

# OPERATING & CAPITAL BUDGET 2022

Fiscal year ending June 30, 2022



*Lake Mead*

*Colorado River*



**On the cover:**

The Las Vegas Valley gets about 90 percent of its water from the Colorado River, which continues to suffer the effects of prolonged drought and global warming. The river, shown here in Utah near Canyonlands National Park, flows into Lake Powell before being released into Lake Mead, the primary source of our community's drinking water. Lake Mead has dropped more than 130 feet since 2000 due to ongoing drought conditions. Learn more at [snwa.com](http://snwa.com).

# **Southern Nevada Water Authority**

## **Operating & Capital Budget Fiscal Year Ending June 30, 2022**



### **Board of Directors**

**Marilyn K. Kirkpatrick, Chair, Clark County Commissioner  
(representing Las Vegas Valley Water District)  
Dan Stewart, Vice Chair, City of Henderson Councilman  
Claudia Bridges, City of Boulder City Councilwoman  
Cedric Crear, City of Las Vegas Councilman  
James B. Gibson, Clark County Commissioner  
(representing Big Bend Water District)  
Justin Jones, Clark County Commissioner  
(representing Clark County Water Reclamation District)  
John Lee, City of North Las Vegas Mayor**

**John J. Entsminger  
General Manager**

**E. Kevin Bethel  
Chief Financial Officer**

**Marliese S. Horsewood  
Director of Finance/Controller**

**Matt J. Chorpening  
Manager, Fin Plan, Analysis & Rep**

**Prepared by the Finance Department  
1001 South Valley View Blvd., Las Vegas, Nevada 89153  
702-870-2011 [www.snwa.com](http://www.snwa.com)**

**Note of Appreciation**

**We would like to express our appreciation to the Finance department staff, and staff members of other departments for their special work in the preparation of the 2021-22 budget document.**



### **CERTIFICATE OF ACHIEVEMENT**

The Government Finance Officers Association of the United States and Canada (GFOA) presented an award of Distinguished Presentation to the **Southern Nevada Water Authority (SNWA) for its annual budget for the fiscal year beginning July 1, 2020.**

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 SNWA 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

**Southern Nevada Water Authority  
Nevada**

For the Fiscal Year Beginning

**July 1, 2020**

*Christopher P. Morrill*

Executive Director

**Southern Nevada Water Authority**  
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# SECTION 1

## GENERAL MANAGER'S INFORMATION REPORT

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SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22  
OPERATING AND CAPITAL BUDGET



# **SOUTHERN NEVADA WATER AUTHORITY**

## **GENERAL MANAGER'S INFORMATION REPORT**

DATE: April 15, 2021

NO. 43

SUBJECT: SOUTHERN NEVADA WATER AUTHORITY  
PROPOSED OPERATING AND CAPITAL BUDGET FOR FISCAL YEAR 2021-22

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The Tentative Operating and Capital Budget of the Southern Nevada Water Authority (SNWA) for fiscal year 2021-22 was submitted by April 15, 2021, to the State of Nevada Department of Taxation in accordance with NRS 354.596.

### **Executive Summary**

The global COVID-19 pandemic brought new and unique conditions to every facet of SNWA's organizational operations. Coupled with adoption and implementation of a \$3.2 billion amendment to the SNWA's Major Construction and Capital Plan (MCCP) and preparation for future supply reductions, fiscal year 2020-21 introduced unprecedented challenges and unique opportunities for the entire organization. The fiscal year 2021-22 tentative budget reflects the ongoing COVID-19 impacts on the economy, implementation of the SNWA's amended MCCP, bolstered conservation efforts, and the continued development and protection of water resources for Southern Nevada.

### **Pandemic Response**

Like many other organizations throughout Southern Nevada, the SNWA was impacted by the COVID-19 pandemic. At the onset of the pandemic, the organization immediately adjusted its normal operations by transitioning to a work-from-home operational status while only retaining limited personnel onsite to ensure critical daily operations continued. As we move forward, additional staff is able to transition back to onsite. Currently, 55 percent of staff are performing their functions and duties onsite full-time. The remaining workforce have been working full-time remotely.

The SNWA developed its Pandemic Readiness and Response Plan more than a decade ago to address potential influenza outbreaks and has continued to update that plan accordingly as the organization monitors and navigates the COVID-19 pandemic. The plan provides awareness, readiness and guidance on matters before, during and after a pandemic situation.

Over the past year, in response to changing operating conditions due to COVID-19 and the offer of a Voluntary Separation Plan, changes were made throughout the organization, including its Executive Team. The Executive Team was reorganized to better reflect the organization's long-term priorities, and now includes a Deputy General Manager of Engineering, Deputy General Manager of Resources and Deputy General Manager of Operations, with the General Manager, General Counsel and Chief Financial Officer roles remaining unchanged.



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## **Integrated Resource Planning Advisory Committee**

In October 2019, the SNWA Board of Directors appointed 11 community members to the Integrated Resource Planning Advisory Committee 2020 (IRPAC 2020) to examine Southern Nevada's long-term water planning efforts and develop recommendations to maintain reliability and meet long-term water resource needs. IRPAC 2020 members represented a spectrum of community interests including the commercial, resorts, residential, development and financial sectors.

The committee met nine times between October 2019 and August 2020. The ten month-long process consisted of education on critical transmission infrastructure, water resources, water conservation, out-of-valley water use and regional water rates; an evaluation of water rate adjustment scenarios and financial models; consideration of the COVID-19 pandemic and its impacts; and ultimately the formulation of a Recommendations Report, which was presented to and approved by the SNWA Board in September 2020.

The Recommendations Report included 22 recommendations pertaining to the construction of new infrastructure, the maximization of return-flow credits to Lake Mead, the increase of conservation efforts and a funding strategy to support these initiatives, many of which will be detailed throughout this document.

## **Major Construction and Capital Plan (MCCP)**

The 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. The Board of Directors approved the amended MCCP in November 2020.

Major facility-related projects included within the amended MCCP include:

### **Horizon Lateral**

An additional lateral is needed to support the regional water system, as the existing South Valley Lateral, which provides 40 percent of all existing in-valley deliveries, is projected to be nearly fully subscribed by 2034. The Horizon Lateral, the largest project in the MCCP, will offer redundancy for a large portion of SNWA customers and the capacity to meet new demands in the southern portion of the water system.

It is estimated that the Horizon Lateral will cost approximately \$1.6 billion to construct and be complete in 2032. Design work continues on the large project, which includes different proposed alternative alignments.

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**Garnet Valley Water System**

The Apex Industrial Park is located in Garnet Valley in North Las Vegas and is one of Southern Nevada's largest industrial parks. The 16-parcel area spans more than 11,000 acres and is attracting technology- and manufacturing-based businesses. Once complete, the Garnet Valley Water System will have the capacity to supply 20 million gallons of water per day to support the water needs of the Apex Industrial Park.

The Garnet Valley Water System is projected to cost approximately \$129.8 million and scheduled for completion in 2028.

**Garnet Valley Wastewater System**

Construction of the Garnet Valley Wastewater System will help ensure the sustainable development of resources and reduce water demand impacts to the Colorado River. The project will maximize the community's water resources by developing the infrastructure required to capture indoor wastewater from the Garnet Valley area and return it to Lake Mead in accordance with the SNWA's out-of-valley water use policy. This project is scheduled for completion in 2027 and estimated to cost \$120 million.

**Large Scale Solar Photovoltaic (PV) Project**

The SNWA will enter a 25-year, fixed-rate Power Purchase Agreement (PPA) with ibV Energy Partners, which will build, operate and maintain a large-scale solar PV facility near Boulder City, NV. The PPA allows the SNWA to purchase power below current market cost, saving money when the facility opens in 2023 and throughout the span of the agreement. In addition to the PPA, the project consists of a 10-mile expansion to the SNWA's existing power transmission system, a single-circuit 230 kV power line, 230 kV Switchyard and other infrastructure to support energy transmission.

This project ensures a clean, cost-effective renewable energy source for the next 25 years and is essential for meeting the Nevada Renewable Portfolio Standard of 50 percent by 2030. The estimated capital cost of this project is \$20.8 million.

**Drought and Water Resources**

As drought conditions continue throughout the Colorado River Basin and the effects of climate change become increasingly prevalent, prudent management of water resources remains a critical priority.

A revised 50-year Water Resource Plan and various resources-related initiatives within the SNWA's amended MCCP will continue to guide and support SNWA's efforts to protect Southern Nevada's water supply.

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**Water Resource Plan**

In November 2020, the SNWA Board adopted an updated Water Resource Plan reflecting various changes within the current resource planning environment, including:

- Extension of the planning horizon through 2071
- Updated resource demand range based on new population forecasts
- Incorporation of the IRPAC 2020 recommendations related to resources and conservation, including new permanent water supplies in the future
- Revision of the composition, priority, and timing of future resource options

The Resource 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. The SNWA continues to use a scenario-based planning approach that represents Southern Nevada's future water resource needs under variable supply and demand conditions. It also includes expanded planning scenarios that reflect shortage impacts under variable hydrology (average, dry, extremely dry and climate change).

**Future Resources**

The SNWA continues to examine and consider additional opportunities to further diversify its water resource portfolio. To that end, the amended MCCP includes potential investment in water recycling and/or desalination projects developed by other Colorado River partners. By participating in these efforts, the SNWA would partially fund the construction of facilities, or lease/purchase water produced by the facilities, in exchange for a portion of the partnering state's Colorado River allocation. Potential projects include:

**Metropolitan Water District of Southern California (MET) Recycling Project.** MET is proposing an advanced water treatment project to treat wastewater and inject it into groundwater aquifers for future use and the project would create approximately 112,000 acre-feet of water per year. While the project is still in an early phase of development, the SNWA and MET are collaborating to identify a path for the SNWA's participation and to determine what approvals might be needed to implement the partnership. The SNWA anticipates that 20,000 - 40,000 acre-feet per year of Colorado River water will be available to the SNWA in exchange for funding participation. The SNWA and MET have executed an agreement that provides for the SNWA to contribute funds for environmental planning phase services related to the project.

**Yuma Desalting Plant.** The Yuma Desalting Plant was built in 1992 to treat agricultural runoff, however, it has only operated three times due to flood damage and insufficient funding. The SNWA may have the opportunity to participate in the plant's repair and long-term operation, which could yield up to 30,000 acre-feet of water per year.

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## **Conservation**

Community water conservation efforts reduce existing and future demands and extend available supplies. As such, conservation continues to be a crucial component of the SNWA's water resource portfolio.

Since 1991, the SNWA and its member agencies have worked to set and achieve aggressive water conservation goals. As a result, per capita water use has decreased by 52 percent since 2002, despite a 48 percent increase in the service area's population during that same timeframe.

The SNWA is currently working to achieve its conservation goal of 105 gallons per capita per day (GPCD) by 2035.

### **IRPAC 2020 Conservation Recommendations**

During the IRPAC 2020 process, the committee reviewed Southern Nevada's water conservation initiatives and progress towards the regional conservation goal. With climate change, a growing population, and system loss placing upward pressure on progress towards the goal, Southern Nevada is facing an uphill challenge in reducing water use consistently over the planning horizon. Meeting the goal will require new strategies, innovation, more stringent regulations and community-wide participation.

In addition to including \$152 million in the MCCP amendment to continue funding the Water Smart Landscapes Program, the committee considered a wide range of conservation opportunities that, if implemented, would help meet the conservation goal.

These recommendations include:

- Target the reduction of non-functional turf and limit turf installation in new development.
- Limit cool-season turf installation in public spaces and expedite conversion in public facilities.
- Enhance landscape watering compliance through implementation of smart controller technology.
- Expedite customer leak repairs through implementation of advanced metering infrastructure.
- Reduce consumptive water losses associated with evaporative cooling.
- Encourage efficient development and discourage consumptive water use for new large water users.
- Maintain and improve the existing water loss rate among wholesale and retail purveyors.

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**Interlocal Agreements**

In November 2020, a number of interlocal agreements with the SNWA's member agencies were signed to help formalize IRPAC 2020's recommendations before funds were spent on larger construction projects within the MCCP. These agreements included:

- Adoption of the SNWA's non-functional turf resolution into local codes and ordinances
- Limiting turf installation to only parks and schools in areas outside the Las Vegas Valley
- Out-of-valley water use policy requiring that any SNWA-delivered water be returned to Lake Mead via a wastewater system
- 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

**Water Smart Landscapes**

In December 2020, the SNWA's Water Smart Landscapes Rebate Program reached a significant milestone. Program participants officially converted more than 197 million square feet of grass—enough to roll an 18-inch-wide strip of sod completely around the earth's circumference.

This milestone was reached as a result of nearly 67,700 residential and commercial turf-conversion projects that have been completed throughout the community since 1999. As a result of these conversions, customers have received more than \$247 million in rebates while collectively saving the community more than 140 billion gallons of water.

The Water Smart Landscapes Program continues to see progress, as evidenced by three recently announced landscape conversions that will replace nearly 400,000 square feet of turf at Aliante Golf Club in North Las Vegas, the Summerlin Parkway entryway monument and at four different parks in Henderson. Once complete, these projects will save more than 18 million gallons of water each year.

**New Conservation Programs**

Recognizing that reducing water use throughout the valley will require new tactics, staff has developed a number of new conservation programs and changes to existing programs to increase access to water-saving efforts.

**Artificial Turf Incentive.** In March 2021, the SNWA Board of Directors approved a new conservation program, which incentivizes customers to install artificial turf in lieu of irrigated turf in areas where turf is needed, such as sport fields. The Board approved a \$2 per square foot rebate to offset the cost of installing artificial turf, which is typically more expensive than its living counterpart.

**Septic Conversion Program.** In March 2021, the Board of Directors approved development and initial program funding for a new financial assistance program for septic users. The program offers grant funding for septic users to abandon their septic tanks and connect to the municipal sewer

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system, thereby protecting the aquifer from nitrates and returning wastewater, that would otherwise be lost, back to Lake Mead.

**Large Water Users Policy.** Recognizing that Southern Nevada's large water users have the potential to affect future supply availability, the SNWA Board approved development of a large water users policy for the community. Aimed to ensure future water uses are the most efficient and suitable for a desert environment, the policy is currently in development and slated for approval some time in 2021.

### **Organizational Award**

In 2020, the Water Environment Federation, in partnership with the National Association of Clean Water Agencies, and the Water Environment Research Foundation awarded the SNWA the *Water Resources Utility of the Future* award in partnering and engagement. The SNWA was recognized for its community collaboration efforts to not only meet organizational objectives, but also enhance the overall environmental, economic, and social wellbeing of stakeholders and the community at large.

## **Financial Considerations/Capital Funding**

The SNWA maintains a diversified funding approach, which includes wholesale delivery charges, water bill charges, connection charges, grant funding and sales tax proceeds. Prudent management of these revenue sources, coupled with consistent long-term financial planning, has resulted in financial stability for the organization. However, the long-term financial effects of the COVID-19 pandemic are yet to be determined, but as described in more detail below, the SNWA continues to maintain its reserves above the reserve policy's target level.

Key initiatives for fiscal year 2021-22 include the water resource and conservation efforts, as well as the continuation of the MCCP. The SNWA's fiscal year 2021-22 Budget Plan reflects efforts and initiatives to maintain reliable water delivery for years to come.

### **Reserve Policy**

A responsible reserve policy helps ensure the SNWA can withstand potential unanticipated expenditures and maintain positive credit ratings.

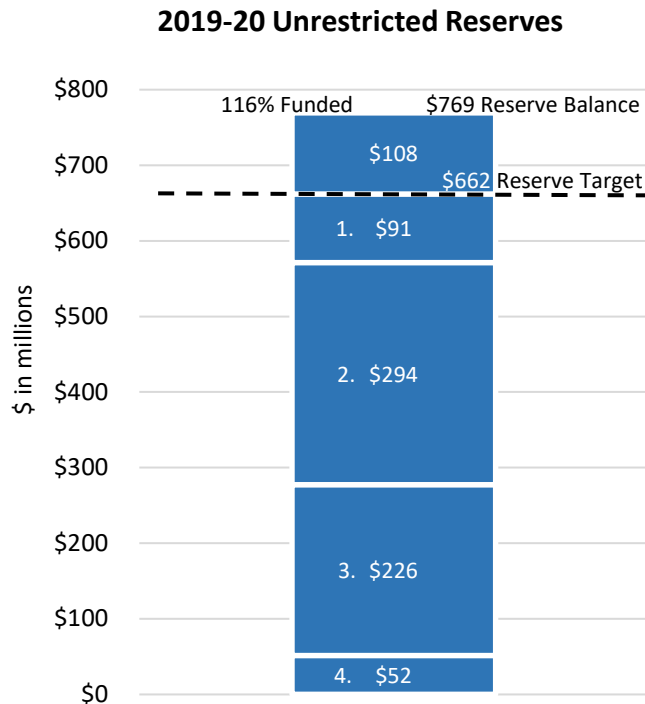
The SNWA's reserve policy includes the following components (corresponding to the numbered dollar amounts in the following chart):

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



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During the past fiscal year, as the following chart indicates, the SNWA met and exceeded its established unrestricted reserve target balance, representing an important benchmark in the organization's financial health.



**Inflation-Based Increases**

The SNWA's Connection Charge, Commodity Charge and Infrastructure Charge had previously not been adjusted since 2008, 2017 and 2018, respectively. To support the proposed amendment to the MCCP, the IRPAC recommended those charges be adjusted to catch them up with current-day inflation levels. The committee also recommended maintaining annual inflation-based increases to avoid future rate shock.

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## Financial Summary

The table on the following page contains a summary of sources and uses of funds for the SNWA's fiscal years 2019-20, 2020-21 and 2021-22.



<b>Budget Summary</b> (\$ in millions)					
	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>	<b>Budget-to-Budget Variance</b>	
				<b>\$</b>	<b>%</b>
<b>Sources</b>					
Wholesale Delivery Charge	\$ 146.0	\$ 142.0	\$ 150.3	\$ 8.3	6%
Infrastructure Charge	167.5	166.9	175.2	8.3	5%
Commodity Charge	67.4	66.8	73.6	6.8	10%
Connection Charge	79.3	19.1	35.6	16.5	86%
Reliability Surcharge	5.5	5.4	6.0	0.6	11%
Sales Tax	65.5	44.7	75.4	30.7	69%
Investment Income	31.4	7.2	9.8	2.6	37%
Other Sources	28.4	10.1	10.0	(0.2)	-2%
<b>Subtotal</b>	<b>590.9</b>	<b>462.3</b>	<b>535.9</b>	<b>73.7</b>	<b>16%</b>
Debt Issuance Proceeds	-	-	348.8	348.8	
<b>Total Sources</b>	<b>590.9</b>	<b>462.3</b>	<b>884.7</b>	<b>422.5</b>	<b>91%</b>
<b>Uses</b>					
Water Resource Investments	4.2	7.9	14.6	6.7	84%
Energy	37.8	38.2	41.6	3.4	9%
Payroll & Related	85.2	97.5	96.0	(1.5)	-1%
Operating Expenses	54.5	75.8	75.5	(0.3)	0%
Capital Expenditures	81.4	124.2	175.5	51.4	41%
Debt Service	293.8	289.1	298.1	9.0	3%
<b>Total Uses</b>	<b>557.0</b>	<b>632.8</b>	<b>701.4</b>	<b>68.6</b>	<b>11%</b>
<b>Total Net Surplus/(Deficit)<sup>1</sup></b>	<b>\$ 33.9</b>	<b>\$ (170.5)</b>	<b>\$ 183.3</b>	<b>\$ 353.8</b>	

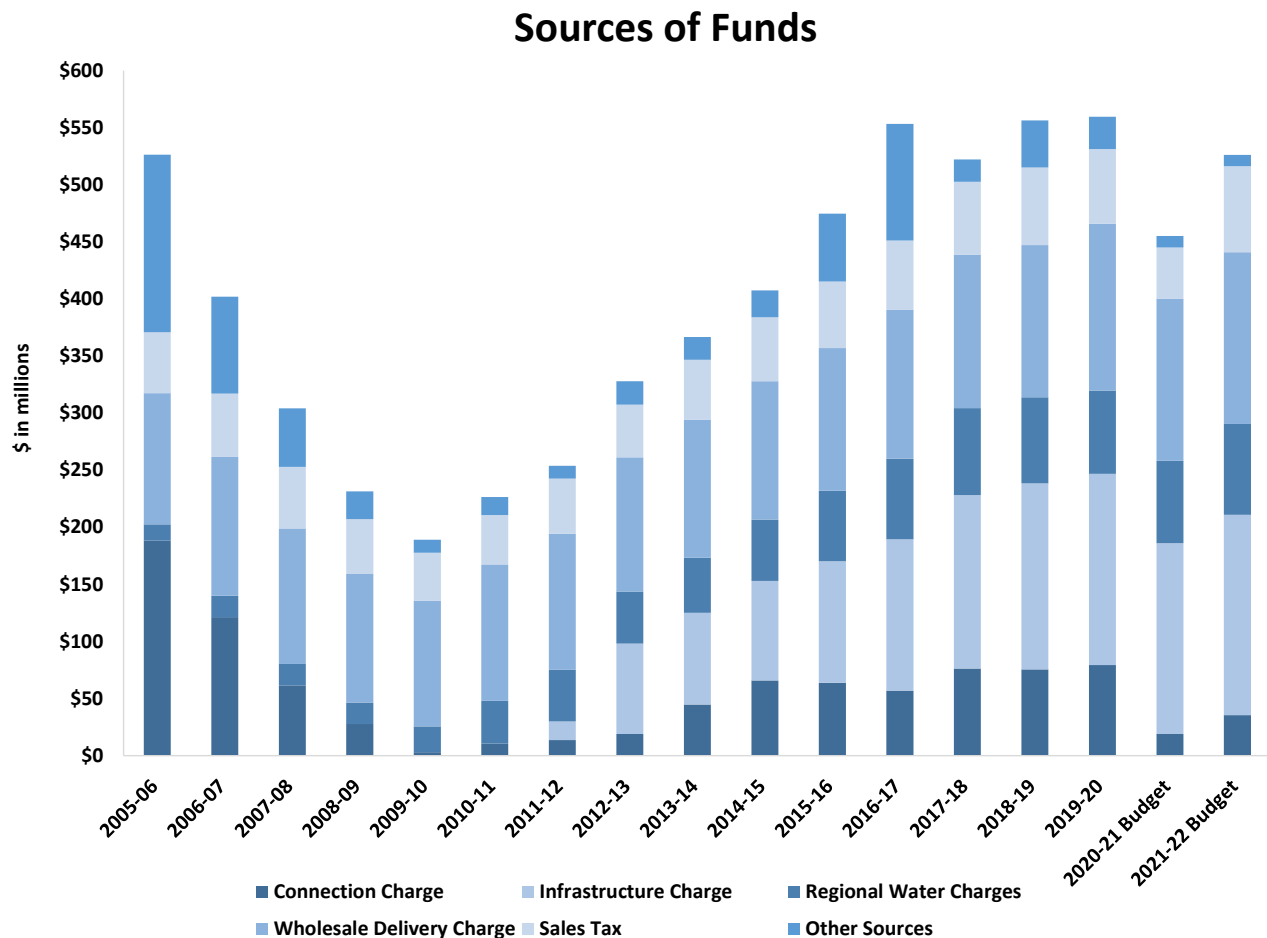
<sup>1</sup> Any amount of Net Surplus is used to fund reserves while Net Deficit amounts are funded through the use of reserve balances.

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**Sources**

The 2021-22 Budget Plan's total sources of funds are projected to be \$884.7 million. The increase as compared to the 2020-21 Adopted Budget Plan is primarily attributable to debt proceeds from a projected debt issuance.

The Wholesale Delivery Charge and Connection Charge are budgeted to decrease \$8.3 million and \$16.5 million respectively, as compared to the 2020-21 Adopted Budget Plan which was significantly affected by projected impacts from the COVID-19 pandemic in Southern Nevada, and the 2021-22 amount is higher due to those projected impacts not having as negative of an effect as anticipated. The Wholesale Delivery Charge forecasts volume increases, while the Connection Charge expects development to continue at a moderate pace. The increase in the Infrastructure Charge is primarily due to the IRPAC 2020 recommended, and subsequently Board adopted, rate adjustments. With the Infrastructure Charge being the largest revenue component, the SNWA's sources of funds have increased stability over the past number of years, lessening the reliance on Connection Charge revenue as shown in the chart below.



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**Uses**

The 2021-22 Budget Plan's total uses of funds are projected to be \$701.4 million, an 11 percent increase compared to the 2020-21 Adopted Budget Plan.

Water Resource Investments are budgeted to increase \$6.7 million, due to the incorporation of the IRPAC 2020 recommendations related to water resources. Energy costs are projected to increase by nine percent. Payroll costs are anticipated to decrease by \$1.5 million, or 1 percent, compared to the 2020-21 Adopted Budget Plan.


Non-payroll operating expenses are projected to essentially remain flat. Capital expenditures are budgeted to increase by \$51.4 million in alignment with the MCCP. Debt service costs are estimated to increase by \$9.0 million largely due to a projected \$348.8 million debt issuance.

**Summary**

The SNWA's fiscal year 2021-22 Budget Plan presents a stable outlook as the SNWA navigates through the COVID-19 pandemic, with recurring revenues exceeding recurring expenses and a mix of revenues, reserves, and debt proceeds funding capital expenditures.

**Approval**

The public hearing on the SNWA's 2021-22 Tentative Budget, and adoption of the Final Budget, is scheduled for 9:00 a.m., Thursday, May 20, 2021.

A handwritten signature in dark ink, appearing to read "John J. Entsminger", is written over a horizontal line.

John J. Entsminger, General Manager

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# SECTION 2

## INTRODUCTION AND STRATEGIC PLAN

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**SOUTHERN NEVADA WATER AUTHORITY™**

**FISCAL YEAR 2021-22**

**OPERATING AND CAPITAL BUDGET**





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## **Introduction**

### **Purposes and Powers**

The Southern Nevada Water Authority (SNWA) is a political subdivision of the State of Nevada created on July 25, 1991, pursuant to Nevada Revised Statutes Chapter 277.080 to 277.180, inclusive, by a cooperative agreement among the Big Bend Water District, the City of Boulder City, the City of Henderson, the City of Las Vegas, the City of North Las Vegas, the Clark County Water Reclamation District, and the Las Vegas Valley Water District (LVVWD).

The SNWA was created to secure additional supplies of water for Southern Nevada and to effectively manage existing supplies of water through the cooperative action of its member agencies. Because the SNWA is governed equally by a seven-member Board of Directors (SNWA Board) composed of one director from each member agency, and the SNWA operations are autonomous from its member agencies, its financial statements are not included in the financial statements of another entity.

The SNWA Board appoints a General Manager (GM). In January 1993, the LVVWD's GM was also appointed GM of the SNWA, and the LVVWD was named Operating Agent for the SNWA. The GM has two Deputy General Managers (DGM's), a Chief Financial Officer (CFO) and General Counsel overseeing the operations of the LVVWD and the SNWA.

Since October 1993, the LVVWD has been paying many expenses on behalf of the SNWA. The SNWA reimburses the LVVWD for those expenses, including the cost of the LVVWD employees allocated to the SNWA. The SNWA has no employees of its own.

The Board of the SNWA has the power to periodically assess the member agencies directly for operating and capital budgets and for the satisfaction of any liabilities imposed against the SNWA. Each member made an initial contribution to the SNWA for operating and administrative expenses in the amount of \$15,000. Assessments for additional funds needed by the SNWA, in accordance with operating and capital budgets, have been apportioned to member agencies on the basis of water deliveries to those agencies. Funding received by the SNWA from its member agencies for operations is recorded as operating revenue, while funding received for capital purchases is recorded as capital contributions. Member agencies who are not water purveyors, i.e., the City of Las Vegas and the Clark County Water Reclamation District, each contributes towards the SNWA operations for the fiscal year 2021-22.

### **Transfer Act**

Pursuant to the Transfer Act, Assembly Bill No. 542, approved June 28, 1995 by the Nevada Legislature, the assets of the Southern Nevada Water System (SNWS), as well as responsibility for operations of the system, were transferred from the Colorado River Commission (CRC) to the SNWA

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effective January 1, 1996. Along with the assets, the CRC transferred all books and records in its possession relating to the project and its facilities. In addition to the assets, all liabilities of the CRC related to the SNWS were to be transferred to the SNWA.

The transfer was a non-cash transaction. In order to affect the transfer, CRC prepared from its SNWS accounting records an unaudited trial balance as of January 1, 1996, which was given to the SNWA. To record the transfer, the SNWA posted the entire CRC trial balance to its General Ledger as of January 1, 1996. The accuracy of that trial balance was verified by the June 30, 1996, audits of both the SNWA and CRC. The CRC detail property listing was posted to the SNWA Property Ledger.

### **Intergovernmental Relationships**

In addition to its members, the SNWA also works with other agencies of state and federal government. The following outlines some of those intergovernmental relationships.

**Major Water Purveyors.** The SNWA diverts Colorado River water from Lake Mead, treats it to federal Clean Drinking Water Act standards, and delivers treated water to the facilities of water purveyors in the Las Vegas Valley and Boulder City. The major water purveyors and their percentage of total SNWA water deliveries are as follows: Boulder City (2.4 percent), Henderson (18.3 percent), North Las Vegas (13.8 percent), the LVVWD (65.2 percent) and others (0.2 percent).

**Wastewater Treatment Agencies.** Wastewater treatment agencies in the SNWA service area are the Cities of Las Vegas, Henderson, North Las Vegas and Boulder City, and the Clark County Water Reclamation District.

**Colorado River Commission.** The CRC is an agency of the State of Nevada created in 1935 to acquire and hold in trust Nevada's right to water and power resources from Colorado River water apportioned among the seven Colorado River Basin states and Mexico. The seven member CRC Board is made up of four members appointed by the Governor (including the Chairperson) and three SNWA Board members.

**U.S. Bureau of Reclamation (Bureau).** The Bureau is a division of the U.S. Department of the Interior. It is charged with the responsibility of managing the Colorado River for the benefit of the users with rights to Colorado River water. Any changes to laws governing the Colorado River benefiting Nevada will require the cooperation and approval of the federal government via the Bureau and all seven of the Colorado River Basin states.

**Southern Nevada Water System.** The SNWS is the regional water system diverting raw Colorado River water from Lake Mead, treats it to federal Clean Drinking Water Act standards, pumps it through the River Mountains, and delivers potable water to the facilities of the water purveyors in the Las Vegas Valley and Boulder City. The SNWS was built in two stages (1971-first stage, and 1983-second stage) by the federal government acting through the Bureau, and the State of Nevada acting through its CRC. The Bureau built the transmission facilities, which are referred to as the Robert B.

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Griffith Water Project. The CRC built the treatment facility, which is known as the Alfred Merritt Smith Water Treatment Facility. The SNWS was owned by CRC and operated under contract by the LVVWD. On January 1, 1996 the assets and liabilities of the SNWS as well as responsibility for operations were transferred from CRC to the SNWA. The LVVWD continues to operate the SNWS under contract with the SNWA. The projects in the SNWA's Major Construction and Capital Plan (MCCP) are expansions or improvements of the SNWS.

**Robert B. Griffith Water Project Title Transfer.** The SNWS was built in two stages by the State of Nevada acting through the CRC and the Bureau. CRC funded its portion by issuing State of Nevada general obligation bonds. The Bureau funded its portion from federal budget appropriations. After completion of each phase, the Bureau determined total reimbursable costs for constructing its portion of the SNWS and the CRC entered into a water delivery and repayment contract with the Bureau to repay those costs plus interest. The terms of the repayment contract required 50 annual payments at 3.25 percent interest. According to the terms of the repayment contract, the federal government would retain title to the facilities it built, even after the repayment contract was fully paid.

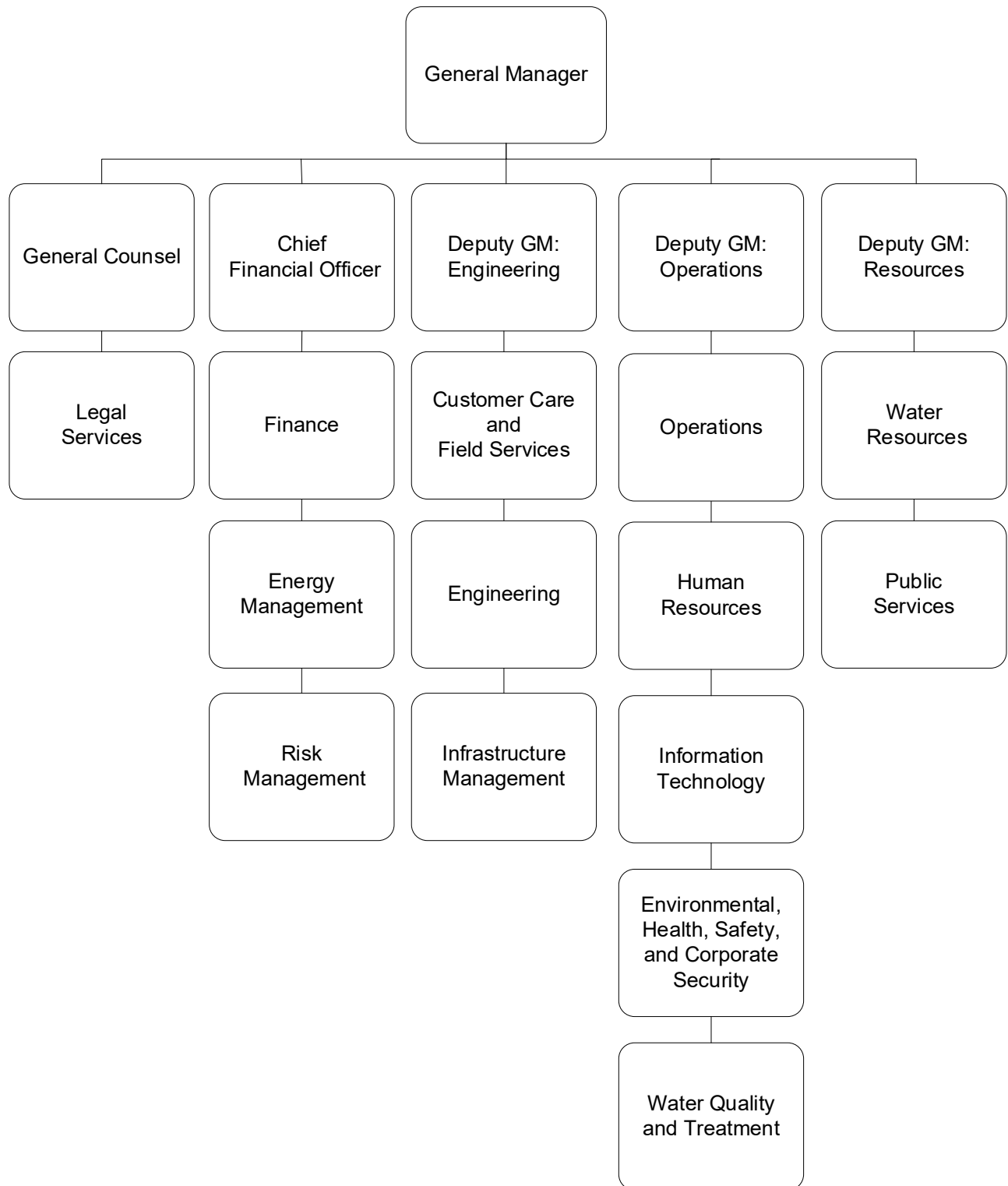
The role of the federal government in financing improvements of the SNWS has been declining. When the first phase of the SNWS was completed in 1971 at a total cost of \$62 million, 85 percent of that cost was provided by the federal government. After completion of the second phase in 1983, the ratio provided by the federal government had dropped to 71 percent. In 1995 the SNWA began work on its \$2.1 billion Capital Improvement Plan to expand and improve the SNWS. Because the Bureau was, and always would be, the owner of the facilities built with federal funding, the SNWA would always be required to obtain Bureau approval to maintain, modify, or improve the federal facilities which are an integral, but increasingly smaller, part of the total system.

In July 2000, the U.S. Congress passed, and President Clinton signed into law, the Griffith Project Prepayment and Conveyance Act (Public Law 106-249), which directed the Secretary of the Interior to transfer title to the Robert E. Griffith Project to the SNWA, subject to prepayment of the Project's federal repayment obligation. According to guidelines published by the Office of Management and Budget, the price of the title transfer was set at \$121.2 million, plus accrued interest, less any principal payments made subsequent to September 30, 1999.

### **Organizational Structure**

The LVVWD operates the SNWA under contract; however, the two entities are legally separate. The LVVWD pays substantially all expenses on behalf of the SNWA, including the cost of employees allocated to the SNWA and is reimbursed monthly for these costs. SNWA has no employees of its own. The organizational chart shows the SNWA organization and how the different departments are arranged. For a further breakdown per department, please see Section 5, Department Budgets.

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**Financial Structure and Controls**

**Proprietary Fund Type - Enterprise Fund.** The SNWA's operations are accounted for as a single Enterprise Fund. A fund is a fiscal and accounting entity with a set of self-balancing accounts comprising its assets, liabilities, fund equity, revenues, and expenses. Enterprise Fund operations are presented using the full accrual basis of accounting wherein revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred, regardless of when payments for such revenues or expenditures are actually made. In this regard, the SNWA operations are accounted for in a manner similar to a private business enterprise, where the intent of the governing body is that the costs of providing goods and services to the general public on a continuing basis are financed or recovered primarily through user charges, and its financial measurement focus is on determination of net income, financial position, and cash flows.

**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 the balance of 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 are also considered restricted.

**Internal Controls.** In developing the SNWA's accounting system, consideration focused on the adequacy of internal accounting controls. Internal accounting 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 not exceed the benefits likely to be derived, and the evaluation of costs and benefits requires estimates and judgment by management. All internal control evaluations occur within the above framework. The SNWA's internal accounting controls safeguard assets and provide reasonable assurance of proper recording of financial transactions. The SNWA will continue to identify ways in which it can strengthen its control procedures.

**Debt Administration.** It is the general intent of the SNWA that rates and charges are adequate to provide for all costs, and reliance on property taxes is to be avoided. Ad valorem taxes have never been needed to support the SNWA's operations or debt service. For a full discussion of debt objectives and guidelines see section 7, Debt Management Policy.

The State of Nevada operates a Municipal Bond Bank Program, which is designed to assist municipalities in undertaking local projects for the protection and preservation of the property and natural resources of the state. In May 1997, the SNWA was authorized to sell bonds directly to the state bond bank. Additionally, the SNWA issues bonds through the Clark County bond bank and through the LVVWD. As a result of legislation approved by the 1999 Legislature, Clark County established a bond bank to assist municipalities within Clark County. The LVVWD issues short-term or variable rate debt for the SNWA in addition to standard debt issues.

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The State of Nevada general obligation debt is rated “Aa1” by Moody’s and “AA+” by Standard & Poor’s. Clark County’s general obligation debt is rated “Aa1” by Moody’s and “AA+” by Standard and Poor’s. The LVVWD’s general obligation debt is rated “Aa1” by Moody’s and “AA” by Standard & Poor’s. It is expected that the SNWA will still utilize the state and county bond banks and the LVVWD to issue debt. The SNWA obtained the credit rating primarily at the request of parties who wished to enter into long term purchased power agreements with the SNWA and needed an evaluation of the SNWA’s credit worthiness.

As of July 1, 2021, the SNWA has \$2.8 billion in outstanding debt, excluding unamortized premiums and discounts. All debt is backed by a pledge of the SNWA’s revenues. All applicable bond covenants such as ratios of net income to debt service, sinking funds, and insurance coverage have been met or exceeded.

**Cash Management.** Funds not immediately required for paying operating or capital expenditures are invested in U.S. Government and agency securities and other money market instruments. Nothing in the Cooperative Agreement creating the SNWA or the Facilities and Operations Agreement governing the SNWA’s relationship with its purveyor members dictates permitted investments. Also, there is no applicable Nevada law. However, the SNWA chooses to comply with Nevada Revised Statutes (NRS) 355.170, which governs permitted investments for counties, cities, and school districts in Nevada. NRS 355.170 limits investments to obligations of the federal government and its agencies, commercial bank certificates of deposit, obligations of state and local governments rated A or above, bankers’ acceptances, repurchase agreements, and money market mutual funds. All investments are held by a commercial bank’s trust department in the name of the SNWA and are insured or collateralized with securities held by a third party in the name of the SNWA.

**Risk Management.** The SNWA employs a multifaceted approach to risk management, which includes the transfer, elimination, avoidance, reduction and/or assumption of risk of loss. The SNWA 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 is \$500 million per occurrence with a deductible of \$1 million per occurrence. The program also includes earthquake coverage (\$100 million limit) and flood coverage (\$50 million limit) each having a \$100,000 deductible. The SNWA self-insures the first \$1 million for its automobile and general liability exposure and purchases \$30 million of excess liability insurance.

In contracts, the SNWA obtains indemnification and hold-harmless agreements, and requires that contractors name the SNWA as an additional insured under the indemnitor’s insurance coverage, usually \$1 million to \$10 million for commercial general and auto liability insurance. The SNWA provides builders risk insurance for all construction projects with a blanket limit of \$500 million per

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contract, or higher as needed, with a \$50,000 deductible per claim, except earthquake and flood where the deductible is \$500,000 per claim.

**Capital Project Structure and Controls**

**Identification of Capital Project Need.** Capital projects for the SNWA are proposed in response to identified needs for improvements to the facilities providing for delivery of community water supplies to the members of the SNWA. These improvements may be either 1) new facilities to expand or enhance capabilities or 2) repair, upgrade or replace existing facilities no longer functioning as required.

Identification of proposed new facilities to meet expanding water delivery requirements is accomplished through a process involving continuing assessment of current and projected future community water demands. The SNWA works with its purveyor members to establish both short-range and long-range projections of future water demands. These water demands are compared to the capacities of the existing SNWA water facilities. Where facility capacities are insufficient to meet projected demands, the SNWA undertakes efforts to plan potential new facilities to address the projected shortfall. New facilities may also be proposed to enhance the reliability of the water delivery facilities, or to enhance the quality of the water provided to the community.

Identification of existing facilities requiring repair, upgrade or replacement comes about through continuous monitoring and assessment of facility performance. To the extent possible, major repair, upgrade or replacement projects are identified in time to allow for planning and scheduling of the projects to minimize costs and interruptions to operations of other facilities.

The SNWA meets periodically with its purveyor members to discuss water demand projections, compare those projections to existing system capacities, review operational issues, define an annual operating plan, discuss progress on approved capital projects under design and construction, and consider proposals for new capital projects. Proposals for new capital projects are presented to the Southern Nevada Water System Work Group (Work Group), a formal advisory committee composed of representatives of the SNWA and the SNWA Purveyor Members. Upon endorsement by the Work Group, new projects are incorporated into amendments to the SNWA's capital plans and are presented to the SNWA Board for approval. If the amended capital plan requires an increase in the total cost of the plan, then the amended capital plan must also be approved by the governing body of each Purveyor Member.

**Execution of Capital Plan.** After approval of the capital plan by the SNWA Board, the Engineering department assembles a staging plan for each project and develops specifications to be used as criteria during the competitive bidding process. Major construction portions are then let to an open competitive bidding process. All bids are reviewed, and the lowest qualifying bid is presented to the SNWA Board for their approval. At the approval date, the Finance department (Finance) and the



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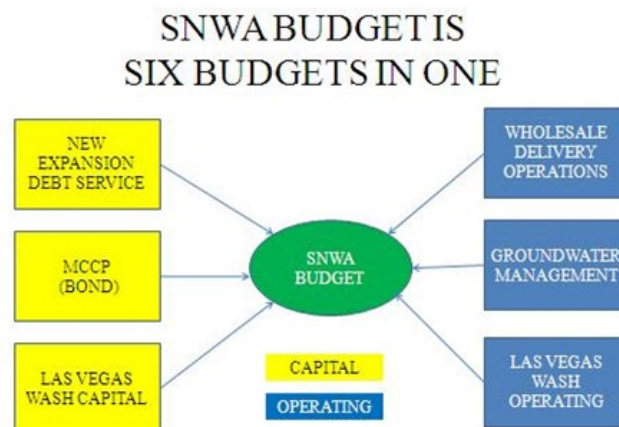
Engineering department encumber the total amount of the contract. Change orders are submitted to the SNWA Board as needed with full explanations as to why the change is necessary.

The Engineering department issues capital plans, which include a list of capital projects and their projected costs. The Finance department tracks expenditures and encumbrances for capital projects and plans future debt service issues on these calculations. Upon capital project completion, the Engineering department presents a summary of the project and then the Finance department moves the completed project from construction work in progress to property, plant and equipment. Details of the current capital budget can be viewed in Section 6 of this 2021-22 Budget Plan document.

## Budget Controls and Process

### Basis of Accounting

The SNWA's audited Comprehensive Annual Financial Report is presented on the full accrual basis of accounting wherein revenues are recognized in the accounting period in which they are earned, and expenses are recognized in the period incurred, regardless of when payments are actually made. However, the budget is presented on a modified cash basis. In addition, the budget is broken into sub funds of the single proprietary fund, which shows beginning balance, sources of funds, uses of funds, and ending balance. The SNWA is an enterprise fund; the sub funds are an internal cost control aiding management in insuring revenues and expenses for major projects are properly matched. The SNWA maintains six separate sub funds. Three track the financial activity of SNWA's capital programs while the other three track day-to-day operations.



Sub fund balances are reconciled to the audited Comprehensive Annual Financial Report. For budget preparation and presentation, the Las Vegas Wash Capital and Las Vegas Wash Operating sub funds are combined into one sub fund for simplification purposes.

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**Budgetary Controls**

By State statutes, the SNWA's budget is approved annually, following a public hearing by the SNWA Board, and a copy is submitted to the State Department of Taxation. Budgetary controls are established at the levels of total estimated operating and non-operating 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, expenditures will vary.

The SNWA is encouraged, but is not required by law, to adopt a balanced budget. A balanced budget is defined as a budget where sources of funds are equal to, or exceed, uses of funds. Throughout the budget process, the SNWA examines projected financial needs and determines whether or not rates, fees and charges should be adjusted to make funds available for those needs.

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 Finance 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 (IT). Finance 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 staffing is controlled by the Human Resources department (HR).

**Budget Process**

The SNWA's budget process starts in December of each year, and proceeds with a series of meetings with the department directors. Financial analysis is done to project the revenues under current rate structures. Wholesale Delivery Charge revenue projections are based on the estimated water the SNWA is planning to deliver in the coming year. The budget reflects the strategies and goals adopted by the SNWA.

Budget staff disseminates current and historical information to managers to assist them in preparation of future budgets within budgeting guidelines. The budget process consists of three major phases. The first phase includes preparing new requests for capital 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 of the departments' budgets have been reviewed and approved by Executive Management, the budget is consolidated, and an initial

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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 non-compliance with the statutory laws of the State of Nevada.


On the third Thursday in May, the SNWA's Board conducts a public hearing to allow the public an opportunity to discuss the proposed budget. During the public hearing, the GM requests final approval from the SNWA Board. The approved final budget document is filed with the State of Nevada. Once approved and filed, departments are provided copies of their budgets. The approved budget is implemented on July 1, the first day of the new fiscal year.

**Budget Augmentation**

Nevada State law (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 SNWA Board must adopt a resolution providing for an augmentation at a regular meeting of the SNWA 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 Department of Taxation.


# FISCAL YEAR 2021-22 BUDGET CALENDAR

All Departments	Financial Services	Executive Management	Human Resources
<b>Thu Dec 3</b> Budget instructions and calendar received	<b>Thu Dec 3</b> Budget instructions and calendar sent to departments		<b>Dec</b> Organization charts available for review in Workday. Adjustments to organization charts due to Human Resources Information Systems, (HRIS) ( <a href="mailto:HRIS@lvvwd.com">HRIS@lvvwd.com</a> ) by Thursday, January 14, 2020
<b>Mon Dec 7 – Tue Dec 15</b> Operating expense files received	<b>Mon Dec 7 – Tue Dec 15</b> Operating expense files sent. Coordination of budget process, schedule, and assigned department Analyst assistance begins	<b>Tue Dec 15 – Thu Jan 14</b> Personnel related requests will be coordinated through each department's Director and Deputy General Manager	<b>Thu Dec 17</b> List of existing interns and summer hire positions distributed to departments. Updates, corrections and new requests due to HRIS ( <a href="mailto:HRIS@lvvwd.com">HRIS@lvvwd.com</a> ) by Thursday, January 14, 2020
<b>Tue Dec 15</b> Budget Kick-off Meeting (Teams)	<b>Tue Dec 15</b> Budget Kick-off Meeting(Teams)		<b>Thu Jan 14</b> List of existing interns and summer hire position renewals sent to Financial Services
<b>Tue Dec 15 – Thu Jan 14</b> Personnel related requests will be coordinated through each department's Director and Deputy General Manager	<b>Thu Jan 14</b> Major data processing and equipment requests submitted to Information Technology and Fleet Services for review and coordination		
<b>Thu Jan 14</b> Adjustments to organization charts submitted to Human Resources Information Systems, (HRIS) ( <a href="mailto:HRIS@lvvwd.com">HRIS@lvvwd.com</a> )	<b>Mon Jan 25</b> Begin coordination with departments incurring intercompany and overtime payroll costs		
<b>Thu Jan 14</b> Final requests for interns and summer hire positions submitted to HRIS ( <a href="mailto:HRIS@lvvwd.com">HRIS@lvvwd.com</a> )			
<b>Thu Jan 28</b> Final 2021-22 operating expense budgets submitted to Financial Services			
<b>Thu Jan 28</b> Final 2021-22 capital budget equipment and project requests submitted			



Dec

Jan

SOUTHERN NEVADA WATER AUTHORITY

# FISCAL YEAR 2021-22 BUDGET CALENDAR



	All Departments	Financial Services	Executive Management	Human Resources
Feb	<b>Mon Feb 1</b> Budget narrative instructions received	<b>Mon Feb 1</b> Budget narrative instructions sent to departments		
	<b>Mon Feb 22</b> Summaries and detail of operating expense & capital expenditure budgets received	<b>Mon Feb 22</b> Summaries and detail of operating expense & capital expenditure budgets sent to departments		
		<b>Mon Feb 22</b> Assisting departments in preparation for the Senior Management Team (SMT) budget meeting presentations begins		
Mar		<b>Tue Mar 2</b> Budget overview briefing with Executive Management (E-Team)	<b>Tue Mar 2</b> Budget overview briefing	
	<b>Mon Mar 8</b> Department budget meetings with SMT and overview briefing	<b>Mon Mar 8</b> Department budget meetings with SMT and overview briefing	<b>Mon Mar 8</b> Department budget meetings with SMT and overview briefing	
	<b>Mon Mar 15</b> Budget narratives submitted to Financial Services		<b>Tue Mar 9 – Mon Mar 15</b> Final budget decisions made by Executive Management (E-Team)	
Apr		<b>Thu Apr 1</b> Proposed draft budgets completed for Budget Workshops with Boards of Directors	<b>Thu Apr 15</b> Board of Directors Budget Workshop for SNWA	
		<b>Thu Apr 15</b> Preliminary Budgets filed with the Nevada State Department of Taxation	<b>Mon Apr 26</b> Board of Directors Budget Workshop for LVVWD (including BBWD & Coyote Springs)	

# FISCAL YEAR 2021-22 BUDGET CALENDAR



All Departments	Financial Services	Executive Management	Human Resources
May	<p><b>Tues May 4</b> LVVWD, BBWD, and Coyote Springs Public hearing notice published in LVRJ</p> <p><b>Fri May 7</b> SNWA Public hearing notice published in LVRJ</p>	<p><b>Mon May 17</b> LVVWD Board of Directors public hearings conducted on proposed budgets of LVVWD, Big Bend, and Coyote Springs for possible adoption</p> <p><b>Thu May 20</b> SNWA Board of Directors public hearing conducted on the proposed budget for possible adoption</p>	
	<p><b>Thu May 27</b> Adopted budgets sent to the Nevada Department of Taxation</p>		<p><b>Thu May 20</b> Organization charts updated after Boards adopt budgets</p>
	<p><b>Mon Jun 21</b> LVVWD, SNWA, BBWD &amp; Coyote Springs annual summary fiscal reports published in LVRJ</p>		
	<p><b>Thu Jul 22</b> Proof of publication of fiscal reports submitted to the Nevada State Department of Taxation</p>		
Jun			
Jul			
Aug	<p><b>Thu Aug 5</b> Budget Award Application submitted to the GFOA</p>		

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## **Southern Nevada Water Authority Strategic Plan**

### **Strategic Plan Background**

The SNWA's Strategic Plan represents the latest iteration in the SNWA's long-standing commitment to self-assessment, continuous improvement, and comprehensive planning. The Strategic Plan provides future direction for the SNWA, 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 SNWA, senior management and employees of the SNWA, with policy guidance from the SNWA Board, completed a comprehensive Strategic Plan in 1993. The SNWA's Strategic Plan identified forces influencing decision-making and formulated goals and strategies to guide the SNWA in responding to the challenges, and evolve into a dynamic, responsive and effective organization. In 1997, the SNWA 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 SNWA's Strategic Plan, and a revised plan with new goals and strategies was presented to and adopted by the SNWA 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 SNWA and the member agencies.

In fall 2012, the Senior Management Team began meeting to update the strategic plan. This strategic planning process allows the SNWA and the member agencies 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 2021-22 Budget Plan Preparation**

The SNWA's Strategic Plan serves as a guide in the development of the SNWA'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 2021-22 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 SNWA has a long-standing commitment to self-assessment, continuous improvement, customer service and comprehensive planning, and has undergone several strategic planning initiatives over the past two 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 challenges of the current economic climate, organizational realignment and operational needs.

For the past two decades, Southern Nevada has weathered unprecedented drought conditions on

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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 sales tax revenue, and a significant decrease in the SNWA 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 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 to develop goals and strategies that support these objectives. By involving all levels of employees in the development of measures, milestones, standards of excellence, and incorporating their input into the strategic plan, the entire workforce 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 and mission 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.



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**Strategic Plan Strategies**

In order to implement the goals of the Strategic Plan, the SNWA 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.
- 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 and 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.

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**Operating and Capital Budget**  
**Introduction and Strategic Plan**  
Fiscal Year Ending June 30, 2022

***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.

***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.

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# SECTION 3

## OPERATING AND CAPITAL BUDGET PLAN

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**SOUTHERN NEVADA WATER AUTHORITY™**

**FISCAL YEAR 2021-22**

**OPERATING AND CAPITAL BUDGET**



**Southern Nevada Water Authority**  
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**Operating and Capital Budget Plan**  
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The fiscal year 2021-22 Budget Plan reflects the continued commitment of the Southern Nevada Water Authority (SNWA) to provide water resources and services to meet the demands of Southern Nevada. The SNWA utilizes its Strategic Plan as a guide in shaping its annual Budget Plan. The fiscal year 2021-22 Budget Plan's total sources of funds are projected to be \$884.7 million, or a 91 percent increase compared to the fiscal year 2020-21 Adopted Budget Plan. The fiscal year 2021-22 Budget Plan's total uses of funds are projected to be \$701.4 million, or a 11 percent increase compared to the fiscal year 2020-21 Adopted Budget Plan. The table below shows the Sources and Uses Summary for the fiscal years 2019-20, 2020-21, and 2021-22.



**Budget Summary**

	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>	<b>Budget-to-Budget Variance \$</b>	<b>%</b>
<b>Sources</b>					
Wholesale Delivery Charge	\$ 145,992,532	\$ 142,032,734	\$ 150,291,355	\$ 8,258,621	6%
Infrastructure Charge	167,503,236	166,934,981	175,223,605	8,288,624	5%
Commodity Charge	67,367,835	66,773,853	73,550,659	6,776,806	10%
Connection Charge	79,318,598	19,108,425	35,636,854	16,528,429	86%
Reliability Surcharge	5,526,459	5,448,046	6,046,468	598,422	11%
Sales Tax	65,457,762	44,678,049	75,410,833	30,732,784	69%
Investment Income	31,356,661	7,154,023	9,799,849	2,645,826	37%
Other Sources	28,412,007	10,145,982	9,977,999	(167,983)	-2%
<b>Subtotal</b>	<b>590,935,090</b>	<b>462,276,092</b>	<b>535,937,622</b>	<b>73,661,529</b>	<b>16%</b>
Debt Issuance Proceeds	-	-	348,808,349	348,808,349	
<b>Total Sources</b>	<b>590,935,090</b>	<b>462,276,092</b>	<b>884,745,971</b>	<b>422,469,878</b>	<b>91%</b>
<b>Uses</b>					
Water Resource Investments	4,240,030	7,914,000	14,594,000	6,680,000	84%
Energy	37,809,348	38,222,458	41,582,555	3,360,097	9%
Payroll & Related	85,246,385	97,499,379	96,038,037	(1,461,342)	-1%
Operating Expenses	54,450,803	75,824,972	75,504,140	(320,832)	0%
Capital Expenditures	81,449,749	124,177,051	175,537,731	51,360,680	41%
Debt Service	293,793,977	289,141,521	298,143,520	9,001,999	3%
<b>Total Uses</b>	<b>556,990,291</b>	<b>632,779,381</b>	<b>701,399,982</b>	<b>68,620,601</b>	<b>11%</b>
<b>Total Net Surplus/(Deficit)<sup>1</sup></b>	<b>\$ 33,944,799</b>	<b>\$ (170,503,288)</b>	<b>\$ 183,345,989</b>		

<sup>1</sup> Any amount of Net Surplus is used to fund reserves while Net Deficit amounts are funded through the use of reserve balances.

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
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## Sources

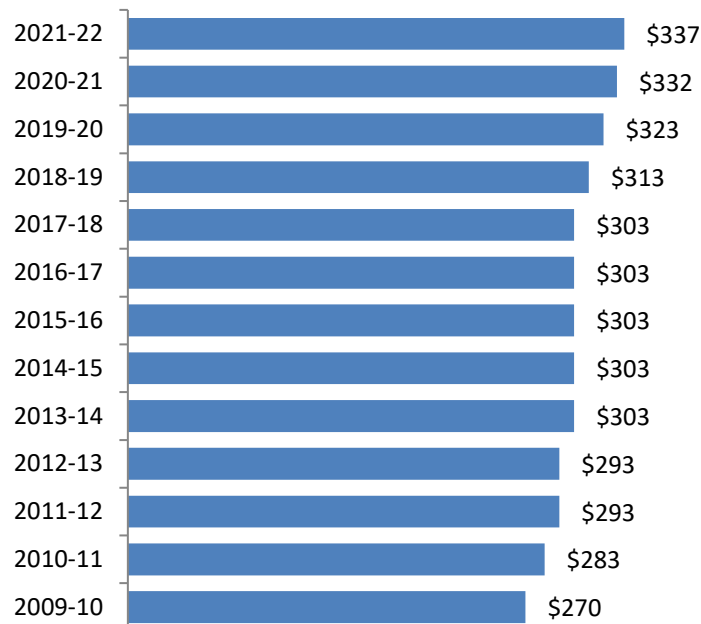
The fiscal year 2021-22 Budget Plan's total sources of funds are projected to be \$884.7 million, which is a 91 percent increase compared to the 2020-21 Adopted Budget Plan. The increase is largely due to proceeds from a projected debt issuance. The SNWA anticipates issuing approximately \$349 million in new debt to fund expenditures related to the MCCP. The remaining 16 percent increase over the 2020-21 Adopted Budget Plan is due to Sales Tax and Connection Charge rebounding from COVID-19 levels.

### Wholesale Delivery Charge

The wholesale delivery charge is the revenue generated from Colorado River water delivered by the SNWA to its purveyor members. Those purveyor members then sell the purchased water to end-users. The SNWA has no retail customers. For fiscal year 2021-22, the wholesale delivery charge for treated water sold will rise by \$5 per acre-foot. This increases the charge from \$332 to \$337 per acre-foot.

Periodic rate increases have kept the wholesale delivery charge revenue relatively stable during periods of flat-to-declining usage. The increase of \$8.3 million (six percent) in fiscal year 2021-22 is the result of the rate increase, as well as growth in water sales to purveyor members. As the following chart illustrates, the SNWA makes a concerted effort to keep the wholesale delivery per acre-foot charge economical for its purveyor members.

**Wholesale Delivery Charge Rate**  
**(\$ per Acre Foot)**



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**Infrastructure Charge**

In October 2011, the SNWA's Board of Directors (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. In February 2012, the Board approved an infrastructure charge. This charge is applied by the SNWA purveyor members, typically to retail bills, and is a fixed charge assessed based on meter size and customer class. Consumption is not considered in the application of the charge. Revenue is remitted to the SNWA from its purveyor members, on a monthly basis. At the same time in 2012, the Board appointed a 21-member Integrated Resource Planning Advisory Committee (IRPAC). The IRPAC reviewed financial projections of the SNWA and recommend strategies concerning the financial commitments. IRPAC's Phase 1 recommended, with subsequent Board approval, a four-year step-in increase of the infrastructure charge beginning January 1, 2014 and increased annually through January 1, 2017.

In addition to IRPAC's Phase 1 recommended increases to the infrastructure charge, IRPAC's Phase 2 recommended, with subsequent Board approval in December 2014, to increase the fixed monthly charges. This charge was called the Drought Protection Charge and was added to the infrastructure charge.

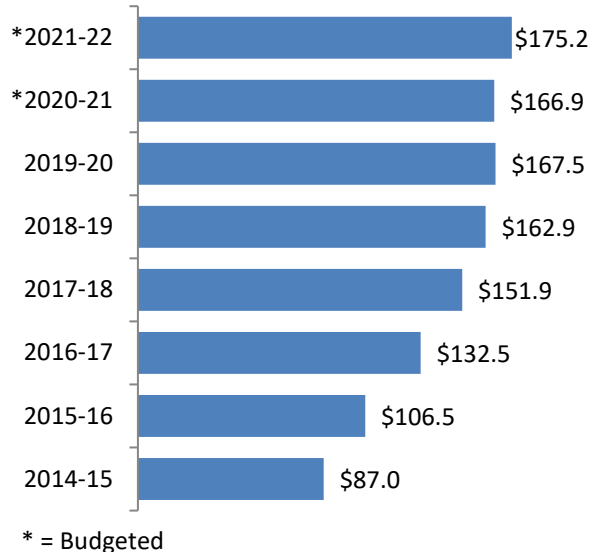
In October 2019, the SNWA Board appointed a citizens advisory committee, named IRPAC 2020, to examine Southern Nevada's long-term water planning efforts. One of the IRPAC 2020's recommendations was to implement a six-year annual increase, beginning in January 2022, to phase-in an inflationary catch up, as well as adjust for annual inflation. All of the IRPAC 2020's recommendations were approved by the Board in September 2020, and the rate adjustments themselves were adopted by the Board in November 2020 after a public hearing. Beginning in January 2022 the infrastructure charge will increase 1.6 percent annually for six years to catch up the rate to current day dollars, as well as three percent for current year inflation. Beginning in January 2028 the infrastructure charge will be indexed to the Engineering News Record (ENR) construction cost index, which will allow the cost of services to keep pace with the associated fee structure.

Infrastructure Charges are budgeted to increase \$8.3 million (five percent), compared to the 2020-21 Adopted Budget Plan. The increase is a result of the rate adjustments in January 2022 described above and account growth.



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**Infrastructure Charge**  
(\$ in millions)



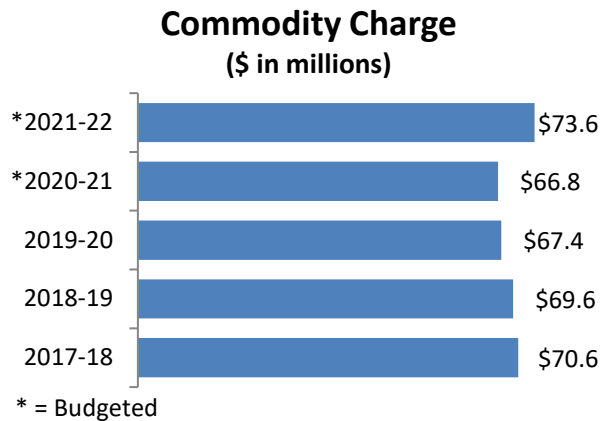
**Commodity Charge**

The commodity charge went into effect in November 1996. This charge is typically collected by purveyor members and remitted to the SNWA monthly. The commodity charge is applied to retail water bills. The IRPAC Phase 1 recommended, with subsequent Board approval, the commodity charge to increase from the starting rate \$0.30 per 1,000 gallons to \$0.48 over a four-year step-in period ending in January 2017.

Similar to the infrastructure charge, the IRPAC 2020 recommended to implement a six-year annual increase effective January 2022 to phase-in an inflationary catch up and adjust for annual inflation. This recommendation was approved by the Board in September 2020, and the rate adjustments themselves were adopted by the Board in November 2020 after a public hearing. This increases the commodity charge by 2.3 percent annually for six years, as well as 2.5 percent for current year inflation. Beginning in January 2028 the commodity charge will be indexed to the Consumer Price Index (CPI).

Commodity Charges are budgeted to increase \$6.8 million, or 10 percent compared to the 2020-21 Adopted Budget Plan. This increase is mostly due to the January 2022 rate adjustment described above and a projected increase in volumetric water sales.

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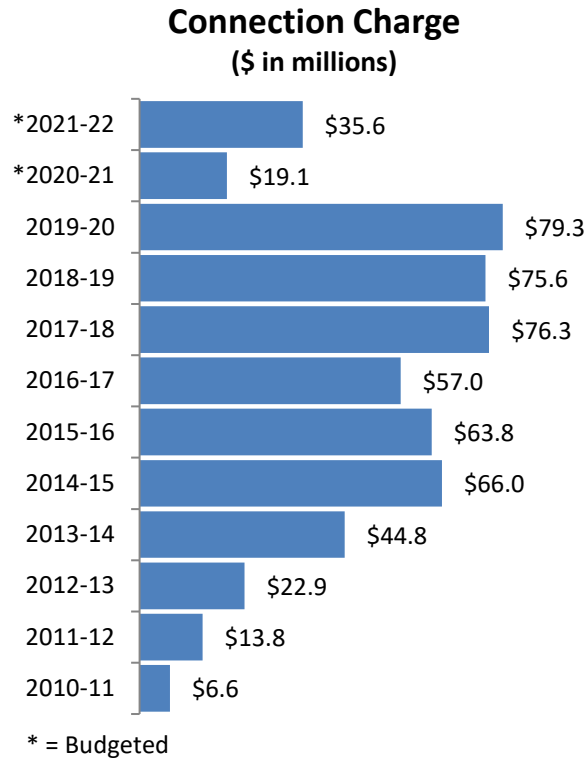
**Connection Charge**

The connection charge is a charge assessed for new connections to the potable water system and is based on customer type, land usage, and meter size. The SNWA's purveyor members collect these charges when customers apply for new water services and they are remitted to the SNWA monthly.

Similar to the infrastructure and commodity charges, the IRPAC 2020 recommended to implement a six-year annual increase effective March 2022 to phase-in an inflationary catch up and adjust for annual inflation. This recommendation was approved by the Board in September 2020, and the rate adjustments themselves were adopted by the Board in November 2020 after a public hearing. Beginning March 2022, the connection charge will increase by 6.5 percent annually for six years, as well as three percent to account for current year inflation. Beginning in March 2028 the connection charge will be annually indexed to the ENR.

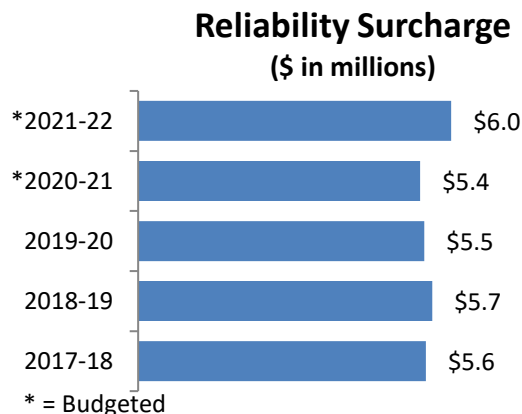
The fiscal year 2021-22 budget for connection charge revenue is \$35.6 million, which is 86 percent higher than the 2020-21 Adopted Budget Plan. Connection charge collections were one of the SNWA's largest sources of funds in the mid-2000s. However, during the subsequent recession, this revenue fell sharply with the lack of construction activity in the SNWA's service area. Since reaching a low in fiscal year 2009-10, connection charge collections increased steadily through 2018-19 and are currently experiencing volatility as a result of the COVID-19 pandemic.

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**Reliability Surcharge**

The reliability surcharge went into effect in April 1998 and is based on the total water bill, excluding the infrastructure charge, of the SNWA's purveyor members. The rate is 0.25 percent for residential customers and 2.5 percent for non-residential customers. These revenues are collected by purveyor members from retail billings and are remitted to the SNWA monthly. The fiscal year 2021-22 reliability surcharge is projected to increase \$0.6 million, or 11 percent. Because this surcharge is based on the total water bill charged to an end user by a purveyor, less the infrastructure charge, the reliability surcharge is affected by purveyor water sales and rate increases, as well as SNWA's commodity charge and infrastructure charges.



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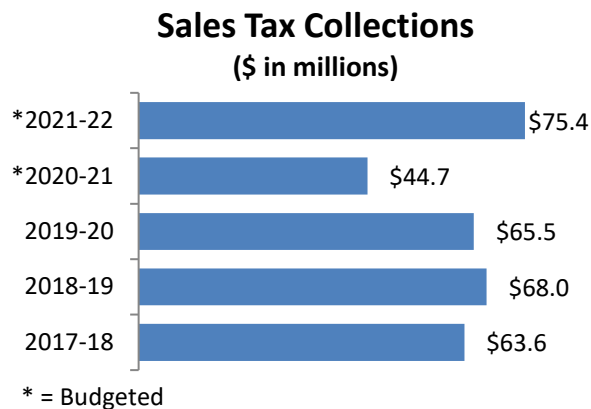
**Sales Tax**

The Clark County Water and Wastewater Infrastructure Sales Tax (sales tax) went into effect on April 1, 1999, and at that time, this increased the sales tax rate in Clark County from 7.0 percent to 7.25 percent. This is the only tax the SNWA receives.

The sales tax was originally scheduled to sunset on June 30, 2025, or when a cumulative amount of \$2.3 billion had been collected, whichever occurred first. However, legislation extending the sales tax sunset provisions were enacted during the 2011 Legislative session, subject to approval from the Clark County Board of Commissioners (Clark County Board). On September 3, 2019, the Clark County Board adopted an ordinance determining that the cessation of the sales tax was not advisable and that it would remain in place beyond the original statutorily prescribed sunset provisions. Therefore, unless such ordinance is repealed by the Clark County Board, the sales tax will remain in place indefinitely.

The sales tax is collected by the Nevada Department of Taxation (DOT) and remitted to the SNWA monthly. Of the gross amount received from the DOT, approximately 3.2 percent is forwarded to rural areas in the county and 4.0 percent is held in reserve by the SNWA to fund needed capital improvements in the Las Vegas Wash. The Las Vegas Wash is the primary channel through which excess water returns from the Las Vegas area to Lake Mead. The water flowing through the wash comprises less than two percent of the water in Lake Mead and consists of urban runoff, shallow groundwater, storm water and releases from the three water reclamation facilities within the Las Vegas area.

By agreement with the wastewater agencies in the service area, the SNWA received 100 percent of the remaining sales tax proceeds for the first two years. Since then, the remainder has been split between water and wastewater based on the relative size of their capital improvement plans. The fiscal year 2021-22 projection of sales tax revenue is \$75.4 million, or 69 percent, higher than the 2020-21 Adopted Budget Plan. This increase is due to a projected increase in taxable sales.



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**Investment Income**

Investment income includes both interest from bank accounts and investment earnings. The primary objectives of such investments are, in order of importance, safety of principal, maintenance of liquidity, and return on investment (ROI). Investment income is projected to increase \$2.6 million over the 2020-21 Adopted Budget Plan. This increase is primarily due to fluctuations in the reserve balances.

**Other Sources**

Other sources are projected to be \$10.0 million, a decrease of \$0.2 million compared to the 2020-21 Adopted Budget Plan.

**Debt Issuance Proceeds**

The SNWA expects to expend all of the currently available bond funds in fiscal year 2020-21. Therefore, the SNWA anticipates issuing bonds in fiscal year 2021-22 to fund capital expenditures related to the Major Capital and Construction Plan, which is discussed in further detail later in this section. The last new money debt issuance was in April 2016.

**Uses**

The fiscal year 2021-22 Budget Plan's total uses of funds are projected to be \$701.4 million, an 11 percent increase compared to the 2020-21 Adopted Budget Plan. The uses increase is mostly due to higher capital expenditures.

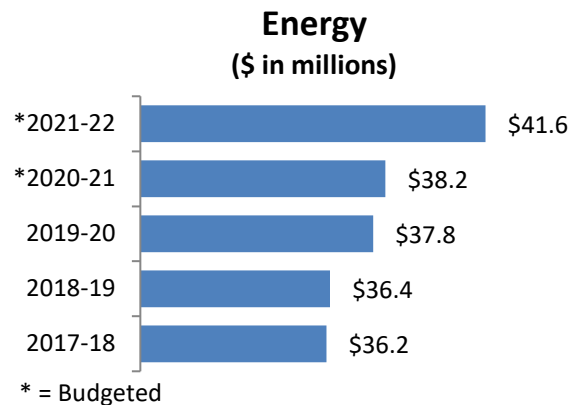
**Water Resource Investments**

Southern Nevada obtains 90 percent of its water supply from the Colorado River. Since the year 2000, persistent drought conditions, the worst in the Colorado River Basin's recorded history, have affected supply and forced stakeholders and the community to change the way water is utilized in Southern Nevada. Because of long-standing community conservation practices, Southern Nevada finds itself in a position in which water demands would still be met, even under a shortage declaration. Moreover, investments made in the regional water system will help the SNWA reliably deliver water even during the most severe drought conditions. The 2021-22 Budget plan reflects these investments, which are expected to be \$14.6 million, a \$6.7 million increase compared to the 2020-21 Adopted Budget Plan.

**Energy**

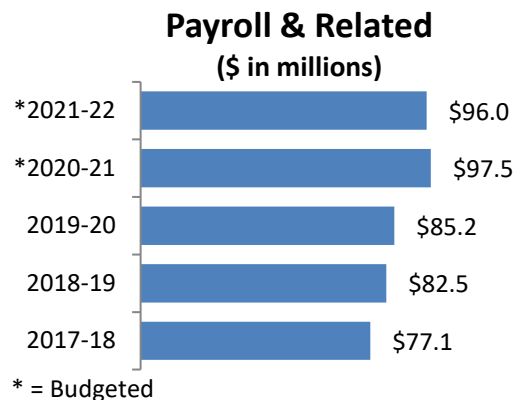
Treating raw water from Lake Mead and delivering it to the Las Vegas area is energy intensive. The cost of energy for fiscal year 2021-22 is projected to increase \$3.4 million (nine percent) over the fiscal year 2020-21 Adopted Budget Plan. This increase is primarily due to higher energy rates and an increasing energy consumption forecast.

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**Payroll & Related**

The SNWA does not have any employees. As described in the introduction section of this budget document, the Las Vegas Valley Water District (LVVWD) is the operating agent for the SNWA. A significant portion of the SNWA's operating expenses, including payroll costs, are initially paid by the LVVWD and then reimbursed by the SNWA. Payroll and related costs include wages, salaries and benefits. For fiscal year 2021-22, payroll and related expenses are anticipated to be \$96.0 million. This represents a decrease of \$1.5 million, or one percent, compared to the 2020-21 Adopted Budget Plan.



Full-time equivalent (FTE) is a unit of measurement which represents the workload of one full-time employed person. The SNWA's FTE count is expected to increase by approximately four employees over the fiscal year 2020-21 Adopted Budget Plan. Demands to secure and protect water resources, ensure efficient use of existing resources, and provide a safe and reliable water supply under current operational conditions has resulted in increased staffing requirements for the SNWA. The following chart summarizes the number of equivalent FTE positions by Department charging time to the SNWA.

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**FTE Summary**

<u>Department</u>	<u>Actual</u> <u>2019-20</u>	<u>Budget</u> <u>2020-21</u>	<u>Budget</u> <u>2021-22</u>
Executive Management	4.5	7.7	7.2
Legal Services	4.7	5.5	5.5
Finance	14.5	14.7	16.2
Energy Management	5.1	5.0	5.0
Risk Management	2.8	4.0	3.0
Customer Care & Field			
Services	2.4	2.6	2.6
Engineering	25.0	33.0	31.2
Infrastructure Management	56.1	69.9	74.1
Operations	57.1	64.3	64.3
Human Resources	2.5	4.7	4.5
Information Technology	40.9	51.6	51.6
Environmental, Health,			
Safety & Corporate Security	25.5	45.0	44.9
Water Quality & Treatment	87.8	88.2	85.3
Water Resources	72.9	67.2	70.6
Public Services	35.3	40.0	41.5
<b>Total</b>	<b>437.1</b>	<b>503.2</b>	<b>507.3</b>

*\*Totals may be off slightly due to rounding*

### **Operating Expenses**

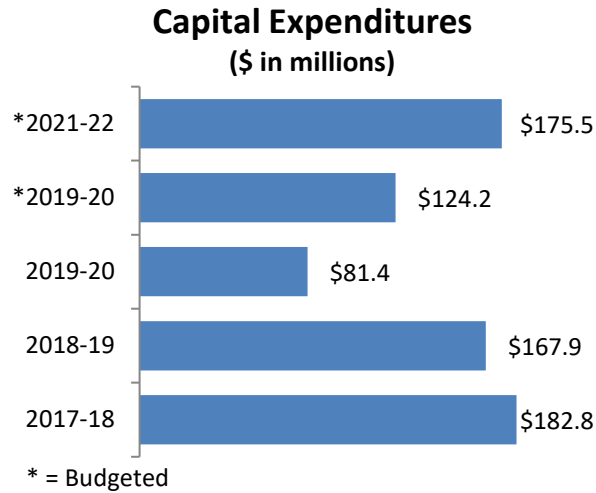
Operating expenses include all normal operating costs of the SNWA except water resource investments, energy, payroll and related, capitalized expenditures, and debt service, which are presented separately. Examples include, but are not limited to, materials and supplies, maintenance and repairs, rental and leases, water treatment chemicals, research and studies, legal fees, and professional services. Operating expenses are projected to remain essentially flat as compared to the 2020-21 Adopted Budget Plan.

### **Capital Expenditures**

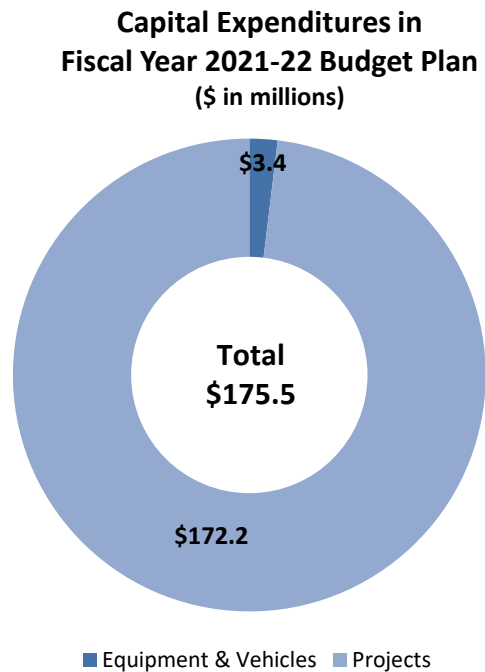
Capital expenditures are projected to increase \$51.4 million (41 percent), compared to the fiscal year 2020-21 Adopted Budget Plan. The increase is largely due to the start of the Horizon Lateral Project's planning and preliminary design phases, which will be discussed in further detail later.

Capital expenditures are different from operating expenses in that they are generally related to assets and those assets have useful lives extending beyond three years and surpass an internally established dollar threshold. Typically, capital expenditures of the SNWA are related to infrastructure assets but can be related to water rights. Examples include, but are not limited to, construction of water treatment and distribution infrastructure, water resource acquisitions, vehicles, and some computer equipment.

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The majority of the SNWA's capital expenditures are project related.



The capital projects are generally accounted for in the SNWA's two approved capital improvement plans (CIP):

- **Major Construction and Capital Plan (MCCP)** - The projects of this CIP are mainly for the water treatment and delivery infrastructure or the acquisition and retention of water resources. It is funded primarily with publicly issued municipal debt.
- **Las Vegas Wash Capital Plan** - The projects of this CIP are related to the improvement of the Las Vegas Wash. It is funded primarily with sales tax proceeds.

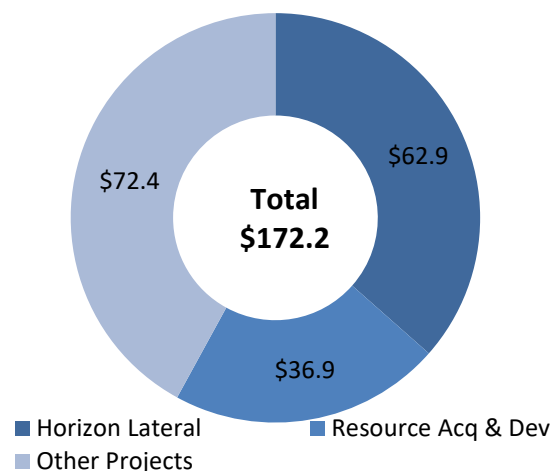


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The following is a brief description of the most significant MCCP project:

- **Horizon Lateral** – The construction of the Horizon Lateral will offer redundancy to existing customers and additional capacity for continued growth. 40% of in valley customers have no redundancy. Additionally, the current infrastructure is slated to be nearly fully subscribed by 2034. The fiscal year 2021-22 Budget Plan includes \$62.9 million to be spent on this project for planning and preliminary design. The total project cost is estimated at \$1.6 billion.

**Capital Projects in  
Fiscal Year 2021-22 Budget Plan  
(\$ in millions)**



Periodically, the SNWA pays for capital costs on a pay-as-you-go basis, attempting to minimize financing costs for these capital expenditures, while maintaining financial stability. Projecting long term additional expenditures of future capital projects, including the ones described above, is tenuous at best. Capital projects are typically instituted for two major reasons – 1) to ensure end users have a reliable, consistent source of water and 2) to deliver that water in the most economical manner possible.

The construction of major capital items fits into an overall goal of system reliability and efficiency. Unlike other government agencies that can highlight a park, school, or street, for example, and immediately determine possible maintenance and operating costs, the capital items for a water utility affect the coordination of the entire water system. An increase in costs for one section of the project may cause a reduction in another connected portion. The SNWA's capital projects utilize state of the art diagnostic equipment and testing procedures which significantly reduce the risk of catastrophic failures and help to minimize routine operating costs. Additionally, the SNWA utilizes internal cost controls to ensure funds are spent in the most conscientious manner. However, even with comprehensive controls such as these, estimating long range costs, especially in current financial conditions, can be a challenge.

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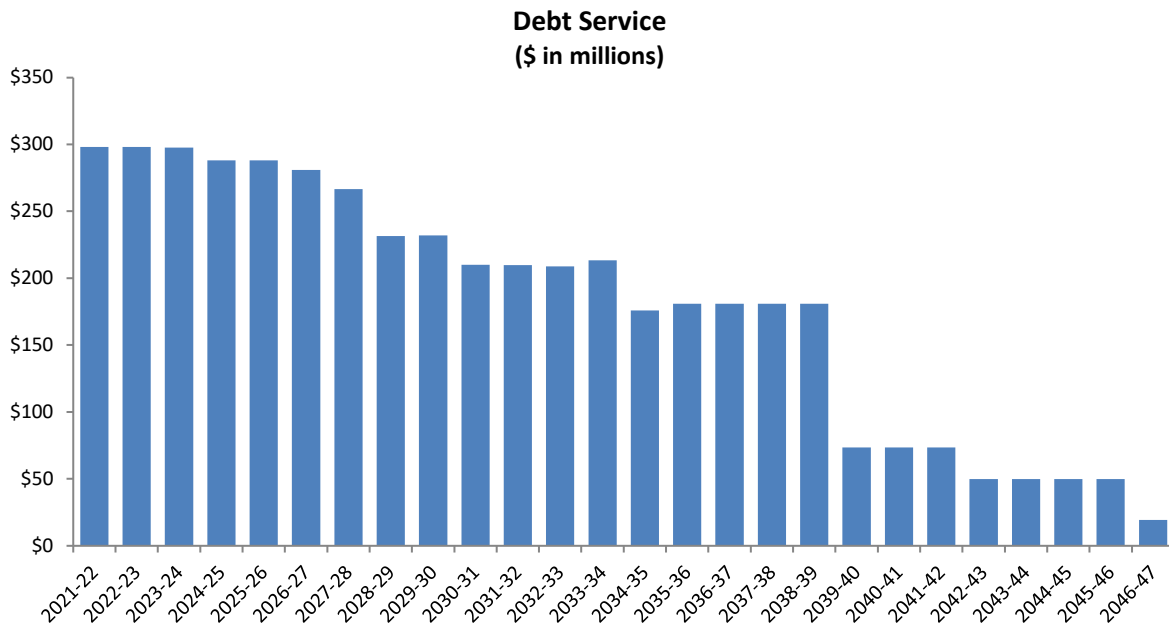
**Debt Service**

This reflects the debt service on all outstanding debt of the SNWA. For more detail on the SNWA's outstanding debt, see the Debt Management Policy, which is section seven of this budget document.

The Las Vegas area has experienced extraordinary population growth since the SNWA's inception in 1991. The vast majority of the SNWA's outstanding debt was necessary to fund infrastructure projects to support such extraordinary population growth. During the recession of the late 2000's, population growth slowed and the SNWA took actions to provide cash flow relief. For example, the SNWA postponed various capital projects and took advantage of historically low borrowing costs to refinance debt.

Debt service payments are anticipated to increase \$9.0 million compared to the 2020-21 Adopted Budget Plan. The increase is due to increased debt service payments as a result of the projected issuance of approximately \$349 million of new debt.

As the following chart illustrates, the existing debt service is projected to be relatively stable for approximately the next four years, then decline over subsequent years.



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## 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 SNWA accounts for its Net Assets in accordance with GASB Statement 33. The following table summarizes the estimated sources and uses of funds and changes in net assets for the fiscal year 2021-22 Budget Plan.

### Estimated Net Assets Detail Fiscal Year 2021-22 Budget

	Invested in Capital Assets Net of <u>Related Debt</u>	<u>Restricted</u>	<u>Unrestricted</u>	<b>Total Net Assets</b>
Estimated Net Position on June 30, 2021	\$ 1,189,532,743	\$ 50,078,487	\$ 941,891,326	\$ 2,181,502,556
<i>From Revenues, Expenses, and Net Income Schedule (RENI), Page 4-5</i>				
Operating Revenue	-	-	160,269,354	160,269,354
Capital Contributions	-	75,410,833	290,457,586	365,868,419
Interest Earned	-	-	9,799,849	9,799,849
Payroll and Related	-	-	(96,038,037)	(96,038,037)
Energy	-	-	(41,582,555)	(41,582,555)
Operating Expenses	-	-	(90,098,140)	(90,098,140)
Depreciation Expense	(110,000,000)	-	-	(110,000,000)
Interest Expense (Debt Service)	153,570,976	-	(298,143,520)	(144,572,544)
<i>Subtotal from RENI</i>	<u>43,570,976</u>	<u>75,410,833</u>	<u>(65,335,463)</u>	<u>53,646,346</u>
<i>Items not on RENI</i>				
Capitalized Expenditures	175,537,731	(175,537,731)	-	-
Debt Issuance Proceeds	-	348,808,349	-	348,808,349
<i>Subtotal Items not on RENI</i>	<u>175,537,731</u>	<u>173,270,619</u>	<u>-</u>	<u>348,808,349</u>
Estimated Net Position on June 30, 2022	<u><u>\$ 1,408,641,449</u></u>	<u><u>\$ 298,759,939</u></u>	<u><u>\$ 876,555,863</u></u>	<u><u>\$ 2,583,957,251</u></u>

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Operating and Capital Budget Plan**  
Fiscal Year Ending June 30, 2022

## Sub Funds

According to Generally Accepted Accounting Principles (GAAP), governmental entities use fund-based accounting. As a governmental entity, the SNWA accounts for its financial activities in a single enterprise fund. However, the SNWA utilizes sub funds for internal tracking purposes.

The SNWA maintains six sub funds. Since both the Las Vegas Wash Capital sub fund and Las Vegas Wash Operating sub fund are small in terms of activity and dollars, they are typically combined into one sub fund for budgeting purposes. Therefore, the SNWA budget presents only five sub funds. Three are classified as capital sub funds while two are operating sub funds. The following table presents the five sub funds, which are described after the table.

**Budget Summary by Sub Fund**  
**Fiscal Year 2021-22**

	<b>Operating Sub Funds</b>		<b>Capital Sub Funds</b>			
	<b>Wholesale Delivery Operations</b>	<b>Groundwater Management Plan</b>	<b>New Expansion Debt Service</b>	<b>Major Capital &amp; Construction Plan</b>	<b>Las Vegas Wash</b>	<b>Total</b>
<b>Sources</b>						
Wholesale Delivery Charge	\$150,291,355	\$ -	\$ -	\$ -	\$ -	\$ 150,291,355
Infrastructure Charge	-	-	175,223,605	-	-	175,223,605
Commodity Charge	-	-	73,550,659	-	-	73,550,659
Connection Charge	-	-	35,636,854	-	-	35,636,854
Reliability Surcharge	-	-	6,046,468	-	-	6,046,468
Sales Tax	-	-	70,509,129	-	4,901,704	75,410,833
Investment Income	195,997	-	4,703,928	4,870,525	29,400	9,799,849
Other Sources	999,345	894,208	4,908,640	72,000	3,103,806	9,977,999
<b>Subtotal</b>	<b>151,486,697</b>	<b>894,208</b>	<b>370,579,282</b>	<b>4,942,525</b>	<b>8,034,910</b>	<b>535,937,622</b>
Debt Issuance Proceeds	-	-	-	348,808,349	-	348,808,349
<b>Total Sources</b>	<b>151,486,697</b>	<b>894,208</b>	<b>370,579,282</b>	<b>353,750,874</b>	<b>8,034,910</b>	<b>884,745,971</b>
<b>Uses</b>						
Water Resource Investments	-	-	14,594,000	-	-	14,594,000
Energy	41,582,555	-	-	-	-	41,582,555
Payroll & Related	68,633,556	64,226	22,373,738	4,154,727	811,790	96,038,037
Operating Expenses	58,676,271	865,600	15,462,419	-	499,850	75,504,140
Capital Expenditures	-	-	1,461,250	168,069,541	6,006,939	175,537,731
Debt Service	-	-	298,143,520	-	-	298,143,520
<b>Total Uses</b>	<b>168,892,382</b>	<b>929,826</b>	<b>352,034,927</b>	<b>172,224,269</b>	<b>7,318,579</b>	<b>701,399,982</b>
<b>Total Net Surplus/(Deficit)<sup>1</sup></b>	<b>\$ (17,405,684)</b>	<b>\$ (35,618)</b>	<b>\$ 18,544,356</b>	<b>\$ 181,526,606</b>	<b>\$ 716,330</b>	<b>\$ 183,345,989</b>

<sup>1</sup> Any amount of Net Surplus is used to fund reserves while Net Deficit amounts are funded through the use of reserve balances.

Southern Nevada Water Authority  
Operating and Capital Budget  
**Operating and Capital Budget Plan**  
Fiscal Year Ending June 30, 2022

**Operating Sub Funds**

**Wholesale Delivery Operations sub fund.** This sub fund accounts for the sources and uses of funds related to the SNWA's primary operations, which is the treatment and delivery of potable water to its members. Other activities include the research and study of water quality issues in support of the overall water industry.

**Groundwater Management Program sub fund.** This sub fund accounts for the sources and uses of funds related to the SNWA's groundwater management program. In 1997, the Nevada Legislature directed the SNWA to develop a Groundwater Management Program to protect and manage the Las Vegas area's primary groundwater supply. The program protects the local groundwater basin from over-drafting and potential sources of contamination.

**Capital Sub Funds**

**New Expansion Debt Service sub fund.** The primary purpose of this sub fund is to account for the majority of the SNWA's debt service and funds received to support those debt service payments. Other expenses include non-turf rebate conservation costs, northern resources costs, non-engineering capitalized labor in support of the MCCP, and some pay-as-you-go capital expenditures.

**Major Construction and Capital Plan sub fund.** This sub fund accounts for proceeds of debt issued to support the MCCP and capital expenditures related to the MCCP.

**Las Vegas Wash sub fund.** This sub fund is two small sub funds combined into one for budget presentation purposes. They are the Las Vegas Wash Capital sub fund and the Las Vegas Wash Operating sub fund. The major function of this sub fund is to pay for costs of the Las Vegas Wash. This sub fund tracks capital and operational revenues and expenses pertaining to the Las Vegas Wash.

# SECTION 4

## STATE OF NEVADA

### BUDGET DOCUMENTS

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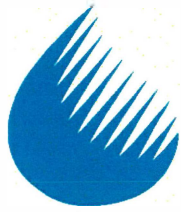


SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22

OPERATING AND CAPITAL BUDGET





# SOUTHERN NEVADA WATER AUTHORITY™

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

Southern Nevada Water Authority herewith submits the (TENTATIVE) (FINAL) budget for the fiscal year ending June 30, 2022

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 \$ 486,479,987

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:

5/20/21

## APPROVED BY THE GOVERNING BOARD

Marilyn K. Kirkpatrick, Chair

Dan Stewart, Vice Chair

Claudia Bridges

Cedric Crear

James Gibson

Justin Jones

John Lee

## SCHEDULED PUBLIC HEARING:

(Must be held from May 17, 2021 to May 31, 2021 this year)

Date and Time: Thursday May 20, 2021 9:00 AM

Publication Date: May 7, 2021

Place: Molasky Corporate Center, 100 City Parkway, Suite 700, Las Vegas, NV

FORM 4404LGF

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Schedule 1



**SOUTHERN NEVADA WATER AUTHORITY  
BUDGET DOCUMENT INDEX**

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FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

	ACTUAL PRIOR YEAR ENDING 06/30/20	ESTIMATED CURRENT YEAR ENDING 06/30/21	BUDGET YEAR ENDING 06/30/22
General Government			
Judicial			
Public Safety			
Public Works			
Sanitation			
Health			
Welfare			
Culture and Recreation			
Community Support			
TOTAL GENERAL GOVERNMENT			
Utilities	437.1	503.2	507.3
Hospitals			
Transit Systems			
Airports			
Other			
TOTAL	437.1	503.2	507.3

POPULATION (AS OF JULY 1)	2,320,107	2,370,221	2,415,018
SOURCE OF POPULATION ESTIMATE*	NV Dept. of Taxation ( <a href="https://tax.nv.gov/">https://tax.nv.gov/</a> ) 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.**

Southern Nevada Water Authority  
(Local Government)

SCHEDULE S-2 - STATISTICAL DATA

SCHEDULE A-2 PROPRIETARY AND NONEXPENDABLE TRUST FUNDS

Budget For Fiscal Year Ending June 30, 2022

Budget Summary for Southern Nevada Water Authority  
(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)	
Southern Nevada Water Authority	E	\$ 160,269,354	\$ 341,907,443	\$ 375,668,268	\$ 144,572,544	\$ -	\$ -	\$ 49,457,635
TOTAL		\$ 160,269,354	\$ 341,907,443	\$ 375,668,268	\$ 144,572,544	\$ -	\$ -	\$ 49,457,635

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

\*\* Include Depreciation

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SCHEDULE A-2

FORM 4404LGF

<b><u>PROPRIETARY FUND</u></b>	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/22	
	ACTUAL PRIOR YEAR ENDING 6/30/2020	ESTIMATED CURRENT YEAR ENDING 6/30/2021	TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Wholesale Delivery Charge	\$ 145,992,532	\$ 142,032,734	\$ 150,291,355	\$ 150,291,355
Other Revenues	7,506,987	8,157,968	9,977,999	9,977,999
Total Operating Revenue	153,499,519	150,190,701	160,269,354	160,269,354
OPERATING EXPENSE				
Energy	37,809,348	38,222,458	41,582,555	41,582,555
Payroll and Related	82,400,694	97,499,379	96,038,037	96,038,037
Operating Expenses	58,690,833	83,738,972	90,098,140	90,098,140
Depreciation/Amortization	103,807,919	140,000,000	114,188,711	114,188,711
Total Operating Expense	282,708,794	359,460,809	341,907,443	341,907,443
Operating Income or (Loss)	(129,209,276)	(209,270,107)	(181,638,089)	(181,638,089)
NONOPERATING REVENUES				
Investment Income	31,356,661	7,154,023	9,799,849	9,799,849
Capital Contributions	405,956,087	304,931,368	365,868,419	365,868,419
Amortization of Bond Premiums & Discounts	73,806,092	-	-	-
Other	122,823	-	-	-
Total Nonoperating Revenues	511,241,663	312,085,391	375,668,268	375,668,268
NONOPERATING EXPENSES				
Interest Expense	137,079,613	140,145,125	144,572,544	144,572,544
Amortization of Refunding Costs	6,845,470	-	-	-
Bond Issue & Commercial Paper Costs	2,321,097	-	-	-
Total Nonoperating Expenses	146,246,180	140,145,125	144,572,544	144,572,544
Special Item	(327,103,336)			
Net Income before Operating Transfers	(91,317,129)	(37,329,842)	49,457,635	49,457,635
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ (91,317,129)	\$ (37,329,842)	\$ 49,457,635	\$ 49,457,635

Southern Nevada Water Authority  
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND ENTERPRISE

FORM 4404LGF

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Schedule F-1

<b>PROPRIETARY FUND</b>	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/22	
	ACTUAL PRIOR YEAR ENDING 6/30/2020	ESTIMATED CURRENT YEAR ENDING 6/30/2021	TENTATIVE APPROVED	FINAL APPROVED
A. CASH FLOWS FROM OPERATING ACTIVITIES:				
Cash Received from Customers	\$ 154,487,380	\$ 150,190,701	\$ 160,269,354	\$ 160,269,354
Cash Payments to Suppliers of Goods and Services	(141,542,788)	(219,460,809)	(227,718,732)	(227,718,732)
Other Cash Payments	-	(5,000,000)	(5,000,000)	(5,000,000)
a. Net cash provided by (or used for) operating activities	12,944,592	(74,270,107)	(72,449,378)	(72,449,378)
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:				
Purchase or Construction of Capital Assets	(101,173,393)	(124,177,051)	(175,537,731)	(175,537,731)
Proceeds from Disposal of Property and Equipment	131,463	-	-	-
Proceeds of Debt Issuance	-	-	348,808,349	348,808,349
Principal Paid on Debt	(154,630,486)	(148,996,396)	(153,570,976)	(153,570,976)
Interest Paid on Debt	(139,163,491)	(140,145,125)	(144,572,544)	(144,572,544)
Interest Rebate	-	-	-	-
Capital Contributions	366,027,041	304,931,368	365,868,419	365,868,419
Other Cash Payments	-	-	-	-
c. Net cash provided by (or used for) capital and related financing activities	(28,808,866)	(108,387,204)	240,995,518	240,995,518
D. CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of Investment Securities	(625,714,069)	(528,536,181)	(866,523,350)	(866,523,350)
Proceeds from Sales or Maturities of Investment Securities	631,643,750	664,287,289	731,759,161	731,759,161
Investment Income	16,786,326	7,154,023	9,799,849	9,799,849
d. Net cash provided by (or used in) investing activities	22,716,007	142,905,131	(124,964,340)	(124,964,340)
NET INCREASE (DECREASE) in cash and cash equivalents (a+b+c+d)	6,851,733	(39,752,180)	43,581,800	43,581,800
CASH AND CASH EQUIVALENTS AT JULY 1, 20xx	6,645,517	13,497,250	(26,254,930)	(26,254,930)
CASH AND CASH EQUIVALENTS AT JUNE 30, 20xx	\$ 13,497,250	\$ (26,254,930)	\$ 17,326,870	\$ 17,326,870

Southern Nevada Water Authority  
(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	*	TERM	ORIGINAL AMOUNT OF ISSUE	ISSUE DATE	FINAL PAYMENT DATE	INTEREST RATE	BEGINNING OUTSTANDING BALANCE 7/1/2021	INTEREST PAYABLE	PRINCIPAL PAYABLE	(9)+(10) TOTAL
FUND										
Nevada Drinking Water State Revolving Fund Loan	2	20 Years	\$ 10,000,000	06/29/01	08/01/21	3.46%	\$ 342,545	\$ 5,926	\$ 342,545	\$ 348,471
Clark County 1106 Refunding Bonds	2	30 Years	604,140,000	11/02/06	11/01/36	2.5% - 5.00%	69,545,000	1,965,425	-	1,965,425
SNWA Renewable Energy 2008 Bonds	4	14 Years	6,900,000	07/30/08	12/15/22	1.2%	920,000	8,073	460,000	468,073
State of Nevada 2009 Bonds	2	21 Years	2,214,457	10/22/09	07/01/29	0.0%	1,075,593	-	126,540	126,540
Clark County 2012 Refunding Bonds	2	20 Years	85,015,000	06/20/12	06/01/32	4.0% - 5.0%	79,515,000	3,180,600	-	3,180,600
LVVWD 2012B Bonds	2	30 Years	360,000,000	07/31/12	06/01/42	3.0% - 5.0%	308,025,000	14,915,500	8,690,000	23,605,500
State of Nevada 2013 Refunding Bonds	2	15 Years	21,720,000	02/20/13	08/01/27	3.0%	21,720,000	651,600	-	651,600
LVVWD 2015 Refunding Bonds	2	24 Years	332,405,000	01/13/15	06/01/39	4.0% - 5.0%	332,405,000	16,370,250	-	16,370,250
LVVWD 2015B Refunding Bonds	2	12 Years	177,635,000	06/01/15	06/01/28	4.0% - 5.0%	119,060,000	5,615,500	13,500,000	19,115,500
LVVWD 2015C Refunding Bonds	2	14 Years	42,125,000	06/18/15	09/15/29	3.0% - 5.0%	27,855,000	1,284,125	3,260,000	4,544,125
Clark County 2016A Refunding Bonds	2	14 Years	263,955,000	03/03/16	11/01/29	4.5% - 5.0%	149,570,000	6,767,000	28,460,000	35,227,000
LVVWD 2016A Refunding Bonds	2	30 Years	497,785,000	04/06/16	06/01/46	3.0% - 5.0%	441,675,000	22,051,550	16,250,000	38,301,550
Clark County 2016B Refunding Bonds	2	18 Years	271,670,000	08/03/16	11/01/34	4.0% - 5.0%	255,390,000	12,149,100	4,590,000	16,739,100
LVVWD 2017B Refunding Bonds	2	15 Years	22,115,000	03/14/17	06/01/32	4.0% - 5.0%	18,815,000	862,125	1,775,000	2,637,125
Clark County 2017 Refunding Bonds	2	21 Years	321,640,000	03/22/17	06/01/38	4.0% - 5.0%	290,405,000	12,880,850	11,470,000	24,350,850
LVVWD 2018B Bonds	2	8 Years	79,085,000	03/06/18	06/01/26	4.25% - 5.0%	53,065,000	2,653,250	9,575,000	12,228,250
LVVWD 2019A Refunding Bonds	2	20 Years	107,975,000	02/01/19	06/01/39	5.0%	103,025,000	5,151,250	2,660,000	7,811,250
LVVWD 2019B Refunding Bonds	2	8 Years	90,280,000	10/16/19	06/01/27	5.0%	90,280,000	4,514,000	15,195,000	19,709,000
LVVWD 2020A Refunding Bonds	2	15 Years	123,860,000	03/03/20	06/01/34	3.0%-5.0%	117,505,000	5,319,350	6,670,000	11,989,350
LVVWD 2021A Refunding Bonds	2	18 Years	144,685,000	03/03/21	06/01/38	2.0% - 5.0%	144,685,000	6,783,750	11,805,000	18,588,750
LVVWD 2021C Refunding Bonds	2	14 Years	208,145,000	03/25/21	06/01/34	2.0% - 5.0%	208,145,000	8,769,950	12,025,000	20,794,950
LVVWD 2021-22 New Money	11	30 Years	352,331,666	2021-22	2051-52	2.0% - 5.0%	352,331,666	12,673,370	6,716,891	19,390,261
TOTAL ALL DEBT SERVICE							\$ 3,185,354,804	\$ 144,572,544	\$ 153,570,976	\$ 298,143,520

SCHEDULE C-1 - INDEBTEDNESS

Southern Nevada Water Authority Budget Fiscal Year 22  
(Local Government)

FORM 4404LGF

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Schedule C-1

**SCHEDULE OF EXISTING CONTRACTS**

**Budget Year 2021 - 2022**

**Local Government:** Southern Nevada Water Authority  
**Contact:** E. Kevin Bethel  
**E-mail Address:** kevin.bethel@lvvwd.com  
**Daytime Telephone:** 702-822-8809

Total Number of Existing Contracts: 235

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2021-22	Proposed Expenditure FY 2022-23	Reason or need for contract:
1	AB Sciex LLC	03/11/19	03/10/26	\$ 228,173	\$ 239,582	Annual PM Services And Repairs
2	Ace Fire Systems, LLC	12/18/20	12/17/25	25,000	25,000	Annual Fire Extinguisher Inspections and Servicing
3	Adelaide University	04/04/19	12/31/20	40,000	-	Water Research Foundation Project 4912 Consulting Services
4	Aerotech Mapping	04/07/15	04/06/22	40,000	30,663	Ad Hoc Aerial Imagery Services
5	Agilent Technologies	04/01/19	03/31/26	139,608	139,608	Annual PM Services On Agilent Instruments
6	Alarmco	10/01/18	09/30/23	18,268	18,268	Alarm Monitoring Services - WSNA
7	Alliance For Water Efficiency	01/01/20	12/31/20	25,000	-	AWE Cooling Technology Study
8	Allied Universal Security Services	03/07/17	02/28/22	32,962	32,962	Security Services-SNWA Portion
9	Anzalone Pumps Inc.	04/12/18	04/11/23	250,000	250,000	Irrigation Well Maintenance
10	Anzalone Pumps Inc.	07/31/18	08/30/23	100,000	100,000	Well and Pump Systems Parts, Maintenance and Repairs
11	Applications Software Technology LLC	01/01/20	12/31/20	111,875	-	Oracle Software Upgrade Services
12	Arizona Machinery LLC dba Stotz Equipmen	01/01/16	12/31/23	30,000	30,000	John Deere Repair Parts And Service For GB Ranches
13	Assetworks Inc	01/01/20	12/31/20	25,739	-	FleetFocus FA Software Maintenance and Support
14	Association Of Metropolitan Water Agencies	01/01/18	12/31/21	59,912	59,912	PSA - AMWA Administrative Support
15	Atkins North America Inc	07/28/11	upon notice	-	-	Surveying Services
16	B&W Trucking	01/01/16	12/31/23	24,000	24,000	Transportation Services For Livestock And Agricultural Products For Grm Ranches
17	Barnard of Nevada	02/01/19	06/30/21	3,000,000	-	Construction Services for L3PS
18	Basin Engineering	04/29/19	04/28/24	25,000	25,000	Engineering and Geotechnical Services
19	BDO USA LLP	01/01/20	12/31/20	46,000	-	Audit Services
20	Beckman Coulter Inc.	01/01/20	12/31/26	100,000	100,000	Annual PM Services
21	Best Amigos LLC	01/01/20	12/31/20	41,225	-	Reimbursement for Connection Work Not Completed
22	Bio-Rad Laboratories Inc.	05/01/19	04/30/26	20,590	20,590	Annual PM Services
23	Bio-West, Inc.	09/05/19	09/04/26	100,000	150,000	Professional Biological Services
24	BK/JA Holdings Inc	01/01/20	12/31/20	18,190	-	Cathodic Protection Services
25	Black & Veatch Corporation	09/18/19	09/17/26	75,000	-	PSA For Feasibility Study For Microbiology Lab
26	Black & Veatch Corporation	09/25/19	6/31/21	7,850,700	-	Professional Engineering Services For The Southern System Expansion Feasibility Study
27	Blackline Systems Inc	12/31/18	12/31/23	71,808	70,000	Blackline Software Subscription Services
28	Board Of Regents	01/01/20	12/31/20	12,000	-	Clark County Population Forecast Report
29	Boomi Inc	08/02/18	08/01/25	160,000	160,000	Cloud-Base Integration Software And Services
30	Boulder City Disposal Inc	01/01/20	12/31/20	55,309	-	Dumpster and Waste Services
31	Boulder Disposal Inc	01/01/20	12/31/20	27,786	-	Dumpster and Waste Services
32	BSA Environmental Services	07/01/19	06/30/26	35,000	35,000	Zooplankton Analysis For Water Quality Div.
33	C&E Fence LLC	07/01/17	06/30/22	49,000	49,000	Fencing Services For Northern Resources
34	Cavanaugh & Associates Pa	10/01/20	09/30/21	100,000	-	Water Loss Technical Training Program
35	CDM Smith	12/08/20	12/07/27	488,232	-	Evaluation of AMS/RM ozone treatment systems
36	CDW Government	02/01/16	01/31/21	500,000	50,000	Hardware And Software And Maintenance Services
37	CH2M Hill	01/01/20	12/31/20	193,587	-	AMS P and ID Development
38	Citrix Systems Inc	01/01/20	12/31/20	21,409	-	Citrix Maintenance Renewal
39	City Of Henderson	01/01/20	12/31/20	70,129	-	Fire Dept Training Simulator/Equipment
40	City Of North Las Vegas	01/01/20	12/31/20	69,925	-	Pump Simulator Purchase and Service
41	Clark County	01/01/20	12/31/20	11,046	-	Escrow Services
42	Clark County Fire Department	01/01/20	12/31/20	61,201	-	County General Services
43	Clark County Recorder	01/01/20	12/31/20	148,502	-	Escrow Services
44	Clark County Regional Flood	01/01/20	12/31/20	100,000	-	Flood Control Support and Services
45	Cloud Carpets & Draperies	01/01/20	12/31/20	10,041	-	Lab North Stairwell Tread Replacement
46	Community Strategies Inc	09/26/19	02/14/22	99,000	99,000	Government Affairs Advisory Services
47	Contri Construction Company	11/28/17	11/28/21	1,000,000	1,000,000	Lateral Repairs Contract
48	Copyright Clearance	11/05/19	11/04/26	10,000	10,000	Copying Services
49	Corporate Air Mechanical Services Inc	10/07/19	02/06/24	50,090	50,090	HVAC Replacement Services
50	Cosco Fire Protection Inc	08/16/18	08/15/23	25,000	25,000	Fire System Upgrades
51	Cosco Fire Protection Inc	12/03/18	12/02/23	100,000	100,000	Fire System Repairs
52	Crosscountry Consulting LLC	01/01/20	12/31/20	52,128	-	Coupa Software Implementation Services
53	D & L Roofing LLC	09/16/19	09/15/24	100,000	100,000	On Call Roofing Repair Services
54	Datasight	04/15/19	04/15/24	40,000	40,000	Arial Data Services
55	Dielco Crane Service	05/07/18	05/06/23	25,000	25,000	On-Call Crane Services For SNWA
56	Digital Guardian Inc	12/29/16	12/28/21	36,016	-	Software Technical Implementation Services
57	Digital Mapping Inc.	04/24/18	06/30/21	99,500	-	Imagery Services For Muddy And Virgin Rivers
58	DMP Expert Tree Service	06/07/18	06/06/23	50,000	50,000	Tree Trimming And Removal Service at The Northern Resources
59	Dotson Law Corp.	10/12/16	10/11/21	50,000	50,000	Outside Counsel Litigation Services
60	DP Air Corporation	07/02/18	06/30/22	20,000	20,000	River Mtn HVAC
61	DP Video Productions LLC	04/10/18	04/09/24	17,750	17,750	Develop, Manage & Maintain A Website
62	Dyno Plumbing	11/14/18	11/13/23	25,000	25,000	On-Call Plumbing Services SNWA
63	Eagle Drilling Services LLC	01/01/20	12/31/20	183,887	-	Well Abandonments and Monthly Estimates
64	Ebara Corporation	02/01/19	06/30/21	250,000	-	Pump Procurement for L3PS
65	Ebara Pumps Americas Corp.	07/07/20	07/06/21	50,000	-	TSA for Pumping Plant 1A at AMS

**SCHEDULE OF EXISTING CONTRACTS**

**Budget Year 2021 - 2022**

**Local Government:** Southern Nevada Water Authority

**Contact:** E. Kevin Bethel

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

**Daytime Telephone:** 702-822-8809

Total Number of Existing Contracts: 235

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2021-22	Proposed Expenditure FY 2022-23	Reason or need for contract:
66	Ecole Polytechnique De Montreal	04/23/19	04/22/26	50,000	-	PSA For Water Research Foundation Project 4912 Develop Guidance Document For Assessment And Evaluation Of Algal Blooms
67	Ecosynthesis Scientific & Regulatroy Service	07/10/17	07/09/20	75,000		PSA For Geologic And Biologic Consulting Services
68	Eeawag Idgenossische Anstal	06/01/20	05/31/27	10,000	-	Technical Advisor for Water R&D Project
69	Emcor Services Nevada	07/01/18	06/30/22	25,000	25,000	Chiller Maintenance
70	Emd Consulting Group, LLC	02/21/19	02/20/24	25,000	25,000	Executive Search
71	Emphasys Treasury Mgmt Software	01/01/20	12/31/20	30,012		Treasury Desktop Subscription Renewal
72	Environmental Resource Associates	01/03/19	01/03/26	52,500	52,500	Lab Proficiency Testing
73	Environmental Systems Research Institute In	07/01/16	06/30/21	45,231	46,000	Geographic Information System Software Services
74	Eurofins Eaton Analytical	11/01/17	10/31/21	115,000	115,000	Water Sample Analysis Services
75	FEI Company	12/05/19	12/04/24	30,100	35,000	Annual PM Services On The Company's Aspek Explorer VR Instrument
76	FireEye Inc	01/01/20	12/31/20	40,000	-	Software Products And Services
77	First Choice Tree Service Inc	01/01/20	12/31/20	13,500		Tree Pruning and Thinning Services
78	Ford Audio-Video	01/01/20	12/31/20	13,180		SNWA Board Meeting Broadcasting Equipment Services
79	Freshworks Inc	01/01/20	12/31/20	39,067		Help Desk Software And Implementation Services
80	Geophex Surveys LTD	01/23/19	01/22/21	200,000	200,000	Digital Aerial Imagery Services
81	George T. Hall	05/18/17	06/30/22	300,000	300,000	Prof. Services For Automation Projects
82	Geotechnical & Environmental Services, Inc	04/02/19	12/31/20	37,090	37,090	Construction Materials Sampling And Testing Services
83	Gilbarco Inc	01/01/20	12/31/20	11,214		Gilbarco GasBoy Maintenance Renewal
84	Great Basin Bird Observatory	08/28/14	08/27/20	75,073	-	Avian And Vegetation Monitoring In LV Wash
85	Great Basin Institute	12/18/17	10/31/24	99,000	99,000	WSNA Vegetation Control And Docent Staffing
86	Great Basin Irrigation	01/01/16	12/31/23	40,000	40,000	Irrigation Systems Parts And Maintenance
87	Gunnison Bend Veterinary Services	08/09/17	06/30/22	50,000	50,000	PSA For Veterinary Services At The Ranches.
88	Gust Electric	01/01/19	12/31/22	100,000	100,000	Electrical Supplies, Materials And Related Service For The Ranches
89	Hach Company	04/14/20	04/13/23	15,199	15,199	Annual PM Services on Hach Instruments
90	Harris Las Vegas LLC	08/01/18	07/31/22	25,000	25,000	SNWA HVAC Repair Services
91	Hazen & Sawyer	08/06/19	08/05/26	30,000	-	PSA For The Production Of Report For Algal Blooms
92	Henderson Engineers Inc	01/01/20	12/31/20	13,294		IPS2 HVAC Consulting Services
93	High Sierra Waterlab	11/19/19	11/30/26	40,000	40,000	Water Sample Analysis Services
94	Hispana Comunicacion Integral	03/01/17	02/28/22	98,000	98,000	Spanish Language Support Services
95	Hobbs, Ong & Associates Inc	07/21/16	07/20/21	150,000	150,000	Financial Advice And Debt Management Services
96	Holds Water LLC	05/13/20	04/23/23	75,000	75,000	Consulting on Water Resources Matters
97	Holland and Hart	06/30/18	upon notice	1,500,000	1,500,000	Environmental Compliance, water resources
98	Holland and Hart	08/26/13	08/22/20	100,000	100,000	Nevada Energy Integrated Resource Plan
99	Holley Driggs	12/10/19	12/09/26	15,000	15,000	Professional Services
100	Horiba Instruments Inc	01/01/20	12/31/20	32,300		Equipment Service Agreement Renewal
101	Horizon Lab Systems LLC	07/01/18	06/30/25	70,000	-	TSA For Implementation Of Upgrades To Lims System
102	Horrocks Engineers	10/18/19	10/17/20	100,000	\$100,000.00	PSA For Consultant Engineering Services
103	HRA Inc	12/17/19	12/16/27	90,000	90,000	Archaeological Evaluations
104	Hydro Resources, West Inc.	02/01/19	06/30/21	220,000	-	Well Replacement Services
105	Hydro Resources, West Inc.	02/01/19	06/30/21	250,000	-	Well Development Services
106	Illumina	12/31/18	12/31/25	12,845	13,487	Annual Support Maintenance Services on Illumina Miseq System Integrated Instrument.
107	Indar Consortium	02/01/19	06/30/21	5,000,000	-	Pump procurement for L3PS
108	Information Governance Solutions	01/01/20	12/31/20	21,234		Information Governance Services
109	InfoUSA Marketing Inc	01/01/20	12/31/20	11,200		Semi-Annual Maintenance Renewal
110	Intuitech	12/08/20	12/07/27	75,108	75,108	Programming Svs and Installation Svs
111	IR Ashleman	09/29/19	09/08/26	30,000	30,000	Plan Attorney For Retirement Plan
112	Iwater Inc	01/01/20	12/31/20	26,400		Annual Maintenance Renewal
113	Jacob Engineering Group Inc.	01/28/20	01/27/27	1,000,000	1,000,000	Professional Engineering Services
114	Jacobs Engineering Group Inc	01/28/20	01/27/27	1,000,000	1,000,000	Professional Engineering Services
115	Jena Antonchuk	04/01/16	03/31/21	99,000	99,000	PSA To Assist Public Services With Outreach Communication
116	Johnson Controls Inc	01/01/19	12/31/26	100,000	100,000	Ongoing Maintenance Of The Hardware And Software For Johnson Controls Card Access Security System
117	Joseph Guild & Associates	01/23/19	01/22/26	64,000	64,000	PSA for Ranch and Agricultural Consulting Services
118	Joseph Guild & Associates	02/01/18	01/31/21	92,000	-	Professional Services Agreement - Ranch And Agricultural Consulting Services
119	Joshua Tree Productions	07/01/18	06/30/23	90,000	90,000	Video Production Services
120	Ketos Inc.	04/02/19	04/01/26	55,400	-	Equipment and Technical Support for Heavy Metal Online Monitoring
121	Klir Inc	08/13/18	08/13/25	181,500	200,000	Implementation Of Environmental Permit Tracking Software, Purchase Of Additional Software And Licensing Fees
122	Komatsu Equipment Company	01/01/20	12/31/20	20,325	-	Equipment Rental and Repair Services
123	Korn Ferry Hay Group, Inc.	01/01/19	01/01/22	49,000	49,000	Professional Services
124	Laguna Production	07/05/18	07/04/23	40,000	40,000	Video Production Services



**SCHEDULE OF EXISTING CONTRACTS**

**Budget Year 2021 - 2022**

**Local Government:** Southern Nevada Water Authority  
**Contact:** E. Kevin Bethel  
**E-mail Address:** kevin.bethel@lvvwd.com  
**Daytime Telephone:** 702-822-8809

Total Number of Existing Contracts: \_\_\_\_\_ 235 \_\_\_\_\_

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2021-22	Proposed Expenditure FY 2022-23	Reason or need for contract:
125	Landscape Specialities Inc	11/04/19	11/03/24	100,000	100,000	Landscape Maintenance
126	Las Vegas Color Graphics	11/28/16	06/30/21	48,762	-	SNWA Water Smart Living Newsletter - Mailing Services
127	Las Vegas Management	01/01/20	12/31/20	61,128	-	WSI Conference Services and Cancellation Fees
128	Lawrence Roll-Up Doors Inc	08/20/18	08/19/24	25,000	25,000	Repair Contract
129	Leasequery LLC	01/01/20	12/31/20	15,480	-	LeaseQuery Subscription Services
130	Legacy Rock	09/01/16	08/31/21	10,000	10,000	Materials Such As Soil, Gravel, And Boulders Needed At The WSNA
131	Leonard, Street & Deinard	02/22/12	upon notice	-	-	Special Counsel To The Authority On General Electricity Matters
132	Lewis & Roca	03/22/10	upon notice	-	-	Legal Services
133	Lightriver Technologies, Inc.	10/01/29	09/30/26	328,571	328,571	Design & Communication Services
134	Malitzlaw	11/16/16	06/30/23	15,000	15,000	Legal Services For H-2A Matters
135	March Counsel, LLC	07/01/17	06/30/24	100,000	100,000	Legal Services For Energy Matters
136	Marcus G. Faust PC	07/01/18	06/30/28	150,000	150,000	Governmental Affairs Consulting Services
137	Market Decisions Corporation	04/01/18	03/31/24	100,000	100,000	Data Collection Services SNWA
138	MDC Research	04/01/18	03/31/24	110,250	110,250	Technical Services - Research Studies
139	Mesa Laboratories Inc	01/01/20	12/31/20	25,292	-	Annual Maintenance for Tempsys Application
140	Metropolitan Water District	09/19/19	09/18/29	212,476	212,476	Support Water Utility Climate Alliance Initiatives
141	MMC, Inc.	06/05/18	06/04/23	1,414,000	1,414,000	On-Call Operation & Main. Support Services
142	Moapa Valley Water District	01/01/20	12/31/20	252,994	-	Transmission System Design Services
143	Mountain Vet Supply	01/01/20	12/31/20	45,547	-	Ranch Livestock Vaccines
144	Moyle Irrigation	01/01/16	12/31/23	50,000	50,000	Pivot Irrigation System Parts And Maintenance Services For Gb Ranches
145	National Park Service	02/01/17	01/31/22	57,500	57,200	Provide Professional Weed Control Services
146	Naturaldry Carpet Cleaning	09/25/18	10/31/23	47,918	47,918	Carpet Cleaning
147	Navigant Consulting Inc	08/10/17	08/10/24	60,000	60,000	Transmission Evaluation Services
148	Nevada Division Of Forestry	01/31/17	01/31/22	50,000	50,000	Inmate Conservation Camp Services
149	Nevada Division Of Forestry	06/07/18	06/06/23	250,000	250,000	Personnel And/Or Conservation Camp Crews Services
150	Nevada Division Of Forestry	07/01/19	06/30/23	262,500	262,500	Grounds Maintenance
151	O'Flarety Plumbing And Heating	01/01/16	12/31/23	35,000	35,000	Plumbing Repair Services For Gb Ranches
152	Ontario Refrigeration	08/13/19	08/12/24	100,000	100,000	Chiller Prentive Maintenance And Repair Services
153	Opportunity Village	04/01/13	03/31/21	31,100	31,100	Shredding And Recycling Services
154	Park Landscape	02/01/19	01/31/24	15,270	69,156	Landscape Maintenance
155	Parker Hannifin Corp	05/29/19	05/29/26	30,952	34,047	Annual PM Services For Parker Hannifin Instruments
156	Parsons Water & Infrastructure	11/19/20	11/19/23	7,000,000	7,000,000	Program Management Services
157	Parsons Water and Infrastructure	02/01/19	06/30/21	400,000	-	Construction Management Services
158	Patty A. Emery	05/18/17	07/31/20	24,900	-	Editorial Services
159	Peconic Solutions Inc	01/01/20	12/31/20	27,216	-	IT Consulting Services
160	Perkinelmer Health Sciences Inc.	08/01/19	07/31/26	25,835	26,000	Annual PM Services
161	PFM Asset Management LLC	01/01/20	12/31/20	78,000	-	Arbitrage Compliance Services
162	PGAL, LLC	11/12/18	10/31/20	45,680	-	Design Services for Projects L0022 & L0023
163	Phycotech Inc.	08/01/19	07/31/26	100,000	100,000	PSA To Provide Phytoplankton Analysis On Water Samples
164	Piercy Bowler Taylor & Kern	03/30/17	03/29/22	47,500	47,500	Authority Auditor Services
165	Power Plus Engineering Inc	01/01/20	12/31/20	27,507	-	UPS Maintenance Services
166	Precision Crane & Hoist Svc Inc	01/01/20	12/31/20	26,134	-	Overhead Crane Maintenance And Repair Service
167	Pyro Combustion & Controls	11/14/18	11/13/23	25,000	25,000	Boiler PM And Repair Services
168	Pyro Combustion And Controls, Inc.	11/14/19	11/13/23	25,000	25,000	Preventative Maintenance
169	Qiagen	12/12/18	12/11/25	61,280	61,280	Annual PM Service On Qiasymphony Sp Instrument.
170	R&R Partners	07/08/20	07/07/22	50,000	50,000	Public Affairs/advisory Services for SNWA
171	R&R Partners, Inc	06/30/18	06/29/21	2,452,367	-	Integrated Marketing and Olther Media Support for SNWA
172	Rayos Group	09/24/19	09/23/26	86,500	86,500	Risk Resilience Assessment
173	Red Star Fence Company	09/11/19	09/10/24	100,000	100,000	On Call Tortoise And Chain Link Fencing Installation And Repair Services
174	Rimkus Consulting Group	09/29/20	09/28/27	300,000	300,000	Geotechnical Consulting/Witness Testimony Services
175	Robin Rockey	07/22/19	07/21/23	90,000	90,000	Consulting Services For Community Outreach
176	Ruckus Wireless Inc	01/01/20	12/31/20	10,505	-	Annual Ruckus Maintenance 2020/2021.
177	Sanitary Septic Service, Inc.	02/04/19	02/03/24	10,000	10,000	Septic Tank Services
178	Santoro Whitmire LTD	11/06/18	11/05/25	-	-	Coyote Spring Valley Case A-18-778039-C
179	Santoro Whitmire LTD	11/07/18	11/06/25	-	-	Legal Services Csi Vs. State Eng.

**SCHEDULE OF EXISTING CONTRACTS**

**Budget Year 2021 - 2022**

**Local Government:** Southern Nevada Water Authority  
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Total Number of Existing Contracts: 235

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2021-22	Proposed Expenditure FY 2022-23	Reason or need for contract:
180	SAP Public Services Inc	01/01/20	12/31/20	48,576	-	Software and Maintenance Support
181	Seal Analytical	05/15/19	05/14/26	10,450	10,450	Annual PM Services on Seal Instruments
182	Sectran Security	12/09/19	12/08/26	10,000	10,000	Customer Care Credit Risk Assessment Svs.
183	Shimadzu Scientific Instruments	11/01/19	10/31/26	10,102	10,405	Annual PM Service On Shimadzu Instruments
184	Silver Reef Biomedical	03/01/20	02/28/23	11,400	11,400	Annual PM Service On Sterilization Equipment
185	Simmons Group	07/11/19	07/10/25	20,000	20,000	Employee Development Training
186	Simplot Growing Solutions	10/01/13	10/01/20	50,000	50,000	Soil Testing Services for GB Ranches
187	SL Robbins & Associates	02/26/19	02/25/25	69,950	69,950	Workshop And Video Learning Series
188	SNEI	01/01/20	12/31/20	25,720	-	Low Lake Level Pumping Station Support
189	Soil Tech, Inc	08/02/16	08/01/21	496,800	496,800	Wash Revegetation
190	South Point Hotel & Casino	01/01/20	12/31/20	10,000	-	Water Smart Innovations Conference & Expo
191	Southern Nevada Environmental	08/09/17	08/08/20	50,000	20,000	Monitoring, Surveying And Compliance Inspections
192	Southwest Specialty Coatings Inc	01/01/20	12/31/20	24,540	-	Pump Train Painting
193	Spring Valley Associates	01/01/15	12/31/20	1,200,000	-	Ranch Management
194	Stanka Consulting LTD	01/31/07	upon notice	210,000	210,000	Water Rights Assessments
195	State Of Utah	01/01/20	12/31/20	66,552	-	Weather Modification Services
196	Steve Reagan	01/01/16	12/31/23	35,000	35,000	Veterinary Services For GB Ranches
197	Stradling Yocca Carlson & Rauth, A Profess	12/05/17	12/05/24	50,000	50,000	Bond Disclosure Counsel Services
198	Stukenholtz Laboratory Inc.	11/18/19	11/17/24	10,000	10,000	Soil Testing, Chemical Analysis And Agronomy Consulting Services
199	Swendseid And Stern	04/03/12	upon notice	200,000	200,000	Bond Counsel
200	T&M Controls	07/24/18	07/23/23	245,000	245,000	On-Call Elec. Services
201	Taggart & Taggart LTD	07/01/13	06/30/26	1,000,000	1,000,000	Consulting Services On Water Resources
202	Teixeira Cattle Company	01/01/20	12/31/20	12,731	-	Beef Igenity Testing
203	Teledyne Tekmar	11/19/19	11/18/26	11,558	11,558	Annual PM Services on Teledyne Instruments
204	The Law Offices Of Rory Reid	06/21/18	upon notice	31,000	31,000	State and Local Government Legal Services
205	The Leading Edge Group, Inc.	09/22/20	09/21/21	60,082	29,710	Design Services For AMS Communications Room
206	The Tiberti Fence Company	09/01/16	08/31/22	49,000	49,000	Fence Repairs
207	The WW Williams Company LLC	01/01/20	12/31/20	14,325	-	Troubleshoot Generator / Provide Rental Backup Generator
208	Thermo Electron North America LLC	03/01/19	03/01/26	84,314	88,530	Annual PM Service On Thermo Scientific Instruments
209	Tibco Software Inc	01/01/20	12/31/20	16,861	-	Software and Maintenance Support
210	TJK Consulting Engineers, Inc.	01/15/20	06/30/21	-	-	BBWD Ozone Generator Room HVAC Upgrade
211	Total-Western, Inc.	07/26/18	07/25/23	100,000	100,000	Misc. Mechanical Services
212	Tree Dr Services	04/23/19	04/22/23	13,800	13,800	On-Call Tree and Shrub Trimming and Removal Services
213	Tri-County Weed Control	06/25/17	06/24/21	50,000	50,000	Noxious And Invasive Weed Control
214	Trussell Technologies	07/01/20	06/30/27	85,000	-	Water Research Foundation bromate control measures on ozone and downstream treatment systems
215	U S Captioning Company	08/01/16	07/31/21	120,000	12,000	Closed Captioning Services
216	U.S. Geological Survey (USGS)	11/21/19	11/21/23	133,495	133,495	Surface-Water And Groundwater Data Collection Services
217	United Soil Science	02/22/17	02/21/22	296,767	300,000	Fertilizer Application Services
218	United States Department of the Interior (US	10/01/20	09/30/21	183,088	-	Surface Water and Water Quality Monitoring Program
219	University Corporation For Atmospheric Rese	01/01/20	12/31/20	111,210	-	Streamflow Ensembles Reporting
220	University Corporation ForAtmospheric Rese	03/21/19	03/20/23	100,000	100,000	Climate Downscaling Research
221	University Of Adelaide	04/04/19	04/03/26	40,000	40,000	Water Research Foundation Assessment And Evaluation Of Algal Blooms
222	University of Colorado Boulder	10/01/20	01/21/22	48,376	-	State of the Science Report on Colorado River Basin
223	Utah State University	11/14/19	11/13/26	77,300	77,300	Analysis Services
224	Utah State University	01/01/20	12/31/20	26,500	-	Ultrasonic Meter Calibration
225	Utility Resources	05/15/97	upon notice	-	-	PUC Consultant Services
226	Vernon E. Fairchild Jr	02/04/19	02/02/24	50,000	50,000	Sheep Shearing Services
227	Wag Services Inc.	06/01/15	06/30/22	49,500	49,500	Hay Tarping Services For GB Ranches
228	Weck Analytical	11/01/17	10/31/21	125,000	58,190	Water Sample Analysis Services
229	Western Ecosystems Technology Inc	01/01/20	12/31/20	12,424	-	Bat Acoustic Data Analysis
230	Whiting-Turner Contracting Co	02/01/19	06/30/22	8,000,000	800,000	Construction Services for Filter Replacement Project
231	Wilmer Cutler Pickering Hale & Dorr	09/01/20	08/31/26	500,000	500,000	Legal and strategy advice for Colorado River issues
232	Wilmer Hale	12/14/17	Upon Notice	100,000	100,000	Colorado River Issues
233	Wunderlich-Malec	07/01/17	06/30/22	300,000	300,000	Programming Technical Services
234	Wyoming Water Development Office	01/01/20	12/31/20	110,000	-	Weather Modification Services
235	Zions Public Finance Inc	01/01/20	12/31/20	11,000	-	Arbitrage Rebate Computation Report Services
Total Proposed Expenditures				\$ 58,958,945	\$ 26,091,396	

Additional Explanations (Reference Line Number and Vendor):

**SCHEDULE OF PRIVATIZATION CONTRACTS**

**Budget Year 2021 - 2022**

**Local Government:** Southern Nevada Water Authority  
**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 FY 2021-22	Proposed Expenditure FY 2022-23	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: 9

Schedule 32

Attach additional sheets if necessary.

FORM 4404LGF

## AFFIDAVIT OF PUBLICATION

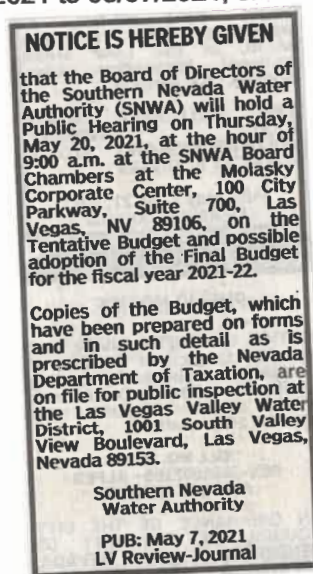
STATE OF NEVADA)  
COUNTY OF CLARK) SS:

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

**Account #** 22455  
**Ad Number** 0001144867

Eileen Gallagher, 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 05/07/2021 to 05/07/2021, on the following days:

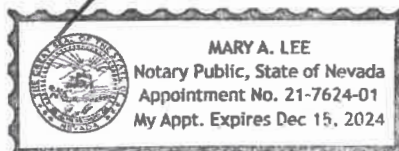
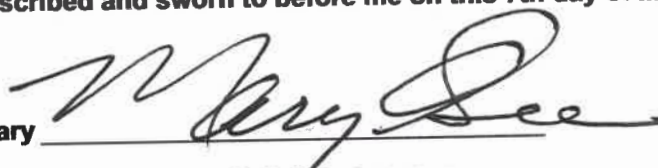
05 / 07 / 21

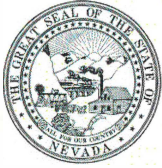


IS/ Eileen Gallagher  
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 7th day of May, 2021

## Notary





STEVE SISOLAK  
Governor

JAMES DEVOLLD  
Chair, Nevada Tax Commission  
MELANIE YOUNG  
Executive Director

STATE OF NEVADA  
DEPARTMENT OF TAXATION

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

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

LAS VEGAS OFFICE

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Las Vegas, Nevada 89101  
Phone: (702) 486-2300 Fax: (702) 486-2373

RENO OFFICE

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

HENDERSON OFFICE

2550 Paseo Verde Parkway, Suite 180  
Henderson, Nevada 89074  
Phone: (702) 486-2300  
Fax: (702) 486-3377

May 26, 2021

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

Re: Final Budget – Fiscal Year 2021-2022  
Southern Nevada Water Authority

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 25, 2021 for certification:

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

If you should have any questions, please call me at (775) 684-2073, or my email address is:  
[klangley@tax.state.nv.us](mailto:klangley@tax.state.nv.us).

Sincerely,

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

# SECTION 5

## DEPARTMENT BUDGETS

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SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22

OPERATING AND CAPITAL BUDGET



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Department Budgets**  
Fiscal Year Ending June 30, 2022

## Department Budgets

This section contains summaries of budgets for each of the Southern Nevada Water Authority's (SNWA) departments. Each department's budget narrative contains detailed budget information and other highlights of the 2021-22 Budget Plan. The following table presents the 2019-20 actual, 2020-21 Adopted Budget and 2021-22 Budget Plan for each of the departments.

**SNWA**  
**Summary of Department Expenditures**

<b>Departments</b>	<b>2019-20 Actual</b>	<b>2020-21 Budget</b>	<b>2021-22 Budget</b>	<b>Budget-to-Budget Variance</b>
Executive Management	\$ 1,724,056	\$ 2,581,741	\$ 2,332,615	\$ (249,126)
Legal Services	2,317,356	4,916,510	4,146,007	(770,504)
Finance	17,932,456	15,093,518	19,066,950	3,973,431
Energy Management	39,867,722	39,731,461	52,470,110	12,738,648
Risk Management	523,192	1,525,794	1,608,856	83,062
Customer Care & Field Services	382,711	435,457	445,053	9,596
Engineering	40,064,464	62,292,918	104,220,798	41,927,880
Infrastructure Management	21,183,642	39,170,612	30,975,688	(8,194,924)
Operations	13,425,119	24,121,375	23,137,608	(983,768)
Human Resources	462,547	838,516	803,425	(35,091)
Information Technology	15,208,655	24,920,538	27,072,855	2,152,317
Environmental Health Safety & Corporate Security	8,393,694	12,587,711	10,948,194	(1,639,517)
Water Quality & Treatment	42,686,618	33,543,547	28,869,455	(4,674,092)
Water Resources	45,914,269	65,778,049	84,030,550	18,252,501
Public Services	13,109,813	16,100,110	13,128,299	(2,971,812)
<b>Total Department Expenditures</b>	<b>263,196,314</b>	<b>343,637,860</b>	<b>403,256,463</b>	<b>59,618,603</b>
Debt Service	293,793,977	289,141,521	298,143,520	9,001,999
<b>Total Uses of Funds</b>	<b>\$ 556,990,291</b>	<b>\$ 632,779,381</b>	<b>\$ 701,399,982</b>	<b>\$ 68,620,601</b>



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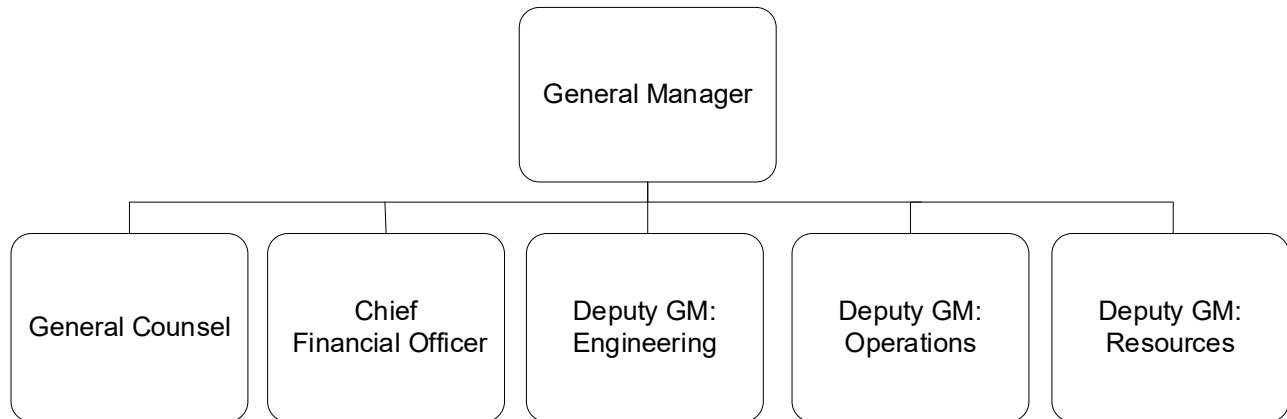


Southern Nevada Water Authority  
Operating and Capital Budget  
Department Budgets  
Executive Management  
Fiscal Year Ending June 30, 2022

## EXECUTIVE MANAGEMENT

Level: 1000

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### 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.

### Leadership Changes

The SNWA's Executive Team has been realigned over the past year following the Deputy General Manager of Administration's retirement in July 2020. The Executive Team was reorganized to better reflect the organization's long-term priorities, and now includes a Deputy General Manager of Engineering, Deputy General Manager of Resources and Deputy General Manager of Operations.

Southern Nevada Water Authority  
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### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 8,145	\$ 21,600	\$ 18,100
Maintenance & Repairs	-	-	-
Other Employee Expenses	70,617	158,976	128,475
Other Expenses	248,235	223,584	226,400
Total Operating Expenses	326,996	404,160	372,975
Capital Expenditures	-	-	-
Payroll & Related Costs	1,397,060	2,177,581	1,959,640
<b>Total Department Expenditures</b>	<b>\$ 1,724,056</b>	<b>\$ 2,581,741</b>	<b>\$ 2,332,615</b>
FTE Positions	4.5	7.7	7.2

## 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 impacts of drought and climate change, maintaining 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:

- The Integrated Resource Planning Advisory Committee 2020 (IRPAC 2020) process.
- Continued implementation of LVVWD's 10-year Capital Improvement Plan.
- Board approval and implementation of a major amendment to the SNWA's Major Construction and Capital Plan.
- Implementation of enhanced conservation efforts to maintain progress toward the regional conservation goal.
- Leadership and involvement in Colorado River issues and initiatives.
- Continued collaboration with Colorado River partners on conservation programs to help protect Lake Mead water elevations, including execution of the Lower Basin Drought Contingency Plan.
- Continued progress toward the Nevada Renewable Standard of 50 percent by 2030.

**Southern Nevada Water Authority**  
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- Continued participation in the WaterStart partnership.
- Continued response to the Coronavirus Pandemic.

## **Integrated Resource Planning Advisory Committee**

In October 2019, the SNWA Board of Directors appointed 11 community members to the Integrated Resource Planning Advisory Committee 2020 (IRPAC 2020) to examine Southern Nevada's long-term water planning efforts and develop recommendations to maintain reliability and meet long-term water resource needs. IRPAC 2020 members represented a spectrum of community interests including the business, resorts, residential, development and financial sectors.

The committee met nine times between October 2019 and August 2020. The ten month-long process consisted of education on critical transmission infrastructure, water resources, water conservation, out-of-valley water use and regional water rates; an evaluation of water rate adjustment scenarios and financial models; consideration of the COVID-19 pandemic and its impacts; and ultimately the formulation of a Recommendations Report, which was presented to and approved by the SNWA Board in September 2020.

The Recommendations Report included 22 recommendations pertaining to the construction of new infrastructure, the maximization of return-flow credits to Lake Mead, the increase of conservation efforts and a funding strategy to support these initiatives.

## **Conservation Initiatives**

During the IRPAC 2020 process, the committee reviewed Southern Nevada's water conservation initiatives and progress towards the regional conservation goal. With climate change, a growing population, and system loss placing upward pressure on progress towards the goal, Southern Nevada is facing an uphill challenge in reducing water use consistently over the planning horizon. Meeting the goal will require new strategies, innovation, more stringent regulations, and community-wide participation.

In addition to including \$152 million in the MCCP amendment to continue funding the Water Smart Landscapes Program, the committee considered a wide range of conservation opportunities that, if implemented, would help meet the conservation goal.

These recommendations include:

- Target the reduction of non-functional turf and limit turf installation in new development.
- Limit cool-season turf installation in public spaces and expedite conversion in public facilities.
- Enhance landscape watering compliance through implementation of smart controller technology.
- Speed customer leak repairs through implementation of advanced metering infrastructure.
- Reduce consumptive water losses associated with evaporative cooling.

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- Encourage efficient development and discourage consumptive water use for new large water users.
- Maintain and improve the existing water loss rate among wholesale and retail purveyors.

**Interlocal Agreements**

In November 2020, a number of interlocal agreements with the SNWA's member agencies were signed to help formalize IRPAC 2020's recommendations before funds were spent on larger construction projects within the MCCP. These agreements included:

- Adoption of SNWA's non-functional turf resolution into local codes and ordinances
- Limiting turf installation to only parks and schools in areas outside the Las Vegas Valley
- Out-of-valley water use policy directives requiring that any SNWA-delivered water be returned to Lake Mead via a wastewater system
- Implementation of water conservation and efficiency measures, such as customer compliance with watering schedules, data sharing and emending development agreements to include up-to-date efficiency measures

**Water Smart Landscapes**

In December 2020, the SNWA's Water Smart Landscapes Rebate Program reached a significant milestone. Program participants officially converted more than 197 million square feet of grass—enough to roll an 18-inch-wide strip of sod completely around the earth's circumference.

This milestone was reached as a result of nearly 67,700 residential and commercial turf-conversion projects that have been completed throughout the community since 1999. As a result of these conversions, customers have received more than \$247 million in rebates while collectively saving the community more than 140 billion gallons of water.

The Water Smart Landscapes Program continues to see progress, as evidenced by three recently announced landscape conversions that will replace nearly 400,000 square feet of turf at Aliante Golf Club in North Las Vegas, the Summerlin Parkway entryway monument and at for different parks in Henderson. Once complete, these projects will save more than 18 million gallons of water each year.

**LVVWD Service Rules Update**

In December, the LVVWD Board of Directors approved revisions to the LVVWD's Service Rules that will bolster water conservation efforts, curtail inefficient water use and restrict non-functional turf. These changes include:

- Prohibiting turf installations that do not meet the SNWA's Non-Functional Turf Resolution guidelines. This action ensures that LVVWD water is used only for new turf installations that are functional for things such as parks and recreational use.

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- Ceasing service to new manmade lakes and ornamental water features, except resort-hotel water features and manmade lakes that agree to participate in abatement efforts. New recreational water parks will also be required to offset their water use.
- Adjusting water rates, beginning January 1, 2022, for existing manmade lakes to match those rates paid by commercial and industrial businesses. Any new manmade lakes constructed will pay exclusively fourth tier water rates.

**Advanced Metering Infrastructure (AMI) and Software**

The LVVWD is in the process of implementing an AMI system. The AMI system 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 leaks in a more efficient manner.

To take full advantage of the new AMI capabilities, the LVVWD will be replacing its current Customer Care and Billing System with Oracle Utilities Customer to Meter System (C2M) software. The new software will provide enhanced customer management tools to manage customer accounts, rates and billing, payments, credit and collection and field activities. It will also provide advanced support for the new metering infrastructure, allowing staff to more efficiently monitor and manage device inventory and testing, usage data and smart meter commands. The C2M project implementation started November 2019 and is projected to be completed February 2022. Implementing AMI requires constructing a fixed network consisting of data repeaters and collectors that is compatible with the existing system's meter end-point communication module. The network is capable of two-way communication with all service points in the LVVWD service area. The AMI implementation started January 2021 and is expected to be completed January 2023.

With this technology, the LVVWD will be able to provide enhanced customer service and interaction, increased support for conservation initiatives, optimized service response and more efficient device management.

**Drought and Water Resources**

As drought conditions continue throughout the Colorado River Basin and the effects of climate change become increasingly prevalent, prudent management of water resources remains a critical priority.

A revised 50-year Water Resource Plan and various resources-related initiatives within the SNWA's amended MCCP will continue to guide and support the SNWA's efforts to protect Southern Nevada's water supply.

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**SNWA Water Resource Plan**

In November 2020, the SNWA Board adopted an updated Water Resource Plan reflecting various changes within the current resource planning environment, including:

- Extension of the planning horizon through 2071;
- Updated resource demand range based on new population forecasts;
- Incorporation of IRPAC 2020 recommendations related to resources and conservation; and
- Revision of the composition, priority, and timing of future resource options.

The Water Resource 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. The SNWA continues to use a scenario-based planning approach that represents Southern Nevada's future water resource needs under variable supply and demand conditions. It also includes expanded planning scenarios that reflect shortage impacts under variable hydrology (average, dry, extremely dry and climate change).

**Future Resources**

The SNWA continues to examine and consider additional opportunities to further diversify its water resource portfolio. To that end, the amended MCCP includes potential investment in water recycling and/or desalination projects developed by other Colorado River partners. By participating in these efforts, the SNWA would partially fund the construction of facilities, or lease/purchase water produced by the facilities, in exchange for a portion of the partnering state's Colorado River allocation. Potential projects include:

**Metropolitan Water District of Southern California (MET) Recycling Project.** MET is proposing an advanced water treatment project to treat wastewater and inject it into groundwater aquifers for future use. The project would create approximately 112,000 acre-feet of water per year. The SNWA could potentially partner with MET to help fund a portion of the project in exchange for MET using less of its Colorado River allocation, which the SNWA would then utilize and access via Lake Mead.

**SNWA Major Construction & 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 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. The Board of Directors approved the amended MCCP in November 2020.

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Major facility-related projects included within the amended MCCP include:

**Horizon Lateral**

An additional lateral is needed to support the regional water system, as the existing South Valley Lateral, which provides 40 percent of all existing in-valley deliveries, is projected to be nearly fully subscribed by 2034. The Horizon Lateral—the largest project in the MCCP— will offer redundancy for a large portion of SNWA customers and the capacity to meet new demands in the southern portion of the water system.

It is estimated that the Horizon Lateral will cost approximately \$1.6 billion to construct and be complete in 2032.

**Garnet Valley Water System**

The Apex Industrial Park is located in Garnet Valley in North Las Vegas and is one of Southern Nevada’s largest industrial parks. The 16-parcel area spans more than 11,000 acres and is attracting technology- and manufacturing-based businesses. Once complete, the Garnet Valley Water System will have the capacity to supply 20 million gallons of water per day to support the water needs of the Apex Industrial Park.

The Garnet Valley Water System is projected to cost approximately \$129.8 million and scheduled for completion in 2028.

**Garnet Valley Wastewater System**

Construction of the Garnet Valley Wastewater System will help ensure the sustainable development of resources and reduce water demand impacts to the Colorado River. The project will maximize the community’s water resources by developing the infrastructure required to capture indoor wastewater from the Garnet Valley area and return it to Lake Mead in accordance with the SNWA’s out-of-valley water use policy. This project is scheduled for completion in 2027 and estimated to cost \$120 million.

**Large Scale Solar Photovoltaic (PV) Project**

The SNWA will enter a 25-year, fixed-rate power Purchase Agreement (PPA) with ibV Energy Partners, which will build, operate and maintain the large-scale solar PV facility near Boulder City, NV. The PPA allows the SNWA to purchase power below current market cost, saving money when the facility opens in 2023 and throughout the span of the agreement. In addition to the PPA, the project consists of a 10-mile expansion to the SNWA’s existing power transmission system, a double-circuit 230 kV power line, 230 kV Switchyard and other infrastructure to support energy transmission.



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This project ensures a clean, cost-effective renewable energy source for the next 25 years and is essential for meeting the Nevada Renewable Portfolio Standard of 50 percent by 2030. The estimated cost of this project is \$20.8 million.

## **LVVWD Capital Improvements Plan**

In 2017, the LVVWD Board of Directors approved a 10-year, \$616 million Capital Improvement Plan (CIP). A top priority, this document guides 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 are currently either active or recently completed:

**Centennial 2635 Zone Reservoir.** This project involves the installation of the 2745 Zone Pumping Station and the Centennial 2635 Zone Reservoir. The reservoir, a 5-million gallon (MG) below grade reinforced concrete reservoir, will provide gravity storage for the pressure zone and will transfer storage to the west. The pumping station consists of a 38 MGD pumping station intended to transfer water from the pressure zone into the future Rome reservoir.

**Centennial 3205 Zone North Pipeline, Phases I and II.** This project consists of installing 8,250 feet and 4,850 feet, respectively, of 36-inch diameter pipe on the western edge of the valley and service both existing and future development. The pipeline will provide additional capacity at the existing 3205 Zone pumping station by eliminating current limitations and allowing all pumps to run simultaneously without over-pressurizing the system.

**Rome 2745 Reservoir, 2975 Zone Pumping Station, and 2975-2860 Zone Pressure Reducing Valve (PRV).** This project consists of installing the Rome 2975 Zone Pumping Station, Rome 2745 Zone Reservoir, and a PRV. The reservoir will provide gravity storage for the pressure zone. In addition, the reservoir will maintain adequate hydraulic grade lines in the northern portion and will eliminate reliance on the existing PRV. The pumping station will also improve the reliability of the northern portion of the District's system.

**Skye Canyon 2860 Zone Pipeline.** This project consists of installing 5,800 feet of 36-inch diameter pipe to supply the 2860 Pressure Zone on the north side of the Las Vegas valley and will serve current and future demand.

**Egan Crest 3090 Zone North Pipeline Phase III.** This project consists of installing 5,947 feet of 36-inch diameter pipeline and will initially serve a master planned community. The new pipeline will add capacity and reliability for current and future demand.

**Shaumber 3205 Zone North Pipeline Phase II and Pressure Reducing Valve.** This project consists of installing 4,200 feet of 36-inch diameter pipe within the northern portion of the 3205 Pressure Zone and will distribute water to that portion of the zone.

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**Las Vegas Boulevard Improvements, Phase B.** This project involves the installation of 9,000 feet of 36-inch pipeline between Russell Road and CC-215. This is the second phase of replacement of existing water transmission and distribution facilities along the Boulevard in cooperation with Clark County's improvements to the corridor. Phase B includes approx. \$12.3 million in improvements of a total estimate of \$68.2 million in infrastructure improvements along Las Vegas Boulevard, from Stewart Avenue to CC-215.

## **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.***

### **2021-22 Performance Objectives**

- Develop and maintain existing state, federal and international partnerships to advance and promote water-related technical development and innovative water-resource solutions.
- Conduct public outreach and 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.
- Demonstrate national and international leadership in water research, conservation, and water quality efforts.
- Implement the LVVWD and the SNWA Capital Plans.

### **2020-21 Major Accomplishments**

- The SNWA Board of Directors approved an updated Water Resource Plan in 2020. 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.
- Completion of the IRPAC 2020 public participation process and approval of the committee's Recommendation Report.
- Continued progress on asset management, necessary system expansion and water quality compliance projects provided within the LVVWD's 10-year Capital Improvement Plan.

***Strategic Plan Goal - Deliver an outstanding customer service experience.***

### **2021-22 Performance Objectives**

- Identify and implement further operational and management practices to maintain service levels with greater efficiency.

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- Continue implementation and increase use of analytics software to detect potential leaks and notify customers.

**2020-21 Major Accomplishments**

- Suspended water shut-offs due to delinquent accounts for several months for customers experiencing financial difficulties due to the COVID-19 pandemic. Staff continues to work with individual customers facing financial hardships to establish payment arrangements.
- Continued construction schedule coordination with the City of Las Vegas and Clark County for all major projects occurring throughout the District's service area, resulting in lower costs and reduced traffic impacts.
- Continued outreach to customers through trickle report letters, which are sent to customers whose meters report constant water use—often the sign of an undiscovered on-site leak.
- Started the Water Smarts Podcast, which covers a broad range of Southern Nevada water issues and is available on all streaming platforms.

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

**2021-22 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 ranching properties.
- Continue conservation education and incentive programs to maximize available water supplies.

**2020-21 Major Accomplishments**

- In 2020, the Water Smart Landscapes rebate program hit a milestone, with participants converting more than 197 million square feet of grass—enough to roll an 18-inch-wide strip of sod completely around the Earth's circumference.
- Enhanced water waste enforcement efforts to stimulate sustained water conservation throughout the community.
- The SNWA member agencies signed various interlocal agreements to increase water efficiency and conservation throughout Southern Nevada, including adoption of the SNWA's non-functional turf resolution into local codes and ordinances, limiting turf installation to only parks and schools in areas outside the Las Vegas Valley, and implementing the SNWA's Out-of-valley water use policy requiring that any of the SNWA-delivered water be returned to Lake Mead via a wastewater system.

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- 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.***

**2021-22 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.

**2020-21 Major Accomplishments**

- In 2020, the SNWA conducted groundbreaking research on genetic markers of COVID-19 in wastewater.
- 16 Water Efficient Technologies projects were completed in 2020, totaling approximately \$148,000 in rebates and 23.3 million gallons in water savings.
- Expedited implementation of Automated Metering Infrastructure to allow for increased efficiency in responding to potential compliance and leak issues.
- 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.

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

**2021-22 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.
- Plan and develop opportunities to increase the LVVWD and the SNWA investments in alternative and renewable energy supplies.

**2020-21 Major Accomplishments**

- The LVVWD ended fiscal year 2019-20 with \$422 million in reserves, exceeding its fund balance target by 25 percent.

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- The SNWA ended fiscal year 2019-20 with \$769 million in unrestricted reserves, exceeding its fund balance target by 15 percent.

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

**2021-22 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.

**2020-21 Major Accomplishments**

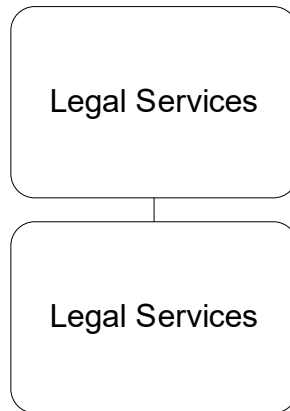
- In early 2020, the LVVWD was able to donate 50,000 N95 masks to COVID-19 first responders.
- Held a virtual Black History Month celebration in February 2021. While an in-person event was unable to be held due to the COVID-19 pandemic, spectacular music and dance performances, educational children's activities and informational speakers and presentations were held online for all to enjoy.
- In 2020, the LVVWD was named the top employer in Nevada by Forbes Magazine.
- During the COVID-19 pandemic, the Executive Team began a weekly video series to keep the organization informed of major developments, initiatives, and accomplishments. The video series won a Pinnacle Award in 2020 from the PRSA Las Vegas Chapter.

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Operating and Capital Budget  
Department Budgets  
Legal Services  
Fiscal Year Ending June 30, 2022

## LEGAL SERVICES

Level: 1200

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### 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 2021-22 budget contains continuing funding to support these efforts and for outside counsel who perform a variety of other legal services for the organization.

Southern Nevada Water Authority  
Operating and Capital Budget  
Department Budgets  
**Legal Services**  
Fiscal Year Ending June 30, 2022

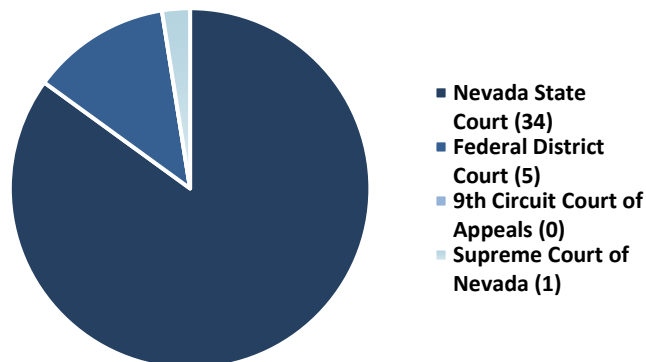
### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 55	\$ 48,480	\$ 5,480
Maintenance & Repairs	-	-	-
Rental & Leases	-	-	-
Other Employee Expenses	57,740	68,160	81,560
Other Expenses	1,029,684	3,361,008	2,616,008
Total Operating Expenses	1,087,478	3,477,648	2,703,048
Capital Expenditures	-	-	-
Payroll & Related Costs	1,229,879	1,438,862	1,442,959
<b>Total Department Expenditures</b>	<b>\$ 2,317,356</b>	<b>\$ 4,916,510</b>	<b>\$ 4,146,007</b>
FTE Positions	4.7	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



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**Legal Services**  
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## **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.

### **2021-2022 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.

### **2020-2021 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.



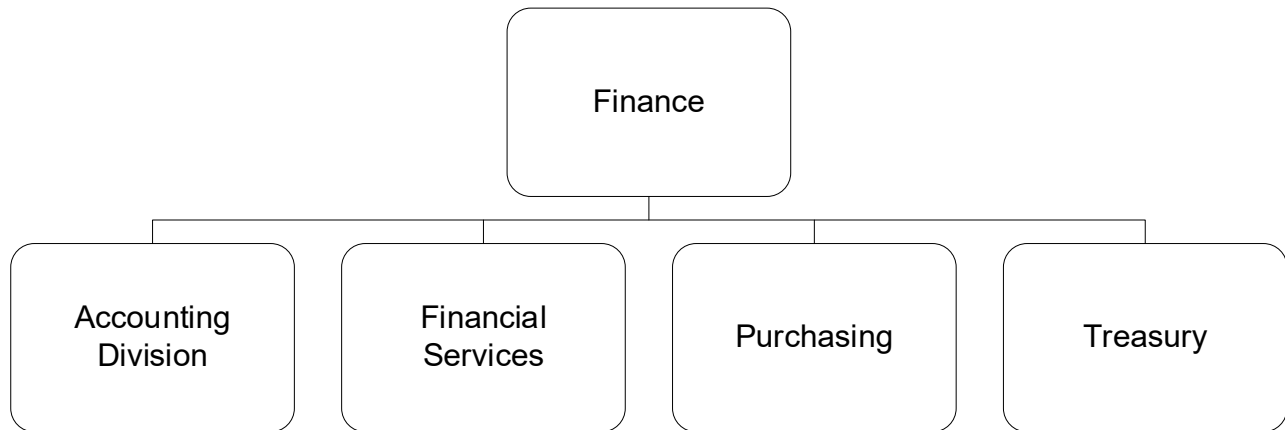
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Southern Nevada Water Authority  
Operating and Capital Budget  
Department Budgets  
**Finance**  
Fiscal Year Ending June 30, 2022

**FINANCE**  
**Level: 2100**

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## 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 2021-22 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.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Water Resource Investments	\$ 2,074,239	\$ -	\$ -
Energy	(967,193)	-	-
Materials & Supplies	1,867,207	303,707	41,019
Maintenance & Repairs	1,245,662	12,480	6,000
Rental & Leases	14,649	3,072	3,200
Other Employee Expenses	3,967	42,192	41,898
Other Expenses	10,910,786	11,915,946	15,922,721
Total Operating Expenses	15,149,317	12,277,397	16,014,838
Capital Expenditures	-	-	-
Payroll & Related Costs	2,783,139	2,816,121	3,052,112
<b>Total Department Expenditures</b>	<b>\$ 17,932,456</b>	<b>\$ 15,093,518</b>	<b>\$ 19,066,950</b>
FTE Positions	14.5	14.7	16.2

## 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 Comprehensive Annual Financial Reports with their corresponding audit reports. In addition, the division prepares and submits the financial reporting related to grant activities for both the SNWA and the LVVWD.

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

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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 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.***

### **2021-22 Performance Objectives**

- Identify and secure funding for critical infrastructure.
- Provide timely and accurate financial reporting for all capital programs.
- 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.

***Strategic Plan Goal - Deliver an outstanding customer service experience.***

### **2021-22 Performance Objectives**

- Complete implementation of a new procure-to-pay system that streamlines the procurement process, and optimize the system creating efficiencies that will allow staff the time to manage their assigned commodities and services more effectively.
- Continue to improve and streamline day-to-day accounting practices, specialized processes, improved financial analyses, reporting, and information sharing to departments.
- Continue to provide the quality products, equipment, and services to departments in a timely manner.
- Pursue process and system improvement initiatives to shorten the financial month-end close and complete the process before the end of the following month.

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**2020-21 Major Accomplishments**

- Achieved several months of completing the financial month-end close before the end of the following month.
- Increased electronic payment to suppliers by 25 percent.
- Implemented Workday Expense module to help streamline and manage the review, approval, and payment of employee expense reports related to travel and training.
- Continued collaboration with all Departments, including conducting the annual budget kickoff and new Budget Dashboard training meetings on Microsoft Teams for the first time. Recordings of the meetings were made viewable by posting on our Hydroweb/SharePoint Budget Help page for those unable to attend.
- Implemented new procure-to-pay system and moved the Purchasing Card (P-Card) reconciliation into a new system.
- Expanded use of electronic systems for the submission and analysis of bids for construction, and evaluation of complex Request for Proposals. The ability to submit bids and proposals electronically helped increase competition, and exposure of the LVVWD's contracting activity to a larger supply base, including diverse suppliers.
- Continued expansion of the Procurement Card program for small dollar purchases to further increase transparency, accountability and efficiency for small dollar purchases and decrease the transactional costs for such items.
- Updated the Purchasing Guidelines to reflect new processes and procedures due to the implementation of new procure-to-pay system.

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

**2021-22 Performance Objectives**

- Complete planning phase of a chart of accounts enhancement project to facilitate alignment of processes across entities and improve system reporting capabilities.
- Define new use cases to maximize benefits of existing Blackline modules.
- Expand use of Workiva financial reporting software to produce the BBWD annual report.
- Increase use and training of Splash BI Publishing and GL Connect reporting tools to improve reporting and automation technology to provide more timely information for management to make decisions, increased employee efficiency, better control of the approval/authorization process and to maximize vendor discounts.
- Actively participate in defining financial information requirements to new system implementations or enhancements, which include but are not limited to, the Apttus contract project, Customer Care & Billing (CC&B), and Workday software.

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**2020-21 Major Accomplishments**

- Expanded use of the Workiva financial reporting software to produce the 2021-22 budget document.
- Implemented Sympro Debt Management software to improve debt management accounting, reporting, and analysis for the LVVWD and the SNWA.
- Implemented a new technology tool named Lease Query. This tool and additional accounting procedures will ensure compliance with GASB 87 leases.
- Fully implemented an accounts payable automation system which helped automate manual processes.
- Upgraded the organization's budget dashboard application, which allows users without access to the Oracle Financial System to view their work area's financial data and expenditures.

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

**2021-22 Performance Objectives**

- Issue new money bonds for the SNWA and LVVWD to fund capital programs and refunding bonds for both the SNWA and LVVWD to generate savings.
- Implement GASB 87 related to new Lease Accounting Standard.
- 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.

**2020-21 Major Accomplishments**

- Issued the LVVWD General Obligation (Limited Tax) (Additionally Secured by Pledged Revenues) Series 2020C Water Bonds generating \$100 million of new monies to fund the next tranche of the District's capital improvements plan.
- Issued the LVVWD General Obligation Bonds (additionally secured by SNWA Revenues) Series 2021A Refunding Bonds generating net present value savings of \$50.2 million.
- Issued the LVVWD General Obligation Bonds (additionally secured by Pledged Revenues) Series 2021B Refunding Bonds generating net present value savings of \$6.6 million.
- Issued the LVVWD General Obligation Bonds (additionally secured by SNWA Revenues) Series 2021C Refunding Bonds converting the commercial paper program to fixed rate debt.
- 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, maintenance of robust cash reserves, and continued economic growth in the Las Vegas area.

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- Processed approximately 28,000 payments annually, earning more than \$265,000 in discounts on invoices processed in fiscal year 2019-20, and achieved a rebate of \$79,000 on annual credit card spend.
- Provided comprehensive financial planning and analytical support for the SNWA's Integrated Resource Planning Advisory Committee 2020.
- Completed implementation of a new procure-to-pay system.

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

**2021-22 Performance Objectives**

- Submit the LVVWD and SNWA Comprehensive Annual Financial Report for the year ending June 30, 2021, to the Government Finance Officers Association (GFOA) to receive the Certificate of Excellence in Financial Reporting.
- Receive unmodified opinions from external auditors for the LVVWD, SNWA and BBWD fiscal year 2021 audits.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year beginning July 1, 2021.

**2020-21 Major Accomplishments**

- Received the Certificate of Excellence in Financial Reporting from the GFOA of the United States and Canada for the forty-second (42<sup>nd</sup>) consecutive year for the LVVWD Comprehensive Annual Financial Report for the ended June 30, 2020.
- Received the Certificate of Excellence in Financial Reporting from the GFOA for the twenty-fifth (25<sup>th</sup>) consecutive year for the SNWA Comprehensive Annual Financial Report for the year ended June 30, 2020.
- Received an unmodified opinion from external auditors for the LVVWD, SNWA and BBWD fiscal year 2020 audits.
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year beginning July 1, 2020.



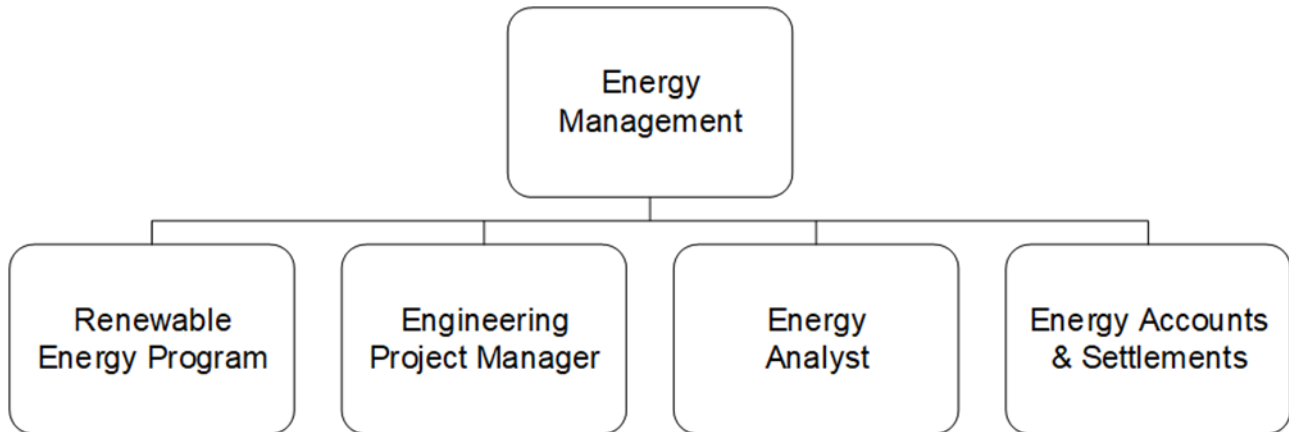
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## ENERGY MANAGEMENT

Level: 2200

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### 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

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on behalf of the SSEA, Energy Management personnel also support the renewable energy initiatives of the SNWA and the LVVWD.

## Budget Objectives and Highlights

The fiscal year 2021-22 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.

### Expenditures

SNWA Uses	Actual 2019-20	Budget 2020-21	Budget 2021-22
Energy	\$ 38,548,975	\$ 37,912,458	\$ 41,250,555
Materials & Supplies	866	2,160	2,160
Maintenance & Repairs	-	-	-
Rental & Leases	-	-	-
Other Employee Expenses	1,542	8,880	8,880
Other Expenses	148	1,200	1,200
Total Operating Expenses	38,551,532	37,924,698	41,262,795
Capital Expenditures	-	500,000	10,000,000
Payroll & Related Costs	1,316,190	1,306,763	1,207,315
<b>Total Department Expenditures</b>	<b>\$ 39,867,722</b>	<b>\$ 39,731,461</b>	<b>\$ 52,470,110</b>
FTE Positions	5.1	5.0	5.0

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## Department Performance

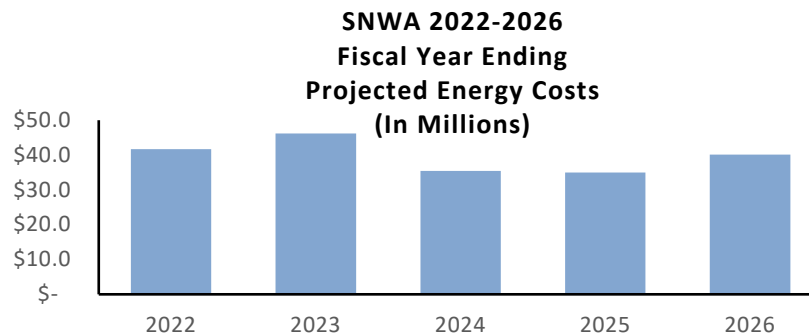
**Silver State Energy Association (SSEA).** The SNWA has been instrumental in the formation and development of the SSEA, which has brought significant benefits to the SNWA, its member agencies and the SSEA members. In order to properly manage the energy needs of the SNWA, a certain minimum size of labor 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 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 2026 as of the end of February 2021.

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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 \$42 million, excluding the estimated cost of capital associated with the SNWA's energy assets for the fiscal year 2021-22. 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 2020 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.***

### **2021-22 Performance Objectives**

- Coordinate all permitting, transmission studies and line crossings required to be able to take delivery of the Boulder Flats Solar energy.

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- Work with CRC to develop a 10-mile transmission line extension to connect the Boulder Flats Solar project to the SNWA's existing system.
- Continue to 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.
- Work with the Middle Office to finalize a morning report for renewable assets showing performance from the prior day. The report will be used as a flag for any potential performance problems.

**2020-21 Major Accomplishments**

- Negotiated a 113 MW Power Purchase Agreement with Boulder Flats Solar in support of our renewable energy goals.
- Developed a rolling three-month resource and price projection to be sent to Western Area Power Administration (WAPA) monthly along with the SSEA month-ahead schedule. This improved WAPA's ability to forecast quarterly and improved cash flow projections and collections from the SSEA.
- Worked with WAPA in correcting monthly curtailment reporting and improving monthly collection efficiency through coordination with third-party vendors and fostering cooperation with WAPA staff.
- Demonstrated our best industry standard practices both through phone calls and Teams meetings, coaching new curtailment personnel to produce acceptable and timely results.
- Worked with WAPA to limit exposure to volatile imbalance prices by devising a correction factor to offset a consistently observed non-zero biasing in the hourly imbalance volumes. WAPA's installation of the correction factor, partnered with prudent scheduling practices, reduced volume and price at risk, and mitigated the observed bias.
- Completed the installation of communications and metering to the solar-covered carports at the LVVWD campus. Information is now being collected in the Energy Management database.
- Received a settlement from Sharp for the warrantied solar panels on the LVVWD reservoirs. The money will be utilized to purchase replacement panels.

***Strategic Plan Goal – Deliver an outstanding customer service experience.***

**2021-22 Performance Objectives**

- Work with the SNWA member agencies to develop and execute power purchase agreements for Boulder Flats solar power commitments.

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**Energy Management**  
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**2020-21 Major Accomplishments**

- Performed load and cost analysis for the City of Henderson to exit 20 water-pumping and wastewater sites from NV Energy, at the request of the customer. Working with WAPA and the CRC, completed and prepared the exiting application and 10-year load forecast under the rules set forth in NRS 704.787.
- Coordinated with the SNWA member agencies to develop new methods to obtain and report renewable energy compliance obligations under new SB 358 legislation.
- Implemented productivity standards and protocols to meet the required remote work mandate. This included alternative methods of trade capture, entry, and approval, along with modified procedures for QB entry, review, and billing to name a few.

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

**2021-22 Performance Objectives**

- Complete a comprehensive review of the Risk Management Procedures, incorporating industry changes and lessons learned from the pandemic.
- 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.

**2020-21 Major Accomplishments**

- Maintained a managed portfolio of energy resources for all SSEA requirements within all hedge guidelines and procedures.
- To reduce the exposure of the extreme summer energy price volatility, changed to a monthly average of the daily index when trading with SNWA customers for balancing energy.
- Secured a long-term layoff of Parker-Davis hydropower and smaller month-to-month layoffs of both Parker-Davis and Hoover hydropower. This improved the ability to meet the state-mandated Renewable Portfolio Standard.
- Reviewed, analyzed, and modified our long-term hedging strategy to address changing market conditions.
- Services for settling and agreeing with NV Energy Balancing Authority loads were automated and migrated to cloud-based services, eliminating the need for outside support.
- Developed a framework and methodology for our newly required renewable energy compliance reporting and successfully submitted our first report to the Office of Energy.
- Migrated some excel based reporting to MongoDB Atlas and implemented dynamic visualization reports. Several Front Office reports were automated and moved to this format, saving hours of labor every month and providing a rich and deeper analysis on demand.

## Risk Management

### Level: 2600

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### 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 reassessed the SWOT analysis 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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**Expenditures**

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Water Resource Investments	\$ -	\$ -	\$ -
Materials & Supplies	-	-	-
Maintenance & Repairs	-	-	-
Other Employee Expenses	-	-	-
Other Expenses	-	768,000	1,026,363
Total Operating Expenses	-	768,000	1,026,363
Capital Expenditures	-	-	-
Payroll & Related Costs	523,192	757,794	582,493
<b>Total Department Expenditures</b>	<b>\$ 523,192</b>	<b>\$ 1,525,794</b>	<b>\$ 1,608,856</b>
FTE Positions	2.8	4.0	3.0

## Department Performance

**Enterprise Risk Management.** In support of the LVVWD's mission and goals, the visibility of the division was elevated by moving it into its own department reporting to the Chief Financial Officer. 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.

**Origami Risk Management Information System.** Each year brings a wider company footprint with the current departments having multiple workflow processes in Origami: Distribution, Security, EHS, Risk Management, Legal, Internal Auditors, and Info Sec and Compliance. There are 85 full users with an average of 80% logging in on a weekly basis.

**Liability Claims.** The Risk Management team saw an increase in efficiencies and decrease in claims costs due to a change in claims handling procedures for the department. 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.

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Renewal Comparison				
Line of Coverage	2017-2018	2018-2019	2019-2020	2020-2021
Operational Property & Builders Risk	\$ 430,701.00	\$ 422,327.00	\$ 417,212.00	\$ 620,000.00
Terrorism	N/A	N/A	N/A	\$ 46,755.00
Excess Liability	\$ 147,413.00	\$ 144,323.00	\$ 144,323.00	\$ 342,566.48
Excess Worker's Compensation	\$ 108,392.00	\$ 106,897.00	\$ 106,897.00	\$ 113,748.00
Employee Fidelity	\$ 19,363.00	\$ 19,366.00	\$ 19,137.00	\$ 19,604.00
Public Officials & Employees Liability	\$ 140,266.00	\$ 138,159.00	\$ 135,196.00	N/A
Employment Practices Liability	\$ 64,711.00	\$ 53,538.00	\$ 53,538.00	\$ 65,760.00
Digital Technology Liability	\$ 56,232.00	\$ 61,301.00	\$ 63,639.00	\$ 68,989.60
Ocean Marine	\$ 9,901.00	\$ 9,148.00	\$ 9,137.00	\$ 9,250.00
Non-owned Aviation	\$ 3,268.00	\$ 3,268.00	\$ 3,430.00	N/A
Pollution Liability*	N/A	N/A	N/A	\$ 158,838.00
<b>Total</b>	<b>\$ 980,247.00</b>	<b>\$ 958,327.00</b>	<b>\$ 952,509.00</b>	<b>\$ 1,445,511.08</b>
*3 year premium paid; 4/9 renewal date				

**Insurance Program.** Over the past several years, the LVVWD has been evaluating the feasibility of forming a captive and has considered how a captive would support the LVVWD's financial and strategic positions. After review, staff has determined that a captive would offer a multitude of benefits to the LVVWD, including cost savings, flexibility and risk management options.

By forming a captive insurance company, the LVVWD would create a separate, licensed and regulated entity to ensure its own risk. 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.

## Strategic Plan Objectives and Accomplishments

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

### 2021-22 Performance Objectives

#### Enterprise Risk Management

- Identify KPIs, KRIs, and Mitigation Strategies for top Risk of 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.

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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.

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

**2020-21 Major Accomplishments**

Enterprise Risk Management (ERM) Initiatives Completed:

- Top Fifteen Risks approved by SMT.
- Create controls and mitigations for top risks.
- Continue to develop resources, reports and tools that offer value for other departments.
- Develop quantitative risk management goals.
- Total Cost of Risk analysis.

Address the following additions to the Origami System in the following departments:

- Safety – complete OSHA reporting, add Safety Boot Program, Hot Work, Lockout/Tagout and Confined Space.
- Security – retire Security Blotter from Information Technology department.
- Risk Management – update certificate of insurance module, increase use of changing ERM module.
- Info Sec and Compliance – have the PCI DSS compliance requirement audits complete and automate workflow process.
- Internal Auditors – address automated workflow on findings and corrective actions.

Continue to increase visibility of Risk Management throughout the LVVWD:

- Attend design meetings and create risk registers for all construction projects.

Increase industry knowledge

- Risk Management Officer to work on Associate in Claims (AIC®) from Institutes.
- Risk Management Analyst to work on and complete Associate in Claims (AIC®) from Institutes.

Diversity and Inclusion

- Risk Manager participated in the National African American Insurance Association  
[www.naaia.org](http://www.naaia.org)

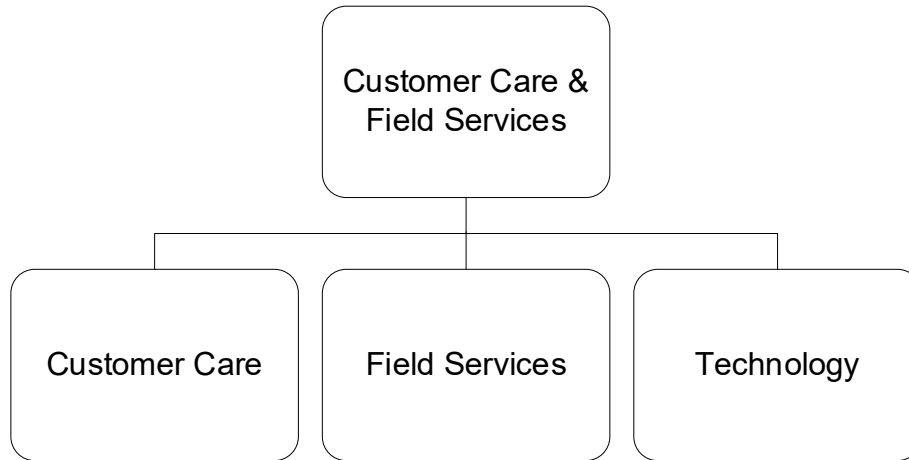
Continue process to create Captive Insurance Company

Southern Nevada Water Authority  
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Customer Care and Field Services  
Fiscal Year Ending June 30, 2022

## CUSTOMER CARE AND FIELD SERVICES

Level: 3100

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### 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 2021-22 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 2021-22 Budget Plan contains funding for meter maintenance, advanced metering infrastructure, and operational costs.

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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.

**Expenditures**

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 368	\$ 5,280	\$ 7,300
Maintenance & Repairs	3,448	3,840	4,000
Rental & Leases	-	-	-
Other Employee Expenses	-	-	-
Other Expenses	-	-	-
Total Operating Expenses	3,816	9,120	11,300
Capital Expenditures	-	-	-
Payroll & Related Costs	378,895	426,337	433,753
<b>Total Department Expenditures</b>	<b>\$ 382,711</b>	<b>\$ 435,457</b>	<b>\$ 445,053</b>
FTE Positions	2.4	2.6	2.6

## Department Performance

In 2020-21, 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.

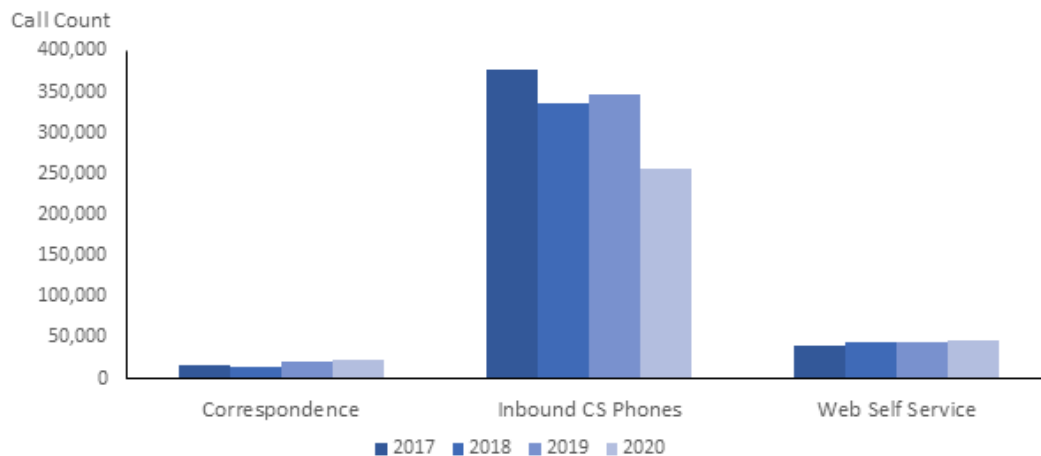
**Customer Care.** The Customer Care division serves as the primary point of contact for internal and external service inquiries—supporting approximately 409,000 active services. The division manages the customer care phones, web requests, correspondence, and walk-in requests. Customer Care handles payments, pay arrangements, courtesy collection calls, delinquent account processing, high consumption requests, water-waste complaints, 24/7 emergency phone coverage, along with providing monthly billing to the LVVWD's customers.

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

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

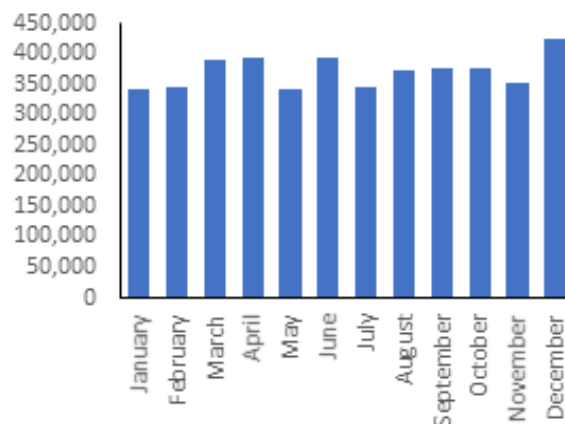
**Customer Care Phone and Correspondence Volume**



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.

The following chart depicts the total number of bills generated monthly in 2020.

**Bills Generated 2020**

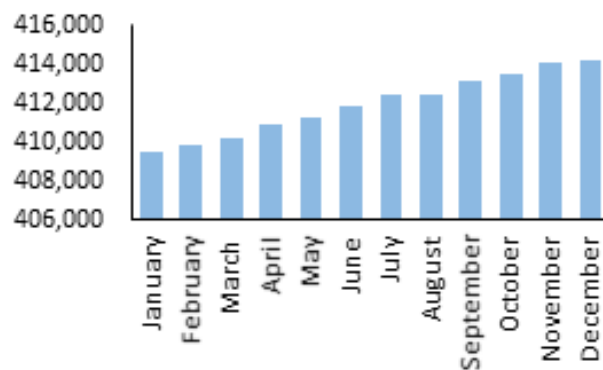


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**Field Services:** The Field Services division is responsible for reading and maintaining meters for approximately 409,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle Canyon, Laughlin, and Jean. The division also responds to leak investigations, low pressure, high consumption, water waste inquiries, billing requests, and turn ons/shut offs.

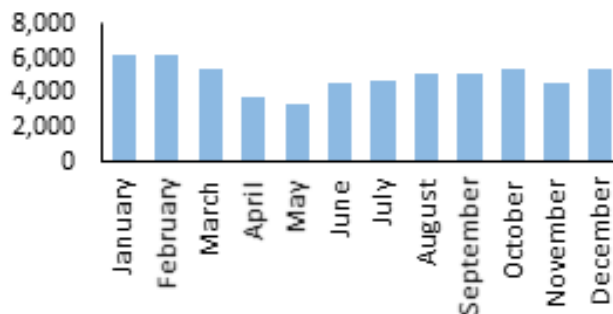
The 2020 Meter Reads chart illustrates the number of meter reads processed by Field Services in 2020 (Over 4.9 million total).

### Meter Reads 2020



The following chart illustrates the number of work orders processed by Field Services in 2020 (Over 59,000 processed).

### Field Activities Completed 2020



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**Technology:** The Technology division is responsible for implementing new technologies, software, and processes to modernize service offerings.

The five-year Technology Roadmap outlines Customer Care and Field Services' (CCFS) accomplishments in 2020 as well as current initiatives.

Current initiatives include implementation of Advanced Metering Infrastructure (AMI) valley-wide, upgrading the CCFS Customer Care & Billing System (CC&B) to the latest Oracle product, Customer-to-Meter (C2M), deploying a Genesys chat bot along with asynchronous chat, and installing walk-up and drive-up kiosks.

Accomplishments in 2020 include the implementation of callback, enhanced outbound dialing functionality, the LVVWD Mobile App, and upgraded Field Services' mobile application.

## **Strategic Plan Objectives and Accomplishments**

### ***Strategic Plan Goal – Deliver on Outstanding Customer Service Experience.***

#### **2021-22 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.

#### **2020-21 Major Accomplishments**

- Created and implemented meter maintenance program focused on meter life per AWWA standards.
- Implemented a Callback Feature within our Interactive Voice Response (IVR system) creating an enhanced customer experience.
- Restructured literature left onsite to provide customers increased opportunities to provide feedback on field staff performance.
- Collected 3.4 billion hourly reads to help customers with their consumptive use.



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- Implemented a new LVVWD Mobile App to enhance the customer experience and improve on our technology efforts.

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

**2021-22 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 in order to maximize life and reduce waste and non-revenue water.

**2020-21 Major Accomplishments**

- Mailed 8,124 Water Waste letters in 2020.
- Completed 10,031 Water Waste Investigations, resulting in \$180,720 in fees assessed.
- Completed over 52,579 field activities in 2020.
- Used data analytics to notify customers that they are watering on Sunday.
- 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.***

**2021-22 Performance Objectives**

- Continue improvements to “My Account” to support conservation efforts including watering groups and customer notifications for leaks.
- Launch chat channel for customers to engage with the organization through a digital platform.
- 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 in order to provide proactive maintenance and replacement.

**2020-21 Major Accomplishments**

- Lobby payments and transactions continued to decline with successful expanded payment and self-service options, reducing lobby traffic and carbon footprint.

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- 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.
- Launched Sunday Watering Letter Program.

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

**2021-22 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 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.

**2020-21 Major Accomplishments**

- Increased Quality Monitoring to enhance the functional capabilities of the individual, team and departmental performance.
- Utilized various subject matter experts throughout the department to support training initiatives.
- Restructured Credit & Collections processing to improve field operations and increase communications with past due customers.
- Adopted Agile methodologies in key areas to improve project management and collaboration.
- Successful transition of call center agents and support teams to at-home working environment.

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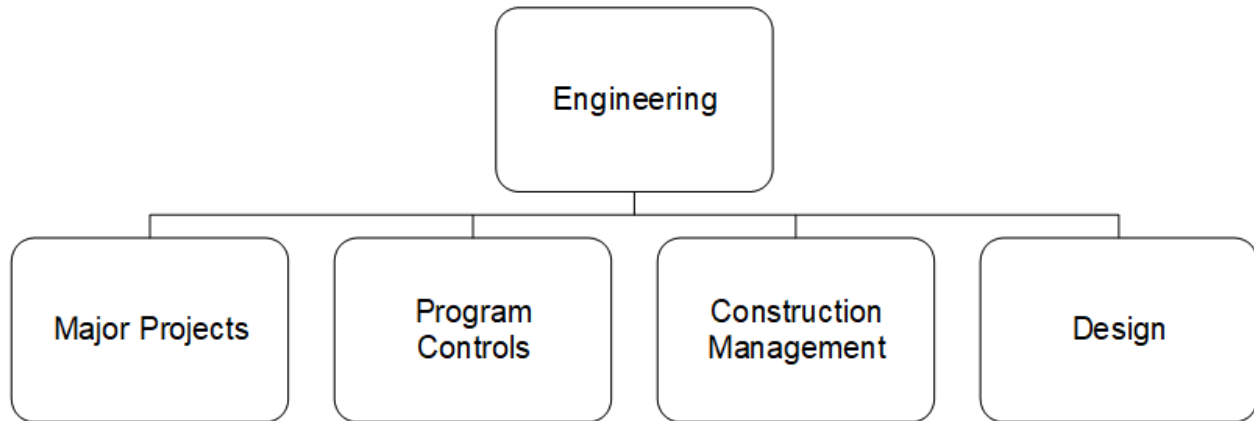


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## ENGINEERING

Level: 3400

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### 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

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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.

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.

**Expenditures**

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ (1,335)	\$ 2,832	\$ 3,240
Maintenance & Repairs	85,081	672,000	450,000
Rental & Leases	-	-	-
Other Employee Expenses	25,980	11,184	28,842
Other Expenses	809,545	485,472	1,128,950
Total Operating Expenses	919,271	1,171,488	1,611,032
Capital Expenditures	34,204,040	54,633,837	96,657,584
Payroll & Related Costs	4,941,152	6,487,593	5,952,183
<b>Total Department Expenditures</b>	<b>\$ 40,064,464</b>	<b>\$ 62,292,918</b>	<b>\$ 104,220,798</b>
FTE Positions	25.0	33.0	31.2

## Budget Objectives and Highlights

The 2021-22 Engineering department budget demonstrates significant ongoing commitment for LVVWD CIP, development needs, Lower Las Vegas Wash Restoration Plan, and the SNWA MCCP 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.

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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.

## **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 Horizon Lateral and the Garnet Valley Water and Wastewater Systems. Staff is currently in the process of negotiating the professional services agreement for the preliminary design of the Horizon Lateral, and this agreement is scheduled to be approved prior to 2021-22. Staff will complete the selection process of consultants for the Garnet Valley Projects prior to 2021-22.

**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.

**Construction Management.** The construction management team is comprised of engineers and inspectors 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.

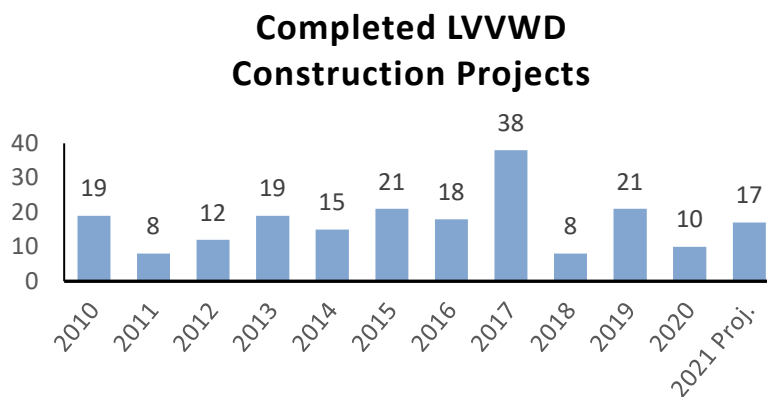
**Program Controls.** A technical team organized to assist with the implementation and management of the LVVWD, SNWA, and Las Vegas Wash capital programs through establishment of best practices for effective cost and schedule management and reporting. This team manages the Project Management Information System (e-Builder) and analyzes capital program project data from

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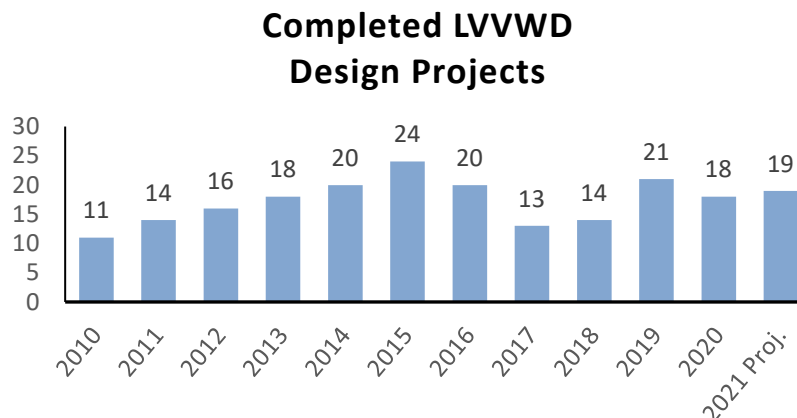
various departments to identify trends and evaluate project performance. This team also performs a vital function in quality control and reporting of projected capital expenditures as a tool for forecasting future funding requirements and coordinates closely with the Finance department.

**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 2010 and the number expected to be completed in 2021.

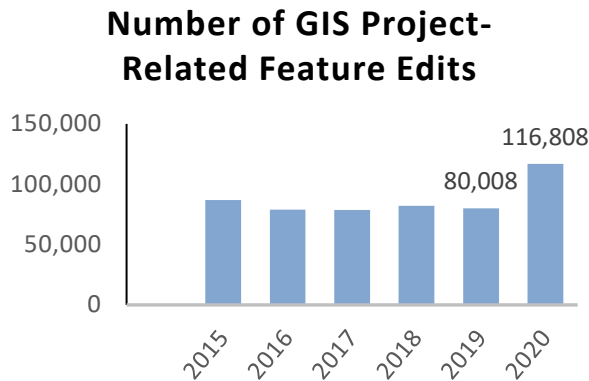


The following chart (Completed LVVWD Design Projects) illustrates the number of projects Engineering has designed since 2010 to support the infrastructure management requirements of the LVVWD.



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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.



## Strategic Plan Objectives and Accomplishments

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

### 2021-22 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 MCCP Amendment.

### 2020-21 Major Accomplishments

- Completed the feasibility study for the Horizon Lateral.
- Completed, and placed into operation, the Low Lake Level Pumping Station.
- Completed construction of 20 LVVWD projects valued at \$38.1 million related to improvement of the LVVWD's facilities.
- Awarded 12 LVVWD construction contracts valued at \$17.8 million related to improvement of the LVVWD's facilities.
- Performed inspections on approximately 727 different developer related projects, involving over 32,000 individual inspection actions.



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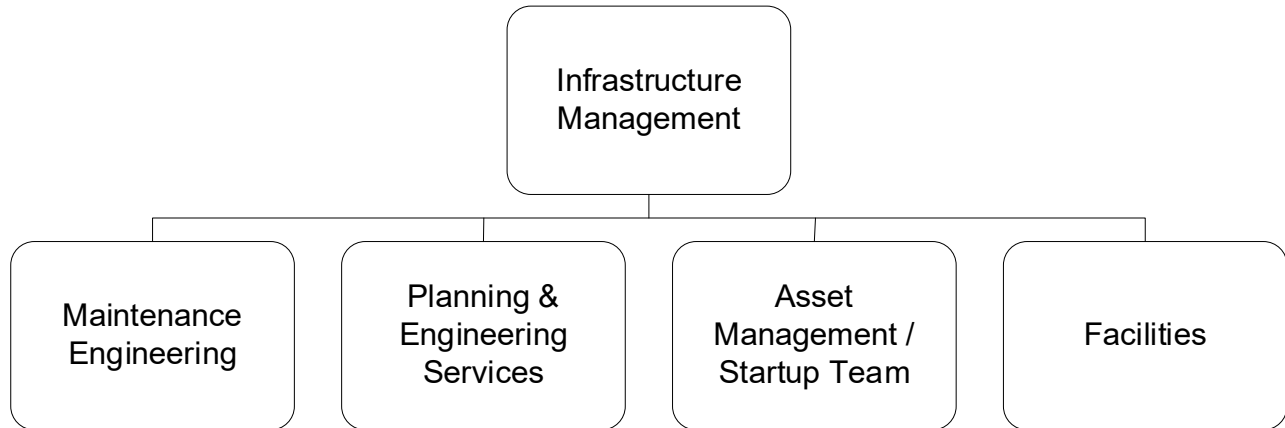


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## INFRASTRUCTURE MANAGEMENT

Level: 3700

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### 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 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 division provides technical support and develops capital projects for the Operations, Resources, Facilities, and Water Quality and Treatment (WQ&T) departments. The Asset Management 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 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 systems such as plumbing, heating, ventilating, and air conditioning (HVAC), structural, and safety.

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## Budget Objectives and Highlights

The 2021-22 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 \$176,216 from budget year 2020-21 to 2021-22. Contributing factors to the operating expense budget include increased pandemic response measures that will now become permanent practice, increased budgeted rental/leases, and added fiber lease with price increase for the fiber lease agreements. The department will continue to focus efforts on infrastructure condition assessments, Supervisory Control and Data Acquisition (SCADA) programming, and the 4-1-1 developer review process.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 853,906	\$ 1,104,000	\$ 941,196
Maintenance & Repairs	1,764,757	3,921,600	3,376,800
Rental & Leases	182,419	216,000	2,160,000
Other Employee Expenses	36,273	73,344	70,660
Other Expenses	13,452	196,656	173,002
Total Operating Expenses	2,850,806	5,511,600	6,721,658
Capital Expenditures	8,594,871	21,469,500	11,712,289
Payroll & Related Costs	9,737,965	12,189,512	12,541,741
<b>Total Department Expenditures</b>	<b>\$ 21,183,642</b>	<b>\$ 39,170,612</b>	<b>\$ 30,975,688</b>
FTE Positions	56.1	69.9	74.1

## Department Performance

**Maintenance Engineering.** The Maintenance Engineering division is responsible for the engineering design enhancements and modifications needed to operate and maintain pumping stations, rate-

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of-flow-control stations, reservoirs, water treatment facilities, the distribution and transmission pipelines, and wells in a safe and efficient manner. Specific responsibilities of Maintenance Engineering 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 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.

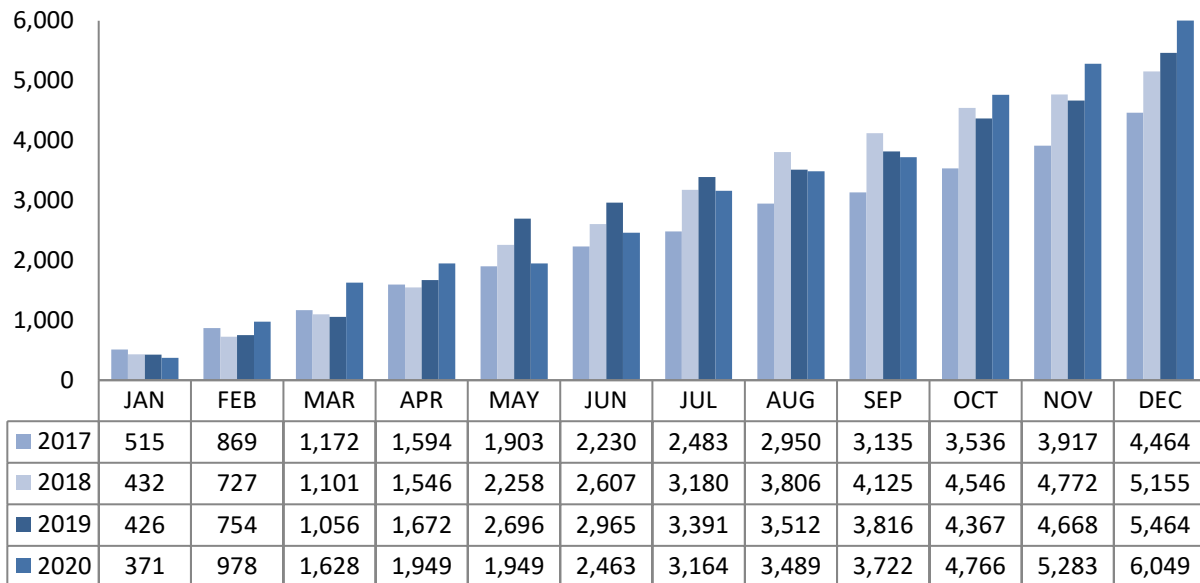
The division is currently managing over 80 active projects between the LVVWD and the SNWA, with a capital budget of more than \$22 million. Major projects include the LVVWD SCADA upgrade; BBWD 1130 Zone Tank refurbishment; BBWD Raw Water Well installation; Jean J-8 Well installation; West Admin cooling tower replacement; Angel Park MCC upgrade; Blue Diamond pipeline replacement; and the build out of the fiber optic communications network.

**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. The division 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. The division locates, sizes, and schedules new pumping stations, reservoirs, wells, and major pipelines. The division also maintains the Asset Management model which is used to prioritize asset renewal projects and provide capital cost projections and conducts hydraulic criticality assessment of the distribution system to ensure system reliability. The division reviews pressure and fire flow availability for new developments and writes cost sharing agreements for the design and construction of major water facilities. The division 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. The division conducts distribution system pressure and flow investigations in support of Customer Care and Field Services, Operations and Public Information. The division also performs planning for small systems, recycled water distribution systems, and out-of-valley transmission systems.

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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. The division 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. The division coordinates with Asset Management 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. The division assists developers, engineers, and contractors with the progression of their projects through meetings or onsite field visits. The division coordinates with other public works construction to minimize both the LVVWD costs and inconvenience to the public. The division is responsible for the evaluation and testing of products for use in the water distribution system and oversees the LVVWD Approved Products List. The following chart represents the LVVWD's cumulative data representing new service points.

**New Service Points**  
**2017-2020 Cumulative New Service Points Received**



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**Asset Management.** The Asset Management division assesses infrastructure conditions and forecasts short and long-term capital renewal needs to meet service level expectations. Asset Management 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 (CP). 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 Maintenance Engineering 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, and others. 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.

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## **Strategic Plan Objectives and Accomplishments**

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

### **2021-22 Performance Objectives**

- Develop a Conservation Strategic Plan to improve water system efficiency through Asset Management.
- 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 equipping of Well J8 in Jean. The design is complete and will bid FY2020/21. This will replace failing Well J4 in support of the Jean community.
- Complete the equipping of the Big Bend raw water well. This project is shovel ready and waiting for the State Revolving Fund funding.
- Work with the Construction Management (CM) and Project team 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.
- Work with purveyor members to define the MCCP scope of the upcoming regional facilities recommended through IRPAC.
- Continue to work with Operations to conduct pump station (PS) performance evaluations.

### **2020-21 Major Accomplishments**

- Repaired the leak at the Campbell PS Pressure Reducing Valve (PRV) 2055/2168 connection using an internal seal without the need for a massive excavation.

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- Performed a wire break electro-magnetic inspection of the 96-inch A Lateral from PP1A to 2A. This proactive assessment identified four segments for rehabilitation and a number of cracked joints.
- Completed the integration and startup and performance testing of the new Bulk delivery system and Chlorine dilution system at the RMWTF. Worked with CM staff and the Control Systems Engineer to coordinate the integration of all the controls valves for Filters 11-15 at the AMSWTF. Integrated and completed startup and performance testing five new Sodium Hypochlorite rectifiers and generators at the RMWTF with minimum programming changes from the original vendor control system.
- Obtained Nevada Division of Environmental Protection's (NDEP's) approval and implemented 4-log inactivation of viruses for ground water production.
- Assisted the Laboratory in relocating 53 water quality monitoring stations and expanded water quality monitoring framework to cover the newly developed areas and pressure zones.
- Assisted the Laboratory in relocating water quality monitoring stations and completing the 2021 water quality monitoring plan maps for all SNWA member agencies.
- Assisted Water Quality and Treatment in groundwater trace modeling. Identified affected areas from two water quality sample stations.
- In collaboration with Maintenance Engineering, an emergency 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.
- Installed utility power (NVEnergy) from the Elkhorn 3090 PS MCC to Cliffs Edge. This provides a more reliable power source and eliminates the cost of funning and maintaining the generator.
- Installed a discharge isolation valve at the Campbell 2168 Zone. The Existing valve failed and could not isolate the Zone.
- Worked with Asset Management to identify and start the retrofit of 29 cathodic protection test stations.
- Replaced electrical distribution equipment at El Capital PS. This equipment had reached the end of its useful life.
- Completed installation of a reverse osmosis system at the Sloan Army Reserve Center.
- 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 integration and startup and performance testing of the new bulk delivery system and Chlorine dilution system at the RMWTF. Worked with CM staff and the Control Systems Engineer to coordinate the integration of all the controls valves for Filters 11-15 at the AMSWTF. Integrated and completed startup and performance testing five new Sodium Hypochlorite rectifiers and generators at the RMWTF with minimum programming changes from the original vendor control system.
- Completed the 4125 Zone North Reservoir and the 4125 Zone PS Construction Agreements.
- Planned the Blue Diamond Water System rehabilitation Project and obtained authorization from the US Army Corps of Engineers for funding in the amount of \$3,000,000.



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- Completed a study to identify facility requirements to serve future Bureau of Land Management disposal areas throughout the LVVWD's service area, including a proposed City of Las Vegas (CLV) development north of Moccasin Road, and south of Southern Highlands.
- 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.
- Completed the installation of a PRV in the BBWD 1000 Pressure Zone. The PRV will provide redundancy and address low fire flow issues in the zone.

***Strategic Plan Goal – Deliver an outstanding customer service experience.***

**2021-22 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 Maintenance Engineering, 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 the 4-1-1 review process for developer projects; four-week first review, one-week resubmittal review, and one-week for final mylar review/approval; with a target success rate of 90 percent.
- 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.
- Refurbish BBWD 1130 Zone Tank. This will require preparatory work and planning to take this tank out of service for an extended time.
- 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.

**2020-21 Major Accomplishments**

- Completed the startup of the El Capitan electrical upgrades.

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- 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.
- Eighty-three percent of first reviews were completed within the four-week goal (335 out of 399) for compliance with the 4-1-1 review process.
- Eighty-seven percent of secondary reviews were completed within the one-week goal (1,496 out of 1,720) for compliance within the 4-1-1 review process.
- Ninety-nine percent of mylar reviews were completed within the one-week goal (794 out of 801) 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.
- Designed and installed a horizontal lifeline and ladder access to provide safe access to the two-tier planters on the north side of the West Admin Building.
- Repaired Pressure Station 34 located on the southwest corner of Eastern at Washington that was struck by a vehicle and damaged.
- Replaced the UPS System in the NaOCI Building with a standard DC battery backup system at the request of the Electrical Shop.
- 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.
- Prepared amendments to the Egan Crest 3090 Zone North Pipeline Phase III and the Shaumber 3205 Zone North Pipeline Phase II and PRV agreements. The pipelines provide additional capacity in the northern portions of the 3090 and 3205 Pressure Zones.
- Facilities completed 10,696 work orders over the past 12 months.

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

**2021-22 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.
- Support the update of the master specifications to consolidate LVVWD and SNWA Specifications.
- Collect additional construction cost data and update the cost estimation tool.
- Prepare an earthquake resiliency study that estimates earthquake-induced pipe damage, repairs, and service restoration for SNWA pipe network.

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- 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 generator installation at the Elkhorn 3205 Zone PS. This is a developer funded project to support development in the Northwest valley.
- Complete the Blue Diamond Water System pipeline replacement to resolve urgent leak and fire protection issues.

**2020-21 Major Accomplishments**

- Integrated the Sedaru collected cathodic protection (CP) 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 MCCP requirements and consolidation of LVVWD and SNWA specifications to ensure accurate and thorough integration of new facilities and upgraded equipment and systems.
- Provided and collaborated testing of an operational strategy for SNWA to deliver 370 MGD for an extended period through the Raw Water Tunnel to the RMWTF.
- Repaired Jean 600K gallon potable water tank. The tank was leaking at the bottom joint. This repair will protect the tank structure and extend the life of the asset.
- Installed redundant chlorine monitors at the Rice PS. This allows wells to pump into the reservoir to achieve disinfection contact time as required per NDEP regulations.
- 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.
- Completed an earthquake resiliency study that estimates earthquake-induced pipe damage, repairs, and service restoration for the LVVWD's pipe network.

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

**2021-22 Performance Objectives**

- Complete Angel Park MCC upgrade at the request of Operations. This equipment has reached its anticipated end of service life.
- 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 NVEnergy Substation.
- Collaborate with Operations and Engineering on assessing and upgrading infrastructure.
- Provide Operations and Maintenance Engineering 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.

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- 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.

**2020-21 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 Asset Management.
- 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 R-8 Tank. This simplified pipeline configuration and will reduce pressure surges.
- Replaced BBWD filter controls. Treatment experienced several failures due to obsolete parts, decay of the panel due to outdoor location, and heat/water.
- Cleaned the Gowan Tank interior at the request of Operations. This will allow the LVVWD to utilize its allocated groundwater allocation.
- Completed migration of the state-of-the-art hydraulic model to a Geographic Information System (GIS) based InfoWater Pro (IWPro) software.
- 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.***

**2020-21 Major Accomplishments**

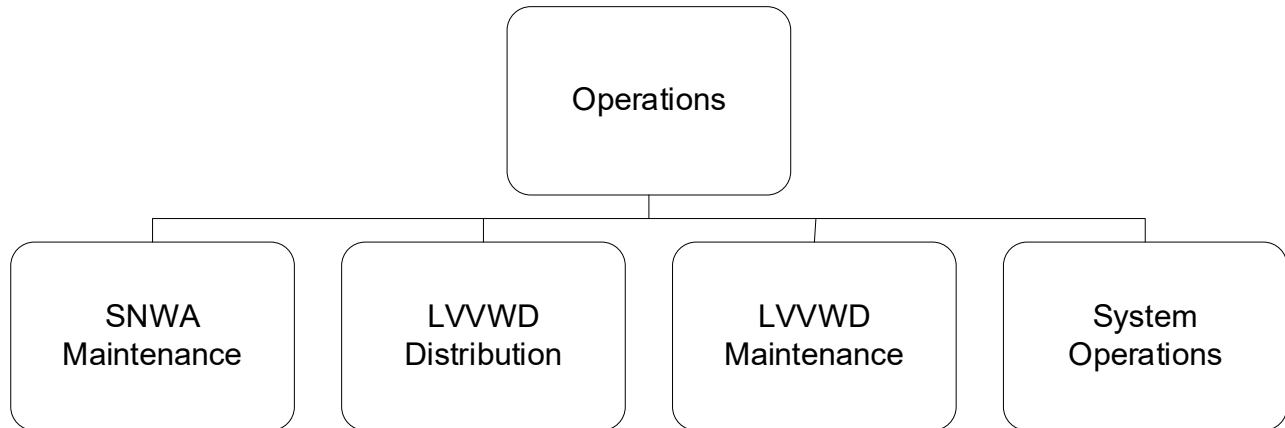
- Designed and installed a zero-water waste facility cooling system for the West Admin Building at the LVVWD. This chiller system will be a showcase for large-scale resort customers as an example of one option to cool large buildings without the evaporative loss that is customary in the area.

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## OPERATIONS

**Level: 4100**

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### 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 178 MGD, 25 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.

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## 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 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 \$13,468,765 for the fiscal year 2021-22 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 2021-22 Budget Plan are shown on the following table.

Operations' fiscal year 2021-22 overall budget totals \$77,644,521 between the LVVWD and the SNWA.

### Expenditures

SNWA Uses	Actual 2019-20	Budget 2020-21	Budget 2021-22
Water Resource Investments	\$ 219,369	\$ 250,000	\$ 250,000
Energy	227,565	250,000	262,000
Materials & Supplies	1,303,493	2,124,384	2,092,300
Maintenance & Repairs	6,827	408,000	425,000
Rental & Leases	-	-	-
Other Employee Expenses	31,704	89,664	79,252
Other Expenses	1,363	2,352	302,352
Total Operating Expenses	1,790,321	3,124,400	3,410,904
Capital Expenditures	1,239,753	9,351,000	8,356,047
Payroll & Related Costs	10,395,045	11,645,975	11,370,656
<b>Total Department Expenditures</b>	<b>\$ 13,425,119</b>	<b>\$ 24,121,375</b>	<b>\$ 23,137,608</b>
FTE Positions	57.1	64.3	64.3

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## 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.



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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.

**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,

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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.

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

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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.***

### **2021-22 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 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.
- LVVWD SCADA Operations will begin 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 iHydrant, PRV, and pressure station data for model calibration.
- SNWS SCADA operations will continue to run/exercise L3PS pumping equipment for use in extracting Lake Mead water to deliver to the treatment plants.
- SNWS SCADA operations will 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 pump 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 finish the plan of standardizing the sodium rooms, which includes chemical storage tank and plumbing modifications, and 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.
- 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, with ACE funding covering 75 percent of the costs.
- Small Systems will add a fire hydrant preventive maintenance schedule to their daily work, checking for operation and leaks, and performing necessary maintenance for all hydrants in the small systems.
- Small Systems will partner with Water Resources, Maintenance Engineering, and the Well Crew to equip the new J8 Well for service in 2021.
- Distribution will continue with the predictive maintenance project of replacing poly service lines

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with an emphasis on Los Prados for completion.

- LVVWD Maintenance will continue a multi-year effort to install fiber optic and 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. Pump stations to be considered for upgrades include: El Capitan, Spring Mountain/Durango, Carlton Square, and Rice.
- SNWA Maintenance will make motor control center upgrades at Decatur Pump Station; change the valves at Sloan ROFS to Rexa valves; change all pumps to Rotork at Bermuda Pump 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 Venturis at Unit No. 6B; 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 refurbish Motor No. 4 at Pumping Station No. 6.
- SNWA Maintenance will replace failing VFD No. 1 at BPS2 and failed VFD No. 8 at PS2C.

**2020-21 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. Water orders were adjusted and internal pumping plans were altered to ensure no impact to customers. The three-day South Valley Lateral outage supported repair work involving the valve replacement and installation of an additional valve for a future PRV, and will facilitate longer duration shutdowns of this lateral in the future. It also supported the backup charger system upgrades at Parkway ROFC, PLC controller updates, IP changes at all the South Valley Lateral sites, and communication fiber repairs at all the Bermuda sites. The two, five-day AMS outages supported the replacement of the 54-inch influent valves on Filter Nos. 6-10, ozone inlet channel repairs, and UPS upgrades.
- SNWS SCADA operations oversaw the planning and execution of 66 individual site and equipment outages. These included repairs of Forebay 2; inspection of the “A” lateral from Forebay 2 to PS1A/B, which required an eight-day “A” and “B” lateral outage; replacement of Pump Nos. 8-12 at Pump Station 1A-BC; a three-week River Mountains Water Treatment Facility outage to repair the clearwell inlet piping; electrical system checks with CRC; and warranty repairs to Forebay No. 6 over the span of 30 days.
- Disinfection Shop staff completed six sodium room rehabilitations; planned and facilitated the cleaning and disinfection of the Gowan Tank and multiple surge tanks; and prepared sodium booster capabilities at the Airport Reservoir.
- Small Systems staff worked with Maintenance Engineering to install a reverse osmosis system at the Sloan Army Reserve Center (SARC), which brought TDS numbers into compliance for the first

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time since the LVVWD took over the system four years ago. Also at SARC, the potable water tanker was used for the first time to deliver potable water to customers when the SARC well failed and was in need of total replacement.

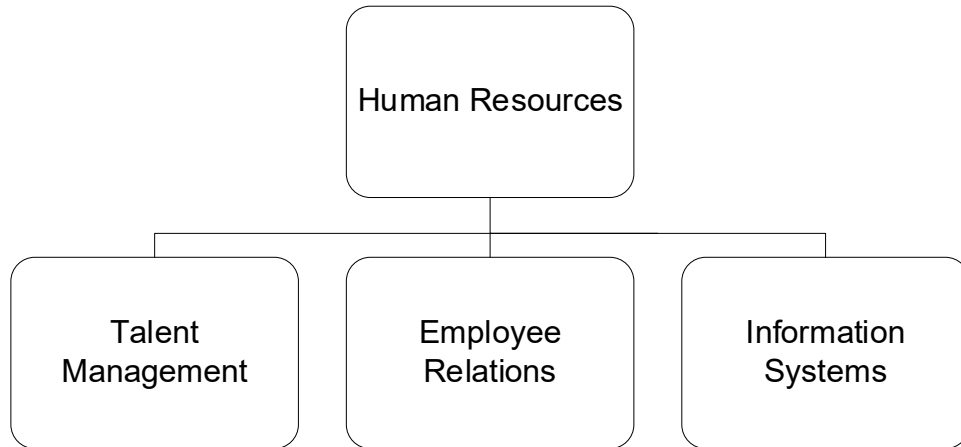
- Small Systems worked with Maintenance Engineering to repair and coat tanks at both Jean and Blue Diamond.
- Distribution completed the Tropicana Inline Valve Replacement project to replace four 48-inch butterfly valves in existing valve vaults. The work included saw cutting and removal of asphalt, 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. 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.
- LVVWD Maintenance upgraded all the Fayle Pumping Station control valves, actuators, and flow spools that had reached the end of their useful lives.
- LVVWD Maintenance upgraded the Campbell Pumping Station engine controls to modern control capabilities.
- SNWA Maintenance established a temporary generator power emergency preparedness program for all in-valley ROFCS.
- SNWA Maintenance completed PP2A Unit No. 2 pump rebuilds.
- 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 replaced failing VRD No. 10 at BPS2.

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## HUMAN RESOURCES

Level: 4200

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### 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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**Expenditures**

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ -	\$ -	\$ -
Maintenance & Repairs	-	-	-
Rental & Leases	-	-	-
Other Employee Expenses	-	-	-
Other Expenses	17,275	-	-
Total Operating Expenses	17,275	-	-
Capital Expenditures	-	-	-
Payroll & Related Costs	445,272	838,516	803,425
<b>Total Department Expenditures</b>	<b>\$ 462,547</b>	<b>\$ 838,516</b>	<b>\$ 803,425</b>
FTE Positions	2.5	4.7	4.5

## Department Performance

**Talent Management.** Provides recruitment and selection services; strategies to increase employee retention, employee engagement and opportunities for professional and personal development. This group develops and administers recruitment and selection methods. This group also recruits and staffs the volunteers for the Springs Preserve.

**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) 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

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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.

***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.***

**2021-22 Performance Objectives**

- Continue implementation of Workday modules, including Performance and Talent.
- Implement Milliman MARC employee self-service for employee retirement planning and projections.
- Continue 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).
- Integrate recruitment, engagement and development into comprehensive talent management strategy.
- Develop/deploy internal mentor program.
- Complete digitization of personnel files to Workday.
- Launch initiative for centralized review of the LVVWD wide Standard Operating Procedures.

**2020-21 Major Accomplishments**

- Deployed and successfully implemented multiple Workday Modules, including Prism, Workday Expenses, People Analytics, Disciplinary Reviews, and Anytime Feedback.
- Implemented Workday Assistant artificial intelligence chatbot and Microsoft Teams Workday application.
- Successful completion of fully remote Open Enrollment.
- Coordinated the LVVWD wide guidance on COVID procedures and protocols, including employee testing.
- Relaunched Talent Management strategy focusing on employee development.
- Negotiated successor collective bargaining agreements with all bargaining units.
- Initiated digitization of personnel files to Workday.
- Launched new recognition and rewards program (Peer to Peer recognition and quarterly awards).
- Launched new Milestone recognition program.
- Launched Yammer, a social networking tool to connect and engage employees across the organization.
- Developed hiring guides for hiring managers based on organization's mission and values.

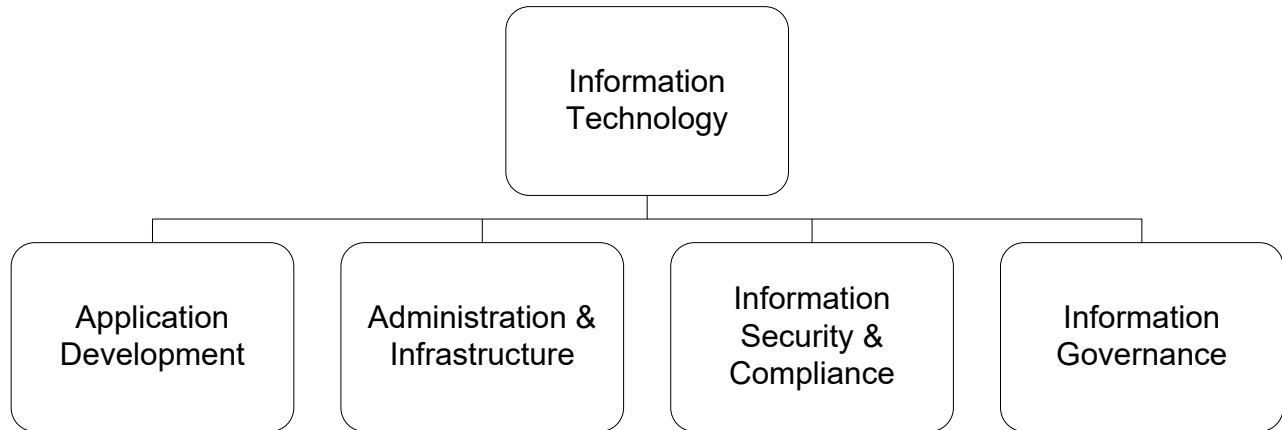


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## INFORMATION TECHNOLOGY

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.

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## Budget Objectives and Highlights

The 2021-22 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.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 939,420	\$ 1,205,472	\$ 933,100
Maintenance & Repairs	2,660,175	5,235,280	5,171,639
Rental & Leases	316,435	432,960	400,000
Other Employee Expenses	49,782	155,688	146,836
Other Expenses	2,007,481	4,630,656	3,635,000
Total Operating Expenses	5,973,294	11,660,056	10,286,575
Capital Expenditures	563,570	2,520,000	6,209,796
Payroll & Related Costs	8,671,792	10,740,482	10,576,483
<b>Total Department Expenditures</b>	<b>\$ 15,208,655</b>	<b>\$ 24,920,538</b>	<b>\$ 27,072,855</b>
FTE Positions	40.9	51.6	51.6

## 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 the completion of the Telecom project, providing infrastructure equipment and support for the telecommute workforce to support the 2020 Covid19 Pandemic, upgrading corporate Firewalls, implementation of a new modern procurement system, developing a native mobile application to further improve customer service and support conservation initiatives, initiating the Genesys Contact Center Messaging phase and new CityBase payment kiosk for LVVWD and BBWD, continuation of the endpoint equipment (PCs, monitors, iOS devices, and Laptop) refresh programs, deployment of a business intelligence system, completion of the 2020 Clark County Imagery Project, and completion of the Spatial Information Portal (SIP) GIS application.

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

Systems supporting Finance, Customer Care, Engineering and Operations are targeted for upgrades and enhancements.

The implementation of a new customer care, billing and meter management system will be completed in fiscal year 2021-22. The new system combines 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.

The Project Management Information System (PMIS) will be completed in fiscal year 2021-22. This multi-year effort consolidates the management of the organization's capital projects under one system and includes a project portal and data warehouse. PMIS refines processes, improves oversight, reporting and eliminates legacy applications.

The effort to implement a new enterprise asset management system will commence in fiscal year 2021-22. This multi-year effort will replace a legacy system 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 effort to re-engineer the organization's general ledger and chart of accounts will begin in fiscal year 2021-22. This project will optimize the structure of assets, liabilities, equity, income, and expense categories and convert systems into a new general ledger to improve financial reporting, analytics, time to finance close and compliance.

A new Native Mobile Application was deployed for IOS and Android phones aimed at improving customer service and supporting conservation initiatives. In fiscal year 2021-22 this application will add on-line chat support with customer service agents and customers' previous-day hourly water usage and alerts based on available metering information from the AMI system.

**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 supports desktops, field and personal laptops, iOS devices, and all supporting iOS & desktop applications. This group provides remote and on-site support for over 5,200 computers, monitors, and printers, iOS devices as well as over 1,000 applications, on all company desktops, laptops, and mobile devices.

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

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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 Microsoft Teams, continued implementation of Genesys contact center features, including the introduction of chat and SMS communications, selection and beginning implementation of new LIMS, upgrade of the corporate wide area network backbone to support 100 GB between campuses, and upgrades to the enterprise backup and recovery infrastructure.

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 Security and Compliance.** Major emphasis will continue to be on cybersecurity as world-wide security breaches increase at an alarming rate. Significant effort will continue to be directed toward providing an operationally stable and secure computing environment, developing strategies with Legal and Risk Management to reduce and manage emerging cyber risks, as well as educating employees on cybersecurity topics.

Ongoing initiatives include continued guidance to support off-site disaster recovery capability and business continuity of operations, defense against cybersecurity threats and vulnerabilities, identification and management of risks, delivering cybersecurity awareness briefings, providing guidance on system upgrades and/or replacements to critical infrastructure, implementation of technology to meet required PCI Data Security Standards (PCI-DSS), recommending best practices to ensure high availability of applications and databases, guidance on securing mobile devices, as well as developing and refining processes to support secure infrastructure.

Security efforts include continual review and enhancement to security procedures, monitoring for cyber threats, managing vulnerabilities in addition to promoting the timely application of security patches, and establishing audited/controlled system and data access for Data Loss Prevention (DLP).

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This division works closely with Legal Services and Risk Management to ensure the organization is addressing supply-chain and contractual security risks. In addition, the division focuses on ensuring software technologies and business processes meet the continuously evolving PCI-DSS and other emerging regulatory requirements.

**Information Governance.** The distributed nature of data assets at the organization is becoming increasingly complex. In part, Information Governance strives to support the organization in optimizing the management and use of its data.

Additional projects include conducting an audit and outreach efforts, supporting and extending the document imaging program, such as the RedEye initiative and other engineering efforts, working with various departments on records-related issues and coordinating with Legal and Public Information on the responsive delivery of public records requests.

During 2020-21, implementation of an Enterprise Content Management System (ECMS) will be one of the key deliverables for Information Governance. This system will be comprised of strategies, methods and tools used to manage information throughout its useful life cycle within the organization. The ECMS will also facilitate the tracking of information and data contained in disparate silos and provide a platform for achieving compliance and improved governance of this data.

## **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.***

### **2021-22 Performance Objectives**

- The Oracle Customer to Meter (C2M) will be completed in Fiscal Year 2021-22. The system will enhance customer service, better support conservation initiatives, further optimize service response and improve device management.
- Additional features will be added to the Native Mobile Application to include previous day hourly water usage and leak notifications from the AMI system and on-line chat with customer service agents.
- Installation of hardware to provide infrastructure needed to replace a legacy customer billing environment.
- Optimize our infrastructure to support a mobile and telecommute workforce.

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**2020-21 Major Accomplishments**

- The LVVWD released its first Native Mobile Application in October 2020, quickly followed by several feature releases. Users can manage their accounts, view, and pay their bills, manage services (start, stop, transfer), report water waste, find assigned water days and elect to receive alerts. The system has a robust alert management system that can target messaging to users.
- A new system on LVVWD.com will allow customers to interact with an artificial intelligence (AI) chat bot. The AI chat bot will allow customers to chat directly with Customer Care Agents and will reduce customer wait times by answering the most common questions such as understanding their bill, finding ways to pay their bill or to help report water waste.
- New kiosks were added for LVVWD and BBWD customers to provide enhanced self-service options for in-person payments.
- Completion of the first iOS refresh cycle and annual desktop and monitor refresh project, which has increased staff efficiency and reduced downtime and labor/maintenance cost.
- Upgraded corporate firewalls to support a larger mobile and telecommute workforce.

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

**2021-22 Performance Objectives**

- Finance and Information Technology will begin an update to the organization's chart of accounts to gain additional efficiency and clarity in financial tracking and reporting.
- The replacement of the enterprise asset management system will start in fiscal year 2021-22 and take approximately four years to complete. This effort will involve an update to the existing asset management system to ensure continued support.
- 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.
- Continue enhancements of Genesys Contact Center infrastructure to provide next generation multi-media technology and improve the overall customer experience by providing additional automation and contact options.
- Continue adding new functionality and enhancements to the SIP GIS Application. Build more GIS data collection field applications for staff to perform real-time seamless updates for project support.
- 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.

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**2020-21 Major Accomplishments**

- A new procurement system was implemented that replaced an 18-year-old legacy purchasing system that required many additional custom applications to function properly. The new system centralizes purchasing functions, is much easier to administer and maintain, provides a modern experience for requisitioners and approvers and offers Suppliers a portal to electronically view their purchasing activity, payments and invoices.
- The Program Management Information System (PMIS) has been substantially completed, replacing many independent legacy applications. PMIS centralizes capital project information for both active and completed projects and provides insight into project performance and capital budget execution.
- Flairdocs, a cloud-based right-of-way and land management application, was implemented, replacing four legacy applications.
- We have leveraged our Microsoft E5 licenses to maximize our ability to collaborate, support, and provide enhanced corporate security, while eliminating costly legacy systems.
- Completed the replacement of the corporate backup infrastructure to streamline backup policies, remove obsolete data stores, and provide enhanced disaster recovery options.

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

**2021-22 Performance Objectives**

- Make numerous enhancements to cybersecurity which include the implementation of a Department-wide change management program, additional threat monitoring tools, and further data separation to achieve PCI compliance 3.2.
- Begin 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 2021 Clark County Imagery Project, including acquisition, performing quality assurance, and making imagery available to internal customers and to external partner agencies.

**2020-21 Major Accomplishments**

- The Aquarius application, used for management of groundwater levels and surface water flows, was upgraded and moved to a cloud-based system. This expanded availability and eliminated on-premises hardware, maintenance and operational support. The cloud-based system includes a web portal enabling business intelligence over water resource and water quality data.
- The Apttus Contract Management System was upgraded to the newest version. Enhancements were also made to include improved workflows and centralized templates.



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- The organization's decade-old Telecom system was updated with a new Microsoft Teams VoIP system to meet emerging technology needs. The new system lowers costs, while increasing accessibility and portability.
- Completed 2020 Clark County Imagery Project, delivering very-high resolution imagery for internal customers and external partner agencies.

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

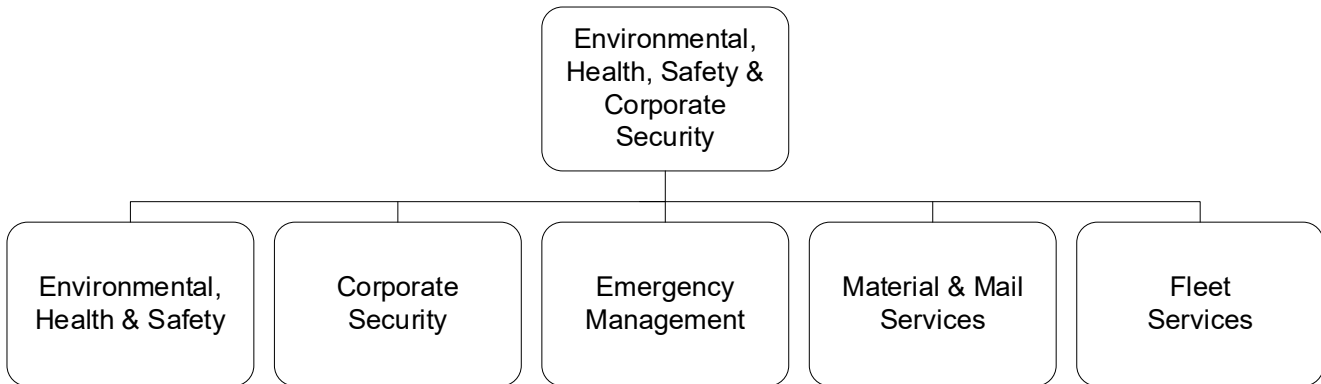
**2021-22 Performance Objectives**

- Support will be provided 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.
- Turf and Vegetation Analysis to support ongoing Water Smart Landscape Program efforts, and related local Urban Heat Island/Climate Studies efforts.

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**ENVIRONMENTAL, HEALTH, SAFETY &  
CORPORATE SECURITY**  
**Level: 4400**

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## Mission Statement

Provide a safe, secure environment and supply logistical services to employees, customers, and the community.

## Department Description

The Environmental, Health, Safety and Corporate Security (EHSCS) Department is comprised of the following four divisions plus emergency management: Environmental, Health and Safety; Corporate Security; Material and Mail Services; and Fleet Services. EHSCS' overarching responsibilities include organizational compliance and maintaining a safe and secure environment for employees and customers and develop strategies and programs to eliminate or mitigate risk and cost exposure.

Material and Mail Services delivers reliable customer service by providing quality operating and maintenance products, material requirements planning, inventory management, and storage and retrieval services.

Fleet Services provides safe, reliable, and functional vehicles, equipment, tools, communications equipment, as well as fuel, to the LVVWD. This includes services for repair, maintenance, acquisition and disposition of all vehicles, support equipment, communications equipment, and loanable tools. Fleet Services also operates seven service facilities and seven fueling facilities located in Las Vegas, Boulder City, Henderson, and White Pine County.

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## Budget Objectives and Highlights

The 2021-22 EHSCS 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 and reduce costs.

The 2021-22 Material and Mail Services budget contains funding necessary to support sustainability through inactive and obsolete inventory reduction activities and use of repurposed shipping materials, and administers, coordinates, and manages investment recovery efforts for various recyclable and repurposed materials and equipment through the auction program and bid sales.

**Fleet Services.** The 2021-22 Fleet Services budget contains funding necessary for new and replacement vehicles and related equipment having reached their end-of-life cycle, shop tools, and the replacement of obsolete radio equipment soon to be inoperable on the Southern Nevada Area Communications Council (SNACC) radio system.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 1,258,159	\$ 1,695,216	\$ 1,481,850
Maintenance & Repairs	125,420	174,720	182,500
Rental & Leases	145,209	115,200	113,000
Other Employee Expenses	32,217	47,424	72,700
Other Expenses	508,118	417,792	466,200
Total Operating Expenses	2,069,124	2,450,352	2,316,250
Capital Expenditures	2,275,025	3,146,000	1,686,000
Payroll & Related Costs	4,049,545	6,991,359	6,945,944
<b>Total Department Expenditures</b>	<b>\$ 8,393,694</b>	<b>\$ 12,587,711</b>	<b>\$ 10,948,194</b>
FTE Positions	25.5	45.0	44.9

## Department Performance

### Environmental, Health and Safety Division.

The EHS division is responsible for overall management of the LVVWD's Environmental, Health and Safety program to guarantee a safe workplace for all employees. The EHS division tracks leading and lagging indicators in the program, making necessary adjustments to ensure a positive safety culture is

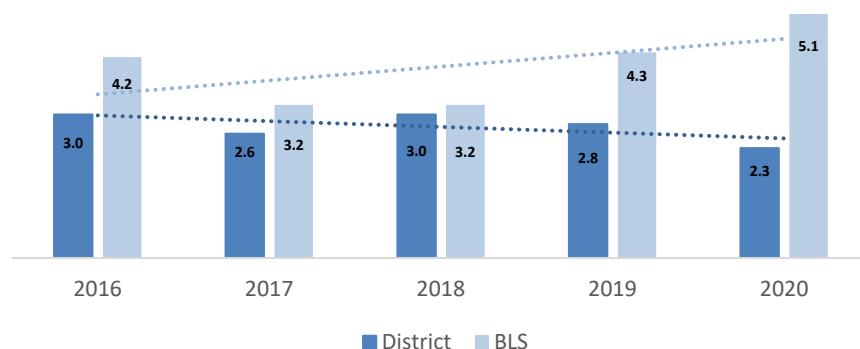
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maintained, while providing ongoing environmental, health and safety training for employees. The division is responsible for permitting and compliance with federal, state and local agencies on environmental regulations regarding pollution control (including air pollution, water pollution, land disturbances, implementation of chemical control and waste management), and manages environmental permitting and compliance reporting for operations and maintenance. The EHS division maintains proper upkeep and care of the LVVWD's Process Safety Management program for highly hazardous chemical chlorine at Alfred Merritt Smith Water Treatment Facility. The division develops and publishes safety procedures ensuring compliance with Occupational Safety and Health Administration (OSHA) and state regulations. The EHS division employs an aggressive accident prevention program, investigates on-the-job accidents and injuries, and manages a comprehensive Fleet Safety program that encompasses vehicle and heavy equipment training, defensive driving education, and commercial driver licenses. The division conducts monthly meetings with the EHS Steering Committee, comprised of employees from various departments and labor management representatives. The health discipline manages the Asbestos, Lead Awareness and Hearing Conservation programs for the LVVWD.

## 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 from 2.8 to 2.3 in 2020.

Recordable Injuries Rate Comparison

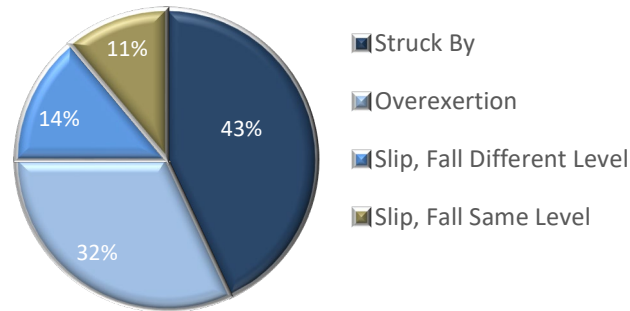


## Recordable Injuries by Category

There were 13 *Struck By* recordable injuries that were a result of employees being hit by something at the work site. This category resulted in 43 percent of recordable injuries in 2020. As a result, the EHS division has made this a special interest item and will continue to conduct spot audits that focus on factors contributing to *Struck By* injuries.

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### Recordable Injuries by Category

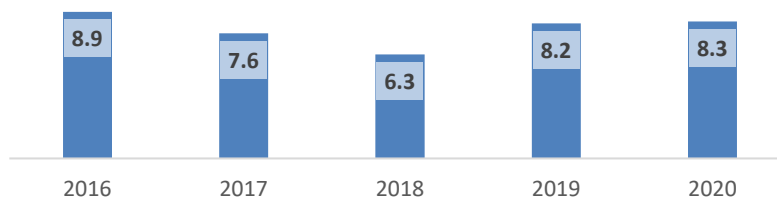


## Vehicle Accidents & Rates

The LVVWD experienced a decrease in at-fault vehicle accidents: 38 in 2019 vs. 35 in 2020.

The LVVWD's vehicle accident frequency rate increased from 8.2 in 2019 to 8.3 in 2020. Rates are computed using the following formula: # vehicle accidents X 1,000,000 miles/actual miles driven.

### Vehicle Accident Frequency Rate



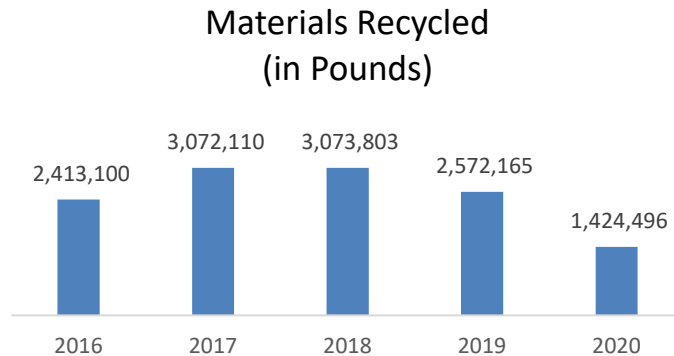
## Health Assessments

The LVVWD achieved 100 percent audiometric testing compliance of its 185 hearing conservation participants and respirator fit tested another 221 employees during the reporting period.

## Total Pounds Recycled

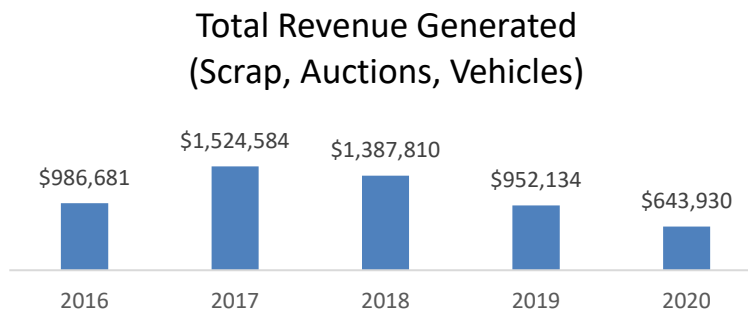
The LVVWD recycled a combined total of 1,424,496 pounds of materials in 2020; a 45 percent decrease from 2019.

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### **Total Revenue Generated**

Total revenue for 2020 was \$643,931 (scrap = \$27,583, auctions = \$9,298, vehicles = \$607,050).



**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 on a system-wide basis.

In so doing, officers respond to intrusion alarms and calls-for-service, both emergency and routine in nature; provide field crew escorts and standby support during water service shut-offs; patrol reservoirs and pumping station sites; investigate LVVWD-involved vehicle collisions; provide emergency first aid and escort police and fire units to LVVWD emergency sites; inspect fire protection equipment and alarm systems; assist with customer parking; escort customers, vendors, and visitors to areas where they can conduct their business; provide information assistance and access to facilities; conduct emergency evacuation and active shooter training; and monitor vendor access as well as access to restricted areas. 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 protect against malicious acts toward people, sites, and systems.

**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

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system's function, or, if interruption occurs, works to rapidly return the system to normal operating conditions.

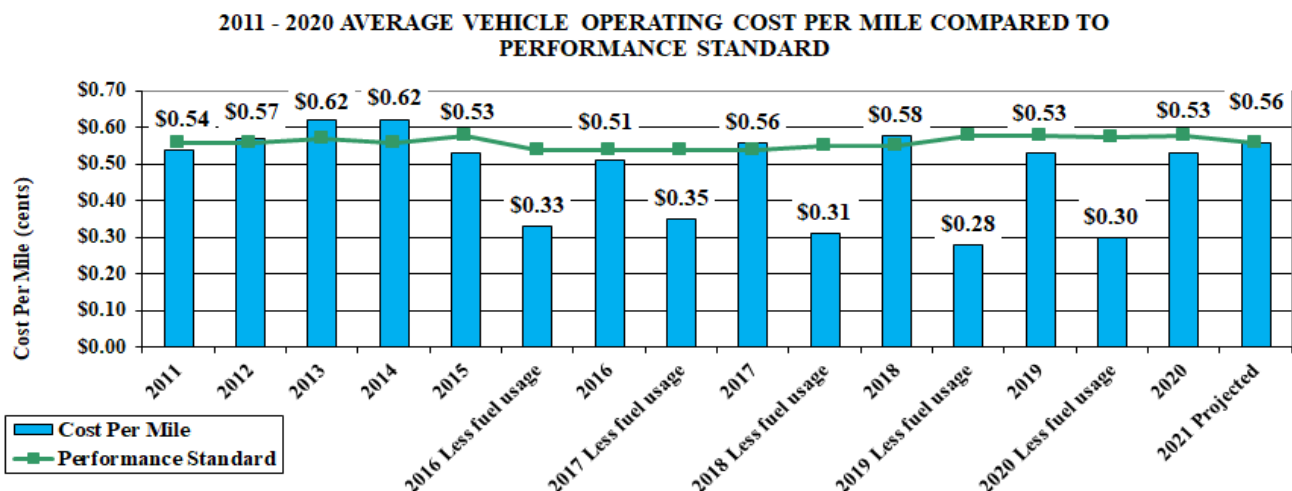
To meet or exceed federal guidelines for water sector preparedness and to increase organizational resiliency, emergency management staff conducts work in all five phases of emergency management: mitigation, planning, prevention, response, and recovery.

**Material Services.** The primary mission of Material Services is to deliver reliable customer service by providing quality operating and maintenance products, material requirements planning, and inventory management, storage, and retrieval services. Through January 2021, Material Services has managed nearly 14,000 inventory assets valued over \$15M. Material Services partners with internal customers to identify, forecast, and schedule capital and operations project material requirement/deliveries to all facilities across the LVVWD's service network.

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

**Fleet Services.** Fleet Services' mission is to provide safe, reliable, and functional vehicles, equipment, tools, fuel, and communications equipment to LVVWD, SNWA, LVSP and BBWD so they can be used to support water delivery. Currently, the division maintains more than 1,500 vehicles and support equipment pieces and 1,000 pieces of communications equipment for the LVVWD. Responsibilities of this division include repair service and maintenance, acquisition and disposition of all vehicles, communications and support equipment, and loanable tools. Fleet Services also operates seven service facilities and seven fueling facilities located in Las Vegas, Boulder City, Henderson, and White Pine County.

The following chart reflects the 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.***

### **2021-22 Performance Objectives**

- Conduct weekend/after-hours 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.
- Participate in National Level Exercise 2020 Binary Blackout to address the impacts of an extended regional power outage.
- Finalize the comprehensive Corporate Security Manual for internal publication.
- Operate the Security Center and continue to implement automated security systems to improve the protection of facilities.
- Expand the use of card activated access control and security system technologies to enhance efficiency.
- Purchase and install a gate trigger alarm to alert the Security Center when the main gate is opened at the Foothills complex.
- Expand the use of a security pipe-button system at Molasky Center to ensure regular checks of all floors.
- Expand the use of the Medeco electronic key system and finalize lock installation at the LVVWD/SNWA and off-site facilities.
- Expand the use of metal detectors at the Springs Preserve and major events.
- Increase the use of automated security camera analytics to distinguish between an actual incident and normal activity more accurately.
- Train key employees and conduct drills on the LVVWD's Emergency Response Plan (ERP).
- Explore new technologies and methods of utilizing the security surveillance system.
- Continue partnership with the Department of Homeland Security (DHS) and the Southern Nevada Counter-Terrorism Center (SNCTC) to prepare for potential threats to facilities or the water industry.
- Conduct a Risk and Resiliency Assessment for Big Bend Water District in accordance with the American Water Infrastructure Act.
- Work towards a document management system where all emergency response related documents and SOPs can be found and updated on a repeatable schedule.
- Emergency Management to maintain rigorous training and exercise programs.



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- Maintain cyclical plans review, revision and improvement based on training and exercise results.
- Continue development of an Incident Management Team (IMT).
- Establish a standalone Department Operations Center (DOC) to support emergency operations and Incident Management Team (IMT) staff training, and to support organizational exercises that increase preparedness and resilience.
- Grow the NVWARN network to support the improved resiliency of safe drinking water and wastewater facilities in Nevada.

**2020-21 Major Accomplishments**

- Conducted the first virtual Safety Stand Down Day.
- Completed over 120 documented audits (spot and comprehensive).
- Conducted over 80 investigations related to recordable injuries, preventable vehicle accidents, and preventable property damage incidents. Recommended corrective actions were included, as appropriate, to reduce the chance of recurrence.
- EHS achieved an incidence rate of 2.3, compared to the BLS rate of 5.1, extending the LVVWD's history of falling below BLS rates.
- Renewed 175 environmental permits.
- Received no OSHA or EPA citations.
- Completed installation of Medeco locks at both water treatment plants, Foothills complex and SNWA pump stations and reservoirs.
- Implemented SNWA Board meeting visitor and guest enhanced screening process utilizing walk-through metal detectors.
- Established a check-in system consisting of real-time location monitoring of LVVWD employees during periods of civil unrest and heightened security.
- Established daily safety and virtual rollcall briefings to increase officer safety and build situational awareness.
- Continued supporting and promoting the Department of Homeland Security's national "If You See Something, Say Something™" campaign.
- Installed access control card readers and security cameras at the new Summerlin pump station and reservoir.
- Installed new cameras at AMSWTF to monitor safety and security of chemical deliveries.
- Completed a Risk and Resiliency Assessment for the LVVWD/SNWA, in accordance with American Water Infrastructure Act.
- Certified updates of the Emergency Operations Plan to the Environmental Protection Agency in accordance with the American Water Infrastructure Act.
- Reviewed and updated the Continuity of Operation Plan (COOP).
- Supported the LVVWD's COVID-19 pandemic response while maintaining the Incident Support Plan (ISP) across the LVVWD's network.
- Mail Services participate in annual terrorism refresher training.

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***Strategic Plan Goal – Deliver an outstanding customer service experience.***

**2021-22 Performance Objectives**

- Provide evaluation forms for instructor-led courses to assess customer satisfaction.
- Participate in local association meetings to gather information on best management practices to support the Safety Management System (SMS) and adopt and implement proven work methods.
- Participate in internal and external committees or groups to improve communication and enhance customer service.
- Explore and test new security technology and systems.
- Enhance the use of virtual training platforms to deliver active shooter and building evacuation training.
- Identify additional opportunities for security services and collaboration with internal departments.
- Attend briefings, meetings and training, and support groups such as the Utility Pipeline and Coordinating Group, InfraGard, Southern Nevada Counter-Terrorism Center (SNCTC), Department of Homeland Security (DHS), Local Emergency Planning Committee, Southern Nevada Health Preparedness Coalition, American Water Works Association (AWWA), and Security Practices and Emergency Preparedness committees.
- Conduct monthly planning and review meetings with Field Services to monitor and ensure consistent materials management and stocking inventory for short and long-term projects.
- Continue to include customers in the specification process of new and replacement vehicles and equipment.
- Continue to partner with all departments to better assess vehicle/equipment needs and improve end products being provided.
- Continue to minimize equipment downtime using technology, technician training and good parts availability.
- Continue to provide the best possible equipment choices to the departments to assist them in meeting their goals efficiently and effectively.
- Respond to changing customer needs and implement/modify services to better support the mission.
- Utilize telematics system to assess vehicle conditions to reduce downtime to our customers.

**2020-21 Major Accomplishments**

- Conducted a survey of the first virtual Safety Stand Down Event to obtain feedback on the virtual platform and improve future training courses.
- Collected student evaluation forms after each EHS instructor-led course to improve future course curriculums.
- Represented EHS in department safety action teams, the EHS Steering Committee and several cross-department teams to include the Specifications Committee and the Sustainability Committee.
- Updated electronic materials on the Hydroweb to ensure that all employees have access to useful safety and health literature, information, and training videos.
- Participated in continuing education opportunities to ensure EHS staff maintained professional

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certifications and CEUs.

- Provided additional security presence for employees during heightened customer interactions on campus and at job sites.
- Increased onsite training and strengthened partnerships with other emergency responders by allowing use of LVVWD facilities for rescue and emergency response training.
- Conducted virtual customer threat training for Customer Care employees.
- Provided increased foot and vehicle patrols on all campuses.
- Increased security patrols at sites of vandalism and backflow device theft.
- Conducted active shooter preparedness training for 80 percent of LVVWD employees.
- Provided enhanced security screening and protection at LVVWD/SNWA public meetings and Springs Preserve events.
- Trained security supervisors on risk assessment, hazard identification and Department of Homeland Security (DHS) incident response to terrorist bombings.
- Coordinated and delivered Department of Homeland Security Bomb Awareness and Response training to all security officers.
- Educated workgroups on the constantly evolving COVID-19 protocols put in place to protect employees from illness while operating and maintaining critical water facilities.
- Worked closely with Distribution, Field Services, and Big Bend Water District staff to ensure sufficient supply of parts on hand and safe disposal of surplus materials.
- Enhanced customer service in outlying area through technology, improved parts availability, and scheduling of technicians on-site.
- Received 100 percent accuracy rating during fiscal year-end audit of the LVVWD's warehouses.
- Worked directly with Information Technology to safely distribute and retrieve over 370 LVVWD issued cell phones during the COVID-19 pandemic.
- Prepared and distributed roughly 2,000 flu kits LVVWD-wide to all essential employees working on-site.
- Assisted with the coordination and delivery of 50,000 donated N95 masks for frontline healthcare workers during the COVID-19 pandemic.
- Completed nearly 11,000 work orders and 15,000 repair tasks on vehicles and equipment.
- Involved customers in the vehicle/equipment specification process from start to finish to ensure the best possible product was 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 complete 3D drawings of special build vehicles prior to order to ensure the best possible equipment fitment and usability of the final product being provided.
- Utilized telematics system to identify equipment failures, whereby greatly reducing operator downtime.

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

**2021-22 Performance Objectives**

- Prepare and submit environmental reports to regulatory agencies.
- Review current recycling and waste streams at manned facilities to identify new recycling opportunities.
- Continue to recondition and reuse service bodies and vehicle up-fit equipment for LVVWD vehicles and equipment, when feasible.
- Maintain the LVVWD's plug-in electric vehicles fleet.
- Continue to lead and develop the alternative fuel vehicle program in support of clean air in Clark County.
- Utilize environmentally friendly practices in automotive paint and body repair.
- Continue to recycle vehicle and equipment maintenance waste and expand these activities, when feasible.
- Reduce unnecessary vehicle fuel burn and improve vehicle utilization using vehicle telematics.

**2020-21 Major Accomplishments**

- Tracked and submitted environmental permits in a timely fashion resulting in zero negative impact to the LVVWD.
- Monitored the LVVWD's recycling program which yielded revenue totaling \$643,931 (scrap = \$27,583, auctions = \$9,298, vehicles = \$607,050).
- Generated 2,075 pounds of hazardous waste at a cost of \$15,653; a 45 percent reduction in waste due in large part to the LVVWD's COVID-19 pandemic operations status.
- Replaced older diesel and gasoline powered vehicles with alternative fuel vehicles, lowering capital cost and reducing the LVVWD's carbon footprint.
- Reduced Volatile Organic Compound (VOC) usage within our fleet paint and body operation by more than 50 percent over the past five years, and 18.5 percent in 2020.
- Reduced vehicle speeding events by more than 45 percent, reducing fuel usage and the LVVWD's liability.
- Selected as one of the 100 Best Fleets, earning recognition in the "Top 100 Fleets in North America" and "Top Green Fleets in North America".

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

**2021-22 Performance Objectives**

- 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.

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- Continue converting mechanical locks to Medeco electronic locks for greater security and accountability.
- Track guest visitor management system to log and account for guest and vendor visits at all sites and chemical deliveries to AMSWTF and RMWTF.
- Evaluate mobile technologies to improve efficiency.
- Evaluate low-cost solar lighting to illuminate security checkpoints and back service roads at the Springs Preserve.
- Research and install a new automatic gate at the SNWA Foothills complex.
- Continue to equip fleet facilities with state-of-the-art testing and diagnostic equipment to properly diagnose and repair vehicle and equipment failures in a timely and cost-effective manner.
- Continue to provide online technical training and diagnostic training to technicians at all repair locations.
- Utilize advanced telematics and fleet management tools to lower liability, reduce costs, improve efficiency, and better manage the utilization of fleet assets.

**2020-21 Major Accomplishments**

- Completed the update of Origami Phase IV, which includes the development of the Hot Work permit, Safety Shoe program, and OSHA 300 reporting modules.
- Hosted the first virtual Safety Stand Down Day with 200 participants.
- Completed Medeco lock conversion project at Valley View and Molasky campuses and continue installing at off-site locations.
- Monitored over 700 cameras in the Security Center using video analytics.
- Created a new paperless process for organizational UPS and FedEx shipping to increase efficiency and provide customers with easy to use applications.
- Utilized the telematics system to identify equipment failures early, greatly reducing operator downtime.
- Utilized telematics system to improve safety and reduce fuel usage.
- 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.

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

**2021-22 Performance Objectives**

- Identify new Environmental, Health and Safety regulations and policy changes, and collaborate with other pertinent agencies.
- Continue partnership with Southern Nevada Counter Terrorism Center and Metropolitan Police Department Area Commands and attend classified briefings on threats to critical infrastructure.
- Continue partnership with FBI InfraGard and Utility Pipeline Coordination Group to stay informed about current water sector threats.

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- Increase the utilization of contract security officers at static posts to allow LVVWD security officers more time to conduct field patrols at critical sites.
- Continue to develop and implement best-practice inventory management and reporting to minimize duplications and realign materials management, as needed.
- Without compromising safety or the level of service provided, reduce fleet operating costs through standardization opportunities, inactive inventory reduction and continuous process improvement.
- Reduce the overall cost per mile/hour of operation for LVVWD vehicles and equipment.
- Life cycle vehicles and equipment to ensure fleet efficiency and best return on investment.

**2020-21 Major Accomplishments**

- Hosted local police and fire departments at AMSWTF and RMWTF to increase responder knowledge of water system criticality.
- Maintained security readiness and response efforts by reallocating contract security officers to meet the staffing needs and challenges caused by retirements and COVID-19 pandemic shortfalls.
- Material Services received and distributed over \$112M in materials.
- Replaced 47 vehicles and equipment pieces that were no longer cost effective to operate and maintain and added an additional 25 pieces to accommodate growth and improve organizational capabilities.
- Recovered over \$615,500 in vehicle and equipment resale at auction and \$47,304 in vehicle warranty repairs through in-house warranty programs.
- Developed a COVID-19 inventory item list to ensure the LVVWD has an uninterrupted supply of pandemic related resources to distribute to customers.

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

**2021-22 Performance Objectives**

- Conduct management, leadership team and divisional staff meetings to update employees on all major projects and communicate status changes and challenges.
- Provide diverse learning opportunities in all department disciplines.
- Recognize employees and teams for their unique talents and accomplishments.
- Utilize ePipeline, Hydroweb, Microsoft Teams and Yammer platforms to provide information and security updates to employees.
- Conducted instructor led EHS training for LVVWD employees.
- Provide EHS information updates through ePipeline and Hydroweb articles, and the use of electronic Management Advisory and Safety Alert messages.
- Provide security officers with belt-worn stop-the-bleed kits for emergency first aid response.
- Engage in future construction and maintenance contracts to ensure security issues and concerns are proactively addressed.
- Continue to partner with other departments to better assess needs and improve design and capability of specialty vehicles and equipment.

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- Provide comprehensive preventive and predictive maintenance on vehicles and equipment to insure optimum uptime of all fleet assets.
- Train and certify fleet maintenance and service personnel in new 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.

**2020-21 Major Accomplishments**

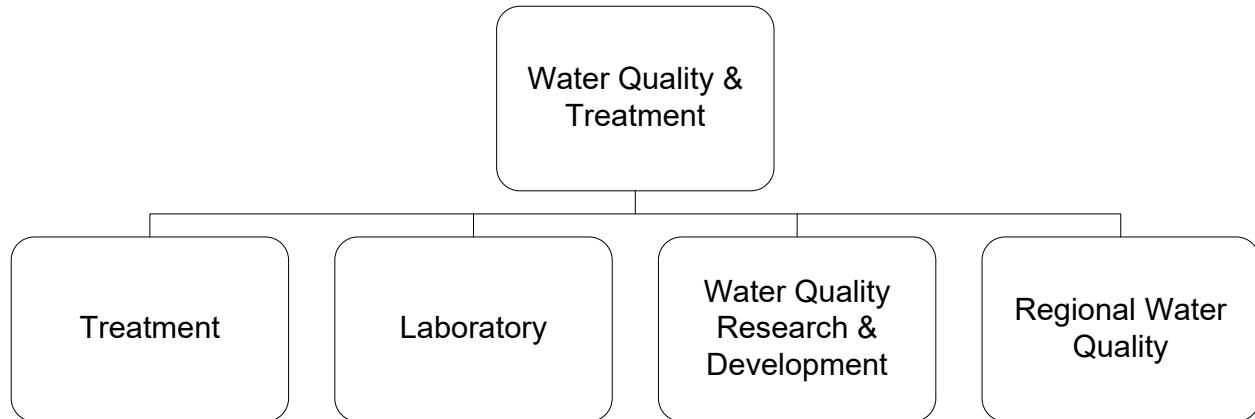
- Environmental, Health and Safety and Fleet Services maintained no-lost-time accidents. Material Services maintained no-lost-time accident history for 26 years for the LVVWD’s Material Services, 19 years for the SNWA’s Material Services and 8 years for Mail Services.
- Completed the EHS Annual Report highlighting major accomplishments in 2020.
- 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.
- Continued 100 percent ID badge checks at all facility entrance points and maintained tighter control of access points.
- Provided support for Clark County mutual assistance partners by providing water utility expertise at the Multi-Agency Coordination Center (MACC) for large-scale events with potential to impact to LVVWD’s customers (e.g., New Year’s Eve, NASCAR, Life is Beautiful).
- Completed the LVVWD/SNWA Risk and Resilience Assessment (RRA) to identify highest risk facilities and areas to best use resources to improve resilience.
- Represented the LVVWD on multiple regional and national committees and working groups for several major regional/comprehensive plans.
- Material Services partnered with key internal customers to better assess customer needs and improve end products provided.
- Maintained 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 nearly 11,000 work orders and 15,000 repair tasks on vehicles and equipment.

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## WATER QUALITY & TREATMENT

Level: 4500

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### 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 and coordinating water quality in the SNWA source waters. All these efforts are in support of the primary responsibility for the department.



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**Expenditures**

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Energy	\$ 80,419	\$ 60,000	\$ 70,000
Materials & Supplies	4,929,728	4,796,256	5,240,880
Maintenance & Repairs	719,852	1,024,304	1,121,464
Rental & Leases	-	-	-
Other Employee Expenses	491,369	653,369	630,281
Other Expenses	380,052	808,096	845,286
Total Operating Expenses	6,601,420	7,342,025	7,907,911
Capital Expenditures	18,129,303	7,921,464	3,600,258
Payroll & Related Costs	17,955,895	18,280,058	17,361,287
<b>Total Department Expenditures</b>	<b>\$ 42,686,618</b>	<b>\$ 33,543,547</b>	<b>\$ 28,869,455</b>
FTE Positions	87.8	88.2	85.3

## 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 WQ 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 36 employees, approximately 54,465 samples were collected, and 307,655 analyses performed in 2020. 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 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,

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Microbiological Research and Development, Analytical Research and Development, and Applied Water Quality Research sections.

**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 collects 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](http://snwawatershed.org/members))

## **Strategic Plan Objectives and Accomplishments**

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

#### **2021-22 Performance Objectives**

- Complete refurbishment of AMSWTF Filters 1-20, including replacing all filter valves, underdrains, and deeper filtration media, and begin minor rehabilitation of Filters 21-26, including adding filter media and replacement of valve actuators.
- Complete the replacement and standardization of the AMSWTF and RMWTF filter gallery instrumentation and provide new installation boards for ease of maintenance and monitoring of equipment.
- Design, install, and verify upgrades to the chemical feed systems at BBWD.
- Plan, coordinate and participate in the testing all of the electrical distribution equipment at AMSWTF and RMWTF.
- Support compliance monitoring and analyses for *Escherichia coli* (*E. coli*), *Cryptosporidium*, algal toxins and *Legionella pneumophila*.
- Validate and become certified by State of Nevada on: haloacetic acid (HAA) analysis by EPA Method 557.0 and mercury analysis by EPA Method 245.1.
- Replace and validate instrumentation for bromide and sulfate analysis by EPA Method 300.0.
- Collaborate closely with Information Technology (IT) and Purchasing departments to procure a new Laboratory Information Management System (LIMS) software that will provide an intuitive and modern database software to meet the Laboratory's business practices and needs.
- Collaborate with member agencies to prepare and plan for the final Revised Lead and Copper Rule (RLCR) that all Public Water Systems (PWS) must be in compliance by January 16, 2024.

#### **2020-21 Major Accomplishments**

- Continued to analyze Lake Mead and Mohave WQ data and to advise WQ&T staff on possible environmental impacts to the treatment system. This included greater utilization of autonomous WQ monitoring platforms to supplement personnel.

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- Completed assessments of online instrumentation used in the full-scale treatment plants (dissolved ozone, turbidity, particle count, free/total chlorine)
- Completed replacement and relocation of pilot plant facilities to AMSWTF ozone utilidor.
- Maintained Phase IV of the American Water Works Association (AWWA) Partnership for Safe Drinking Water for both the AMSWTF and the RMWTF for the “Excellence in Water Treatment” award for the third year.
- Started an engineering evaluation of the AMSWTF and RMWTF Ozone Systems and plan for refurbishment and/or replacement of the major components.
- Completed the installation of new liner for the Zinc Orthophosphate and Ferric Chloride chemical storage tanks at AMSWTF.
- Participated with consultants in the electrical assessment of critical electrical distribution equipment at RMWTF.
- Laboratory staff responded and adapted to the rapidly changing environment during the COVID-19 Pandemic to ensure SDWA monitoring was completed. Additional efforts included developing and implementing analytical testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) to ensure the safety of the drinking water supplied to the community. All 2020 quality assurance/quality control (QA/QC) employee trainings were held in a virtual platform and recorded for future reference.
- Developed and implemented sampling plans for *Legionella pneumophila* from Las Vegas Valley Water District’s (LVVWD) groundwater sources, reservoirs, and distribution system to confirm SNWA and the LVVWD is providing safe and reliable water.
- Implemented, updated and improved deoxyribonucleic acid (DNA) / ribonucleic acid (RNA) extraction technologies for viruses, free living amoebas and pathogenic bacteria.
- Purchased and installed new instrumentation for HAA analysis by EPA Method 557.0 and mercury analysis by EPA Method 245.1.
- Completed two monitoring periods of lead and copper sampling in Kyle Canyon Water District.
- Laboratory staff participated in various interagency committees, such as a groundwater working group committee for LVVWD and drinking water working group for Nellis Air Force Base (NAFB).
- Hosted a workshop for the Revised Lead and Copper Rule (RLCR) for member agencies to introduce and begin discussions about the upcoming changes to the existing rule.
- Complete follow-up of The NELAC Institute (TNI) gap audit by incorporating practices that are beneficial to the Laboratory’s quality program.
- Met or surpassed SDWA monitoring requirements for Southern Nevada Water System (SNWS), LVVWD, North Las Vegas, Henderson, Boulder City, NAFB, BBWD, Blue Diamond, Kyle Canyon, Jean, Sloan Army Reserve Center, and Kapex.

***Strategic Plan Goal – Deliver an outstanding customer service experience***

**2021-22 Performance Objectives**

- Continue serving Water Research Foundation (WRF) on various Project Advisory Committees (5070, 5080) and Technical Advisory Committees.

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- Continue serving the International Ozone Association – Pan American Group (IOA-PAG) on several committees.
- Implement advanced WQ 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.
- Provide laboratory support in sample collection and analyses of various new and ongoing research projects and provide quality data in a timely manner.
- Fulfill all emergency lab supply requests within one business day.
- Continue support of various ongoing research projects by providing quality data in a timely manner, including extensive lake and sources monitoring, complex storage/distribution system trihalomethane (THM) monitoring, as well as ad-hoc WQ monitoring requests.

**2020-21 Major Accomplishments**

- Supported the LVVWD Operations and Rainbow Canyon residents with quick-turn analysis for various analytical parameters related to corrosion control and lead and copper issues. In addition, Laboratory staff contacted and successfully obtained enough volunteers to complete the Kyle Canyon Water District lead and copper sampling program.
- 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 17-05/4833, WRF 4711, WRF 5035, Bromide Removal strategies, Ketos-Searchlight on-line arsenic analyzer comparison, and California SWB DPR-4 Phase 3, by providing quality and timely data to R&D staff.
- Laboratory staff fulfilled all emergency lab supply requests within one business day.
- Water Quality Monitoring Plans (WQMPs) submitted and tracked for all member agencies.
- Unregulated Contaminant Monitoring Rule 4 (UCMR4) monitoring completed for North Las Vegas, Boulder City, and NAFB.

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

**2021-22 Performance Objectives**

- Continue to use the Aquatic Ecosystem Model 3D (AEM3D) Lake Mead WQ model to evaluate changes in the quality of water leaving Lake Mead and entering Lake Mohave at various lake surface elevations. The AEM3D will specifically predict the impact of currently forecast warm waters entering Lake Mead in mid-2021.
- Operate, maintain, and perform challenge testing for water quality instrumentation at the AMSWTF Star Lab.
- 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

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standards, blanks, reagent chemicals, and microbiology media.

- Complete a reference document for the Laboratory's Continuation of Operations Plan (COOP).

**2020-21 Major Accomplishments**

- Regional Water Quality developed scenarios for WQ 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.
- Operated and maintained five remote, autonomous sampling platforms, each containing a suite of on-line WQ monitoring sensors in Lake Mead.
- Developed standard operation procedures (SOPs) for the online WQ instrumentation located at the AMSWTF Star Lab. Supplied data and attended the project meeting to discuss the final report for WRF Project 4636 titled "An Integrated Modeling and Decision Framework to Evaluate Adaptation Strategies for Sustainable Drinking Water Utility Management Under Drought and Climate Change."
- Completed training on the new SNWA sampling vessel and placed it into service in support of Lake Mead monitoring. The new sampling vessel has better workspace ergonomics, fuel efficiency, and allows staff to complete sampling of the upper portion of Lake Mead in a more efficient timeframe.

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

**2021-22 Performance Objectives**

- Investigate the application of conventional and innovative technologies (UV-MP, UV-LED, ozone nanobubbles) to inactivate Legionella in LVVWD groundwater supplies.
- Complete development of a linked model to describe WQ in Lake Mead and the treatment of this water through the drinking water treatment process. Once completed, the impact of various WQ changes in inflowing Colorado River water can be assessed through the lake and treatment process.
- Continue work on externally funded projects by WRF (Projects 4960, 4833, 4912, 4913, 4914, 4958, 5035, 5031, 5048, 5053, 5082, 5104), NSF International, Department of Defense (DOD) Strategic Environmental Research and Development Program (SERDP) and US Department of Agriculture (USDA).
- Implement the use of Next Generation Sequencing to identify organism that impact the SNWA's source waters, raw water, treatment plant effectiveness and finished water.
- Optimize the rapid detection methods, Polymerase Chain Reaction (PCR), and Flow Cytometry for *Legionella pneumophila*.
- Continue to develop the wastewater epidemiology capabilities for COVID-19 as well as other constituents of interest to public health.

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**2020-21 Major Accomplishments**

- R&D was awarded new externally funded projects: WRF 5048, 5082, 5104, and Bureau of Reclamation projects.
- Developed and implemented analytical testing for SARS-CoV-2 in finish and source waters to ensure the safety of the drinking water supplied to the community.
- Purchased the Flow Cytometer and Cell Stream instruments, for rapid *Legionella pneumophila* detection.

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

**2021-22 Performance Objectives**

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

**2020-21 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.***

**2021-22 Performance Objectives**

- Continue to work with diverse federal, state, local, and utility partners to share Lake Mead WQ conditions and potential changes.
- Continue to be a world-class leader in WQ 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.
- Assessment of laboratory's quality program by an independent party against TNI ISO/IEC 17025 standard every two years for continuous quality improvement.
- Ensure a safe workplace and encourage a safety culture by promoting and supporting suggestions that help maintain an incident and accident-free work environment.

**2020-21 Major Accomplishments**

- R&D published 11 articles in scientific journals, three Journal Editorials, and five WRF final reports.

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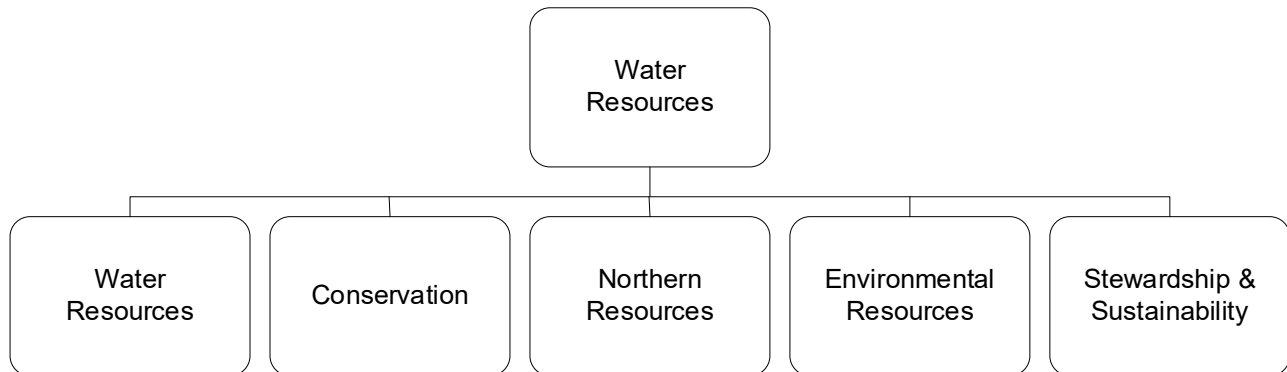
- R&D conducted/participated in 15 virtual webcasts and gave 19 presentations at 13 virtual conferences.
- Assisted and completed the rehabilitation of infrastructure at RMWTF, which included the backwash structure and clearwell inlet channel.
- The WQ Monitoring team drove 88,505 miles in 2020 with no incidents and/or accidents recorded.

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## WATER RESOURCES

### Level: 7100

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### 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 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; development and administration of 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 five divisions, including Water Resources, Conservation, Stewardship and Sustainability, Northern Resources and Environmental Resources.

### Budget Objectives and Highlights

The 2021-22 Water Resources department budget of \$87,824,275 contains funding to maintain and enhance the necessary functions required by SNWA to provide quality services to both internal and external customers. Funding will support water and environmental resource management efforts,



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as well as conservation initiatives designed to help the community meet its conservation goal. Planned expenditures reflect SNWA's long-term commitment to increased water conservation.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Water Resource Investments	\$ 1,946,421	\$ 7,664,000	\$ 14,344,000
Materials & Supplies	1,156,978	5,898,192	5,943,300
Maintenance & Repairs	1,894,768	2,274,672	2,407,300
Other Employee Expenses	178,593	428,360	336,200
Other Expenses	7,041,856	8,728,483	8,958,000
Total Operating Expenses	14,180,647	26,956,907	32,018,000
Capital Expenditures	16,442,071	24,635,250	37,315,756
Payroll & Related Costs	15,291,551	14,185,892	14,696,795
<b>Total Department Expenditures</b>	<b>\$ 45,914,269</b>	<b>\$ 65,778,049</b>	<b>\$ 84,030,550</b>
FTE Positions	72.9	67.2	70.6

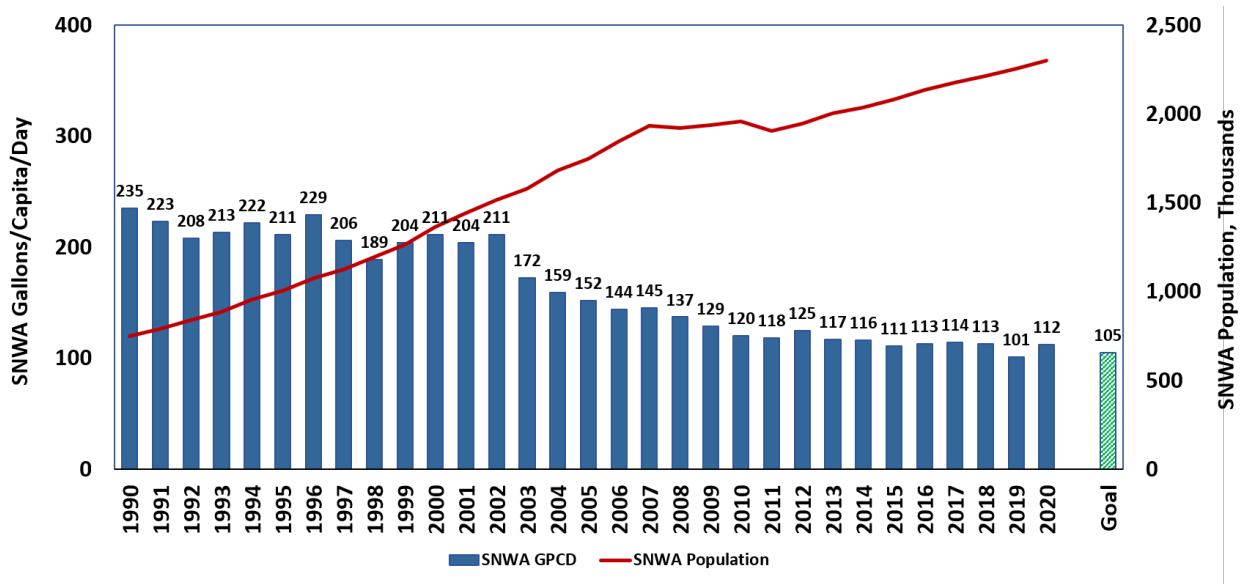
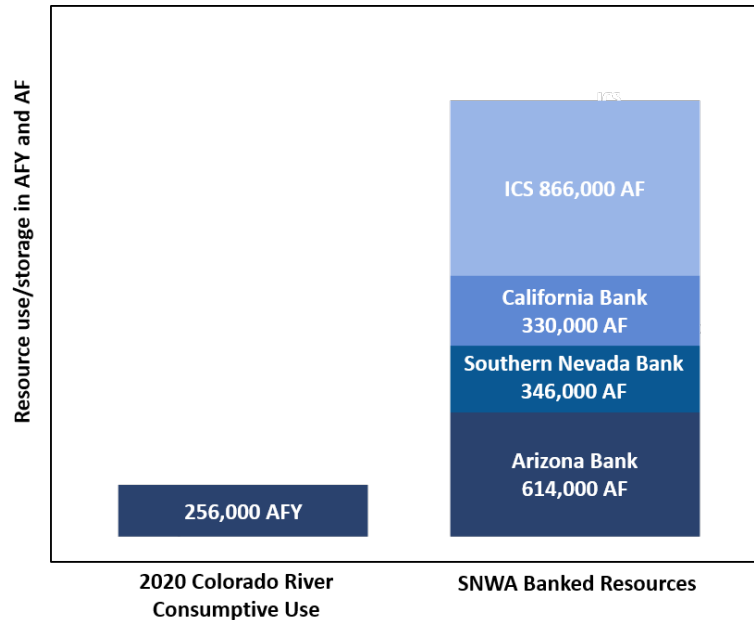
## Department Performance

**Water Resources.** The Water Resources division is responsible for securing and managing regional and local groundwater, surface water and banked resources to ensure a reliable water supply for Southern Nevada. This work involves managing existing Colorado River allocations and agreements, including those for river-related environmental compliance; conducting water resource planning, including integrated water resource planning, population forecasting, regional water demand forecasts and analyses, and water use accounting and reporting; identifying, evaluating, and developing sources of additional groundwater and surface water supplies; managing banked resources; establishing hydrologic and climatological monitoring networks; securing water rights from the Nevada State Engineer's (NSE) Office; and ensuring all water-resource assets remain in good standing.

The Division continued to monitor local and regional drought conditions in 2020-21 and worked with Colorado River Basin states to implement the Drought Contingency Plan. Through local and collaborative efforts, the SNWA banked approximately 80,000 acre-feet of water in calendar year 2020, expanding the storage of temporary resources that can be used flexibly to meet the community's water resource needs. The SNWA has stored 2.1 million acre-feet of water in total.

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This is more than eight times Nevada's 2020 consumptive Colorado River water use. The 2020 chart compares current water demands and banked supplies.



**Conservation.** The Conservation division develops and implements demand management programs and strategies with an emphasis on reducing consumptive water uses. The SNWA

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monitors regional water demand trends in terms of gallons per capita per day (GPCD). The SNWA calculates GPCD by dividing annual SNWA Colorado River water diverted (excluding off-stream storage) and member well production, less corresponding Colorado River return-flow credits by the total SNWA resident population served per day.

The SNWA's GPCD was 112 in 2020, on par with 2015-2018 GPCD trends. 2019 GPCD was lower, primarily due to abnormally cool and wet weather.

The Conservation division served more than 4,400 program applicants in 2020 and issued \$12.1 million in rebates. The largest program, Water Smart Landscapes, rebated 2,842 customers for removal and replacement of more than 4.5 million square feet of turf. These conversions will perpetually produce consumptive water savings of more than 252 million gallons annually. Cumulatively, landscape conversions completed since 2000 have reduced consumptive water use by more than 11 billion gallons annually.

The Conservation division employs three water-efficiency strategies: education, incentives and regulation, and further relies upon water purveyor members to establish appropriate pricing signals. Education strategies include multi-media (managed through the Public Information division), customer contacts, publications, videos, special events, demonstration projects, and a comprehensive website. The incentive strategy utilizes rebates to promote landscape conversions and use of water-efficient technology. These incentives account for the largest share of conservation funding. The regulatory strategy relies on coordination with other jurisdictions to implement efficient development standards, time-of-day watering requirements, water waste penalties and tiered water rate structures.

**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 \$3.2 million in projected ranch revenue for fiscal year 2021-22. Improvements in agricultural practices, livestock genetics and husbandry have increased efficiency and effectiveness in utilizing federal rangeland and private forage. The ranch continues to produce and deliver quality products and services, exhibit scientific-based stewardship, and demonstrate financial and organizational efficiency.

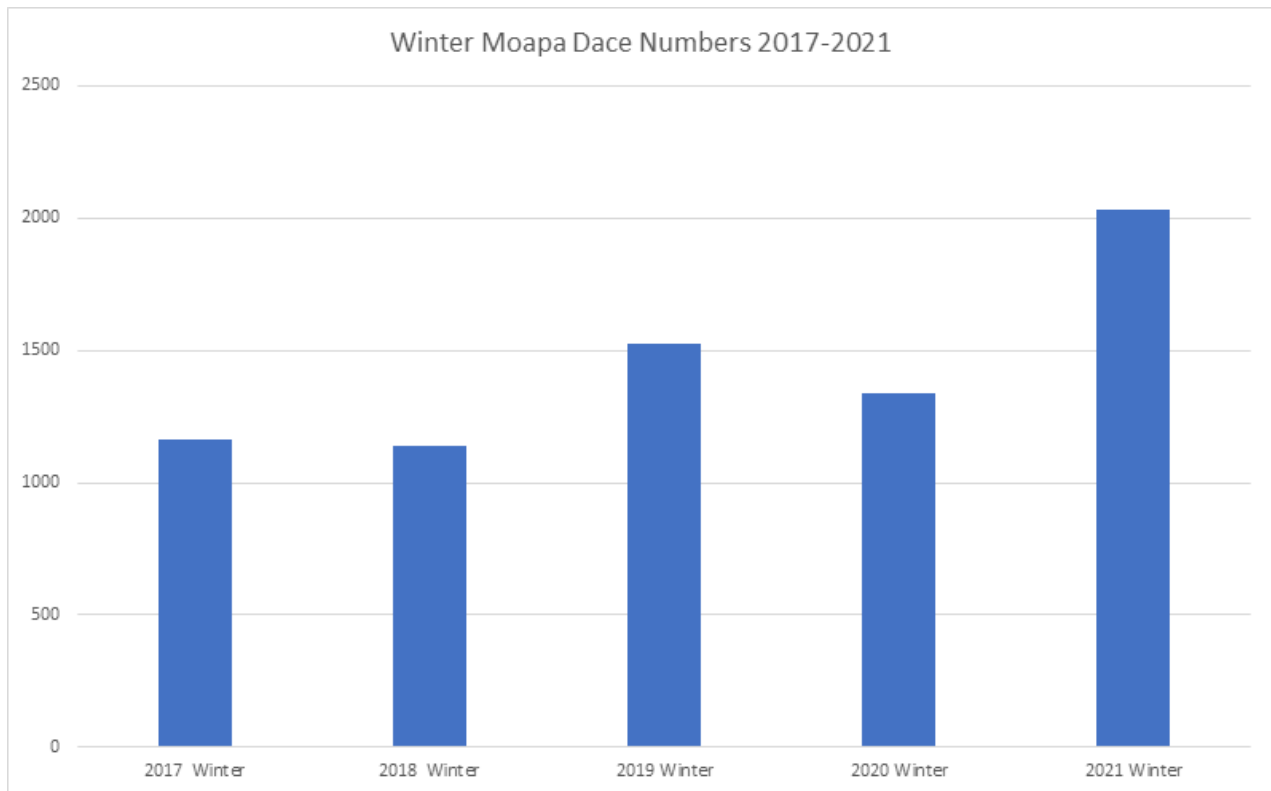
**Environmental Resources.** The Environmental Resources division conducts environmental planning, compliance, and natural resource management for SNWA, LVVWD, and small systems. The division supports policy initiatives on the Colorado River and other resource areas, coordinates with federal and state 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 is responsible for management, restoration, monitoring, compliance and outreach for the Las Vegas Wash (Wash)

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and the Warm Springs Natural Area (WSNA), and the organization's sustainability initiatives. The division has two teams. The Las Vegas Wash Team is responsible for the Las Vegas Wash Coordination Committee and the implementation of the 44 recommendations outlined in the Las Vegas Wash Comprehensive Adaptive Management Plan. The Warm Springs Natural Area Team is responsible for the WSNA Stewardship Plan and conducts management activities for the benefit of the Moapa dace and the other 27 sensitive species. The division also coordinates the Sustainability Cross Departmental Team to implement the organization's Sustainability in Action Plan.

The division's restoration efforts at the WSNA have bolstered Moapa dace populations. The small endangered fish is endemic to the Muddy River. After a period of steady decline, fish populations are on the rise. The population increased from a low of 459 individuals in 2008 to more than 2,340 in 2020.



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## **Strategic Plan Objectives and Accomplishments**

***Strategic Plan Goal 1 – Assure quality water through reliable and highly efficient system.***

### **2021-2022 Performance Objectives**

- Implement the Colorado River Drought Contingency plans to help protect critical elevations in Lake Powell and Lake Mead and reduce the magnitude of potential supply reductions.
- Complete actions as required under the SNWA/Department of Interior Stipulated Agreements.
- Provide technical support for negotiations with the seven Colorado River Basin states and the U.S. Bureau of Reclamation for post-2026 river operations and management
- Advance SNWA and LVVWD interests regarding the acquisition, development, and management of water rights.
- Ensure reliability of Colorado River supplies through active participation in environmental compliance and management programs.
- Inspect SNWA and LVVWD wells annually to ensure appropriate operational capacity for each service area; manage, develop and certificate water rights, as appropriate.
- Continue to conduct long-term water quality sampling and monitoring programs in the Wash and its tributaries.
- Prepare water resource assessments for each small system; document current and historical hydrologic conditions and evaluate system vulnerability to persistent drought conditions.
- Update small system wellhead protection plans.
- Provide technical support for the development and implementation of a septic system conversion program.
- Monitor groundwater quality trends in Las Vegas Valley through the existing monitor and production wells networks and tracking NDEP contamination site database reporting.
- Comply with environmental permit requirements for operation of erosion control facilities in the Wash.
- Conduct research and public outreach for the Wash in accordance with agreements and the Las Vegas Wash Comprehensive Adaptive Management Plan.
- Prepare for implementation of the long-term operating plan for the Wash.
- Provide environmental compliance and monitoring in accordance with permit requirements to operate existing SNWA, LVVWD and small systems facilities.
- Prepare and manage environmental compliance processes for new SNWA major capital projects, including Metropolitan Regional Recycled Water Program, Lower Las Vegas Wash weirs, Horizon Lateral, Boulder Flats Solar, and Garnet Valley water system.
- Prepare environmental compliance documents and provide environmental support for new LVVWD, small systems, and Springs Preserve infrastructure projects.

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**2020-2021 Major Accomplishments**

- Worked with stakeholders to implement the 2019 Lower Basin Drought Contingency Plan Agreement (DCP) to help preserve Colorado River operations for Lower Basin water users and increase the flexible use of Colorado River resources.
- Reviewed and commented on the draft Lake Powell Pipeline EIS.
- Met commitments under the Colorado River Pilot System Conservation Program.
- Collaborated with international partners to implement water and environmental management programs in the Colorado River Delta.
- Led stakeholder programs to improve prediction and understand uncertainty of future water supply and demand resulting from climate and hydrologic change.
- Continued implementation of the Lower Colorado River Multi-Species Conservation Program and the Glen Canyon Dam Adaptive Management Program.
- Completed all compliance monitoring and reporting for LVVWD groundwater rights, and permits to recharge, store, and recover water from the Southern Nevada Water Bank.
- Administered LVVWD groundwater rights to optimize operational flexibility.
- Completed construction of production well W126 at the future Rome reservoir site.
- Acquired land resources for a future high-capacity production well.
- Collaborated with the City of Las Vegas to modify the current interlocal agreement to accommodate construction of a future production well and pipeline at Children's Memorial Park.
- Evaluated the former West Central Wellfield in Las Vegas Valley to assess the viability of rehabilitating existing wells or constructing new wells.
- Filed protests of water-right applications to protect SNWA's senior decreed Muddy River rights and to protect endangered species in the Lower White River Flow System.
- Maintained and perfected SNWA groundwater and surface water rights.
- Managed an ongoing maintenance and repair program to optimize efficiencies of irrigation wells and water rights development at the Great Basin Ranch.
- Rehabilitated Northern Resources Phillips 1 irrigation well
- Implemented a groundwater quality monitoring program to evaluate current conditions and long-term trends in the Las Vegas Valley.
- Provided technical support for the development of a proposed Septic System Conversion Program.
- Completed all scheduled sampling and monitoring tasks in the Wash with minor disruption due to the pandemic.
- Represented Nevada as a member of the Colorado River Basin Salinity Control Forum; collaborated with other stakeholders to protect Nevada Colorado River return flows by ensuring continued compliance with U.S. EPA salinity standards for the Colorado River.

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- Finalized Cooperative Management Agreement with the National Park Service for the Lower Las Vegas Wash Stabilization Plan; conducted coordination meetings and started project environmental compliance.
- Conducted surveys for threatened and endangered birds, cataloged new invertebrates and initiated surveys for snakes and amphibians along the Wash.
- Conducted compliance monitoring and restoration work to support stabilization of the Wash; re-vegetated approximately 25 acres and conducted vegetation monitoring on more than 500 acres.
- Weeded within revegetation sites at the Wash and removed flood debris from the Pabco Weir area.
- Created five videos related to the Wash and educated more than 750 students.
- Initiated a major redesign of the Wash website (lvwash.org) and increased Facebook followers by more than 25 percent.
- Gave the desert tortoise environmental education program to 170 contractors and staff.
- Monitored tortoise exclusion fencing at all existing facility sites on federal lands and coordinated needed fence repairs.
- Completed annual reports for environmental compliance for operations of SNWA existing facilities; completed final report for the Third Intake/L3PS project.
- Conducted annual weed monitoring, reporting, and control measures at 25 SNWA groundwater monitoring sites.
- Conducted agency coordination and monitoring of the Pahrump poolfish and relict leopard frog populations at the Springs Preserve refugia.
- Held a pre-application meeting with the Bureau of Land Management, developed environmental commitments, purpose and need, agency communications, briefing papers and right-of-way application for the Horizon Lateral project.
- Provided environmental evaluations to support grant applications for six LVVWD projects covering 50 sites.
- Reviewed and provided input on design specifications for 31 LVVWD and small systems projects; provided construction environmental compliance for five LVVWD/developer projects.

***Strategic Plan Goal 2 – Deliver an Outstanding Customer Service Experience.***

**2021-22-Performance Objectives**

- Maintain a 90 percent or greater client satisfaction rating for delivery of the Water Smart Landscapes program.
- Resume expansion of single-family Site Evaluation Pilot Program to assist high water users in reducing demands.
- Maintain participation in Water Efficient Technologies by engaging facility managers and industry professionals and increasing awareness of water-efficiency incentive opportunities.

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- Increase participation in Water Smart Landscapes among Homeowner Associations, multi-family residential developments and other commercial and industrial properties.
- Increase compliance with mandatory watering restrictions among non-SFR sectors; engage commercial landscapers, property managers and community association managers.
- Leverage new and emerging technology to refine understanding of consumptive water use and improve customer service within non-single-family sectors.

**2020-21 Major Accomplishments**

- Achieved a 94 percent customer satisfaction rating, with 72 percent of respondents awarding the highest satisfaction rating.
- Developed contact-free program delivery methods and work-from-home procedures to provide continuity of customer contact and program delivery.
- Erased a backlog of more than 1,000 program applicants due to an 83-day interruption in operations due to pandemic response.
- Participated in 55 HOA meetings, made 770 new community association contacts and conducted 37 HOA desktop audits.
- Conducted more than 7,700 customer property visits and provided remote services to 826 customers.
- Rebated 140 smart leak detection units.
- Conducted four state-certified Community Manager trainings in partnership with the Nevada Division of Real Estate. The training included 50 attendees, representing 371 Homeowner Associations.
- Developed comprehensive databases of community association managers and commercial property managers and developed text/video communication tools.
- Contacted 80 HOAs to discuss program awareness and barriers to participation levels.
- Taught landscaping and irrigation classes at City of Henderson; transitioned to an online webinar format and reached 100 attendees.
- Worked with golf industry professionals to deploy specialized mapping technology to assess turf play areas and identify turf conversion opportunities.

***Strategic Plan Goal 3 – Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship of our Environment.***

**2021-22 Performance Objectives**

- Administer Colorado River water delivery and interstate banking agreements.
- Provide technical support for in- and out-valley water recycling through return-flow credits and direct reuse.
- Implement the Colorado River Drought Contingency plans to protect critical elevations in Lake Powell and Lake Mead and reduce the magnitude of potential supply reductions.



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- Reduce water demands and maximize the use of available resources through aggressive water conservation.
- Bank conserved water and increase temporary resources that can be used flexibly to meet demands and/or offset potential supply reductions.
- Assess climate change impacts in long-term planning and publish annual updates to SNWA's Water Resource Plan and Water Budget.
- Communicate water conservation and sustainability goals and progress to the organization.
- 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 SNWA's access to permanent, temporary and future water resources.
- Advance climate science information sharing and pursue research aimed at informing or enhancing predictive modeling tools.
- Work with SNWA member agencies to meet established conservation benchmarks for non-functional turf removal, cool-season turf conversions, Water Efficient Technologies program enrollment, smart irrigation controller deployments and water waste enforcement.
- Complete and implement work plans to accomplish the goals of the Conservation Strategic Plan.
- Ensure reliability of Colorado River supplies through active participation in environmental compliance and management programs.
- Begin preliminary planning initiatives to support the development of guidelines for shortages and coordinated operations of lakes Powell and Mead beyond 2026.
- Lead and participate in multi-stakeholder processes and coordinate with stakeholders to achieve Colorado River policy initiatives.
- Collaborate on local and regional climate change initiatives relevant to SNWA and assess climate change impacts in long-term planning efforts.
- Work across the organization to mitigate water supply and demand risks due to climate and hydrologic change.
- Conduct environmental regulatory, project, and policy reviews relevant to the organization.
- Conduct research, planning and environmental compliance to support strategic decisions and management of SNWA water resources and assets.
- Sustainably manage the Great Basin Ranches such that annual gross revenue covers at least 100 percent of direct costs, measured as a five-year running average.
- Develop and certificate 100 percent of ranch water rights.
- Maintain Great Basin Ranch assets, including property, facilities, water rights, and grazing allotments in accordance with annual work plans and permits.
- Inspect 100 percent of ranch irrigation, stock, and domestic wells at least annually, and maintain at least 90 percent of the wells at full operational capacity.
- Make progress towards achieving the goals of the Recovery Plan for rare aquatic species on the Muddy River.
- Provide public access and outreach at the WSNA.

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- Reduce fire fuels and maintain fire breaks annually at the WSNA in accordance with the property Fire Management Plan.

**2020-21 Major Accomplishments**

- Developed a new Conservation Strategic Plan to reinvigorate conservation progress and counter headwinds of climate change.
- Presented research on heat resiliency of the most common landscape plants, highlighting those most vulnerable to climate change.
- Published the 2020 Water Resource Plan and 2020 Water Budget; updated resource planning scenarios to reflect the latest UNLV-CBER population forecast, DCP provisions and water supply impacts under variable Colorado River inflows.
- Reviewed and commented on the City of Las Vegas Master Plan in support of regional water planning and conservation.
- Provided demand and supply analyses to evaluate additional permanent resources and for use in the Integrated Resource Planning Advisory Committee (IRPAC) process.
- Conducted water demand and related analysis to assess the impact of the pandemic on water use.
- Monitored Colorado River consumptive use for 2020 water resource management and enhanced monthly water use report.
- Prepared a five-year SNWS sales forecast for SNWA financial budget and energy planning, and adjustments for the influence of the pandemic on the FY2021 budget.
- Worked with stakeholders to implement the 2019 Drought Contingency Plan (DCP) to increase flexible use of Colorado River resources.
- Administered Colorado River water delivery and interstate banking agreements.
- Provided technical support for regional water recycling through return-flow credits and direct reuse and participated in WaterReuse Nevada.
- Expanded SNWA water banking opportunities with municipal conservation and an off-stream storage Intentionally Created Surplus (ICS) project; 44,000 acre-feet of water was stored in Lake Mead under this project in 2020.
- Conducted Colorado River modeling in support of ongoing negotiations and resource planning and management activities.
- Partnered with Colorado River stakeholders to identify, prioritize and fund select research initiatives to improve hydrological forecasts, enhance the performance of predictive and decision support tools, and to reduce uncertainty related to future supply and demand conditions in the Colorado River Basin.
- Maintained regional monitoring networks to collect long-term hydrologic and climatological data.
- Implemented a uniform conservation policy for water features among all municipalities.
- Created 34,772 acre-feet of Tributary Conservation ICS water from the Muddy and Virgin rivers for storage in Lake Mead.

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- Completed a water-supply assessment of the Blue Diamond and Kyle Canyon water systems to evaluate the potential impact of below-normal precipitation on system operations.
- Issued more than 4,400 conservation rebates saving more than 290 million gallons of water per year.
- Conducted more than 11,000 water waste investigations within the LVVWD service area, assessing more than \$180,000 in fees.
- Assisted the City of Henderson in creating a Water Smart Landscape (WSL) incentive enhancement program aimed at commercial and multifamily non-function turf.
- Completed seven interlocal agreements with member agencies (North Las Vegas, Henderson, City of Las Vegas) to convert 830,902 square feet of non-functional turf, saving more than 7.2 million gallons of water annually; Henderson converted ten parks from cool season grass to warm season under these agreements, saving more than 22 million gallons of water annually.
- Supported legal appeal of Bureau of Land Management (BLM) grazing use decisions on the Wilson Creek allotment.
- Prepared two Environmental Assessments and continued working with BLM on nine pending land authorizations to improve sustainable operations of the ranch.
- 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.
- Led stakeholder programs and developed information resources to improve prediction and understand uncertainty of future water supply and demand resulting from climate and hydrologic change.
- Worked with water utility and other partners to better understand the potential impacts of a changing climate and tracked the organization's footprint of carbon emissions.
- Developed and began tracking key indicators to provide an early warning of climate change risks to SNWA and developed actions to mitigate those risks.
- Conducted in-depth review of more than 1,000 external projects, legislative and regulatory proposals, and submitted nine formal comment letters.
- Collaborated with BLM and Nevada Division of Wildlife (NDOW) to rescue a population of the endangered Pahrump poolfish.
- Completed irrigation and water system improvements at the Great Basin Ranch in response to severe drought conditions and to support ranching operations. Improvements include pipeline installations and replacements, well rehabilitation, intake and diversion facility repairs, electrical repairs and upgrades, repair and replacements of pivot systems, and pond repair and reconstruction.
- Established a new housing facility at Bastain Creek.
- Completed various improvements at the Great Basin Ranch, including construction of two new hay barns and construction of one new home.

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- Constructed an oil storage facility for Fleet Services; expanded livestock corrals; made improvements on the Wahoo house; reconstructed cattle handling facilities at the Huntsman feedlot; and made corral post improvements to prevent bird entrapment.
- Initiated the Stone House stabilization project.
- Repaired and replaced range improvements in South Spring Valley, Scotty Meadows and Tippet Glencoe.
- Added 1,452 ewe lambs and 253 bred heifers to the ranch livestock population.
- Met or exceeded the projected Ranch revenue budget and operated within the operations budget.
- Conducted bi-annual Moapa dace counts on the upper Muddy River and documented increased dace numbers, reproduction, and successful translocation of dace into restored habitat.
- Conducted threatened and endangered bird surveys at WSNA and monitored bird population recovery from the 2010 wildfire and habitat restoration; documented the highest number of confirmed southwestern willow flycatcher fledglings and first Yuma Ridgway's rail in 2020.
- Grew and maintained more than 5,000 native plants for restoration areas at WSNA.
- Trimmed palm trees and mowed and maintained 11,000 feet of fire breaks to protect infrastructure, Moapa dace habitat, and nesting sites for threatened and endangered birds at WSNA.
- Monitored 21 ecological restoration sites (50 acres) at WSNA for restoration success.
- Received volunteer support to plant 750 yerba mansa and saltgrass plants in a WSNA restoration site at the North Fork of the Muddy River.
- Organized and hosted the Colorado River Climate and Hydrology Work Group Virtual Symposium, including three 2-hr webinars with 157 attendees.

***Strategic Plan Goal 4 – Develop innovative and sustainable solutions through research and technology.***

**2021-22 Performance Objectives**

- Initiate a research project to evaluate the potential for smart irrigation controls to facilitate compliance with watering restrictions and produce consumptive water savings.
- Develop new programs and processes to improve the resolution time of customer leaks.
- Utilize existing mapping technology to improve water waste enforcement efforts in targeted areas.
- Utilize data from smart water metering (AMR/AMI) technology to notify customers of potential violations of watering restrictions.
- Host an international spring webinar and the Annual Innovations Conference.
- Continue to 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.

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- Conduct a study of non-SFR smart irrigation controller performance in field conditions to quantify associated water savings.
- Explore best practices for quantifying agricultural water conservation with Colorado River Basin partners.

**2020-21 Major Accomplishments**

- The smart leak detection incentive program rebated a record 140 units.
- Implemented a program to provide additional support to member agencies to enforce watering restrictions.
- Collaborated with the State of Nevada's WaterStart program and ImagineH2O to review water efficiency technology and select award recipients.
- Provided supplemental funding for a partnership with the Alliance for Water Efficiency and major utilities to model municipal level water volumes used for cooling towers and research water conserving approaches to traditional cooling technologies.
- Participated in developing a scope of work to explore water desalinization opportunities along the Sonoran coast of the Sea of Cortez; partnered with Lower Basin water users to fund a study.
- Initiated a project to compile and integrate existing well-systems and groundwater data into a Common Data Repository to enhance cross-departmental collaboration.
- Implemented Business Intelligence software solutions to enhance organizational communication and collaboration related to well systems and water-usage information.
- Conducted a pilot study using customer meter data to identify Sunday watering offenders; implemented direct outreach and observed a 47 percent change in customer behavior.
- Supported development of pilot studies to assess in-situ water-quality treatment technologies at production wellheads.
- Hosted an online webinar in lieu of the Water Smart Innovations Conference; attracted more than 800 registrants and provided more than 3,000 hours of professional engagement.
- Developed a cost/benefit analysis describing the potential resource gains and operational/revenue implications of significant gains in single-family residential compliance.
- Produced sector-level analyses comparing 2020 water usage to historical averages for both the LVVWD and SNWA member purveyors.

***Strategic Plan Goal 5 – Ensure Organizational Efficiency and Manage Financial Resources to Provide Maximum Customer Value.***

**2021-22 Performance Objectives**

- Implement hydrologic monitoring efficiencies with remote data collection.
- Leverage conservation research dollars through regional/national projects that attract funding and participation from peer utilities.
- Implement a new business system to streamline workflows, maintain accountability, reduce labor intensity through automation and expand use of electronic documents.

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- Develop a Conservation Strategic Plan to guide agency and interagency work efforts.
- Develop a process to gather and share conservation-related data with internal and external stakeholders and track Conservation Strategic Plan performance.
- Coordinate with SNWA member agencies to consistently implement principles of SNWA's Non-Functional Turf Resolution and Out-of-Valley Water Use Policy in municipal code and/or agency service rules.
- Partner with Colorado River Basin stakeholders to jointly fund water and environmental management investigations and programs.
- Provide demand analysis and forecasts to reduce uncertainty in system operations, infrastructure planning and financial planning.
- Ensure annual department expenditures remain within budget.
- Leverage volunteer and docent support when practical to support staff-guided restoration projects and other outreach activities.
- Pursue and secure grants and other funding sources to support department initiatives.
- Execute remaining \$393,000 in awarded grant funding from the U.S. Bureau of Reclamation for Water Smart Landscapes rebates.
- Pilot the use of mobile devices in field operations to streamline data collection, increase productivity and reduce use of paper-based information management.

**2020-21 Major Accomplishments**

- Continued installation of Geostationary Operational Environmental Satellite telemetry systems to monitor and provide real-time access to important hydrologic sites in remote locations.
- Generated investments in climate change and hydrologic forecasting investigations of more than \$1 million from Colorado River Basin partners.
- Developed a weekly demand model to evaluate the system-wide impacts of the pandemic on water demands at a scale finer than existing models.
- Utilized meter and production data to analyze the distributional impacts of the pandemic spatially and across customer classes.
- Provided technical support to Finance in the development of materials supporting refunding of SNWA and LVVWD debt.
- Collaborated with IT to develop new versions of program management software to utilize mobile devices.
- Identified methods and processes to meet customer program demands remotely; implement an electronic program application process.
- Produced videos to promote conservation program remotely for Commercial and Multifamily groups.
- Produced 8,600 tons alfalfa and 1,869 beef calves and sold more than 1.3 million pounds of beef.
- Produced and sold 3,503 lambs and 43,598 pounds of wool.

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- Obtained more than \$624,000 in federal and state grant funding support conservation and Wash initiatives.

***Strategic Plan Goal 6 – Strengthen and uphold a culture of service, excellence and accountability***

**2021-22 Performance Objectives**

- Lead an interdepartmental team in development of a comprehensive annual groundwater management and well operations plan.
- Expand LVVWD water waste enforcement efforts to reduce water waste and improve compliance with mandatory watering restrictions.
- Meet or exceed annual benchmarks for SNWA conservation programs.

**2020-21 Major Accomplishments**

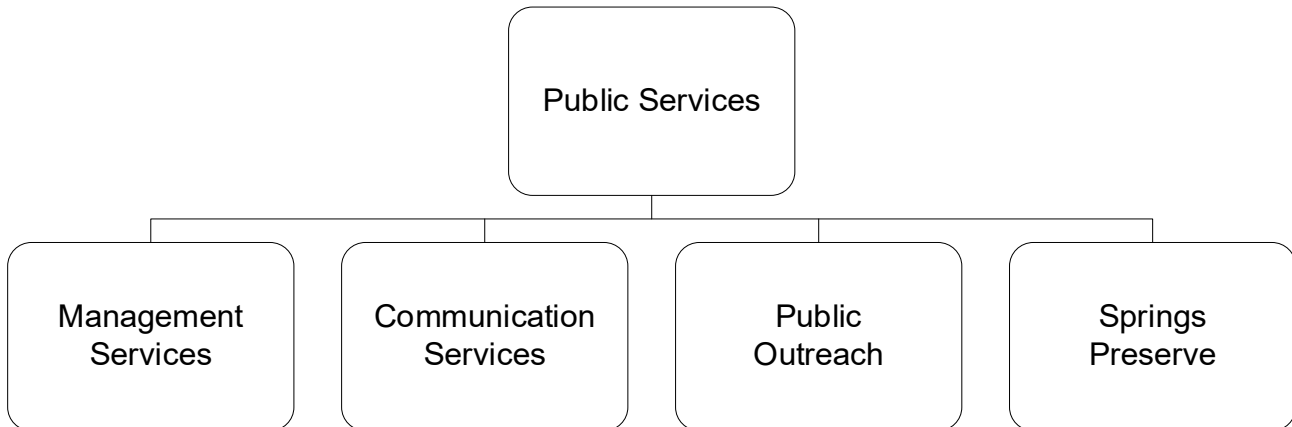
- Provided analytical and administrative support to the Integrated Resource Planning Advisory Committee process (IRPAC).
- Led an organization-wide planning initiative to develop a Conservation Strategic Plan that facilitates implementation of IRPAC conservation recommendations; began implementation of the Strategic Plan.
- 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.
- Completed a multi-agency, national research initiative on cooling technology and water demand.
- Collaborated with the State of Nevada's WaterStart program and ImagineH2O to review water efficiency technology and select award recipients.
- Developed a cost/benefit analysis describing the potential resource gains and operational/revenue implications of significant gains in single-family residential compliance levels.
- Produced sector-level analyses comparing 2020 water usage to historical averages for both the LVVWD and SNWA member purveyors.

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## PUBLIC SERVICES

Level: 7200

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### 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: Management Services; Communication Services; 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 Management Services division oversees the organization's government affairs, agenda processes, public participation efforts and committees, grant writing, conference coordination and support, and provides expert analysis and support to senior management.

Communication Services is responsible for communicating 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 division also executes special events, including those at the Springs Preserve and the Water Smart Innovations conference.



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

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2019-20</b>	<b>Budget 2020-21</b>	<b>Budget 2021-22</b>
Materials & Supplies	\$ 208,500	\$ 539,856	\$ 398,800
Maintenance & Repairs	409,030	299,309	535,770
Rental & Leases	541	245,760	5,000
Other Employee Expenses	57,416	150,018	139,581
Other Expenses	6,303,397	7,648,636	4,937,895
Total Operating Expenses	6,978,884	8,883,579	6,017,046
Capital Expenditures	1,115	-	-
Payroll & Related Costs	6,129,814	7,216,531	7,111,253
<b>Total Department Expenditures</b>	<b>\$ 13,109,813</b>	<b>\$ 16,100,110</b>	<b>\$ 13,128,299</b>
FTE Positions	35.3	40.0	41.5

## Budget Objectives and Highlights

The 2021-22 budget remains consistent with the organization's efforts to enhance efficiency and service to internal and external customers.

## Department Performance

In fiscal year 2020-21, with most department staff working remotely, the Public Services department continued to provide uninterrupted service and support to the organization, its initiatives and priorities:

**Management Services.** Management Services 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.

This fiscal year, and after a pause due to the declared pandemic, the division successfully spearheaded the completion of the IRPAC 2020 process for the SNWA, which resulted in its Board of Directors

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supporting all the committee's recommendations, which include amending the SNWA's Major Construction and Capital Plan (MCCP) to add infrastructure to ensure reliable water service, expanding the state's Colorado River resource through partnerships, and focusing on conservation initiatives that reduce consumptive water use and help our community meet its conservation goals. To fund these initiatives, the committee recommended a modest increase to SNWA water rates beginning in 2022.

In the last fiscal year, water conservation remained a priority and Management Services supported several efforts on behalf of both organizations. The division coordinated an update to the LVVWD Service Rules with conservation-related initiatives that addressed development outside the hydrographic boundary, limits on properties with septic systems, and non-functional turf guidelines. Staff also supported an effort among SNWA member agencies to develop a Large Water Users Policy. The division also helped develop and launch a septic conversion program to improve water quality and water resources for individuals on septic systems.

Following a comprehensive resource and water system analysis, staff worked with the Blue Diamond community to implement a new development moratorium in the town of Blue Diamond to stabilize water demands and protect the water resources for future users.

Because of safety considerations, the Colorado River Water Users Association's (CRWUA) 75<sup>th</sup> anniversary conference was cancelled in 2020. The conference is set to return in-person in December 2021.

Management Services also supported the organization's fund development activities through grant development and fundraising activities to offset programming, capital and operational expenses. Staff applied for and LVVWD was awarded \$1.5 million in funding from Nevada's Drinking Water State Revolving Loan Fund to improve Big Bend Water District's system. These funds will be used to address issues of system reliability, operational efficiency, conservation and water quality for that system. Additionally, staff applied for and was awarded \$848,000 in grant funding from the Bureau of Reclamation's Drought Resiliency Projects for treatment of LVVWD's groundwater production wells. The same funding program also awarded the Warm Springs Natural Area \$189,000 for habitat restoration projects.

Lastly, in the past year, the division secured \$78,520 in grant dollars for the Springs Preserve and was still able to secure fundraising dollars amidst a pandemic.

**Communication Services.** Communication Services is responsible for developing materials that reach customers through the website, social media, television, email and print. Over the past year, the division distributed more than 3.1 million compliance postcards to single-family residences throughout the valley, communicating seasonal mandatory watering restrictions. The division also implemented a compliance marketing campaign, resulting in 651,000 seasonal watering reminder emails to subscribers, and also launched a direct-mail campaign to 15,000 remaining grass landscaped properties.

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Communication Services also launched a social media campaign highlighting SNWA's research on genetic markers of COVID-19 in wastewater. These messages reached more than 395,000 residents.

To make employees feel connected and continuously up to date on the organization's work and status during the COVID-19 pandemic, the division launched a weekly video series featuring the general manager, executive team and special guests. The initiative won a Pinnacle Award in 2020 from the PRSA Las Vegas Chapter.

Communication Services also implemented a redesigned employee intranet website that allowed easy mobile access to employee news and tools. Monthly website visits increased by 32 percent, and the intranet's excellence was recognized as Best in Show at the 2020 PRSA Las Vegas Chapter Pinnacle Awards.

Staff also produced and installed more than 1,000 signs for LVVWD, Springs Preserve and SNWA facilities in support of COVID-19 guidelines.

**Outreach Programs.** The Outreach Programs division is responsible for developing and implementing public awareness and educational campaigns that support organizational initiatives, managing communications with media and journalists, and coordinating the Springs Preserve's cultural and community events.

Over the past year, there have been numerous advertising efforts including the development of a new, homeowner-targeted WSL campaign which launched in March 2021, the development of new social media ads with Vegas Golden Knights enforcer, Ryan Reaves, the production and launch of the Abuela Conservation Campaign, which targeted Spanish speaking audiences, and the revision of the compliance reality check and business testimonial campaigns.

As community partner relationships remain vital, staff continued active participation with the Latin Chamber of Commerce, the Henderson Chamber of Commerce, and the Community Association Institute to expand outreach efforts to the non-residential sector.

The division also continued inter-agency coordination with member agencies, amplifying the SNWA's conservation message and reaching more than 6.5 million social media and web impressions. The division continued its educational outreach to the community, by teaching more than 1,000 local landscapers about watering restrictions, reaching out to HOAs and the business community about water conservation and the WSL Rebate Program.

To further promote conservation, staff established relationships with local businesses, including Star Nursery, Home Depot, Starbucks, and supermarkets to include SNWA conservation collateral inside their stores. Staff also executed a partnership with the UNLV athletic program to help promote water conservation and seasonal watering restrictions.

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Due to safety considerations, the Water Smart Innovations conference could not be held in person and was moved to a virtual format, with outreach staff promoting and supporting the implementation of the webinar series.

This year, the Outreach Programs division managed more than 100 interactions with local, national and international news organizations. Staff also managed outreach efforts to help coordinate the final activities related to the Low Lake Level Pumping Station, initiated community outreach activities related to the construction of the LVVWD's Rome Reservoir, Cougar Reservoir and Centennial Reservoir, and developed a comprehensive communications plan for the SNWA's Horizon Lateral and water conservation programs and initiatives.

Springs Preserve outreach included the Dia De Muertos altar dedicated to the lives lost from COVID-19. Additionally, staff developed and implemented the Springs Preserve's first virtual community event with the 2021 Black History Month Festival in February. Social media activity for the event reached more than 446,000 cumulative impressions across all platforms and the event's Youtube livestream had more than 2,800 impressions.

**Springs Preserve.** Springs Preserve staff is responsible for overall facility operations and programs and events that enhance the visitor experience. Due to the COVID-19 pandemic and state directives, the Springs Preserve was closed for much of the fiscal year and subsequently operated in a limited capacity when open. The Springs Preserve opened its outside trails and gardens in the summer of 2020 and welcomed approximately 10,000 guests before closing again in the fall. During this time, staff retooled operations, moved to cashless payments, initiated timed reservations to increase social distancing, and increased cleaning and sanitizing. Temporary staff were removed from the schedule, reducing the overall labor budget for the remainder of the fiscal year by more than \$300,000. Booked traveling exhibits and art installations were either cancelled or deferred during closure, saving more than \$200,000 over the 2020-21 fiscal year.

While the natural areas and trails were open, staff created pop-up education activities in the main amphitheater, expert staff-guided tours were provided to guests and small retail stations were set up outside to provide water and snacks to visitors. Additionally, Springs Preserve's Group Sales facilitated small venue rentals, keeping with safety guidelines.

The Springs Preserve's botanical garden electrical expansion was completed early due to the facility's closure. This project provided proper electrical outlets throughout the gardens and inground conduit for eventual low voltage lighting/speaker installation. Staff worked to replace plants and make improvements following construction.

The Sustainability Gallery remodel project, funded through a state grant of \$1 million, with an additional \$250,000 from the Springs Preserve Foundation aims to be completed in the first quarter of fiscal year 2021-22. The annual Scholastic Art and Writing competition went virtual in 2020 with 680 art submissions and 724 writing submissions. The art submissions were displayed on the Springs Preserve's website from January through March 2021.

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Springs Preserve staff worked with stakeholders from the Nevada Division of Wildlife and U.S. Fish and Wildlife Service (USFWS) to introduce the endangered Pahrump poolfish and imperiled Relict Leopard frogs into the ponds at the Springs Preserve's Cottonwood Grove. Research conducted earlier this year discovered that the ponds provide a high-quality breeding and recruitment habitat and the Springs Preserve was awarded a \$56,000 grant by the U.S. Fish and Wildlife Service to improve conditions in two additional on-site ponds.

## **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.***

### **2021-22 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.

### **2020-21 Major Accomplishments**

- Assisted in updating the LVVWD Service Rules with conservation initiatives related to development planning and non-functional turf guidelines
- Launched an outreach effort to implement a Large Water Users Policy to include local government planning and development community.
- Launched septic conversion program to improve water quality and resources for individuals on septic systems.
- Worked with the Blue Diamond community to implement a new development moratorium in the town to protect water resources for future users.

***Strategic Plan Goal – Deliver an outstanding customer service experience.***

### **2021-22 Performance Objectives**

- Assess customer satisfaction, establish benchmarks and determine where improvements are required

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Fiscal Year Ending June 30, 2022

- 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 and industries to identify innovations, best practices and ways to improve the customer experience.

**2020-21 Major Accomplishments**

- Distributed more than 3.1 million compliance postcards to single-family residences in the Las Vegas Valley.
- Implemented a compliance marketing campaign, resulting in 651,000 seasonal watering reminder emails to subscribers.
- Successfully adapted to state directives related to the COVID-19 pandemic in operating the Springs Preserve safely while in a limited capacity. During its closure and limited openings, Springs Preserve staff retooled operations, moved to cashless payments, initiated timed reservations to increase social distancing, and increased cleaning and sanitizing.
- Supported the execution of virtual special events hosted by the Springs Preserve.

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

**2021-22 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.

**2020-21 Major Accomplishments**

- Spearheaded the completion of the IRPAC 2020 process, in which the committee examined Southern Nevada’s long-term water planning efforts. All committee recommendations were approved by the SNWA Board of Directors.
- Launched the Septic Conversion Program to offer financial assistance to septic system users to abandon their septic tanks and connect to municipal sewer systems.

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
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- Coordinated the member agency review and development of the Large Water Users Policy.
- Developed and launched a social media campaign highlighting 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 an “early warning” system for the virus’ presence in communities.
- Continued support of the Sustainability Cross-Departmental Team to examine internal processes and develop sustainable practices within the organization.
- Introduced the endangered Pahrump poolfish and imperiled Relict Leopard frogs into the ponds at the Springs Preserve, providing a breeding and recruitment habitat, and was awarded a \$56,000 grant by the USFWS to improve additional on-site ponds.

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

**2021-22 Performance Objectives**

- Increase customer communication so there is a better understanding of the organization’s 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.

**2020-21 Major Accomplishments**

- Supported development of an amended SNWA Major Construction and Capital Plan.
- Secured more than \$2 million in federal grant funding and private sponsorships across the organizations to support water systems, cultural events and habitat restoration.

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

**2021-22 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.

**2020-21 Major Accomplishments**

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- Launched a redesigned employee intranet that allowed easy mobile access to vital news and employee tools. The new site's streamlined organization improved employee productivity during the COVID-19 pandemic as monthly website visits increased by 32 percent. This website redesign was recognized as Best in Show at the 2020 PRSA Las Vegas Chapter Pinnacle Awards.
- Established relationships with local businesses to help educate and promote water conservation and seasonal watering restrictions.
- Continued participation with community organizations to expand conservation outreach efforts to the non-residential sector; continued coordination with member agencies to amplify the conservation message and reach more than 6.5 million social media and web impressions.

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

**2021-22 Performance Objectives**

- 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.

**2020-21 Major Accomplishments**

- Implemented a weekly video series featuring the general manager, executive team and special guests, designed to help employees feel connected and up to date on the organization's work and status during the COVID-19 pandemic. This initiative won a Pinnacle Award in 2020 from the PRSA Las Vegas Chapter.



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# SECTION 6

## CAPITAL PLANS

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SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22  
OPERATING AND CAPITAL BUDGET



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Capital Plans**  
Fiscal Year Ending June 30, 2022

## **Capital Budget**

The Southern Nevada Water Authority (SNWA) maintains a long-range facility planning process to determine the type, size and location of water distribution and treatment facilities needed to meet the water service demands of the areas in Clark County served by the member agencies – Las Vegas Valley Water District, City of Henderson, City of North Las Vegas, City of Boulder City and the Big Bend Water District (Member Agencies). As water system facilities are defined, they are incorporated into the SNWA's overall construction program. The program is dynamic, with projects added, changed, or deleted as necessary to meet the changing conditions of the Member Agencies.

The overall capital project-related expenditures for 2021-22, totaling \$172.2 million, consist of weir improvements and expansion, pumping stations, water resources acquisition and development, reservoirs and wells, new water pipelines, and other distribution facilities. The capital equipment budget of approximately \$3.4 million consists of vehicles, Information Technology equipment, water works and diverse industrial equipment.

In November 2020, the SNWA Board of Directors approved an amended Major Construction and Capital Plan (MCCP) that will guide decisions related to water system expansion, water resource management, water quality compliance activities and asset management. The plan represents an investment of \$3.2 billion (2020 dollars) to construct new facilities, manage water resources and make improvements to key system components, ensuring a reliable water system for SNWA's customers.

### **Impact of Construction Program on Operation and Maintenance Expenses**

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

- First, the facilities being added to the SNWA'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 SNWA until they are fully inspected and tested and ready for operation.
- Third, over the past several years the SNWA 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 SNWA anticipates incurring maintenance expenses for the rehabilitation of facilities such as reservoirs, pump stations, and pipelines. However, these costs are minimized through the SNWA'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

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
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facilities were, and are being constructed, for member agencies 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 expense.

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

The tables on the following pages contain a listing of all the capital equipment and capital projects included in the SNWA's capital expenditures for the fiscal year 2021-22.

Southern Nevada Water Authority  
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**SNWA: CAPITAL BUDGET 2021-22**

**CAPITAL EQUIPMENT**

**4100 - Operations**

PSRM A&B Surge Tank Level Indicators	\$	32,376
Electric Gate Openers		200,000
<b>Subtotal</b>	<b>\$</b>	<b>232,376</b>

**4300 - Information Technology**

Unmanned Aerial Vehicle (UAV) System	\$	30,000
SAN Fabric Switches		96,000
General Infrastructure Support		104,000
<b>Subtotal</b>	<b>\$</b>	<b>230,000</b>

**4400 - EHS & CS**

Heavy Duty Deck Over, Tilt Deck Equipment Trailer.	\$	20,000
SDI TM80-245 300 Gal. Trailer Mounted Weed Sprayer		22,000
Used Full Size Backhoe		50,000
Three Replacement Vehicles.		158,000
One Lot of Four Replacement Equipment Pieces		200,000
Four Each Reg. Cab Utility 11' Body Electrician Trucks		260,000
One Lot of Seven Replacement Vehicles		488,000
Two Each 33,000 lb. Extended Cab Utility W/Crane & Welder		488,000
<b>Subtotal</b>	<b>\$</b>	<b>1,686,000</b>

**4500 - Water Quality & Treatment**

Gas generator, Restek Parker Balston 20682	\$	15,600
Water Purification System		44,000
TECTA B-16 Instrument Detection System (Remote TC/EC Monitoring)		85,325
Ion Chromatograph, Metrohm		103,000
RMWTF ChemTrac Particle Counters		157,808
AMS Backwash Peerless Vertical Pump		163,200
R&D Necessary Unforeseen Projects		275,000
<b>Subtotal</b>	<b>\$</b>	<b>843,933</b>

**Southern Nevada Water Authority**  
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**7100 - Water Resources**

Real-time Water Quality Monitoring Equipment	\$	25,500
Livestock Replacement		350,000
<hr/>		
<b>Subtotal</b>	<b>\$</b>	<b>375,500</b>
<hr/>		
<b>TOTAL CAPITAL EQUIPMENT</b>	<b>\$</b>	<b>3,367,809</b>
<hr/>		

Southern Nevada Water Authority  
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## CAPITAL PROJECTS

### 2200 - Energy Management

Solar Power Project (ENTP)	\$ 10,000,000
<b>Subtotal</b>	<b>\$ 10,000,000</b>

### 3400 - Engineering

880W - Sunrise Mountain Revegetation	\$ 103,293
Flood Repair Allocation	179,521
BOR Materials & Equipment	300,000
Calico Ridge ROFC	578,600
AMSWTF Filter Improvements	1,430,284
Ozone Equipment Upgrade	1,615,461
PCCP Pipeline Rehabilitation. Aqueduct A and B, Las Vegas Lateral	2,250,000
Garnet Valley Wastewater System	2,880,000
Garnet Valley Water System	3,894,000
Final Weir Structure Modifications	3,951,786
Stage II Reliability Upgrades	4,500,000
Lower Las Vegas Wash Stabilization	6,006,939
In-Valley Maintenance Shop and Office Space	6,100,000
Horizon Lateral Planning and Preliminary Design	62,867,700
<b>Subtotal</b>	<b>\$ 96,657,584</b>

### 3700 - Infrastructure Management

AMSWTF Site - Flocculator VFD Replacement	\$ 25,000
Multi-site - Equestrian Surge Upgrades Phase II	30,000
SNWA - RMWTF - Repair Drainage Ditches - RMWTF	30,000
SNWA Tortoise Fence Installation	30,000
RMWTF - HVAC IoT Reliability Monitoring Project	35,000
AMS - HVAC IoT Reliability Monitoring Project	35,000
Replace Burner Assemblies on Governair's AHU's B-3 and B-7	44,000
Raw Water Lateral Site - 340-D VFD Enhancements	50,000
SNWA - Misc. Vault Repair	50,000
SNWA Roof Replacements	53,769
AMSWTF Site - Chlorine Detector Upgrades	75,000
RMWTF - Lab - Chemical Drains	75,000



**Southern Nevada Water Authority**  
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Regulating Tank 2 Structural Repairs	80,000
RMWTF - Impound Dam Concrete Repairs	80,000
RMWTF - Replace Benches in the River Mountains WTF Picnic Area	99,000
Multi-Site - PP1A / 2A Crane Upgrade Project	100,000
Stage I and Stage II PLC Upgrades (300-H) Hydraulic and Air Compressor system PLC/Instrument Upgrade	100,000
SNWS - SCADA PC/Server Hardware Upgrades	100,000
SNWS Network Switch Upgrades	100,000
Backup Microwave Communications Links	100,000
West Valley Lateral Site - Vault Access Upgrades	150,000
SNWS - Replace PLC 5 Processors and Remote Racks from Treatment Sites	150,000
AMSWTF Backwash Pump Replacement	160,000
UPS Replacement and DC Plant Upgrade for all SNWS Distribution Sites.	180,000
AMSWTF - Construct a Laydown Area Adjacent to PS1C Project	200,000
South Valley Regulating Tank Site - SVRT Interior Joint Sealing	200,000
SNWS - ControlLogix Hardware Upgrades	200,000
RMWTF - New roofs for Lab	200,000
AMSWTF Site - Drying Beds Influent Valve LCP Upgrades	205,000
Pumping Station Four Site - Install New Pumps PS-4 (Five each)	250,000
Pumping Station Five Site - Install New Pumps PS-5 (Five Each)	250,000
SNWS - Replace PLC 5 Processors and Remote Racks from Production Sites	250,000
Multi-Site - Network Database Implementation	250,000
Building Energy Management and Control Expansion	255,520
AMSWTF Process Drainage Improvements	300,000
SNWA SONET Transport Ring Replacement and DWDM Upgrades	400,000
ROFC 6A Site - Overflow Piping Modifications	500,000
AMSWTF Site - Network Improvements to Filter Gallery	500,000
AMSWTF Site - PP1A Flooring Replacement Project	500,000
Multi Sites - Install LED Lighting	500,000
RMWTF Site - Replace Chemical Piping	520,000
South Valley Lateral Site - Actuator Replacement Project	750,000
AMSWTF Site - New SNWA Communications Room	750,000

**Southern Nevada Water Authority**  
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Multi-Site - Medium Voltage Electrical Equipment Upgrades	2,800,000
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<b>Subtotal</b>	<b>\$ 11,712,289</b>
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**4100 - Operations**

SNWA - PS2B 48VDC Battery Plant Upgrade	\$ 55,053
Replace Grand Teton ROFC Inlet and Outlet Isolation Valves and Actuators	82,500
Recoat Pump Casings at BPS1A and BPS2	110,000
SNWA - BPS2 Replace 36" Discharge Isolation Valves	129,536
SNWA - Hacienda PS Replace Discharge Isolation Valves with Gate Valves	137,500
SNWA - Simmons PS Replace Discharge Isolation Valves and Actuators	173,920
Magic ROFC Control Valve Actuator Replacement	220,000
SNWA - BPS2 Replace 48" Suction Isolation Valves	226,688
SNWA - BPS1A Replace 36" Discharge Isolation Valves	259,072
SNWA - BPS1A Replace 48" Suction Isolation Valves	323,840
SNWA - Replace Sloan ROFC Isolation Valves and Actuators	330,000
SNWA - BPS1A Replace Trident Actuators on Cone Valves	330,000
PS 1A, 2A, 1B and 2B Pump Repairs and Flow Meter Installation	340,130
SNWA - BPS2 Replace Trident Actuators on Cone Valves	385,000
Machine Shop Equipment	450,648
SNWA - Replace SCUBA Actuators at Sloan and Lamb PS	550,000
Hacienda Pump Station Replace Cone Valve Actuators	660,000
Sleeve and Miscellaneous Valve Repairs (340V)	1,159,785
System Wide Valve Actuator Upgrades	2,200,000

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<b>Subtotal</b>	<b>\$ 8,123,671</b>
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**4300 - Information Technology**

Oracle Financials + Chart of Accounts	\$ 584,796
Enterprise Asset Management Software Replacement	3,175,000
LIMS Replacement	2,220,000

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<b>Subtotal</b>	<b>\$ 5,979,796</b>
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**4500 - Water Quality & Treatment**

Pilot Plant Area Restoration Project	\$ 100,000
Ozone System Related Needs	165,000

**Southern Nevada Water Authority**  
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R&D Necessary Unforeseen Projects	275,000
RMWTF Microbiology Research Laboratory Retrofit	505,000
SNWA Necessary Unforeseen Projects	550,000
Innovation Projects	550,000
Water Quality Testing Equipment	611,325
<b>Subtotal</b>	<b>\$ 2,756,325</b>

**7100 - Water Resources**

Warm Springs Bath House	40,000
Install Cover over the Ranch Fuel Site	\$ 40,000
SNWA - NR Ranches - Domestic Wells	96,250
Livestock Wells	125,000
Mountain Block Pipeline Replacement	192,500
Warm Springs Natural Area - Trail and Warm Springs Road Crosswalk	312,941
Interim Colorado River Supplies - Water Banking	1,100,000
Irrigation Well Replacement - Northern Ranches	1,200,000
Interim Colorado River Supplies - Project Management	1,200,000
Future Water Supplies - Contingency	1,297,958
Virgin and Muddy Rivers Water Resource Acquisition & Tributary Conservation ICS	2,500,000
Future Water Supplies	4,000,000
Water Resource Acquisition and Development - Conservation - Water Smart Landscape Program	24,835,607
<b>Subtotal</b>	<b>\$ 36,940,256</b>

<b>TOTAL CAPITAL PROJECTS</b>	<b>\$ 172,169,922</b>
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<b>TOTAL CAPITAL BUDGET</b>	<b>\$ 175,537,731</b>
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SOUTHERN NEVADA WATER AUTHORITY®

2020

## MAJOR CONSTRUCTION AND CAPITAL PLAN





## **MISSION**

Our mission is to 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.

The Southern Nevada Water Authority (SNWA) is a cooperative, not-for-profit agency formed in 1991 to address Southern Nevada's unique water needs on a regional basis.

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MAJOR CONSTRUCTION AND CAPITAL PLAN

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## MAJOR CONSTRUCTION AND CAPITAL PLAN INTRODUCTION

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The Southern Nevada Water Authority (SNWA) was formed in 1991 by a cooperative agreement among seven water and wastewater agencies. Collectively, the SNWA member agencies serve more than 2.2 million residents in the cities of Boulder City, Henderson, Las Vegas, North Las Vegas and areas of unincorporated Clark County. As their 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.

### SNWA Member Agencies:

- Big Bend Water District
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

### Major Construction and Capital Plan Background

Efforts to manage Southern Nevada's water resources in a cooperative manner began in the middle of the 20th century when local municipalities, the State of Nevada, and the federal government together began exploring options to deliver Colorado River water to the Las Vegas Valley on an extensive scale. These efforts resulted in a plan for staged financing and construction of the Southern Nevada Water Project. Under the direction of the United States Bureau of Reclamation and the Colorado River Commission of Nevada, the first stage of facilities for pumping, treating and conveying up to 200 million gallons per day (mgd) of Colorado River water from

Lake Mead to the Las Vegas Valley and Boulder City was completed in 1971. An expansion of these facilities to a capacity of 400 mgd was accomplished in 1982. These facilities collectively became known as the Southern Nevada Water System (SNWS).

Ongoing growth in Southern Nevada and increasing demands on the SNWS prompted the SNWA to engage community stakeholders in developing a Capital Improvements Plan (CIP) to expand the SNWS to a regional capacity of 900 mgd. When faced with mission-critical decisions, the SNWA often relies on stakeholder advisory committees to consider community impacts and make recommendations. In 1994, the SNWA established an advisory committee that considered how the water system would need to expand to provide the redundancy and capacity the community required. One of their principal recommendations was for the community's regional water system to achieve a capacity of 900 mgd.

By 1996, all the projects initiated by the Colorado River Commission over the previous three years and all the projects identified through the SNWA's stakeholder planning process had been consolidated into a single CIP. These projects included a second water intake in Lake Mead, a new water treatment facility, and a substantial contingent of water pipeline, pumping, and power supply facilities.

As the progress of the CIP began to approach the goal of a total SNWS capacity of 900 mgd, the SNWA recognized a new capital plan was needed that would provide for accomplishment of capital endeavors which were not directly related to the capacity goal. Such endeavors could include acquiring additional water resources, major system repairs and replacements, water quality enhancements, new

facilities needed for increased reliability, and acquiring energy resources. To identify and authorize these endeavors, in 2002, the SNWA created a new capital plan called the **Major Construction and Capital Plan (MCCP)**.

Since 2002, the MCCP has been updated regularly and modified in size and scope to appropriately meet the changing water needs of the community. In 2010, given that the original purpose of the CIP had been achieved and given the MCCP's greater role as the dynamic document that defines the future major capital initiatives of the SNWA, the few remaining projects of the CIP were integrated into the MCCP and the MCCP became the single capital plan combining all authorized capital projects and initiatives into a unified document. It reports on the costs of all completed projects of the SNWA. It defines all authorized projects and initiatives for new facilities, acquisition of assets such as water and energy resources, and all other capital related activities. It also identifies estimated costs and schedules for all approved projects and initiatives.

The projects outlined within the MCCP are funded by SNWA bond proceeds and revenues generated by SNWA water bill charges, connection charges, State Sales Tax, and Southern Nevada Public Land Management Act funds.

## **INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE 2020 PROCESS**

As part of its future planning efforts, the SNWA identified a number of projects that had been deferred, facilities needed to meet new demands and projects that if constructed, would capture valuable Colorado River resources for return-flow credits that would otherwise not be returned to Lake Mead.

To ensure community input into the planning process, the SNWA Board convened an advisory committee to consider the projects and resources needed to continue serving customers into the future. Following a comprehensive education, the committee recommended a package of new infrastructure, water resources, power projects and conservation initiatives to support Southern Nevada.

## **2020 MCCP**

The amended 2020 MCCP represents a major update to the document, including its look and organization. The 2020 MCCP includes a wide variety of projects,

acquisitions, and initiatives addressing various objectives. To facilitate clarity and order, projects, acquisitions and initiatives are organized by chapters corresponding to their general purpose or other distinguishing characteristics, and are organized as follows:

**Chapter 1: System Expansion.** These projects are considered new water facilities to meet new anticipated demands within the service area or to facilitate water deliveries in areas where water systems have not yet been constructed. It also includes projects to support the SNWA's efforts to increase its renewable energy resources and maximize the sustainable use of Colorado River supplies.

**Chapter 2: Water Resources and Conservation.** Water resource projects are assets that require capital funding, but may not involve the construction of SNWA facilities. This chapter also includes the Water Smart Landscapes Program – one of the most important conservation investments the SNWA has made over time.

**Chapter 3: System Maintenance and Upgrades.** Projects, acquisitions or initiatives described in this chapter are needed to maintain the existing system or improve system reliability.

The chapters include project descriptions to outline intent and purpose, and the estimated costs to complete each project, which includes – where applicable – administration, design, construction and contingency amounts.

The appendices also include related information, including projected future cash flow and completed projects.

The MCCP is periodically revised in response to future reliability, water quality, system capacity, and water resource needs and in accordance with the SNWS Facilities and Operations Agreement.



## MAJOR CONSTRUCTION AND CAPITAL PLAN - CHAPTER 1

### SYSTEM EXPANSION

#### PROJECTS:

- Horizon Lateral
- Garnet Valley Water System
- Garnet Valley Wastewater System
- Large Scale Solar Photovoltaic (PV) Project
- Low Lake Level Pumping Station (L3PS)

#### Overview

The SNWA continues to assess its existing regional water system needs and proposes projects necessary to meet future demands. Recently completed major projects include the Low Lake Level Pumping Station (2020) and Intake No. 3 (2015); however, those were designed and constructed to respond to drought conditions and not necessarily to meet future demands.

With economic development opportunities in Southern Nevada's horizon, the regional water system requires new, additional facilities to provide the capacity for new demands while maintaining or improving existing service levels for customers.

Projects included within the 2020 amendment include a new water transmission lateral at the southern portion of the community. In the northern area of the valley, wastewater conveyance lines are contemplated to ensure Colorado River water deliveries are efficiently used and returned to Lake Mead for use again.

Other projects include a solar project and final efforts on the Low Lake Level Pumping Station.



#### SPOTLIGHT ON: The Horizon Lateral

Approximately 40 percent of the residents and businesses in the southern portion of the Las Vegas Valley are currently served by the South Valley Lateral, which is projected to reach 95 percent capacity by 2034. The single-feed transmission lateral does not have redundant facilities to provide back-up water service to the area, highlighting the need for an additional lateral to ensure future reliability and system capacity.

To ensure system redundancy and reliability in the south part of the valley, and to support Southern Nevada's economic development, the SNWA is considering the Horizon Lateral, which will increase the transmission system capacity from the current 306 million gallons per day (MGD). A feasibility study is being prepared for the Horizon Lateral infrastructure and alignment that will define the recommended capacity, pipeline sizes, reservoir location, pumping station size and location, purveyor turnout locations, and pipeline alignments.

The Horizon Lateral project is expected to include:

- Approximately 24 miles of pipeline ranging between 72 and 120 inches in diameter
- Approximately 7 miles of tunneling
- 2 Pump Stations
- 40 Million Gallon Reservoir(s)
- Rate-of-Flow Control Stations



## Horizon Lateral

The Horizon Lateral represents the largest project proposed within this MCCP amendment in terms of both cost, timeline and magnitude. When completed, the new lateral will offer redundancy for a large portion of SNWA customers and the capacity to meet new demands in the southern portion of the water system. For more details about the Horizon Lateral project, refer to the sidebar on the previous page.

## Garnet Valley Water System

The APEX Industrial Park is one of Southern Nevada's largest industrial parks located in Garnet Valley in North Las Vegas. The 16-parcel industrial park includes more than 11,000 acres and is attracting technology- and manufacturing-based businesses.

When completed, the Garnet Valley Water System will support the water needs of the Apex Industrial Park. The Garnet Valley Water System will consist of facilities to support supplying 20 million gallons per day (MGD) at full build-out and includes:

- 18 miles of pipeline, 16 inches to 36 inches in diameter
- 1 reservoir (4 million gallons)
- 3 pumping stations with a capacity of 5 MGD
- 2 forebays
- 2 Rate-of-Flow Control Stations (20 MGD total)

## Garnet Valley Wastewater System

Southern Nevada maximizes its water resources by treating and recycling 99 percent of the water used indoors in its service area. Treating wastewater and returning it to Lake Mead extends the availability of our water resources through return-flow credits.

Construction of the Garnet Valley Wastewater System will help ensure the sustainable development of resources and reduce water demand impacts to the Colorado River. The wastewater project will support the agency's efforts to maximize our water resources by developing the infrastructure required to capture indoor wastewater from the Garnet Valley area and transport it to existing treatment facilities in accordance with SNWA's out-of-valley water use policy. The project consists of:

- 5 wastewater lift stations
- 43 miles of wastewater pipeline from 8 inches to 48 inches in diameter
- 8 miles of force main pipe from 14 inches to 30 inches in diameter

## Large Scale Solar Photovoltaic (PV) Project

A considerable amount of energy is required to pump water uphill from Lake Mead into the Las Vegas Valley, where SNWA member agencies then distribute it to homes and businesses. SNWA is one of the largest energy users in Southern Nevada, and power is a significant portion of the cost of treating and delivering water.

The Large Scale Solar Photovoltaic (PV) Project ensures a clean, cost-effective renewable energy source for the next 25 years and is essential for meeting the Nevada Renewable Portfolio Standard of 50 percent by 2030. Currently, renewable energy is approximately 21 percent of SNWA's existing power portfolio, and this project will ensure SNWA meets the state-mandated standards by securing 88 megawatts (MW) of solar energy for SNWA and 30 MW for several of its purveyor members.

As part of this project, SNWA will enter into a 25-year, fixed-rate Power Purchase Agreement (PPA) with ibV Energy Partners, which will build, operate and maintain the large-scale solar PV facility. The PPA allows SNWA to purchase power below current market cost, saving money when the facility opens in 2023 and throughout the span of the agreement. In addition to the PPA, the project consists of a 10-mile expansion to SNWA's existing power transmission system, a double-circuit 230 kV power line, 230 kV Switchyard and other infrastructure to support energy transmission.

## Low Lake Level Pumping Station (L3PS)

The Low Lake Level Pumping Station ensures Southern Nevada maintains access to its primary water supplies in Lake Mead even if water levels decline due to drought.

Development of the pumping station located in the Lake Mead National Recreation Area involves construction of a 26-foot diameter access shaft more than 500 feet deep and the excavation of a 12,500-square-foot underground forebay. The forebay connects with 34 vertical shafts—each 500 feet deep and 6 feet in diameter—to accommodate the station's submersible pumping units.

During construction, SNWA closed off an access trail to the lake to secure a large area in which to stage the construction, which began in mid-2015 and was completed in April 2020.

This capital will fund final project close-out activities that include contractor retention fees, restoring 10 miles of Lakeshore Road, re-establishing public access to the trail that has been inaccessible during

construction, removing a construction access road, and restoring the entire staging area to its pre-construction state.

## SYSTEM EXPANSION PROJECTS

TITLE (Projected Completion Year)	ESTIMATED COST TO COMPLETE (Estimates in 2019 million dollars)
Horizon Lateral (2032)	\$ 1,596.7
Garnet Valley Water System (2028)	129.8
Garnet Valley Wastewater System (2027)	120.0
Solar PV Project (2022)	20.8
Low Lake Level Pumping Station (2021)	16.4
<b>TOTAL SYSTEM EXPANSION PROJECTS</b>	<b>\$1,883.7</b>

*Totals are rounded*

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## MAJOR CONSTRUCTION AND CAPITAL PLAN - CHAPTER 2

# WATER RESOURCES

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### PROJECTS:

- Future Water Resources
- Water Smart Landscape Rebate
- Water Resource Contingency
- Virgin and Muddy River Water Resource Acquisition
- Minute 323
- Interim Colorado River Supplies – Water Banking

### Overview

Water resources represent a significant and important asset for SNWA and require capital funding to acquire and maintain. While this chapter provides a brief description of resources funded within this MCCP, the SNWA Water Resource Plan provides a comprehensive overview of all SNWA water resources and how they're managed and utilized to meet demands over a 50-year planning horizon.

The estimated total spend for water resource projects over a 10-year planning horizon is \$1,068.6 million.

### Future Water Resources

SNWA is working to further diversify its water resource portfolio and has identified potential resource options, including investments in water recycling and/or desalination projects developed in partnership with other Colorado River Basin states. In these projects, SNWA would fund part of the construction of the facilities, or lease/purchase water produced by the facilities, in exchange for a portion of that partnering state's Colorado River allocation. Projects under consideration include the Metropolitan Water District of Southern California

(MET) Recycled Water Purification Center and the Yuma Desalting Plant in Arizona.

MET, in collaboration with the Los Angeles County sanitation districts, is proposing an advanced water treatment plant to treat wastewater and inject it into groundwater aquifers for future use. The project would create approximately 112,000 acre-feet of water per year. SNWA would partner with MET to help fund a portion of the project in exchange for MET using less of its Colorado River allocation, which SNWA would then utilize and access via Lake Mead.

SNWA also is considering supporting the retrofit of the Yuma Desalting Plant. Built in 1992 to treat agricultural runoff, the plant has operated only three times due to damage caused by a flood and lack of funding. SNWA may have the opportunity to participate in the plant's repair and long-term operation, which could yield up to 30,000 acre-feet of water per year.

Unlike typical construction projects, these water resource acquisitions require negotiations with willing partners. At the time of this plan's development, these were likely options, but neither have finalized opportunities for partnerships. Including these options within the MCCP and establishing a funding threshold approval ensures the SNWA is prepared to take action on valuable water resources when the opportunities arise.



### Water Smart Landscape Rebate

The Water Smart Landscape (WSL) rebate offers financial incentives to residential and commercial customers in the SNWA service area who replace water-thirsty grass with water-efficient landscaping. Since the majority of Southern Nevada's water is used outdoors on landscaping, the WSL program targets the largest consumptive use of water as a top priority.

This capital funding is capable of providing rebates for approximately 5 million square feet of non-functional turfgrass each year. To sustain results, participants in the program must grant a conservation easement that promises the project will be sustained in perpetuity. This capital funding supports the program funding and the easements associated with the property at which the grass is removed.

### Water Resource Contingency

SNWA has successfully partnered with the other Colorado River Basin states and the country of Mexico to flexibly manage Colorado River resources, which have been threatened by drought for two decades. The water resource contingency capital will provide SNWA the funding required to react to changing conditions on the Colorado River and act on developing additional water supplies when opportunities become available.

### Virgin and Muddy River Water Resource Acquisition

These costs represent the acquisition of water shares in irrigation companies on the Muddy and Virgin rivers.

### Minute 323

The United States and Mexico finalized Minute 323 to the 1944 U.S./Mexico Water Treaty in September 2017. Minute 323 helps maintain Lake Mead water levels, delay potential shortages and create additional certainty for all water users, particularly during shortages. This capital funding supports SNWA efforts to invest in conservation and infrastructure projects in Mexico in exchange for Bi-National Intentionally Created Surplus credits.

### Interim Colorado River Supplies – Water Banking

This project includes funding for temporary water supplies: Colorado River system conservation projects, interstate water banking, and SNWA activities with Colorado River basin states that alleviate impacts of the ongoing drought, and more specifically, recovery activities associated with banked resources. Colorado River system conservation and drought-related activities develop water resources to bolster Lake Mead water elevation and protect short-term water supplies, water quality, and operation of SNWA intakes.

## WATER RESOURCES

TITLE	ESTIMATED COST TO COMPLETE
	(Estimates in 2019 million dollars)
Future Colorado River Resource Acquisitions	\$ 587.7
Water Smart Landscape Program Rebates	152.3
Water Resource Contingency	188.3
Virgin and Muddy River Resource Acquisitions	98.4
Minute 323	36.4
Interim Colorado River Supplies – Water Banking	5.5
<b>TOTAL WATER RESOURCES COSTS</b>	<b>1,068.6</b>

*Totals are rounded*



## MAJOR CONSTRUCTION AND CAPITAL PLAN - CHAPTER 3

# SYSTEM MAINTENANCE AND UPGRADES

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### PROJECTS:

- Stage II Reliability Upgrades
- Stage II Multi-site Medium Voltage Electrical Equipment Upgrades
- Ozone Equipment Upgrade
- AMSWTF Filter Improvements
- In-Valley Maintenance Shop
- Enterprise Asset Management Software Replacement
- RMWTF Microbiology Research Lab Expansion
- Water Quality Testing Equipment
- System-wide Valve Actuator Upgrades
- SCADA System Replacement
- Joint SCADA Site

### Overview

Maintaining a world class water system requires ongoing repair, upgrade and investment. The projects outlined within this chapter represent those efforts to support existing infrastructure in a way that significantly upgrades the facilities:

### Stage II Reliability Upgrades

These improvement projects are associated primarily with SNWA water conveyance infrastructure along the Pittman Lateral which serves the central Las Vegas Valley. The upgrades will improve reliability for customers in older, more established areas of Southern Nevada.

The Stage II Reliability Upgrades consist of modifications to the Hacienda Pumping Station,

rehabilitation of portions of the Pittman Lateral, and localized improvements that would enhance the reliability of delivery along this central corridor, including upgrades to the Gowan, Simmons, Lamb and Sloan pumping stations.

The Hacienda Pumping Station has a conveyance capacity of 180 million gallons per day (MGD) and serves a critical, central area of the Las Vegas Valley. To ensure future reliability, protect against facility aging, provide redundancy in the water delivery system and prevent water loss, additional capital investments are necessary.

This project also includes construction of a new 80 MGD pumping station at the Las Vegas Valley Water District's (LVVWD) Campbell Reservoir site and approximately 1.75 miles of 66-inch diameter discharge pipeline from the new pumping station to the existing Hacienda Pumping Station discharge pipeline. This will facilitate rehabilitation work at the Hacienda Pumping Station.

Additional upgrades to facilities at Sloan, Lamb, Gowan and Simmons pumping stations will be needed to support this project. These upgrades will provide additional back-feed capacity of up to 50 MGD. This capital project includes:

- 1.75 miles of 66-inch diameter pipeline from Campbell to Hacienda Pumping Station
- 4 new pumps to existing pump barrels at Sloan Pumping Station with electrical upgrades
- 4 new pumps to existing pump barrels at Lamb Pumping Station with electrical upgrades
- 30-inch pipeline and two 16-inch pressure reducing valves with electrical upgrades at Gowan Pumping Station
- 60-inch pipeline and 60-inch bypass valve at Simmons Pumping Station

## **Stage II: Multi-site Medium Voltage Electrical Equipment Upgrades**

Pumping station switchgear that incorporates fuse clip technology has experienced failures, creating water delivery challenges and potential safety concerns for staff. The switchgear — used to control, protect and isolate large pumps — will be replaced at five pumping station sites.

### **Ozone Equipment Upgrade**

In 2002 and 2003, the SNWA implemented Ozone as a primary disinfectant at the Alfred Merritt Smith Water Treatment Facility (AMSWTF) and at the River Mountains Water Treatment Facility (RMWTF).

The systems have been operating continuously for the past 17 years. As the systems age, the potential for equipment failure increases and replacement parts become difficult to acquire. In order to maintain water quality levels, SNWA will fund an analysis of the existing system and, based on the analysis, upgrade or replace the ozone equipment at both treatment plants.

### **AMSWTF Filter Improvements**

The water treatment filters at the AMSWTF have provided reliable service to SNWA's water treatment process since the facility first opened in the 1970s. Due to age and increasing turbidity in the raw water supply due to a drop in Lake Mead's water levels, these filters and related media used to remove sediment and impurities from the water need to be upgraded and deepened. This project consists of demolishing the old filter blocks, raising the height of filter center channel walls, installing new filter blocks, and replacing 135 valves in 15 filters.

### **In-Valley Maintenance Shop**

This project included the design and construction of a maintenance building to support SNWA's water system maintenance activities, including staff, materials and related equipment. The In-Valley Maintenance Shop will provide a centralized location for SNWA to store and use specialized tools and conduct water system repair and maintenance projects. The new facility will improve work efficiencies and reduce travel time required to transport equipment and materials to various sites and locations around the valley.

## **Enterprise Asset Management Software Replacement**

Proactively maintaining, protecting and updating the infrastructure required to meet Southern Nevada's water demands requires a software management system that can track preventative maintenance required at water treatment and transmission facilities and the associated assets such as pipelines, valves, motors, electrical switchgear and pumps. This project consists of replacing outdated, inefficient technology with a software package that allows staff to more effectively manage the agency's many facilities and assets. In addition to maintaining an inventory of these assets and maintenance schedule, the system will also help manage the workflow and costs associated with SNWA's maintenance activities.

### **RMWTF Microbiology Research Lab Expansion**

The SNWA Water Quality Research & Development (R&D) Team conducts cutting-edge water quality research on contaminants of emerging concern and advanced treatment technologies. Since its inception in 2000, the R&D team has helped develop patented technology and has procured \$10 million of external research funds to study emerging water quality issues.

To date, the R&D Team has primarily focused its research on chemical contaminants such as bromate and pharmaceuticals. Emerging water quality issues that include Legionella, antimicrobial resistance and algal toxins create new challenges for the water industry, and the Microbiology Research Laboratory will allow SNWA to establish itself as an R&D leader in microbiology.

This project will facilitate building a 5,500 square-foot, state-of-the-art microbiology research facility. The new building will be located adjacent to the existing R&D laboratories at the RMWTF and include the facilities and equipment necessary to conduct leading-edge microbiology research using a combination of culture methods, molecular methods and microscopy.

### **Water Quality Testing Equipment**

Annually, SNWA's water quality scientists collect nearly 55,000 water samples and conduct nearly 300,000 analyses of those samples. Testing for more than 160 regulated and unregulated contaminants, SNWA experts monitor water quality in real time, 24

hours a day, 365 days a year. These intensive testing process allow staff to detect contaminants at concentrations of parts per billion, and as technology improves, efficiently identifying contaminants in even smaller concentrations.

The SNWA Water Quality Compliance Laboratory and the Water Quality Research Laboratory provide the infrastructure necessary to meet federal Safe Drinking Water Act standards and support the agency's efforts to provide a clean, safe water supply. Both laboratories contain specialized, sensitive water quality testing equipment. This capital project will provide the funding necessary to replace that equipment as it becomes outdated or needs to be replaced with newer technology.

### System-wide Valve Actuator Upgrades

As the SNWA water system matures, proactively replacing aging infrastructure is essential to the reliable, cost-efficient operation of the water transmission and distribution systems. Several large valves in the SNWA water system are 50 years old or more, reaching the end of the service lifecycle. Maintaining service reliability, SNWA will update the valve actuators and continue its proactive valve maintenance programs.

### SCADA System Replacement

SNWA's water system operators use Supervisory Control and Data Acquisition system (SCADA) to monitor and control the water treatment and distribution system to ensure the safe and reliable delivery of water. This project will replace an existing SCADA with a new SCADA system that simplifies system maintenance and implements new features to help operate the water treatment and distribution system more efficiently. The Las Vegas Valley Water District and Big Bend Water District also are implementing the new SCADA system, creating operating synergies between SNWA and the two water purveyors.

### Joint SCADA Site

SNWA is evaluating the current SCADA operations to determine the feasibility of consolidating current SCADA control rooms and the operations staff from multiple locations to a single site. This capital would provide for modifying an existing space or constructing a new space for the colocation of SNWA and Las Vegas Valley Water District SCADA teams in one centralized SCADA control site.

## SYSTEM MAINTENANCE AND UPGRADE PROJECTS

TITLE (Projected Completion Year)	ESTIMATED COST TO COMPLETE (Estimates in 2019 million dollars)
Stage II Reliability Upgrades (2024)	\$ 61.0
Stage II Multi-site Medium Voltage Electrical Equipment Upgrades (2024)	10.5
Ozone Equipment Upgrade (2025)	38.5
AMSWTF Filter Improvements (2022)	20.7
In-Valley Maintenance Shop (2024)	20.0
Enterprise Asset Management Software Replacement (2027)	15.5
RMWTF Microbiology Research Lab Expansion (2024)	16.0
Water Quality Testing Equipment (2029)	11.8
System-wide Valve Actuator Upgrades (2023)	6.6
SCADA System Replacement (2023)	5.0
Joint SCADA Site (2026)	7.7
<b>TOTAL SYSTEM MAINTENANCE &amp; UPGRADES</b>	<b>\$213.3</b>

Totals are rounded

## MCCP TOTAL COSTS

PROJECT TITLE	ESTIMATED COST TO COMPLETE
	<i>Estimate in 2019 million dollars</i>
Horizon Lateral	\$ 1,596.7
Garnet Valley Water System	129.8
Garnet Valley Wastewater System	120.0
Solar PV Project	20.8
Low Lake Level Pumping Station	16.4
Water Smart Landscape Program Rebates	152.3
Future Colorado River resource acquisitions	587.7
Water Resource Contingency	188.3
Virgin and Muddy River Resource Acquisitions	98.4
Minute 323	36.4
Interim Colorado River Supplies – Water Banking	5.5
Stage II Reliability Upgrades	61.0
Stage II Multi-site Medium Voltage Electrical Equipment Upgrades	10.5
Ozone Equipment Upgrade	38.5
AMSWTF Filter Improvements	20.7
In-Valley Maintenance Shop	20.0
Enterprise Asset Management Software Replacement	15.5
RMWTF Microbiology Research Lab Expansion	16.0
Water Quality Testing Equipment	11.8
System-wide Valve Actuator Upgrades	6.6
SCADA System Replacement	5.0
Joint SCADA Site	7.7
<b>TOTAL MCCP</b>	<b>\$3,165.6</b>

*Totals are rounded*





## MAJOR CONSTRUCTION AND CAPITAL PLAN **APPENDICES**

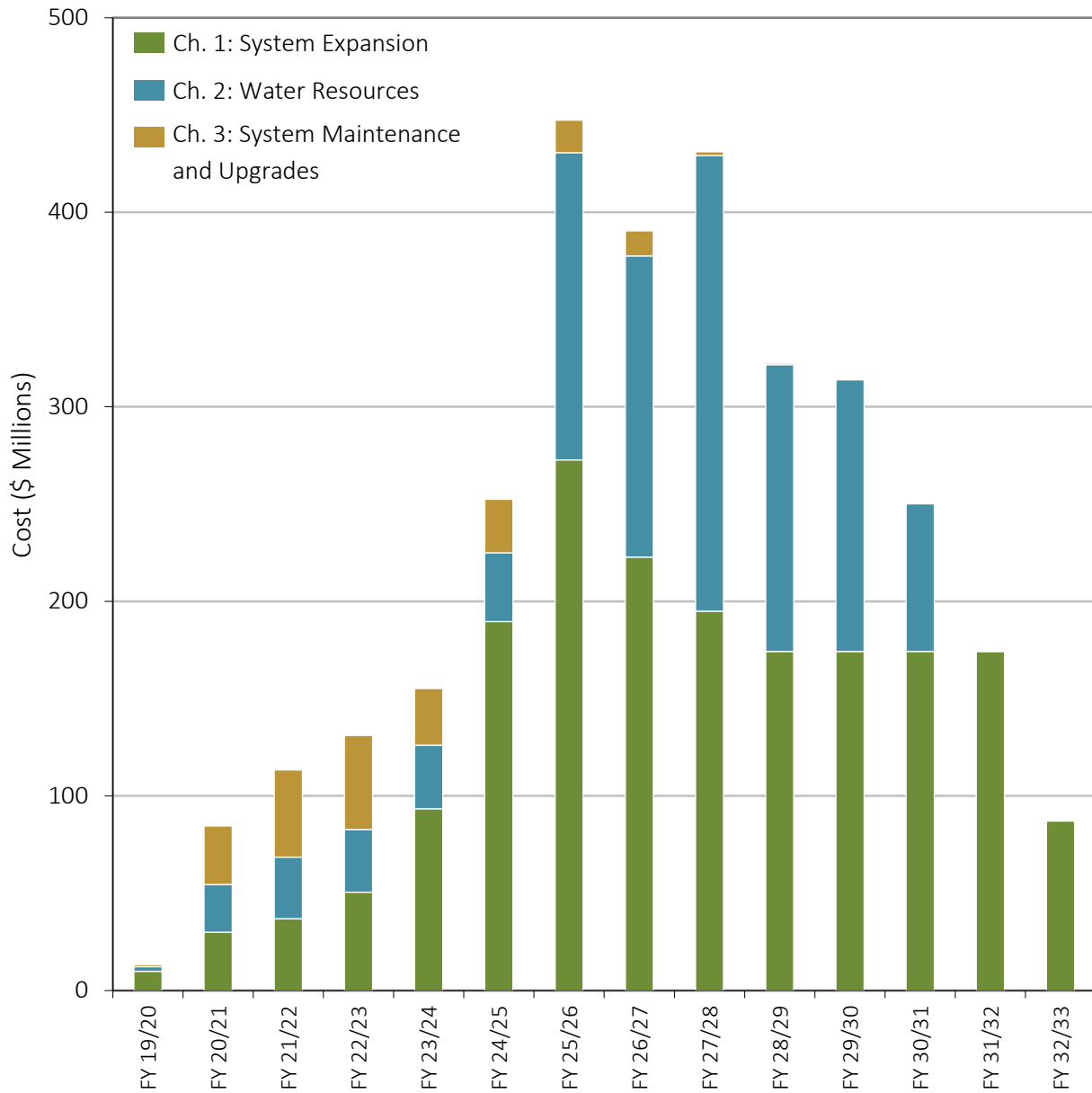
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**Appendix A – Cash Flow**

**Appendix B – Completed Projects**

## APPENDIX A: Cash Flow

### MCCP Projected Cash Flow



## APPENDIX B: Completed Projects

Project Number	Project Title	Completion Year	Actual Cost (\$ Millions)
.	Planning/Environmental for 1995 CIP Administrative		41.2
.	Operational Decision Support System	1997	1.3
B01	Batch Plant at AMSWTF	1997	1.8
C11	Communications	1997	1.3
D01	Scrubber Prepurchase at AMSWTF	1997	0.0
D11	Disinfection Facilities Upgrades at AMSWTF	1997	4.1
F11	Filter Additions at AMSWTF	1997	11.1
H01	Hacienda Pumps Prepurchase	1997	0.0
L11	Low Lift Pump Station	1997	0.0
M11	Gibson Lateral (48" - 2.0 miles)	1997	5.4
P11	Plant Improvements at AMSWTF	1997	9.2
P12	Plant Mass Excavation at AMSWTF	1997	0.6
R11	River Mountains Tank (46 MG)	1997	15.9
R12	River Mountains Tank Mass Excavation	1997	1.9
S11	Simmons Pumping Station (71 mgd)	1997	9.0
T01	Valve Prepurchase	1997	1.0
T11	River Mountains Tunnel (144" - 4.0 miles)	1997	20.5
T12	River Mountains Tunnel Portal Connection	1997	13.7
T13	River Mountains Regulating Tank Mass Excavation	1997	1.4
W11A	West Valley Lateral (60" - 3.3 miles) - Section A	1997	17.4
W11B	West Valley Lateral (60" - 2.9 miles) - Section B	1997	15.4
10010C	Substation Mass Excavation	1997	6.9
08010K	East C-1 Detention Basin	1999	7.7
08010L	Chemical Containment System at AMSWTF	1999	1.8
10010Z	CRC Power Development (Phase I)	1999	46.2
11010A	River Mountains Lateral (72" - 3.8 miles)	1999	9.6
11010B	South Valley Lateral - Major Crossings	1999	6.1
11010C	South Valley Lateral (108" - 9.8 miles)	1999	24.6
11010D	Foothills 2210 Pumping Station (140 mgd)	1999	20.1
11010E	River Mountains 2530 Pumping Station (140 mgd)	1999	24.6
11010G	Horizon Ridge 2375 Reservoir (10 MG), South Valley Lateral Regulating Reservoir (4 MG)	1999	13.5
11010H	South Valley Lateral (90" - 5.0 miles, 54" - 0.2 miles)	1999	14.6
11010I	South Valley Lateral - MacDonald Ranch (108" - 1.1 miles)	1999	5.8
11010J	South Valley Lateral Communications	1999	2.9
11010K	South Valley Lateral (84" - 6.8 miles)	1999	20.9
11010L	Burkholder 2210 Regulating Reservoir (25 MG)	1999	14.9
11010M	Rate-of-Flow Control Station	1999	8.0



11010P	Pipe Prepurchase (108")	1999	27.0
11010Q	Pipe Prepurchase - 11010H Phase I (90")	1999	1.8
11010R	So. Valley Lateral Regul Resv Inlet/Outlet Pipeline (90" - 0.6 miles, 54" - 0.2 miles)	1999	2.6
11010S	South Valley Lateral - MacDonald Ranch Extension (108" - 0.4 miles)	1999	2.0
11010T	South Valley Lateral Controls	1999	1.0
11010W	South Valley Lateral - Disinfection (Complete)	1999	0.5
11010X	Black Mountain Rate-of-Flow Control Station (25 MG)	1999	3.0
11010Z	R-8 Lateral (24" - 0.8 miles)	1999	1.0
12010A	SNWS Phase II Mass Excavation	1999	2.4
12010B	SNWS Phase II System "C" (225 mgd) (27 MG)	1999	75.5
08010C	Ozone Addition to Alfred Merritt Smith Water Treatment Facility (Pre-design)	2000	0.6
08010D	Site Preparation for Ozone Addition to AMSWTF	2000	4.2
090A	Water Resource (Coyote Spring Valley)	2000	31.6
10010M	Nevada Power Company Connections to Sloan PS and Lamb PS	2000	1.4
13010A	East Valley Lateral - Hollywood/DI to Sloan PS (78" - 2.7 miles)	2000	22.4
13010B	East Valley Lateral - Sloan Pumping Station to Las Vegas Bldg. (78" - 5.7 miles)	2000	22.8
13010C	East Valley Lateral - Las Vegas Blvd. To Lamb PS (78" - 4.5 miles)	2000	22.7
13010D	Sloan 2160 Pumping Station (20 mgd)/Structure (175 mgd)	2000	32.2
13010E	Lamb 2350 Pumping Station (20 mgd)/Structure (175 mgd)	2000	26.4
13010F	Grand Teton 2330 Reservoir (10 MG)	2000	12.5
13010I	Disinfection Facilities: Carlton Square/Twin Lakes	2000	3.3
13010J	East Valley Lateral Communications	2000	2.4
13010T	East Valley Lateral Controls	2000	0.5
13010W	East Valley Lateral Disinfection	2000	0.3
10020A	CRC Power Development Project (Phase II)	2001	11.8
10020B	CRC Power Development Project (Phase III)	2001	14.3
07010A	Lake Mead Intake No. 2 (100 mgd)	2002	104.7
07010B	Raw Water Pumping System (108" - 2.0 miles 100 mgd)	2002	143.3
07010C	River Mountain Aqueduct (108" - 3.2 miles)	2002	18.1
07010E	Basic Water Company Pipeline Relocation	2002	0.6
08010A	RMWTF direct Filtration (150 mgd); Ozone at RMWTF (150 mgd); Clearwell Exp. 25 MG/50 MG total)	2002	266.8
08010H	AMSWTF Modulating Weirs	2002	0.4
08010J	Intake System and RMWTF Communications	2002	2.6
08010M	Magic Way RMWTF Entrance Improvements	2002	3.6
08010N	RMWTF Temporary Fluoridation	2002	1.3
10510A	NPC - Leased Fiber Optic systems - Phase I	2002	0.7
13510A	Boulder City Water Delivery Improvements (30" - 7.0 miles, 10 mgd)	2002	24.3
14010A	NVL - Washburn Rd to Decatur 2350 Res. (24" to 72" - 6.0 miles)	2002	12.0
14010B	Carlton Sq. Lateral, Cole Ave to Washburn Rd (42" - 3.9 miles)	2002	10.6
14010C	Gowan 2350 Pumping Station (24 mgd)	2002	8.7
14010D	Decatur 2350 Reservoir (20 MG)	2002	12.7

14010E	Deer Springs Rate-of-Flow Control Station (80 mgd)	2002	4.3
14010G	College Rate-of-Flow Control Station (25 mgd)	2002	3.8
14010J	North Valley Lateral - Communications	2002	2.2
14010T	North Valley Lateral - Controls	2002	0.5
07010D	Low Lift Pumping Station Improvements (Phase I)	2003	3.7
07210B	Low Lift Pumping Station Improvements (Phase II)	2003	3.0
08010B	Prepurchase Oxygen/Ozone Equipment (AMSWTF & RMWTF)	2003	19.5
08010ER	Ozone Addition to AMSWTF (600 mgd)	2003	96.0
08010T	Intake System and RMWTF Controls	2003	4.3
08010W	AMSWTF Ozone Controls	2003	0.6
100D	SNWS Power System Upgrades - Equipment Prepurchase	2003	6.4
100E	SNWS Power System Upgrades - Equipment Installation	2003	16.9
100F	CRC Power System Upgrades	2003	5.0
100G	SNWS Power System Upgrades - Material Prepurchase	2003	1.0
100T	SNWS Power System Upgrades - Remote Terminal Units	2003	0.5
10510B	NPC - Leased Fiber Optic Systems - Phase II	2003	1.7
14010F	Foothills Pumping Station Turbine Project	2003	2.8
17010C	North Valley Lateral - Grand Teton Drive to Beltway (60" - 2.4 miles)	2003	9.8
17010G	North Valley Lateral - Beltway Crossing (60" - 0.4 miles)	2003	3.0
17010H	North Valley Lateral - Decatur 2538/2430 PS to Grand Teton Drive (60" - 2.5 miles)	2003	6.6
360B	Equity Purchase of Electric Power Generation Facilities	2003	55.3
08010V	Ozone Training and Start-up Services	2004	1.0
10010P	NPC Connection to Decatur 2538 PS	2004	0.0
10010Q	CRC River Mountains Pumping Station Expansion Power Supply	2004	1.9
16010A	River Mountains Pumping Station B (175 mgd/315 mgd total), and Clearwell Expansion C (25 MG/75 MG total)	2004	44.0
17010B	North Valley Lateral - Grand Teton 2330 Res. To Valley Drive (72" - 7.0 miles)	2004	22.4
17010D	Sloan 2160 (91 mgd/111 mgd total) and Lamb 2350 (91 mgd/111 mgd total) Pumping Station Expansion	2004	15.1
17010F	Decatur 2538/2430 PS (54 mgd-2538, 27 mgd-2430/Structure 105 mgd)	2004	31.1
17010J	East Valley Lateral and North Valley Lateral Communications Improvements	2004	0.4
17010K	Valley Drive Isolation Valve	2004	0.6
320C	Disinfection By-Products Control Strategy	2004	0.2
320D	AMSWTF Filter Media and Underdrain Improvements Study	2004	0.2
320G	Lake Mead Intake No. 1 Modifications	2004	7.4
320H	Pumping Plant 6 Rechlorination Station	2004	0.0
360A	Equity Purchase of Electric Power Generation Facilities - Silverhawk Project	2004	120.0
08210B	RMWTF Prepurchase Ozone Equipment (150 mgd/300 mgd total)	2005	6.7
13010K	East Valley Lateral Interconnections	2005	6.5
17010A	East Valley Lateral - River Mtns. Res. To Desert Inn Rd. (78" - 8.2 miles)	2005	49.8
19010A	Horizon Ridge 2375 Reservoir Expansion (10 MG/20 MG total)	2005	11.9

340F	Transmission Pipeline Cathodic Protection System Repairs	2005	1.1
360E	Feasibility Study of Intermountain Project Unit 3	2005	0.5
370F	AMSWTF Utility Building Chiller Replacement	2005	0.0
07210C	Intake No. 2 to AMSWTF By-pass Pipeline	2006	17.7
08210A	RMWTF Expansion (150 mgd/300 mgd total)	2006	76.8
370H	Flame Detection Equipment for High Pressure Hydraulic System	2006	0.2
07210A	Raw Water Pumping System Expansion (200 mgd RMWTF + 160 mgd AMSWTF 460 mgd total)	2007	68.0
08010F	AMSWTF Process Improvements	2007	71.4
090S	Virgin and Muddy Rivers Surface Water Development	2007	8.8
15010A	River Mountains 2530 Pumping Station Expansion - Equestrian Addition (7 mgd/14 mgd total)	2007	0.9
17010L	In-Valley Isolation Valves	2007	4.4
300G	RMWTF Operators Video Display Upgrade	2007	0.2
340G	Transmission Pipelines Discharge Modifications Study	2007	0.4
370D	Fiber-Optic Network Improvements	2007	1.3
370G	AMSWTF Computer Room HVAC Replacement	2007	0.0
300B	Radio Communication System Upgrades	2008	0.6
300C	Overhead Crane Upgrades	2008	0.2
300I	AMSWTF Asbestos Removal	2008	0.0
310C	IPS-1 Pump and Motor Replacements	2008	28.7
320A	RMWTF Water Quality Laboratory and Pilot Plant	2008	42.1
320E	AMSWTF Cathodic Corrosion Protection System Repairs and Upgrades	2008	1.5
320L	AMSWTF Electrical Disconnect Switch Replacements	2008	0.2
320M	Spare Filter Backwash Control Valve	2008	0.1
320R	Water Quality Sampling and Testing Equipment	2008	1.0
340K	Reservoir Vent Modifications	2008	0.4
340M	Air Vacuum and Relief Valve Piping Adjustments	2008	0.1
360D	Energy Supplier Conversion	2008	0.1
360F	Rate of Flow Control Energy Recovery	2008	8.1
360G	Intermountain Power Project Unit 3 - Predevelopment	2008	0.6
360I	Hacienda Pumping Station Electrical Substation Upgrades	2008	1.8
360J	AMSWTF & RMWTF Solar Photovoltaic Electric	2008	0.1
370J	SNWA Office Tenant Improvements	2008	42.5
370K	AMSWTF Warehouse Storage System Improvements	2008	0.0
370P	Purchase SNWA Office Space	2008	36.5
07011B	Raw Water Pumping System - Warranty	2009	1.7
07012B	Flowserve Pump Replacement at BPS-1A & BPS2	2009	1.5
19010B	Duck Creek Isolation Valve	2009	4.2
19010C	Magic Rate-of-Flow Controls (15 MGD)	2009	5.9
300D	Roofing Replacements	2009	0.9
300J	Warm Springs Rate-of-Flow Control Station Offsite Improvements	2009	0.0
310D	Emergency Bypass Rate-of-flow Control Station Valve Replacements	2009	2.6
310E	North I-15 Treatment and Transmission Facilities Planning - Phase I	2009	0.9

320J	Disinfection By-Products Studies	2009	0.3
320K	Surface Water Treatment Pilot Studies	2009	1.9
340H	Pumping Plant No. 7 Upgrades	2009	0.6
340I	South Valley Facilities Expansion - Phase I	2009	13.4
340L	Hemenway Rate-of-Flow Control Improvements	2009	0.5
340O	Pumping Station 6 Forebay Relining	2009	0.1
340P	Charleston Heights Lateral Repair and Valve Installation	2009	1.9
360K	High Concentrating Solar Photovoltaic Demonstration and Research	2009	2.3
360N	Solar Photovoltaic Panels at AMSWTF Filters & Flocculation Basins	2009	0.1
370C	RMWTF Fleet Maintenance & Electrical Maintenance Facility	2009	4.0
370E	AMSWTF Mechanic Maintenance Shop Addition	2009	13.0
370L	SCADA Communications Upgrades	2009	0.4
370N	AMSWTF Standby Generator Replacement	2009	0.3
070F05	Lake Mead Intake No. 2 Connection and Modifications	2010	40.4
320S	Quagga Mussel Evaluation and Control Facilities	2010	0.4
340A	Coyote Spring Valley Well and Moapa Transmission System	2010	52.6
370B	Security System Upgrades	2010	2.0
310F	IPS-2 Test Pump Procurement and Installation	2011	40.3
370O	AMSWTF Utility Building Air Handler Replacement	2011	0.3
370S	Mold Abatement at River Mountains Water Treatment Facility	2011	0.3
320N	AMS Clearwell Slide Gates	2012	0.3
070F02C1	Intake No. 3 Pumping Station	2014	21.9
070F02C2	Intake No. 3 - Connector Tunnel	2014	96.9
320F	AMSWTF Filtration System Valve Repairs	2014	0.1
340R	Transmission Pipelines Cathodic Corrosion Protections System Repairs - Phase 2	2014	7.7
360M	Renewable Energy Project Development	2015	3.4
070F01	Lake Mead Intake No. 3 Shafts and Tunnel	2017	532.3
070F06	Lake Mead Intake No. 3 Chemical Feed System	2017	2.6
320B	Remodel Former AMSWTF Laboratory Spaces	2017	0.7
320P	AMSWTF Chlorine Building I Rehabilitation	2017	0.1
340C	Hitachi Motor Retrofit	2017	9.4
341A	Pumping Station 6 Forebay Relining - Phase 2	2017	1.0
360C	Electric Power Transmission Facilities	2017	0.3
340X	Simmons Rate-of-Flow Control Station Pipeline Repairs and Hacienda ROFC Repair	2018	0.1
070F04	Discharge Pipeline	2018	38.2
13010H	Disinfection Facilities - Horizon/Parkway/Bermuda	2018	0.3
300E	Control System Improvements	2018	30.2
340T	Sloan Pumping Station Foundation Repairs (MEPS 6860	2018	0.2
360H	Pumping Station Electrical Transformer Repairs	2018	2.7
	<b>Completed Projects</b>	<b>TOTAL</b>	<b>3,260.6</b>

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# SECTION 7

## DEBT MANAGEMENT POLICY

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SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22  
OPERATING AND CAPITAL BUDGET



## Debt Management Policy

In Accordance With  
NRS 350.013



SOUTHERN NEVADA  
WATER AUTHORITY™

June 30, 2021



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## **Debt Management Policy**

### **NRS 350.013 Subsection 1(c)**

#### **Introduction**

The Southern Nevada Water Authority (SNWA) is charged with: 1) operating the Southern Nevada Water System (SNWS) to deliver wholesale treated Colorado River water to its purveyor members, 2) expanding the SNWS as needed to meet the growing demand for water by its purveyor members, and 3) securing additional supplies of water for Southern Nevada, and effectively manage existing water supplies through the cooperative action of its member agencies.

The SNWS was originally a joint effort of the State of Nevada (State) acting through its Colorado River Commission (CRC) and the United States of America acting through the U.S. Bureau of Reclamation. Prior to 1995, the debt associated with the SNWS was either repayment contracts with the federal government, or general obligations of the State. Assembly Bill No. 542, approved by the Nevada Legislature in June 1995, transferred all assets and liabilities associated with the SNWS from the CRC to the SNWA effective January 1, 1996.

The SNWA's current debt structure is presented in the appendix. The SNWA has four options to sell debt:

- The SNWA can request the Las Vegas Valley Water District (LVVWD) to sell debt on its behalf. Standard & Poor's rates the LVVWD bonds "AA", and Moody's Investors Service rates them at "Aa1". This rating makes the LVVWD's bonds "high investment grade." This option has generally been used to sell most debt.
- The SNWA can sell its bonds to the Clark County (County) Bond Bank, which can then sell County general obligation bonds. The 1999 Nevada Legislature made this option available. Standard & Poor's rates County bonds "AA+", and Moody's Investors Service rates them at "Aa1". This rating classifies the County bonds as "high investment grade". This option has generally been used to sell long term fixed rate debt.
- The SNWA can sell its bonds to the State of Nevada's (State) Bond Bank, which then sells the State general obligation bonds. The 1997 Nevada Legislature made this option available. Standard & Poor's rates State bonds "AA+", and Moody's Investors Service rates them at "Aa1". This rating classifies the State's bonds as "high investment grade". This option has generally been used to sell long term fixed rate debt.
- The SNWA can issue debt in its own name. However, the SNWA is unable to make a general obligation (property tax) pledge, therefore interest rates on the debt would tend to be higher. This debt has not been rated but is likely to be below the rating of the LVVWD, the State, and the County, which would result in higher interest rates. Therefore, it is expected that the SNWA will continue to use the previously mentioned options to issue debt.

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The SNWA's Major Construction and Capital Plan (MCCP) outlines the phased construction plan developed to meet the growing demands for water in the Las Vegas Valley. The MCCP is reviewed semi-annually and is presented to the Board as determined appropriate by the SNWS work group. The most recent update was adopted by the Board in May 2020. The MCCP has been partially funded with debt.

In October 2019, the Board appointed 11 residents to an Integrated Resource Planning Advisory Committee (IRPAC 2020) to examine Southern Nevada's long-term water planning efforts and develop recommendations to maintain reliability and meet the long-term water resource needs. The IRPAC 2020 members represented a spectrum of community interests including the business, resorts, residential, development and financial sectors. Key recommendations from IRPAC 2020 included pursuing acquisition of Colorado River resources, building new major water infrastructure, maximizing return-flow credits to Lake Mead, increasing conservation efforts and a funding strategy to support those initiatives. These recommendations were taken to the Board and adopted in September 2020. The related amendment to the MCCP, and the IRPAC 2020 recommended water rate adjustments, were adopted in November 2020.

The Las Vegas Wash Capital Improvements Plan (LVWCIP) covers projects the SNWA is building in the Las Vegas Wash. The LVWCIP is updated periodically with the most recent update occurring in May 2020. The SNWA intends to use an inter account loan from the New Expansion Debt Service sub fund, as well as grant proceeds, to pay for these projects. Four percent of the SNWA's overall sales tax proceeds received are dedicated to the Las Vegas Wash and will be used to make debt service payments on this inter account loan.

This document is not intended to review the SNWA's total financial position. Analysis of the SNWA's debt position is important, as growth in the County, as well as impacts from the ongoing drought within the Colorado River Basin, have resulted in an increased need for capital financing. Resources, as well as needs, drive the SNWA's debt issuance program. The MCCP and LVWCIP were developed to identify clearly, and in detail, the specific facilities which are to be built, the year in which they are proposed to be completed, and an estimate of how much each will cost. As projects are completed, these plans will also document actual costs of those facilities.

Below are excerpts from Nevada Law, which require local governments to submit this 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*

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*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:*

*(a) A complete statement of current general obligation debt and special elective taxes, and a report of current debt and special assessments and retirement schedules, in the detail and form established by the Committee on Local Government Finance.*

*(b) A complete statement, in the detail and form established by the Committee on Local Government Finance, of general obligation debt and special elective taxes contemplated to be submitted to the commission during the fiscal year.*

*(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 this 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 property tax rate.*

*(d) Either:*

*(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*

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*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 Issued by the Las Vegas Valley Water District ("LVVWD Bonds")**

The SNWA's Bonds issued in the name of the LVVWD 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, subject to Nevada constitutional and statutory limitations on the aggregate amount of ad valorem taxes. The LVVWD Bonds are payable from general ad-valorem taxes on all taxable property in the LVVWD service area and are additionally secured by certain SNWA pledged revenues as set forth in Section 4, Chapter 631, Statutes of Nevada 1993. The SNWA pledged revenues currently consist of connection, commodity, infrastructure and reliability charges, which were approved by the SNWA, the LVVWD, and the cities of Henderson and North Las Vegas.

In any year in which the total property taxes levied within the LVVWD's service area by all applicable taxing units (e.g. the State, 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 Bonds or their security may be repealed, amended, or modified in such a manner as to adversely impair 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 Bonds is not secured by an encumbrance, mortgage or other pledge of property of the LVVWD or the SNWA, and no property shall be liable to be forfeited or taken in payment of the LVVWD Bonds; provided the payment of the Bonds is secured by the proceeds of general (ad valorem) taxes and the LVVWD's and the SNWA's revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act provides no recourse shall be

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had for the payment of the principal of, interest on, or any prior redemption premiums due in connection with municipal securities such as the LVVWD 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 or the SNWA, past, present or future, either directly or indirectly by virtue of any statute or rule of law. The LVVWD Bonds will be repaid with revenues of the SNWA and/or revenues made available to the LVVWD by certain members of the SNWA.

The LVVWD has never levied an ad valorem tax because theirs, and the SNWA's revenues, have been sufficient to pay debt service on all of the LVVWD's bonds and obligations secured by such revenues.

**Proposed Future SNWA Water Bonds.** The SNWA intends to issue \$352 million new money debt in fiscal year 2021-22. Additionally, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

**Bonded Indebtedness.** The following table shows the SNWA's outstanding LVVWD Bonds as of June 30, 2021.

**Debt Service Requirements.** See the appendix for the table illustrating the debt service to maturity on the LVVWD Bonds.

**Property Tax Rate Impact.** Principal and interest on the LVVWD Bonds are payable from the SNWA's pledged revenues. There will be no direct impact on the ad valorem tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds. See the appendix for a table that illustrates the SNWA's pledged revenues and debt service coverage.

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	Issue Date	Original Amount Issued	Outstanding Principal
LVVWD 2012B Bonds	Jul-12	360,000,000	308,025,000
LVVWD 2015 Refunding Bonds	Jan-15	332,405,000	332,405,000
LVVWD 2015B Refunding Bonds	Jun-15	177,635,000	119,060,000
LVVWD 2015C Refunding Bonds	Jun-15	42,125,000	27,855,000
LVVWD 2016A Refunding Bonds	Apr-16	497,785,000	441,675,000
LVVWD 2017B Refunding Bonds	Mar-17	22,115,000	18,815,000
LVVWD 2018B Refunding Bonds	Mar-18	79,085,000	53,065,000
LVVWD 2019A Refunding Bonds	Mar-19	107,975,000	103,025,000
LVVWD 2019B Refunding Bonds	Oct-19	90,280,000	90,280,000
LVVWD 2020A Refunding Bonds	Mar-20	123,860,000	117,505,000
LVVWD 2021A Refunding Bonds	Mar-21	144,685,000	144,685,000
LVVWD 2021C Refunding Bonds	Mar-21	208,145,000	208,145,000
<b>Total</b>		<b>\$ 2,186,095,000</b>	<b>\$ 1,964,540,000</b>

SOURCE: Southern Nevada Water Authority

**Existing, Authorized and Proposed General Obligation/Revenue Supported Bond Indebtedness Issued by the Clark County, Nevada Bond Bank ("County Bonds")**

The County Bonds will be repaid with revenues of the SNWA and/or revenues made available to the SNWA by certain members of the SNWA. AB 201, approved by the 1997 State Legislature, provides that members of the SNWA must contract with the SNWA to make payments from the revenues of the members' water systems that, in the aggregate, are fully sufficient to pay those bonds as they become due. If the water revenues of any such member are insufficient to pay the member's share of the amount due on the bonds, the member shall pay the deficiency out of money available for that purpose in the general fund of the member. If the money in the general fund of the member is insufficient to pay fully any such deficiency promptly, the member shall levy a general ad valorem tax on all taxable property within the member's boundaries at a rate necessary to produce revenue in an amount sufficient to pay that member's share of the payments due on the bonds. The obligations of the members of the SNWA to the SNWA and the State as a result of the acquisition of bonds of the SNWA pursuant to AB 201 do not constitute indebtedness of the members within the meaning of any constitutional, charter, or statutory limitation or other provision restricting the ability to incur debt. Nevada statutes provide that no act concerning the County 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.

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Payment of the County Bonds is not secured by an encumbrance, mortgage or other pledge of property of the SNWA, and no property shall be liable to be forfeited or taken in payment of the County Bonds; provided payment of the Bonds is secured by the SNWA revenues, which are pledged for payment of the Bonds. Furthermore, Section 350.606 of the Bond Act provides that 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 County 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 SNWA, past, present or future, either directly or indirectly by virtue of any statute or rule of law.

**Proposed Future SNWA Clark County Bonds.** The SNWA does not intend to issue new money debt in fiscal year 2021-22. However, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

**Bonded Indebtedness.** The following table shows the SNWA's outstanding County Bonds as of June 30, 2021.

**Debt Service Requirements.** See the appendix for the table illustrating the debt service to maturity for the existing County Bonds.

**Property Tax Rate Impact.** There is no impact on tax rates as principal and interest on the County Bonds is payable from the SNWA's pledged revenues only. See the appendix for the table illustrating the SNWA's pledged revenues and debt service coverage.

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**Debt Issued By Clark County, Nevada Bond Bank**  
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	Issue Date	Original Amount Issued	Outstanding Principal
Clark County 1106 Refunding Bonds	Nov-06	\$ 604,140,000	\$ 69,545,000
Clark County 2012 Refunding Bonds	Jun-12	85,015,000	79,515,000
Clark County 2016A Refunding Bonds	Mar-16	263,955,000	149,570,000
Clark County 2016B Refunding Bonds	Aug-16	271,670,000	255,390,000
Clark County 2017 Refunding Bonds	Mar-17	321,640,000	290,405,000
<b>Total</b>		<b>\$ 1,546,420,000</b>	<b>\$ 844,425,000</b>

SOURCE: Southern Nevada Water Authority



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**Existing, Authorized and Proposed General Obligation/Water Revenue Bonds Issued by the State of Nevada Bond Bank (“State Bonds”)**

The SNWS was originally financed by a combination of State of Nevada, CRC General Obligation Bonds and Federal Repayment Contracts entered into between the State and the United States Bureau of Reclamation (the Repayment Contracts). These debt obligations were transferred to SNWA effective January 1, 1996, according to the Transfer Act (Assembly bill No. 542, NRS Chapter 393).

The State Bonds are general obligations of the State, and the payment of principal and interest due thereon are secured by general taxes levied against all taxable property within the State, subject to limitations imposed by the constitution and statutes of the State. The full faith and credit of the State is pledged for the payment of the principal, redemption premium, if any, and interest on the State Bonds. For the purpose of paying the principal and interest on the Bonds, there shall be levied, until all the Bonds shall have been fully paid, a general tax on all property, both real and personal, subject to taxation within the boundaries of the State, including the net proceeds of mines, fully sufficient to pay and retire the State Bonds, without regard to any statutory tax limitations now or hereafter existing (other than the limitation of \$3.64 on each \$100 of assessed valuation in the State statutes, and after there are made due allowances for probable delinquencies).

The payment of the State Bonds is further secured by a lien on the net pledged revenues derived from the operation of the SNWA’s facilities.

In any year in which the total property taxes levied within the State by all overlapping units (e.g. the State, any county, the school district, any city, or any special district) exceed such property tax limitations, the reduction to be made by those units (including the State) must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness, subject to any implied police power exception.

Nevada statutes provide that the faith of the State be pledged and any law supplemental or otherwise appertaining thereto, and any act concerning the Bonds, or other municipal securities, taxes or pledged revenues, shall not 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 State Bonds is not secured by an encumbrance, mortgage or other pledge of property of the State, except the proceeds of general taxes, net pledged revenues, and other money pledged for the payment of the Bonds shall be liable or forfeited for, or taken in payment of, the Bonds.

**Proposed Future SNWA State of Nevada Bonds.** The SNWA does not intend to issue new money

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debt in fiscal year 2021-22. However, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

**Bonded Indebtedness.** The following table shows the SNWA's outstanding State Bonds as of June 30, 2021.

**Debt Service Requirements.** See the appendix for the table illustrating the debt service to maturity for the existing State Bonds.

**Property Tax Rate Impact.** Principal and interest on the State bonds are payable from the SNWA's net pledged revenues. There will be no direct impact on the State's ad valorem tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds. See the appendix for the table illustrating the SNWA's pledged revenues and debt service coverage.

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**Debt Issued By The State of Nevada Bond Bank**  
As of June 30, 2021

	Issue Date	Original Amount Issued	Outstanding Principal
Nevada Drinking Water State Revolving Fund Loan 2	Jun-01	\$ 10,000,000	\$ 342,545
State of Nevada 2009 Bonds	Oct-09	2,214,457	1,075,593
State of Nevada 2013 Refunding Bonds	Feb-13	21,720,000	21,720,000
<b>Total</b>		<b>\$ 33,934,457</b>	<b>\$ 23,138,138</b>

SOURCE: Southern Nevada Water Authority

**Existing, Authorized and Proposed Water Revenue Bonds Issued by the Southern Nevada Water Authority ("SNWA Bonds")**

At present, the SNWA Bonds consist solely of the SNWA's Subordinate Lien Revenue (Clean Renewable Energy) Bonds, Series 2008 (the "2008 Bonds"). The 2008 Bonds are payable from a pledge of the Sales Tax (hereinafter defined) and a subordinate pledge of all revenues from the SNWS, including revenues, charges or fees for commodities and services rendered by or through the SNWS. The pledge of the SNWS water revenues is subordinate to the lien thereon of the LVVWD Bonds (which are payable to the LVVWD pursuant to a Master Bond Repayment Agreement between the LVVWD and the SNWA), the County Bonds, and on a parity with the balance of the State Bonds.

The Sales Tax is authorized by NRS 377B.010 through 377B.210 and enacted pursuant to Chapter 4.18 of the Clark County Code. The Sales Tax is comprised of a tax upon retailers at the rate of

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0.25 percent of the gross receipts of any retailer from the sale of tangible personal property sold at retail, or stored, used or otherwise consumed in the County less a percentage (calculated on the same basis as the percentage calculated pursuant NRS 374.785(3)(a)) of all fees, taxes, interest and penalties as compensation to the State for the cost of collecting the Sales Tax. At present, the Sales Tax is only pledged to the payment of the 2008 Bonds.

The payment of the 2008 Bonds is not secured by an encumbrance, mortgage or other pledge of property of the SNWA and no property of the SNWA shall be liable to be forfeited or taken in payment of the 2008 Bonds except the proceeds of the Sales Tax and a subordinate lien on the proceeds of the revenues derived from the SNWS.

**Proposed Future SNWA Water Bonds.** The SNWA does not intend to issue new money debt in fiscal year 2021-22. However, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

**Bonded Indebtedness.** The following table shows the SNWA outstanding Bonds as of June 30, 2021.

**Debt Service Requirements.** See the appendix for the table illustrating the debt service to maturity on the SNWA Bonds.

**Property Tax Rate Impact.** Principal and interest on the SNWA bonds are payable from the SNWA's net pledged revenues. There will be no impact on ad valorem tax rates. See the appendix for the table illustrating the SNWA's pledged revenues and debt service coverage.

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**Debt Issued By Southern Nevada Water Authority**  
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	Issue Date	Original Amount Issued	Outstanding Principal
SNWA Clean Renewable Energy 2008 Bonds	Jul-08	\$ 6,900,000	\$ 920,000
<b>Total</b>		<b>\$ 6,900,000</b>	<b>\$ 920,000</b>

---

SOURCE: Southern Nevada Water Authority

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## **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 SNWA does not have a specific debt limit dollar amount threshold. The SNWA's ability to issue and pay its debt is a function of its capital needs and revenues generated from the SNWA's facilities.

## **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 this 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;*

The SNWA currently has no outstanding bonds payable directly from property taxes, as the SNWA cannot levy property taxes. The existing and proposed 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 may sell its bonds at a competitive or negotiated sale. The SNWA will follow these 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 governed by the requirements of the Nevada Open Meeting Law.

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**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.

**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 SNWA.
- 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 SNWA to conclude a competitive sale would not be effective, including market conditions.

It is the policy of the SNWA to provide minority owned business enterprises, women owned business enterprises and all other business enterprises an equal opportunity to participate in the performance of the SNWA contracts. At a competitive sale, bidders are requested to assist the SNWA 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 SNWA 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 the SNWA's competitive bond 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 SNWA financings, or have submitted financing ideas and concepts for SNWA's consideration over the past five years.
- The CFO may distribute, or request that the SNWA's Financial Advisors distribute on behalf of the SNWA, a Request for Proposal (RFP) to underwriting firms on the list. The RFP may include, at a minimum, information regarding the firm's qualifications, staffing and personnel assigned to the SNWA, fees (including takedown and management fee, if any), debt

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structuring, marketing, expected yield, and credit strategies. Before selecting a firm or firms, the CFO may, but is not required to, conduct interviews of firms who submit responses to the RFP.

- The selection of underwriter(s) may be based on the overall quality of the response, qualifications of the firm, demonstrated success in pricing bonds, understanding of the SNWA's objectives, qualifications of the banking and underwriting team to be assigned to the SNWA, 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 SNWA. 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 five percent to any firm. The CFO will also determine the maximum amount to be designated to a single firm (typically 60 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 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 Refinitiv Credit.
- The Syndicate Policy Memo may include other relevant information (e.g., management fee or other fees, description of the sale timeline).

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### **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 SNWA'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 the Capital Improvement Plans**

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 (d), 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 SNWA's intent to finance future operational costs with water revenues and will therefore have no effect on ad valorem taxes. New capital improvement projects will allow the SNWA 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 debt service on the refunded bonds.
- **Current Refunding** - The duration of the escrow is 90 days or less.

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- **Gross Savings** - Difference between debt service on refunded bonds less debt service on refunding bonds less any contribution from the SNWA'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 the SNWA's reserves or debt service fund.

Prior to beginning a refunding bond issue, the SNWA will review an estimate of the savings achievable from the refunding. The SNWA may also review a pro forma schedule estimating the savings assuming the refunding is done at various points in the future.

The SNWA 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 five 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, net present value savings of at least three 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 SNWA 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 three years or less.

### **Debt Structure**

**Maturity Structures.** The term of the debt issues will not extend beyond the useful life of the project or equipment financed. As appropriate, debt 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 SNWA are sufficient to pay debt service, or where the deferral of principal allows the SNWA 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,



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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 to purchase bond insurance from bond proceeds

Bond insurance can be purchased directly by the issuer 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 issuer, 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**

Fixed rate debt or variable rate debt may be issued, 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 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, it shall not constitute more than 25 percent of the SNWA's overall debt portfolio. The CFO, in consultation with the Financial Advisors, will determine the appropriate form of variable rate debt, subject to the approval of the Board.

**Financing Sources.** The SNWA will evaluate available State and County bond financing programs before choosing the financing source. The SNWA will consider utilizing a State or County program if bonds can be sold by the State or County in a manner meeting the SNWA'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 Schedule of Existing Debt Service Requirements
3. Combined Schedule of Existing and Proposed Debt Service Requirements
4. Net Pledged Revenues
5. Schedule of Debt Service by Issuer

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**Five Year Schedule of Existing and Proposed Debt Service Requirements**  
**As of June 30, 2021**

Type of Debt	Fiscal Year				
	2022	2023	2024	2025	2026
SNWA Bonds	\$ 298,143,520	\$ 298,085,167	\$ 297,646,276	\$ 288,161,526	\$ 288,101,776
Total	<u>\$ 298,143,520</u>	<u>\$ 298,085,167</u>	<u>\$ 297,646,276</u>	<u>\$ 288,161,526</u>	<u>\$ 288,101,776</u>

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**Combined Schedule of Existing Debt Service Requirements**  
**As of June 30, 2021**

<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2022	\$ 146,854,085	\$ 131,899,174	\$ 278,753,259
2023	154,041,540	124,653,366	278,694,906
2024	161,206,540	117,049,475	278,256,015
2025	159,846,540	108,924,725	268,771,265
2026	168,061,540	100,649,975	268,711,515
2027	169,361,540	92,138,675	261,500,215
2028	163,471,540	83,710,000	247,181,540
2029	135,176,540	76,854,575	212,031,115
2030	142,058,270	70,585,313	212,643,583
2031	126,505,000	64,061,400	190,566,400
2032	131,895,000	58,374,725	190,269,725
2033	136,555,000	52,783,575	189,338,575
2034	146,980,000	46,892,225	193,872,225
2035	115,440,000	41,097,425	156,537,425
2036	125,515,000	35,873,325	161,388,325
2037	130,890,000	30,494,313	161,384,313
2038	136,130,000	25,246,650	161,376,650
2039	142,560,000	18,852,450	161,412,450
2040	42,160,000	11,836,350	53,996,350
2041	44,205,000	9,788,000	53,993,000
2042	46,355,000	7,640,150	53,995,150
2043	25,000,000	5,387,750	30,387,750
2044	26,250,000	4,137,750	30,387,750
2045	27,565,000	2,825,250	30,390,250
2046	28,940,000	1,447,000	30,387,000
Total *	<u>\$ 2,833,023,138</u>	<u>\$ 1,323,203,615</u>	<u>\$ 4,156,226,753</u>

\* Totals may not be exact due to rounding.

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**Combined Schedule of Existing and Proposed Debt Service Requirements  
As of June 30, 2021**

Fiscal Year	Existing Debt			Proposed (New Money)		
	Principal	Interest	Total	Principal	Interest	Total
2022	\$ 146,854,085	\$ 131,899,174	\$ 278,753,259	\$ 6,716,891	\$ 12,673,370	\$ 19,390,261
2023	154,041,540	124,653,366	278,694,906	6,958,497	12,431,763	19,390,261
2024	161,206,540	117,049,475	278,256,015	7,208,794	12,181,466	19,390,261
2025	159,846,540	108,924,725	268,771,265	7,468,095	11,922,166	19,390,261
2026	168,061,540	100,649,975	268,711,515	7,736,722	11,653,539	19,390,261
2027	169,361,540	92,138,675	261,500,215	8,015,012	11,375,249	19,390,261
2028	163,471,540	83,710,000	247,181,540	8,303,312	11,086,949	19,390,261
2029	135,176,540	76,854,575	212,031,115	8,601,982	10,788,279	19,390,261
2030	142,058,270	70,585,313	212,643,583	8,911,395	10,478,865	19,390,261
2031	126,505,000	64,061,400	190,566,400	9,231,938	10,158,322	19,390,261
2032	131,895,000	58,374,725	190,269,725	9,564,011	9,826,250	19,390,261
2033	136,555,000	52,783,575	189,338,575	9,908,028	9,482,232	19,390,261
2034	146,980,000	46,892,225	193,872,225	10,264,420	9,125,840	19,390,261
2035	115,440,000	41,097,425	156,537,425	10,633,631	8,756,629	19,390,261
2036	125,515,000	35,873,325	161,388,325	11,016,123	8,374,137	19,390,261
2037	130,890,000	30,494,313	161,384,313	11,412,373	7,977,888	19,390,261
2038	136,130,000	25,246,650	161,376,650	11,822,876	7,567,384	19,390,261
2039	142,560,000	18,852,450	161,412,450	12,248,145	7,142,116	19,390,261
2040	42,160,000	11,836,350	53,996,350	12,688,711	6,701,550	19,390,261
2041	44,205,000	9,788,000	53,993,000	13,145,124	6,245,137	19,390,261
2042	46,355,000	7,640,150	53,995,150	13,617,954	5,772,307	19,390,261
2043	25,000,000	5,387,750	30,387,750	14,107,792	5,282,469	19,390,261
2044	26,250,000	4,137,750	30,387,750	14,615,249	4,775,012	19,390,261
2045	27,565,000	2,825,250	30,390,250	15,140,959	4,249,301	19,390,261
2046	28,940,000	1,447,000	30,387,000	15,685,580	3,704,681	19,390,261
2047	-	-	-	16,249,790	3,140,471	19,390,261
2048	-	-	-	16,834,295	2,555,966	19,390,261
2049	-	-	-	17,439,824	1,950,436	19,390,261
2050	-	-	-	18,067,135	1,323,126	19,390,261
2051	-	-	-	18,717,010	673,251	19,390,261
Totals *	\$ 2,833,023,138	\$ 1,323,203,615	\$ 4,156,226,753	\$ 352,331,666	\$ 229,376,151	\$ 581,707,817

Fiscal Year	Total Existing & Proposed Debt		
	Principal	Interest	Total
2022	\$ 153,570,976	\$ 144,572,544	\$ 298,143,520
2023	161,000,037	137,085,129	298,085,167
2024	168,415,335	129,230,941	297,646,276
2025	167,314,635	120,846,891	288,161,526
2026	175,798,262	112,303,514	288,101,776
2027	177,376,552	103,513,924	280,890,476
2028	171,774,852	94,796,949	266,571,801
2029	143,778,522	87,642,854	231,421,376
2030	150,969,665	81,064,178	232,033,843
2031	135,736,938	74,219,722	209,956,661
2032	141,459,011	68,200,975	209,659,986
2033	146,463,028	62,265,807	208,728,836
2034	157,244,420	56,018,065	213,262,486
2035	126,073,631	49,854,054	175,927,686
2036	136,531,123	44,247,462	180,778,586
2037	142,302,373	38,472,200	180,774,573
2038	147,952,876	32,814,034	180,766,911
2039	154,808,145	25,994,566	180,802,711
2040	54,848,711	18,537,900	73,386,611
2041	57,350,124	16,033,137	73,383,261
2042	59,972,954	13,412,457	73,385,411
2043	39,107,792	10,670,219	49,778,011
2044	40,865,249	8,912,762	49,778,011
2045	42,705,959	7,074,551	49,780,511
2046	44,625,580	5,151,681	49,777,261
2047	16,249,790	3,140,471	19,390,261
2048	16,834,295	2,555,966	19,390,261
2049	17,439,824	1,950,436	19,390,261
2050	18,067,135	1,323,126	19,390,261
2051	18,717,010	673,251	19,390,261
Totals *	\$ 3,185,354,804	\$ 1,552,579,766	\$ 4,737,934,570

\* Totals may not be exact due to rounding.

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**Net Pledged Revenues**  
**For the Fiscal Years Ended June 30**

Fiscal Year End	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2022 Budget
<b>Operating Revenues</b>					
Wholesale Delivery Charges	\$ 134,480,919	\$ 133,258,094	\$ 145,992,532	\$ 142,032,734	\$ 150,291,355
Regional Connection Charges	76,343,260	75,567,401	79,318,598	19,108,425	35,636,854
Regional Water Charges	76,107,764	75,278,710	72,894,294	72,221,899	79,597,127
Regional Infrastructure Surcharges	151,907,841	162,936,993	167,503,236	166,934,981	175,223,605
<b>Total SNWA Water Revenues</b>	<b>438,839,784</b>	<b>447,041,198</b>	<b>465,708,660</b>	<b>400,298,039</b>	<b>440,748,941</b>
Operating Expenses	168,535,149	173,194,349	178,900,875	211,546,809	213,124,732
Net SNWA Revenues	270,304,635	273,846,849	286,807,785	188,751,230	227,624,209
Annual Debt Service on the SNWA Superior Obligations	1,220,815	1,220,355	1,218,416	-	-
<b>Remaining SNWA Revenues</b>	<b>270,304,635</b>	<b>273,846,849</b>	<b>286,807,785</b>	<b>188,751,230</b>	<b>227,624,209</b>
Beginning Unrestricted Fund Balance <sup>1</sup>	480,331,300	561,768,492	675,410,297	769,494,612	737,494,675
Funds Available for Debt Service	750,635,935	835,615,341	962,218,082	958,245,842	965,118,884
Annual Debt Service on Total Parity Obligations <sup>2</sup>	\$ 252,683,857	\$ 250,584,599	\$ 247,348,664	\$ 289,141,521	\$ 298,143,520
Parity Obligations					
Debt Service Coverage <sup>2</sup>	2.97	3.33	3.89	3.31	3.24

<sup>1</sup> Unrestricted funds include unrestricted cash and unrestricted investments as shown on the Comprehensive Annual Financial Report.

<sup>2</sup> Years 2021 and 2022 include debt service amounts paid on Parity and Subordinate debt.

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**Schedule of Debt Service By Issuer**

As of Fiscal Year Ending June 30, 2021

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Fiscal Year	Southern Nevada Water Authority Through the Las Vegas Valley Water District			Southern Nevada Water Authority Through the Clark County Bond Bank		
	Principal	Interest	Total	Principal	Interest	Total
2022	\$ 101,405,000	\$ 94,290,600	\$ 195,695,600	\$ 44,520,000	\$ 36,942,975	\$ 81,462,975
2023	106,645,000	89,324,975	195,969,975	46,810,000	34,674,100	81,484,100
2024	111,865,000	84,109,400	195,974,400	49,215,000	32,288,475	81,503,475
2025	107,980,000	78,492,775	186,472,775	51,740,000	29,780,350	81,520,350
2026	113,525,000	72,855,150	186,380,150	54,410,000	27,143,225	81,553,225
2027	109,725,000	67,174,475	176,899,475	59,510,000	24,312,600	83,822,600
2028	79,050,000	62,105,350	141,155,350	62,575,000	21,278,850	83,853,850
2029	69,690,000	58,479,850	128,169,850	65,360,000	18,374,725	83,734,725
2030	72,175,000	55,050,713	127,225,713	69,820,000	15,534,600	85,354,600
2031	65,050,000	51,488,225	116,538,225	61,455,000	12,573,175	74,028,175
2032	84,670,000	48,350,100	133,020,100	47,225,000	10,024,625	57,249,625
2033	100,685,000	44,661,050	145,346,050	35,870,000	8,122,525	43,992,525
2034	105,140,000	40,199,450	145,339,450	41,840,000	6,692,775	48,532,775
2035	76,655,000	35,891,900	112,546,900	38,785,000	5,205,525	43,990,525
2036	80,335,000	32,212,750	112,547,750	45,180,000	3,660,575	48,840,575
2037	84,190,000	28,355,000	112,545,000	46,700,000	2,139,313	48,839,313
2038	112,720,000	24,310,250	137,030,250	23,410,000	936,400	24,346,400
2039	142,560,000	18,852,450	161,412,450	-	-	-
2040	42,160,000	11,836,350	53,996,350	-	-	-
2041	44,205,000	9,788,000	53,993,000	-	-	-
2042	46,355,000	7,640,150	53,995,150	-	-	-
2043	25,000,000	5,387,750	30,387,750	-	-	-
2044	26,250,000	4,137,750	30,387,750	-	-	-
2045	27,565,000	2,825,250	30,390,250	-	-	-
2046	28,940,000	1,447,000	30,387,000	-	-	-
Totals *	\$ 1,964,540,000	\$ 1,029,266,713	\$ 2,993,806,713	\$ 844,425,000	\$ 289,684,813	\$ 1,134,109,813

\* Totals may not be exact due to rounding



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**Schedule of Debt Service By Issuer**

As of Fiscal Year Ending June 30, 2021

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Fiscal Year	Southern Nevada Water Authority Through the State of Nevada Bond Bank			Southern Nevada Water Authority Issued by Southern Nevada Water Authority		
	Principal	Interest	Total	Principal	Interest	Total
2022	\$ 469,085	\$ 657,526	\$ 1,126,611	\$ 460,000	\$ 8,073	\$ 468,073
2023	126,540	651,600	778,140	460,000	2,691	462,691
2024	126,540	651,600	778,140	-	-	-
2025	126,540	651,600	778,140	-	-	-
2026	126,540	651,600	778,140	-	-	-
2027	126,540	651,600	778,140	-	-	-
2028	21,846,540	325,800	22,172,340	-	-	-
2029	126,540	-	126,540	-	-	-
2030	63,270	-	63,270	-	-	-
2031	-	-	-	-	-	-
2032	-	-	-	-	-	-
2033	-	-	-	-	-	-
2034	-	-	-	-	-	-
2035	-	-	-	-	-	-
2036	-	-	-	-	-	-
2037	-	-	-	-	-	-
2038	-	-	-	-	-	-
2039	-	-	-	-	-	-
2040	-	-	-	-	-	-
2041	-	-	-	-	-	-
2042	-	-	-	-	-	-
2043	-	-	-	-	-	-
2044	-	-	-	-	-	-
2045	-	-	-	-	-	-
2046	-	-	-	-	-	-
Totals *	\$ 23,138,138	\$ 4,241,326	\$ 27,379,464	\$ 920,000	\$ 10,764	\$ 930,764

\* Totals may not be exact due to rounding

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2022

## Schedule of Debt Service By Issuer

As of Fiscal Year Ending June 30, 2021

Page 3 of 3

Fiscal Year	Total Debt Service		
	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2022	\$ 146,854,085	\$ 131,899,174	\$ 278,753,259
2023	154,041,540	124,653,366	278,694,906
2024	161,206,540	117,049,475	278,256,015
2025	159,846,540	108,924,725	268,771,265
2026	168,061,540	100,649,975	268,711,515
2027	169,361,540	92,138,675	261,500,215
2028	163,471,540	83,710,000	247,181,540
2029	135,176,540	76,854,575	212,031,115
2030	142,058,270	70,585,313	212,643,583
2031	126,505,000	64,061,400	190,566,400
2032	131,895,000	58,374,725	190,269,725
2033	136,555,000	52,783,575	189,338,575
2034	146,980,000	46,892,225	193,872,225
2035	115,440,000	41,097,425	156,537,425
2036	125,515,000	35,873,325	161,388,325
2037	130,890,000	30,494,313	161,384,313
2038	136,130,000	25,246,650	161,376,650
2039	142,560,000	18,852,450	161,412,450
2040	42,160,000	11,836,350	53,996,350
2041	44,205,000	9,788,000	53,993,000
2042	46,355,000	7,640,150	53,995,150
2043	25,000,000	5,387,750	30,387,750
2044	26,250,000	4,137,750	30,387,750
2045	27,565,000	2,825,250	30,390,250
2046	28,940,000	1,447,000	30,387,000
Totals *	\$ 2,833,023,138	\$ 1,323,203,615	\$ 4,156,226,753

\* Totals may not be exact due to rounding

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# SECTION 8

## STATISTICAL INFORMATION

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SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22

OPERATING AND CAPITAL BUDGET



**Southern Nevada Water Authority**  
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**Southern Nevada Water Authority**  
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Fiscal Year Ending June 30, 2022

**Demographic Statistics**  
**Clark County, Nevada**  
**Five Calendar Years**

Calendar Year	Clark County Population <sup>(1)</sup>	Per Capita Income <sup>(2)</sup>	Clark County Personal Income (In Million \$) <sup>(2)</sup>	Median Household Income <sup>(3)</sup>
2020	2,376,683	N/A	N/A	N/A
2019	2,325,798	48,806	110,628	62,107
2018	2,284,616	47,759	106,317	57,076
2017	2,248,390	45,798	99,915	57,189
2016	2,205,210	43,950	94,001	54,384

Calendar Year	School Enrollment <sup>(4)</sup>	Total Labor Force <sup>(5)</sup>	Unemployment Rate <sup>(6)</sup>
2020	318,226	N/A	N/A
2019	320,703	1,131,551	4.0%
2018	322,436	1,101,978	4.7%
2017	322,122	1,072,743	5.2%
2016	320,339	1,048,544	5.8%

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).

**Southern Nevada Water Authority  
Operating and Capital Budget  
Statistical Information**

Fiscal Year Ending June 30, 2022

**Top Ten Employers<sup>(1)</sup>  
Clark County, Nevada  
Calendar Year 2020**

<b>Employer Trade name</b>	<b>Employees <sup>(2)</sup></b>	<b>Ranking</b>
US Air Force Base	10,000 or More	1
Las Vegas Metropolitan Police	5,000 to 9,999	2
Flamingo Las Vegas Hotel-Casino	5,000 to 9,999	3
MGM Grand	5,000 to 9,999	4
Orleans Hotel & Casino	5,000 to 9,999	5
Las Vegas Sands Corp	5,000 to 9,999	6
Mandalay Bay	5,000 to 9,999	7
Caesars Palace Las Vegas Hotel	5,000 to 9,999	8
Aquarius Casino Resort	5,000 to 9,999	9
Planet Hollywood	5,000 to 9,999	10

Total Labor Force	1,131,551
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Sources:

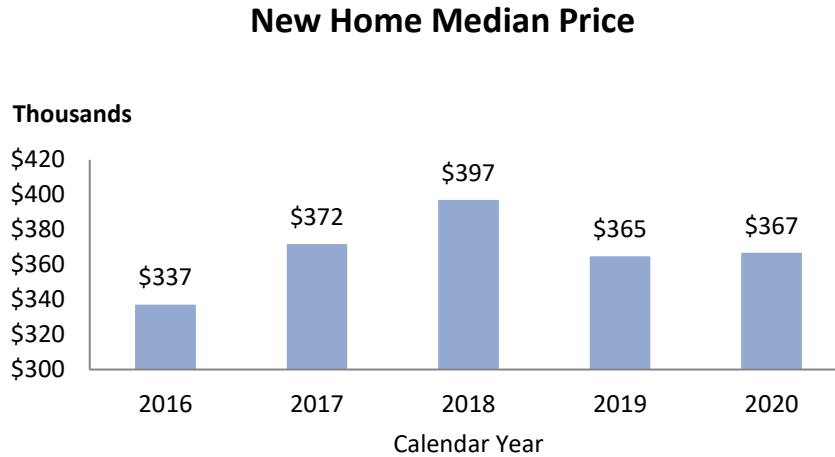
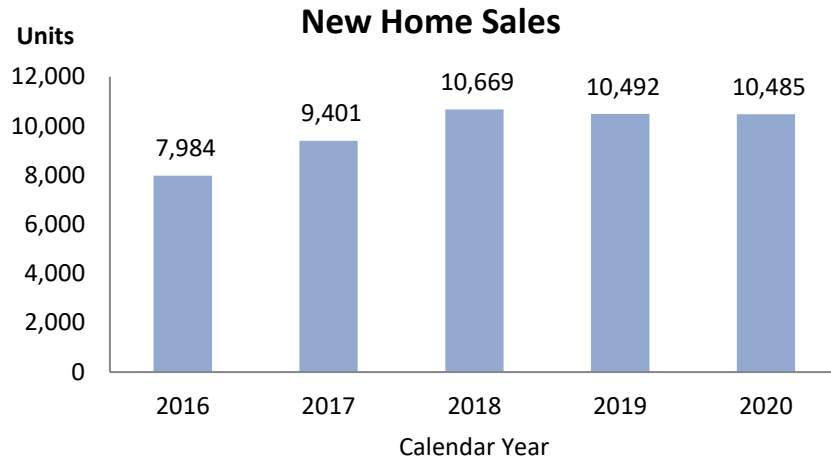
(1) Nevada Department of Employment, Training & Rehabilitation (DETR). The data is as of release of 2021 (as of March 15, 2021). In 2018, DETR changed the data source from internal created to a third party provider (Infogroup). Infogroup collects the data at the establishment level not rolled up into a collective whole. For example in the current method, the data set 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.



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Statistical Information**  
Fiscal Year Ending June 30, 2022

**Residential Real Estate**  
**Clark County, Nevada**



**Sources:**

(1) New Home Sales are sourced from the Home Builders Research, Inc. - The Las Vegas Housing Market Letter.

(2) New Home Median Prices are as of December of each year and are sourced from the Home Builders Research, Inc. - The Las Vegas Housing Market Letter.

Southern Nevada Water Authority  
Operating and Capital Budget  
Statistical Information  
Fiscal Year Ending June 30, 2022

**Secured Tax Roll**  
**Clark County, Nevada**  
**2020 - 21**

<u>Taxpayer</u>	<u>Taxable Assessed</u>	<u>Taxable Appraised</u>
1. MGM Resorts International	\$ 3,341,076,734	\$ 9,545,933,525
2. Caesar's Entertainment Corp.	1,871,780,926	5,347,945,504
3. NV Energy	1,797,492,697	5,135,693,420
4. Las Vegas Sands Corporation	1,122,130,007	3,206,085,734
5. Wynn Resorts Limited	894,979,174	2,557,083,353
6. The Blackstone Group	886,545,352	2,532,986,719
7. Station Casinos LLC	868,278,915	2,480,796,901
8. Howard Hughes Corporation	519,706,857	1,484,876,733
9. Ruffin Companies	461,330,605	1,318,087,444
10. Boyd Gaming Corporation	456,065,295	1,303,043,699
	<u>\$ 12,219,386,562</u>	<u>\$ 34,912,533,032</u>

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Source: Clark County Assessor's Report Dated October 31, 2020

Southern Nevada Water Authority  
Operating and Capital Budget  
Statistical Information  
Fiscal Year Ending June 30, 2022

## Temperature and Rainfall

Average Maximum and Minimum Daily Temperature  
in Degrees Fahrenheit and Monthly Rainfall in Inches

Month	2015			2016			2017		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	62	44	0.9	57	40	0.5	57	42	0.9
February	71	49	0.5	70	46	0.1	65	49	0.6
March	78	56	0.3	75	53	0.0	77	54	0.0
April	80	58	0.3	79	58	2.3	81	59	0.0
May	85	64	0.2	86	65	0.0	89	66	0.1
June	104	80	0.0	105	81	0.5	105	79	0.0
July	101	80	0.2	107	84	0.2	107	85	0.1
August	104	82	0.7	102	80	0.2	103	81	0.2
September	98	76	0.0	93	71	0.0	92	72	0.5
October	84	65	1.2	84	64	0.2	84	60	0.0
November	64	45	0.2	71	51	0.0	73	53	0.0
December	56	38	0.0	57	40	0.8	63	42	0.0
<b>Average Annual Temperature/ Total Rainfall</b>	<b>82.2</b>	<b>61.3</b>	<b>4.5</b>	<b>82.1</b>	<b>61.0</b>	<b>4.8</b>	<b>82.9</b>	<b>61.7</b>	<b>2.4</b>

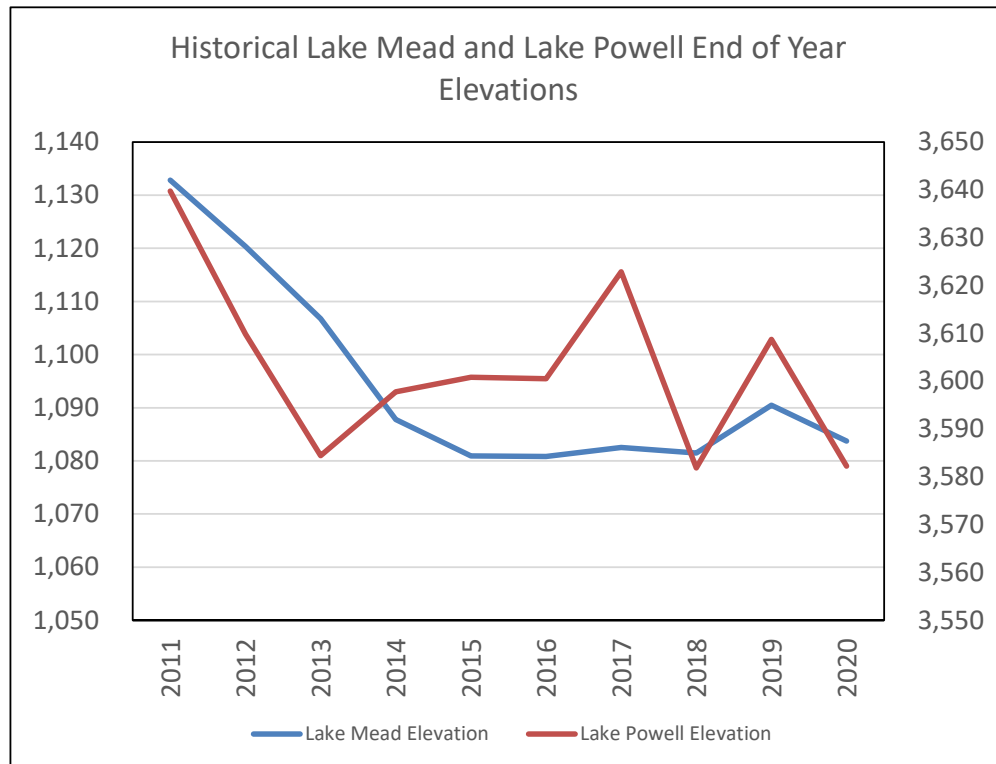
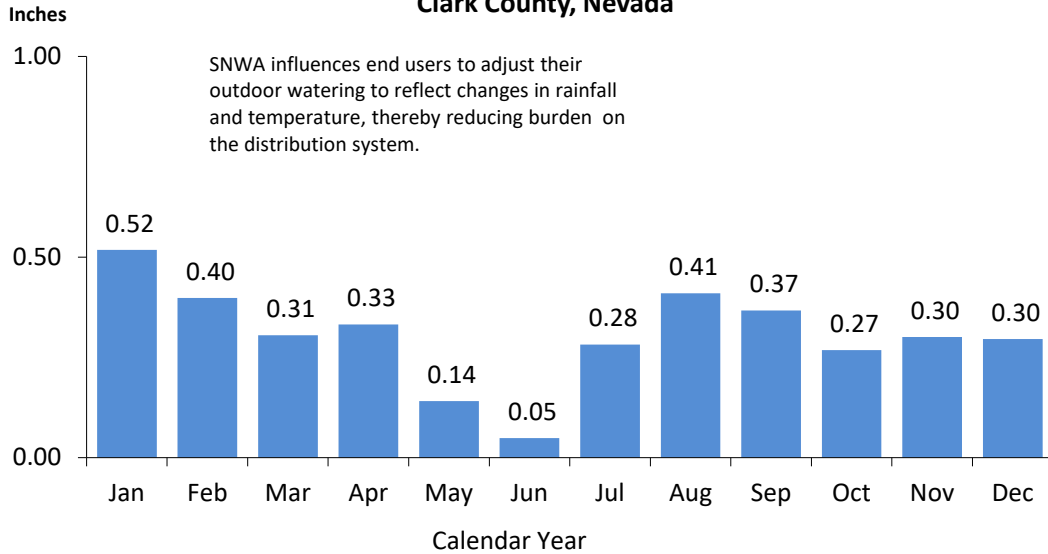
  

Month	2018			2019			2020		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	64	44	1.5	59	42	1.0	60	41	0.0
February	64	44	0.0	56	39	2.1	64	44	0.3
March	70	50	0.3	70	51	0.4	67	50	1.6
April	84	61	0.0	82	60	0.4	80	59	0.4
May	90	68	0.2	82	61	0.8	92	69	0.0
June	103	79	0.0	99	77	0.0	99	75	0.0
July	107	85	0.8	105	83	0.0	107	83	0.0
August	105	84	0.1	107	82	0.0	107	84	0.0
September	100	77	0.0	95	73	0.2	99	74	0.0
October	79	61	0.1	78	55	0.0	88	62	0.0
November	68	48	0.2	69	48	1.1	69	48	0.0
December	59	42	0.2	57	42	0.9	59	38	0.0
<b>Average Annual Temperature/ Total Rainfall</b>	<b>82.6</b>	<b>61.7</b>	<b>3.4</b>	<b>79.7</b>	<b>59.3</b>	<b>6.9</b>	<b>82.5</b>	<b>60.5</b>	<b>2.4</b>

Southern Nevada Water Authority  
Operating and Capital Budget  
Statistical Information  
Fiscal Year Ending June 30, 2022

## Average Rainfall Per Month Ten Year Span (2011 to 2020)

Clark County, Nevada



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# SECTION 9

## FINANCIAL POLICIES

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Capitalization Policy .....	9-7



SOUTHERN NEVADA WATER AUTHORITY™

FISCAL YEAR 2021-22  
OPERATING AND CAPITAL BUDGET



## **Financial Policy**

As operating agent for the Southern Nevada Water Authority, 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.

<b>SOUTHERN NEVADA WATER AUTHORITY</b>  <b>BOARD POLICY</b>	<b>SUBJECT:</b>  <b>SOUTHERN NEVADA WATER AUTHORITY RESERVE POLICY</b>	<b>NUMBER:</b>  <b>11</b>
	<b>APPROVED BY:</b>  <b>BOARD OF DIRECTORS</b>	<b>ISSUE:</b>  <b>1</b>
<b>ISSUING DEPARTMENT:</b>  <b>FINANCE</b>	<b>January 21, 2016</b>	<b>PAGE:</b>  <b>1 OF 2</b>

### Purpose

The purpose is to establish 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 Southern Nevada Water Authority (SNWA).

### 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 SNWA's reserve policy:

1. Volatility in Sources of Funds – Some of the SNWA's sources of funds have experienced significant volatility; for example, connection charges and sales tax, in periods where the local economy suffers.
2. Customer Concentration – The SNWA receives the majority of its unrestricted funds from its member agencies. Although none have ever defaulted, such a default or a significant delay could have a substantial impact on the SNWA's operations.
3. Likelihood of Successful Rate Increases – Although the SNWA has enjoyed tremendous support from its member agencies and the community, it is possible that these conditions could change in the future, thus impacting the SNWA's ability to increase rates to meet increasing costs.
4. Asset Age and Condition – As the infrastructure ages, maintenance and replacements costs will increase. Also, there is always the possibility of unexpected failures that can be quite expensive. Such failures could result from age-related causes or natural disasters.

5. Control Over Expenses – Although most of the SNWA's expenses are predictable, there remains the possibility of large, unexpected expenditures; for example, litigation, natural disasters, increases in energy and chemical costs.

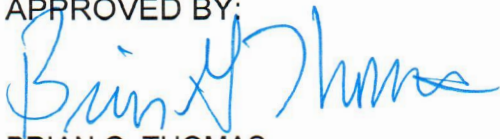
### Reserve Components

The following are the four components identified for the SNWA'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 SNWA 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 SNWA 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 the SNWA operations, and provide assurances to investors that the SNWA 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, the capital improvement plan may be used. This reserve will fluctuate over time as projects change. This level of capital reserve will enable the SNWA 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 SNWA 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	NUMBER: 1
	APPROVED BY:  BRIAN G. THOMAS CHIEF FINANCIAL OFFICER Effective Date: July 1, 2018	ISSUE: 2018
ISSUING DEPARTMENT:  FINANCE		PAGE:  1 OF 3

I. PURPOSE

The purpose of this policy is to define what costs are capitalized and depreciated/amortized (if applicable).

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

- A. All land, land improvements, buildings, building improvements, vehicles, machinery, equipment, works of art and historical treasures, infrastructure, and all other tangible or intangible assets (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 are capitalized. Cost includes installation and delivery, but not training. The cost of designing and constructing facilities includes all direct and indirect expenditures.

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 integral to our operations and are capitalized regardless of individual unit cost. These groups are meters, service laterals, and pipelines. Assets / asset groups deemed integral may be revised only with written approval of the Chief Financial Officer.

- B. The cost of normal maintenance and repairs (any outlay that does no more than return a capital asset to its original condition, regardless of amount) are expensed and not capitalized. See Attachment A for a decision-tree to assist in defining whether expenditures are capital or operating and maintenance.



**IV. COMPUTER SYSTEM SOFTWARE**

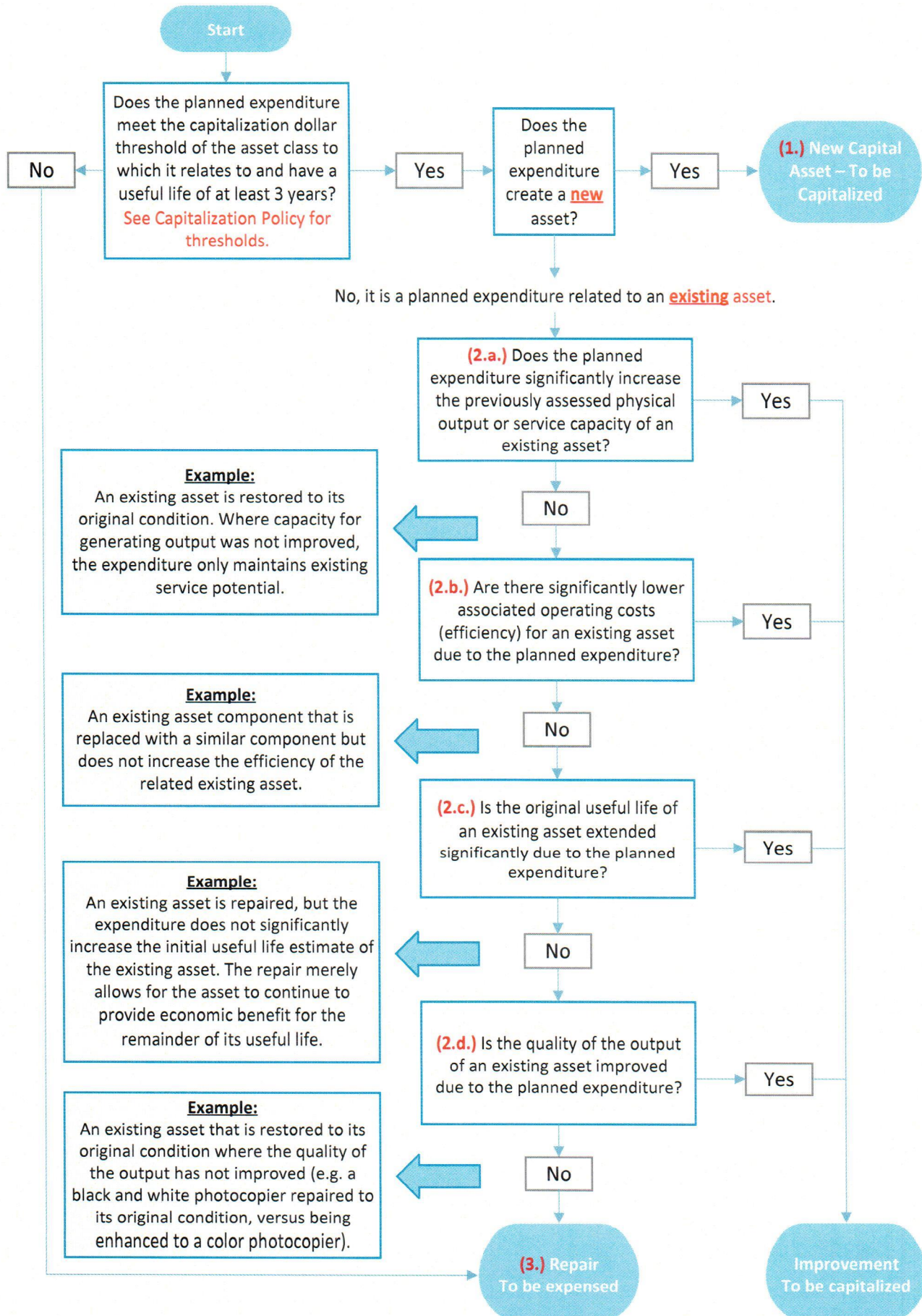
Major on-premises computer systems software and software modifications, whether purchased or internally developed, are capitalized if the total cost exceeds \$100,000 and the useful life is at least three years. Cost includes direct and indirect expenditures within the application development stage of implementation. Training on the operation and use of software is expensed and not capitalized. Costs that take place before the final selection of the software, such as due diligence and the evaluation of alternatives, are expensed and not capitalized.

Software-as-a-Service (SaaS) will generally be expensed as a service contract and does not qualify as a capital asset unless the SaaS 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.

**V. DONATED FACILITIES**

Donated developer facilities are capitalized at the engineering estimates of acquisition value at the time the assets are donated.

## New Asset vs. Improvement vs. Repair Decision Tree





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# **SECTION 10**

## **GLOSSARY**

Glossary.....	10-1
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**SOUTHERN NEVADA WATER AUTHORITY™**

**FISCAL YEAR 2021-22**

**OPERATING AND CAPITAL BUDGET**



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Glossary**  
Fiscal Year Ending June 30, 2022

**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 SNWA's service area.

**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 given period.

**Arizona Groundwater Banking Program.** A program between SNWA and the Arizona Water Banking Authority (AWBA). In exchange for financial consideration, the AWBA will bank recharged water in Arizona for future use by Clark County, Nevada.

**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.

**Automatic Transfer Switch (ATS).** An electrical switch that switches a load between two sources.

**Balanced Budget.** A budget where sources of funds are equal to uses of funds. The SNWA is not required to issue a balanced budget.

**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.

**Big Bend Water District (BBWD).** A general improvement district created in 1983 to supply water to Laughlin, Nevada.

**Bond.** A certificate of debt issued by a government or corporation guaranteeing payment of the original investment plus interest by a specified future date.

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Glossary**  
Fiscal Year Ending June 30, 2022

**Bond Funds.** Monies raised through debt issuance that are used for the acquisition or construction of capital assets.

**Budget.** Proposed financial plan over a given period, usually one year.

**Budget Calendar.** The schedule of key dates or milestones the SNWA 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 statement prepared by the SNWA and approved by the SNWA's Board of Directors.

**Bureau of Labor Statistics (BLS).** A unit of the United States Department of Labor, 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, which 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 Contributions.** For net position purposes, defined as regional connection, commodity, reliability and infrastructure surcharge revenues as well as grant receipts.

**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 useful life of three or more years.

**Capital Revenue.** A revenue source that is used solely to either retire debt or pay for construction of capital assets.

**Capital Improvement Plan (CIP).** A multi-year plan, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.

**Captive Insurance.** Captive insurance is an alternative to self-insurance in which a parent group or groups create a licensed insurance company to provide coverage for itself.

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**Citizens Advisory Committee (CAC).** A group of citizens convened to seek recommendations and help guide decision-making of the organization.

**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.

**Colorado River Commission (CRC).** An agency of the of the State of Nevada created to acquire and hold in trust Nevada's right to water and power resources from Colorado River water apportioned among the seven Colorado River Basin states and Mexico.

**Commercial Paper.** Short-term, unsecured, discounted, and negotiable notes sold through the open market. In most cases commercial paper provides immediate cash needs at lower rates than standard debt issues.

**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).

**Connection.** Generic term for a retail customer. Currently a connection is estimated to increase the annual load on the water delivery system by 0.45 acre-foot per year. A customer whose annual load is estimated at more than 0.45 acre-foot per year is said to have multiple connections.

**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 SNWA achieves the benefits of conservation through education of the end user, promoting water efficient hardware, and pricing signals.

**Construction Expenditures.** Generally, expenditures made to build, supervise, or provide materials used in the construction of capital assets.

**Consumer Price Index. (CPI)**

**Coyote Springs Water Resources General Improvement District (CSWRD).** Created in 2006 to provide necessary water and wastewater services to the Coyote Springs community.

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**Cross Departmental Team. (CDT)**

**Debt Issuance Proceeds.** Principal amount or face value of debt issues. These proceeds are used to pay for major construction expenditures incurred by the SNWA.

**Debt Service Payments.** Funds used for the repayment of annual principal and interest charges on debt the SNWA has issued.

**Department.** A basic organizational unit of the SNWA 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.

**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.

**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.

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**Energy.** Collective name for electricity and natural gas purchases used to treat and distribute water throughout the SNWA's service area as well as power office buildings and other ancillary locations.

**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.

**Fiscal Year (FY).** For the Southern Nevada Water Authority, the 12-month period begins with July 1, and ends with June 30 of the designated fiscal year; e.g. FY 2021-22 ends on June 30, 2022.

**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 sub-fund at the beginning or ending of an accounting period.

**Fund Equity.** The excess of an entity's assets over its liabilities.



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**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.

**Government Finance Officers Association (GFOA).** A professional association of approximately 17,500 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).

**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.

**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.

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**Inter-fund Loan.** An internal financing device used by the wholesale delivery operations, capital improvements plan, and Las Vegas wash sub funds wherein money is “loaned” to the sub funds by the new expansion debt service sub fund. The WDO sub fund will repay the loan as the actual market price of power falls below the model clearing price. The MCCP sub fund will repay the loan when additional bond proceeds become available. The LVW sub fund will repay the loan with future sales tax revenues. In each case the repayments will include amounts equal to the estimated amount of interest the NEDS could have earned from the loan proceeds in addition to the principal.

**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 SNWA 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 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 Groundwater Management Program Sub Fund.** Sub fund that tracks revenues and expenses incurred from the SNWA program designed to protect and manage the Las Vegas valley's primary groundwater supply.

**Las Vegas Wash (LVW).** The primary channel through which the valley's excess water returns to Lake Mead. The water flowing through the wash comprises less than 2 percent of the water in Lake Mead and consists of urban runoff, shallow groundwater, storm water and releases from the valley's three water reclamation facilities.

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**Las Vegas Wash Program Fees.** Fees imposed on signatories of the Las Vegas Wash Inter local Agreement that will be used for Las Vegas Wash operating expenses. The fees are net of any anticipated grant proceeds. Participants in the Inter local Agreement are the SNWA, the City of Henderson, the City of Las Vegas, Clark County, the Clark County Regional Flood Control District, and the Clark County Water Reclamation District.

**Las Vegas Wash (LVW) Sub Fund.** Sub fund that tracks capital and operational revenues and expenses pertaining to the Las Vegas Wash.

**Las Vegas Valley Water District (LVVWD).** The major water retailer in southern Nevada. The LVVWD is the operating agent of the Southern Nevada Water Authority although the two companies are autonomous and produce financial records and statements independent of each other.

**Leading Utilities of the World (LOUW).** A global network of the world's most successful and innovative water and wastewater utilities.

**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.

**Major Construction and Capital Program (MCCP).** 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.

**Model Clearing Price.** A power cost calculated per MWh and established to reflect the projected cost of electrical power over a ten year period.

**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.

**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.

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**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.

**New Expansion Debt Service (NEDS) Sub Fund.** Sub fund that tracks revenues and expenses relating to debt service incurred from the expansion of the SNWA transmission and distribution system.

**Northern Resources.** All-inclusive term for water rights, land, and ranching operations owned by the SNWA and found in Lincoln and White Pine County, Nevada.

**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 of the SNWA's treatment and distribution system and through the Las Vegas Wash and groundwater management program. On a GAAP prepared financial statement, these costs will appear on the Statement of Revenues, Expenses and Changes in Net Position.

**Operating Revenue.** For net position purposes, defined as wholesale delivery charge, net income from ranch operations, program fees collected from the operation of the Las Vegas Wash and groundwater management fees.

**Other Revenues.** Various sundry revenues from minor sources. Other revenues include, but are not limited to, reimbursement of Authority operating expenses for purveyors who do not use the SNWA's treatment facilities and income from the SNWA's Northern Resource holdings.

**Payroll and Related.** A budget category that includes all SNWA 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.

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**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.

**Power.** Electricity and natural gas costs that are used for the transportation and transmission of water throughout the SNWA distribution system.

**Power Purchase Agreement.** (PPA)

**Proprietary Fund.** Synonym in this document for Enterprise Fund.

**Purveyor.** A subset of the members of SNWA consisting of City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, and the Las Vegas Valley Water District. These members purchase potable water from SNWA and remit a form of capital revenue.

**Rate-of-Flow Control Systems (ROFCS).** Flow control in a hydraulic system is to regulate speed. The device controls the speed of an actuator by regulating the flow rate.

**Recharge.** Lake water injected directly into the aquifer by wells to store for future use.

**Reliability Centered Maintenance (RCM).**

**Remote Operated Vehicle (ROV).** Unoccupied, highly maneuverable underwater robots typically operated 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.

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**Regional.** Pertaining to the area of Clark County, Nevada (the jurisdiction of SNWA).

**Regional Commodity Charge.** Charge placed each thousand gallons of potable water sold. This charge is collected by SNWA's purveyor members (City of Henderson, City of North Las Vegas and Las Vegas Valley Water District only) and remitted monthly to SNWA.

**Regional Connection Charge.** Charge placed on new connections to the system. Mainly based on service size, although adjustments to certain customer classes are made. This charge is collected by SNWA's purveyor members (City of Henderson, City of North Las Vegas and Las Vegas Valley Water District only) and remitted monthly to SNWA.

**Regional Infrastructure Surcharge.** Surcharge placed on all retail water bills. Revenue collected by the purveyors on this charge is forwarded to SNWA monthly. The charge is based on the size of meter or meters that service a customer. Different rates apply for residential, nonresidential and nonresidential fire services. Residential fire services are not assessed this charge.

**Reliability Surcharge.** Surcharge placed on retail water bills. Currently the charge is 0.25% of total retail bill for residential customers, and 2.5% of total retail bill for non-residential services. This charge is collected by SNWA's purveyor members (City of Henderson, City of North Las Vegas and Las Vegas Valley Water District only) and remitted monthly to SNWA.

**Research and Development (R&D).** Work directed toward the innovation, introduction, and improvement of products and processes.

**Restricted Revenues.** For net position purposes, defined as operating capital and expenses, payroll, recharge purchases and power costs. However it excludes these costs if they are present in the MCCP sub-fund or if they are associated with capital costs for the Las Vegas Wash.

**Revenues.** Funds received from various sources and treated as income to SNWA to finance expenditures.

**Revenue Bonds.** Bonds where pledges are made to dedicate specific revenue sources to repay the bonds.

**Risk Management.** An organized attempt to protect a government'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)**

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**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.

**Sales Tax.** One quarter of one penny of the Clark County sales tax rate that is remitted to SNWA on a monthly basis. The rate was added on April 1999, and is shared with wastewater agencies, rural water and wastewater systems and the Las Vegas Wash.

**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.

**Solar Photovoltaic (PV).** A technology that converts sunlight (solar radiation) into direct current electricity by using semiconductors.

**Southern Nevada Public Lands Funds.** A federal law governing the disposition of certain public lands in the Las Vegas Valley by the Bureau of Reclamation. The SNPLMA calls for SNWA to receive 10% of the purchase price of all public lands sold pursuant to the Act. These funds are restricted in use to paying for the SNWA Capital Improvement Plan.

**Southern Nevada Water Authority (SNWA).** Formed in 1991 to manage Southern Nevada's water needs on a regional basis. The SNWA 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.

**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.

**Sub Fund.** An internal control measure used to ensure that revenues and expenses from similar operations are matched. Although SNWA is an enterprise fund under Nevada law, the sub fund philosophy assists SNWA in analyzing and controlling its costs throughout the year.

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**Supervisory Control and Data Acquisition (SCADA).** Water operations control systems.

**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.

**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 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.

**Wholesale Delivery Operations (WDO) Sub Fund.** Sub fund that tracks revenues and expenses incurred from the production of 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.



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