.

Wholesale Delivery Charge (WDC). The per acre-foot charge that SNWA charges purveyor members for the treatment and delivery of treated, potable water.

Variable Frequency Drive (VFD). A type of motor controller that drives an electric motor by varying the frequency and voltage supplied to the electric motor.