



SOUTHERN NEVADA WATER AUTHORITY™

OPERATING & CAPITAL BUDGET 2024

Fiscal year ending June 30, 2024



On the cover:

The Quinn Apartment Homes converted nearly 30,000 square feet of grass to desert landscaping saving more than 1.5 million gallons of water annually. Southern Nevada businesses, HOAs and multifamily properties have until the end of 2026 to replace nonfunctional grass with drip-irrigated plants and trees to comply with a new state law that prohibits use of Colorado River water to irrigate decorative grass. The Southern Nevada Water Authority (SNWA) offers a cash incentive to help defray the costs of landscape upgrades, but SNWA encourages property owners to act now while the current rebate is in effect. Learn more at snwa.com.

Southern Nevada Water Authority

Operating & Capital Budget Fiscal Year Ending June 30, 2024



Board of Directors

**Marilyn K. Kirkpatrick, Chair, Clark County Commissioner
(representing Las Vegas Valley Water District)
Dan Stewart, Vice Chair, City of Henderson Councilman
Steve Walton, City of Boulder City Councilman
Scott Black, City of North Las Vegas Councilman
Olivia Diaz, City of Las Vegas Councilwoman
James B. Gibson, Clark County Commissioner
(representing Big Bend Water District)
Justin Jones, Clark County Commissioner
(representing Clark County Water Reclamation District)**

**John J. Entsminger
General Manager**

**E. Kevin Bethel
Chief Financial Officer**

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

**Prepared by the Finance Department
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Note of Appreciation

We would like to express our appreciation for the Finance department staff, and staff members of other departments for their special work in the preparation of the 2023-24 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, 2022.**

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 01, 2022

Christopher P. Morill

Executive Director

Southern Nevada Water Authority
Operating and Capital Budget
Table of Contents
Fiscal Year Ending June 30, 2024

Section 1: General Manager's Information Report

Executive Summary	1 - 1
Major Construction and Capital Plan (MCCP)	1 - 2
Drought and Water Resources	1 - 3
Conservation	1 - 4
Awards and Recognition	1 - 7
Financial Consideration/Capital Funding	1 - 7
Financial Summary	1 - 9
Approval	1 - 11

Section 2: Introduction and Strategic Plan

Introduction	2 - 1
Purpose and Powers	2 - 1
Transfer Act	2 - 1
Intergovernmental Relationships	2 - 2
Organizational Structure	2 - 3
Financial Structure and Controls	2 - 5
Capital Project Structure and Controls	2 - 7
Budget Controls and Process	2 - 8
Basis of Accounting	2 - 8
Budgetary Controls	2 - 9
Budget Process	2 - 9
Budget Augmentation	2 - 10
Budget Calendar	2 - 11
Southern Nevada Water Authority Strategic Plan	2 - 14
Strategic Plan Background	2 - 14
Strategic Plan and Budget Plan Preparation	2 - 14
Visions-Mission-Goals	2 - 15
Strategic Plan Strategies	2 - 15
Performance Measures Matrix	2 - 17

Section 3: Operating and Capital Budget Plan

Operating Budget Summary	3 - 1
Operating Sources	3 - 2
Operating Uses	3 - 7
Capital Budget Summary	3 - 11
Capital Sources	3 - 12
Capital Uses	3 - 12
Summary of Sources and Uses of Funds and Changes in Net Assets	3 - 16
Sub Funds	3 - 17

Southern Nevada Water Authority
Operating and Capital Budget
Table of Contents
Fiscal Year Ending June 30, 2024

Section 4: State of Nevada Budget Documents

State of Nevada, Department of Taxation, Budget Submittal	4 - 1
Budget Document Index	4 - 2
Schedule S-2: Statistical Data	4 - 3
Schedule A-2: Proprietary Funds	4 - 4
Schedule F-1: Enterprise Fund - Revenues, Expenses and Net Position	4 - 5
Schedule F-2: Enterprise Fund - Statement of Cash Flows	4 - 6
Schedule C-1: Indebtedness	4 - 7
Schedule 31: Schedule of Existing Contracts	4 - 8
Schedule 32: Schedule of Privatization Contracts	4 - 13
Affidavit of Publication	4 - 14
Letter of Compliance	4 - 15

Section 5: Department Budgets

Summary of Department Expenditures	5 - 1
Executive Management	5 - 2
Legal Services	5 - 14
Finance	5 - 19
Energy Management	5 - 26
Risk Management	5 - 33
Customer Care & Field Services	5 - 37
Engineering	5 - 45
Infrastructure Management	5 - 50
Operations	5 - 60
Human Resources	5 - 69
Information Technology	5 - 73
Environmental, Health, Safety & Corporate Security	5 - 80
Water Quality & Treatment	5 - 96
Water Resources	5 - 105
Public Services	5 - 115

Section 6: Capital Plans

Capital Budget	6 - 1
Major Construction and Capital Plan 2020	6 - 10

Southern Nevada Water Authority
Operating and Capital Budget
Table of Contents
Fiscal Year Ending June 30, 2024

Section 7: Debt Management Policy

Table of Contents	7 - 2
Introduction	7 - 3
Affordability of Debt	7 - 5
Issued by the Las Vegas Valley Water District	7 - 5
Issued by the Clark Count, Nevada	7 - 7
Issued by the State of Nevada	7 - 9
Issued by the Southern Nevada Water Authority	7 - 10
Debt Capacity	7 - 11
Debt Comparison (per capita and assessed valuation)	7 - 11
Policy Statement for Sale of Debt	7 - 11
Operation Costs and Revenue Sources for Projects in Major Construction and Capital Plan	7 - 14
Miscellaneous Items	7 - 14
Chief Financial Officer	7 - 17
Appendix	7 - 18

Section 8: Statistical Information

Table of Contents	8 - 1
Demographic Statistics	8 - 2
Top Ten Employers	8 - 3
Residential Real Estate	8 - 4
Secured Tax Roll	8 - 5
Temperature & Rainfall	8 - 6
Charts: Average Rainfall and Comparison of Lake Elevations	8 - 7

Section 9: Financial Policies

Financial Policy	9 - 2
Reserve Policy	9 - 5
Capitalization Policy	9 - 7

Section 10: Glossary

Glossary	10 - 1
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SECTION 1

GENERAL MANAGER'S INFORMATION REPORT

Executive Summary	1 - 1
Major Construction and Capital Plan (MCCP)	1 - 2
Drought and Water Resources	1 - 3
Conservation	1 - 4
Awards and Recognition	1 - 7
Financial Consideration/Capital Funding	1 - 7
Financial Summary	1 - 9
Approval	1 - 11

SOUTHERN NEVADA WATER AUTHORITY

GENERAL MANAGER’S INFORMATION REPORT

DATE: April 17, 2023

No. 45

SUBJECT: SOUTHERN NEVADA WATER AUTHORITY
PROPOSED OPERATING AND CAPITAL BUDGET FOR FISCAL YEAR 2023-24

The Tentative Operating and Capital Budget of the Southern Nevada Water Authority (SNWA) for fiscal year 2023-24 was submitted by April 15, 2023, to the State of Nevada Department of Taxation in accordance with NRS 354.596.

Executive Summary

Twenty-three years of sustained drought conditions throughout the Colorado River Basin coupled with ominous climatic and hydrologic projections indicate that hotter and drier conditions throughout the region are not temporary and should be expected and planned for moving forward. To protect critical water levels in Lakes Powell and Mead, the federal government has required that the Basin States develop a plan to greatly reduce their Colorado River diversions. While the states continue to negotiate regional solutions, Southern Nevada remains a leader in water conservation and infrastructure efforts to reduce the impact of future shortage declarations and ensure the community’s continued vitality into the future. The fiscal year 2023-24 tentative budget reflects those efforts.

New SNWA Board Members

In January 2023, the SNWA Board of Directors welcomed two new members. Councilwoman Olivia Diaz replaced Cedric Crear as the City of Las Vegas representative, and Councilman Steve Walton replaced James Adams as the Boulder City representative. Board leadership remained unchanged with Marilyn Kirkpatrick (Las Vegas Valley Water District) as Chair, and Dan Stewart (City of Henderson) as Vice Chair.

Nevada Water Working Committee

The SNWA General Manager, John Entsminger, was selected by Governor Joe Lombardo to lead Nevada’s Working Committee on Water. Mr. Entsminger, along with other water experts across the state, developed recommendations and priorities to support the Governor and his staff on water-related issues.

Update to Organizational COVID-19 Protocols

In October, the SNWA discontinued the protocols established during the COVID-19 pandemic. As a result, employees are no longer required to complete a wellness survey before reporting to work onsite; however, various health actions and precautions remain in place to protect the health and safety of employees.

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Major Construction and Capital Plan (MCCP)

The Major Construction and Capital Plan (MCCP) is the SNWA's vehicle for identifying and authorizing capital initiatives, including water resource acquisition; system expansion; and construction, repair, and replacement of water facilities. Projects outlined in the MCCP are funded by the SNWA's bond proceeds and revenue generated by the SNWA's water bill charges, connection charges, sales tax proceeds and Southern Nevada Public Land Management Act funds, when available. Significant inflationary increases in materials and equipment delivery since the MCCP was amended in 2020 have caused projected capital project costs to increase from approximately \$3.2 billion to \$5 billion. Major facility-related projects currently in progress are described below.

Horizon Lateral

The Horizon Lateral, the largest project in the MCCP, will offer redundancy for a large portion of the SNWA's 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 \$2.4 billion to construct with completion projected in 2030. The predesign phase for the project is 80 percent complete.

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.

Two major components of the project, the SNWA's 20 million-gallon-per-day (MGD) pumping station and the City of North Las Vegas' 5 MGD reservoir, are each at 30-percent design completion and scheduled for construction in 2025.

Scheduled for completion in 2028, the Garnet Valley Water System is projected to cost approximately \$340 million.

Garnet Valley Wastewater System

Construction of the Garnet Valley Wastewater System will help ensure the sustainable development of resources and reduce water demand impacts on 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.

The wastewater system is comprised of two major components: an out-of-valley system, which is currently at 30-percent design completion and estimated to begin construction in 2025. The other component is the in-valley wastewater collection system, known as the Las Vegas Boulevard Interceptor. This component is at 90-percent design completion and projected to begin construction in 2024.

The entire project, scheduled for completion in 2027, is estimated to cost \$294 million.

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Large Scale Solar Photovoltaic (PV) Project

In 2021, the SNWA entered a 25-year, fixed-rate Power Purchase Agreement (PPA) with ibV Energy Partners, who will build, operate, and maintain a large-scale solar PV facility near Boulder City, Nevada. The PPA allows the SNWA to purchase power below current market cost, saving money when the facility becomes operational 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. Construction is now estimated to commence in 2023, with commercial operations beginning in 2024. The estimated capital cost of this project is \$20 million.

Ozone Equipment Upgrades at AMS and RM

Existing Ozone equipment at the Alfred Merritt Smith and River Mountains water treatment facilities is 20 years old and nearing the end of its useful life. Replacing the old equipment with five new ozone generators will help to ensure that regional water quality needs will be met for the next 20 years. The overall cost for this project is \$85 million and construction is scheduled for 2024.

Stage 2 Reliability Upgrades Project

This project will install a new 90 MGD pumping station at the (LVVWD) Campbell Reservoir and provide a backup supply in the event that the Hacienda Pumping Station needs to be taken offline in the event of failure or scheduled maintenance. The estimated cost of this project is \$128 million and is on schedule to meet design completion in 2024.

Drought and Water Resources

The most recent and reliable scientific projections suggest that the Colorado River Basin is experiencing permanent aridification, meaning that the region is making a permanent shift to a drier future because of gradual warming. As a result, the combined storage in Lake Powell and Lake Mead was just 33 percent of capacity as of January 2023, and future declines are expected. With such uncertainty moving forward, swift and significant efforts at the local, regional and federal levels will be critical to reducing basin-wide Colorado River water consumption and protecting the water levels at the river's two main reservoirs.

Memorandum of Understanding (MOU)

In August 2022, the SNWA joined the Metropolitan Water District of Southern California, Aurora Water (Colorado), Denver Water (Colorado) and Pueblo Water (Colorado) in signing a Memorandum of Understanding (MOU) that commits the parties to reduce water use in their respective municipalities. Just three months later, the MOU was updated to include 25 additional municipal and public water providers. Specifically, signatories to the MOU committed to take the following actions:

- Increase indoor and outdoor water use efficiency
- Reduce non-functional turfgrass
- Increase water reuse and recycling programs

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

- Implement best practices and share successful strategies
- Collaborate to bring the Colorado River water supply and demand into balance

Water Resource Plan

In January 2023, the SNWA Board of Directors adopted an updated Water Resource Plan, which provides a comprehensive overview of available water resources to meet regional water demands over a 50-year planning horizon and considers factors that could influence long-term water demands and future resource availability. The 2023 Plan highlights growing uncertainties about Colorado River water supply availability, both locally and throughout the Colorado River Basin. It also reflects ongoing discussions between the Colorado River Basin States and the Federal government to address and protect Lake Mead and Lake Powell from reaching critically low reservoir elevations. Community conservation efforts that will need to be successfully implemented to meet the community's water conservation goal of 86 gallons per capita per day (GPCD) by 2035 are also included in the 2023 Plan.

Mandatory Water Use Reductions

Under federal shortage rules and the Colorado River Drought Contingency Plan, the likelihood of additional Colorado River water use reductions increases as water levels at Lake Mead continue to fall. The first-ever federally declared shortage on the Colorado River occurred in 2022. As hydrologic conditions worsened, a Stage 2 shortage was declared for 2023, reducing Nevada's Colorado River allocation from 300,000 acre-feet per year (afy) to 275,000 afy. While these reductions are significant and future reductions are likely, community conservation efforts have reduced Southern Nevada's annual consumptive use of Colorado River water to an amount below any supply reduction that may occur under existing rules.

Conservation

As Colorado River hydrology continues to worsen and there is no indication of future improvement, community-wide water conservation efforts are critical to the current and future vitality of Southern Nevada. Because nearly 60 percent of all water delivered by the SNWA is used consumptively—primarily for landscape irrigation and cooling—reducing consumptive water use continues to be a primary focus area for future conservation gains.

Water Smart Landscapes Program

Participation in the Water Smart Landscapes Program continues to produce successful results. In 2022, Southern Nevada water users converted nearly 10 million square feet of turf, which will yield an estimated savings of 531 million gallons of water every year. Major program participants in 2022 included Western High School converting 50,000 square feet, Peccole Ranch Community Association converting 43,000 square feet, and Mountain Drive Homeowners Association converting 30,000 square feet. The SNWA will look to build on the program's current momentum throughout 2023.

Water Efficient Technologies Program

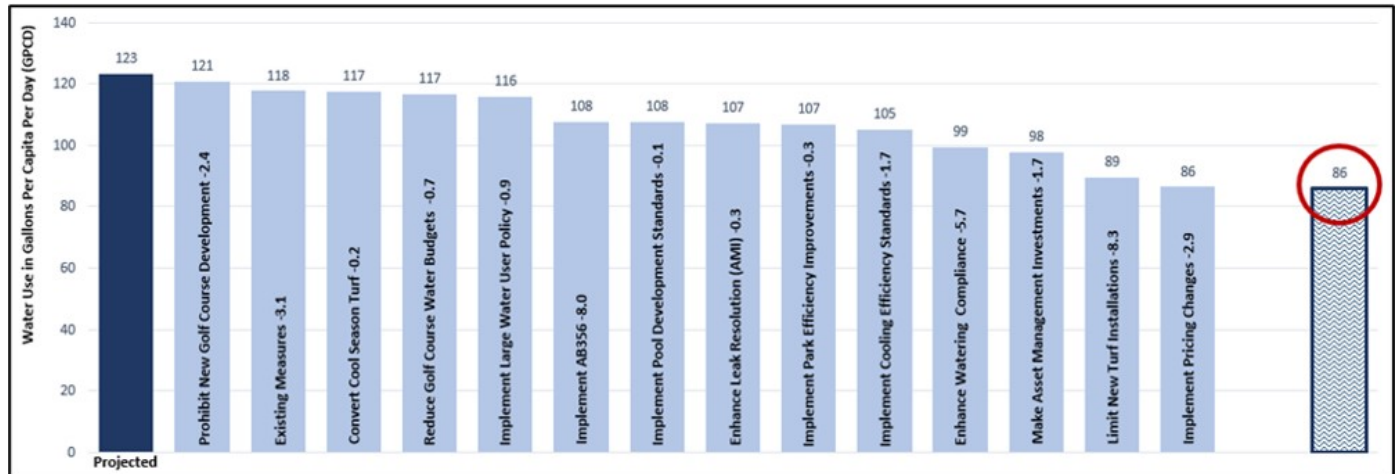
The Water Efficient Technologies Program also experienced success in 2022, with 45 projects completed for an estimated water savings of 116 million gallons. The SNWA hopes to continue the program's success by focusing on cool-to-warm season turf conversions and cooling efficiency improvements throughout 2023.

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Additional Water Conservation Measures

Over the past year, the SNWA has identified various forms of consumptive water use throughout the valley and implemented programs to either dramatically reduce or eliminate the water footprint of each (Conservation Trajectory table below). Continuing to reduce consumptive water use will require a significant and sustained effort from all sectors of the community; however, it is anticipated that doing so will ensure that Southern Nevada reaches its conservation goal of 86 GPCD by 2035 and have sufficient water resources to meet future demands.

Conservation Trajectory with Additional Measures



Prohibit New Golf Course Development. Restricting new golf course development will help to reduce per capita consumptive water use. The Las Vegas Valley Water District (LVVWD) and the City of Henderson approved rule changes in 2021 that restrict the use of Colorado River water to irrigate new golf course developments. Other SNWA member agencies followed suit with rule and code changes in 2022, including Clark County and the City of North Las Vegas.

Convert Cool Season Turf. Limiting future installations of cool-season turf and expediting the conversion to warm-season turf at existing public facilities will help reduce consumptive use associated with turf irrigation while preserving functional turf in recreational spaces. The SNWA is working with its member agencies to identify conversion opportunities and providing support through its incentive programs. In September 2022, the SNWA Board of Directors approved an agreement with the City of Henderson to convert two million square feet of cool season turf to warm season turf under the SNWA's WET incentive program. It is estimated that cool-season turf replacement will result in an annual water savings of 21 gallons per square foot converted.

Golf Course Water Budgets. In 2022, the SNWA Board of Directors approved a resolution supporting the reduction of golf course water budgets from 6.3 to 4.0 acre-feet of water annually per irrigated acre. The LVVWD and other local jurisdictions are currently coordinating efforts to update their respective Service Rules and municipal codes. It is anticipated that this measure will save 2,586 acre-feet each year.

Large Water User Policy. The SNWA continues to work with its member agencies to establish an efficiency review policy for new large water users that encourages efficient development and disincentivizes consumptive uses. To aide this effort, SNWA is working to refine a water investment rating tool, which will consider a proposed project's demand on water resources, whether water used

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

can be recaptured and returned to Lake Mead, and how the proposed project will benefit the community. This information will help decision-makers in evaluating whether certain development proposals are viable options for Southern Nevada. While not yet final, the tool is under review and subject to input from the development community.

Nonfunctional Turf Removal. The Nevada Legislature passed Nevada Assembly Bill 356 (AB 356) in 2021, restricting the use of Colorado River water to irrigate non-functional turf in non-single family residential applications by 2027. In 2022, more than 4.6 million square feet of non-functional turf was removed in accordance with AB 356. These conversions are expected to increase significantly in future years as the deadline draws closer.

Implement Pool Development Standards. In July 2022, the SNWA Board of Directors approved a resolution that supports limiting new residential pools to a surface area of 600 square feet. The LVVWD and other jurisdictions added this change to their Service Rules and municipal codes shortly thereafter. This measure will reduce wasteful development practices and conserve an estimated 40 million gallons of water annually by 2035.

Enhance Leak Resolution. As recommended by the Integrated Resource Planning Advisory Committee (IRPAC 2020), the SNWA member agencies, including the LVVWD, City of Henderson and City of North Las Vegas, are working to deploy Advanced Metering Infrastructure (AMI). AMI provides high-resolution data in near real-time and will significantly enhance the ability of local water providers to notify their customers of suspected leaks for faster leak resolution.

Implement Park Efficiency Improvements. While parks provide significant recreational value for residents, many use significantly more water than is needed. This can be the result of unaddressed leaks, inefficient irrigation practices or other factors. The SNWA continues to offer incentives to public parks to convert cool-season turf, install sewer-connected splash pads and develop alternate amenities (such as basketball courts, tennis courts and other turfless play areas). Future efforts may include creating awareness and tools for parks to manage water use consistent with their property features.

Implement Cooling Efficiency Standards. Evaporative cooling is the second-largest consumptive water use in Southern Nevada. In November 2022, the SNWA Board revised the incentive to replace industrial cooling towers or swamp coolers with a dry-cooled system or improve the water efficiency of existing evaporative cooling systems. The incentive now pays up to 50 percent of the total conversion cost per project. The board previously raised the cash incentive cap to \$500,000 to encourage businesses to convert their wet cooling systems to dry-cooled systems. The SNWA also continues to conduct research and pilot projects to inform best management practices, incentive programs and other policy changes.

Enhance Watering Compliance. Improving compliance with landscape watering restrictions and preventing water waste remains an effective and high priority for reducing consumptive water use in Southern Nevada. The SNWA maintains an active outreach campaign to promote landscape watering compliance and is working with member agencies in 2022 to enhance water waste enforcement. The LVVWD, City of Henderson and City of North Las Vegas have all expanded enforcement staffing and coordinated joint enforcement efforts that include concentrating staff within specific geographic areas for high visibility and results.

Prioritize Asset Management Investments. The SNWA and its member agencies continue to implement various strategies to minimize water loss within their water distribution systems, but ongoing investment will be required as systems age. Other related efforts include deploying and testing

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

innovative technologies that can improve leak detection and speed up leak repairs, prioritizing system optimization and making proactive retrofits and repairs to system facilities. The SNWA is also currently working with its member agencies to establish water loss reduction goals and identify strategies to support goal achievement.

Limit New Turf Installations. In December 2021, the SNWA adopted a resolution supporting a prohibition on installing new irrigated turfgrass and installing and using spray irrigation systems in new development, excluding parks, schools and cemeteries. This measure includes prohibitions on turf in new single-family and multi-family development. In 2022, the LVVWD, Clark County, and the cities of Henderson, North Las Vegas, and Boulder City, all considered and adopted rule and code changes to implement new turf restrictions in 2022.

Implement Pricing Changes. While the SNWA's member agencies set water rates independently, they all use similar principles to manage water demand, such as compressing tier thresholds and increasing upper-tier water rates. In October 2022, the LVVWD Board of Directors approved conservation-based rate changes that went into effect on January 1, 2023. The updated rates include seasonal excessive use surcharges and tier compression. The City of Henderson also recently approved additional conservation-based rate changes.

Septic Conversion Program. Colorado River water discharged to septic systems is lost and cannot be returned to Lake Mead for return flow credits. In March 2021, the SNWA Board of Directors approved development of and initial funding for, a financial assistance program for the estimated 14,500 septic users throughout the Las Vegas Valley to abandon their septic tanks and connect to the municipal sewer system. Additional future code changes may limit the development of new septic systems in the Las Vegas Valley.

Awards and Recognition

Wall Street Journal Recognition

In October 2022, the *Wall Street Journal* recognized Southern Nevada as "one of the most water-minded places on Earth" as a result of the community's water conservation efforts. The piece highlighted the SNWA's conservation programs and how they have contributed to the community's reduction of Colorado River water usage despite increasing population.

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.

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 chart below):

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

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

During the 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.

2021-22 Unrestricted Reserves



Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Financial Summary

The following tables and descriptions contain a summary of operating and capital sources and uses of funds for the SNWA's fiscal years 2021-22, 2022-23 and 2023-24.

Operating Budget Summary

	Actual 2021-22	Budget 2022-23	Budget 2023-24	Budget-to-Budget Variance	
				\$	%
SOURCES					
Wholesale delivery charge	\$ 149,758,833	\$ 163,997,961	\$ 168,440,978	\$ 4,443,017	3 %
Infrastructure charge	180,478,487	194,444,579	207,488,744	13,044,165	7 %
Commodity charge	73,378,159	79,194,819	85,898,156	6,703,337	8 %
Connection charge	111,110,114	55,683,665	64,538,794	8,855,129	16 %
Reliability surcharge	6,242,651	6,273,574	6,655,433	381,859	6 %
Sales tax	89,300,520	89,454,486	98,922,517	9,468,031	11 %
Investment income	(40,799,860)	11,444,897	10,723,648	(721,249)	(6)%
Other sources	13,029,485	8,849,505	9,029,764	180,259	2 %
SNWA Sources	582,498,389	609,343,486	651,698,033	42,354,547	7 %
USES					
Water resource investments	7,274,928	31,819,000	34,394,000	2,575,000	8 %
Energy	43,922,478	51,560,553	59,604,253	8,043,700	16 %
Salaries and benefits	80,966,019	94,120,623	101,424,569	7,303,946	8 %
Operating expenses	66,301,083	91,281,802	109,855,219	18,573,417	20 %
Debt service	281,915,322	291,227,106	307,286,471	16,059,365	(2)%
Other uses	3,863,276	209,805	9,770,223	9,560,418	
Transfers to reserves	98,255,283	49,124,596	29,363,298	(19,761,298)	(40)%
SNWA Uses	\$ 582,498,389	\$ 609,343,486	\$ 651,698,033	\$ 42,354,547	7 %

Operating Sources

The fiscal year 2023-24 tentative budget's operating sources of funds are projected to be \$651.7 million. The increase as compared to the 2022-23 Adopted Budget Plan is primarily attributable to increases in water and sales tax revenues.

The Wholesale Delivery Charge is budgeted to increase \$4.4 million, or 3 percent, as compared to the 2022-23 Adopted Budget Plan due to forecasted volume and rate increases. 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 experienced increased stability over the past number of years. The Connection Charge is budgeted to increase by \$8.9 million compared to the 2022-23 Adopted Budget Plan.

Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Operating Uses

The fiscal year 2023-24 tentative budget's operating uses of funds are projected to be \$651.7 million, a 7 percent increase compared to the 2022-23 Adopted Budget Plan.

Water resource investments are budgeted to increase \$2.6 million, due to the incorporation of the IRPAC 2020 recommendations, and other conservation and water resource initiatives. Energy costs are projected to increase by \$8.0 million, or 16 percent. Salaries and benefits are anticipated to increase by \$7.3 million, or 8 percent.

Non-payroll operating expenses are projected to increase by \$18.6 million, or 20 percent, as the SNWA continues to face cost pressures due to inflation and supply chain issues. Debt service is anticipated to increase by \$16.1 million, compared to 2022-23, largely due to a projected \$270.9 million debt issuance. Transfers to reserves are expected with operating sources for fiscal year 2023-24 exceeding operating uses.

Capital Budget Summary

	Actual 2021-22	Budget 2022-23	Budget 2023-24	Budget-to-Budget Variance	
				\$	%
SOURCES					
Grant funds	\$ —	\$ 9,957,236	\$ 43,711,041	\$ 33,753,806	
Debt issuance proceeds	351,646,228	—	270,932,815	270,932,815	
Other sources	5,215,623	—	—	—	— %
Transfers from reserves	—	260,316,745	64,716,521	(195,600,224)	(75)%
Total Sources	356,861,851	270,273,981	379,360,378	109,086,397	40 %
USES					
Capital expenditures	73,661,410	270,273,981	379,360,378	109,086,397	40 %
Transfers to reserves	279,337,165	—	—	—	— %
Total Uses	\$ 356,861,851	\$ 270,273,981	\$ 379,360,378	\$ 109,086,397	40 %

Capital Sources

The fiscal year 2023-24 tentative budget's capital sources of funds are projected to be \$379.4 million. The increase as compared to the 2022-23 Adopted Budget Plan is primarily attributable to a projected debt issuance in fiscal year 2023-24. Transfers from reserves are expected to fund the planned capital expenditures in fiscal year 2023-24.

Capital Uses

The fiscal year 2023-24 tentative budget's capital uses of funds are projected to be \$379.4 million, a 40 percent increase compared to the 2022-23 Adopted Budget Plan. This increase in capital expenditures aligns with the SNWA's M CCP.

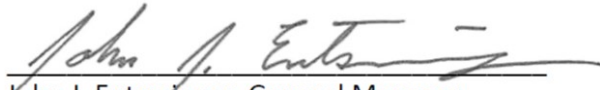
Southern Nevada Water Authority
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2024

Summary

Overall, the SNWA's fiscal year 2023-24 Operating and Capital Budget Plan presents a stable outlook as the SNWA continues to navigate the impacts of ongoing drought and climate change, with operating revenues matching operating expenses and an assortment of revenues, reserves, and debt proceeds funding capital expenditures.

Approval

The public hearing on the SNWA's 2023-24 Tentative Budget, and adoption of the Final Budget, is scheduled for 9:00 a.m., Thursday, May 18, 2023.



John J. Entsminger, General Manager

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SECTION 2

INTRODUCTION AND STRATEGIC PLAN

Introduction	2 - 1
Purpose and Powers	2 - 1
Transfer Act	2 - 1
Intergovernmental Relationships	2 - 2
Organizational Structure	2 - 3
Financial Structure and Controls	2 - 5
Capital Project Structure and Controls	2 - 7
Budget Controls and Process	2 - 8
Basis of Accounting	2 - 8
Budgetary Controls	2 - 9
Budget Process	2 - 9
Budget Augmentation	2 - 10
Budget Calendar	2 - 11
Southern Nevada Water Authority Strategic Plan	2 - 14
Strategic Plan Background	2 - 14
Strategic Plan and Budget Plan Preparation	2 - 14
Visions-Mission-Goals	2 - 15
Strategic Plan Strategies	2 - 15
Performance Measures Matrix	2 - 17

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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 three 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 based on the 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 2023-24.

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 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,

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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 percent), Henderson (19.25 percent), North Las Vegas (13.40 percent), the LVVWD (65.29 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. 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 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

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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.

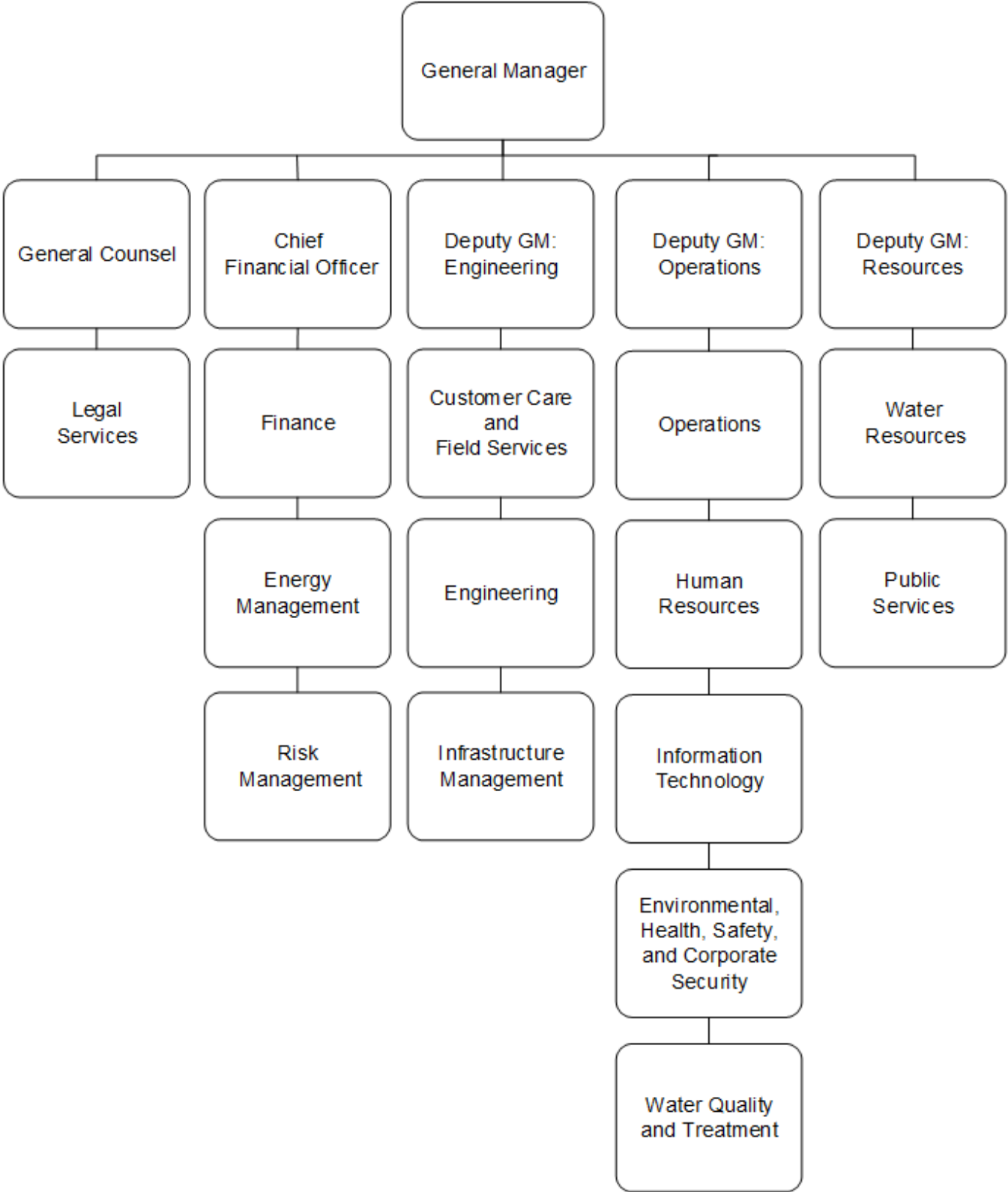
The role of the federal government in financing improvements of the SNWS has been declining. When the first phase of the SNWS was completed in 1971 at a total cost of \$62 million, 85 percent of that cost was provided by the federal government. After completion of the second phase in 1983, the ratio 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 after 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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024



Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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.

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

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

Internal Controls. In developing and evaluating the SNWA's accounting system, consideration is given to the adequacy of internal accounting controls. These controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss from unauthorized use or disposition; and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes the cost of a control should not exceed the benefits likely to be derived and the evaluation of costs and benefits requires estimates and judgments by management. All internal control evaluations occur within the above framework. The SNWA's internal accounting controls safeguard assets and provide reasonable assurance of proper recording of financial transactions. On an ongoing basis, the SNWA evaluates its internal controls and implements changes in response to dynamic operations.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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.

As of July 1, 2022, the SNWA will have \$2.9 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 (including industrial equipment) 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. This program also provides terrorism insurance for all locations with a blanket limit of \$250 million for all terrorist acts with a deductible of \$10,000. The SNWA self-insures the first \$1 million for its automobile and general liability exposure and purchases \$20 million over the \$1 million self-insured retention.

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

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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

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

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

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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

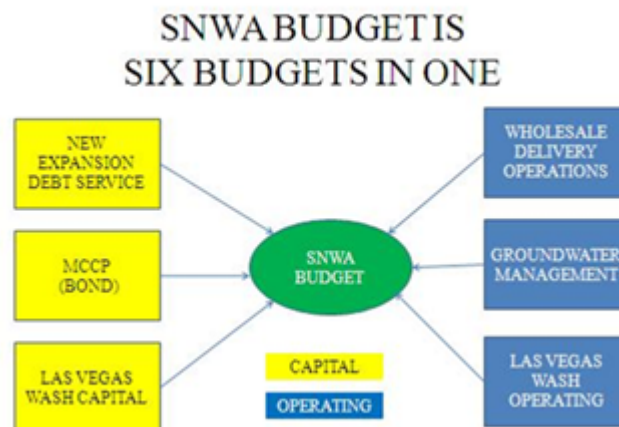
Execution of Capital Plan. After approval of the capital plan by the SNWA Board, the Engineering department assembles a staging plan for each project and develops specifications to be used as criteria during the competitive bidding process. Major construction portions are then let to an open competitive 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 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 2023-24 Budget Plan document.

Budget Controls and Process

Basis of Accounting

The SNWA's audited Annual Comprehensive 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 Annual Comprehensive 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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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 salaries and benefits expenditures. Estimating salaries and benefits 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 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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

Budget Augmentation

Nevada Revised Statute (NRS) 354.493 defines budget augmentation as a procedure for increasing appropriations of a fund with the express intent of employing unbudgeted resources to carry out the purpose for the increased appropriations. To augment the budget, the 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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

FISCAL YEAR 2023-24 BUDGET CALENDAR

		All Departments	Financial Planning, Analysis & Reporting	Executive Management	Human Resources
Dec		Tue Dec 6 Budget instructions and calendar received	Tue Dec 6 Budget instructions and calendar sent to departments		Dec Organization charts available for review in Workday. Adjustments to organization charts due to Human Resources Information Systems, (HRIS) (HRIS@lvvwd.com) by Thursday, January 12, 2023
		Mon Dec 12 Budget Kick-off Meeting (Teams)	Mon Dec 12 Budget Kick-off Meeting (Teams)		
		Mon Dec 12 – Thu Dec 15 Operating expense files received	Mon Dec 12 – Thu Dec 15 Operating expense files sent. Coordination of budget process, schedule, and assigned department Analyst assistance begins		
		Mon Dec 12 – Thu Jan 12 Personnel related requests will be coordinated through each department's Director and Deputy General Manager		Mon Dec 12 – Thu Jan 12 Personnel related requests will be coordinated through each department's Director and Deputy General Manager	Thu Dec 15 List of existing interns and summer hire positions distributed to departments. Updates, corrections and new requests due to HRIS (HRIS@lvvwd.com) by Thursday, January 12, 2023
Jan		Thu Jan 12 Adjustments to organization charts submitted to Human Resources Information Systems, (HRIS) (HRIS@lvvwd.com)	Thu Jan 12 Major data processing and equipment requests submitted to Information Technology and Fleet Services for review and coordination		Thu Jan 12 List of existing interns and summer hire position renewals sent to Financial Services
		Thu Jan 12 Final requests for interns and summer hire positions submitted to HRIS (HRIS@lvvwd.com)	Mon Jan 23 Begin coordination with departments incurring intercompany and overtime payroll costs		

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

FISCAL YEAR 2023-24 BUDGET CALENDAR

				
	All Departments	Financial Planning, Analysis & Reporting	Executive Management	Human Resources
Feb	Wed Feb 1 Budget narrative instructions received	Wed Feb 1 Budget narrative instructions sent to departments		
	Thu Feb 2 Final 2023-24 operating expense budgets submitted to Financial Services			
	Thu Feb 2 Final 2023-24 capital budget equipment and project requests submitted	Tue Feb 21 Summaries and detail of operating expense & capital expenditure budgets sent to departments		
	Tue Feb 21 Summaries and detail of operating expense & capital expenditure budgets received	Tue Feb 21 Assisting departments in preparation for the Senior Management Team (SMT) budget meeting presentations begins		
Mar		Thu Mar 2 Budget overview briefing with Executive Management (E-Team)	Thu Mar 2 Budget overview briefing	
	Thu Mar 9 Department budget meetings with SMT and overview briefing	Thu Mar 9 Department budget meetings with SMT and overview briefing	Thu Mar 9 Department budget meetings with SMT and overview briefing	
	Thu Mar 16 Budget narratives submitted to Financial Services		Thu Mar 16 – Mon Mar 20 Final budget decisions made by Executive Management (E-Team)	Mon Mar 20 Preliminary update of positions list based on Executive Management's final budget decisions
Apr		Mon Apr 3 Proposed draft budgets completed for Budget Workshops with Boards of Directors	Thu Apr 20 Board of Directors Budget Workshop for SNWA	
		Thu Apr 13 Preliminary Budgets filed with the Nevada State Department of Taxation	Mon Apr 24 Board of Directors Budget Workshop for LVVWD (including BBWD & Coyote Springs)	

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

FISCAL YEAR 2023-24 BUDGET CALENDAR

		All Departments	Financial Planning, Analysis & Reporting	Executive Management	Human Resources
May			Tue May 2 LVVWD, BBWD, and Coyote Springs Public hearing notice published in LVRJ		
			Fri May 5 SNWA Public hearing notice published in LVRJ		
				Mon May 15 LVVWD Board of Directors public hearings conducted on proposed budgets of LVVWD, Big Bend, and Coyote Springs for possible adoption	
				Thu May 18 SNWA Board of Directors public hearing conducted on the proposed budget for possible adoption	Thu May 18 Organization charts updated after Boards adopt budgets
			Thu May 25 Adopted budgets sent to the Nevada Department of Taxation		
Jun			Mon Jun 19 LVVWD, SNWA, BBWD & Coyote Springs annual summary fiscal reports published in LVRJ		
Jul			Thu Jul 20 Proof of publication of fiscal reports submitted to the Nevada State Department of Taxation		
Aug			Thu Aug 3 Budget Award Application submitted to the GFOA	 SOUTHERN NEVADA WATER AUTHORITY™	

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 2023-24 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 2023-24 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 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 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

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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, mission and goals were developed:

VISION

To be a global leader in service, innovation and stewardship

MISSION

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

GOALS

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

Strategic Plan Strategies

In order to implement the goals of the Strategic Plan, the 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.

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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

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

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

Develop innovative and sustainable solutions through research and technology.

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

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2024

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

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

Performance Measures Matrix

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

Strategic Plan goals and metrics, along with the actual levels achieved during fiscal year 2021-22 as well as the targets for fiscal years 2022-23 and 2023-24 are reported in the following table.

**Southern Nevada Water Authority
Operating and Capital Budget
Introduction and Strategic Plan**

Fiscal Year Ending June 30, 2024

Strategic Goal	Department	Metrics	Definition / Calculation	Fiscal Year 2021-22 Actual	Fiscal Year 2022-23 Target	Fiscal Year 2023-24 Target
Assure quality water through reliable and highly efficient systems	Water Quality & Treatment	Water quality	Meet or surpass all State of Nevada and Federal Safe Drinking Water Act standards for prior calendar year	100%	100%	100%
	Infrastructure Management	Infrastructure leak index	Ratio of actual to unavoidable real losses.	1.9	3.0	3.0
Deliver an outstanding customer service experience	Customer Care	Customer service satisfaction rating	Customer satisfaction rating average for 4 quarters in calendar year	8.01	8.01	>7.58
Anticipate and adapt to changing climatic conditions while demonstrating stewardship of our environment	Water Resources	Water resource availability	Sufficient permanent, temporary and future water resources available to meet projected calendar year demands	100%	100%	100%
	Water Resources	Average water usage / consumption	Gallons per capita per day (GPCD) assumes straight-line approach to goal of 86 GPCD by 2035	110	104	102.5
Develop innovative and sustainable solutions through research and technology	Environmental, Health, Safety and Security	Maintain alternative fuel fleet vehicle standings	Percentage of fleet operating on alternative fuel	90%	90%	91%
	Water Quality & Treatment	Number of innovative solutions deployed	Quantity of innovative solutions working within the system for the fiscal year	3	3	3
Ensure organizational efficiency and manage financial resources to provide maximum customer value	Finance	Reserve target compliance	Amount of unrestricted reserves (unrestricted cash & unrestricted investments) as compared to the unrestricted reserves target	122%	116%	122%
	Finance	Credit ratings	Credit ratings assigned by the credit rating agencies to identify the credit worthiness of an issuer relative to their peers	AA/Aa1	AA/Aa1	AA/Aa1
Strengthen and uphold a culture of service, excellence and accountability	Environmental, Health, Safety and Security	OSHA reportable rates	Incidence rate below the reportable injury and illness rate posted by the Bureau of Labor Statistics (BLS) annually for comparable industries	2.1	2.0	1.9
	Environmental, Health, Safety and Security	EPA reportable notifications	Number of reportable occurrences	0	0	0

SECTION 3

OPERATING AND CAPITAL BUDGET PLAN

Operating Budget Summary	3 - 1
Operating Sources	3 - 2
Operating Uses	3 - 7
Capital Budget Summary	3 - 11
Capital Sources	3 - 12
Capital Uses	3 - 12
Summary of Sources and Uses of Funds and Changes in Net Assets ...	3 - 16
Sub Funds	3 - 17



Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

The fiscal year 2023-24 Operating 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 Operating Budget Plan.

The fiscal year 2023-24 Budget Plan's total sources of funds are projected to be \$651.7 million, or a 7 percent increase compared to the fiscal year 2022-23 Adopted Budget Plan. The fiscal year 2023-24 Budget Plan's total uses of funds are projected to be \$651.7 million, or a 6 percent increase compared to the fiscal year 2022-23 Adopted Operating Budget Plan. The table below shows the Sources and Uses Summary for the fiscal years 2021-22, 2022-23, and 2023-24.

Operating Budget Summary						
	Actual	Budget	Budget	Budget-to-Budget Variance		
	2021-22	2022-23	2023-24	\$	%	
SOURCES						
Wholesale delivery charge	\$ 149,758,833	\$ 163,997,961	\$ 168,440,978	\$ 4,443,017	3 %	
Infrastructure charge	180,478,487	194,444,579	207,488,744	13,044,165	7 %	
Commodity charge	73,378,159	79,194,819	85,898,156	6,703,337	8 %	
Connection charge	111,110,114	55,683,665	64,538,794	8,855,129	16 %	
Reliability surcharge	6,242,651	6,273,574	6,655,433	381,859	6 %	
Sales tax	89,300,520	89,454,486	98,922,517	9,468,031	11 %	
Investment income	(40,799,860)	11,444,897	10,723,648	(721,249)	(6)%	
Other sources	13,029,485	8,849,505	9,029,764	180,259	2 %	
SNWA Sources	582,498,389	609,343,486	651,698,033	42,354,547	7 %	
USES						
Water resource investments	7,274,928	31,819,000	34,394,000	2,575,000	8 %	
Energy	43,922,478	51,560,553	59,604,253	8,043,700	16 %	
Salaries and benefits	83,193,445	98,189,014	101,424,569	3,235,555	3 %	
Operating expenses	66,301,083	91,281,802	109,855,219	18,573,417	20 %	
Debt service	281,915,322	291,227,106	307,286,471	16,059,365	(2)%	
Other uses	3,863,276	209,805	9,770,223	9,560,418		
Transfers to reserves	98,255,283	49,124,596	29,363,298	(19,761,298)	(40)%	
SNWA Uses	\$ 584,725,815	\$ 613,411,877	\$ 651,698,033	\$ 38,286,156	6 %	

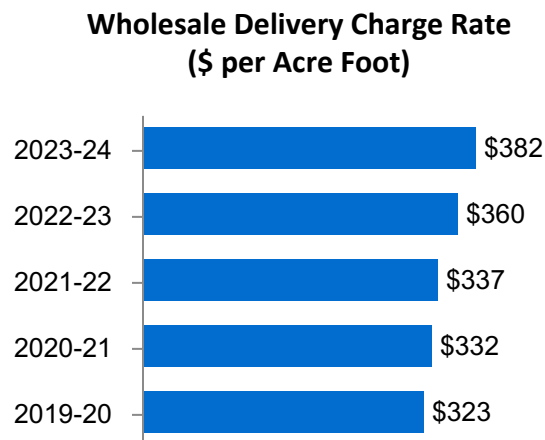
Operating Sources

The fiscal year 2023-24 Operating Budget Plan's total sources of funds are projected to be \$651.7 million, which is a 7 percent increase compared to the 2022-23 Adopted Budget Plan. The increase is largely due to increases in water sold and related customer charges.

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 2023-24, the wholesale delivery charge for treated water sold will rise by \$22 per acre-foot. This increases the charge from \$360 to \$382 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 \$4.4 million, or three percent, in fiscal year 2023-24 is the result of the rate increase, as well as growth in water sales to purveyor members. The recent wholesale delivery charge potable rates are shown on the following chart.



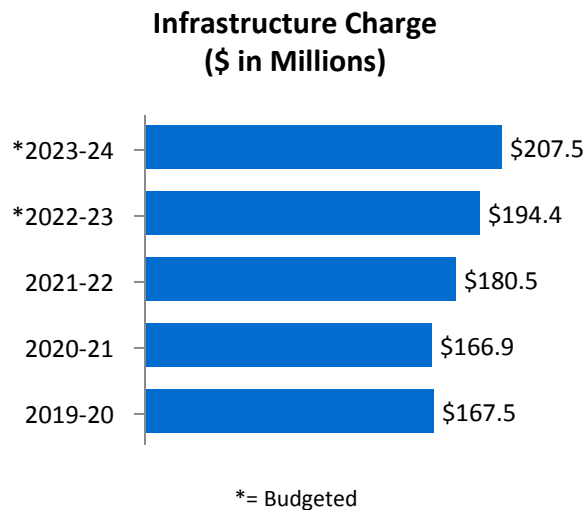
Infrastructure Charge

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 prior 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. 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 ending January 1, 2017. IRPAC's Phase 2 recommended, with subsequent Board approval, to increase the fixed monthly charges. This charge was called the Drought Protection Charge and was added to the infrastructure charge.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

In October 2019, the SNWA Board appointed a citizens advisory committee, named IRPAC 2020, to examine Southern Nevada’s long-term water planning efforts. IRPAC 2020 recommended to implement a six-year annual increase, beginning in January 2022, to phase-in an inflationary catch-up rate increase and adjust for future annual inflation. The 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. These rates were fixed increases of 1.6 percent annually for six years to catch-up the rate to current day dollars, as well as three percent to account for current year inflation. Due to inflationary impacts experienced starting in 2021, IRPAC 2020 reconvened in December 2021 to ensure that fees charged maintained pace with current and future inflation. Subsequently, IRPAC 2020 recommended to the Board to amend the previously approved current year fixed rate increases to variable rates. The variable rates were proposed to be the actual percentage change in the Engineering News Record (ENR) construction cost index, which would allow the cost of services to keep pace with the associated fee structure. The recommendation was approved by the Board in February 2022. In addition to the rate changes, the Board also approved limiting future increases to a floor of 1.5 percent and a ceiling of seven percent, excluding previously approved catch-up increases in years 2023 through 2027.

Infrastructure charges are budgeted to increase \$13.0 million, or seven percent, compared to the 2022-23 Adopted Operating Budget Plan. The increase is a result of the rate adjustments in January 2024 described above and account growth.



Commodity Charge

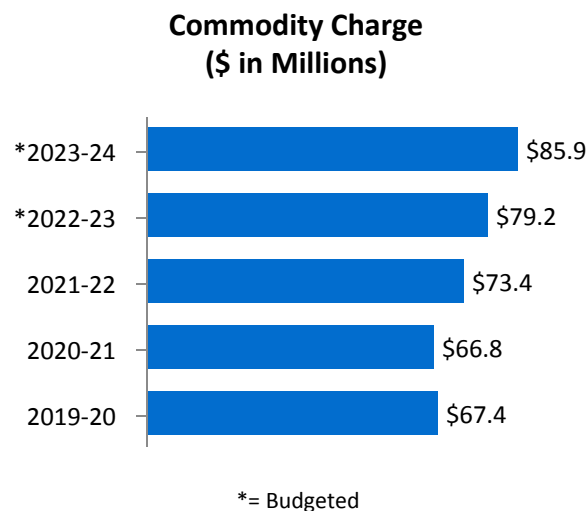
The commodity charge went into effect in November 1996. This charge is typically collected by purveyor members and remitted to the SNWA monthly. The commodity charge is applied to retail water bills. The IRPAC Phase 1 recommended, with subsequent Board approval, the commodity charge to increase from the starting rate of \$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. Catch-up inflation was set at 2.3 percent for six years starting in January 2022. Due to inflationary impacts experienced

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

starting in 2021, IRPAC 2020 reconvened in December 2021 to ensure that fees charged maintained pace with current and future inflation. Subsequently, IRPAC 2020 recommended to the Board to amend the previously approved current year fixed rate increases to variable rates. The variable rates would be the actual Consumer Price Index (CPI), which will allow the cost of services to keep pace with the associated fee structure. The recommendation was approved by the Board in February 2022. In addition to the rate changes, the Board also approved limiting future increases to a floor of 1.5 percent and a ceiling of seven percent, excluding catch-up increases in years 2023 through 2027. The charges are paid by the purveyors' customers based on the benefit they will accrue from the expansion of the SNWA's regional water treatment and transmission system.

Commodity charges are budgeted to increase \$6.7 million, or eight percent, compared to the 2022-23 Adopted Budget Plan. This increase is mostly due to the January 2022 rate adjustment described above and a projected increase in volumetric water sales.



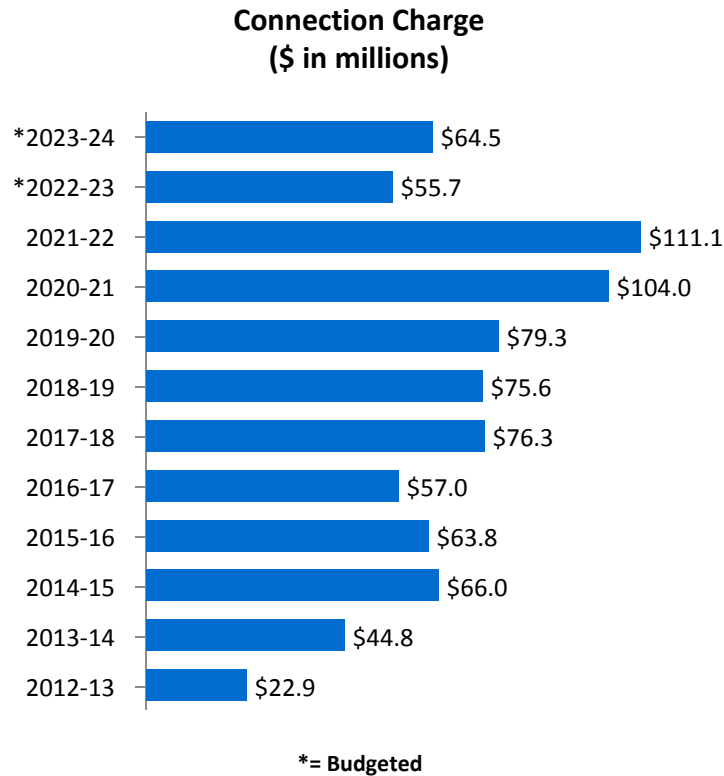
Connection Charge

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 catch-up inflation, as well as adjust for annual inflation. Beginning in March 2028, the connection charge will be annually indexed to the ENR.

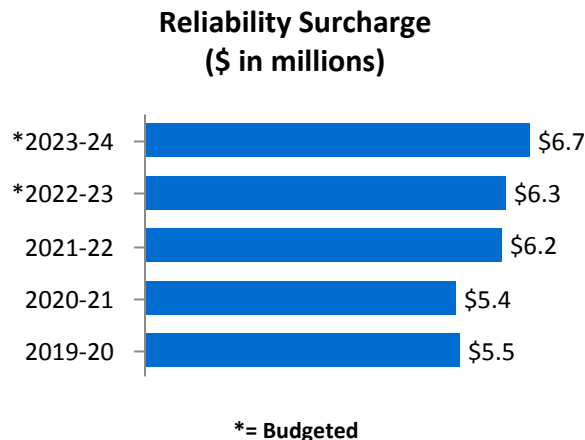
The fiscal year 2023-24 budget for connection charge revenue is \$64.5 million, which is 16 percent higher than the 2022-23 Adopted Budget Plan. Connection charge collections were one of the SNWA's largest sources of funds in the mid-2000s. However, during the subsequent recession, this revenue fell 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 2021-22 and the budgets for 2022-23 and 2023-24 were intended to be conservative estimates due to uncertainty from the economic impact of inflation.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024



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 2023-24 reliability surcharge is projected to increase \$0.4 million, or six 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.



Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

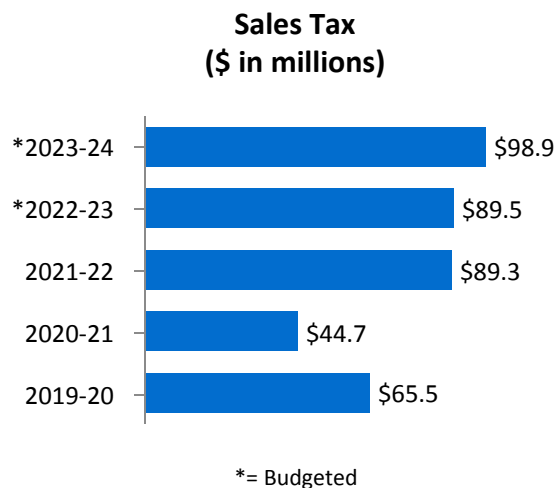
Sales Tax

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 increase 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 2023-24 projection of sales tax revenue is \$98.9 million, or 11%, higher than the 2022-23 Adopted Budget Plan. This increase is due to a projected increase in taxable sales.



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 decrease \$0.7 million over

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

the 2022-23 Adopted Budget Plan. This decrease is primarily due to fluctuations in the reserve balances.

Other Sources

Other sources are projected to be \$9.0 million, an increase of two percent compared to the 2022-23 Adopted Operating Budget Plan. This increase is primarily attributable to changes in Lease Accounting as required by the Governmental Accounting Standards Board (GASB) No. 87, *Leases*, and No. 96, *Subscription-Based Information Technology Arrangements*.

Operating Uses

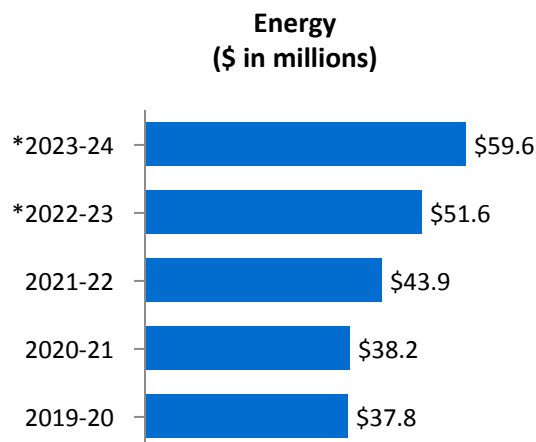
The fiscal year 2023-24 Operating Budget Plan's total uses of funds are projected to be \$651.7 million, a 6 percent increase compared to the 2022-23 Adopted Budget Plan. The uses increase is mostly due to higher water resource investments and increases in operating expenses.

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 the current shortage declaration, as well as possible future shortage declarations. Moreover, investments made in the regional water system will help the SNWA reliably deliver water even during the most severe drought conditions. The 2023-24 Budget plan reflects these investments, which are expected to be \$34.4 million, a \$2.6 increase, compared to the 2022-23 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 2023-24 is projected to increase \$8.0 million, an increase of 16 percent, over the fiscal year 2022-23 Adopted Budget Plan. This increase is primarily due to higher energy rates and an increasing energy consumption forecast.

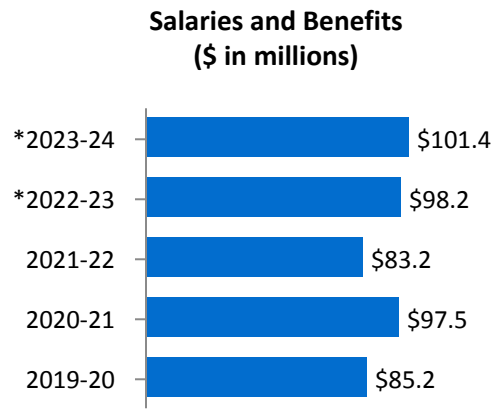


Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

*= Budgeted

Salaries and Benefits

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. Salaries and benefits costs include wages, salaries and benefits. For fiscal year 2023-24, salaries and benefits expenses are anticipated to be \$101.4 million. This represents an increase of 3.2 million, or three percent, compared to the 2022-23 Adopted Budget Plan.



*= Budgeted

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 decrease by nine employees over the fiscal year 2022-23 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.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

FTE Summary

DEPARTMENT	Actual 2021-22	Budget 2022-23	Budget 2023-24
Executive Management	7.1	6.2	5.0
Legal Services	5.6	5.5	11.9
Finance	11.9	19.8	19.9
Energy Management	5.3	5.0	5.0
Risk Management	2.7	2.5	2.5
Customer Care & Field Services	1.1	2.9	2.9
Engineering	25.8	21.5	20.4
Infrastructure Management	61.5	73.4	73.0
Operations	59.1	63.7	63.7
Human Resources	1.8	17.9	21.3
Information Technology	45.4	51.4	47.6
Environmental Health Safety & Corporate Security	38.9	41.5	41.1
Water Quality & Treatment	87.5	92.1	92.1
Water Resources	70.6	73.8	73.8
Public Services	32.9	35.0	23.0
Total	457.2	512.0	503.1

**Totals may vary slightly due to rounding*

Operating Expenses

Operating expenses include all normal operating costs of the SNWA except water resource investments, energy, salaries and benefits, 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 increase \$18.6 million as compared to the 2022-23 Adopted Budget Plan.

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.

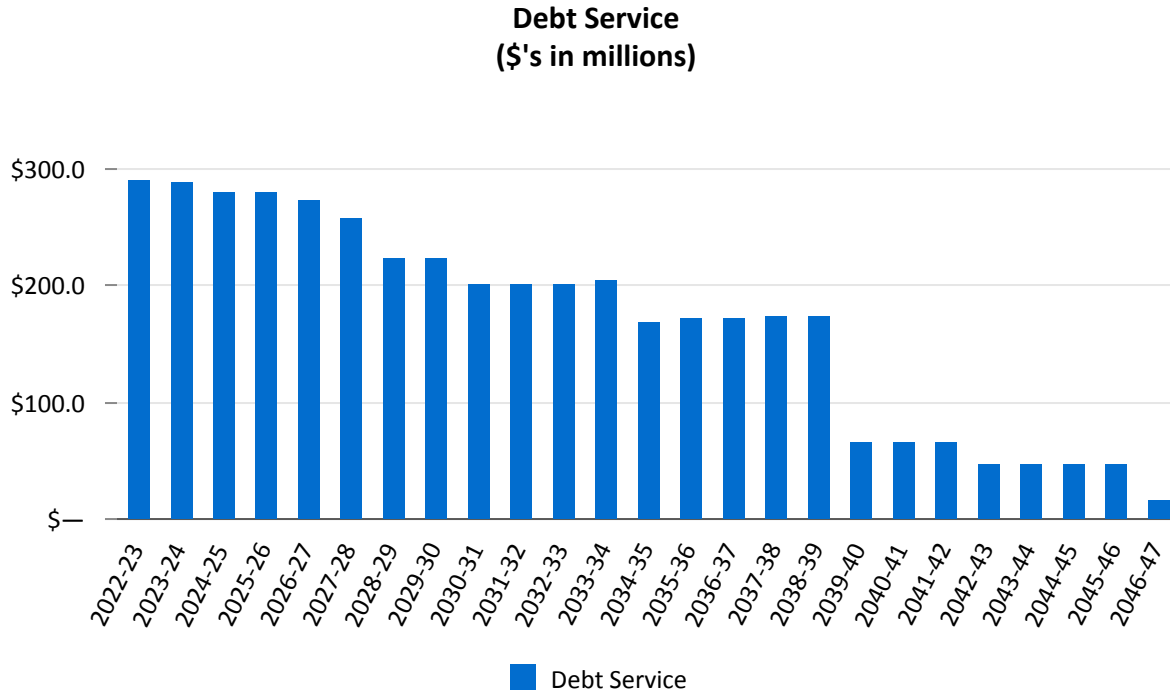
The Las Vegas area has experienced extraordinary population growth since the SNWA's inception in 1991. The vast majority of the SNWA's outstanding debt was necessary to fund infrastructure projects to support such extraordinary population growth. During the recession of the late 2000's, population growth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

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

postponed various capital projects and took advantage of historically low borrowing costs to refinance debt.

Debt service payments are anticipated to increase \$16.1 million compared to the 2022-23 Adopted Operating Budget Plan. The increase is a result of the new money bond issuance planned for 2022-23.

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



Other Uses

Other uses are projected to be \$9.8 million compared to the 2022-23 Adopted Operating Budget Plan. This is predominately due to a funding of certain LVVWD projects that will also provide benefit to the SNWA with its use.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

The fiscal year 2023-24 Capital 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 2023-24 Budget Plan's total sources of funds are projected to be \$379.4 million, or a 40 percent increase, compared to the fiscal year 2022-23 Adopted Capital Budget Plan. The fiscal year 2023-24 Capital Budget Plan's total uses of funds are projected to be \$379.4 million, or a 40 percent increase, compared to the fiscal year 2022-23 Adopted Budget Plan. The table below shows the Sources and Uses Capital Budget Summary for the fiscal years 2021-22, 2022-23, and 2023-24.

Transfers To Reserves

The fiscal year 2023-24 Operating Budget Plan's transfers to reserves are projected to be \$29.4 million, an decrease of \$(19.8) million compared to the 2022-23 Adopted Budget Plan. The increase is a result of higher sources of revenue and lower uses (expenditures) creating a higher surplus.

The fiscal year 2023-24 Capital Budget total sources of funds are projected to be \$379.4 million, or a 40 percent increase, compared to the fiscal year 2022-23 Adopted Capital Budget Plan. The fiscal year 2022-23 Budget Plan's total uses of funds are projected to be \$379.4 million, or a 40 percent increase compared to the fiscal year 2022-23 Adopted Budget Plan. The table below shows the Capital Sources and Uses of Funds Summary for the 2021-22, 2022-23, and 2023-24 fiscal years.

Capital Budget Summary					
	Actual	Budget	Budget	Budget-to-Budget Variance	
	2021-22	2022-23	2023-24	\$	%
SOURCES					
Grant funds	\$ —	\$ 9,957,236	\$ 43,711,041	\$ 33,753,806	
Debt issuance proceeds	351,646,228	—	270,932,815	270,932,815	
Other sources	5,215,623	—	—	—	— %
Transfers from reserves	—	260,316,745	64,716,521	(195,600,224)	(75)%
Total Sources	356,861,851	270,273,981	379,360,378	109,086,397	40 %
USES					
Capital expenditures	73,661,410	270,273,981	379,360,378	109,086,397	40 %
Transfers to reserves	279,337,165	—	—	—	— %
Total Uses	\$ 356,861,851	\$ 270,273,981	\$ 379,360,378	\$ 109,086,397	40 %

Capital Sources

The fiscal year 2023-24 Capital Budget Plan's total sources of funds are projected to be \$379.4 million, which is a 40 percent increase compared to the 2022-23 Adopted Capital Budget Plan. The increase is due to debt being issued in fiscal year 2023-24 and no planned issuances in fiscal year 2022-23.

Grant Funds

The 2023-24 Capital Budget Plan includes grant funds of \$43.7 million. This amount is comprised of \$31.1 million of sources from the oversizing fund and \$12.6 million in grant funding. The oversizing fund in other sources matches the amounts in their corresponding uses of funds within capital expenditures.

Debt Issuance Proceeds

The SNWA anticipates issuing bonds for \$270.9 million in fiscal year 2023-24. Bonds are issued to fund capital expenditures related to the Major Capital and Construction Plan, which is discussed in further detail later in this section.

Other Sources

The 2023-24 Capital Budget Plan includes no other sources. This grouping of revenue reflects other capital sources such as contributed capital as well as member debt service billings.

Transfers From Reserves

The 2023-24 Capital Budget Plan includes Transfers From Reserves of \$64.7 million. This amount is the required funds to fund the current fiscal year's capital budget.

Capital Uses

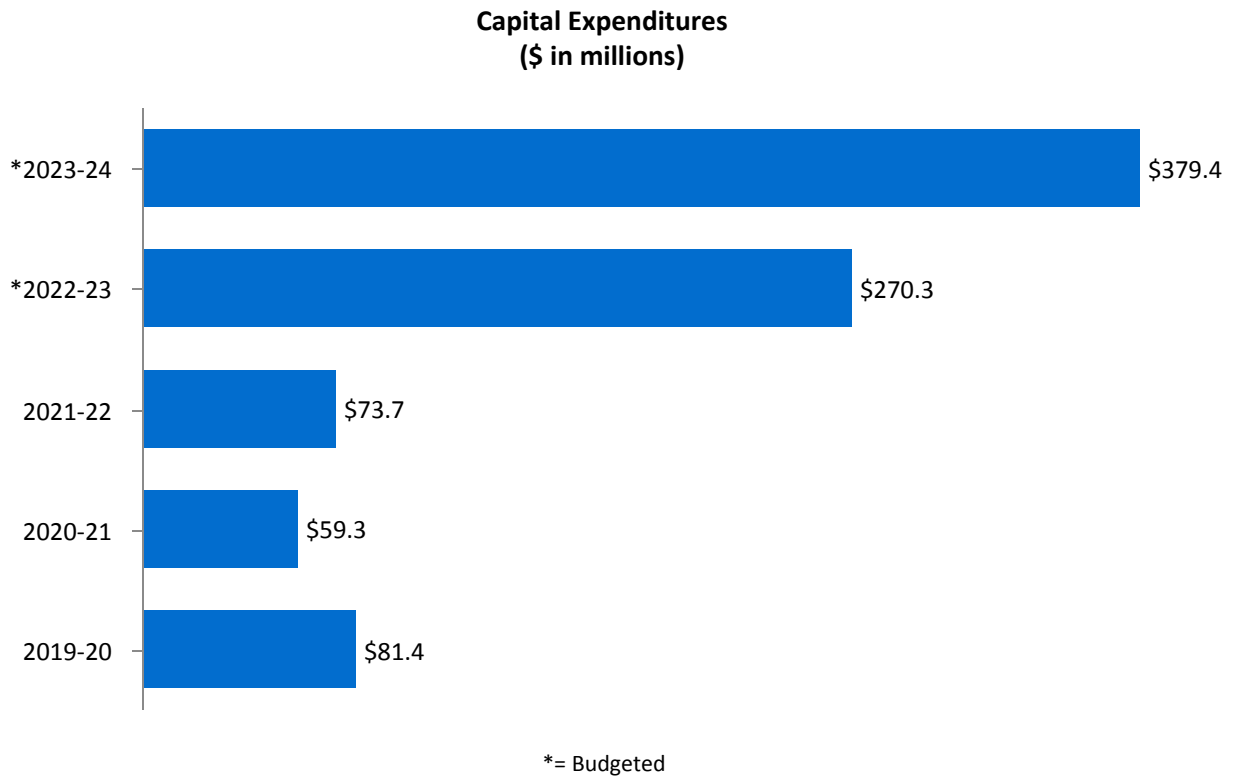
The fiscal year 2023-24 Budget Plan's total uses of funds are projected to be \$379.4 million, a 40 percent increase compared to the 2022-23 Adopted Budget Plan.

Capital Expenditures

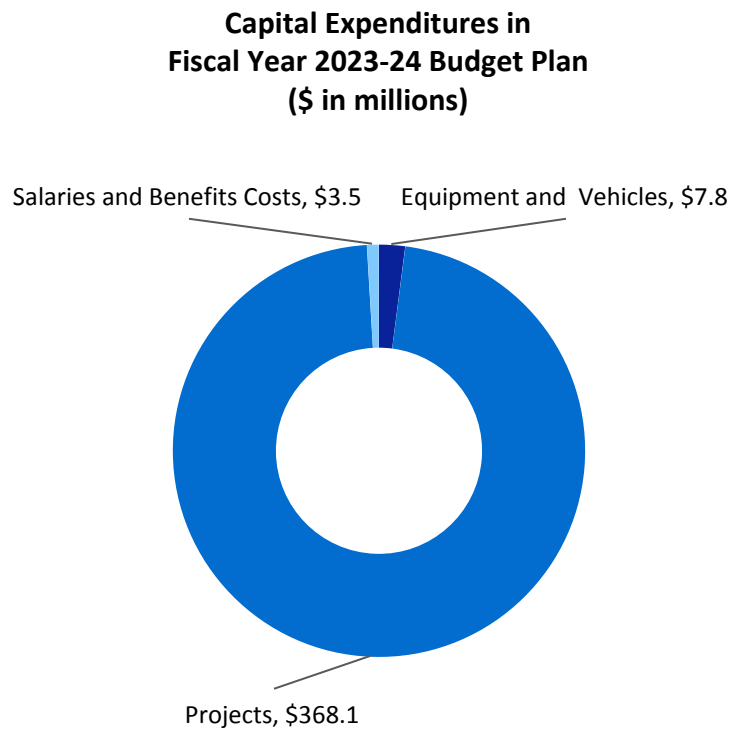
Capital expenditures are projected to increase \$109.1 million (40 percent), compared to the fiscal year 2022-23 Adopted Budget Plan. The increase is largely due to the start of the Garnet Valley Water Project's planning and preliminary design phases, which will be discussed in further detail later.

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.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024



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



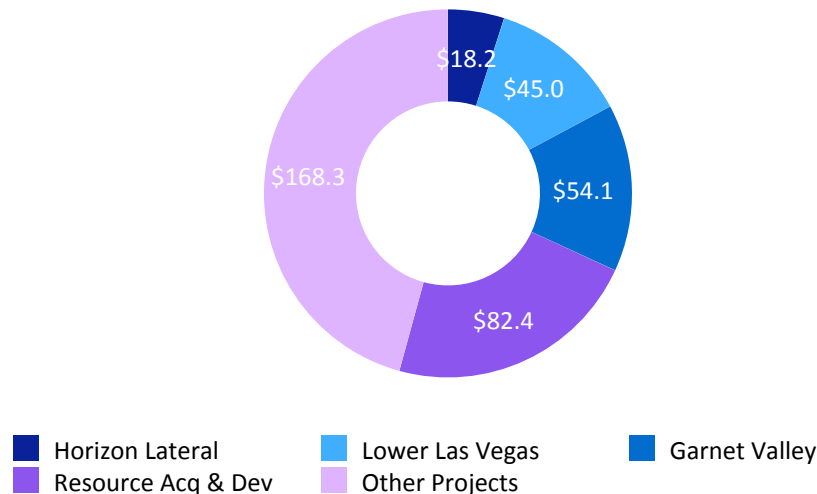
Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

The capital projects are generally accounted for in the SNWA's Major Construction and Capital Plan (MCCP). The projects within the MCCP 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.

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 since 40 percent of in-valley customers have no redundancy. Additionally, the current infrastructure is slated to be nearly fully-subscribed by 2034. The fiscal year 2023-24 Capital Budget Plan includes \$18.2 million to be spent on this project. The total project cost is estimated at \$2.3 billion.

**Capital Projects in
Fiscal Year 2023-24 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

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

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.

Transfers To Reserves

This classification includes transfers of capital funds in excess of the capital budget. No transfers to reserves are expected for the fiscal year 2023-24 Budget Plan.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

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 No. 33, *Exchange or Non-exchange Transaction*. The following table summarizes the estimated sources and uses of funds and changes in net assets for the fiscal year 2023-24 Budget Plan.

Estimated Net Assets Detail Fiscal Year 2023-24 Budget

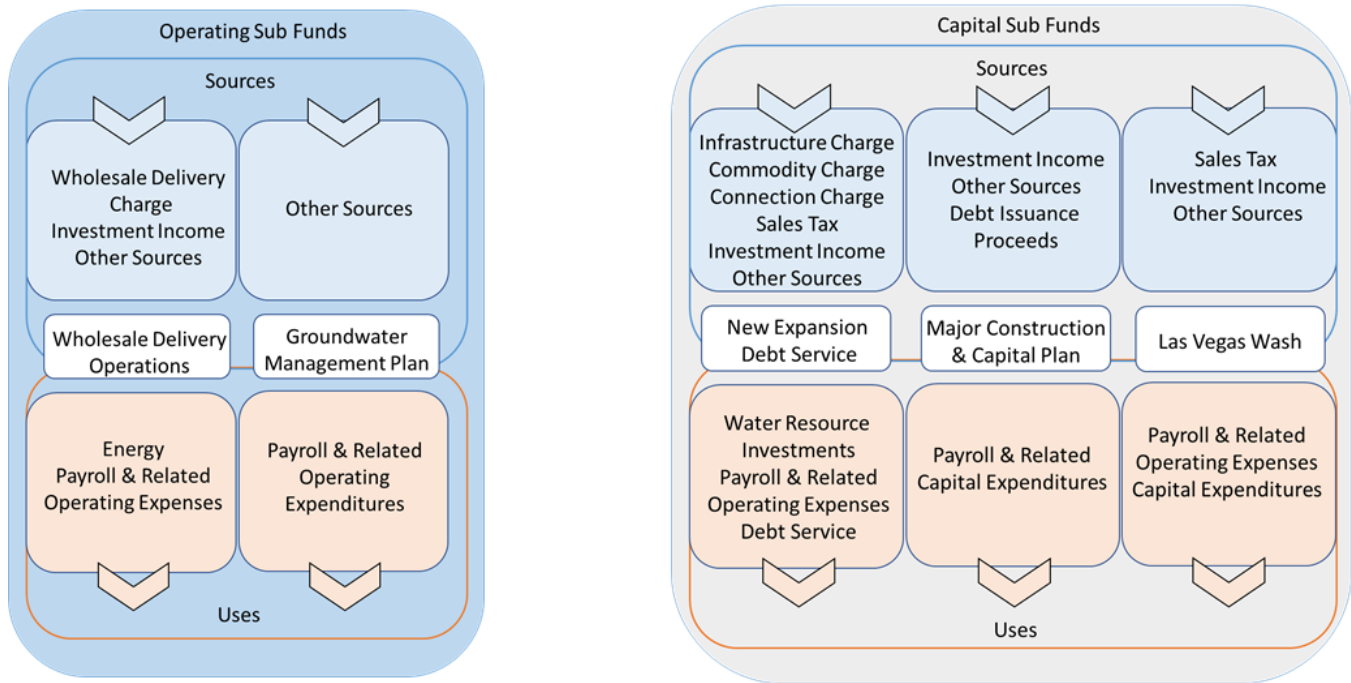
	Invested in Capital Assets Net of Related Debt	Restricted	Unrestricted	Total Net Assets
Estimated net position on June 30, 2023	\$ 1,483,848,099	\$ 353,136,391	\$ 1,080,514,077	\$ 2,917,498,567
From revenues, expenses, and net income schedule (RENI), Page 4-5				
Operating revenue	—	—	177,470,741	177,470,741
Capital contributions	—	98,922,517	364,581,127	463,503,644
Interest earned	—	—	10,723,648	10,723,648
Salaries and benefits	—	—	(101,424,569)	(101,424,569)
Energy	—	—	(59,604,253)	(59,604,253)
Operating expenses	—	—	(154,019,442)	(154,019,442)
Depreciation expense	(131,989,641)	—	—	(131,989,641)
Interest expense (debt service)	169,404,946	—	(307,286,471)	(137,881,525)
Subtotal from RENI	37,415,305	98,922,517	(69,559,219)	66,778,603
Items not on RENI				
Capitalized expenditures	335,649,337	(335,649,337)	—	—
Debt issuance proceeds	—	—	—	—
Subtotal Items not on RENI	335,649,337	(335,649,337)	—	—
Estimated net position on June 30, 2024	<u>\$ 1,856,912,741</u>	<u>\$ 116,409,571</u>	<u>\$ 1,010,954,858</u>	<u>\$ 2,984,277,170</u>

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

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.



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.

Southern Nevada Water Authority
Operating and Capital Budget
Operating and Capital Budget
Fiscal Year Ending June 30, 2024

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.

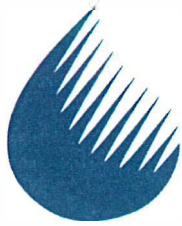
Las Vegas Wash sub fund. This sub fund is two small sub funds combined into one for budget presentation purposes. They are the Las Vegas Wash Capital sub fund and the Las Vegas Wash Operating sub fund. The major function of this sub fund is to pay for costs of the Las Vegas Wash. This sub fund tracks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

SECTION 4

STATE OF NEVADA

BUDGET DOCUMENTS

State of Nevada, Department of Taxation, Budget Submittal	4 - 1
Budget Document Index	4 - 2
Schedule S-2: Statistical Data	4 - 3
Schedule A-2: Proprietary Funds	4 - 4
Schedule F-1: Enterprise Fund - Revenues, Expenses and Net Position	4 - 5
Schedule F-2: Enterprise Fund - Statement of Cash Flows	4 - 6
Schedule C-1: Indebtedness	4 - 7
Schedule 31: Schedule of Existing Contracts	4 - 8
Schedule 32: Schedule of Privatization Contracts	4 - 13
Affidavit of Publication	4 - 14
Letter of Compliance	4 - 15



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 final budget for the
fiscal year ending June 30, 2024

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 1%. 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 \$ 586,059,354

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:

5/18/23

Phone:

702-822-8809

APPROVED BY THE GOVERNING BOARD

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

Marilyn Kirkpatrick, Chair

Dan Stewart, Vice Chair

Steve Walton

Scott Black

Olivia Diaz

James Gibson

Justin Jones

SCHEDULED PUBLIC HEARING:

(Must be held from May 15, 2023 to May 31, 2023)

Date and Time: Thursday May 18, 2023 9:00 AM

Publication Date: May 5, 2023

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

**SOUTHERN NEVADA WATER AUTHORITY
BUDGET DOCUMENT INDEX**

	Page No.
I INTRODUCTION	
1 Transmittal Letter	1
2 Budget Document Index	2
II SUMMARY FORMS	
1 Schedule S-2 - Statistical Data	3
2 Schedule A-2 - Proprietary Funds	4
III PROPRIETARY FUNDS	
1 Schedule F-1 - Enterprise Fund - Revenues, Expenses and Net Position	5
2 Schedule F-2 - Enterprise Fund - Statement of Cash Flows	6
IV SUPPLEMENTARY INFORMATION	
1 Schedule C-1 - Indebtedness	7
V SERVICE CONTRACTS	
1 Schedule 31 - Schedule of Existing Contracts	8
2 Schedule 32 - Schedule of Privatization Contracts	9

FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

	ACTUAL PRIOR YEAR YEAR 06/30/22	ESTIMATED CURRENT YEAR YEAR 06/30/23	BUDGET YEAR YEAR 06/30/24
General Government			
Judicial			
Public Safety			
Public Works			
Sanitation			
Health			
Welfare			
Culture and Recreation			
Community Support			
TOTAL GENERAL GOVERNMENT			
Utilities	457.2	512.0	503.1
Hospitals			
Transit Systems			
Airports			
Other			
TOTAL	457.2	512.0	503.1

POPULATION (AS OF JULY 1)	2,338,127	2,368,523	2,368,524
SOURCE OF POPULATION ESTIMATE*	NV Dept. of Taxation (https://tax.nv.gov/) Publications, Population Statistics & Reports	Population Statistics & Reports Figure Increased by Demographer's annual % increase projection for Clark County	
Assessed Valuation (Secured and Unsecured Only)			
Net Proceeds of Mines			
TOTAL ASSESSED VALUE			
TAX RATE			
General Fund			
Special Revenue Funds			
Capital Projects Funds			
Debt Service Funds			
Enterprise Fund			
Other			
TOTAL TAX RATE			

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

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, 2024

Budget Summary for Southern Nevada Water Authority
(Local Government)

FUND NAME	*	OPERATING REVENUES (1)	OPERATING EXPENSES (2) **	NONOPERATING REVENUES (3)	NONOPERATING EXPENSES (4)	<u>OPERATING TRANSFERS</u>		NET INCOME (7)
						IN (5)	OUT(6)	
Southern Nevada Water Authority	E	\$ 177,470,741	\$ 436,292,227	\$ 562,481,869	\$ 149,767,127	\$ -	\$ -	\$ 153,893,256
TOTAL		\$ 177,470,741	\$ 436,292,227	\$ 562,481,869	\$ 149,767,127	\$ -	\$ -	\$ 153,893,256

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

** Include Depreciation

PROPRIETARY FUND	(1) ACTUAL PRIOR YEAR ENDING 6/30/2022	(2) ESTIMATED CURRENT YEAR ENDING 6/30/2023	(3) (4) BUDGET YEAR ENDING 06/30/24	
			TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Wholesale Delivery Charge	\$ 149,758,833	\$ 157,740,819	\$ 168,440,978	\$ 168,440,978
Other Revenues	9,279,805	6,194,654	9,029,764	9,029,764
Total Operating Revenue	\$ 159,038,638	\$ 163,935,473	\$ 177,470,741	\$ 177,470,741
OPERATING EXPENSE				
Energy	43,922,478	61,160,553	59,604,253	59,604,253
Salaries & Benefits	80,966,019	93,179,417	101,424,569	101,424,569
Operating Expenses	73,576,010	96,817,836	143,273,764	143,273,764
Depreciation/Amortization	118,833,973	119,103,806	131,989,641	131,989,641
Total Operating Expense	317,298,480	370,261,611	436,292,227	436,292,227
Operating Income or (Loss)	(158,259,842)	(206,326,138)	(258,821,485)	(258,821,485)
NONOPERATING REVENUES				
Investment Income	(40,799,860)	4,876,777	10,723,648	10,723,648
Capital Contributions	465,725,555	481,527,558	507,214,685	507,214,685
Amortization of Bond Premiums & Discounts	48,583,931	49,384,680	44,543,536	44,543,536
Other Nonoperating Revenues	138,783	-	-	-
Total Nonoperating Revenues	473,648,409	535,789,015	562,481,869	562,481,869
NONOPERATING EXPENSES				0
Interest Expense	135,161,878	133,513,043	137,916,171	137,916,171
Amortization of Refunding Costs	4,483,146	2,579,551	2,115,379	2,115,379
Bond Issue Costs	3,863,276	-	899,100	899,100
Other Nonoperating Expenses	-	-	8,836,477	8,836,477
Total Nonoperating Expenses	143,508,300	136,092,594	149,767,127	149,767,127
Special Item				
Net Income before Operating Transfers	171,880,267	193,370,283	153,893,256	153,893,256
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	171,880,267	193,370,283	153,893,256	153,893,256

Southern Nevada Water Authority
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND _____ ENTERPRISE _____

Page: 5
Schedule F-1

PROPRIETARY FUND	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/24	
	ACTUAL PRIOR YEAR ENDING 6/30/2022	ESTIMATED CURRENT YEAR ENDING 6/30/2023	TENTATIVE APPROVED	FINAL APPROVED
A. CASH FLOWS FROM OPERATING ACTIVITIES:				
Cash Received from Customers	\$ 158,674,475	\$ 163,935,473	\$ 177,470,741	\$ 177,470,741
Cash Payments to Suppliers of Goods and Services	(147,315,624)	(251,157,806)	(304,302,586)	(304,302,586)
Other Cash Payments	-	(5,000,000)	(5,000,000)	(5,000,000)
a. Net cash provided by (or used for) operating activities	11,358,851	(92,222,333)	(131,831,844)	(131,831,844)
B. CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:				
b. Net cash provided by (or used for) noncapital financing activities	-	-	-	-
C. CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
Acquisition and Construction of Capital Assets	(70,614,699)	(162,164,388)	(379,360,378)	(379,360,378)
Proceeds from Disposal of Property and Equipment	323,834	-	-	-
Proceeds of Debt Issuance	351,646,228	-	270,932,815	270,932,815
Bond Issue Costs	-	-	(899,100)	(899,100)
Principal Paid on Debt	(146,854,085)	(179,571,540)	(169,404,946)	(169,404,946)
Interest Paid on Debt	(135,066,842)	(133,373,776)	(137,881,526)	(137,881,526)
Interest Rebate	-	-	-	-
Capital Contributions	405,069,425	481,527,558	507,214,685	507,214,685
Other Cash Receipts	-	-	-	-
Other Cash Payments	-	-	-	-
Right-of-use Leases	(518,332)	(639,900)	(336,000)	(336,000)
Subscription assets	-	(382,725)	(674,100)	(674,100)
c. Net cash provided by (or used for) capital and related financing activities	403,985,529	5,395,229	89,591,451	89,591,451
D. CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of Investment Securities	(1,098,933,722)	(668,963,528)	(518,963,528)	(518,963,528)
Proceeds from Sales or Maturities of Investment Securities	699,436,715	728,850,000	550,507,500	550,507,500
Investment Income	9,831,787	14,030,353	10,723,648	10,723,648
d. Net cash provided by (or used in) investing activities	(389,665,220)	73,916,825	42,267,620	42,267,620
NET INCREASE (DECREASE) in cash and cash equivalents (a+b+c+d)	25,679,160	(12,910,279)	27,227	27,227
CASH AND CASH EQUIVALENTS AT JULY 1, 20xx	2,592,709	28,271,869	15,361,590	15,361,590
CASH AND CASH EQUIVALENTS AT JUNE 30, 20xx	28,271,869	15,361,590	15,388,817	15,388,817

Southern Nevada Water Authority
(Local Government)

SCHEDULE F-2 STATEMENT OF CASH FLOWS

FUND ENTERPRISE

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

* - Type

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

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NAME OF BOND OR LOAN List and Subtotal By Fund	TYPE *	TERM	ORIGINAL AMOUNT OF ISSUE	ISSUE DATE	FINAL PAYMENT DATE	INTEREST RATE	BEGINNING OUTSTANDING BALANCE 7/1/2023	REQUIREMENTS FOR FISCAL YEAR ENDING 06/30/24 INTEREST PAYABLE	PRINCIPAL PAYABLE	(9)+(10) TOTAL
State of Nevada 2009 Bonds	2	20 Years	\$ 2,214,457	12/11/09	07/01/29	0.00%	\$ 822,513	\$ -	\$ 126,540	\$ 126,540
LVVWD 2015 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 Bonds	2	13 Years	177,635,000	06/01/15	12/01/27	4.0% - 5.0%	91,365,000	4,195,250	14,920,000	19,115,250
LVVWD 2015C Bonds	2	14 Years	42,125,000	06/18/15	09/01/29	3.0% - 5.0%	21,175,000	941,875	3,590,000	4,531,875
Clark County 2016A Bonds	2	14 Years	263,955,000	03/03/16	11/01/29	0.05	102,485,000	4,633,375	19,635,000	24,268,375
LVVWD 2016A Bonds	2	30 Years	497,785,000	04/06/16	06/01/46	3.0% - 5.0%	408,100,000	20,372,800	18,185,000	38,557,800
Clark County 2016B Bonds	2	18 Years	271,670,000	08/03/16	11/01/34	4.0% - 5.0%	234,660,000	10,803,975	16,935,000	27,738,975
LVVWD 2017B Bonds	2	15 Years	22,115,000	03/14/17	02/01/32	4.0% - 5.0%	15,175,000	680,125	1,955,000	2,635,125
Clark County 2017 Bonds	2	21 Years	321,640,000	03/22/17	06/01/38	4.0% - 5.0%	266,890,000	11,705,100	12,645,000	24,350,100
LVVWD 2018B Bonds	2	8 Years	79,085,000	03/06/18	06/01/26	0.05	33,425,000	1,671,250	10,580,000	12,251,250
LVVWD 2019A Bonds	2	20 Years	107,975,000	03/13/19	06/01/39	5.0%	97,570,000	4,878,500	2,935,000	7,813,500
LVVWD 2019B Bonds	2	8 Years	90,280,000	10/16/19	06/01/27	0.05	59,130,000	2,956,500	16,755,000	19,711,500
LVVWD 2020A Bonds	2	14 Years	123,860,000	03/03/20	06/01/34	3.0%-5.0%	103,830,000	4,635,600	7,355,000	11,990,600
LVVWD 2021A Bonds	2	17 Years	144,685,000	03/03/21	06/01/38	2.0% - 5.0%	120,485,000	5,573,750	13,020,000	18,593,750
LVVWD 2021C Bonds	2	13 Years	208,145,000	03/25/21	06/01/34	2.0% - 5.0%	183,615,000	7,788,750	13,005,000	20,793,750
Clark County 2021 Bonds	2	15 Years	67,620,000	11/02/21	11/01/36	2.1% - 3.0%	67,620,000	1,623,475	-	1,623,475
LVVWD 2022A Bonds	2	29 Years	292,240,000	02/01/22	06/01/51	4.0% - 5.0%	287,205,000	12,152,900	5,285,000	17,437,900
LVVWD 2022C Bonds	2	20 Years	253,820,000	03/03/22	06/01/42	4.0% - 5.0%	245,925,000	10,751,500	8,295,000	19,046,500
Clark County 2022A Bonds	2	10 Years	75,090,000	05/10/22	06/01/32	4.0%	75,090,000	3,003,600	-	3,003,600
LVVWD 2023-24 Proposed Bonds	11	30 Years	270,932,815	2023-24	2053-54	4.9%	266,749,410	13,142,951	4,183,405	17,326,356
							\$	\$	\$	\$
TOTAL ALL DEBT SERVICE							\$ 3,013,721,922	\$ 137,881,526	\$ 169,404,946	\$ 307,286,471

SCHEDULE C-1 - INDEBTEDNESS

Southern Nevada Water Authority

Budget Fiscal Year 24

(Local Government)

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2023-2024

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: _____ 117 _____

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2023-24	Proposed Expenditure FY 2024-25	Reason or need for contract:
1	AB Sciex LLC	03/11/19	03/10/26	\$ 500,000	\$ 500,000.00	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	Agilent Technologies	04/01/19	03/31/26	239,547	263,502	Annual PM Services On Agilent Instruments
4	Alarmco	10/01/18	09/30/27	4,200	4,200	Alarm Monitoring Services - WSNA
5	Anzalone Pumps Inc.	04/12/18	04/11/25	250,000	250,000	Irrigation Well Maintenance
6	Anzalone Pumps Inc.	07/31/18	08/30/25	100,000	100,000	Well and Pump Systems Parts, Maintenance and Repairs
7	Arizona Machinery LLC	01/01/16	12/31/25	30,000	30,000	John Deere Repair Parts And Service For GB Ranches
8	Artel	04/01/20	03/31/27	10,000	10,000	Annual PM service agreement
9	ASM Affiliates Inc	01/05/21	01/04/24	74,543	-	Closeout Cultural Survey fo rthe Las Vegas Wash
10	Association of Metropolitan Water Agencies	01/01/21	12/31/27	74,000	74,000	Administrative Support for WUCA Climate Change
11	B&W Trucking	01/01/16	12/31/25	24,000	24,000	Transportation Services For Livestock And Agricultural Products For Grm Ranches
11b	Baker Tilly US, LLP	03/28/22	12/31/27	100,000	100,000	Professional Auditing Services SNWA
12	Basin Engineering	04/29/19	04/28/27	25,000	25,000	Engineering and Geotechnical Services
13	Beckman Coulter Inc.	01/01/20	12/31/26	100,000	100,000	Annual PM Services
14	Bio-Rad Laboratories Inc.	05/01/19	04/30/26	100,000	100,000	Annual PM Services
15	Bio-West, Inc.	09/05/19	09/04/26	150,000	150,000	Professional Biological Services
16	Board of Regents Nevada System of Higher Education On Behalf of The Desert Research Institute	11/18/2021	11/17/2026	50,000	50,000	Spring Mountains Cloud Seeding
17	BSA Environmental Services	07/01/19	06/30/26	35,000	35,000	Zooplankton Analysis For Water Quality Div.
18	Capital Project Law Group	01/21/22	01/20/24	50,000	-	CMAR Projects Services
19	CDM Smith	12/08/20	12/07/27	488,232	-	Evaluation of AMS/RM ozone treatment systems
20	Community Strategies, Inc.	7/1/2021	06/30/27	49,500	49,500	Community Based Outreach Services
21	Consili, Inc.	4/11/2021	04/10/25	65,000	65,000	State Regulatory Issues Consulting Services

22	Corporate Air Mechanical Services Inc	10/07/19	02/06/24	50,090	50,090	HVAC Replacement Services
23	Cosco Fire Protection Inc	08/13/18	08/12/25	25,000	25,000	Fire System Upgrades
24	Cosco Fire Protection Inc	12/03/18	12/02/25	100,000	100,000	Fire System Repairs
25	DP Video Productions LLC	04/10/18	04/09/24	17,750	17,750	Develop, Manage & Maintain A Website
26	Dyno Plumbing	11/14/18	11/13/25	25,000	25,000	On-Call Plumbing Services SNWA
27	EMD Consulting Group, LLC	02/21/19	02/20/24	25,000	25,000	Executive Search
28	Enpark Cleaning Services	09/18/18	09/17/24	25,000	10,000	Carpet Cleaning Services
29	Eurofins NDSC Environment Testing Americas, Inc.	11/1/2021	10/31/2022	500,000	500,000	Water Sample Analysis Services
30	Fairchild Shearing LLC	02/04/19	02/03/25	50,000	50,000	Sheep Shearing Services
31	FEI Company	12/05/19	12/04/24	35,000	35,000	Annual PM Services On The Company's Aspex Explorer VR Instrument
32	Gold Standard Diagnostics Horsham	09/09/19	09/08/24	100,000	100,000	PM Service Agreement
33	Great Basin Bird Observatory	1/1/2021	12/31/27	66,251	66,251	Las Vegas Wash Restoration Site Avian Monitoring
34	Great Basin Institute	12/18/17	10/31/26	60,000	40,000	WSNA Vegetation Control And Docent Staffing
35	Great Basin Irrigation	01/01/16	12/31/25	40,000	40,000	Irrigation Systems Parts And Maintenance
36	Hach	04/11/20	06/06/24	100,000	-	PM Service Agreement
37	Herndon Solutions Group	9/20/2021	09/19/28	2,763,607	2,763,607	Specialty Staff Augmentation Services
38	High Sierra Waterlab	11/19/19	11/30/26	40,000	40,000	Nutrient Chemical Analysis on Water Samples
39	Holds Water LLC	05/13/20	04/21/25	75,000	75,000	Consulting on Water Resources Matters
40	Holland and Hart	07/01/20	06/30/28	100,000	100,000	General Counsel Services PUC
41	Holland and Hart	01/20/21	01/19/28	1,500,000	1,500,000	Legal Services-Environmental Compliance and Water Resources
42	Holley Driggs	12/10/19	12/09/26	15,000	15,000	Professional Services
43	Horiba	01/04/20	01/03/27	100,000	100,000	PM Service Agreement
44	HRA Inc	12/17/19	12/16/27	90,000	90,000	Archaeological Evaluations
45	HRA Inc.	03/06/19	03/05/25	49,500	33,000	On-call Services for National Historic Preservation Act Section 106 Compliance
46	Ichrom Solutions	02/06/21	02/05/28	50,000	50,000	PM Service Agreement
47	Illumina	12/31/18	12/31/25	48,323	50,739	Annual Support Maintenance Services On Illumina Miseq System Integrated Instrument.
48	IR Ashleman	09/29/19	09/08/26	30,000	30,000	Plan Attorney For Retirement Plan
49	J&M Trucking	12/30/20	12/29/23	115,000	-	Concrete, Sand, Gravel and Misc. Building Supplies
50	Jacobs Engineering Group Inc	01/27/21	01/26/27	300,000	300,000	SNWA Misc Engineering Services
51	Jena Antonchuk	7/16/2021	07/15/26	95,000	95,000	Conservation and Environmental Protection Educational Projects Consultation Services
52	Jena Antonchuk	07/16/21	07/15/25	95,000	95,000	Community Outreach Services

53	Joseph Guild & Associates LLC	01/23/19	01/22/26	40,000	40,000	Ranch and Agricultural Consulting Services-Water Resources
54	Joshua Tree Productions	07/01/18	06/30/24	90,000	-	Video Production Services
55	JT Fasteners	01/01/21	12/31/23	10,000	-	VMI Fasteners and Other Consumables
56	Knight & Leavitt Associates, Inc.	7/1/2021	06/30/25	50,000	50,000	Desert Tortoise Services Rate Structure Amendment
57	Kyle Thompson (KYLE THOMPSON)	08/24/21	08/23/28	11,000	-	PFAs in Waste Water Treatment Facilities
58	Landscape Specialties Inc.	10/03/20	10/03/25	100,000	100,000	Landscape Maintenance Services - SNWA Facilities
59	Lawrence Roll-Up Doors Inc	08/20/18	08/19/25	25,000	25,000	SNWA Door Repair Services
60	Life Technologies Corporation	03/08/20	03/07/25	51,547	55,000	I881451791-Equipment PM Services
61	Mantech (USA) Inc	12/29/18	01/05/24	35,000		I855200000-Equipment PM Services
62	March Counsel, LLC	07/01/17	06/30/24	100,000	100,000	Legal Services For Energy Matters
63	Marcus G. Faust PC	07/01/18	06/30/28	150,000	150,000	PSA Governmental Affairs Consulting Services
64	MDC Research	01/01/22	12/31/28	150,000	150,000	Data Collection Services SNWA
65	Metropolitan Water District	09/19/19	09/18/29	212,476	212,476	Support Water Utility Climate Alliance Initiatives
66	Midi Inc	04/01/20	03/31/27	500,000	500,000	PM Service Agreement
67	Milestone Inc	06/05/19	06/04/26	500,000	500,000	PM Service Agreement
68	Moyle Irrigation	01/01/16	12/31/25	50,000	50,000	Pivot Irrigation System Parts And Maintenance Services For Gb Ranches
69	Muddy Valley Irrigation Company	07/16/20	07/15/24	200,000	200,000	Reimbursement for Attorney Fees in MVWR Case.
70	Nancy Weaver	09/26/19	06/30/26	98,000	98,000	Communications Consulting Services
71	Naturaldry Carpet Cleaning	09/25/18	10/31/23	12,000	-	Carpet Cleaning
72	Navigant Consulting Inc	08/10/17	08/10/24	60,000	60,000	Transmission Evaluation Services
73	Nevada Division Of Forestry, Conservation Camp Billing	07/01/19	06/30/25	266,250	266,250	Grounds Maintenance
74	O'Flarety Plumbing And Heating	01/01/16	12/31/25	35,000	35,000	Plumbing Repair Services For Gb Ranches
75	Ontario Refrigeration	08/13/19	08/12/26	100,000	100,000	Chiller Prentive Maintenance And Repair Services
76	Park Landscape	02/01/19	01/31/28	69,156	69,156	On Call Landscape Maintenance WSNA
77	Perkinelmer Health Sciences Inc.	08/01/19	07/31/26	26,000	26,000	Annual PM Services
78	Phycotech Inc.	08/01/19	07/31/26	100,000	100,000	Provide Phytoplankton Analysis On Water Samples
79	Prodajsa USA, Inc. dba HCI Advertising	7/1/2021	06/30/25	450,000	-	Spanish Language Conservation and Water Quality Advertising & Marketing Services
80	Pyro Combustion & Controls	11/14/18	11/13/25	50,000	50,000	Boiler Preventative Maintenance/Repair Services
81	Qiagen	12/12/18	12/11/25	61,280	61,280	Annual PM Service On Qiasymphony Sp Instrument.

82	R&R Partners Inc.	07/01/21	06/30/25	3,750,000	3,750,000	Integrated Marketing and Communication Services
83	Rayos Group	09/24/19	09/23/26	86,500	86,500	Risk Resilience Assesment
84	Red Star Fence Company	09/11/19	09/10/24	100,000	33,000	On-call Tortoise and Chain Link Fencing Installand Repair
85	Reward Strategy Group	10/27/21	10/26/27	95,000	95,000	SNWA Job Classifications & Compensation Plans
86	Sanitary Septic Service, Inc.	02/04/19	02/03/24	10,000	-	Septic Tank Services
87	Santoro Whitmire LTD	11/06/18	11/05/25	-	-	Coyote Spring Valley Case A-18-778039-C
88	Santoro Whitmire LTD	11/07/18	11/06/25	-	-	Legal Services Csi Vs. State Eng.
89	Seal Analytical	05/15/19	05/14/26	25,000	25,000	Annual PM Services on Seal Instruments
90	Shimadzu Scientific Instruments	11/01/19	10/31/26	100,000	103,000	Annual PM Service On Shimadzu Instruments
91	Silver Reef Biomedical	03/01/20	02/28/24	11,400	-	Annual PM Service On Sterilization Equipment
92	Silver State Analytical Laboratories, Inc. DBA Sierra Environmental Monitoring	11/1/2021	10/31/2022	500,000	500,000	Wash Water Sampling Analysis Services
93	Silver State Analytical Labs	10/30/21	10/31/28	88,555	88,555	BOR Grand Funded Protion of Wash Water Sampling Services Contract
94	Simmons Group	07/11/19	07/10/25	20,000	20,000	Employee Development Training
95	SL Robbins & Associates	02/26/19	02/25/25	69,950	69,950	Workshop And Video Learning Series
96	Soil Tech	08/02/18	08/01/25	753,618	753,618	SNWA Revegetation and Restoration Program
97	Southern Nevada Environmental, Inc.	08/09/17	08/07/24	50,000	10,000	Environmental Consulting services
98	Spring Valley Associates LLC	09/22/20	09/21/26	2,139,367	2,139,367	Ranch Management Services
99	Stradling Yocca Carlson & Rauth, A Professional Corporation	12/05/17	12/05/24	50,000	50,000	Bond Disclosure Counsel Services
100	Stukenholtz Laboratory Inc.	11/18/19	11/17/27	10,000	10,000	Soil Testing, Chemical Analysis And Agronomy Consulting Services
101	Teledyne Tekmar	11/19/19	11/18/26	11,558	11,558	Annual PM Services on Teledyne Instruments
102	The Law Offices Of Rory Reid	06/21/18	05/31/25	31,000	31,000	Legal Services
103	Thermo Electron North America LLC	03/01/19	03/01/26	500,000	525,000	Annual PM Service On Thermo Scientific Instruments
104	Tri-County Weed Control	1/1/2021	12/31/27	23,040	23,040	Weed Control Services
105	Trussell Technologies	07/01/20	06/30/27	85,000	85,000	Water Research Foundation bromate control measures on ozone and downstream treatment systems
106	University Corporation For Atmospheric Research	03/26/19	03/25/26	150,000	150,000	B880254117-Climate Downscaling Project in the Colorado River Basin
107	University Of Las Vegas-Nv (Unlv)	01/15/21	09/15/23	53,734	-	WRF 5104 "Use of DNA Nanostructure as Viral Surrogates in Potable Reuse Applications"
108	Vernon E Fairchild JR	02/04/19	02/03/24	29,000	-	Sheep Shearing Services

109	WSP USA Solutions Inc.	02/07/17	02/06/24	40,000	25,000	8829 Eng. Serv. for C1477 Paradise Road Waterline Replacement Project
110	Black & Veatch Corporation	04/20/22	04/19/29	90,000	90,000	Evaporative Cooling Alternatives Study
111	Blanc Canvass, Inc.	03/31/22	03/30/24	50,600	-	Springs Preserve Fundraising Development analysis and Management
112	Lincoln County Power District No. 2	01/01/22	12/31/22	73,712	-	Electric Service - Decker Substation
113	Mt Wheeler Power	01/01/22	12/31/22	204,267	-	Electric Service - No. Resources Ranch Residences & Irrigation
114	Siad Macchine Impianti Spa	02/01/22	01/31/28	500,000	500,000	SIAD-SNWA PM Services Agreement
115	State Of Nevada Colorado River Commission (Colorado River Commission)	01/01/22	12/31/22	552,346	-	Design Engineering Services Boulder Flats Switchyard
116	United Soil Science	01/26/22	01/25/28	500,000	500,000	Fertilizer Application Services
	Total Proposed Expenditures			\$ 23,585,899	\$ 21,049,389	

Additional Explanations (Reference Line Number and Vendor):

SCHEDULE OF PRIVATIZATION CONTRACTS

Budget Year 2023-2024

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 2023-24	Proposed Expenditure FY 2024-25	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										
2										
3										
4										
5										
6										
7										
8	Total									

Page: 9

Attach additional sheets if necessary.

Schedule 32

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 0001232503**

Leslie McCormick, being 1st duly sworn, deposes and says: That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for, was continuously published in said Las Vegas Review-Journal and / or Las Vegas Sun in 1 edition(s) of said newspaper issued from 05/05/2023 to 05/05/2023, on the following days:

05 / 05 / 23

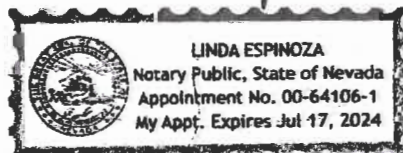


/s/

LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 5th day of May, 2023

Notary





STATE OF NEVADA
DEPARTMENT OF TAXATION

Web Site: <https://tax.nv.gov>
Call Center: (866) 962-3707

LAS VEGAS OFFICE
700 E. Warm Springs Rd, Suite 200
Las Vegas, Nevada 89119
Phone (702) 486-2300
Fax (702) 486-2373

JOE LOMBARDO
Governor
TONY WREN
Chair, Nevada Tax Commission
SHELLIE HUGHES
Executive Director

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

RENO OFFICE
4600 Kietzke Lane, Suite L235
Reno, NV 89502
Phone: (775) 687-9999
Fax: (775) 688-1303

June 12, 2023

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 2023-2024
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 26, 2023 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.

Sincerely,

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

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SECTION 5

DEPARTMENT BUDGETS

Summary of Department Expenditures	5 - 1
Executive Management	5 - 2
Legal Services	5 - 14
Finance	5 - 19
Energy Management	5 - 26
Risk Management	5 - 33
Customer Care & Field Services	5 - 37
Engineering	5 - 45
Infrastructure Management	5 - 50
Operations	5 - 60
Human Resources	5 - 69
Information Technology	5 - 73
Environmental, Health, Safety & Corporate Security	5 - 80
Water Quality & Treatment	5 - 96
Water Resources	5 - 105
Public Services	5 - 115

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Fiscal Year Ending June 30, 2024

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 2023-24 Budget Plan. The following table presents the 2021-22 Actual, 2022-23 Adopted Budget and 2023-24 Budget Plan for each of the departments.

SNWA
Summary of Department Expenditures

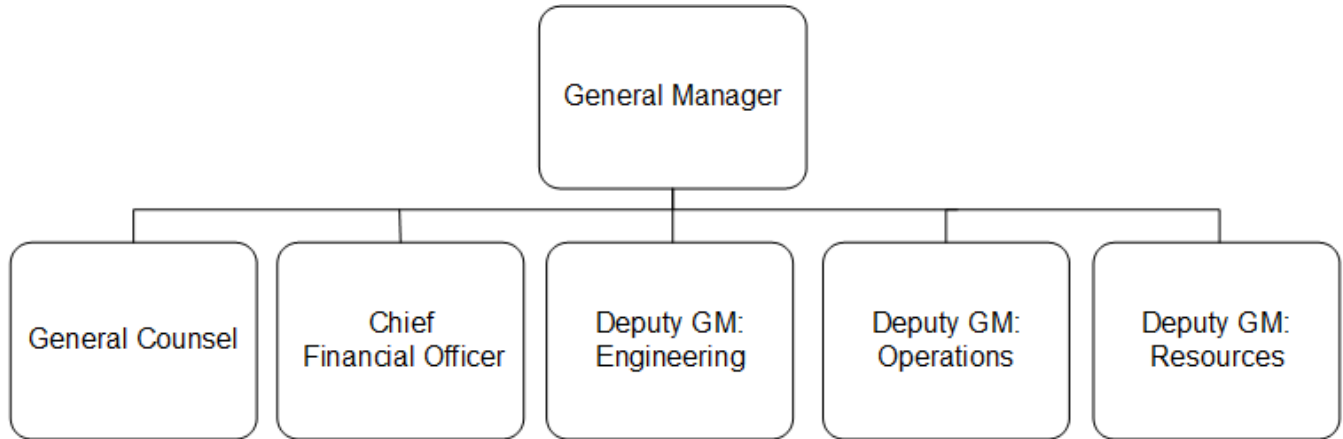
DEPARTMENTS	Actual 2021-22	Budget 2022-23	Budget 2023-24	Budget-to-Budget Variance
Executive Management	\$ 2,321,838	\$ 2,234,983	\$ 2,053,123	\$ (181,860)
Legal Services	3,566,320	5,606,427	7,249,383	1,642,956
Finance	26,546,314	20,824,378	30,296,405	9,472,027
Energy Management	45,449,877	64,480,477	72,062,658	7,582,181
Risk Management	2,072,449	3,174,482	3,192,848	18,366
Customer Care & Field Services	180,910	538,413	555,616	17,203
Engineering	39,332,280	144,172,810	225,039,348	80,866,537
Infrastructure Management	21,073,575	41,555,220	45,825,894	4,270,674
Operations	14,319,547	21,736,181	23,007,528	1,271,347
Human Resources	263,547	2,617,598	3,719,121	1,101,523
Information Technology	15,380,035	32,458,234	21,976,152	(10,482,082)
Environmental Health Safety & Corporate Security	8,761,090	10,831,536	13,243,215	2,411,680
Water Quality & Treatment	27,021,488	45,463,551	65,859,208	20,395,657
Water Resources	57,320,977	130,189,733	164,521,468	34,331,735
Public Services	10,835,062	13,381,742	15,806,675	2,424,933
Total Department Expenditures	\$274,445,309	\$ 539,265,765	\$ 694,408,642	\$ 155,142,877
Debt Service	281,915,322	291,227,106	307,286,471	16,059,365
TOTAL USES OF FUNDS	\$556,360,631	\$ 830,492,871	\$1,001,695,113	\$ 171,202,241

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EXECUTIVE MANAGEMENT

Level: 1000



Mission Statement

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

The Executive Management Team

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

Expenditures

SNWA USES	Actual 2021-22	Budget 2022-23	Budget 2023-24
Water resource investments	\$ —	\$ —	\$ —
Materials and supplies	8,500	18,100	25,580
Maintenance and repairs	53	—	—
Rental and leases	—	—	—
Other employee expenses	109,768	144,250	201,445
Other operating expenses	235,313	226,650	128,180
Total Operating Expenses	353,634	389,000	355,205
Capital expenditures	—	—	—
Salaries and benefits	1,968,204	1,845,983	1,697,918
TOTAL DEPARTMENT EXPENDITURES	\$ 2,321,838	\$ 2,234,983	\$ 2,053,123
FTE POSITIONS	7.1	6.2	5.0

Major Activities

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

- Development and implementation of new conservation programs and initiatives to meet the community conservation goal of 86 GPCD by 2035.
- Continued implementation of SNWA's Major Construction and Capital Plan (MCCP).
- Continued implementation of LVVWD's 10-year Capital Improvement Plan.
- Ongoing implementation of Integrated Resource Planning Advisory Committee (IRPAC) 2020 recommendations.
- Leadership and involvement in Colorado River issues and initiatives.
- Continued collaboration with Colorado River partners to develop a basin-wide plan to help protect Lake Mead water elevations.
- Continued progress towards Nevada's Renewable Portfolio Standard of 50 percent by 2030.
- Continued participation in the WaterStart partnership.

Capital Planning

SNWA Major Construction and Capital Plan

The Major Construction and Capital Plan (MCCP) is the SNWA's vehicle for identifying and authorizing capital initiatives, including water resource acquisition; system expansion; and construction, repair and replacement of water facilities. Projects outlined in the MCCP are funded by the SNWA's bond proceeds and revenue generated by the SNWA's water bill charges, connection charges, sales tax proceeds and Southern Nevada Public Land Management Act funds when available. Significant inflationary increases in materials and equipment delivery since the MCCP was amended in 2020 have caused projected capital project costs to increase from the original estimates. Major facility-related projects currently in progress are described in the table below:

Project	Status	Estimated Cost	Estimated Completion
Large Scale Solar PV Project	Construction slated for late 2023	\$20 M	2024
Garnet Valley Wastewater System	Design	\$294 M	2027
Garnet Valley Water System	Design	\$340 M	2028
Horizon Lateral	Design/Permitting	\$2.4 B	2030

LVVWD Capital Improvement Plan

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

- Rome 2745 Reservoir, 2975 Zone Pumping Station, and 2975-2860 Zone Pressure Reducing Valve
- Rome Facilities Pipelines
- Las Vegas Boulevard Improvements
- 4125 Zone South Reservoir
- Alpine Ridge 3090 Zone North Pipeline Phase I and II
- Cougar 3090 Zone Reservoir
- Cougar Facilities Pipeline
- Equipping W124
- Drill and Develop Well W125
- Westlund Drive Pipeline Replacement
- Rehab SCCP in Sahara Avenue
- Replace SCCP & ACP on Flamingo Road
- Blue Diamond 3630 Zone Pumping Station
- Blue Diamond 3630 Zone Discharge Pipeline and PRV

Additionally, the LVVWD converted a 266-ton, water-cooled chiller system to an air-cooled chiller system with thermal storage. This renovation increases energy efficiency, reduces consumptive water use and aligns with the new community conservation measures.

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

Drought and Water Resources

The most recent and reliable scientific projections suggest that the Colorado River Basin is experiencing permanent aridification, meaning that the region is making a permanent shift to a drier future because of gradual warming. With such uncertainty moving forward, swift and significant efforts at the local, regional and federal levels will be critical to reducing basin-wide Colorado River water consumption and protecting the reservoir levels at Lake Mead and Lake Powell.

SNWA Water Resource Plan

In January 2023, the SNWA Board of Directors adopted an updated Water Resource Plan, which provides a comprehensive overview of available water resources and demands over a 50-year planning horizon. This year's plan reflects ongoing discussions between the Colorado River Basin States and the Federal government to address and protect Lake Mead and Lake Powell from reaching critically low reservoir elevations. The plan maintains the key conservation efforts that will need to be successfully implemented to meet the community's water conservation goal of 86 gallons per capita per day (GPCD) by 2035.

Memorandum of Understanding

In August 2022, the SNWA joined the Metropolitan Water District of Southern California, Aurora Water (Colorado), Denver Water (Colorado) and Pueblo Water (Colorado) in signing an agreement that commits the parties to reduce water use in their respective municipalities. Just three months later, the agreement was updated to include 25 additional municipal and public water providers. Specifically, signatories committed to take the following actions:

- Increase indoor and outdoor water use efficiency
- Reduce non-functional turfgrass
- Increase water reuse and recycling programs
- Implement best practices and share successful strategies
- Collaborate to bring the Colorado River into balance

Mandatory Water Use Reductions

Under federal shortage rules and the Colorado River Drought Contingency Plan, it's likely that Nevada will see additional Colorado River water use reductions as water levels at Lake Mead continue to fall. The first-ever federally declared shortage on the Colorado River occurred in 2022. As hydrologic conditions worsened, a Stage 2 shortage was declared for 2023, reducing Nevada's Colorado River allocation from 300,000 acre-feet per year (afy) to 275,000 afy. While these reductions are significant and future reductions are likely, community conservation efforts have reduced Southern Nevada's annual consumptive use of Colorado River water to an amount below any supply reduction that may occur under existing rules. Processes to develop new short-term and long-term operating guidelines

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

for the river are underway by the Bureau of Reclamation. SNWA is actively participating in both processes and the water resource plan and conservation strategies will be reevaluated as new guidelines are adopted.

Future Resources

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

Conservation

Since 2000, Southern Nevada has reduced its Colorado River water use by approximately one-third despite a 49 percent population increase during that same period, demonstrating that economic growth and water efficiency can occur in tandem. Over the past year, the SNWA has identified additional conservation measures to reduce community water consumption and implemented programs and policies to dramatically reduce or eliminate the water footprint of new economic development. Successfully implementing the following efforts will help to ensure that the community has sufficient water resources to meet demands well into the future. They will also require significant and sustained water conservation contributions from all community sectors on an ongoing basis:

- Remove all non-functional grass in non-single family residential sectors by 2027 and prohibit the installation of grass in new development
- New development standards for limiting the size of residential pool, spas, and water features
- Incentivize the abandonment of septic systems and connection to the municipal sewer system
- Prohibit evaporative cooling in new development and incentivize the replacement of evaporative coolers with dry-cooled systems
- Prohibit new golf course development and reduce water budgets at existing golf courses

Water Smart Landscapes Program

Participation in the Water Smart Landscapes Program continues to produce successful results. In 2022, single family residential and non-single-family residential customers combined to convert nearly 10 million square feet of turf, which will yield an estimated savings of 531 million gallons of water every year. The SNWA will look to build on the program's current momentum throughout 2023.

Water Efficient Technologies Program

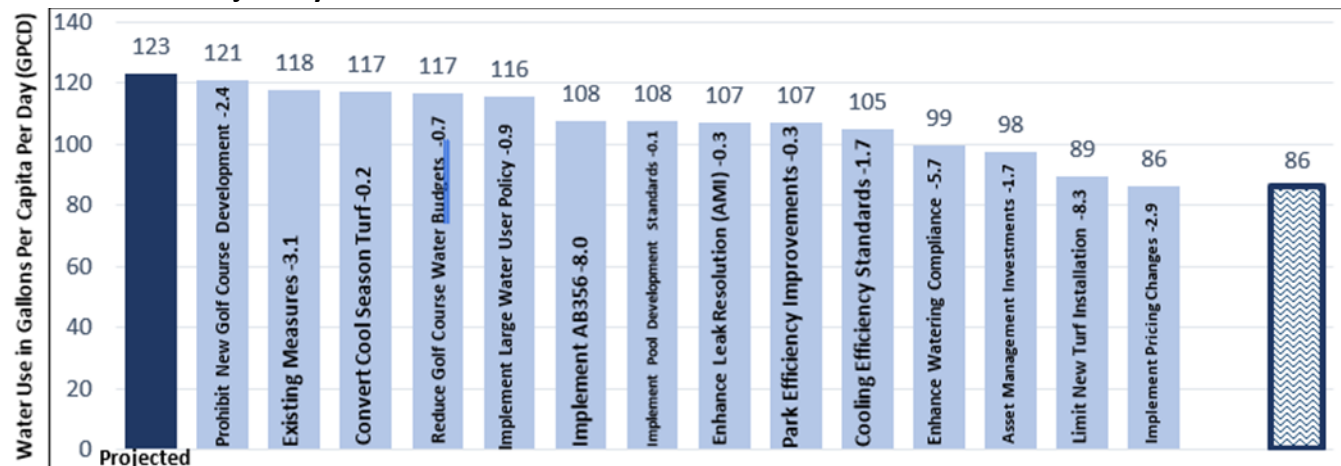
The Water Efficient Technologies Program also experienced success in 2022, with 45 projects completed for an estimated water savings of approximately 116 million gallons. The SNWA hopes to build on the program's success by focusing on cool-to-warm season turf conversions and cooling efficiency improvements throughout 2023.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

Additional Water Conservation Measures

Over the past year, SNWA has identified various forms of consumptive water use throughout the valley and implemented programs to either dramatically reduce or eliminate the water footprint of each. Continuing to reduce consumptive water use will require a significant and sustained effort from all sectors of the community; however, it is anticipated that doing so will ensure that Southern Nevada reaches its conservation goal of 86 GPCD by 2035 and have sufficient water resources to meet future demands.

Conservation Trajectory with Additional Measures



Prioritizing Water-Efficient Development. To continue progress toward the community goal of 86 GPCD by the year 2035, SNWA staff continues to work alongside the economic development community to help ensure that Southern Nevada can continue to grow and diversify in a water-efficient manner. As such, SNWA is prioritizing development with non-consumptive water use. To aide this effort, SNWA is working to refine a water investment rating tool, which will consider a proposed project's demand on water resources, whether water used can be recaptured and returned to Lake Mead, and how the proposed project will benefit the community. This information will help decision-makers in evaluating whether certain development proposals are viable options for Southern Nevada. While not yet final, the tool is under review and subject to input from the development community.

Septic Conversion Program. Colorado River water discharged to septic systems is lost and cannot be returned to Lake Mead for return flow credits. In March 2021, the Board of Directors approved development of, and initial funding for, a financial assistance program for the estimated 14,500 septic users throughout the Las Vegas Valley to abandon their septic tanks and connect to the municipal sewer system. Additional future code changes may limit the development of new septic systems in the Las Vegas Valley.

Operations

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

The LVVWD provides water service to customers in the City of Las Vegas, parts of unincorporated Clark County and several rural water systems that are not connected to in-valley infrastructure. The LVVWD operates the public water systems in Blue Diamond, Jean, Kyle Canyon, Laughlin and Searchlight. In 2022, the LVVWD delivered approximately 109 billion gallons of water to customers throughout its service area. While the Las Vegas Valley continues to grow, new service connections were down slightly from the previous year, having dropped from 9,323 in 2021 to 8,091 in 2022.

Leak Repair

To help detect leaks in their early stage, LVVWD relies on notifications from customers as well as an acoustic leak detection system that listens for underground leaks and pinpoints their location. In 2022, these efforts led to the quick repair of 1,921 service line leaks and 82 main breaks. Timely response to these types of leak events enables LVVWD to maintain stable operating costs and low non-revenue water losses. The LVVWD system currently experiences less than five percent water loss, compared to the 20 national average.

Rural Water Systems

Blue Diamond. In 2019, LVVWD staff conducted an assessment of the Blue Diamond Water System, which indicated a need for various repairs and upgrades that will increase water system reliability and efficiency, enhance community fire protection and increase emergency storage to meet regulations. As such, LVVWD has plans to replace approximately 4,700 feet of pipelines, install a new pumping station, construct a new well and construction a storage tank that will double the community's water storage by 2025.

Big Bend Water District (Laughlin). The Big Bend Water District is continuing infrastructure improvements, including a recently completed major refurbishment of the 1130 Zone tank. This project consisted of significant inspection, repair and a full National Sanitation Foundation (NSF)-rated coating for tank protection. This project is part of the capital infrastructure improvement for Laughlin, funded by State Revolving Fund money from the State of Nevada.

Kyle Canyon Water District. Staff recently installed an inspection vault in the Rainbow subdivision. The vault will aide in evaluating the condition of a critical water main that distributes water from the Old Town subdivision to the Rainbow storage tank, helping to ensure reliable water delivery to one of the system's most critical reservoirs.

Springs Preserve

The LVVWD also owns and operates the Springs Preserve, a 180-acre facility built to inspire culture and community, promote environmental stewardship in the Las Vegas Valley.

Over the past year, the Springs Preserve focused on various mission-driven projects and programming. During fiscal year 2022-23, the Springs Preserve hosted more than 200,000 visitors and the new Springs Café opened its doors in October.

Additionally, several improvement projects throughout Springs Preserve's natural area and Botanical gardens were completed to enhance the site and the visitor experience, including:

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

- Renovation of the quarter-acre Teaching Garden to accommodate larger groups and boost educational offerings
- Installation of additional interpretive panels throughout the Preserve's walking trails
- Overhaul of the Springs Preserve's Botanical Garden interpretation and wayfinding system
- Starting construction of the new, grant-funded Ethnobotanical Garden, which will showcase traditional ecological knowledge and the cultural and sustainable living practices of Southern Nevada's Native American communities

Annual community outreach events, designed to increase the Preserve's visibility and celebrate the region's cultural history, continued to draw large crowds and corporate sponsorships. Both the four-day Haunted Harvest and three-day Día de Muertos events sold out in advance. Combined, these events drew approximately 19,000 visitors to the campus. February's Black History Month Festival saw record attendance and sponsorships in 2023.

Customer Care and Field Services

LVVWD staff continues to evaluate and implement various programs and systems to support water conservation through its customer base. The increased availability of water usage data and the enhanced ability to convey that information to customers in a timely manner will yield additional awareness of, and response to, on-site water usage issues and conservation opportunities on a customer-by-customer basis.

Advanced Metering Infrastructure and Software (AMI)

The AMI implementation project is in the final stages and scheduled for completion in the first quarter of 2023. By January 2024, the system is projected to have hourly usage reads for 98 percent of the LVVWD's customers. Along with the new customer information system, C2M, AMI will optimize customer and field services communication and improve staff's ability to monitor and quickly address water consumption issues. Eventually, this data will be available to customers through the LVVWD's mobile app, SMS messaging, and web portal. These technologies will allow the LVVWD to provide enhanced customer service and interaction, increased support for conservation initiatives, optimized service response, and more efficient account management.

Weekly Irrigation Compliance Detection

Completion of the AMI and C2M projects will enable staff to implement a data-driven single family residential (SFR) enforcement compliance program using a validated irrigation compliance detection system. This functionality is expected to be available by the end of 2023 and will provide automated review of all available SFR meter data to identify violations of time of day and day of week watering restrictions. This program is expected to result in a five percent annualized increase in compliance, estimated to save approximately 6,500 acre-feet of water each year.

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.

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Continued discussions with Colorado River Basin partners to achieve reductions in Colorado River consumptive use
- Staff continued efforts to implement community-wide water conservation initiatives, including turf removal, evaporative cooling reduction, septic system conversion, pool size limits and water waste monitoring and enforcement.
- The SNWA Board of Directors approved an updated Water Resource Plan for 2023. 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.
- Continued progress on asset management, necessary system expansion and water quality compliance projects provided within the LVVWD's 10-year Capital Improvement Plan.
- Continued collaboration with Metropolitan Water District to provide financial support for its regional recycling program in exchange for a portion of its Colorado River allotment.
- Continued design work on major components of the SNWA MCCP, including Horizon Lateral and the Garnet Valley water and wastewater systems.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2023-24 Performance Objectives

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Completion of the Advanced Metering Infrastructure implementation project, which will provide hourly usage reads for 98 percent of LVVWD customers by January 2024. This infrastructure will allow for enhanced customer care interactions, increased conservation, optimized service response, and more efficient account management
- Continued installation of irrigation compliance detection. It is anticipated that, by the end of 2023, this project will be able to provide automated review of all available SFR meter data to identify violations of the watering day assignments and save approximately 6,500 acre-feet of water.

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

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- SNWA was one of five original signatories to a Memorandum of Understanding to reduce Colorado River water use. The memorandum now includes 25 additional municipal and public water providers.
- More than 9.5 million square feet of turf replaced through the Water Smart Landscapes rebate program in 2022, saving an estimated 530.7 million gallons of water.
- Sustained water waste enforcement efforts to stimulate sustained water conservation throughout the community.
- Continued efforts to decrease consumptive water use through service rule and code revisions for all of SNWA's member agencies
- Ongoing implementation of water conservation and efficiency measures, such as customer compliance with watering schedules, data sharing and amending development agreements to include up-to-date efficiency measures.

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

2023-24 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.

2022-23 Major Accomplishments

- Completed 45 Water Efficient Technologies projects in 2022, resulting in an estimated water savings of 116 million gallons.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

- 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.

2023-24 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.

2022-23 Major Accomplishments

- The LVVWD ended fiscal year 2021-22 with an unrestricted reserve balance of \$547.6 million, exceeding its fund balance target by 143 percent.
- The SNWA ended fiscal year 2021-22 with an unrestricted reserve balance of \$936.6 million, exceeding its fund balance target by 122 percent.
- Applied for and received \$37.6 million in grant funding for SNWA, LVVWD and the Big Bend Water District in fiscal year 2021-22.
- Both LVVWD and SNWA maintained AA credit ratings, with stable outlook

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

2023-24 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.

2022-23 Major Accomplishments

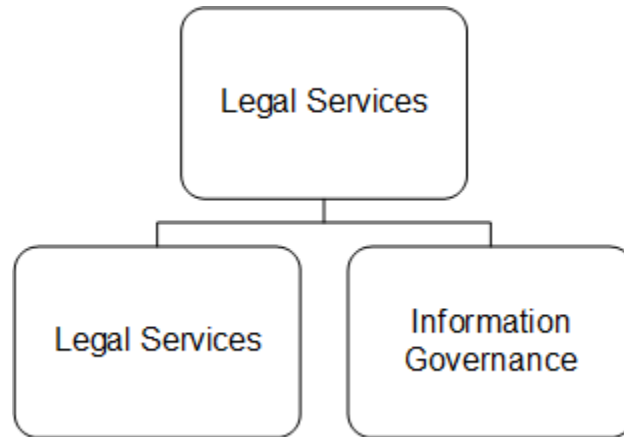
- The LVVWD was recognized as one of America's best mid-size employers in 2022 by Forbes Magazine.
- Frost & Sullivan awarded the LVVWD its annual Excellence in Resourcefulness Award for its efforts to minimize the impact of climate change by improving its overall water management operations, proactively identifying leaks through new technologies and expanding its service capabilities to its customers.
- The Wall Street Journal published an in-depth feature recognizing the community's conservation efforts, calling Southern Nevada "one of the most water-minded places on Earth," amid the worst drought in 1,200 years.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Executive Management
Fiscal Year Ending June 30, 2024

- The Springs Preserve held its in-person Black History Month celebration in February 2023 welcoming more than 4,000 attendees. The event featured music and dance performances, educational children's activities and informational speakers and presentations.

LEGAL SERVICES

Level: 1200



Mission

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

Department Description

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

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.

The Information Governance division is responsible for managing the maintenance, retention, preservation, and disposition of the organization's Records in accordance with federal, state, and local laws, ordinances, regulations, and rules, applicable contractual requirements, and regular business practices. In addition, IG is responsible for conducting forensic analysis on data loss scenarios in coordination with Risk Management, Information Technology (IT), and Public Services departments.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Legal Services
Fiscal Year Ending June 30, 2024

Budget Objectives and Highlights

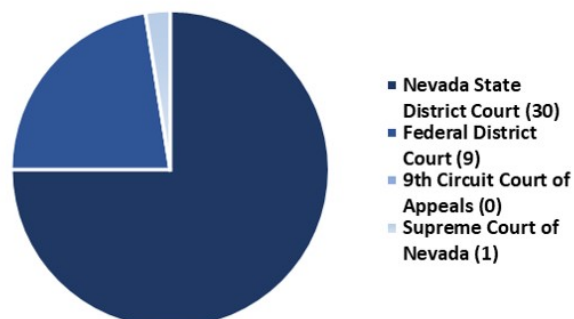
Attorneys in the department are performing a steadily increasing practice before Nevada courts, federal courts, and state and federal administrative agencies. The 2023-24 budget contains continuing funding to support these efforts and for outside counsel who perform a variety of other legal services for the organization. This year, the IG Division's budget has also been added to the department budget.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 125	\$ 5,480	\$ 5,480
Maintenance and repairs	422,886	425,147	106,000
Rental and leases	—	—	—
Other employee expenses	55,635	155,600	179,600
Other operating expenses	1,661,141	3,510,209	4,203,008
Total Operating Expenses	2,139,788	4,096,436	4,494,088
Capital expenditures	—	—	—
Salaries and benefits	1,426,532	1,509,991	2,755,295
TOTAL DEPARTMENT EXPENDITURES	\$ 3,566,320	\$ 5,606,427	\$ 7,249,383
FTE POSITIONS	5.6	5.5	11.9

Department Performance

Legal Services. 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.

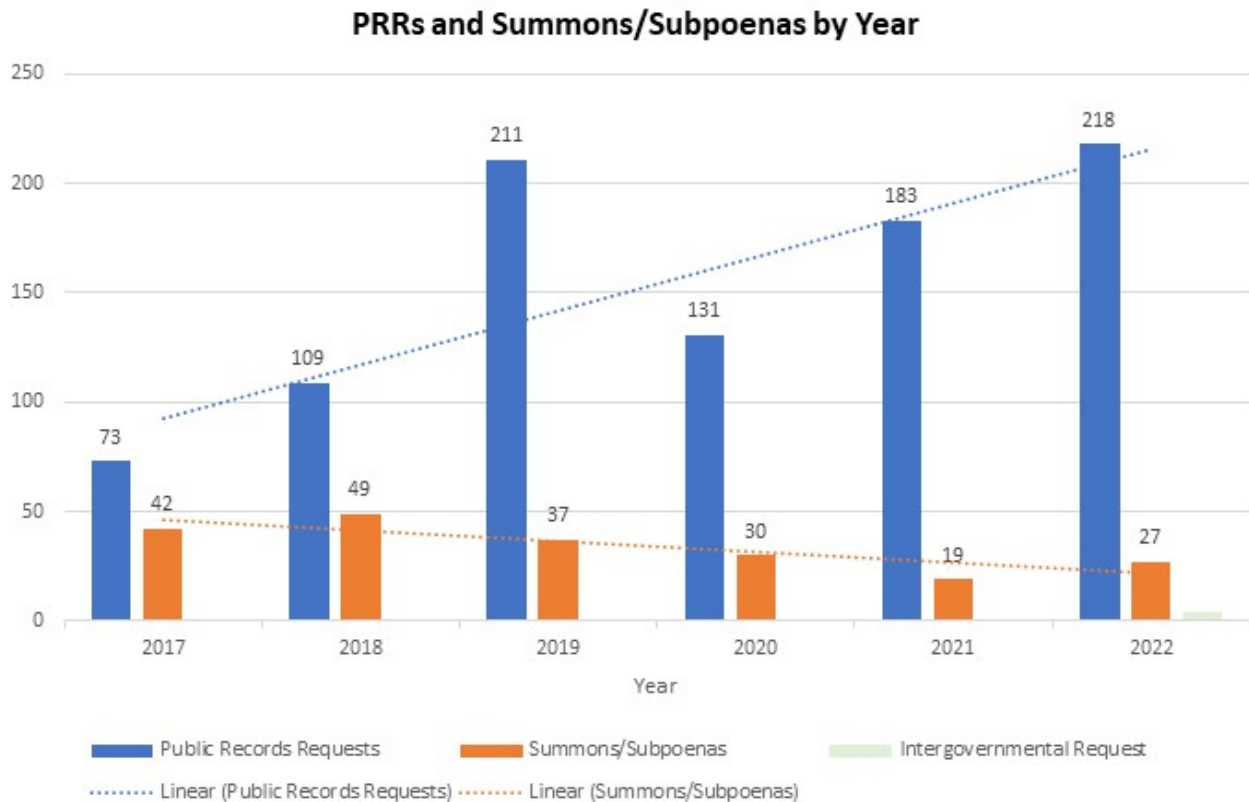
Pending Litigation Matters
Number of Cases: Federal, State, or Administrative Forum



Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Legal Services
Fiscal Year Ending June 30, 2024

Information Governance. IG is responsible for managing numerous workstreams for the organization. Ongoing activities in 2022 included General Manager approval of the federal and state changes to the retention schedule.

IG manages Public Records Requests (PRRs) for the organization. In addition, IG processes select Summons and Subpoenas. During the CY 2022, the number of PRRs completed increased 16% from the year before, and 40% since 2020. This number surpasses pre-Covid levels and was the highest number of PRRs processed since data collection ensued in 2017. IG continues to manage two applications to process this work more efficiently for this workstream.



Work to retire legacy applications and either disposition or migrate content to new applications is ongoing with Information Technology (IT) and other departments. Similar to PRRs, the number of completed dispositions (paper and digital applications) increased by 128% over the previous CY.

IG also continues to be responsible for managing the Agenda Item System including the Board Pack Management workflow process permissioning, troubleshooting and related items. The team began planning for development work that includes upgrades and enhancements to the system, which will occur in CY 2023. Moreover, the team continued to support Legal Services staff with contract management.

IG was also responsible for supporting a new IT/Legal Services/Finance initiative, the Technical Purchasing Review (TPR) process. Currently, IG is responsible for reviewing and commenting on all new

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Legal Services
Fiscal Year Ending June 30, 2024

IT Purchases, as well as annual renewals, that have an IG-related function such as Legal Holds, Records Retention and Data Managing/Placement. IG participated in 144 TPR's for CY 2022.



The cleanup and migration of department data as part of the ATLAS project 1 continued through 2022 and will be completed finished in March 2023, paving the way for Project 2, Classification and Governance to begin.

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.

2023-24 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.
- To complete ATLAS Project 1.
- To complete the cleanup of the organization's U and T drives.
- To implement the Upland Enterprise Federated Search solution for SharePoint and shared drives.
- To complete a Pilot for ATLAS Project 2, Classification and Governance and begin implementation.
- To update workflows in the Engineering Drawing Management System and successfully hand over management of system to Engineering and Infrastructure Management Departments

2022-23 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.
- General Manager approval of the federal and state changes to the retention schedule.
- Cleaned and moved content to the enterprise management system for 5 departments, as part of ATLAS Project 1.
- Successfully completed a Proof of Concept for the organizations' s Enterprise Federated Search solution for ATLAS Project 1.

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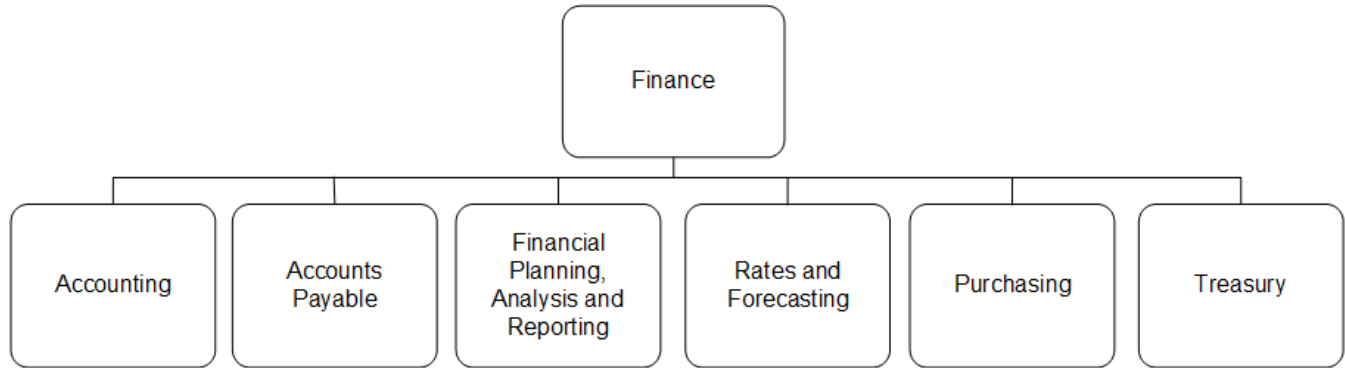
Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets

Finance

Fiscal Year Ending June 30, 2024

FINANCE

Level: 2100



Mission

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

Department Description

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Finance
Fiscal Year Ending June 30, 2024

Budget Objectives and Highlights

The 2023-24 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.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Purchased water	\$ 59,175	\$ —	\$ —
Energy	—	—	—
Materials and supplies	\$ 1,716,645	\$ 54,288	\$ 1,718,838
Maintenance and repairs	243,386	1,674,907	2,200,645
Rental and leases	95,221	95,800	96,600
Other employee expenses	488	59,528	58,978
Other operating expenses	20,480,064	15,071,591	12,615,746
Total Operating Expenses	22,594,979	16,956,114	16,690,807
Nonoperating expenses	91,964	209,806	9,770,223
Capital expenditures	—	—	—
Salaries and benefits	3,859,371	3,658,458	3,835,374
TOTAL DEPARTMENT EXPENDITURES	\$ 26,546,314	\$ 20,824,378	\$ 30,296,405
FTE POSITIONS	11.9	19.8	19.9

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

The Accounting Division supports both senior management and other workgroups with financial analysis. Some areas include construction-related activities, groundwater management programs, conservation-related activities, Las Vegas Wash activities, energy management, and various activities related to water rights.

**Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets**

Finance

Fiscal Year Ending June 30, 2024

Accounting functions include: ensuring financial statements and reports are accurate, complete and consistent; performing various financial analyses, revenue billing, maintaining the general ledger, inventory, fixed asset and other system records; oversight of 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; and federal and state agency grant accounting that require preparation and submission of reports to obtain reimbursements.

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

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

Financial Planning, Analysis & Reporting. The Financial Planning, Analysis & Reporting division provides a broad range of financial services including oversight of annual budgets and other budget-related financial reporting to management.

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

Rates & Forecasting. This division focuses on designing, analyzing, and recommending water rates; and providing short- and long-term financial plans, as well as support with the budget and reporting processes.

This division 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 and projections for the organization. On an annual basis, this division conducts a survey of water rates from over 50 cities located in the Western United States, closely monitors water production and consumption data, and prepares statistical reports.

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

**Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets**

Finance

Fiscal Year Ending June 30, 2024

Treasury. The Treasury division 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.

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Continued to hold strong credit ratings, helping to secure funding for critical infrastructure. Current credit ratings are AA and Aa1 by Standard & Poor's (S&P) and Moody's, respectively.
- Developed updated monthly financial reports leveraging the Workiva and GL Connect systems.
- Started the development of a new Budget Dashboard with enhancements based on internal customer feedback.
- Continued coordination with the Project Controls Group to improve financial reporting from the organization's e-Builder capital project management system.
- Provided financial modeling analysis and support for all entities that the organization administers.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Increased electronic invoicing to over 40 percent.
- Continued collaboration with all departments, including conducting the annual budget kickoff meeting on Microsoft Teams. A recording of the meeting was made viewable by posting on our Hydroweb/SharePoint Budget Help page.
- Revised the Purchasing Guidelines to reflect updated processes and procedures.

**Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets**

Finance

Fiscal Year Ending June 30, 2024

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

2023-24 Performance Objectives

- Select vendor and implementer for the replacement of the Oracle financial system through a Request for Proposal (RFP) effort.
- Continue active participation in the implementation of an Enterprise Asset Management system and its integration into financial and purchasing systems.
- Expand use of Fairmarkit quote-to-procure system to increase supplier competition in quoting and increase efficiency for the procurement of goods and services that do not require formal solicitation.

2022-23 Major Accomplishments

- Implemented Workiva data connectors and integrations to improve efficiency and accuracy of data transfers from existing financial systems and sources to the Workiva financial reporting software.
- Actively participated in defining financial information requirements to new system implementations or enhancements, which include but are not limited to, Apttus contract management, Customer-to-Meter (C2M), and SharePoint file management.
- Continued use of the Fairmarkit quote-to-procure system to manage the quoting process more efficiently for smaller dollar purchases that do not require a formal solicitation. First full year awarded savings totaled over \$542,000.
- Expanded use of Lease Query tool to manage compliance with GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*.
- Completed a business process review with the Government Finance Officers Association (GFOA) Research and Consulting Center to evaluate options for the replacement of the Oracle financial system.

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

2023-24 Performance Objectives

- Continue to evaluate opportunities to issue refunding bonds for both the SNWA and LVVWD to generate savings.
- Assess technological changes and new practices to ensure the processing of SNWA vendor payments directly from its own funds.
- Continue to enroll suppliers on electronic payments to further increase the overall efficiency of the procure-to-pay process.
- Lead comprehensive financial planning and analytical support for various organizational initiatives.

**Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets**

Finance

Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- The long-term credit ratings of AA/Stable and Aa1/Stable were affirmed by S&P and Moody's, respectively. These ratings help keep rates affordable, and acknowledge LVVWD's strong financial management practices, policies, and maintenance of robust cash reserves.
- Implemented GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*.
- Processed approximately 20,000 supplier payments annually, earning more than \$130,000 in discounts on invoices processed in fiscal year 2020-2021, and achieved a rebate of \$50,000 on annual credit card spend.
- Continued to provide comprehensive financial planning and analytical support for the SNWA's Integrated Resource Planning Advisory Committee 2020.

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

2023-24 Performance Objectives

- Receive unmodified opinions from external auditors for the LVVWD, SNWA, and BBWD fiscal year ending June 30, 2023 audits.
- Receive the Certificate of Achievement for Excellence in Financial Reporting from the GFOA for the LVVWD and SNWA Annual Comprehensive Financial Report for the fiscal year ending June 30, 2023.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the fiscal year beginning July 1, 2023.

2022-23 Major Accomplishments

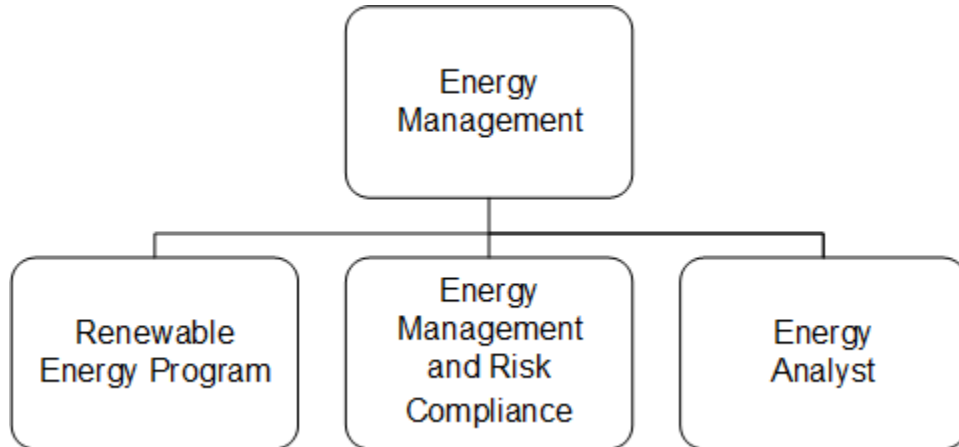
- Received the Certificate of Achievement for Excellence in Financial Reporting from the GFOA of the United States and Canada for the 44th consecutive year for the LVVWD Annual Comprehensive Financial Report for the year ended June 30, 2022.
- Received the Certificate of Achievement for Excellence in Financial Reporting from the GFOA for the 27th consecutive year for the SNWA Annual Comprehensive Financial Report for the year ended June 30, 2022.
- Received an unmodified opinion from external auditors for the LVVWD, SNWA, and BBWD fiscal year ended June 30, 2022 audits.
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the fiscal year beginning July 1, 2022.
- Completed implementation of project management portfolio and reports for the execution of Finance Department's prioritized process improvement efforts.

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ENERGY MANAGEMENT

Level: 2200



Mission

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

Department Description

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

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Energy Management
Fiscal Year Ending June 30, 2024

Budget Objectives and Highlights

The fiscal year 2023-24 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.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Energy	\$ 43,669,797	\$ 51,223,553	\$ 59,215,077
Materials and supplies	896	2,700	2,700
Maintenance and repairs	—	—	—
Rental and leases	—	—	—
Other employee expenses	1,423	10,400	10,400
Other operating expenses	187	1,550	1,550
Total Operating Expenses	43,672,303	51,238,203	59,229,727
Capital expenditures	554,512	12,183,395	11,532,476
Salaries and benefits	1,223,062	1,058,879	1,300,455
TOTAL DEPARTMENT EXPENDITURES	\$ 45,449,877	\$ 64,480,477	\$ 72,062,658
FTE POSITIONS	5.3	5.0	5.0

Department Performance

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

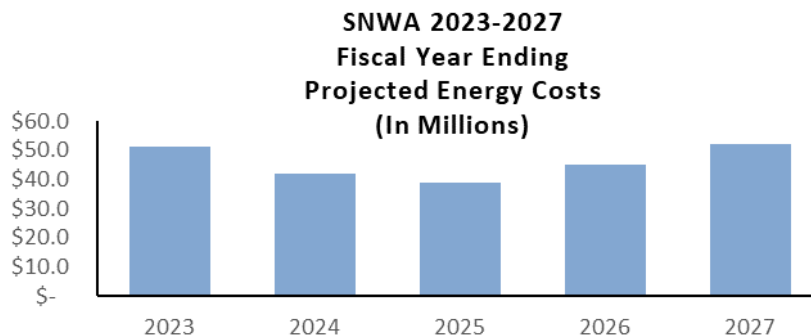
Expanding the energy portfolio managed by this group to include the SNWA member agencies and the members of the SSEA has brought significant economies of scale and portfolio synergies to each of the participants, including the SNWA. Furthermore, the energy portfolio has been able to be expanded in this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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Energy Management
Fiscal Year Ending June 30, 2024

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 been significantly reduced through calendar year 2025. 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. The chart below shows the SNWA's actual and projected energy costs through fiscal year 2028 as of the end of February 2023.



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

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

Boulder Flats Solar and 230 kV Transmission Project. The SNWA is working with ibV Energy Partners on a large 113-megawatt (MW) solar photovoltaic (PV) energy project located in the El Dorado Valley, including a 10-mile 230 kV transmission line extension to allow for interconnection with our existing

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Energy Management
Fiscal Year Ending June 30, 2024

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 met its 2022 target 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.

2023-24 Performance Objectives

- Continue to work with the SNWA Environmental Division to secure a right-of-way grant from the Bureau of Land Management for the transmission portion of the Boulder Flats Solar Project.
- Work with CRC to finalize the design and begin construction of the 10-mile transmission line extension to connect the Boulder Flats Solar Project to the SNWA's existing transmission system.
- Transition the maintenance for the LVVWD reservoir solar installations to another provider and cancel the current agreement with SunPower Corporation.
- Receive a settlement amount from Sharp in conjunction with warranty provisions for its solar panels installed on the LVVWD reservoirs.

2022-23 Major Accomplishments

- Amended the 113 MW Power Purchase Agreement with Boulder Flats Solar to extend the completion date and to adjust the pricing to reflect changes in the market for labor and materials.
- Revised monthly scheduling and informational reports with Western Area Power Administration (WAPA) to accommodate new procedures.
- Developed automated reports to send hourly network customer meter data to the WAPA scheduling desk during a prolonged CRC/WAPA communications error. This was during the highly volatile month of September.
- Worked with WAPA staff on how and when to collect liquidated damages from counterparties for curtailments.
- Finalized a lease and easement agreement with the City of Boulder City for the transmission line that will connect the Boulder Flats Solar Project to SNWA's transmission network.
- Completed the 60-percent design phase for the Boulder Flats Solar transmission system and began procurement of long lead-time items.
- Began rehabbing the LVVWD solar units with internal labor to address areas that can be immediately addressed. Have had success at all sites demonstrated by additional system power output.
- Evaluated and created a white paper on the various renewable energy options available to attain Net Zero by 2050.
- Developed and executed a transmission study agreement with Townsite Solar 2, a new utility-scale solar and battery storage project, to study the feasibility of selling transmission wheeling service on SNWA's new 10-mile transmission line in Boulder City.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2023-24 Performance Objectives

- Develop a multi-phased approach to the restructuring and modernization of settlement reporting and performance metrics. Phase 2 will include settlement, storage, capture, and reconciliation with WAPA Energy Imbalance Market (EIM) reporting, improved data display, and reporting functions.
- Expand MongoDB usage for report automation, better data accessibility, and superior data analysis functions.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Energy Management
Fiscal Year Ending June 30, 2024

- Complete integration of new reporting, scheduling, and settlement procedures required by WAPA's EIM participation.
- Continue to work with CRC staff to provide consultation to the Engineering Department teams on how to best provide power to their water infrastructure projects.
- Provide analytical support to member agencies as needed regarding their energy needs.
- Keep abreast of new legislative initiatives for the 2023 legislative session and communicate relevant impacts as needed.

2022-23 Major Accomplishments

- Worked with SNWA member agencies to execute amendments to the interlocal agreements for power provision accommodating a price increase necessary for the Boulder Flats Solar project to be constructed and operating in 2024.
- Maintained a managed portfolio of energy resources for all SNWA and member agency requirements within all hedge guidelines and procedures.
- Phase 1 of Settlement and Reporting Modernization included parallel storage, testing, and processing of WAPA monthly reports. Additionally, it also encompassed capture and processing of NV Energy EIM invoices, along with reconciling them with both WAPA scheduling data and CRC meter data. It also included the processing and storage of hydropower scheduling data and CRC meter data sanitization.
- Successfully integrated storage and processing of the Hitachi daily "deal data" file for trade capture and data integrity. It has become a key piece to processing and reconciling end-of-month reports from WAPA and CRC.
- Daily cloud backups for both the development environment and QuickBooks have been successfully enacted and successfully utilized.
- Created automation to report Mead forward price curves to an SNWA contractor (Xylem), who is developing a water-pumping decision tool. This automation creates and sends the report on a weekly basis, containing seven years of monthly forecasted price points.
- Submitted commodity and resource analysis while providing guidance to the City of Boulder City to help them complete their five-year Integrated Resource Plan.
- Transitioned the SSEA to new accounting firm, Baker Tilly, and worked with them on the SSEA accounting and settlement procedures, providing them with all requested documents.
- Provided three Engineering Department work teams with reports recommending how best to serve power to the new loads created by their projects. Provided support to those teams as they progressed through their designs and eventually into construction.
- Provided energy educational meetings with SNWA member agencies.

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

2023-24 Performance Objectives

- Monitor, evaluate and capture new hydropower allocation opportunities or layoffs as they become available.
- Monitor and track market conditions and adapt the Energy Risk Management Procedures accordingly and responsibly.
- Evaluate alternatives with other partners to obtain strategic value for the Newport to Silverhawk transmission right-of-way.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Energy Management
Fiscal Year Ending June 30, 2024

- Work with the Operations Department to determine an optimal summer pumping profile to minimize summer power costs.
- Continue to look strategically for how best to transition to a Regional Transmission Organization (RTO). Identify potential options and perform preliminary feasibility evaluations for them.
- Work collaboratively with member agencies and exchange Portfolio Energy Credits among each other to achieve the 29-percent renewable energy portfolio standard for the upcoming year.
- Monitor and analyze power and gas price trends and correlations and anticipated structural changes to the marketplace to adjust hedging approach as needed.

2022-23 Major Accomplishments

- Successfully met the Nevada Renewable Portfolio Standard for 2022. Worked with member agencies to utilize their Portfolio Energy Credits and to exchange them among each other.
- Evaluated Basic Water Company's power assets and contracts to determine valuations and the optimal process for taking assignment of some of those assets.
- Worked with the Operations Department to determine an optimal summer pumping profile to minimize high peak-period power costs, adjusting the plan twice to accommodate unplanned maintenance outages.
- Analyzed power and gas price trends and correlations to modify long-term hedging approach.
- Negotiated an agreement to split the Eastern Nevada Transmission Project right-of-way and assign sole ownership of a portion of that right-of-way to the SNWA.
- Added over 22,000 MWh of additional hydropower resources to the energy portfolio through long-term and month-to-month hydropower contractor layoffs. These additional resources helped to lower commodity prices and was counted to meet the state mandated Renewable Portfolio Standard for the year.
- Provided scheduling, generation, and weather information to WAPA and its contractors to evaluate fiscal and scheduling options for current and future solar generation in the EIM.
- Applied Energy Risk Management Procedures to responsibly combat market scarcity and secure reliable physical power by issuing strategic exemptions and re-rating reliable counterparties.
- Daily automation and analysis of the reservoir solar locations was created and added as part of the MongoDB expansion.
- Implemented new accounting procedures to capture gas financial transactions to comply with GASB 53.
- Established credit with additional trading counterparties (Citigroup, Tenaska, Mercuria and Dynasty) to facilitate transactional liquidity at the Mead 230 Substation.
- Studied the price relationships among different potential hedging products, such as natural gas and Palo Verde, due to fundamental power market changes.
- Met with a regional transmission provider to entertain alternatives for SNWA's transmission assets in light of future migration to an RTO. Achieved a better understanding of the nuances of transitioning and the various value propositions associated therewith.

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RISK MANAGEMENT

Level: 2600



Mission

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

Department Description

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

Budget Objectives and Highlights

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Risk Management
Fiscal Year Ending June 30, 2024

Expenditures			
SNWA USES	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ —	\$ —	\$ —
Maintenance and repairs	—	—	—
Other employee expenses	—	—	—
Other operating expenses	1,574,872	2,678,560	2,690,710
Total Operating Expenses	1,574,872	2,678,560	2,690,710
Capital expenditures	—	—	—
Salaries and benefits	497,577	495,922	502,138
TOTAL DEPARTMENT EXPENDITURES	\$ 2,072,449	\$ 3,174,482	\$ 3,192,848
FTE POSITIONS	2.741	2.5	2.5

Department Performance

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

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

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

Risk Management Information System. Origami has grown from having workflows in two departments (Risk and Safety) in to ten departments; from 21 users to all employees (expected implementation 2023); from 9 incident types to 27; from 1 audit type to 60; daily usage from an average of 10 users to 50; averaging 12 entries a day through anonymous portals to 85 entries (expected daily increase with user implementation of 2023); and from 12 data updates creating 4 automated events a day to more than 200 data updates averaging 300 automated events in a day.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Risk Management
Fiscal Year Ending June 30, 2024

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

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

Renewal Comparison

LINE OF COVERAGE	Premiums			
	2019-2020	2020-2021	2021-2022	2022-2023
Operational property and builders risk	\$ 390,002	\$ 620,000	\$ 713,000	\$ 815,213
Terrorism	—	46,755	46,755	49,670
Excess liability	144,323	342,566	340,848	496,921
Excess workers' compensation	106,897	113,748	129,444	121,909
Employee fidelity	19,137	19,604	22,583	18,488
Public officials and employees liability	135,196	—	—	—
Employment practices liability	53,538	65,760	71,740	75,290
Cyber (digital technology liability)	63,639	68,990	107,485	148,960
Ocean marine	9,137	9,250	10300	11,375
Non-owned aviation	3,430	—	—	—
Pollution and remediation liability*	—	—	132,338	—
Total	\$ 925,299	\$ 1,286,673	\$ 1,574,493	\$ 1,737,826
Change from previous premium		39.1%	22.4%	10.4%
*3 year policy				

Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- Future Origami Projects:
 - EHS – transition to EHS Module from CDEs, follow-up on Chemical Management System when SDS are available in Origami, consider workflow for Policies and Procedures, Certificate Tracking for CDL, Hearing Conservation Program, Respirator Certification Program, and EHS Training tracking by employee title
 - Risk Management – update COI for anonymous portal entry, consider CMS reporting and ISO Claim Search in Origami
 - Security – revamp notification and add supervisory protocol, automate Fire Extinguisher audits workflow
 - Administration – automate employee access based on Workday feed, work with Origami to move from Account level to Client level to improve efficiencies and updates, Mobile Application use for Audits and Incidents
- Captive Insurance Company
 - Recover all Property Damages not subrogated (Annual average \$180,000)
 - Recover all First-Party Damages no subrogated (Annual average \$105,000)
 - Recover Stolen Backflows (Annual average \$75,000)
- Enterprise Risk Management
 - Reassess Risks
 - Incorporate Emerging Risks

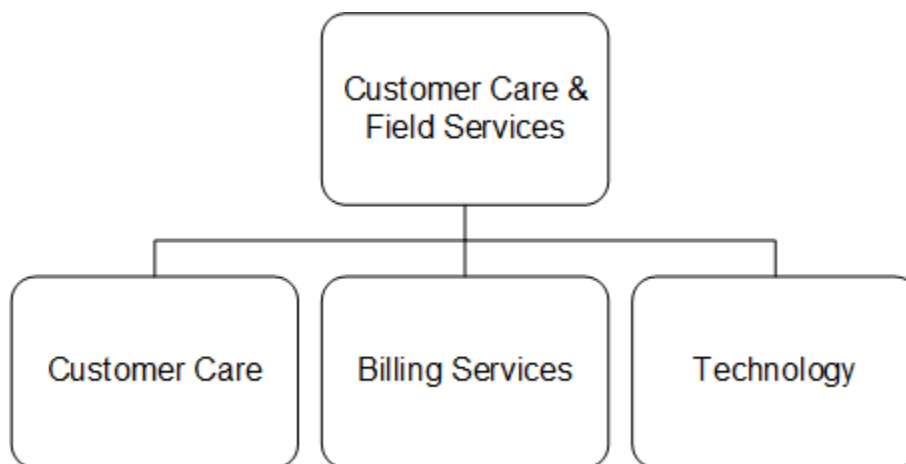
Strategic Plan Goal - Strengthen and uphold a culture of service, excellence, and accountability.

2022-23 Major Accomplishments

- Enterprise Risk Management (ERM) Initiatives Completed:
 - Created controls and mitigations for all risks
 - Developed resources, reports and tools that offer value for other Departments
 - Total Cost of Risk analysis added to SMT dashboard
 - 2022 Survey conducted for all supervisors, managers, and directors to review concerns on all active and emerging risks
- Origami:
 - EHS – completed Hot Work Permit and Confined Space Permit, completed Safety Meeting attendance, testing and answer keys for Big 5 in-person training, automated Hot Work Permits workflow and updated Incident Corrective Action workflow and process
 - Security – added Fire Extinguisher audits for all sites
 - Risk Management – began workflow automation for certificate of insurance module, Coupa Integration Feed with Purchasing, increased use of changing ERM module, created new dashboards for Captive, ERM Survey, and Annual Report
 - Maintenance Engineering – completed a Vault Asset Problem reporting system based on the Confined Space Audits
 - Inspection – Created a water loss leak calculator for tracking purposes
- Captive Insurance Company
 - Increased utilization

CUSTOMER CARE AND FIELD SERVICES

Level: 3100



Mission

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

Department Description

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

Budget Objectives and Highlights

The 2023-24 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 re-engineer business processes and implement new technology to support the meter-to-cash philosophy, minimizing field impacts, promoting conservation efforts, and enhancing the overall customer experience.

Field Services. The 2023-24 Budget Plan includes funding for meter maintenance, advanced metering infrastructure, and operational costs. Division objectives are to continue to ensure the accuracy of our metering infrastructure and provide our partners with near real-time data to support community conservation goals.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024

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

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 1,520	\$ —	\$ —
Maintenance and repairs	3,696	—	—
Rental and leases	—	—	—
Other employee expenses	3,064	—	—
Other operating expenses	60	—	—
Total Operating Expenses	8,340	—	—
Capital expenditures	—	—	—
Salaries and benefits	172,570	538,413	555,616
TOTAL DEPARTMENT EXPENDITURES	\$ 180,910	\$ 538,413	\$ 555,616
FTE POSITIONS	1.1	2.9	2.9

Department Performance

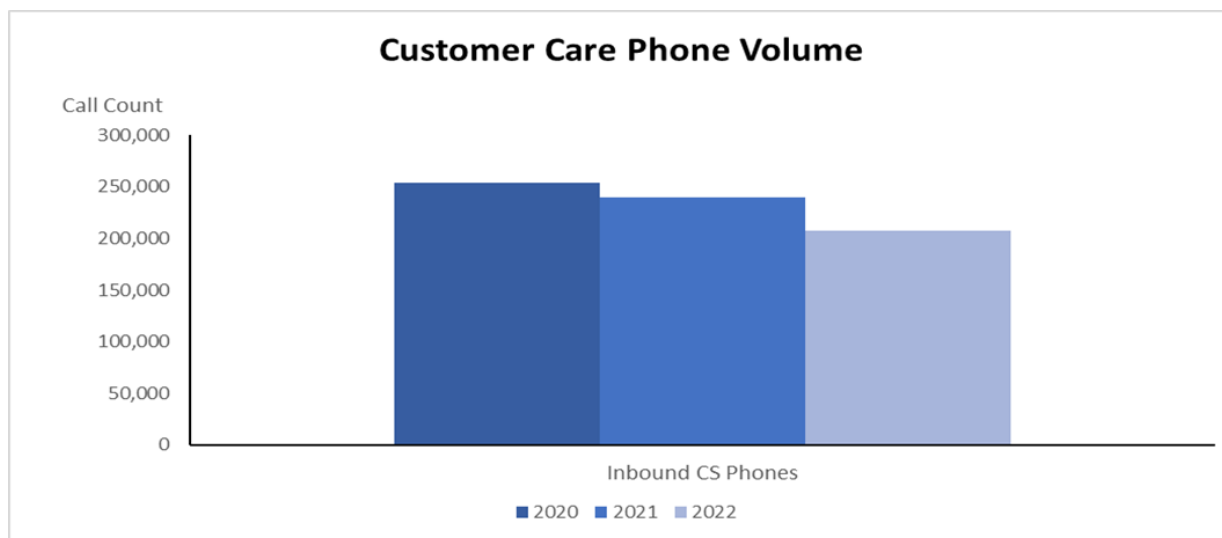
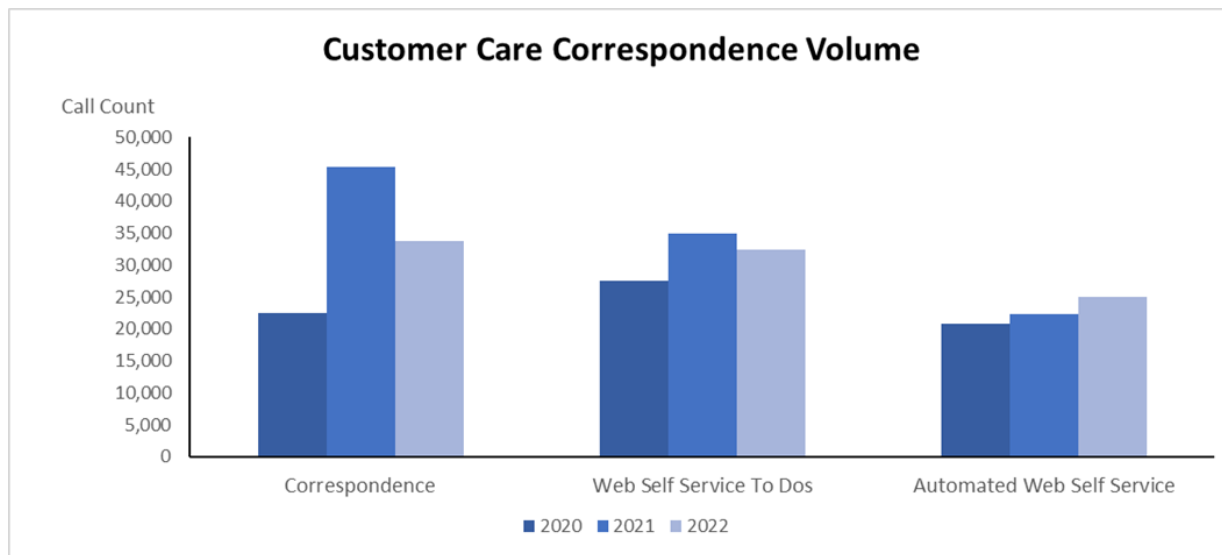
In 2022-23, the Customer Care and Field Services department continued to refine business processes and advance technology in service to the Las Vegas Valley Water District's (LVVWD) customers. The department focused efforts on maximizing the customer experience with alignment to four strategic goals: Deliver 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 420,000 active services. The division manages customer care interactions that include phone, kiosk, chat, web requests, correspondence, and appointment requests. Customer Care handles payments, payment arrangements, courtesy collection calls, delinquent account processing, high consumption requests, water waste complaints, conservation inquiries, Springs Preserve customer support, 24/7 emergency phone coverage, and 24/7 dispatching while providing monthly billing to LVVWD customers.

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

**Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024**

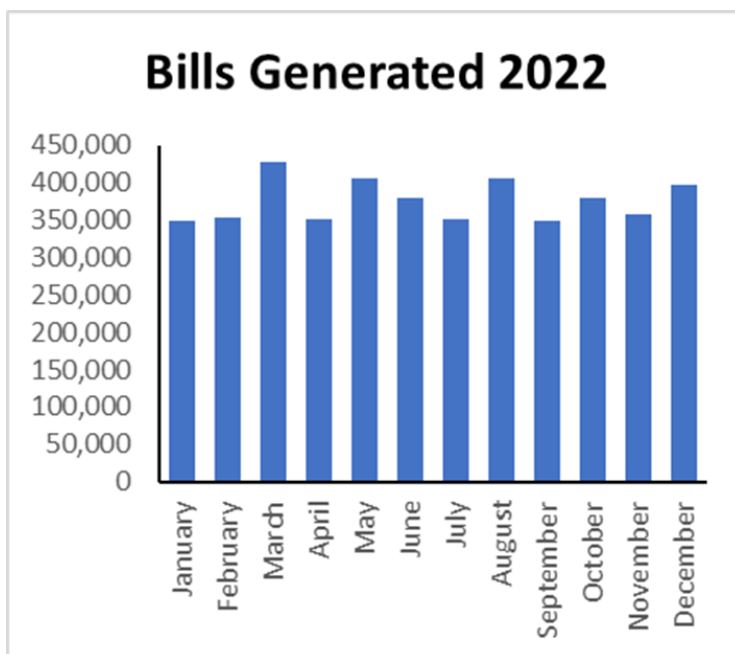
The following graph illustrates the shift in volume distribution over the past three years as process and technical innovations advance the meter to cash philosophy.



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

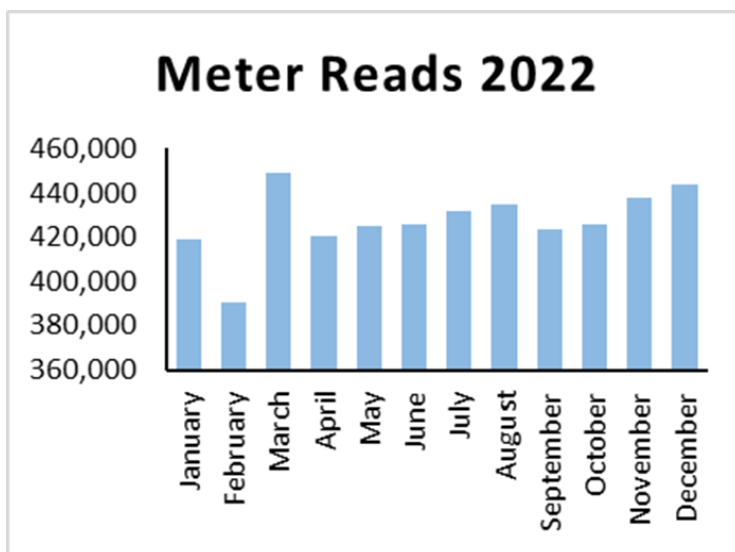
Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024

The following chart depicts the total number of bills generated monthly in 2022.



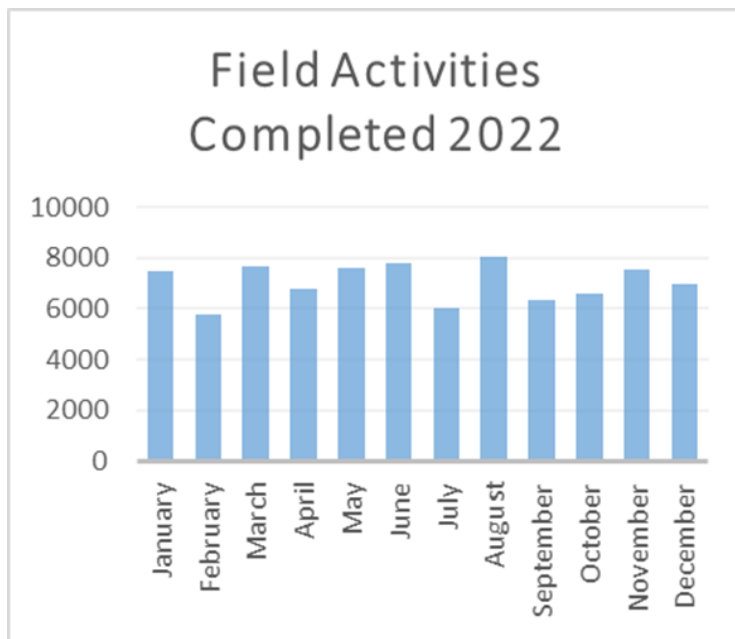
Field Services. The Field Services division is responsible for reading, testing, and maintaining residential and commercial meters for more than 430,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle Canyon, Laughlin, and Jean. The division is responsible for meter maintenance field activities, responding to leak investigations, low pressure issues, high consumption, water waste inquiries, and billing requests. Field Services maintains the AMI infrastructure in all service territories.

The Meter Reads chart illustrates the number of meter reads processed by Field Services in 2022 (Over 4.9 million total).



Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024

The Field Activities chart illustrates the number of work orders processed by Field Services in 2022(Over 85,000 processed).



Technology. The Technology division is responsible for implementing new technologies, software, and processes to modernize service offerings. The CCFS Technology Roadmap outlines the accomplishments in 2022, as well as current initiatives.

Current initiatives include the installation of Advanced Metering Infrastructure (AMI), proactive leak notifications, collaborating with I.T (Information Technology) to develop data-driven compliance, and development of a data warehouse. Accomplishments in 2022 include the deployment of rate modifications (Excessive Use Charge and Tier Equalization), migration to a new letter provider, redesign of the excessive leak program, and implementation of SMS communications (text messaging).

Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Deliver on Outstanding Customer Service Experience.

2023-24 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.
- Enhance customer notification and self-service options.

2022-23 Major Accomplishments

- Created meter maintenance program based on testing and benchmarking meter service life expectancy according to AWWA (American Water Works Association) and collected data.
- Converted drive-by reading system to Advanced Metering Infrastructure, bringing near real-time reads to our customer base.
- Expanded Callback accessibility within our Interactive Voice Response (IVR system) creating an enhanced customer experience.
- Implemented billing structure modifications with EUC and Tier Equalization.
- Collected 3.7 billion hourly reads to allow for outreach and education of customers on their consumptive use patterns. Upgraded our AMI head end system Network Administrative Application (NAA).

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

2023-24 Performance Objectives

- Reduce and dispose of waste responsibly.
- Maintain proper disposal of scrap and waste products, especially lithium batteries.
- Continue supporting organizational water conservation efforts through improved technology and customer and interdepartmental communication.
- Educate customers on water usage and trends through all contact center activities.
- Adjust Meter Maintenance Program to highlight and prioritize meter removal based on accuracy rather than age to maximize service life and reduce non-revenue water.
- Implement new processes through Advanced Metering Infrastructure technology that will reduce our fleet carbon footprint.
- Implementation of golf course water budget modifications to promote conservation.
- Integrate new metering technology to capture lower flow rates to enhance conservation efforts.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Low Income Household Water Assistance Program (LIHWAP) incorporated into our business model.
- Mailed 11,926 Excessive Leak Letters in 2022, resulting in \$14,560 in fees assessed.
- Completed more than 85,000 field activities in 2022.
- Used data analytics to notify customers that they are watering on Sunday and a variety of other compliance scenarios.
- Successfully converted all 16 read/bill cycles, including the golf courses and District facilities, to fixed network/AMI.

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

2023-24 Performance Objectives

- Continue improvements to “My Account” to expand self-service options and support conservation efforts, including watering groups and customer notifications for leaks.
- Expanded use of SMS technology to provide additional communication channels.
- Improve technology solutions for revenue protection and greater collection gains.
- Continue to educate customers using advanced meter reading data.
- Continue to use data analytics to identify equipment nearing end of service life to allow for proactive maintenance and replacement.
- Continued enhancement of notification preferences and customer engagement options.
- Improve technology solutions to provide more comprehensive business insights.
- Innovate self-service options to leverage technology and reduce call center hold times.

2022-23 Major Accomplishments

- Handled 18,357 kiosk transactions in 2022.
- Leveraged existing meter read and interval data through our AMI system to significantly reduce field work and allow staff to focus on system health.
- Identified leaks through the excessive leak program resulting in nearly 90 percent resolution rate within less than 100 days.
- Continued Sunday watering letter program and compliance pilot program.
- Launched letter outreach to inactive customers, reducing field activity and the number of unsigned services directly reducing consumption.

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

2023-24 Performance Objectives

- Provide and seek timely feedback on individual, team, and departmental performance to enhance collaboration, accountability, and excellence.
- Ensure timely and consistent communication with the team to provide feedback and solicit recommendations to create operational efficiencies.
- Establish continuous communication forum between workgroups to address interdepartmental challenges and business impacts.
- Coordinate with outside departments for knowledge sharing and training.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Customer Care and Field Services
Fiscal Year Ending June 30, 2024

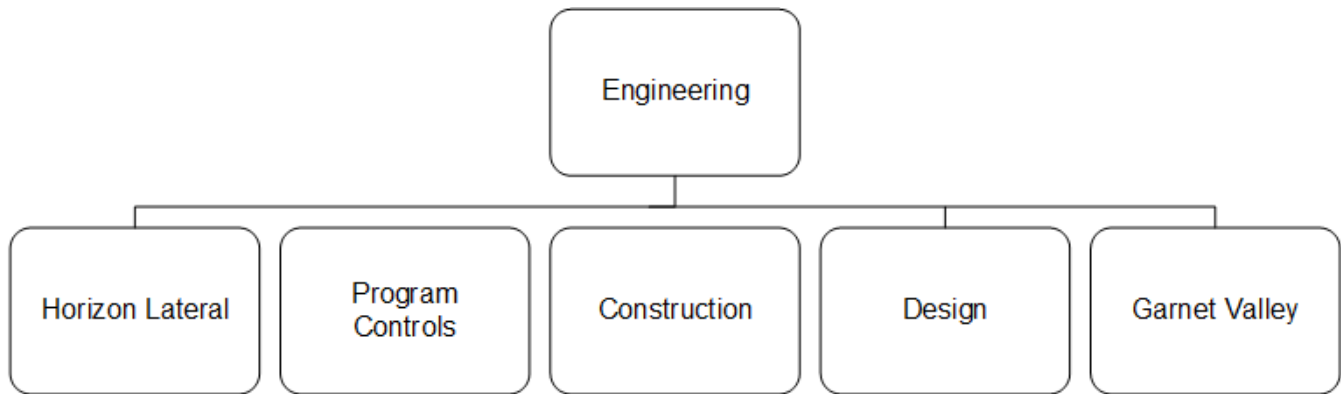
- Leverage internal resources for mentoring employees to promote consistent knowledge and performance.
- Continued reduction of emissions by leveraging Advance Meter Infrastructure.

2022-23 Major Accomplishments

- Utilized various subject matter experts throughout the organization to support new rate structure implementation.
- Restructured Credit & Collections processing to improve field operations and increase communications with past-due customers.
- Incorporated other workgroups into Agile methodologies to improve project management and collaboration.
- Added a new channel to engage with customers through agent chat and chat bot.
- Repurposed space and equipment to support organizational training needs.

ENGINEERING

Level: 3400



Mission

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

Department Description

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

The LVVWD's capital projects are currently focused on the rehabilitation and replacement of aging pipelines, along with design and construction of new reservoirs, pumping stations, and related components of the large water distribution system spread across the Las Vegas Valley and in nearby rural areas. These projects are described in the LVVWD Capital Improvements Plan (LVVWD CIP). Several new facilities are also being designed and constructed to meet long-term operational requirements. In coordination with the Operations, Water Quality and Treatment, Water Resources, 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 (2020 MCCP). The 2020 MCCP describes ongoing projects and initiatives related to establishing and maintaining reliable system capacity, providing necessary support facilities, and developing access to new water resources. In coordination with the Operations, Water Resources, Water Quality and Treatment, and Infrastructure Management departments, Engineering provides design and construction services for many of the 2020 MCCP programs and projects.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Engineering
Fiscal Year Ending June 30, 2024

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

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

Budget Objectives and Highlights

The 2023-24 Engineering department budget demonstrates significant ongoing commitment for LVVWD CIP, development needs, Lower Las Vegas Wash Restoration Plan, and the 2020 MCCP. In addition, a major portion of the department staff will continue to be focused on many projects directly supporting the Operations, Water Quality and Treatment, Water Resources and Infrastructure Management departments in preserving the facilities needed to assure a reliable, quality water supply.

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.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 2,144	\$ 4,830	\$ 8,220
Maintenance and repairs	25,025	250,000	150,000
Rental and leases	—	—	—
Other employee expenses	1,936	18,940	29,120
Other operating expenses	2,065,045	606,790	4,801,500
Total Operating Expenses	2,094,151	880,560	4,988,840
Capital expenditures	32,164,135	140,852,755	215,421,397
Salaries and benefits	5,073,995	2,439,496	4,629,111
TOTAL DEPARTMENT EXPENDITURES	\$ 39,332,280	\$ 144,172,810	\$ 225,039,348
FTE POSITIONS	25.8	21.5	20.4

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 and SNWA capital plans.

Major Projects. Currently, the active major projects are the Lower Las Vegas Wash Stabilization, the Horizon Lateral, Stage II Reliability Upgrades, Stage II Sloan 2160 and Lamb 2350 Pumping Station Expansion, Ozone Equipment Upgrades, the Garnet Valley Water System, and the Garnet Valley Wastewater Systems. Professional services agreements for the above listed projects have all been executed and staff is managing the consultant design efforts.

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 senior design division staff 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.

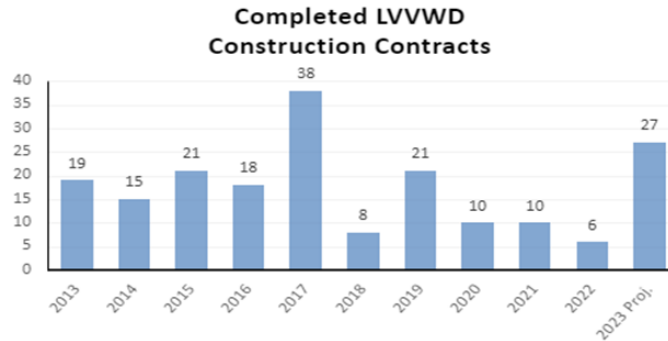
Construction Management. The construction management team is comprised of engineers, inspectors, technical staff, and support staff who have extensive experience in the construction of public works for water utilities and manage the construction of necessary facilities and inspection of new developer-installed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

Program Controls. A technical support division organized to assist with the implementation and management of the LVVWD and SNWA capital programs through establishment of best practices for effective cost and schedule management and reporting and for management and review of engineering standards. This division manages the Project Management Information System (e-Builder) and analyzes capital program project data from various departments to identify trends and evaluate project performance. This team also performs a vital function in quality control and reporting of projected capital expenditures as a tool for forecasting future funding requirements and coordinates closely with the Finance department. Further, this division maintains engineering design standards, department standard operating procedures, best management practices, schedule management tools and cost estimating resources.

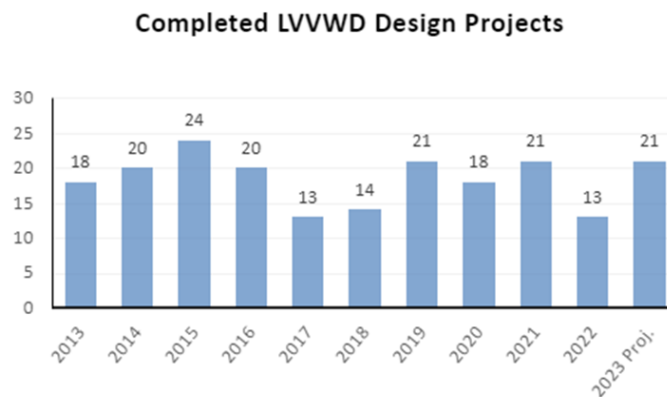
Survey, Property Management and Infrastructure Mapping Services. Professional staff within the department support design and construction of infrastructure by providing land surveying, water rights surveying, line location, right of way acquisition and property management, and as-built record drawings 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.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Engineering
Fiscal Year Ending June 30, 2024

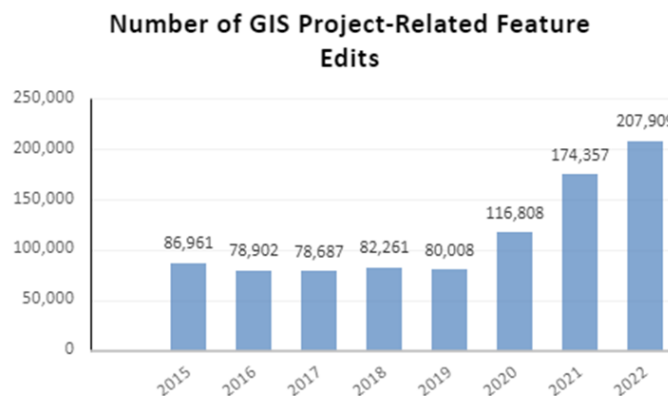
The chart below (Completed LVVWD Construction Projects) represents the number of the LVVWD construction projects completed by Engineering since 2013 and the number expected to be completed in 2023.



The following chart (Completed LVVWD Design Projects) illustrates the number of projects Engineering has designed since 2013 to support the infrastructure management requirements of the LVVWD.



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 eight 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.

2023-24 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, Water Quality and Treatment, Water Resources, and Operations departments with a high level of technical services and capital project support.
- Continue to optimize program management applications and processes to improve consistency, accountability, and reporting.
- Continue design efforts to support projects in the 2020 M CCP .
- Begin construction on Garnet Valley Wastewater System, weir 5 of the Lower Las Vegas Wash, and early procurement of equipment for Ozone Equipment Upgrades, Garnet Valley Water Transmission System, Stage II Reliability Upgrades, and Stage II Sloan 2160 and Lamb 2350 Pump Station Expansion project.

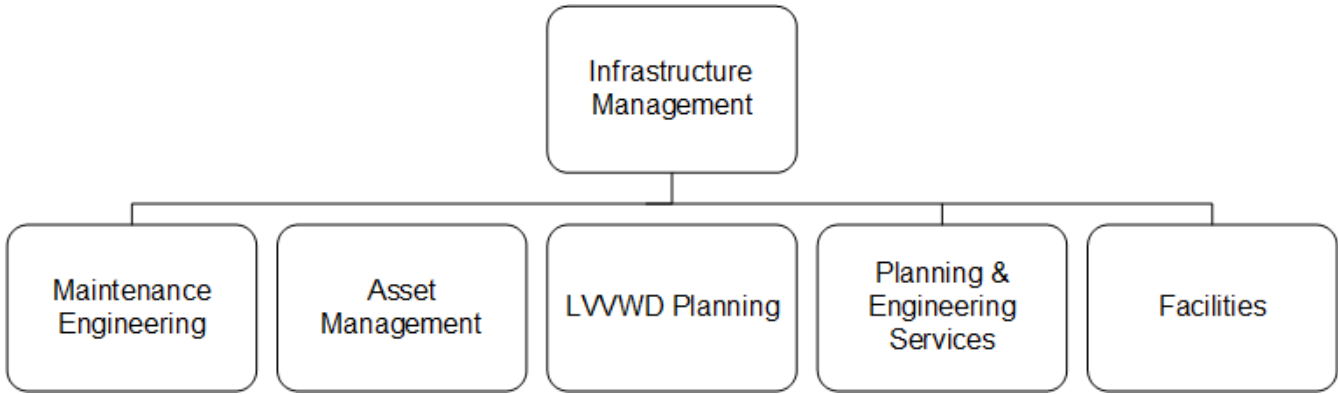
2022-23 Major Accomplishments

- Completed the preliminary design for the Horizon Lateral and submitted right of way applications to the Bureau of Land Management.
- Completed the design for weir 5 for the Lower Las Vegas Wash Stabilization.
- Initiated final design for Stage II Reliability Upgrades, Stage II Sloan 2160 and Lamb 2350 Pump Station Expansion, Garnet Valley Water Transmission System, Garnet Valley Wastewater System, Ozone Equipment Upgrades, and common elements of the Horizon Lateral.
- Completed construction of 5 LVVWD projects valued at \$6.9 million related to improvement of the LVVWD's facilities.
- Awarded 19 LVVWD construction contracts valued at \$79.9 million related to improvement of the LVVWD's facilities.
- Performed inspections on approximately 840 different developer related projects, involving over 37,000 individual inspection actions.

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INFRASTRUCTURE MANAGEMENT
Level: 3700



Mission

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

Department Description

The primary responsibility of the Infrastructure Management department is to manage the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA) assets by developing and maintaining the asset management program. To accomplish this, the Planning and Engineering Services division reviews water plan submittals for proposed development to ensure they meet LVVWD’s design and construction standards. They also ensure new developments have adequate water pressure and fire flow, evaluate future system requirements, and develop future capital cost projections. The Maintenance Engineering division provides technical support and develops capital projects for the Facilities division and the Operations, Water Resources, 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 Big Bend Water District (BBWD) operating systems. The Facilities division performs daily grounds keeping and janitorial tasks for all LVVWD and SNWA buildings and properties. Facilities also performs work improvements and preventive maintenance with respect to building support and life safety systems such as plumbing, heating, ventilating, air conditioning, structures, roofs, elevators, fire sprinklers, and fire alarms.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

Budget Objectives and Highlights

The 2023-2024 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 LVVWD's and SNWA's projects.

Infrastructure Management's total operating expense budget between LVVWD and SNWA increased \$4,223,417 from budget year 2022-23 to 2023-24. Contributing factors to the increased operating expense budget include increased economic pricing versus last year; compensating for depressed spending over the past two years due to COVID related issues such as having less staff on site, less proactive maintenance, and supply chain restrictions; replacement of IoT devices due to 3G sunset; increase in on-call operating and maintenance contracts; furniture, painting, and paving projects being funded by operating rather than capital monies; increased resources within Asset Management to allow for increased leak detection and pipeline assessments; and inflated economic pricing for contract maintenance service providers.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 725,614	\$ 1,053,710	\$ 1,168,940
Maintenance and repairs	1,312,749	4,303,800	2,882,000
Rental and leases	2,066,611	1,980,000	1,940,000
Other employee expenses	32,120	93,060	148,200
Other operating expenses	304,797	401,902	3,009,450
Total Operating Expenses	4,441,890	7,832,472	9,148,590
Capital expenditures	6,899,547	21,321,116	23,578,595
Salaries and benefits	9,732,138	12,401,632	13,098,709
TOTAL DEPARTMENT EXPENDITURES	\$ 21,073,575	\$ 41,555,220	\$ 45,825,894
FTE POSITIONS	61.5	73.4	73.0

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-of-flow-control stations, reservoirs, wells, water treatment facilities, and the distribution and transmission pipelines in a safe and efficient manner. The division provides 24/7/365 support for field automation equipment, the Supervisory Control and Data Acquisition system (SCADA), and the communications network for LVVWD, SNWA, and BBWD; specifies and procures long-lead electrical

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

and automation equipment for large contracts to ensure consistent system performance; administers the testing of electrical distribution equipment and direct current battery plants; tracks vault and backflow condition and prioritizes repair and replacement projects; coordinates with the WQ&T and Operations departments to plan outages for projects at the Alfred Merritt Smith Water Treatment Facility (AMSWTF), River Mountains Water Treatment Facility (RMWTF), and Big Bend Water Treatment Facility (BBWTF); prepares preliminary engineering reports and applications for approval by the Nevada Division of Environmental Protection (NDEP); assists WQ&T with testing of prototype equipment and processes; collaborates with the Asset Management division to identify and oversee necessary remediation to tanks and piping; creates contracts and professional services agreements to execute capital projects and support requests; coordinates with the Water Resources department on drilling and equipping of new wells; 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 is currently managing over 90 active projects between LVVWD, SNWA, and BBWD with a capital budget of more than \$23 million. The division also routinely manages dozens of active support requests from the Operations department.

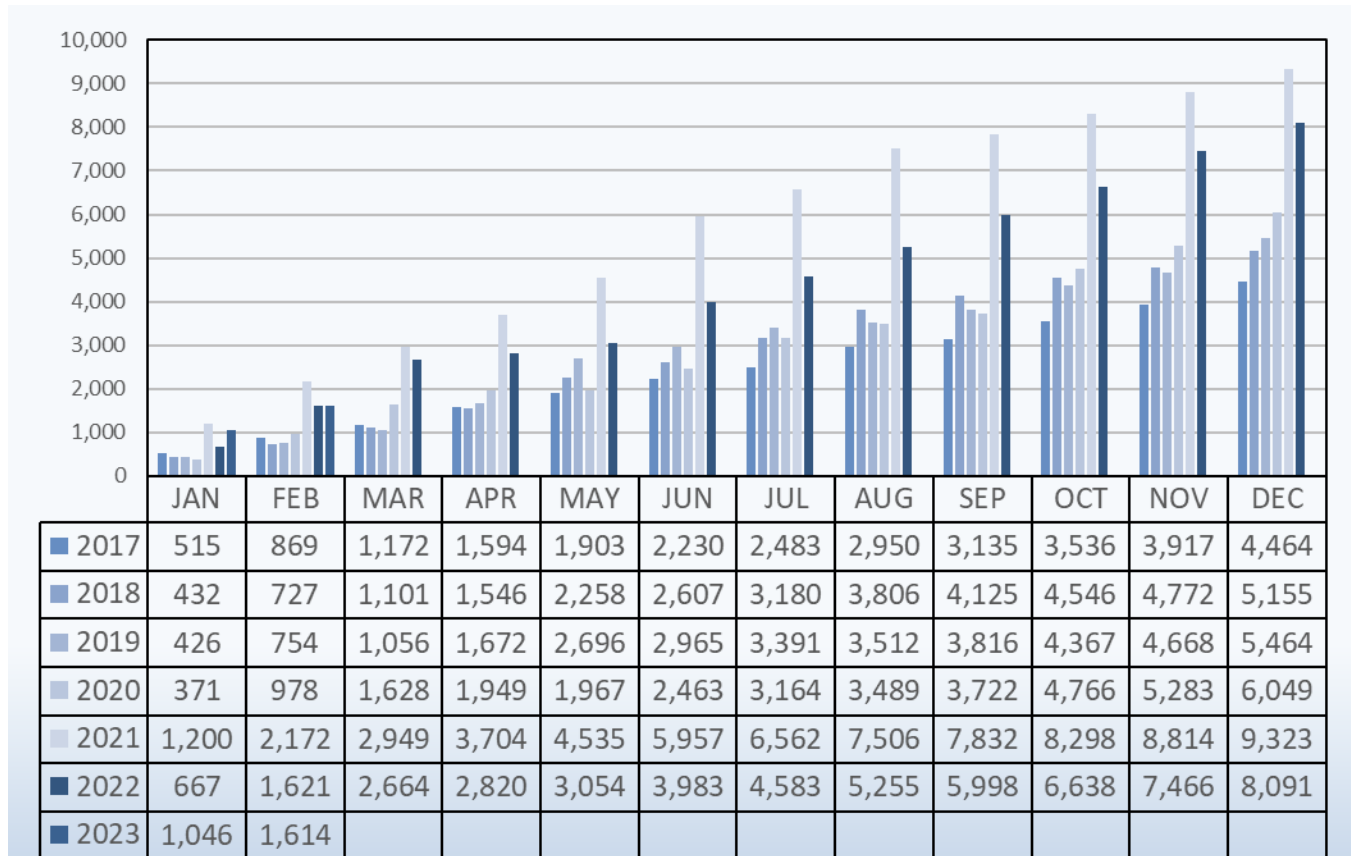
Planning and Engineering Services. The Planning and Engineering Services division provides research, analytics, modeling, and projections to support several activities for LVVWD, SNWA, and BBWD. The division evaluates near- and long-term demands and changing operating conditions for infrastructure planning,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

The Planning and Engineering Services division is also responsible for reviewing and approving plans for LVVWD and SNWA systems additions and modifications initiated by developers, utilities, and public entities, ensuring they meet LVVWD and SNWA requirements for reliability and maintainability. The team routinely calculates fees; processes agreements; commits water resources to new developments; supports the water conservation initiatives, including the recent water service refusal on septic systems; coordinates with the Conservation division for landscape review and approval; coordinates with the Asset Management division to identify segments of existing water lines that are in poor condition and can be replaced within active public works projects through a betterment agreement to assist in cost saving measures related to permits, pavement, traffic control, and other construction related items that would otherwise fall to the organization; assists developers, engineers, and contractors with the progression of their projects through meetings or onsite field visits; participates in other public works construction projects to minimize both LVVWD costs and inconvenience to the public; evaluates and tests products for use in the water distribution system and oversees the LVVWD

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

Approved Products List; and reviews vacation requests for public rights-of-way, utility and patent easements, as well as fire sprinkler permits with sites that utilize chemical additives. The following chart represents LVVWD's cumulative new service points data.

New Service Points
2017-2023 Cumulative New Service Points Received



Asset Management. The Asset Management division manages LVVWD's and SNWA's assets from startup to retirement to help ensure assets continue to operate as designed in an efficient and reliable manner. Critical infrastructure is continually assessed and monitored to meet industry standards and, through several infrastructure programs, strives to be an industry leader. The division was recently restructured into two distinct groups: Vertical Asset Group and Horizontal Asset Group.

The Horizontal Asset Group focuses on underground infrastructure and performs condition assessments on pipelines utilizing state-of-the-art acoustic methods for both leak detection and pipeline condition assessment, closed-circuit television (CCTV) inspections, and pipe-wall measurements to determine the remaining useful life of the pipelines. These evaluations seek to locate subsurface pipeline leaks with the goal of reducing non-revenue water. Condition assessments of the transmission and distribution large diameter pipelines is vital in maximizing reliability and sustainability. Pipeline rehabilitation projects are identified, and recommendations are made for capital replacement. The Horizontal Asset Group is managing the multi-year Enterprise Asset Management (EAM) system upgrade. IBM Maximo will be implemented throughout the organization to

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

improve operation and maintenance efficiencies and it will also provide the Horizontal Asset Group new geospatial tools to track pipeline assets.

The Vertical Asset Group provides startup management and analyses necessary to maximize the life of installed water infrastructure. The group assess reservoirs and tanks using divers or remote operated vehicle (ROV) technology; conducts pump performance evaluations utilizing the SCADA historian data to determine the current pump efficiency; and analyzes transient pressure data to evaluate main breaks and provide pump operation recommendations. The group is also responsible for managing the corrosion control program for LVVWD, SNWA, BBWD, and the small systems. The goal of the corrosion control program is to extend the life of steel pipe and other steel structures by applying and maintaining cathodic protection. Corrosion Control Systems Technicians collect annual corrosion data on over 4,300 corrosion protection test stations and 500 impressed current rectifiers. Finally, the group manages the startup of capital construction projects. The startup program is necessary to coordinate the safe integration of new equipment, components, and facilities into the LVVWD, SNWA, and BBWD operating systems.

Facilities. The Facilities division consists of Facilities Maintenance, Facilities Services, and Grounds Maintenance. The division has two separate components that primarily maintain the buildings and grounds property for LVVWD and SNWA. The division is responsible for ensuring all buildings and land meet organizational standards for appearance, quality, reliability, and cost-effectiveness. Additionally, the Facilities division supports rural system sites including BBWD, Warm Springs, Mt. Charleston, Jean, Searchlight, and the Northern Resources properties. The division provides support during the design and construction of new facilities, as well as site remodeling and/or retrofit support for existing structures.

Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- Further expand the leak detection program by leak testing all pipelines 24 inches and greater every five years. The program will prioritize 350 miles of pipe in 2023-2024 based on several 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 support Goal 6 of the Conservation Strategic Plan.
- In cooperation with a water loss consultant, coordinate and assist all SNWA member purveyors to conduct defensible water audits and prepare a water loss control plan.
- Plan capital improvement projects for LVVWD, SNWA, and the small systems to keep pace with increasing water demands while maintaining current or improved levels of service for existing customers.
- Identify, prioritize, scope, and budget projects to replace high-risk pipelines, reducing the risk of catastrophic failures and improving leak rates.
- Complete a revision to the Uniform Design and Construction Standards, coordinating revisions from multiple stakeholders.
- Complete the installation of ultraviolet (UV) equipment at five wells and submit plans to NDEP for approval to discharge into the distribution system.
- Complete equipping of the BBWD raw water well. This project has received State Revolving Fund financing in the amount of \$800,000.
- Complete the SCADA upgrade at BBWTF.
- Replace electrical motor control equipment at a defined rate to improve equipment operability, reliability, and ease of maintenance at an estimated cost of \$2.8 million for the fiscal year.
- Update the SCADA policy document to be consistent with applicable requirements of the Cybersecurity and Infrastructure Security Agency and National Institute of Standards and Technology.
- Complete the replacement of legacy control equipment at six LVVWD sites, four SNWS sites, and seven BBWD sites.
- Replace end-of-life SCADA network switching/routing infrastructure.
- Replace end-of-life hyperconverged systems infrastructure for optimal supportability and reliability and integrate into a new data center.
- Add decomposed granite to multiple sites to reduce maintenance and improve sanitation around water facilities.

2022-23 Major Accomplishments

- Asset Management crews leak tested 23 miles of large diameter pipeline in an effort to meet the Conservation Strategic Plan goal of 25 miles per year.
- Utilized the Sahara Platform, a tethered tool for inspection of pipelines developed by the condition assessment company Pure Technologies, to survey 3,000 feet of the Pitman Lateral with no leaks found.
- Utilized Pure Technologies to perform an electromagnetic inspection of the Aqueduct “B” Lateral. The purpose of the inspection was to understand the condition of the prestressing wires in this

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

critical pipeline. In addition, the Asset Management team inspected the surge towers using their new tethered ROV during this outage.

- The team purchased and outfitted a CCTV inspection van that houses equipment capable of inspecting pipelines and reservoirs up to a maximum distance of 1,500 feet. Integrated inspection software will allow point observations of corrosion and degradation to be stored in a geographic information system (GIS) database. This purchase will allow for more efficient inspections and reports to be produced.
- Conducted several pilots to test new and emerging remote leak detection equipment.
- Executed major developer agreements in the northwest to fund design and construction of required facilities to maintain existing service levels for all customers.
- Implemented strategies for non-revenue water (NRW) reduction such as awarding construction projects averaging over \$17 million of pipeline rehabilitations or replacements each year, and tracked key performance indicators such as pipeline failure risk reduction to minimize NRW.
- Evaluated and provided preliminary scoping for \$300 million of infrastructure needs to provide redundancy for the South Valley Lateral due to the Horizon Lateral project encountering delays.
- Continued with the design and construction of the Blue Diamond Water System rehabilitation project at a cost of \$15 million in infrastructure improvements being funded by grant monies. In addition, a plan was prepared for water supply threats and emergency service for Blue Diamond.
- Assisted the WQ&T laboratory in completing the 2023 water quality monitoring plan maps for all SNWA member agencies and assisted in evaluating possible sources for a problem water sample.
- Maintenance Engineering successfully completed 44 projects totaling \$14 million. Highlights include:
 - Completed chlorine feeder system configuration modifications at AMSWTF.
 - Equipped Well J8 in Jean.
 - Installed a 90-inch isolation valve at the South Valley Regulating Tank. This will allow the tank to be taken out of service for long-duration maintenance activities.
 - Installed conventional UV equipment at Well 101 and UV LED lighting at Well 97, allowing these two wells to be utilized in the upcoming well production season.
 - Recoated the 1130 Zone tank interior and installed cathodic protection equipment.
 - Replaced electrical equipment at Pump Stations 1B and Decatur.
 - Upgraded automation equipment at 12 sites totaling over \$1 million.
 - Upgraded network switches at all SNWS facilities.
 - Specified and procured more than \$2.3 million of replacement valves and actuators for SNWA sites.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2023-24 Performance Objectives

- Coordinate support for commissioning of facilities drawing on the Asset Management team's expertise in facility commissioning and processes. Specifically, the team will complete all commissioning documentation for the Centennial Pump Station and Reservoir and Cougar Reservoir and provide support for other construction projects.
- Streamline and coordinate with agencies to minimize repetition and be more strategic in required comments and signatures on water plans.
- Continue to work with other agencies to include water facility upgrades and replacements in road improvement projects. Planned betterments for 2023-2024 year include Paradise Road and Pinto

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

Lane improvements totaling over \$4.5 million in infrastructure costs. Partnering with other agencies saves significant costs and reduces inconvenience to the driving public.

- Complete the review of all submitted tenant improvement permit requests in one to two business days.
- Review and respond to all mapping reviews within ten days.
- Continue to provide 24/7/365 support for the programmable automation control, SCADA, and communications systems.
- Review and update internal service level agreements (SLAs) to provide optimal support of the Operations department's needs.

2022-23 Major Accomplishments

- Provided startup services for Redrock North Reservoir and Summerlin 4125 Pumping Station.
- Created over 8,000 new service points and completed over 5,000 water plan reviews and 550 map reviews.
- Achieved 99.9 percent system availability of the Ethernet carrier communications network. This network supports corporate, SCADA, and security traffic.
- The Maintenance Engineering Automation Team completed 913 support tickets associated with Operations support.
- Implemented an on-call process for SCADA/Process Control/OT systems to improve response time and created SLAs for Operations support.
- The Facilities division completed 11,643 work orders during the 2022 calendar year. This work consisted of:
 - Predictive maintenance to determine priorities and avoid downtime of major operational support equipment by scheduling work before predicted failure.
 - Routine frequency preventive maintenance for lower priority, high quantity equipment and facilities.
 - Corrective work orders to make permanent changes that improve energy efficiency or provide permanent improvements in reliability.
- The Facilities division rolled out a new on-demand coffee service for the organization in an effort to minimize waste of unused bulk coffee and boost morale.

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

2023-24 Performance Objectives

- Assist with development of a successful Septic Conversion Program by streamlining processes with the City of Las Vegas, Clark County Water Reclamation District, and Southern Nevada Health District. Negotiate and execute sewer lateral extension projects when applicable, resulting in additional return flow credits which extend our water supply.
- Initiate conversion of recycled water customers to potable water to facilitate decommissioning of recycled water facilities.
- Upgrade irrigation controls at six sites to maximize water efficiency.

2022-23 Major Accomplishments

- Completed an agreement to install 12 sewer laterals with a public sewer line in Rosada Way.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

- Prepared multiple scoping options for Boulder City to recycle or return wastewater resulting in beneficial use of the water supply.
- Completed installation of a zero-waste air cooled chiller system for the LVVWD West Administration Building. 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.

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

2023-24 Performance Objectives

- Continue to provide a world-class hydraulic model, with a new goal this year to implement a Smart Pressure Management System using transient analysis to increase pipeline longevity and reduce water loss due to breaks and leaks in the system. In addition, continue to collaborate with Operations and Information Technology to upgrade and enhance daily pumping plans and hydraulic modeling tools. The upgrades will result in improved system reliability, asset protection, emergency response, energy management, and water quality.
- Add a new solution to the VODA artificial intelligence platform that would predict likelihood of service lateral failures. This will help prioritize a proactive approach to replacing service laterals where appropriate.
- Create a digital workflow in the digital plan submittal portal for Project Support Team reviews.
- Assess and improve workflow processes for various groups using the RedEye document management system, which is transitioning to Infrastructure Management to manage.
- Work to move most Project Support Team processes and workflows into a digital, automated system to reduce printing and physical storage needs.
- Implement a private cellular network service using a commercial carrier to reduce reliance on low bandwidth radios.
- Develop and design plans for the replacement of legacy SCADA radios with new technology, enabling faster response times by engineers supporting Operations.
- Develop and document functional improvements to automation software throughout LVVWD and SNWA to provide further operational insights.
- Expand data integration of the LVVWD, SNWA, and BBWD SCADA systems to support organization-wide reporting and optimization technologies.

2022-23 Major Accomplishments

- Created the digital fire hydrant meter request portal with an interactive GIS map.
- Integrated SNWA SCADA data into a cloud-based data portal for internal and external use with the Xylem optimization software.
- Developed a proof-of-concept for private 5G capability to enable multiple services at small sites near the LVVWD Valley View campus.

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

2023-24 Performance Objectives

- Partner with a consulting firm to develop an Asset Management Policy and Strategic Asset Management Plan specific to horizontal assets. This effort aligns with Goal 6 of the

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Infrastructure Management
Fiscal Year Ending June 30, 2024

Conservation Strategic Plan by addressing water conservation through proper management of the District's horizontal assets. The goal is to understand Asset Management best practices deployed by peer utilities both in the United States and internationally and to adopt and deploy solutions that support the workforce and improve service.

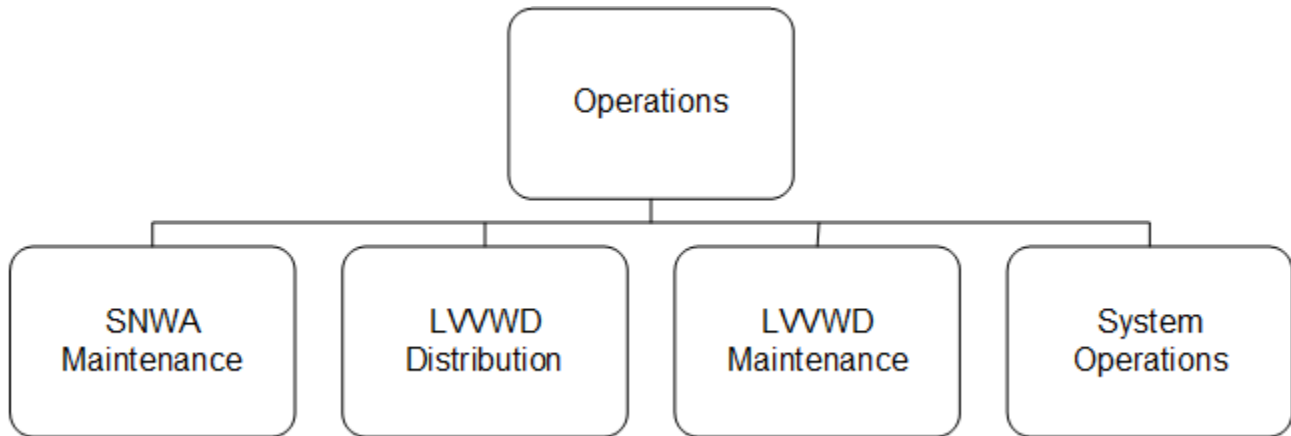
- Coordinate with the Project Controls group and EAM solution implementation team, Maximo. Project types will be categorized to better align with the long-term capital planning needs of the organization and appropriate budgets for rehabilitation of each project type will be consistently aligned with the Asset Management Policy and Strategic Asset Management Plan.
- Provide project support for the Maximo EAM implementation. This project involves nearly every work group in the organization and will not only build on the current Asset and Maintenance Management programs but will also implement industry best practices with a modern system.
- Prioritize critical pipeline infrastructure for installation of new impressed current cathodic protection systems.
- Continue to utilize the latest condition assessment technologies to determine the true condition and expected remaining life of the infrastructure.
- Complete agreements with major developers for the design and construction of additional reservoirs and pumping stations to serve the land that they are developing.

2022-23 Major Accomplishments

- Completed installation and commissioning of a new impressed current cathodic protection system at the Big Bend raw water intake pumping plant and installed new galvanic anodes as part of the Big Bend 1130 Zone tank rehabilitation project.
- Completed various betterment and interlocal agreements.

OPERATIONS

Level: 4100



Mission

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

Department Description

The LVVWD system is comprised of a wide variety of facilities which includes various pumping stations ranging in size from 1,500 gallon per minute (GPM) to 108,500 GPM and various reservoirs ranging in size from 4.5 million gallon (MG) to 50 MG, for a total storage of over 900 MG. The LVVWD has 62 potable wells capable of producing 174 MGD, and 26 specially constructed wells dedicated to recharging the groundwater basin with treated Colorado River water to create credits in the Southern Nevada Water Bank. In addition, 31 dual-use wells are capable of recharge are permitted; 28 of these are operationally ready.

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.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations
Fiscal Year Ending June 30, 2024

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 \$12,949,801 for the fiscal year 2023-24 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 2023-24 Budget Plan are shown on the following table.

Operations' fiscal year 2023-24 overall budget totals \$87,759,114 between the LVVWD and the SNWA.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Water resource investments	\$ 194,728	\$ 250,000	\$ 250,000
Energy	252,681	262,000	314,176
Materials and supplies	1,646,440	2,117,080	2,329,888
Maintenance and repairs	47,136	500,000	—
Rental and leases	—	—	—
Other employee expenses	27,018	86,000	115,500
Other operating expenses	217,057	6,150	204,200
Total Operating Expenses	2,385,060	3,221,230	3,213,764
Capital expenditures	2,203,883	7,120,157	7,641,187
Salaries and benefits	9,730,604	11,394,794	12,152,578
TOTAL DEPARTMENT EXPENDITURES	\$ 14,319,547	\$ 21,736,181	\$ 23,007,528
FTE POSITIONS	59.1	63.7	63.7

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations
Fiscal Year Ending June 30, 2024

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 7,074.9 miles of pipeline and laterals, 143,707 valves, 429,675 service laterals, 42,632 fire hydrants, and all related appurtenances comprising the LVVWD's distribution system. In fiscal year 2021-2022, Distribution crews completed 7,193 work orders consisting of repairs to pipelines and the repair and replacement of valves and fire hydrants. Additionally, 1,891 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 69,210 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 7,641 valves in fiscal year 2021-2022, keeping them in good working order and improving Distribution staff's ability to quickly perform main shutdowns in case of a leak or large emergency. This has helped Distribution staff lower the average time to shut down a leaking water main in an emergency and reduce non-revenue water losses.

The Backflow Prevention section administers the LVVWD's Backflow Prevention Program. This is a service protection program involving annual testing and repair of all backflow assemblies in the LVVWD distribution system. An active backflow program ensures contaminated water cannot enter the potable water system if a backflow, backpressure or back siphonage condition exists. The backflow technicians are certified by the California/Nevada section of the American Water Works Association (AWWA). They are currently managing approximately 33,919 backflow prevention devices.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations

Fiscal Year Ending June 30, 2024

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

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

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

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

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

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

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

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

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations

Fiscal Year Ending June 30, 2024

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

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

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

Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- LVVWD SCADA operations will continue to fine-tune the new Aveva SCADA system. This system will be the model for the Laughlin and SNWA SCADA upgrades in future years. Significant effort is being made to monitor and adjust Aveva SCADA alarms to meet industry best practices.
- LVVWD SCADA Operations will begin developing loss of SCADA plans and exercises in the event communications are lost to pump stations and reservoirs due to radio repeater issues. These plans and exercises will include using flat pumping plans and dispatching personnel to stations and reservoirs to manually start and stop pumps and check residuals and reservoir levels.
- LVVWD SCADA Operations will continue to upgrade the current Ops Tool used to create the daily pumping plans. A new Intelligent Water (iWater) tool will provide additional features, making it easier to create pumping plans, and will incorporate PRV and pressure station data for model calibration.
- SNWS SCADA operations will continue to run/exercise L3PS high lift pumping equipment for use in extracting Lake Mead water to deliver to the treatment plants.
- SNWA SCADA operations will continue low lift pumping from L3PS low lift pumps. IPS-1 remains out of service due to low lake level.
- SNWS SCADA operations will continue to work with Xylem to implement a Real Time Decision Support System for Drinking Water Network Operations Management. The work will be done in three phases: developing a “Digital Twin” for the SNWS system; an individual pumping facility operational optimization; and the entire network operational optimization. The success of this program will be measured in reduced energy costs and safeguarding against losing institutional knowledge with an aging workforce.
- The Disinfection Shop will continue its efforts in standardizing the sodium hypochlorite rooms, including chemical storage tank, plumbing modifications, and floor coatings, bringing all sodium rooms up to industry standards
- The Disinfection Shop will continue to assist Maintenance Engineering, Asset Management, Water Quality Research and Development, and Well Crew teams with development and implementation of ultraviolet disinfection at several well sites, as well as cross-training with the Small Systems team to assist in the event of illness, vacation, and emergencies.
- Small Systems will partner with Maintenance Engineering, Water Resources, and the Army Corps of Engineers (ACE) for exploratory drilling of a backup well in Blue Diamond to increase source water reliability. The Small Systems will also be partnering with Maintenance Engineering, Planning, and the Army Corps of Engineers to upgrade the 3630 Zone booster pumping station. The total cost of the projects will be covered by ACE and State Revolving Fund grant monies.
- Small Systems will partner with Maintenance Engineering, Water Resources, contractors, and ACE to develop the S4 well in Searchlight. This will add an additional well that can be equipped in case the S2 or S3 wells experience a failure. With 75% of this project costs to be reimbursed by ACE.
- The Small Systems will be coordinating the replacement of the arsenic removal media at S2, with the costs being covered 100% by ACE and State Revolving Fund monies.
- Small Systems will partner with Telemetry to install an online Cl₂ analyzer in Searchlight to improve public safety and add remote water quality monitoring.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations

Fiscal Year Ending June 30, 2024

- Small Systems will partner with Maintenance Engineering, Distribution, and contractors to reroute the Rainbow Well discharge line.
- Small Systems and Distribution will continue creating a service lateral inventory to document the material of all service lines, in accordance with the Revised Lead and Copper Rule.
- The Disinfection Shop has taken on the responsibility of on-site reservoir critical valve preventive maintenance that establishes readiness for unforeseen reservoir isolation needs.
- LVVWD Maintenance will continue a multi-year effort to install fiber optic and make security camera upgrades at all primary LVVWD locations.
- LVVWD Maintenance will continue upgrading control valves and actuators that have reached the end of their useful lives.
- LVVWD Maintenance will begin installing UV LED systems at five wells in the valley for continued testing and demonstration.
- SNWA Maintenance will make motor control center upgrades at Decatur Pumping Station; change the valves at Sloan ROFCS to REXA valves; change all pumps to Rotork at Bermuda Pumping Station; replace inlets at Warm Springs with REXA and Rotork control valves; and change ball valves at Horizon Ridge.
- SNWA Maintenance will perform the valve actuator replacement project.
- SNWA Maintenance will install new isolation valves at Horizon Ridge ROFC and an automatic transfer switch at Foothills Pumping Station to provide redundant power to critical items within the station.
- SNWA Maintenance will replace Bermuda ROFC inlet and outlet valves and actuators.
- SNWA Maintenance will replace PS2A/PS2B forebay isolation gates.
- SNWA Maintenance will replace Warm Springs ROFC isolation valves and actuators.
- SNWA Maintenance will update DC excitation systems at various plants.
- SNWA Maintenance will upgrade medium voltage electrical equipment at multiple sites.
- SNWA Maintenance will replace Discharge valve actuators at Hacienda Pump Station.
- SNWA Maintenance will replace Isolation valves with Gate valves at Hacienda Pump Station.
- SNWA Maintenance will replace Pump Station 2A/2B Forebay Isolation Gate valves.

2022-23 Major Accomplishments

- LVVWD SCADA Operations responded to a request by NV Energy to conserve power in the Southern Nevada area in September by curtailing pumping operations for several hours during a one-week span. By adjusting well run times and ensuring that pump stations using NV Energy power did not pump during peak hours, the LVVWD was able to achieve a significant reduction in power. The total power reduction achieved through this curtailment equaled 280 MW and led NV Energy to recognize our efforts.
- LVVWD SCADA Operations worked in tandem with Maintenance Engineering and Facilities to upgrade the SCADA room with new monitors, system maps, and other essential equipment to increase operator efficiency and ability to control the complex water system.
- LVVWD SCADA Operations worked in tandem with SNWS SCADA operations to support several main lateral outages, including two five-day AMSWTF outages, one two-week RMWTF outage, and a five-day South Valley Lateral outage. Water orders were adjusted, and internal pumping plans were altered to ensure no impact to customers.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations

Fiscal Year Ending June 30, 2024

- SNWS SCADA operations oversaw the planning and execution of 109 individual site and equipment outages. These included two five-day AMS outages to repair a filter influent channel leak, repair the 90" interconnect valve between the B & C laterals, manned inspection of the B Lateral from PS-1B to the Forebay 2, AMS weir gate repairs, manned inspection of the A & B laterals from RT-2A to the Surge towers, rover inspection of approximately 1500 feet of the River Mountains Tunnel 2 from RT-2A, and miscellaneous electrical and controls work; a two-week RMWTF outage for filter influent valve repairs, filter #4 leak repair, valve installation on process area pumps, and miscellaneous electrical and controls work; 5 day South Valley lateral outage for the installation of a new 90" BF Valve at the South valley Reg Tank; outage to replace Pumps No. 2-5 at PS04 and PS05; a five-month Decatur PS outage to replace the station's electrical gear; replacement of all valves, actuators and venturis at ROFC 3; and replacement of all inlet isolation valves and actuators at Sloan ROFC and Warm Springs ROFC.
- Disinfection Shop staff completed three sodium room rehabilitations and planned and installed a prototype entry hatch on Reno Reservoir with the assistance of Asset Management and the welding shop.
- Disinfection Shop staff and Maintenance Engineering successfully completed the Re-lining of 2-5,000-gallon Bulk Naocl tanks at the Main Naocl building.
- Disinfection Shop staff successfully completed 24-hour Hazwoper certifications as requested by EH&S.
- Small Systems partnered with Water Resources, Maintenance Engineering, and the Well Crew to equip the new J8 Well in Jean for service in 2023 providing a reliable and sustainable water source for the future.
- Small Systems partnered with Maintenance Engineering and Distribution to reroute the transmission main in Jean at the chemical injection site. Doing so removed a section of corroded pipe, and eliminated a confined space, thereby improving employee safety when servicing the chemical feed system.
- Small Systems partnered with Maintenance Engineering, Water Resources and Army Corps of Engineers to replace steel and AC pipelines in Blue Diamond, thereby reducing leaks and improving fire protection. The total cost of the projects is covered by ACE and State Revolving Fund grant monies.
- Small Systems completed a service lateral inventory in Searchlight and Jean to document the material of all service lines, in accordance with the Revised Lead and Copper Rule.
- Small Systems staff increased outreach to customers in Blue Diamond, Kyle Canyon, and Searchlight regarding onsite (property owner) leaks. This enhanced outreach has made a major impact, especially in Searchlight, where there has been a substantial reduction in well production since July 2022.
- Small Systems staff worked with Asset Management and Distribution to install an inspection vault in the Rainbow subdivision of Kyle Canyon. This vault will allow for the inspection and locating of a critical transfer line between the Old Town subdivision and the Upper Rainbow Tank. Small Systems also worked with Asset Management to inspect the mainline going to the underground reservoir in the Echo subdivision of Kyle Canyon.
- Distribution completed the Tropicana Inline Valve Replacement project to replace four 48-inch butterfly valves in existing valve vaults. The work included saw cutting and removal of asphalt, excavation, and removal of existing deck segments, casting and installation of new deck segments, new concrete vault floor, recoating of facilities within the vault, backfill, dense grade pavement, and restoration. Distribution inspected 1,000 feet of pipeline and installed eight internal seals. The

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Operations

Fiscal Year Ending June 30, 2024

project was completed prior to the repaving of Tropicana Avenue and will enable better isolation of the 60-inch line for future assessments and leak remediation.

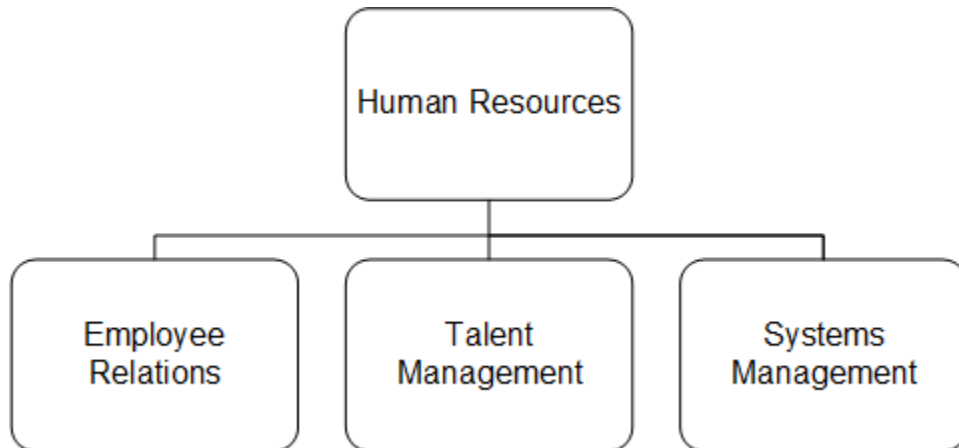
- Distribution installed 1,400 feet of Primus liner to rehabilitate an 18-inch AC pipeline crossing interstate I-15 south of Blue Diamond.
- Distribution replaced 360 polyethylene service lines in Spring Valley, Los Prados, and Desert Shores.
- Distribution replaced a 36-inch valve at Lamb and Wyoming that was restricting flow through the transmission line. This included bolstering area connections to prepare for outages and performing an internal inspection of the 42-inch pipeline.
- LVVWD Maintenance restored and recoated multiple pumping stations and pumping equipment, including lead abatement where necessary.
- LVVWD Maintenance upgraded communications and reservoir sample analyzers at over 20 reservoir locations.
- LVVWD Maintenance upgraded multiple pumping stations with efficient LED lighting to enhance safety and reduce electrical consumption.
- SNWA Maintenance established a temporary generator power emergency preparedness program for all in-valley ROFCS.
- SNWA Maintenance installed new venturis at Unit No. 6B.
- SNWA Maintenance refurbished Motor No. 4 at Pumping Station No. 6.
- SNWA Maintenance replaced all control valve actuators at Magic ROFC.
- SNWA Maintenance replaced Sloan Inlet/Outlet Isolation valves and actuators.
- SNWA Maintenance replaced Grand Teton Inlet/Outlet Isolation valves and actuators.
- SNWA Maintenance replaced Simmons Discharge Isolation valves with Check Valves.

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HUMAN RESOURCES

Level: 4200



Mission

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

Department Description

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

Budget Objectives and Highlights

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Human Resources
Fiscal Year Ending June 30, 2024

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ —	\$ —	\$ —
Maintenance and repairs	—	—	—
Other employee expenses	17,167	—	—
Other operating expenses	—	—	—
Total Operating Expenses	17,167	—	—
Capital expenditures	—	—	217,988
Salaries and benefits	246,380	2,617,598	3,501,133
TOTAL DEPARTMENT EXPENDITURES	\$ 263,547	\$ 2,617,598	\$ 3,719,121
FTE POSITIONS	1.8	17.9	21.3

Department Performance

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

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

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

Strategic Plan Objectives and Accomplishments

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

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.

2023-24 Performance Objectives

- Eliminate the manual effort performed by accounting, by implementing the costing allocation splits for Payroll within Workday.
- Continue to implement Asset Management and Tracking for Information Technology in Workday.
- Launch the class and compensation job study for Operators within EH&S, Operations and Water Quality & Treatment.
- Continue the EH&S learning realignment in Workday to assist departments in maintaining employee's compliance.
- Implement new Workers' Compensation tracking and reporting for Payroll and EH&S.
- Continue to implement financial/retirement preparation programs focused on various employment and life stages.
- Streamline and improve EPDS process in Workday.

2022-23 Major Accomplishments

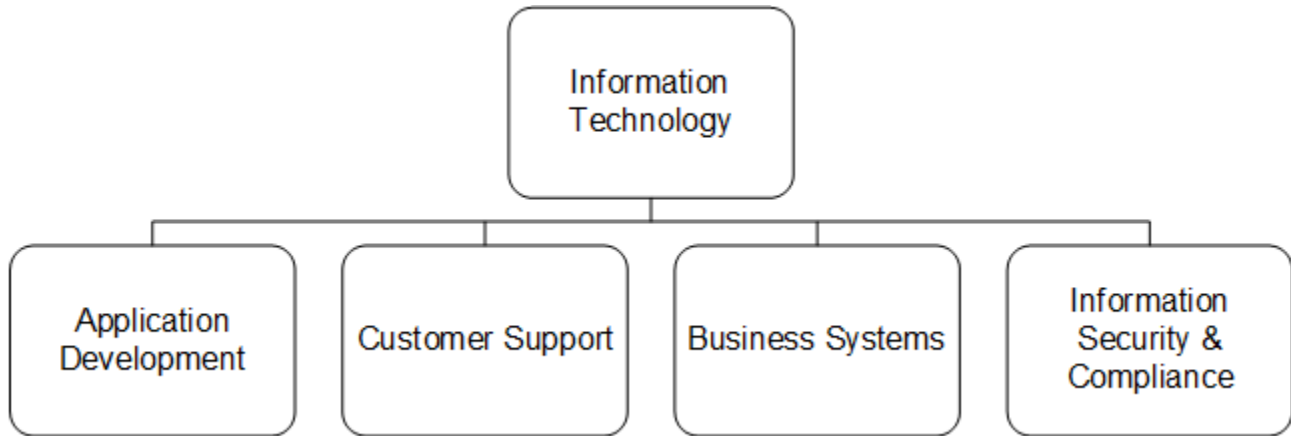
- Configured Benefits and Pay Hub Dashboard in Workday, including 'Model My Pay.'
- Created new Benefits billing worksheets that reduced processing effort from days to hours.
- Created new composite reports for payroll processing, eliminating manual effort.
- Implemented monthly workshops to provide training and support to management on performance assessments, managing hybrid staff and management skills.
- Completed digitization of employee personnel files in Workday.
- Completed a wall-to-wall class and compensation job study for Public Services, Springs Preserve and Finance.
- Concluded COVID protocols and developed guidance on how to manage illness moving forward.
- Introduced new financial wellness program for employees.
- Reduced time-to-fill for open positions by implementing a SME pass-through and contingent hiring for approved positions, reducing redundancies in position posting and applicant processing.
- Increased candidate pool volume and diversity by approving the application of work experience and/or transferable skills toward minimum job qualifications.
- Revised New Hire Orientation to include an in-person portion to supplement the online orientation.
- Developed a monthly engagement activities newsletter to provide to department executive assistants for distribution to all shift and satellite teams.
- Launched LVVWD Book and Bicycling Yammer groups.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Human Resources
Fiscal Year Ending June 30, 2024

- Facilitated two donation drives (Shade Tree and Safe Nest) and implemented 'Charity Champion' program. Donated approximately 35 pallets of goods and items to charities with 100% department participation for both drives.
- Launched new employee store with new vendor, adding more customizable options.
- Implemented monthly wellness topics and Wellness Warrior Program.
- Implemented on-site fitness classes through Camp Rhino.
- Partnered with EOS fitness for employee subscription discounts.
- Developed a training audit protocol to ensure organization-wide compliance with mandatory training requirements.
- Developed a robust leadership enhancement program to include training and development courses and initiatives for prospective, new and seasoned leaders.
- Facilitated the 2022 TAP Leadership Enhancement series of classes.
- Developed and implemented a mentoring program
- Developed a catalog with a searchable directory of online and in-person employee training and development classes.

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 relaunched in 2022 and is comprised of multi-departmental leadership 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.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
Fiscal Year Ending June 30, 2024

Budget Objectives and Highlights

The 2023-24 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.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 501,812	\$ 819,300	\$ 1,033,500
Maintenance and repairs	4,115,380	4,844,823	5,119,659
Rental and leases	353,544	397,600	389,400
Other employee expenses	21,048	132,705	105,739
Other operating expenses	981,770	3,168,180	2,076,560
Total Operating Expenses	5,973,553	9,362,608	8,724,858
Capital expenditures	693,839	12,728,277	3,000,000
Salaries and benefits	8,712,642	10,367,349	10,251,294
TOTAL DEPARTMENT EXPENDITURES	\$ 15,380,035	\$ 32,458,234	\$ 21,976,152
FTE POSITIONS	45.4	51.4	47.6

Department Performance

Information Technology has 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 implementation of a new customer care, billing and meter management system, completion of Advanced Metering Infrastructure (AMI) installation, imagery analysis related to Assembly Bill 356, enhancements to the water plan review process, continuation of the endpoint equipment (PCs, monitors, iOS devices, and Laptops) refresh programs, and major enhancements to cybersecurity programs.

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

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

The multi-year project to implement a new Enterprise Asset Management System kicked off in 2022 and will replace an aging application reaching end-of-life with a modern, best-in-class asset and work management system. Key features include preventative and predictive maintenance, inventory and

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
Fiscal Year Ending June 30, 2024

material management, work management, reporting, and analytics. The system is projected to complete in 2025.

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

The implementation of a new Financial Management System began in 2022 with efforts to analyze business processes and identify a replacement system. Vendor and implementor selection is anticipated in 2024-2025 with completion of the project in 2027-2028. In addition to the Financial Management System implementation, the corporate chart of accounts will be reviewed for restructuring.

Administration and Infrastructure. This division is comprised of five teams that provide support to the Information Technology Operations consisting of: IT Customer Support, System Administration, Application Administration, Geospatial Technologies, and the Mapping and Analysis teams.

The IT Customer Support team is responsible for many diverse functions within the company. This group is responsible for the infrastructure needed to remotely update, secure, manage and support over 2,600 work-from-home and on-premises desktops, field and personal laptops, iOS devices, and upwards of 450 iOS & desktop applications.

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

Geospatial Information Systems are comprised of two teams. The Mapping and Analysis team is responsible for the acquisition and delivery of high-resolution imagery and GIS project data management. The GIS Administration and Application Development team is responsible for GIS application development and GIS Enterprise infrastructure and maintenance to support the organization.

Enterprise support focuses on providing uninterrupted application services to customers during 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 upgrades and add 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. Continued implementation of the corporate local and wide area network backbone to support 100 GB between campuses, upgrades to the enterprise backup and recovery infrastructure,

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
Fiscal Year Ending June 30, 2024

and a hardware refresh to support the virtual server infrastructure along with the initiation of a major call-center replacement project will take place this year.

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 Services 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, providing guidance on the impacts of recently passed changes to Nevada Revised Statutes, 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). This division works closely with Legal Services, Information Governance, Purchasing and Risk Management to ensure the organization is addressing supply-chain and contractual security risks. In January 2022, the District launched a comprehensive vendor due diligence initiative which is managed by the Information Security & Compliance division. In addition, the division focuses on emerging regulatory requirements from state and federal agencies, as well as continuously evolving requirements from cyber insurance underwriters and bond rating entities.

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 – Assure quality water through reliable and highly efficient systems.

2023-24 Performance Objectives

- Complete migration to the new LIMS application for the River Mountain Water Quality Lab. The new Labworks LIMS application is scoped to have minimal customizations and will provide the laboratory with advanced technology, compliance monitoring, and better integrations to instrument equipment.

2022-23 Major Accomplishments

- Implement improvements in systems that support water quality initiatives used by our organization and other agencies.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2023-24 Performance Objectives

- Implement automated start/stop/transfer service options for customers.
- Bring Phase One of the digital records management project to completion.

2023-24 Performance Objectives

- Implemented a fully online and contact-free method to accept approved engineering drawings to support the water plan review process.

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

2023-24 Performance Objectives

- Continue to progress conservation initiatives forward with proactive notifications related to leaks and compliance.
- Continue Turf and Vegetation Analysis to support ongoing water conservation efforts, including the Water Smart Landscape (WSL) Program and the Non-Functional Turf (NFT) Project.
- Complete 2023 Las Vegas Valley Imagery Project, including acquisition, performing quality assurance, and making imagery available for analysis related to water conservation programs.

2022-23 Major Accomplishments

- Continue to progress conservation initiatives forward with proactive notifications related to leaks and compliance.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
Fiscal Year Ending June 30, 2024

- Completed imagery analysis and GIS mobile application related to the new Assembly Bill 356 in identifying areas where Non-Functional Turf exists as relayed in the Bill.

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

2023-24 Performance Objectives

- Optimize our technology infrastructure to support a hybrid mobile and telecommute workforce.
- Support organizational initiatives with information security best practices guidance to ensure systems reliability.

2022-23 Major Accomplishments

- Built and enhanced various GIS mobile applications to support field data collections and dissemination of data, supporting important Organizational projects like Lead & Copper Revised Rule, Water Smart Landscape (WSL) Program, and Non-Functional Turf (NFT) Project.
- Implemented a new web site for the Las Vegas Wash project (LVWash.org).
- Completed Clark County LiDAR Digital Elevation Project, in conjunction with the USGS, to obtain updated elevation data to assist with a variety of Engineering, Planning, and Water Resources projects.

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

2023-24 Performance Objectives

- Continue work on the implementation of a new enterprise asset and work management system.
- Continue work on the implementation of a new financial management system.
- Substantially improve internal processes and software that support the organization's water plan review processes.
- 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 to enhance cybersecurity programs throughout the organization to keep cyber insurance rates low and bond ratings high.

2022-23 Major Accomplishments

- Installation of Advanced Metering Infrastructure (AMI) across all service areas enabling proactive water usage intelligence.
- Made enhancements to cybersecurity which include the implementation of a department-wide change management program, additional threat monitoring tools, and further data separation to support latest changes to PCI compliance.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
Fiscal Year Ending June 30, 2024

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

2023-24 Performance Objectives

- Engage Department of Homeland Security and CISA in performing information security and resilience assessments to prepare for emerging regulatory from federal and state agencies.
- Provide support and metrics regarding Public Records Requests, summons and subpoenas associated with Assembly Bill 356, sewer to public septic conversions and any other items that may arise.

2022-23 Major Accomplishments

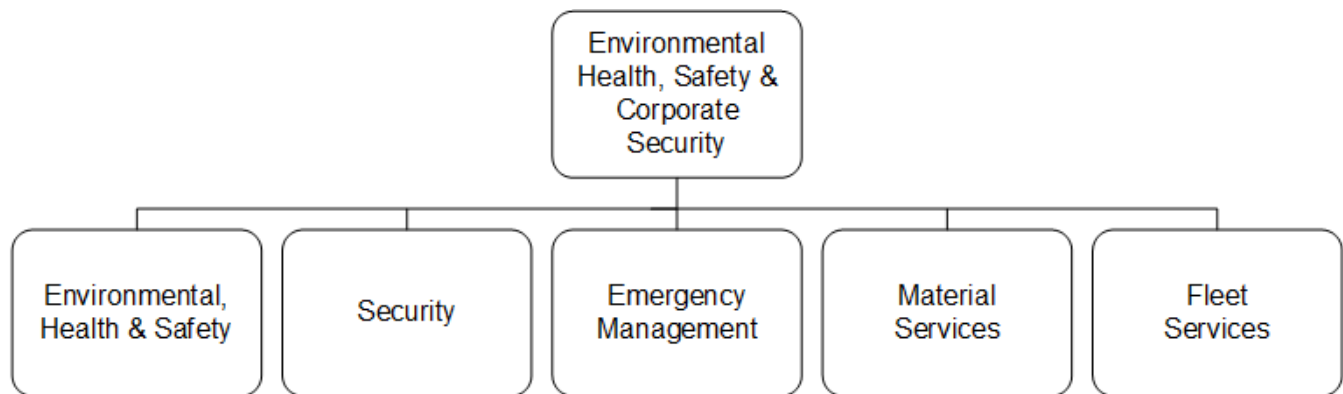
- Gathered data and provided support and metrics regarding Public Records Requests, summons and subpoenas based on type.
- Developed metrics and dashboards to manage vulnerabilities, along with effectiveness of prevention and remediation efforts.
- Streamlined due diligence procedures to reduce the processing time of technology-based purchases by 68%.

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ENVIRONMENTAL, HEALTH, SAFETY & CORPORATE SECURITY

Level: 4400



Mission

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

Department Description

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

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

Budget Objectives and Highlights

The 2023-24 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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

allowed us to streamline processes, reduce costs, and focus on sustainability, while skillfully maintaining goods, vehicle, and equipment inventory.

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 1,100,530	\$ 1,279,750	\$ 1,097,000
Maintenance and repairs	94,864	186,000	97,500
Rental and leases	111,147	116,000	121,500
Other employee expenses	37,201	72,000	55,500
Other operating expenses	789,140	536,000	903,551
Total Operating Expenses	2,132,882	2,189,750	2,275,051
Capital expenditures	1,125,186	2,332,734	4,574,069
Salaries and benefits	5,503,022	6,309,052	6,394,096
TOTAL DEPARTMENT EXPENDITURES	\$ 8,761,090	\$ 10,831,536	\$ 13,243,215
FTE POSITIONS	38.9	41.5	41.13

Department Performance

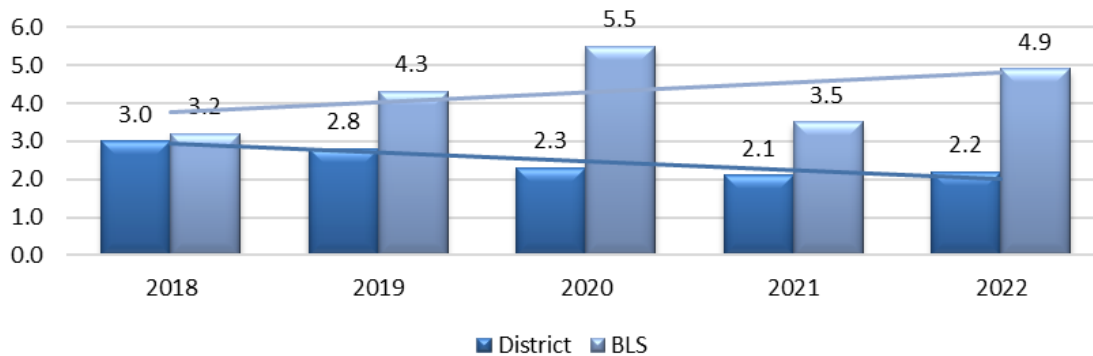
Environmental, Health, and Safety Division. The Environmental, Health, and Safety (EHS) division is responsible for overall management of SNWA's environmental, health, and safety program which governs employee safety in the workplace. EHS tracks leading and lagging indicators in the program, making necessary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

Recordable Injury Rates

EHS tracks recordable injuries and illnesses annually and compares them to the BLS annual averages for similar industries. The incidence rate of injuries and illnesses is computed using the following formula: (# injuries/illnesses X 200,000)/employee hours worked. The incidence rate for the District increased slightly from 2.1 in 2021 to 2.2 in 2022.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

Recordable Incident Rates

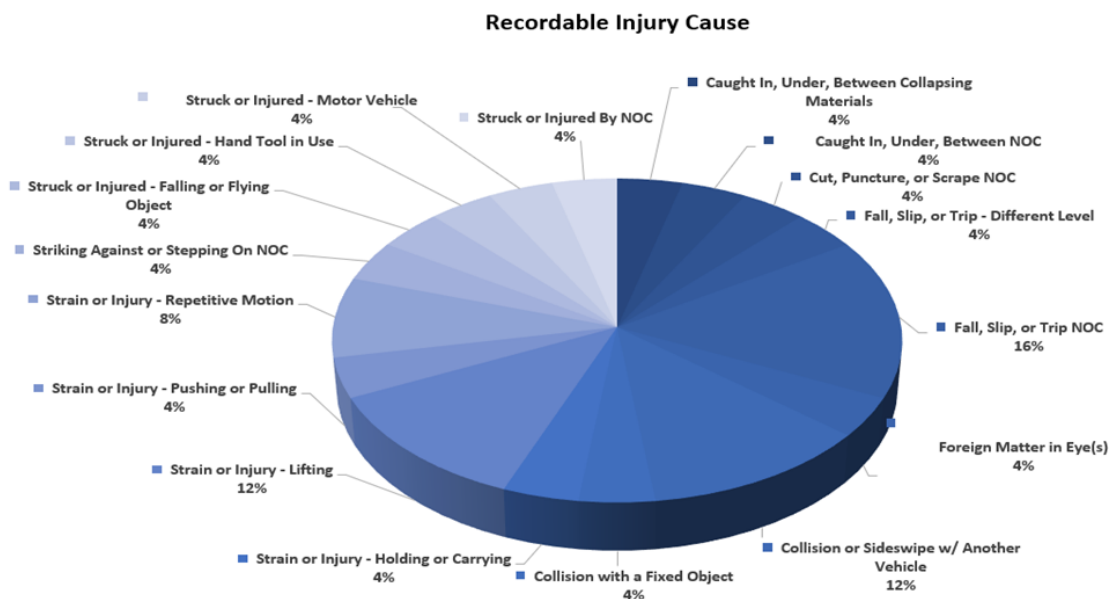


Recordable Injuries by Category

In 2022, lost-time cases increased 50 percent from 2021. The increase was due to the severity of three claims that resulted in the need for extended time off and/or surgery. The water and wastewater industries continue to trend upward as the District continues to trend downward, well below the BLS incidence rate.

In 2022, four *Struck By* and four *Strain* recordable injuries were reported, which resulted in 32 percent of all recordable injuries.

EHS continued focused reviews at job sites for potential impact hazards with emphasis placed on general housekeeping, equipment and tool placement, and employee positioning. While the reviews did not reveal unmitigated hazards, strains and struck-by injury events remained the highest cause of employee injury. These two injury category types are considered emerging risks and remain a priority for the District.

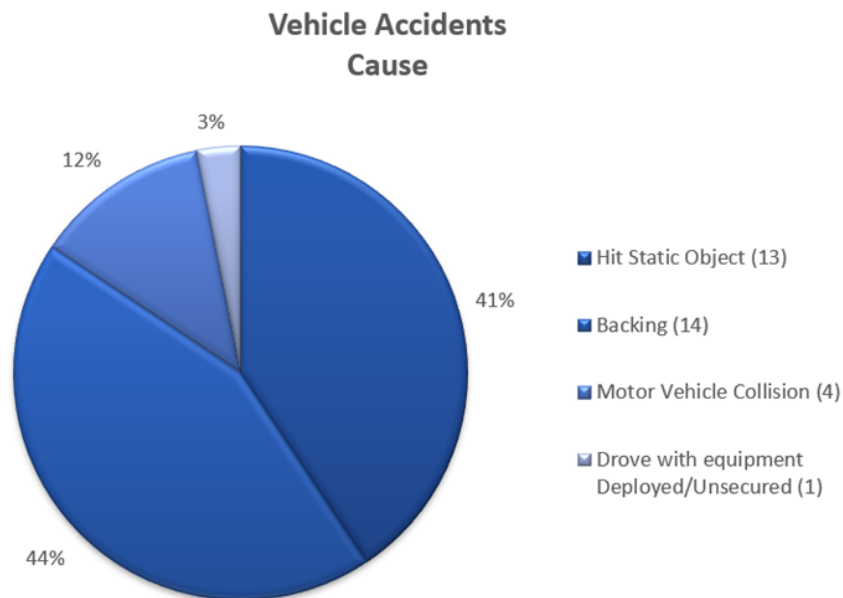
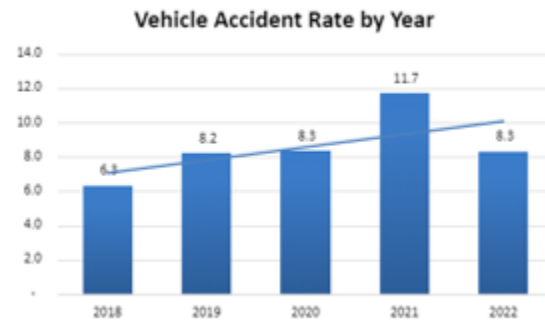
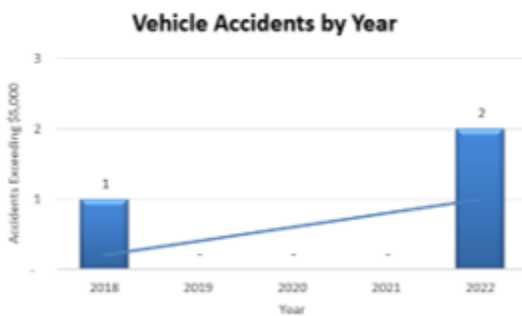


Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

Vehicle Accidents

The District experienced an increase in at-fault vehicle accidents above \$5,000 (zero in 2021 vs. two in 2022) and a decrease in the total number of at-fault vehicle accidents (47 in 2021 vs. 32 in 2022). The District's vehicle accident rate decreased from 11.7 in 2021 to 8.3 in 2022, although the vehicle accident rate trend has continued to climb over the five-year review period. Rates are computed using the following formula: # vehicle accidents X 1,000,000 miles/actual miles driven.

Most vehicle accidents were caused by preventable driving activities, with 41 percent attributable to *hitting stationary objects while driving forward* and 44 percent to *backing* incidents. Most accidents continue to be a direct result of drivers not conducting a safety circle check before moving a parked vehicle and ensuring adequate clearances for maneuvers both to the front and rear. Employees must take the time to verify that the path of travel is clear by conducting a safety circle check and, when possible, use a spotter. Training efforts and focused reviews in these specific areas will be included in the goals of the EHS Steering Committee and Safety Action Teams.



Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

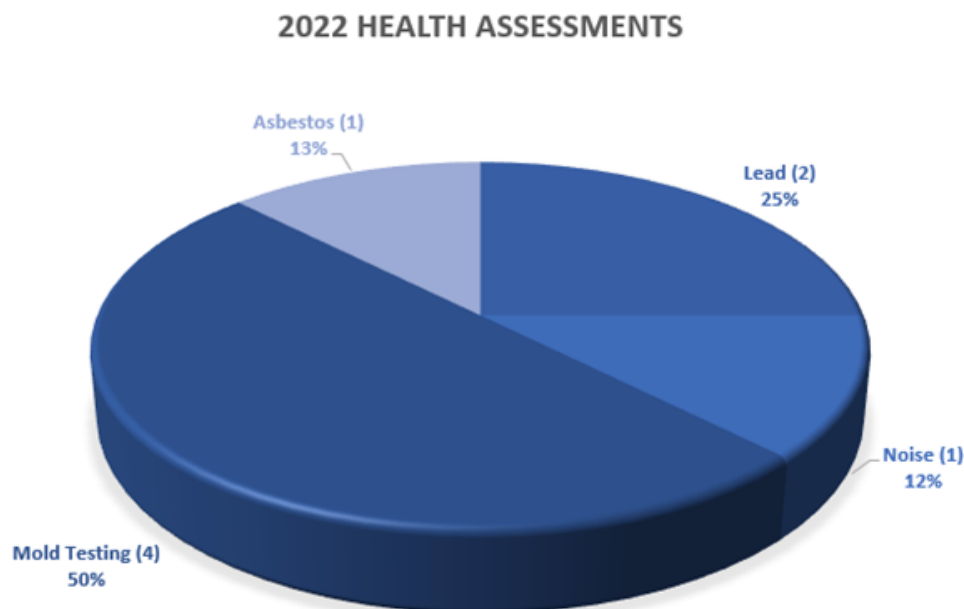
Occupational Health

Occupational Health is the promotion and maintenance of the highest degree of worker well-being. Monitoring potential hazards associated with higher noise exposure and risk respiratory protection is an EHS priority. The Hearing Conservation and Respiratory Protection programs exist to test and train employees annually on hazard identification and mitigation.

The Hearing Conservation program includes 201 employees. Every employee available for testing underwent an audiometric exam in 2022. Results show zero employees who sustained a recordable shift and, as such, there were no claims filed for hearing loss.

The Respiratory Protection program continues to utilize the smoke tube evaluation process for employees. EHS fit tested 276 employees in 2022.

The number of health assessment requests decreased from 16 in 2021 to 8 in 2022. Various samples were collected and analyzed for exposure impact.

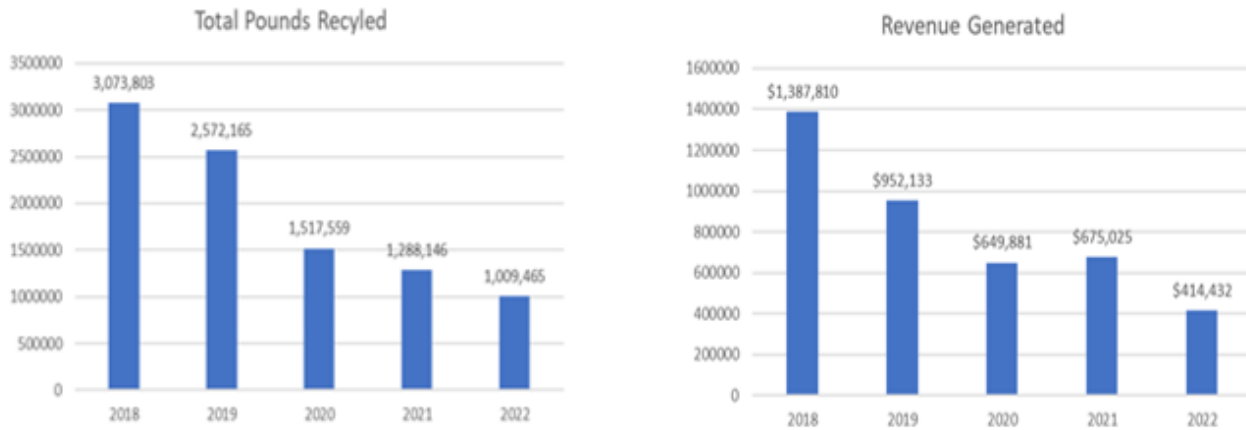


Recycling Program

The organization recycled a combined total of 1,009,465 pounds of materials in 2022, which resulted in a 22 percent decrease from 2021. Total revenue for 2022 was \$414,432 (scrap = \$43,267, auctions = \$0.00, vehicles = \$371,165).

The decrease in recycled material can be directly attributed to the organization's hybrid working operations. The decrease in total revenue can be directly attributed to a decrease in the number of vehicles and lack of scrap metal sent to auction.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024



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

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

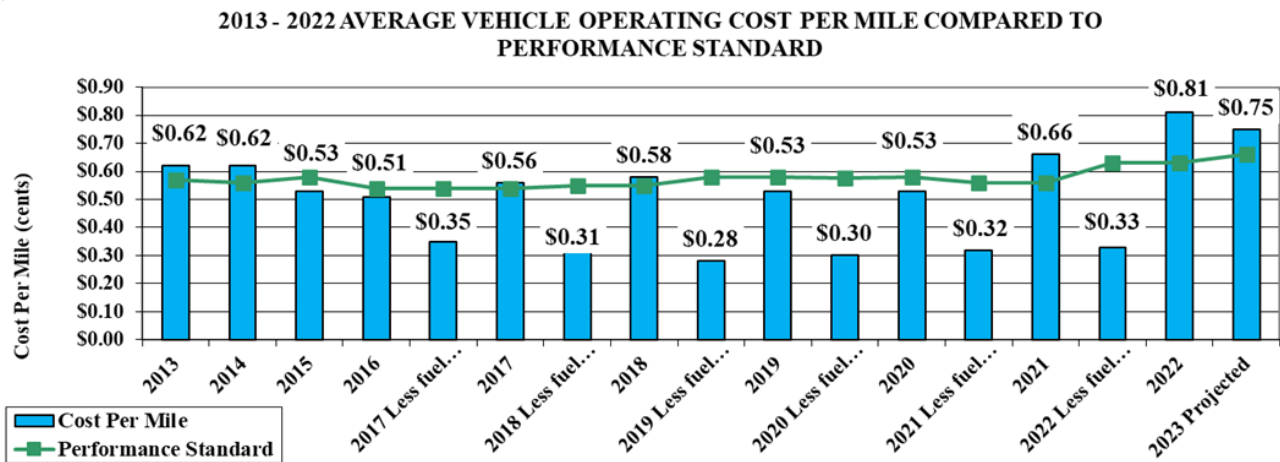
Material Services. Material Services is customer focused as it provides quality operating and maintenance products, material requirement planning, inventory management, and storage and retrieval services to the organization. In 2022, Material Services managed 14,000 inventory assets valued over \$20M. Material Services partners with internal customers to identify, forecast, and schedule capital and operations project material requirements and ensure delivery to all SNWA facilities. Material Services also processes and delivers all items intended for auction, manages recycled metals, and administers the uniform process for employees.

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

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

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



Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- Environmental, Health and Safety
 - Assure water quality by performing two comprehensive audits of departments involved in high-hazard activities in order to measure regulatory compliance.
 - Benchmark accident/injury standards to BLS comparable industries.
 - Conduct weekend/after-hour spot audits of industrialized work activities supporting water treatment, water quality, water distribution, or other activities.
 - Maintain a formalized training schedule for all EHS instructor-led courses.
 - Obtain all required operational water pollution control permits and continually monitor water discharge parameters to reduce pollutants discharged.
 - Review and update the EHS Manual and all internal EHS procedures.
 - Review maintenance and professional services contracts to ensure EHS operational compliance.
- Corporate Security
 - Increase lighting at the Foothills complex access gate and service roads in preparation for the Lakemoor housing development.
 - Purchase automated security gate with card readers for Foothills pumping complex main entrance.
 - Replace the current P-2000 access control program with the enhanced C-CURE 9000 security management system to provide critical security and safety protection for District employees, buildings, and assets.
 - Replace the entrance gate at Montessori satellite with a superior Wallace Gate.
 - Upgrade the Security Center with new camera and alarm systems that take advantage of available analytics and artificial intelligence technologies.
- Emergency Management
 - Build strong relationships with Federal Emergency Management Agency (FEMA) municipal and partner agencies.
 - Collaboratively develop, maintain, and revise rigorous training and emergency exercise programs.
 - Develop the NvWARN network to support Nevada safe drinking water/wastewater facility resilience.
 - Implement new document management software, Risk Solutions, to maintain and update critical emergency response documents while improving accessibility.
 - Improve mobile monitoring capabilities to provide leadership and improved field level situational awareness during emergencies.
 - Lead community effort and plan for drinking water distribution in the event of supply disruption.
 - Partner with the Department of Homeland Security (DHS) and Southern Nevada Counter-Terrorism Center (SNCTC) to prepare for potential threats to facilities or the water industry.
 - Provide additional on-site training opportunities for employees and partner agencies.
 - Train key employees and conduct drills on SNWA's Emergency Response Plan (ERP).

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

- Utilize the District's Emergency Operations Center (EOC) to engage with Incident Management Team.

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Achieved recordable injury incidence rate of 2.2, compared to BLS rate of 4.9, extending SNWA's history of falling below BLS rates.
 - Completed over 115 documented spot audits.
 - Conducted over 87 investigations related to recordable injuries, preventable vehicle accidents, and preventable property damage incidents, and made corrective action recommendations, as appropriate, to reduce the chance of recurrence.
 - Received no citations from OSHA or Environmental Protection Agency.
 - Renewed 175 environmental permits.
 - Reviewed the Industrial Scientific service contract parameters and equipment use which resulted in a reduction of the monthly contract expense.
 - Successfully completed Safety Stand Down Day with 258 employees in attendance.
- Corporate Security
 - Completed a comprehensive Corporate Security Manual review and update.
 - Completed the DHS Vulnerability Assessment at our most critical locations: Foothills pumping complex, Alfred Merritt Smith Water Treatment Facility (AMSWTF), and River Mountains Water Treatment Facility (RMWTF).
 - Completed Use of Force and Restraint Standard Operating Procedure for District Security Officers.
 - Installed new access control card readers at the main gates at AMSWTF, RMWTF, and IPS #1 to provide a safer entry by larger work trucks.
 - Installed fixed thermal camera at Foothills pumping complex main entrance drive.
 - Promoted Department of Homeland Security's national *If You See Something, Say Something™* campaign.
 - Provided increased security checks at critical sites, including water treatment plants and pumping stations.
 - Updated, redesigned, and issued new badges to all District employees.
- Emergency Management
 - Attended FEMA training to gain the FEMA ICS Trainer certification.
 - Coordinated aid response for the County of Hawaii to provide a critical piece of equipment.
 - Hosted several local first responder liaison days at AMSWTF and RMWTF.
 - Participated in state and community Threat Hazard Identification and Risk Assessment workshops, exercise planning meetings, and threat/risk exercises.
 - Reviewed and updated the continuity of operations plan.
 - Launched internal two-way notification system to communicate with staff on any emergencies.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

Strategic Plan Goal – Deliver an outstanding customer service experience.

2023-24 Performance Objectives

- Environmental, Health and Safety
 - Participate in local association meetings to gather information on best management practices to support the Safety Management System and adopt and implement proven work methods.
 - Provide evaluation forms for instructor-led courses to assess customer satisfaction.
- Corporate Security
 - Conduct ride-alongs and field escorts with Operations, Distribution, and water enforcement teams.
 - Enhance active shooter response and survival training and make it available to all work groups.
 - Explore and test new security technology and systems.
- Emergency Management
 - Attend briefings, meetings, training, and support groups for Utility Pipeline and Coordinating Group, InfraGard, SNCTC, DHS, LEPC, Southern Nevada Health Preparedness Coalition, American Water Works Association, etc.
 - Lead community effort and plan for drinking water distribution in the event of supply disruption.
- Material and Mail Services
 - Conduct monthly planning and review meetings with Field Services, Project Support Team, and Inspections to monitor and ensure consistent materials management and inventory replenishment for short- and long-term projects.
 - Handle logistics between District locations to ensure timely delivery of mail, materials, and equipment.
 - Meet customer shipping needs for outbound materials from all District campuses.
- Fleet Services
 - Expand telematics system to assess vehicle condition and reduce downtime.
 - Partner with all departments in the specification process for new and replacement vehicles/equipment.
 - Provide the best possible equipment choices to all departments to assist them in meeting their goals efficiently and effectively.
 - Provide state-of-the-art tools, equipment, and training to technicians to ensure maximum efficiency in services provided.
 - Respond to changing customer needs and implement/modify services to better support the mission.
 - Strive for 100 percent vehicle equipment availability.

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Collected student evaluation forms after each EHS instructor-led course to improve future course curriculums.
 - Conducted a survey of the Safety Stand Down event to obtain feedback and improve future training courses. The latest survey results show the highest overall employee satisfaction trending upward over the last three years.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

- Participated in meetings with Safety Action Teams, the EHS Steering and Sustainability cross-department committees, and the Public Employer Safety Officer (PESO) Coordination meeting.
- Recognized as “Best in Class.” for the second year in a row, by the American Water Works Association (AWWA) for Utilities with over 500 Employees.
- Updated electronic materials on the Hydroweb to ensure that all employees have access to useful health and safety literature and information.
- Corporate Security
 - Continued security patrols in areas of high backflow theft and developed partnerships with local scrap metal yards to identify and seize stolen backflows.
 - Deployed Traction Guest visitor management system in the main customer lobby.
 - Increased on-site training and strengthened partnerships with other emergency responders by allowing use of District facilities for rescue and emergency response training.
 - Launched an in-house preventative maintenance program for the Medeco lock system to ensure error-free operation for all employees.
 - Partnered with the local FBI Office to quickly evaluate, vet, and clear foreign nationals requesting access to District facilities.
 - Provided additional security presence for employees during heightened customer interactions, both on campus and at job sites.
 - Provided enhanced security coverage for multiple high-capacity events to support the reopening of the Springs Preserve to the public.
 - Utilized walkthrough metal detectors at public meetings and special events for increased employee and guest safety.
- Emergency Management
 - Educated workgroups on COVID-19 protocols to protect employees from illness and spread.
- Material and Mail Services
 - Worked diligently with Purchasing department and external vendors/suppliers to ensure a consistent stream and supply of materials required for uninterrupted District operations.
 - Received 100 percent accuracy rating during SNWA’s Material Services audit.
 - Processed 83,656 material issues/returns and 39,410 individual receipts and delivered 8,274 packages District-wide.
 - Performed 252 pickups or deliveries for multiple departments.
- Fleet Services
 - Completed 9,684 work orders and 12,166 vehicle/equipment repair tasks.
 - Enhanced customer service in outlying areas through technology, improved parts availability, and on-site technician scheduling.
 - Involved customers in the vehicle/equipment specification process to ensure the best possible products were provided.
 - Maintained automotive service excellence Blue Seal of Service Award and World Class Technician status through training and certification.
 - Maintained I-Car Platinum status for the fleet paint and body operation through technician training and certification.
 - Monitored vehicle health status through our telematics system to identify equipment failures and reduce operator downtime.
 - Partnered with customers to review vehicle/equipment needs, identify areas in need of modification or improvement, and provide 3D drawings of special-build vehicles to ensure the best equipment fitment and product usability.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

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

2023-24 Performance Objectives

- Environmental, Health and Safety
 - Prepare and submit environmental reports to regulatory agencies.
 - Review current recycling and waste streams to identify new recycling opportunities.
- Corporate Security
 - Increase water enforcement patrols and coordinate with Conservation to enforce service rules related to water theft.
 - Provide security oversight to construction projects associated with the Horizon Lateral project.
 - Utilize results from the Department of Homeland Security's vulnerability assessments to further protect L3PS from human caused incidents.
- Fleet Services
 - Develop alternate fuel vehicle program, expand the District's plug-in electric vehicle fleet, and add electric vehicle charging infrastructure.
 - Implement environmentally friendly practices in automotive paint and body repair.
 - Improve fleet vehicle/equipment utilization to reduce costs and resources.
 - Recondition and reuse service bodies and vehicle up-fit equipment for SNWA vehicles and equipment, when feasible.
 - Recycle vehicle and equipment maintenance waste and expand recycling activities, when feasible.
 - Retrofit fleet paint booth with more environmentally friendly technology.
 - Use telematics and best management practices to reduce unnecessary vehicle fuel burn across the District's vehicle fleet.

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Generated 4,780 pounds of hazardous waste.
 - Monitored recycling program which yielded \$414,432 (scrap = \$43,267, auctions = \$0, vehicles = \$371,165).
 - Tracked and submitted 175 environmental permits on time.
 - Tracked, contained, and cleaned up 18 unintentional releases of regulated material.
- Corporate Security
 - Assisted Public Services with multiple media tours to L3PS.
 - Provided security awareness, safety training, and escorts for employees who respond to water theft incidents and investigations.
- Material Services
 - Recycled 148,000 pounds of scrap brass, copper, and wire which sold at auction for \$348,750.
 - Recycled 742,000 pounds of miscellaneous scrap metals, resulting in \$43,000 of revenue.
- Fleet Services
 - Added dust free sanding equipment to our paint and body operation.
 - Achieved 79 percent alternative fuel burn rate for District vehicles/equipment.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

- Replaced older diesel and gasoline powered vehicles with alternative fuel and more efficient vehicles, which lowered capital cost and reduced carbon footprint.
- Reduced volatile organic compound usage within fleet paint and body operation by more than 20 percent in 2022, and over 95 percent in the past 20 years.
- Earned recognition as one of the 100 best fleets by the Top 100 Fleets in North America.

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

2023-24 Performance Objectives

- Environmental, Health, and Safety
 - Explore modern technologies and methods in the Worker's Compensation Program Management.
- Corporate Security
 - Conduct monthly security meetings with Information Technology to monitor security risks and threats.
 - Partner with SNWA Telemetry to leverage the full potential of our current security camera analytics.
 - Secure a cost-effective mobile guard post for the Springs Preserve entrance which will eliminate the need for an idling security vehicle.
- Fleet Services
 - Equip the fleet facilities with state-of-the-art testing and diagnostic equipment to accurately diagnose and repair vehicle and equipment failures.
 - Provide online technical and diagnostic training to technicians.
 - Utilize advanced telematics and fleet management tools to lower liability, reduce costs, improve efficiency, and better manage fleet assets.

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Completed Origami Safety Management update, including development of EHS training, and tracking and occupational health modules.
 - Implemented a new Worker's Compensation Third Party Administrator (TPA), CorVel, which brings new technology, greater transparency, and new opportunities for employees to seek medical attention.
- Corporate Security
 - Continuously monitored more than 800 cameras in the Security Center.
 - Installed automatic gate at Northwest satellite location.
 - Partnered with Risk Management to utilize the security blotter system to accurately track theft, vandalism, and fire system outages.
- Material and Mail Services
 - Implemented Fastenal vending machines for personal protective equipment and consumables to increase efficiency and transparency and reduce overhead costs.
- Fleet Services
 - Equipped all fleet repair facilities with state-of-the-art diagnostic equipment, reducing vehicle downtime and repair costs.
 - Integrated fleet telematics system and asset management system to improve statistical data and reporting.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

- Provided online technical training and diagnostic information to technicians at all repair locations.
- Upgraded to cloud-based fuel management system to improve access and reporting capabilities.
- Replaced fleet paint and body estimating system with a more robust and intuitive system to improve estimate quality, efficiency, and cybersecurity defense.
- Utilized telematics system for early detection of equipment failures to improve safety, reduce operator downtime, and lower fuel usage.

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

2023-24 Performance Objectives

- Environmental, Health and Safety
 - Identify new environmental, health, and safety regulations and policy changes, and collaborate with other pertinent agencies.
- Corporate Security
 - Collaborate with Las Vegas Metropolitan Police Department to explore drone training for use in security, emergency management, and remote-site inspections.
 - Partner with FBI InfraGard and Utility Pipeline Coordination Group to stay informed about current water sector threats.
 - Partner with Southern Nevada Counter Terrorism Center and Las Vegas Metropolitan Police Department Area Commands and attend classified briefings on critical infrastructure threats.
- Material and Mail Services
 - Develop and implement best-practice inventory management and reporting to minimize duplications and realign materials management.
- Fleet Services
 - Lifecycle vehicles and equipment to ensure fleet efficiency and best return on investment.
 - Reduce overall cost per mile/hour of operation for all vehicles and equipment.
 - Without compromising safety or level of service, reduce fleet operating costs through standardization opportunities, inactive inventory reduction, and continuous process improvement.

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Achieved continuous monitoring of OSHA, EPA, and DIR regulations and guidelines to incorporate relevant changes.
 - Developed and implemented best practice in EHS management and reporting.
 - Partnered with the Public Employee Safety Officer (PESO) Coordination agencies.
- Corporate Security
 - Conducted over 150 security readiness drills to prepare security officers to better respond to unauthorized vehicles and persons, suspicious packages, and medical emergencies.
 - Hosted multiple confined space and rope rescue training scenarios at District reservoirs for local police and fire departments to increase responder readiness.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

- Increased security officer training for better response time to collisions involving District vehicles.
- Partnered with local FBI Office to provide employees with advanced insider threat training.
- Partnered with Valley law enforcement and area recycling centers and scrap yards to achieve a 75 percent reduction in backflow thefts.
- Material and Mail Services
 - Received and distributed over \$28.5M in materials.
 - Received zero findings during the July 2022 warehouse audit report by Baker Tilly Accounting Firm.
- Fleet Services
 - Completed the year with a fleet parts inventory on the dollar variance of 0.2 percent.
 - Recovered \$573,000 through vehicle and equipment auction and \$9,480 in vehicle warranty repairs through in-house warranty programs.
 - Replaced 54 vehicles and equipment pieces that were no longer cost effective to operate and maintain, while adding 16 pieces to accommodate growth and improve organizational capabilities.

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

2023-24 Performance Objectives

- Environmental, Health and Safety
 - Conduct instructor led EHS training for SNWA employees.
 - Conduct investigations for all incidents and identify corrective actions.
 - Provide EHS information updates through ePipeline, Hydroweb, and electronic management advisory and safety alert messaging.
- Corporate Security
 - Educate employees on the importance of safeguarding themselves and company property while crews are working in the field.
 - Engage in future construction and maintenance contracts to ensure security issues and concerns are proactively addressed.
 - Expand installation of Nightlock devices for additional safe rooms at all campuses and Big Bend Water District.
 - Provide security refresher training to employees on active shooter awareness and Nightlock safe-room operations.
- Emergency Management
 - Foster relationships with local municipal and emergency management professionals to reinforce the importance of including SNWA in local planning activities.
- Fleet Services
 - Partner with departments to better assess needs and improve design and capability of specialty vehicles and equipment.
 - Provide comprehensive preventive and predictive maintenance on vehicles and equipment to ensure optimum uptime.
 - Maintain Automotive Service Excellence Blue Seal certification and World Class Technician status.
 - Maintain I-CAR Platinum Class Certification for paint and body operations.
 - Train and certify fleet maintenance and service personnel in modern technology and repair techniques.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Environmental, Health and Safety
 - Applied Origami software risk accident/incident tracking and reporting processes through the Security Center.
 - Completed the EHS Annual Report highlighting major accomplishments in 2022.
 - Implemented the Safety Minute on Yammer.
 - Received and monitored 12 Safety Action Requests to ensure corrective actions were implemented.
 - Successfully completed the Safety Stand Down event.
- Corporate Security
 - Cross-trained officers in all posts and duties and maintained proficiency through weekly rotation.
 - Implemented the recommended corrective actions that were identified in the internal audit of the Security Division.
 - Provided advanced Active Shooter response and Stop the Bleed training for all Security Officers.
 - Provided daily security escorts for Customer Service employees servicing kiosk terminals.
 - Received the American Society for Industrial Security Las Vegas Chapter Outstanding Member Agency award for 2022.
 - Standardized 100 percent employee identification badge checks at all facility entrance points and maintained tighter control of access points.

Emergency Management

- Completed the Big Bend Water District Risk and Resilience Assessment (RRA) to identify highest risk facilities and areas to best use resources and improve resilience.
- Provided support for Clark County mutual assistance partners by offering utility expertise at the Multi-Agency Coordination Center for large-scale events, such as New Year's Eve, NASCAR, and Life is Beautiful.

Material and Mail Services

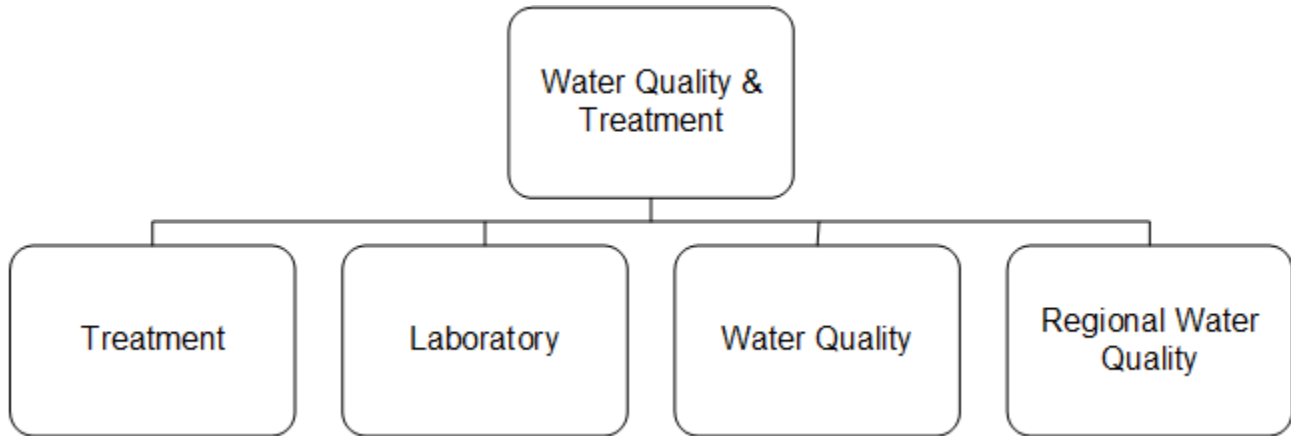
- Implemented a quarterly staff rotation between satellite facilities to ensure all team members can provide the same level of service to internal and external customers.
- Installed safety gates for added protection on mezzanines in the Valley View warehouse.
- Partnered with key internal customers to better assess customer needs and improve distribution of products.
- Provided cross-training for Material Services and Mail Services employees to fill in, as needed.
- Transferred a large amount of inventory and materials to the Alfred Merritt Smith Water Treatment Facility warehouse to better utilize storage and available space.

Fleet Services

- Completed over 9,684 work orders and 12,166 repair tasks on vehicles and equipment.
- Maintained Automotive Service Excellence Blue Seal of Service Award and World Class Technician status.
- Maintained I-CAR Platinum Class Certification for paint and body operation.
- Maintained standing as one of the 100 Best Fleets in North America through North American Fleet Management Association.
- Partnered with key customers to better assess their needs and improve end products and services provided.

WATER QUALITY & TREATMENT

Level: 4500



Mission

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

Department Description

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Energy	\$ 65,171	\$ 75,000	\$ 75,000
Materials and supplies	6,187,107	10,525,500	11,674,300
Maintenance and repairs	1,052,380	1,210,000	1,210,000
Rental and leases	—	—	—
Other employee expenses	555,729	777,395	768,140
Other operating expenses	440,770	1,124,250	1,879,450
Total Operating Expenses	8,301,157	13,712,145	15,606,890
Capital expenditures	2,229,677	13,358,955	30,460,897
Salaries and benefits	16,490,654	18,392,451	19,791,421
TOTAL DEPARTMENT EXPENDITURES	\$ 27,021,488	\$ 45,463,551	\$ 65,859,208
FTE POSITIONS	87.519	92.05	92.1

Department Performance

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

Laboratory. The Laboratory division is responsible for routine water quality monitoring, testing, and reporting. The analytical capabilities of the Laboratory cover a broad spectrum including: trace organic, trace inorganic, macro constituent, physical, wet-chemical, bacteriological, virological, protozoan, amoebas, and limnological analyses. With 36 employees, approximately 53,653 samples were collected, and 297,644 analyses performed in 2022. The number of analyses can fluctuate year-to-year depending on the year's monitoring requirements.

Water Quality Research and Development. The Water Quality Research and Development (R&D) division performs leading-edge water quality research and provides innovative treatment solutions with expertise in engineering, chemistry, and microbiology. Water quality and treatment research prepares the Organization for current and future U.S. Environmental Protection Agency (USEPA) compliance, advances the science of direct and indirect potable reuse, and provides guidance for full-scale capital improvement projects. Research areas focused on low-level environmental contaminants, emerging pathogens, and wastewater surveillance. In 2022-23, R&D was involved in \$17M of research in a principal investigator role and published 29 peer reviewed manuscripts.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

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

Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- Provide updated model predictions of Lake Mead water quality as the US Bureau of Reclamation (USBOR) updates their predictions of Colorado River Operations to inform water treatment.
- Collaborate with LVVWD Operations and Nevada Division of Environmental Protection-Bureau of Safe Drinking Water (NDEP-BSDW) on the installation and evaluation of ultraviolet light emitting diode (UV-LED) technology for *Legionella* inactivation.
- Complete all Safe Drinking Water Act (SDWA) monitoring requirements for SNWS, LVVWD, North Las Vegas, Henderson, Boulder City, Nellis Air Force Base, BBWD, Blue Diamond, Kyle Canyon, Jean, Searchlight, Sloan Army Reserve, and Kapex.
- Support water quality monitoring activities at Lake Mead, water treatment plants, and distribution systems.
- Collaborate with member agencies to prepare for new regulatory requirements under the SDWA's Revised Lead and Copper Rule (LCRR).
- Implement new digital Polymerase Chain Reaction (PCR) technology into routine monitoring protocols for viruses, free-living amoeba, SAR-CoV-2, and other emerging microbial pathogens.
- Support compliance monitoring for *Escherichia coli*, *Cryptosporidium*, *Legionella pneumophila*, and algal toxins in drinking and source waters.
- Implement new Labworks Laboratory Information Management System (LIMS) with all functioning aspects needed to properly monitor water for all requirements of the SDWA. Continue to refine new LIMS, by identifying efficiencies in various workflow processes through use of enhanced configuration in LIMS.
- Complete replacement of wireless temperature monitoring system used for sample preservation and sample analysis. Upgrading the wireless temperature monitoring system will improve compliance integrity of sample storage requirements and data being produced by the laboratory.
- Complete The NELAC Institute International Standards Organization/International Electrochemical Commission (TNI ISO/IEC) 17025 gap assessment to identify corrective actions for continuous improvement upon quality driven efficiency in the laboratory.
- Procurement and installation of new purge and trap instrumentation for volatile organic compound analysis.
- Continue participation to complete Low Lake Level Treatability Study.
- Continue participation to complete design of enhancements to the ozone and oxygen systems at AMSWTF and RMWTF.
- Complete replacement of the motor control center (MCC) for the backwash pumps at the AMSWTF.
- Complete refurbishment of the remaining two Base Load Oxygen Compressors (BLOC) at AMSWTF and RMWTF.
- Replace ozone/oxygen dew points analyzers at the AMSWTF and RMWTF.
- Complete electrical upgrades at the BBWD raw water pump station.
- Work with the Supervisory Control and Data Acquisition (SCADA) team to upgrade the SCADA system at the BBWD.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Continued to analyze Lake Mead and Mohave measured water quality data and to advise management on possible environmental impacts to the treatment system. Autonomous water quality monitoring platforms continue to provide additional information to supplement sampling by personnel. These analyses have become increasingly focused on predicting the impact of falling lake levels on future water quality.
- Continued the weekly wastewater surveillance effort at all the major wastewater treatment facilities in Southern Nevada. Summary reports were submitted to SNWA Management, the collaborating wastewater agencies, the Southern Nevada Health District (SNHD), the press, and the Governor's Pandemic Response Coordinator.
- Completed lab-scale and field-scale evaluations of conventional and innovative UV treatment technologies to inactivate *Legionella pneumophila* and prepared Preliminary Engineering Reports for submission to NDEP-BSDW.
- Coordinated and completed SDWA monitoring requirements for all member agencies. Met or surpassed SDWA monitoring requirements for SNWS, LVVWD, North Las Vegas, Henderson, Boulder City, Nellis Air Force Base, BBWD, Blue Diamond, Kyle Canyon, Jean, Searchlight, Sloan Army Reserve, and Kapex.
- Participated in the LCRR workshop with member agencies and NDEP-BSDW, and the LVVWD Groundwater Working Group.
- Completed required tasks for Unregulated Contaminant Monitoring Rule 5 (UCMR5), such as updating monitoring location and schedules for applicable member agencies. The monitoring period for UCMR5 will be between 2023-2025.
- Procurement of new digital PCR instrumentation for the monitoring of viruses, free-living amoeba, SARS-CoV-2, and other microbial pathogens.
- Developed sampling protocols for use in Next Generation Sequencing for monitoring treated wastewater returned to Lake Mead and the potential impacts on the treatment plant intake.
- Supported the ongoing efforts of monitoring for *Escherichia coli*, *Cryptosporidium*, *Legionella pneumophila*, and algal toxins.
- The LIMS Request for Proposal (RFP) process was completed. Labworks was chosen as the vendor to configure and implement a new LIMS, which will improve the laboratory's efficiency and traceability. The efficiency will cover the life of the sample from collection and receipt to analysis and reporting data of known and documented quality.
- Purchased new ion-chromatography mass spectrometer instrumentation for perchlorate analysis by EPA Method 332.0.
- Completed replacement of four critical use chlorine feeders at the AMSWTF.
- Completed replacement of one large backwash pump and motor, and MCC at the AMSWTF.
- Completed repairs to the gearboxes on weir gates at the AMSWTF.
- Completed repairs to leaking joints in ozone contactor influent channel at the AMSWTF. In addition, the following were replaced at AMSWTF: programmable logic controller (PLC) for the fluorosilicic acid feed system, 36-inch backwash rate of control valve, gearbox, actuator, and all electrical capacitors for ozone generators.
- Completed refurbishment of two BLOCs, one at the AMSWTF and another at the RMWTF.
- Completed replacement of electrical actuators for filter 23 and two air valves, including new gearboxes on Inlet and Drain Valve, at the AMSWTF.
- Completed replacement of critical electrical breakers at the RMWTF.
- Recoated the interior of the 1130 zone tank at the BBWD.
- Supported the install of new Cathodic Protection at 1130 Tank while being inspected and coated.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

- Repaired leak in 36-inch finished water line.
- Replaced failed air conditioning unit on main admin building MCC Room in BBWD
- Completed replacement of heating, ventilation, and air conditioning (HVAC) system at the BBWD ozone building.
- Completed repairs to #1 return wash water (RWW) pump and motor at AMSWTF.
- Replaced rake drive motors on #1 and #2 thickener basins at AMSWTF.
- Replaced all drying bed inlet valve and actuators at AMSWTF.
- Supported Laboratory division in collecting of compliance Lead and Copper samples for BBWD.
- Replaced fluorosilicic acid bulk tank #1 at RMWTF.
- Completed water quality station upgrades at contactor influent, floc influent, and both floc effluent stations at the RMWTF.

Strategic Plan Goal – Deliver an outstanding customer service experience

2023-24 Performance Objectives

- Working with Information Technology transition the Lower Colorado River Water Quality Database to a new, more customer friendly, platform. This will enable internal and external customers to access water quality data more easily.
- Continue serving Water Research Foundation (WRF) on various Project Advisory Committees and Technical Advisory Committees.
- Continue serving the International Ozone Association – Pan American Group (IOA-PAG) on several committees and International President.
- Continue serving the Arizona Department of Environmental Quality, Nevada Direct Potable Reuse Forum, and SNWA Engineering through participation on discussion panels related to potable water reuse implementation.
- Continue serving Nevada public health officials through expanded implementation of wastewater surveillance for various pathogen and illicit drug targets.
- Implement customer data portal feature within Labworks LIMS to allow the Laboratory's customers access to available data.
- Support various ongoing research projects by providing a high-level of quality in sampling and analytical services within a timely manner, including extensive lake and sources monitoring, complex storage/distribution system Trihalomethane (THM) monitoring, Legiolert study sampling, Lead and Copper study sampling, and additional ad-hoc water quality monitoring requests.
- Provide outstanding customer service to external customers through water quality investigations by responding to inquiries in a timely manner (within one business day), educating customers about water quality and what to look for, and leave them feeling that their concerns matter and that we want to help them resolve their problem.

2022-23 Major Accomplishments

- Prepared a fact sheet and provided WRF Research to LVVWD Public Information to better communicate the facts associated with per- and polyfluoroalkyl substances (PFAS).
- Served as a Guest Associate Editor for AWWA Water Science's Topical Collection on PFAS Analytics and Treatment.
- Generated wastewater surveillance data that was cited by Governor Sisolak as a contributing factor in policy changes.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

- Developed first ever approach for detecting and quantifying antifungal resistant *Candida auris* in wastewater as a means of characterizing the ongoing public health crisis in Southern Nevada. Data were used to justify expanded public health surveillance in high prevalence areas.
- Supported various water quality monitoring requests and studies, for LVVWD, the Legiolert Study, and assisted R&D in ongoing *Legionella* removal efficacy studies at Well 101 and Well 97.
- Water Quality Monitoring staff assisted in multiple Public Information campaigns in support of media requests. Staff captained the sample vessel for media requests, tours of Intake Pump Station 1 (IPS-1), and routine photos of the lower lake levels.
- Assisted Regional Water Quality maintenance and repairs of the water quality monitoring buoys deployed in Lake Mead.
- In 2022, the Water Quality Monitoring team responded to water quality investigations throughout the LVVWD distribution system, totaling 39 samples for the year.
- Supported new and ongoing research projects with quality, timely data, such as WRF 5035, the Well *Legionella* Disinfection project, supported the ozone system replacement project, the Ketos-Searchlight project, the Horizon Lateral chlorine decay study, WRF 5082, and WRF 5053.

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

2023-24 Performance Objectives

- Staff will continue to use the Aquatic Ecosystem Model 3D-driven Lake Mead Model to evaluate changes due to climate drivers and changes in inflow, outflow, and water storage in the quality of water leaving Lake Mead and entering Lake Mohave at various lake surface elevations. Additional modeling efforts will focus on simplified predictions of water quality upstream of Lake Mead.
- Review the outcome of the Low Lake Level Treatability Study and evaluate potential treatment solutions for continued regulatory compliance.
- Evaluate the efficacy of innovative dissolved air flotation approaches to address potential for elevated turbidity and algal events resulting from lowering lake elevations.
- Evaluate effect of potential water quality changes (e.g., temperature, organic character/content, bromide) and water age on disinfection by-product (DBP) formation in the distribution system.

2022-23 Major Accomplishments

- Regional Water Quality provided guidance for water quality at the drinking water intakes for a range of lake surface elevations to guide the Enterprise Risk Management work. Simulated scenarios included the impacts of drawdown, projected rising air temperature from peer-reviewed climate models, Federal inflow and outflow projections, and turbidity.
- Regional Water Quality advised partners at Lake Mead National Recreation Area, USBOR-Lower Colorado River Region, and other Colorado River decision makers on the water quality impacts of continued drought conditions.
- Evaluated the impact of increased temperature on ozone system performance and bromate formation as part of the full-scale Ozone System Evaluation.
- New leak detection system was installed in the SNWA Laboratory's water purification system to help indicate leaks before a major leak event occurs.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

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

2023-24 Performance Objectives

- Provide water quality predictions based on predicted water levels to internal and external partners evaluating water treatment options and obstacles imposed by the drought.
- Continue evaluation of conventional and innovative technologies to inactivate *Legionella* in LVVWD groundwater supplies (e.g., Ultra-Violet-Low Pressure, High Output, Ultra-Violet-Light Emitting Diodes).
- Continue work on externally funded projects (i.e., emerging DBPs, online water quality monitoring, identifying and monitoring emerging chemical and pathogen contaminants, treatment evaluations, machine learning/AI) by the WRF, USBOR, USEPA, National Science Foundation (NSF), and the U.S. Centers for Disease Control and Prevention (CDC).
- Continue to develop the wastewater epidemiology program and track other constituents of interest to public health.
- Implement new digital PCR technology into routine monitoring protocols for viruses, free-living amoeba, SAR-CoV-2, and other emerging microbial pathogens.
- Process samples using Next Generation Sequencing protocols, 16S Metagenomics, and analyze data from samples for one year to see impact to microbial communities impacting Lake Mead.
- Collaborate with SNWA R&D to test and validate UV treatment systems at LVVWD groundwater wells for the effectiveness of treating *Legionella pneumophila*.
- Coordinate with Information Technology to ensure the Spatial Information Portal and the Navigator applications are best suited and up to date to complete support required monitoring tasks.

2022-23 Major Accomplishments

- The linked Lake Mead-Water Treatment model has been implemented and is being revised to incorporate energy costs into the prediction matrix.
- Regional Water Quality received funding from the USBR WaterSMART grant program to perform “Robust Updates to Advanced Lake Models to Inform Future Drinking Water Treatment Needs.”
- Installed first full-scale ultraviolet light emitting diode (UV-LED) reactor at LVVWD groundwater well for *Legionella* inactivation.
- Expanded wastewater surveillance capabilities to include other targets of interest to public health and the water industry, including SARS-CoV-2 variants of concern, *Candida auris*, monkeypox, enteric viruses, *Cryptosporidium*, *Giardia*, and illicit drugs and their metabolites.
- Awarded externally funded projects from the Water Research Foundation (3 Projects), USEPA (1 Project) and Bureau of Reclamation (BOR) (2 Projects).
- Completed externally funded projects: WRF 4960, 5205, 5305, 5104, 5031, 4913, 5048, 4971 and 4833, and Strategic Environmental Research and Development Program (W912HQ19C00210), BOR R19AC00095 and NSF Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP).
- Procurement of new digital PCR instrumentation for the monitoring of viruses, free-living amoeba, SARS-CoV-2, and other microbial pathogens.
- Developed sampling protocols for use in Next Generation Sequencing for monitoring treated wastewater returns to Lake Mead and the potential impacts on the treatment plant intake.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Quality & Treatment
Fiscal Year Ending June 30, 2024

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

2023-24 Performance Objectives

- Pursue external research funding to support water quality and treatment research.
- Procurement and installation of new autoclave for Laboratory Services prep laboratory.

2022-23 Major Accomplishments

- Involved in \$17M of research projects in a principal investigator role and published 29 peer reviewed manuscripts.
- Renewed service contracts to ensure long service life for analytical equipment.
- Purchased and installed the final two legacy dishwashers in the Laboratory Services prep laboratory.

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

2023-24 Performance Objectives

- Continue to be a world-class leader in water quality and treatment research as demonstrated by scientific journal and report publications, industry presentations and service on advisory committees.
- Complete all water quality monitoring requests and data reporting for customers in timely manner that meets customer's needs.
- No SDWA monitoring or compliance reporting violations for member agencies.
- Continued stewardship and support with the new requirements under the LCRR.
- To ensure a safe workplace and promote a positive safety culture, continue to support suggestions on ways to remain incident and accident-free within the laboratory.
- Continue to meet method certification criteria through performance testing and adherence to laboratory accreditation authorities.

2022-23 Major Accomplishments

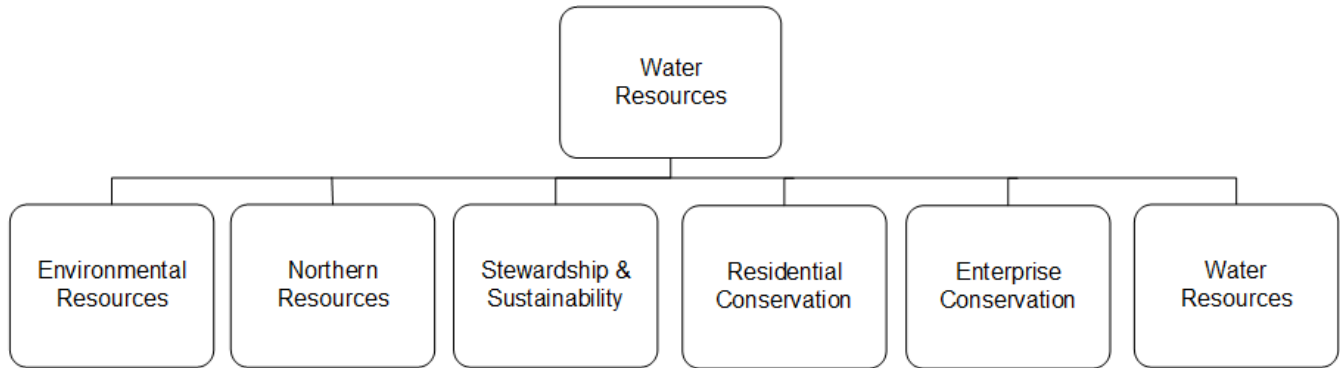
- The SNWA Laboratory received TNI ISO/IEC 17025 Accreditation in December 2022 to become the first Public Water System (PWS) laboratory in Nevada to be TNI Accredited. This is the most stringent level of environmental laboratory accreditation and bolsters LVVWD in being a world-class organization. This also completes the corrective action from the LVVWD internal assessment report that recommended getting TNI ISO/IEC Accreditation.
- The laboratory addressed approximately 120 corrective actions from TNI ISO/IEC 17025 third-party gap assessments in 2019 and 2022.
- Regional Water Quality published four papers in scientific journals and two additional articles in scientific organization magazines.
- R&D published 29 articles in scientific journals, gave 42 conference presentations, and submitted reports for all completed projects.
- No SDWA monitoring or compliance reporting violations for member agencies.
- Maintained status as an AWWA Presidential Award facility at both AMSWTF and RMWTF.
- No substantial deficiencies reported following NDEP Sanitary Inspections at AMSWTF, RMWTF, and BBWD.

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WATER RESOURCES

Level: 7100



Mission

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

Department Description

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

Budget Objectives and Highlights

The 2023-24 Water Resources department budget of \$175,758,432 contains funding to maintain and enhance the necessary functions required by SNWA to provide quality services to internal and external customers. Funding will support water and environmental resource management efforts and conservation initiatives designed to help the community meet its conservation goal. Planned expenditures reflect SNWA's long-term commitment to increased water conservation.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Water resource investments	\$ 7,021,026	\$ 31,569,000	\$ 34,144,000
Materials and supplies	1,187,090	7,471,290	11,597,820
Maintenance and repairs	1,686,819	2,273,290	2,108,400
Rental and leases	34,070	29,200	37,200
Other employee expenses	89,389	354,060	368,670
Other operating expenses	6,537,990	13,466,886	17,510,160
Total Operating Expenses	16,556,384	55,163,726	65,766,250
Capital expenditures	27,790,631	60,376,592	82,933,768
Salaries and benefits	12,973,962	14,649,415	15,821,449
TOTAL DEPARTMENT EXPENDITURES	\$ 57,320,977	\$ 130,189,733	\$ 164,521,468
FTE POSITIONS	70.564	73.8	73.75

Department Performance

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

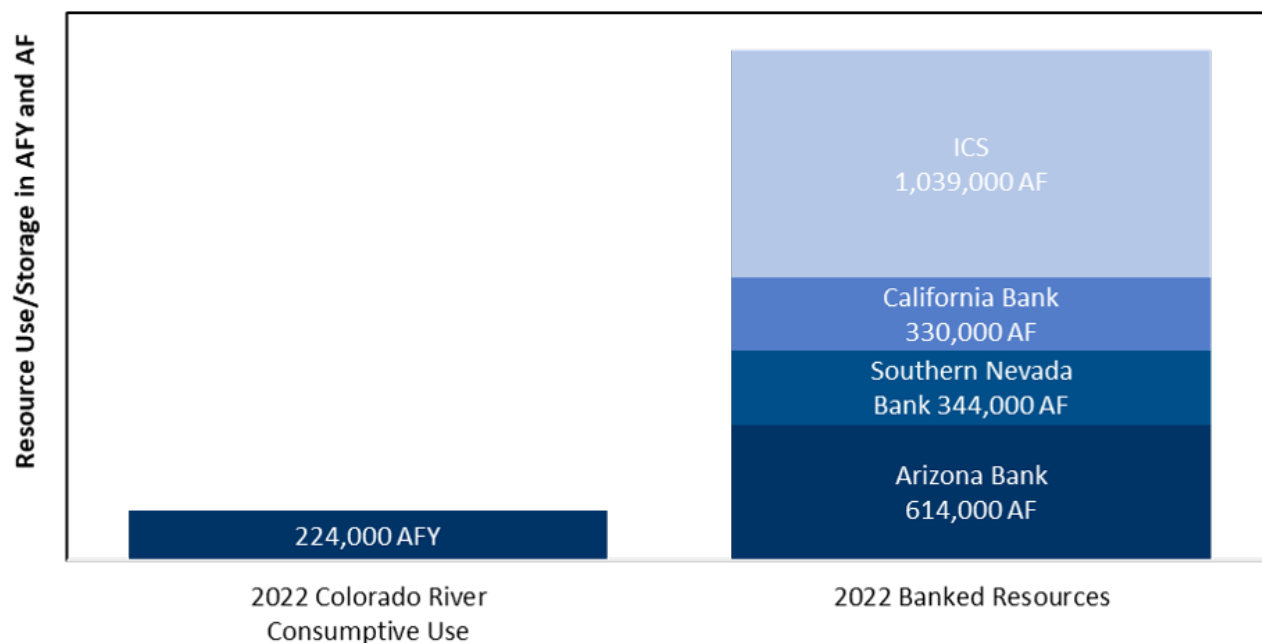
The division continued monitoring local and regional hydrologic conditions in 2022-23 and worked with other Colorado River Basin states to continue 2019 Drought Contingency Plan (DCP) implementation. Through local and collaborative efforts, the SNWA banked approximately 89,000 acre-feet of water in 2022, expanding the storage of temporary resources available for flexible use in meeting the community's water resource needs.

The SNWA has stored 2.3 million acre-feet of water in total through 2022, more than ten times Nevada's 2022 consumptive Colorado River water use. The chart below compares 2022 consumptive water use with the total volume of temporary resource supplies banked through 2022.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

The chart below compares 2022 consumptive water use with the total volume of temporary resource supplies banked through 2022.

**SNWA Banked Resources
Through Calendar Year 2022**



Residential Conservation. The Residential and Water Use Compliance Conservation division develops and implements demand management programs and strategies that target consumptive water use reductions among single-family residential homeowners. The division administers rebate and incentive programs for residential customers, including the Water Smart Landscapes (WSL) program. It also oversees water use compliance enforcement for the LVVWD and continues to support regional water waste enforcement efforts in Henderson and North Las Vegas.

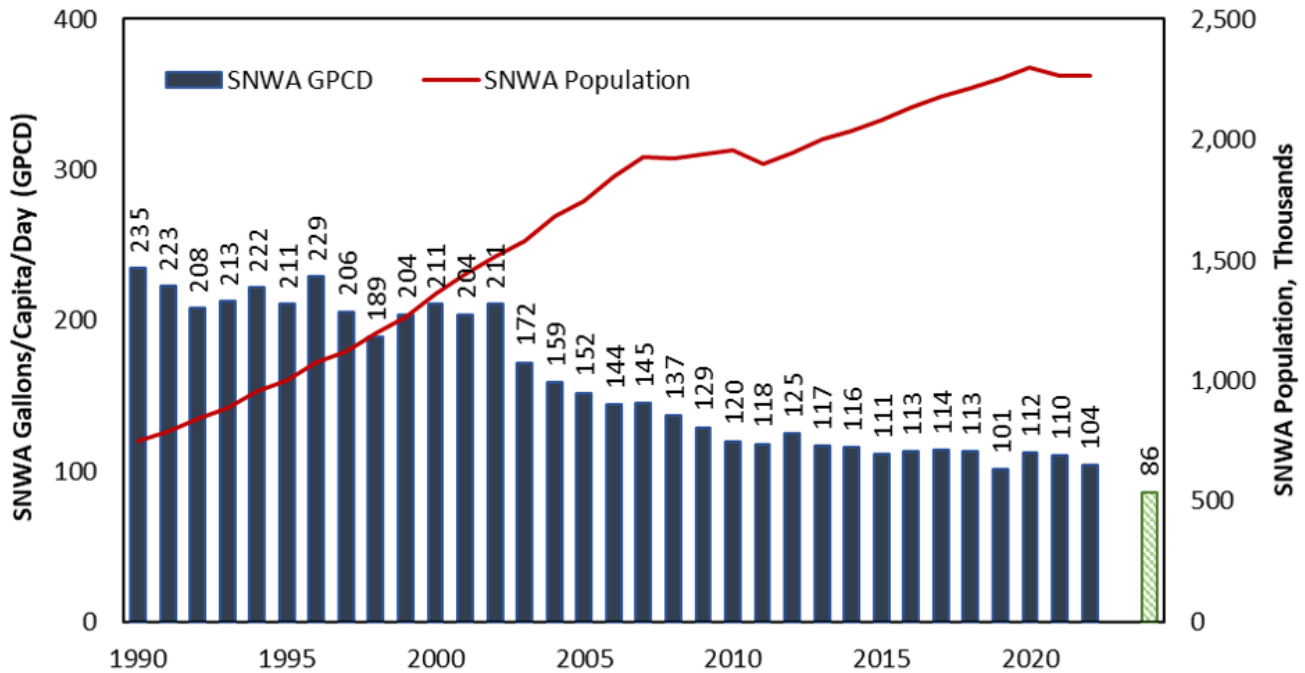
Enterprise Conservation. The Enterprise Conservation division administers outreach, engagement and incentive programs that target all sectors except single-family residential. The division aggressively promotes turf conversions and administers the Water Efficient Technologies (WET) incentive program for evaporative cooling replacement or efficiency projects, process water optimization and non-WSL-related turf conversions. The division also manages planning and implementation activities associated with Assembly Bill 356 (AB356), which effectively prohibits non-functional turf in non-single-family sectors, effective January 1, 2027.

The two conservation divisions work collaboratively to develop and administer regional conservation programs aimed at helping the community achieve its water conservation goal of 86 gallons per capita per day (GPCD) by 2035. The SNWA monitors regional water demand trends and calculates GPCD by dividing annual SNWA Colorado River water diverted (excluding off-stream storage) and member well production, less corresponding Colorado River return-flow credits, by the total SNWA resident population served per day.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

This chart shows 2022 per capita water use at 104 GPCD, a 5.5 percent reduction from the prior year and the lowest per capita water use level experienced to date except for 2019, which was atypically cool and wet.

SNWA Per Capita Water Use
1990 - 2022



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 2023-24. Improvements in agricultural practices, livestock genetics and husbandry have increased efficiency and effectiveness in utilizing federal range land and private forage. The ranch continues to produce and deliver quality products and services, exhibit scientific-based stewardship, and demonstrate financial and organizational efficiency.

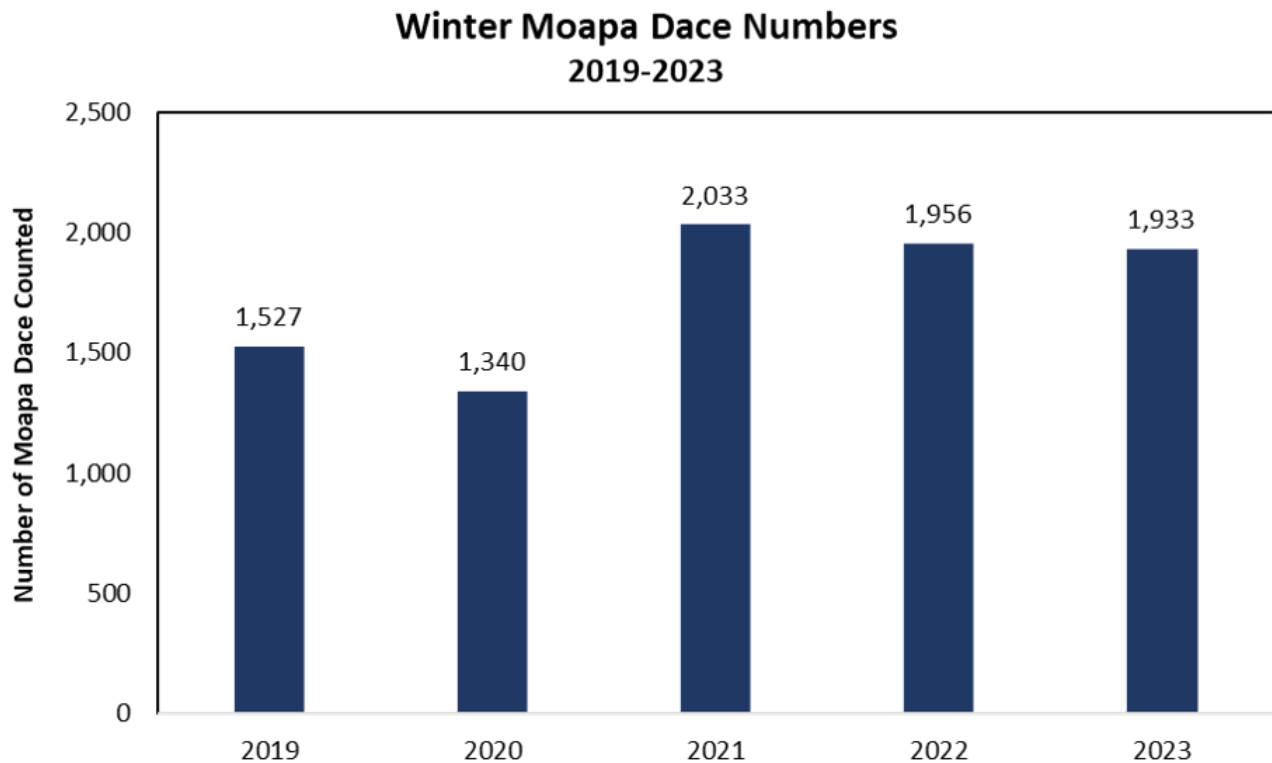
Environmental Resources. The Environmental Resources division conducts environmental planning, compliance, and natural resource management for SNWA, LVVWD and small systems. The division supports policy initiatives on the Colorado River and other resource areas; coordinates with federal and state agencies on environmental and regulatory issues; prepares environmental compliance documents; conducts biological and environmental monitoring, restoration, and reporting for existing facilities and new capital construction; and coordinates climate change adaptation initiatives. The division also coordinates the Sustainability Cross-Departmental Team to implement the organization’s Sustainability in Action Plan.

Stewardship and Sustainability. The Stewardship and Sustainability division manages Wash programs and the WSNA, including restoration, monitoring, compliance, and outreach activities. The division is responsible for the Wash Coordination Committee stakeholder process, implementing the Wash

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

Comprehensive Adaptive Management Plan and coordinating the Lower Las Vegas Wash Stabilization Plan and associated environmental compliance. In addition, the division is responsible for the WSNA Stewardship Plan and Habitat Conservation Plan (HCP) for WSNA and the Hidden Valley Property. The division conducts management activities to benefit the Moapa dace and other sensitive species on site. Effective stewardship of the habitat used by the Moapa dace and other species under the WSNA HCP allows for flexible management of water resources in the upper Muddy River area.

Restoration efforts at the WSNA have bolstered Moapa dace populations. This federally endangered fish is endemic to the upper Muddy River. After a period of relatively low numbers, fish populations have increased and remained stable for the last three years. This chart shows the Moapa dace population rising from 1527 individuals in 2019 to nearly 2,000 in 2023.



Strategic Plan Objectives and Accomplishments

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

2023-24 Performance Objectives

- Acquire and manage resources to meet current and future water demands, including implementation of conservation initiatives that improve efficiency and reduce water waste.
- Collaborate with partners on resource challenges and implement actions to mitigate Lake Mead water level declines. Support the development, operation, and maintenance of groundwater facilities for the LVVWD, small water systems and Great Basin Ranch. Prepare water resource assessments, evaluate system vulnerabilities, and take actions to improve system reliability.
- Conduct water-quality sampling and hydrologic monitoring to evaluate aquifer and water quality conditions and trends affecting LVVWD and SNWA resources.
- Provide environmental compliance and monitoring activities in accordance with permit requirements to operate existing SNWA, LVVWD and small systems facilities. Prepare and manage environmental compliance processes to support the development of new projects.

2022-23 Major Accomplishments

- Reviewed and updated the SNWA Water Resource Plan and SNWA Water Budget; stored approximately 89,000 acre-feet of temporary resources in 2022.
- Supported the development and implementation of new policies and programs to reduce consumptive water use. Updated rules and codes to restrict or reduce consumptive uses associated with new turf installations, golf course development, residential swimming pools, evaporative cooling and septic systems. Also supported the implementation of rate changes to promote water conservation, water budget reductions for golf courses and the septic system conversion program.
- Supported the implementation of the policies and programs designed to protect critical Lake Mead elevation, including the 2019 Drought Contingency Plan (DCP), 500+ Plan and Colorado River Pilot System Conservation Program. Water banking and other collaborative drought response actions have reduced Lake Mead's water level decline by an estimated 86 feet.
- Managed, supported, and collaborated with internal, external, and international partners to implement water and environmental management programs along the Las Vegas Wash, WSNA and Colorado River. Began implementation of the Wash Long-Term Operating Plan and the Habitat Conservation Plan for WSNA and the Hidden Valley property. Efforts also include implementation of the Lower Colorado River Multi-Species Conservation Program and Glen Canyon Adaptive Management Program.
- Provided environmental compliance and monitoring support for the operation of existing facilities and the development of new projects, including the Metropolitan Regional Recycled Water Program, the Lower Las Vegas Wash project, the Horizon Lateral project, the Boulder Flats Solar project, and Garnet Valley water and wastewater systems.
- Conducted water quality sampling and hydrologic monitoring of surface water and groundwater resources; represented Nevada as a member of the Colorado River Basin Salinity Control Forum and collaborated with other stakeholders to protect Nevada Colorado River return flows by ensuring continued compliance with U.S. Environmental Protection Agency salinity standards for the Colorado River.

Strategic Plan Goal – Deliver an Outstanding Customer Service Experience.

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Modified and administered existing conservation incentive programs; expanded conservation staffing to support conservation initiatives, including water use compliance activities in Henderson and North Las Vegas. Conducted more than 12,700 residential property visits for WSL and more than 100 educational site visits with customers requiring assistance to abate water waste violations.
- Conducted 80 education and outreach events to community manager associations and single-family residential homeowners to support water conservation initiatives. Developed two state-certified Community Manager training workshops, an HOA financial workshop and a Tree Care workshop to support the implementation of AB356.
- Enhanced GIS tools to measure and classify turf. Pre-measured and classified turf at all municipal parks and Master Homeowner Associations.
- Performed data analysis and modeling to inform the development of conservation programs and policies.

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

2023-24 Performance Objectives

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Conducted research and analysis to support conservation goal (86 GPCD) achievement and continued implementation of the Conservation Strategic Plan. Reduced per capita water use by six GPCD between 2021 and 2022. Efforts resulted in a 653-million-gallon water savings for 2022.
- Worked with stakeholders to implement the 2019 DCP and 500+ Plan, administered Colorado River water delivery and interstate banking agreements and provided technical support for regional water recycling efforts. Expanded SNWA water banking opportunities and continued to explore collaborative resource projects to develop future resources.
- Modified the Colorado River Simulation System model to evaluate water resource availability under various long-term water supply and demand planning scenarios to support development of the 2023 SNWA Water Resource Plan; simulated proposed modifications to near-term reservoir operations and consumptive use reductions to support the development of alternatives for analysis in the Supplemental Environmental Impact Statement to the 2007 Interim Guidelines.
- Tracked the organization's carbon emissions footprint and monitored key risk indicators and controls to provide an early warning of climate change risks to SNWA. Identified actions to mitigate those risks.
- Maintained regional monitoring networks to collect long-term hydrologic and climate data. Funded the operation of a ground-based weather modification generator to increase precipitation in the Spring Mountains.
- Collaborated with state, local and international partners to implement water and environmental management programs on the Colorado River from Lake Powell to the Colorado River Delta. Continued to conduct and support environmental monitoring and management programs at the Wash and WSNA, including species monitoring, habitat restoration, fuels removal and firebreak management.
- Continued to develop streamflow forecasts, SNOTEL sensitivity project, and MODIS Snow Water Equivalent projects and coordinated with central Arizona Project N-drip water irrigation conservation initiative. Participated in, reviewed, managed, and reported on the BOR Lower Basin AG Water Savings pilot project.

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

2023-24 Performance Objectives

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Designed and implemented a monitoring program to assess consumptive uses by evaporative cooling towers at 23 sites throughout the Las Vegas Valley; collaborated with a third-party vendor to design a pilot demonstration study to assess the capability of radiant cooling technology to reduce head loading to evaporative cooling systems.
- Pursued the implementation of a Water Smart Plumber program and continued evaluation of a service line warranty program.
- Deployed Advanced Metering Infrastructure (AMI) to support improved compliance goals, used metering technology to notify customers of potential watering restriction violations and used AMI data to assess customer watering patterns to assist in leak detection. Used metering data to guide the deployment of water waste investigators for improved effectiveness.
- Compiled and integrated existing well systems, groundwater and water quality data into the Common Data Repository to enhance cross-departmental collaboration. Augmented Business Intelligence software solutions to enhance organizational communication and collaboration related to well systems, water usage and water quality information.
- Supported pilot studies to assess state-of-the-art water-quality treatment technologies at production wellheads. Initiated pilot studies to evaluate potential water savings associated with compliance-programmed smart controllers.

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

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Installed a Geostationary Operational Environmental Satellite telemetry system to transmit real-time water quality data characterizing Las Vegas Wash flows at the confluence with Lake Mead.
- Secured approximately \$25 million in state and federal funding to support water conservation programs, environmental initiatives, drought response efforts and system improvements.
- Partnered with hundreds of volunteers to revegetate several acres at the Wash and WSNA with thousands of native trees, shrubs and other vegetation.
- Collaborated with Information Technology to develop new versions of program management through software and field hardware upgrades.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Water Resources
Fiscal Year Ending June 30, 2024

- Prepared water demand forecasts and updated long-range demand planning scenarios to support planning and operations.

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

2023-24 Performance Objectives

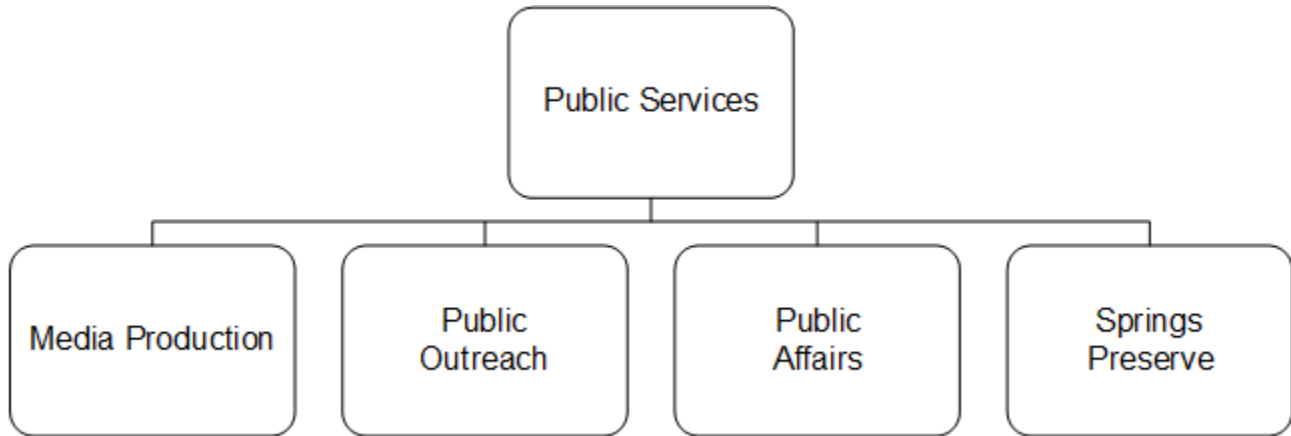
- Lead an interdepartmental team to develop a comprehensive annual groundwater management and well operations plan.
- Implement the Conservation Strategic Plan and meet or exceed annual benchmarks for SNWA conservation programs.
- Improve communication and coordination within the organization and among SNWA member agencies.
- Sustainably operate the Great Basin Ranch and implement department/division priorities within budget.

2022-23 Major Accomplishments

- Worked collaboratively with an interdepartmental team to update a comprehensive annual groundwater management and well maintenance and operations plan.
- Strengthened performance benchmarks for conservation programs for 2023 and reported progress to internal and external stakeholders for 2022 performance. Exceeded 2022 program benchmarks for WSL program participation, WET program water savings and water use compliance investigations.
- Continued to support implementation of the Conservation Strategic Plan and tracked progress. Conservation programs, policies and related outreach and education efforts have helped to reduce per capita water use by six GPCD between 2021 and 2022. Efforts resulted in a 653-million-gallon water savings for 2022.
- Developed a home audit class to address customer issues associated with higher water bills.
- Met the projected ranch revenue budget and operated the department within budget.

PUBLIC SERVICES

Level: 7200



Mission

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

Department Description

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

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

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

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

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

SNWA USES	Expenditures		
	Actual 2021-22	Budget 2022-23	Budget 2023-24
Materials and supplies	\$ 378,359	\$ 531,340	\$ 591,600
Maintenance and repairs	143,813	579,190	3,539,900
Rental and leases	—	5,000	5,000
Other employee expenses	24,060	147,981	137,896
Other operating expenses	4,706,097	5,677,040	6,394,296
Total operating expenses	5,252,329	6,940,551	10,668,692
Capital expenditures	—	—	—
Salaries and benefits	5,582,733	6,441,191	5,137,983
TOTAL DEPARTMENT EXPENDITURES	\$ 10,835,062	\$ 13,381,742	\$ 15,806,675
FTE POSITIONS	32.9	35.0	23.0

Budget Objectives and Highlights

The 2023-24 budget remains consistent with the organization's efforts to enhance efficiency and service to internal and external customers.

Department Performance

Department staff worked a hybrid at-home/in-office schedule, while continuing to support the organization, its initiatives, and priorities:

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

As water conservation remained a top priority, Public Affairs supported several efforts on behalf of the LVVWD and SNWA. The division coordinated updates to the LVVWD Service Rules with conservation-related initiatives that limited the size of new residential pools to no more than 600 square surface feet, reduced golf course water budgets from 6.3 acre-feet of water per irrigated acre to 4 acre-feet per irrigated acre annually, prohibited water service to new development using evaporative cooling systems and revised the incentive to replace industrial cooling towers or swamp coolers with a dry-cooled system or improve the water efficiency of existing evaporative cooling systems. Staff also continued to help with the implementation of AB 356 language and non-functional turf definitions across all Southern Nevada municipalities. These updates to the Service Rules aim to strengthen the system's performance, integrity, and reliability, and will help conserve millions of gallons annually from consumptive uses of water.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

The 82nd Session of the Nevada Legislature convened on February 6, 2023. The Legislative Team worked on several bills with a nexus to water, including: groundwater boards, basin assessments, and a resolution urging the United States Bureau of Reclamation to consider actions, alternatives and measures for the protection and management of the Colorado River. In addition, the Legislative Team advocated for SNWA's omnibus water bill, Assembly Bill 220, which addresses five major issues focused primarily in Southern Nevada. The bill prohibits new septic systems in areas served by the Colorado River, codifies Colorado River water conservation initiatives, addresses development of water systems in outlying areas, makes modest changes to Nevada Water Law related to revocable permits, and makes changes to the Las Vegas Valley Groundwater Management Program.

Division staff also engaged with the Southern Nevada Health District and SNWA member agencies to further the septic conversion program focusing on connecting valley-wide septic systems to the sewer system to reclaim that water. Staff has been working to receive state and local funding to help offset septic conversion costs for its customers.

Staff continued to support the organization's small systems in Laughlin, Kyle Canyon, Blue Diamond, Searchlight and Jean, giving status and operational reports at each system's monthly town advisory board meetings. These systems experience their own unique challenges and staff's involvement and work with other departments has created solutions and/or processes to help achieve system success.

In an effort to increase awareness of water-related issues, educate the public and gain community support, Public Affairs continued coordination of a speakers bureau program and gave presentations and engaged in discussions with more than 60 community businesses and groups this past year. In addition, staff coordinated and supported the Colorado River Water Users Association's conference which took place in December 2022 and had a record attendance of nearly 1,400 attendees, representing all the Colorado Basin states, multiple Native American tribes, the federal government, and the country of Mexico.

Division staff also supported the organization's funding initiatives through grant development and fundraising activities to help offset programming, capital and operational expenses. Through staff's efforts, the organization received nearly \$22.5 million in funding from the Bureau of Reclamation (BOR) for various projects, including Lower Wash erosion control structures (\$9,040,000), the Lake Mead Hatchery Water Pipeline (\$8,499,582), Water Smart Landscaping rebates (\$2,000,000), the Septic System Conversion Incentive program (\$4,747,500), the Las Vegas Wash riparian restoration (\$900,500), water treatment research programs (\$200,000), and evaporative cooling technology research (\$50,000). The Nevada Department of Wildlife also awarded staff \$400,000 for design of the Lake Mead Hatchery Water Pipeline.

The Springs Preserve was also awarded funding through several local and federal funding sources, including \$11,991 for the Ponds Wildlife Exhibit, \$25,000 for the Butterfly Habitat, and \$205,000 from the U.S. Fish and Wildlife Service Recovery Challenge grant for work with the Pahrump poolfish.

Media Production. Media Production develops materials to reach customers through websites, social media, television, email and print.

Interactive Media

Over the past year, the Media Production team largely supported the implementation of LVVWD residential rate changes related to tier equalization and the excessive use charge. In collaboration with

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

the Information Technology team, Media Production developed a bill estimator application on lvvwd.com to help customers view the impacts of these changes to their monthly bill. The estimator was also integrated with the My Account system to provide residential customers accurate bill comparisons by auto populating historical data. The bill estimator garnered approximately 53,000 views in the first three months of its launch. Social media posts driving customers to the estimator and website for rates information resulted in 774,159 impressions, 5,365 engagements and 819 clicks.

SNWA and LVVWD social media platforms saw increases in performance and engagement over the year. Posts published between July 2022 and January 2023, which were predominantly related to conservation, compliance, and shortage, resulted in nearly 17,000 impressions, 750,000 engagements and 150,000 clicks. The division played a large role in helping to reach a 69 percent watering restrictions compliance rate, a 20 percent increase from three years ago. The continued success of the Springs Preserve's social media program helped drive visitation, memberships, and ticket sales, including complete advance sell outs for the Haunted Harvest and Día de Muertos events.

Media Production's video team produced a half-hour roundtable discussion with the organization's executive team to address the federal water shortage and SNWA's efforts to protect the valley's water supply. Multiple, short segments were edited for a variety of uses on websites and social media platforms. The video about the potential of Lake Mead hitting dead pool produced 236,000 views on YouTube. The team also continued a weekly series of videos with management to inform employees about safety, HR activities, water resources and conservation initiatives.

In anticipation of increased participation in the Water Smarts Landscape (WSL) Rebate program, the division launched an online application for commercial and multifamily customers on snwa.com to streamline the application process for all customers. Conservation's residential and enterprise divisions received nearly 5,500 online applications through the website in the first half of the fiscal year.

In conjunction with the Public Outreach team, staff produced a dozen Water Smarts podcasts to convey the organization's most critical initiatives, such as business and commercial conservation incentives for evaporative cooling upgrades, LVVWD water rates, water waste investigations, AB 356 and SNWA's efforts to protect Lake Mead's water elevation. Over the year, the podcast was downloaded more than 1,500 times from Apple, Spotify and Google.

Design Production

Over the past year, the Design Production workgroup distributed a year-round watering schedule and seasonal watering reminders with a combined circulation of more than 2 million pieces. Staff also distributed more than 575,000 direct mail letters to residential customers notifying impacts on bills of tier equalization and excessive use charges. These letters were customized by meter size and contained a QR code to access an online rates estimator, which registered a significant increase in visits following the mailings. The team also transitioned LVVWD bill inserts to a new software platform, leveraging new customized messaging capabilities related to seasonal water use and rates messaging.

In addition, division staff launched a new Lake Mead Water Update publication which circulated to more than 860,000 properties throughout the community and reported on Lake Mead elevations, shortage conditions and conservation initiatives. The team also photo-documented historic declines in the lake's elevations, which were shared and used by peer utilities and media outlets around the world. Staff also assisted in publishing the annual LVVWD Water Quality Report, with mailings to approximately 369,000 households. This was accompanied by a new Water Quality campaign.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

Over the past year, the division also designed multiple in-house creative campaigns to advance conservation initiatives, including AB356, evaporative cooling, watering restrictions and drip education outreach, as well as creating a new interpretive experience at the Springs Preserve Botanical Garden, focusing on drought, climate change, conservation, and water-smart landscaping.

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

Marketing

The Public Outreach division coordinated customer outreach about water rate changes, including the development of a creative brief, an implementation plan, a paid media plan, and a notification letter for tier equalization and rate modification outreach. Staff developed and launched watering restriction (*Get Real*) and water waste (*Law & Water*) public education and outreach campaigns in both English and Spanish and achieved several hundred-million impressions with thousands of ads running throughout the year promoting water conservation and water quality initiatives. Other in-house produced campaigns focused on evaporative cooling, water quality, Warm Springs Natural Area, and irrigation education, along with a “Thank You” campaign that highlighted the previous year’s community conservation successes while also reminding everyone to keep conserving water.

The team conducted more than 100 interviews with local, national, and international media outlets focused on water resources, shortage declarations, conservation, water waste, seasonal watering restrictions, environmental issues and water infrastructure. Staff also mailed approx. 24,000 letters to customers that were not complying with the mandatory seasonal watering restrictions, distributed nearly 10,000 letters to customers impacted by AB 356, sent new pool development standard letters to 119 pool builders, 34 home builders and 27 real estate companies, distributed water theft collateral to 2,000 Clark County contractors to increase awareness about theft penalties, and issued Water Update e-newsletters to nearly 4,000 subscribers regarding a wide-range of water related topics.

Conservation Outreach and Events

Over the past year, staff coordinated outreach efforts and business partnerships with 400 professional organizations, including NAIOP, CAI, NPFMA, and Vegas and Henderson Chambers, as well as local sports teams to promote water conservation and water waste initiatives. Staff members also participated in more than 50 community outreach events to provide the public with conservation-focused messaging and information. To support new Service Rule changes, staff distributed more than 5,000 new homeowner packets in the LVVWD, Boulder City, and North Las Vegas service territories regarding prohibition of grass and spray irrigation in backyards.

Operation and Construction Outreach

Staff conducted community outreach for multiple LVVWD operations and construction projects, including the Centennial, Cougar and Rome Reservoirs, contacting more than 3,300 residents and businesses. In addition, staff coordinated outreach related to major LVVWD infrastructure repairs and maintenance and distributed more than 35 notifications to municipal agencies regarding well start-ups.

Springs Preserve. Springs Preserve staff is responsible for the daily operations of the 180-acre Springs Preserve campus. This includes the maintenance and operation of museums, exhibits, meeting facilities, a botanical garden, natural trails, and animal habitats/ecosystems. Springs Preserve staff is also responsible for the creation and management of educational programming, community events,

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

strategic partnerships, grant-funding opportunities, and the development of outreach content. During fiscal year 2022-23, the Springs Preserve hosted more than 200,000 visitors.

Focused on mission-driven projects and programming, the Springs Preserve directed much of its efforts this past year to the development and expansion of educational outreach. These efforts add deeper meaning to the visitor experience by highlighting the region's vibrant history and exploring Southern Nevada's sustainable future. Several improvement projects within Springs Preserve's natural area and botanical gardens enhanced and increased the sites' educational offerings, including a renovation of the quarter-acre Teaching Garden to accommodate larger groups, installation of interpretive panels within the trail system of the Preserve's natural area, an update to the Botanical Garden interpretation and wayfinding system with new content and designs. The new interpretive panels in the natural area and garden provide visitors practical information about water conservation, sustainable living, and environmental protections in Southern Nevada. In spring, construction started on the new, grant-funded Ethnobotanical Garden that showcases traditional ecological knowledge and the cultural and sustainable living practices of Southern Nevada's Native American communities.

The Preserve's educational outreach expanded to include two, full-day comprehensive teacher trainings. Funded and supported by the Nevada Department of Environmental Protection and several community partners, the symposium-style training provided K-12 educators with the data and tools necessary to skillfully teach students about the region's complex water story. More than 150 teachers participated in the trainings. Collectively, these educators teach approximately 20,000 students annually. The Preserve's on-going educational programming includes Conservation for Kids classes, pop-up programming, the SPRINGBOARD virtual learning platform and Youth Conservation Council program, which saw its participation grow by 40 percent this year.

Annual community outreach events, designed to increase the Preserve's visibility and celebrate the region's cultural history, continued to draw large crowds and corporate sponsorships. Both the four-day Haunted Harvest and three-day Día de Muertos events sold out in advance. Combined, these events drew approximately 19,000 visitors to the Preserve campus. February's Black History Month Festival saw record attendance and doubled sponsorship goals. Earth Day at Springs Preserve, in its second year, grew into Earth Month including on-site programming, focused on water conservation and sustainable living, and was offered every weekend in April.

Community partnerships continued this past year with the addition of "Science at the Springs," a speaker series offering after-hour, over-21, events that explore the fascinating research of the Desert Research Institute. Additional partnerships included Get Outdoors Nevada, with continued support of teacher training sessions; the Las Vegas Clark County Library District offered Preserve passes for check-out through the library system with cross-promotional opportunities; and the Native American community through shared knowledge, educational opportunities, and horticultural resources. After months of preparation by staff, the Springs Café reopened with a new food and beverage contractor. The Bronze Café and Inspire opened operations at the café in October.

Funded by a grant through the State of Nevada, the Preserve launched the design development phase of a five-year project to remodel two galleries within the OriGen Museum. The galleries will become a cutting-edge exhibit about the Colorado River. The remodel is the first of three major projects that will transform the OriGen Museum complex into a science and sustainability center.

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.

2023-24 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.

2022-23 Major Accomplishments

- During the 2023 legislative session, the Legislative Team advocated for SNWA's omnibus water bill – Assembly Bill 220 - which addresses five major issues focused primarily in Southern Nevada. The bill prohibits new septic systems in areas served by the Colorado River, codifies Colorado River water conservation initiatives, addresses development of water systems in outlying areas, makes modest changes to Nevada Water Law related to revocable permits, and makes changes to the Las Vegas Valley Groundwater Management Program.
- Assisted with the implementation of AB 356 language and non-functional turf definitions across all Southern Nevada governmental jurisdictions.
- Engaged with community partners to further the septic conversion program focusing on connecting valley-wide septic systems to the sewer system to improve water quality and reclaim that water.
- Conducted more than 100 interviews with local, national, and international media outlets focused on water resources, shortage declarations, conservation, water waste, seasonal watering restrictions, environmental issues, and water infrastructure.
- Engaged in community outreach for multiple LVVWD operations and construction projects, contacting more than 3,300 residents and businesses.
- Coordinated outreach related to major LVVWD infrastructure repairs and maintenance and distributed more than 35 notifications to municipal agencies regarding well start-ups.
- Continued to support the small systems by delivering monthly status and operational reports at each system's town advisory board meetings and working with other departments to help achieve system success.
- Photo-documented historic declines in the lake's elevations, which were shared and used by peer utilities and media outlets around the world.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2023-24 Performance Objectives

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

2022-23 Major Accomplishments

- Supported the LVVWD rate changes of tier equalization and excessive use charge, by:
 - updating the LVVWD Service Rules to reflect the new rates.
 - developing a bill estimator application on lvvwd.com to help customers view impacts to their monthly bill; the estimator was integrated with the My Account system to provide residential customers accurate bill comparisons.
 - distributing more than 575,000 direct mail letters to residential customers notifying impacts on bills of tier equalization and excessive use charges.
- Distributed more than 2 million year-round watering schedule and seasonal watering reminders to single-family residences in the Las Vegas Valley.
- Coordinated a speakers bureau program, giving presentations and engaging in discussions with more than 60 community businesses and groups.
- Launched a direct mail campaign reaching approx. 24,000 LVVWD customers who were out of compliance with the year-round watering schedule, resulting in significant water savings.
- Distributed 10,000 letters to customers impacted by AB 356, sent new pool development standards to 119 pool builders, 34 home builders and 27 real estate companies, distributed water theft collateral to 2,000 contractors to increase awareness about theft penalties, and issued Water Update e-newsletters to nearly 4,000 subscribers regarding a wide-range of water related topics.
- Supported new Service Rule changes by distributing more than 5,000 new homeowner packets regarding prohibition of grass and spray irrigation in backyards.
- Published and mailed the annual LVVWD Water Quality Report to more than 369,000 households.
- Participated in more than 50 community outreach events providing the public with conservation-focused messaging and information.
- Drove visitation, memberships, and ticket sales, including complete advance sell outs for the Haunted Harvest and Día de Muertos events hosted by the Springs Preserve.

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

2023-24 Performance Objectives

- Enhance understanding of climate change impacts among ourselves and our stakeholders.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

- 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.

2022-23 Major Accomplishments

- Continued to educate and inform the LVVWD and SNWA Board of Directors on water-related issues, policies and initiatives throughout Southern Nevada.
- Assisted in updating the LVVWD Service Rules with conservation-related initiatives that limited the size of new residential pools to no more than 600 square surface feet, reduced golf course water budgets from 6.3 acre-feet of water per irrigated acre to 4 acre-feet per irrigated acre annually, prohibited water service to new development using evaporative cooling systems and revised the incentive to replace industrial cooling towers or swamp coolers with a dry-cooled system or improve the water efficiency of existing evaporative cooling systems; worked to implement these changes with other Southern Nevada municipalities to create consistency and uniformity in the support and management of our water resources.
- Produced a half-hour roundtable discussion with management to address the federal water shortage and SNWA's efforts to protect the valley's water supply; short segments were edited for a variety of uses on social media platforms.
- Launched an online application to streamline the application process for all WSL customers; nearly 5,500 online applications were submitted through the website in the first half of the fiscal year.
- Coordinated and supported the Colorado River Water Users Association's conference which had a record attendance of nearly 1,400 attendees.
- Circulated a new Lake Mead Water Update publication to more than 860,000 properties throughout the valley that reported on Lake Mead elevations, shortage conditions and conservation initiatives.
- Began construction on the new, grant-funded Ethnobotanical Garden that will showcase the ecological, cultural, and sustainable living practices of Southern Nevada's early Native Americans.
- Renovated the Springs Preserve Teaching Garden to accommodate larger groups and enhance the sites' educational offerings.

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

2023-24 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.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

2022-23 Major Accomplishments

- Secured \$22.5 million in funding from the Bureau of Reclamation for various infrastructure and water resource projects, including \$1.7 million for the Septic System Conversion Incentive program.
- Applied for and received more than \$240,000 from multiple sources for the Springs Preserve for new informative exhibit panels, the Butterfly Habitat, and the Preserve's refuge ponds.
- Received funding and support from NDEP and several community partners to provide K-12 educators with the necessary tools to teach students about the region's complex water story; more than 150 teachers participated in the trainings, reaching approximately 20,000 students annually.

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

2023-24 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.

2022-23 Major Accomplishments

- Designed in-house English and Spanish language campaigns focused on conservation initiatives, including AB 356, evaporative cooling, watering restrictions (*Get Real*), water waste (*Law & Water*), and drip education outreach; garnered several hundred-million impressions with thousands of ads running throughout the year.
- Saw increases in performance and engagement from both LVVWD and SNWA social media platforms with posts predominantly related to conservation, compliance, and shortage.
- Produced a dozen Water Smarts podcasts to convey critical initiatives, such as conservation incentives, LVVWD water rates, water waste investigations, AB 356, and efforts to protect Lake Mead's water elevation; the podcast was downloaded more than 1,500 times from Apple, Spotify and Google.
- Continued to establish relationships with local businesses and organizations to help educate and promote water conservation and seasonal watering restrictions.
- Utilized the LVVWD's messaging system to inform all customers about the federally declared shortage and seasonal watering restrictions.
- Created a new interpretive experience at the Springs Preserve Botanical Garden focused on drought, climate change, conservation, and water-smart landscaping.
- Launched the design phase of a multi-year project to remodel two galleries within the Springs Preserve's OriGen Museum that will become cutting-edge exhibits about the Colorado River.

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

2023-24 Performance Objectives

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

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Public Services
Fiscal Year Ending June 30, 2024

- 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.

2022-23 Major Accomplishments

- Staff continued to work a hybrid at-home/in-office schedule.
- Produced an in-house “Thank You” campaign that highlighted the previous year’s community conservation successes while also reminding everyone to keep conserving water.
- Continued to produce a weekly series of videos with management to inform employees about safety, HR activities, water resources, infrastructure updates and conservation initiatives.

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SECTION 6

CAPITAL PLANS

Capital Budget	6 - 1
Major Construction and Capital Plan 2020	6 - 10

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 2023-24, totaling \$379.4 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 \$7.8 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 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.

Prioritization of Capital Projects

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

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

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

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

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

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

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

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

Category 1: The projects in this category have a low risk of deferring and are desired to enhance or provide improved:

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

Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2024

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

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

The tables on the following pages contain a listing of all the capital equipment and capital projects included in the SNWA's capital expenditures for the fiscal year 2023-24.

SNWA: CAPITAL BUDGET 2023-24

CAPITAL EQUIPMENT

3700 - Infrastructure Management

Custodial Equipment	\$	35,000
Exhaust Fan Replacement		100,000
SNWA Unforeseen Necessary Equipment		200,000
Upgrade AMS Treatment shop EVAP		200,000
SNWA HVAC Replacement – AMSWTF		200,000
SNWA HVAC Upgrade - RMWTF		300,000
RMWTF - Multi sites upgrade 6 cooler fans		375,000
Subtotal	\$	1,410,000

4100 - Operations

Large vertical Lathe	\$	420,000
Subtotal		420,000

4400 - EHS & CS

Gas Boy Fuel site Island Controller (SNWA Item GL 18500)	\$	20,000
Gas Boy Fuel Site Island Controller (SNWA Ranch Item GL 15603)		20,000
1 Each 600 Gallon Fuel Trailer (SNWA Ranch Item GL 15603)		20,000
1 Each 4X4 Side by Side UTV (SNWA Ranch Item GL 15603)		22,000
1 Each 2 Seat UTV with Dump bed and Hydraulics (SNWA, WSNA Item GL 15603)		22,000
1 Each 4 Seat UTV with Cab (SNWA, WSNA Item GL 15603)		23,000
1 Each Gooseneck Dump Trailer (SNWA Warm Springs GL 15603)		30,000
Veeder-Root Fuel Tank Monitoring System (SNWA Ranch Item GL 15603)		30,000
1 Each Grizzly Screen W/2" & 3" Capability (SNWA Item GL 18500)		31,000
1 Each Orthman 6DT Subsoiler Ripper (SNWA Ranch Item GL 15603)		40,000

Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans

Fiscal Year Ending June 30, 2024

1 Each 15,000lb Regular Cab 11' Utility Truck. (SNWA Item GL 18500)	65,000
2 Each Mid Size Sedans (SNWA Items GL18500)	70,000
1 each Extended cab 3/4 ton Utility with sliding cover. (SNWA Item GL 18500)	72,000
1 Each Cat 305 Mini Excavator W/Boom Mount Tilt Rotator. (SNWA GL 18500)	150,000
1 Lot of 6 Replacement Vehicles (SNWA Ranch Items GL 15603)	402,000
1 Lot of 4 Re-budgeted Vehicles (SNWA Items GL 18500)	435,000
2 - Each Re-budgeted Large Service Trucks (SNWA Items GL 18500)	482,000
1 Lot of 7 Replacement equipment pieces (SNWA Items GL 18500)	669,000
1 Lot of 18 Replacement Vehicles (SNWA GL 18500) LID 4490.	1,288,000
Subtotal	\$ 3,891,000

4500 - Water Quality & Treatment

Sample Storage Laboratory Refrigerator	\$ 15,000
AMS/RM Electrical Remote Switching Tool	20,000
AMS Ozone Automatic Transfer Switch	25,000
Inspired Flight IF750 Drone and MicaSense RedEdge-P Multispectral Sensor	25,000
AMS/RM Dew Point Analyzers	28,800
AMS/RM Fluke Vibration Analysis Tool	35,000
Teledyne Tekmar Purge and Trap Units	85,000
AMS Ozone/Oxygen Control Valves	88,000
RM Filter Valve Gearboxes	104,000
Replacement Autoclave	115,000
Standalone Sample Prep Station	130,000
Granular Media Filtration Pilot	335,314
Wireless Temperature Monitoring System	335,617
SCIEX Triple Quad 7500 System	480,000
Subtotal	1,821,731

7100 - Water Resources

Livestock Replacement	\$ 250,000
Subtotal	\$ 250,000

TOTAL CAPITAL EQUIPMENT	\$ 7,792,731
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Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2024

CAPITAL PROJECTS

2200 - Energy Management

Solar Power Project (ENTP)	\$	11,532,476
Subtotal	\$	11,532,476

3400 - Engineering

Cathodic Protection Systems. Las Vegas, Aqueduct B, and Raw Water Laterals	\$	50,000
Stage II Reliability Upgrades Power Substation		412,454
Relocate Nellis ROFC 6B and Replace Nellis Lateral		500,000
Stage II Reliability Upgrades Monthill PS		1,268,338
Lower Las Vegas Wash Stabilization - Weirs 2-3 Reconstruction		1,375,402
Stage II Reliability Upgrades Early Procurement		1,510,328
Garnet Valley Water Transmission System - Distribution Pipeline		1,759,459
Stage II Reliability Upgrades Interconnect Pipeline		1,765,309
Garnet Valley Water Transmission System - Transmission Pipeline		2,144,654
Horizon Lateral - Big Dipper Pipeline (South Alignment)I		2,541,550
Lower Las Vegas Wash Stabilization		2,574,468
Horizon Lateral - West Henderson ROFCS/Horizon & Paradise Hills PS (North Alignment)		3,000,000
Stage II Reliability Upgrades		3,012,537
Lower Las Vegas Wash Stabilization - Weirs 8-9		3,391,136
Lower Las Vegas Wash Stabilization - Weirs 6-7		3,434,881
PCCP Pipeline Rehabilitation. Aqueduct A and B, Las Vegas Lateral (G1227)		3,967,861
AMSWTF Flocculation Area Rehabilitation		4,037,755
Garnet Valley Wastewater System (G1172)		4,052,963
Garnet Valley Water Transmission System - Facilities		4,275,862
Horizon Lateral - Big Dipper Pipeline (North Alignment)		4,401,712
Boulder City Wastewater		5,000,000
Garnet Valley Wastewater System (Phase 2)		6,657,555
NDOW RAW WATER PIPELINE INSTALLATION		6,846,923
Calico Ridge ROFC		6,891,719
Horizon Lateral Planning & Preliminary Design		8,299,067
Garnet Valley Water Distribution System (G1173)		9,344,102
Lower Las Vegas Wash Stabilization - Geotechnical Road for Weirs 6-8		9,943,651
Garnet Valley Water Transmission System (G1282)		10,614,944

Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2024

Stage III Reliability Upgrades	11,545,361
Garnet Valley Wastewater System (Phase 1)	15,293,446
In-Valley Maintenance Shop and Office Space (G1226)	19,895,680
Lower Las Vegas Wash Stabilization - Weir 5	24,278,121
Stage II: Sloan 2160 PS & Lamb 2350 PS Expansion	28,763,468
Subtotal	\$ 212,850,708

3700 - Infrastructure Management

Evaporative Cooler Replacement Pump Station Cooler Upgrades	\$ 5,179
SNWA Tortoise Fence Installation (G1027)	25,000
AMSWTF Chlorine Vacuum Regulator Installation	50,000
SNWA - Misc. Vault Repair (MEPS8110) (G1189)	50,000
Pumping Station 4 Site - Install New Pumps PS-4 (5 each) (MEPS8140)	75,000
RMWTF - Replace Chiller tubes	80,000
RMWTF - Replace benches in the River mountains WTF picnic area	99,000
AMSWTF Chemical Pump Replacements	100,000
AMSWTF - Construct a laydown area adjacent to PS1C Project (MEPS7898)	100,000
AMS Infrastructure Staff and Tech Library Relocation	100,000
AMSWTF Miscellaneous Facilities Improvements	100,000
Replace burner assemblies on governair's AHU's B-3 and B-7	100,000
SNWA Board Meeting AV Replacement and Granicus Voting System Integration	100,000
AMSWTF & RMWTF Multilin Upgrades	105,000
RMWTF Fluoride Bulk Tanks	109,750
AMS campus communications fiber optic cable upgrade	113,621
Boulder City Lateral Flow Meter Upgrades	120,000
RMWTF Operations UPS Upgrades	138,000
AMSWTF Backwash Pump Replacement	139,975
RMWTF- R&D Lab Management Office Area Remodel	144,382
Multi-site - PP1A / 2A Crane Upgrade Project (MEPS-8062)	150,000
RMWTF Filter Drain Valve Replacements	150,000
RMWTF - Remodel Operations restrooms	165,000
Entry Gate for Foothill Complex (G1026)	199,086
SNWS - ControlLogix Hardware Upgrades (G1144)	200,000
SNWS - SCADA PC/Server Hardware Upgrades (G1142)	200,000
SNWS Network Switch Upgrades (G1143)	200,000
AMSWTF - Berm Repair and Erosion control at AMS/RMWTF site (G1186)	200,000
RMWTF LED Lighting Upgrade	200,000

Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans

Fiscal Year Ending June 30, 2024

AMSWTF Equip Evaporators for Trains 3 & 4	225,000
SNWS - Replace PLC 5 Processors and Remote Racks From Production Sites	250,000
RMWTF - Remove and reseal AHU's 1 & 3 and curbs	250,000
Multi Sites - Install LED Lighting (G1106)	255,728
AMS Ozone Modicon Controller Replacement	270,000
SNWA - RMWTF Site - RMWTF Ozone Modicon Controller Replacement (G1145)	270,000
Multi-Site Manual Transfer Switch Installation	300,000
L3PS HVAC remote access controls	325,000
Multi-site - Network Database implementation (MEPS8591) (G1200)	350,000
RMWTF Fire Alarm System Replacement	350,000
SNWA - Replace AMS Admin Chiller (G1180)	400,000
RMWTF Site - Network Improvements to Filter Gallery (MEPS8572) (G1193)	500,000
SNWS - SCADA Software Replacement (Ovation to WSP)	600,000
Pumping Stations 7 & 7B Pump Upgrades	600,000
AMSWTF - Admin, Warehouse, Mechanical Shop, and Chlorine #1 Building - Roof Replacement	627,912
Gowan Pumping Station Bypass	730,000
AMSWTF Fire System Upgrade	777,374
AMSWTF Site - PP1A Flooring replacement Project (G0987)	851,500
South Valley Regulating Tank Site - SVRT Interior Joint Sealing (G1122)	875,400
RMWTF - Replace chillers	990,000
AMSWTF Install Actuators on Filters 21-26	1,012,400
PS1A Electrical Equipment Upgrades	1,050,125
AMSWTF Site - Network Improvements to Filter Gallery (G1197)	1,266,667
Pumping Station 2A Electrical Upgrades	1,530,770
Multi-site - Medium Voltage Electrical Equipment Upgrades (MEPS8379)	1,800,000
AMSWTF Site - New SNWA Communications Room (MEPS8569) (G1168)	2,000,000
Subtotal	\$ 21,976,869

4100 - Operations

Replace Grand Teton ROFC Inlet and Outlet Isolation Valves and Actuators	\$ 50,000
Update DC Excitation Systems at Various Plants (G1217)	60,407
Refurbish Pump Casings at BPS1A and BPS2	110,000
Magic ROFC Control Valve Actuator Replacement	110,498
Replace Bermuda ROFC Inlet and Outlet Isolation Valves and Actuators	137,500
Replace Warm Springs ROFC Isolation Valves and Actuators	220,000

Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2024

PS 1A, 2A, 1B and 2B Pump Repairs and Flow Meter Installation	226,754
BFV Actuator Replacements at Outlet Poral and RM Reservoir (9) (G1203)	250,000
Xylem - Smart Water	270,261
Hacienda Pump Station Replace Cone Valve Actuators	300,000
SNWA - Replace Sloan ROFC Isolation Valves and Actuators (G1213)	302,500
Replace PS2A/PS2B Forebay Isolation Gates	320,682
SNWA - BPS1A Replace Trident Actuators on cone valves (G1206)	330,000
SNWA - BPS2 Replace Trident Actuators on cone valves (G1209)	385,000
Machine Shop Equipment	456,480
Motor Refurbishment (originally 6S027)	800,000
Sleeve and Miscellaneous Valve Repairs (340V)	1,159,785
System Wide Valve Actuator Upgrades (G1216)	1,500,000
Subtotal	\$ 6,989,866

4300 - Information Technology

Water Quality	\$ 3,000,000
Subtotal	\$ 3,000,000

4400 - EHS & CS

New Fleet maintenance building at AMSWTF	\$ 683,069
Subtotal	\$ 683,069

4500 - Water Quality & Treatment

AMSWTF Lobby Renovation	\$ 100,000
Ozone System Related Needs	137,190
R&D Necessary Unforeseen Projects	275,000
Innovation Projects	430,000
SNWA Necessary Unforeseen Projects	550,000
Water Quality Testing Equipment (G1225)	825,000
RMWTF Microbiology Research Laboratory Expansion	839,967
Laboratory Hood Control System and Air Valve Retrofit Replacement	1,997,409
Ozone Equipment Upgrade (G1224)	23,484,600
Subtotal	\$ 28,639,166

7100 - Water Resources

Wahoo #1 Roof Replacement	\$ 16,000
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Southern Nevada Water Authority
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2024

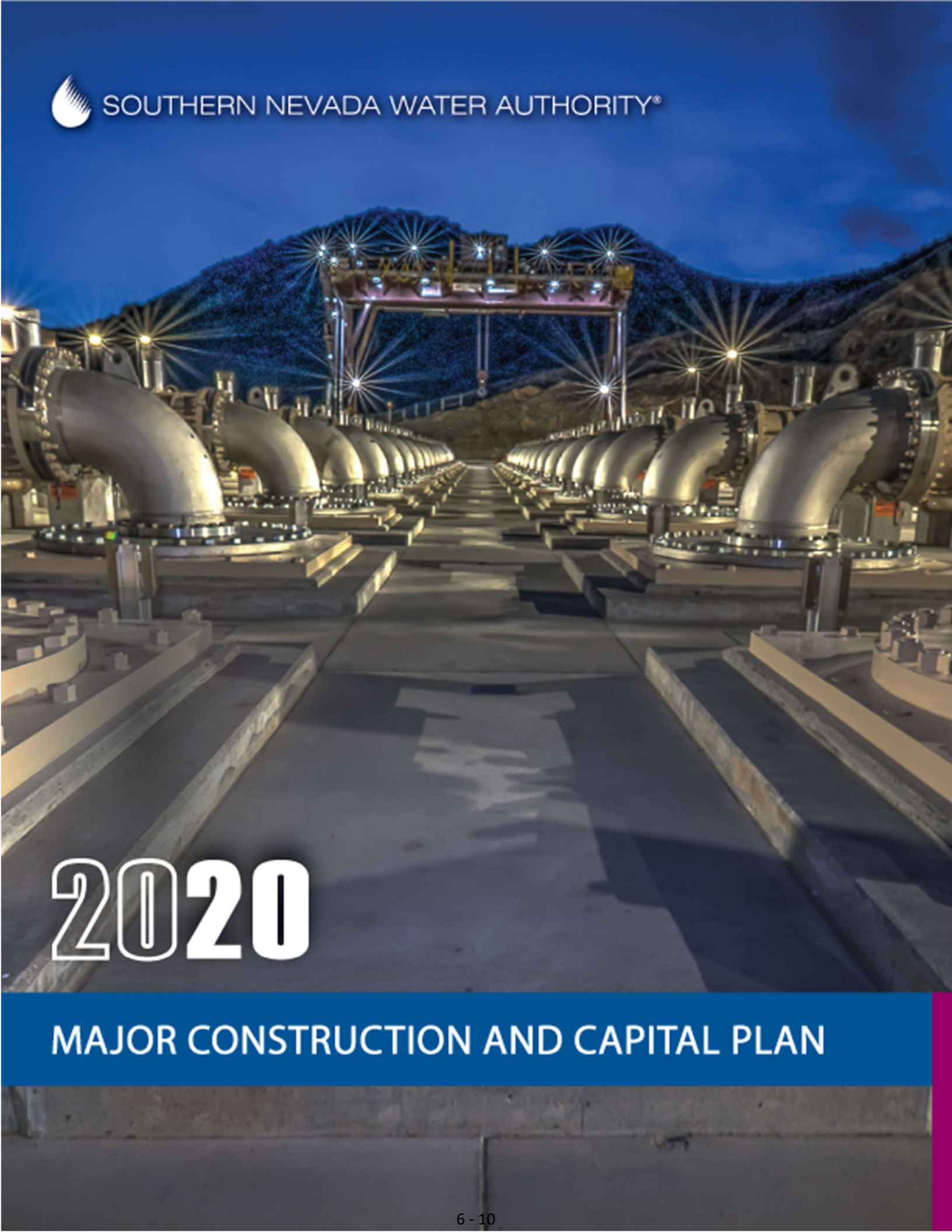
Livestock Wells	95,000
SNWA - NR Ranches - Domestic Wells (G1201)	103,000
Pivot System Replacement/upgrade systems to precision rate irrigation (5)	110,000
Indian Springs Pipeline	125,000
Cottonwood Pipeline	235,000
Warm Springs Natural Area - Trail and Warm Springs Road Crosswalk	744,222
Interim Colorado River Supplies - Water Banking	1,100,000
SNWA Capital - Interim Colorado River Supplies Minute 323	1,500,000
Future Water Supplies	6,000,000
Virgin and Muddy Rivers Water Resource Acquisition & Tributary Conservation ICS	15,000,000
Future Water Supplies - Contingency	20,000,000
Water Resource Acquisition and Development - Conservation - Water Smart	37,408,611
Subtotal	\$ 82,436,832
Capital Payroll	\$ 3,458,661
TOTAL CAPITAL PROJECTS	\$ 371,567,647
TOTAL CAPITAL BUDGET	\$ 379,360,378

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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

TABLE OF CONTENTS

INTRODUCTION 7

CHAPTER 1: SYSTEM EXPANSION..... 9

CHAPTER 2: WATER RESOURCES AND CONSERVATION 13

CHAPTER 3: SYSTEM MAINTENANCE AND UPGRADES..... 15

APPENDICES 19

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MAJOR CONSTRUCTION AND CAPITAL PLAN INTRODUCTION

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
TOTAL SYSTEM EXPANSION PROJECTS	\$1,883.7

Totals are rounded

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MAJOR CONSTRUCTION AND CAPITAL PLAN - CHAPTER 2

WATER RESOURCES

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
TOTAL WATER RESOURCES COSTS	1,068.6

Totals are rounded



MAJOR CONSTRUCTION AND CAPITAL PLAN - CHAPTER 3

SYSTEM MAINTENANCE AND UPGRADES

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
TOTAL SYSTEM MAINTENANCE & UPGRADES	\$213.3

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
TOTAL MCCP	\$3,165.6

Totals are rounded



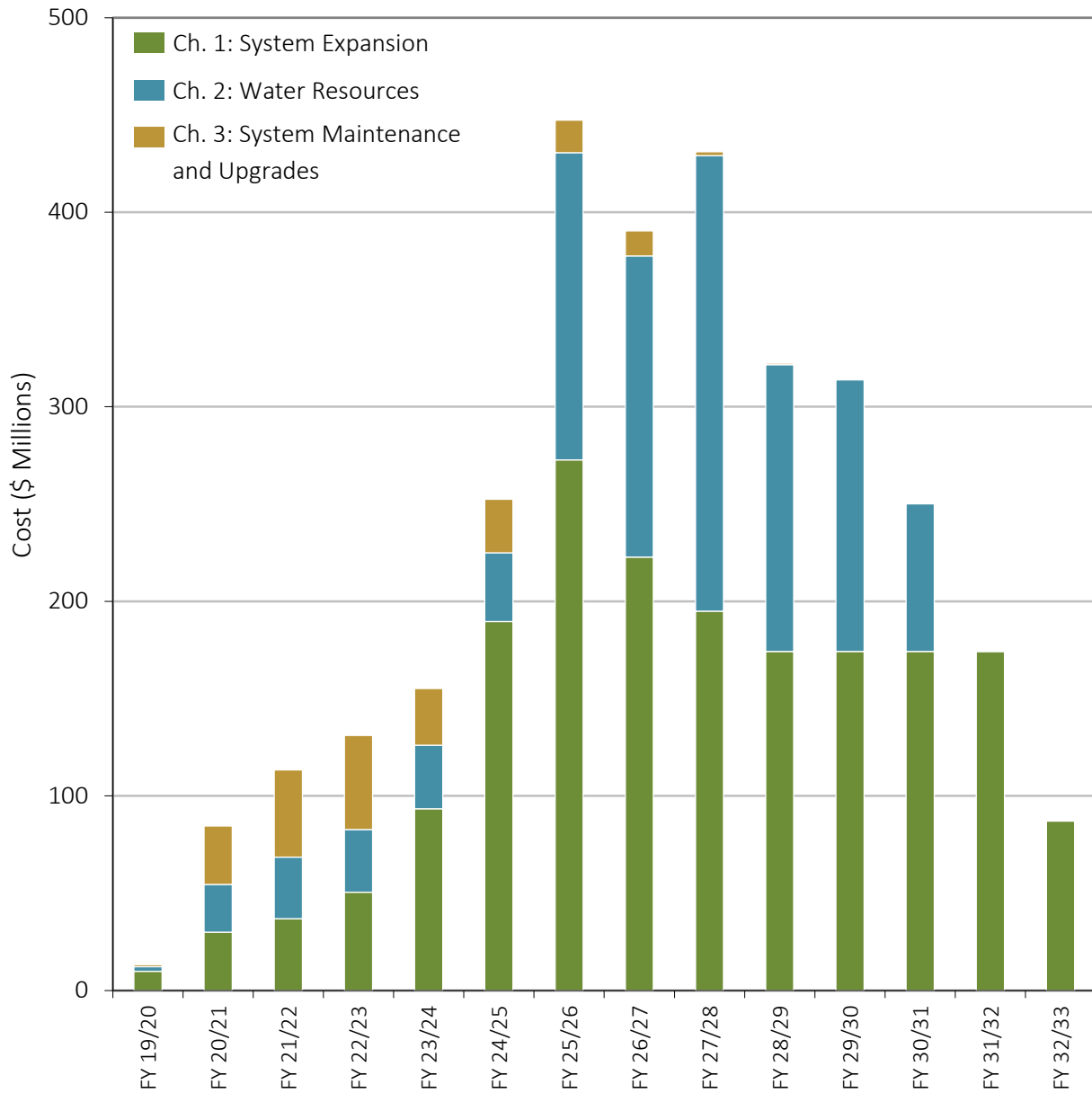
MAJOR CONSTRUCTION AND CAPITAL PLAN **APPENDICES**

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
	Completed Projects	TOTAL	3,260.6

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SECTION 7

DEBT MANAGEMENT POLICY

Cover	7 - 1
Table of Contents	7 - 2
Introduction	7 - 3
Affordability of Debt	7 - 5
Issued by the Las Vegas Valley Water District	7 - 5
Issued by the Clark Count, Nevada	7 - 7
Issued by the State of Nevada	7 - 9
Issued by the Southern Nevada Water Authority	7 - 10
Debt Capacity	7 - 11
Debt Comparison (per capita and assessed valuation)	7 - 11
Policy Statement for Sale of Debt	7 - 11
Operation Costs and Revenue Sources for Projects in Major Construction and Capital Plan....	7 - 14
Miscellaneous Items	7 - 14
Chief Financial Officer	7 - 17
Appendix	7 - 18

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Debt Management Policy

In Accordance With
NRS 350.013



SOUTHERN NEVADA
WATER AUTHORITY™

June 30, 2023

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Table of Contents

Introduction	7-3
Affordability of Debt	7-5
Issued by the Las Vegas Valley Water District (“LVVWD Bonds”).	7-5
Issued by the Clark County, Nevada Bond Bank (“County Bonds”).....	7-7
Issued by the State of Nevada Bond Bank (“State Bonds”).....	7-9
Issued by the Southern Nevada Water Authority (“SNWA Bonds”)	7-10
Debt Capacity	7-11
Debt Comparison (per capita and assessed valuation).....	7-11
Policy Statement for Sale of Debt.....	7-11
Operation Costs and Revenue Sources for Projects in the Capital Improvement Plans.....	7-14
Miscellaneous Items.....	7-14
Chief Financial Officer Information	7-17
Appendix	7-18

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 is how the SNWA has accomplished most of its debt financing.
- 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".
- The SNWA can sell its bonds to the State of Nevada's (State) Municipal 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".
- 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.

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

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

semi-annually and is presented to the Board as determined appropriate by the SNWS work group. The MCCP has been partially funded with debt.

The Las Vegas Wash Capital Improvements Plan (LVWCIP) covers projects the SNWA is building in the Las Vegas Wash. The LVWCIP is updated periodically, as needed. The SNWA uses a combination of interfund loans and sales tax proceeds to fund the LVWCIP; it does issue bonds or other debt to fund the LVWCIP.

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 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;

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

(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 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

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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 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 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 the LVVWD’s bonds and obligations secured by such revenues.

Proposed New LVVWD Bonds. The SNWA intends to issue approximately \$271 million in LVVWD Bonds in fiscal year 2023-24. In addition, the bond market is monitored for savings opportunities via

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

refunding or restructuring existing debt issues.

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.

Bonded Indebtedness. The following table shows the outstanding LVVWD Bonds as of June 30, 2023.

Bond Series	Issue Date	Original Amount Issued	Outstanding Principal
2015	Jan-15	\$ 332,405,000	\$ 332,405,000
2015B	Jun-15	177,635,000	91,365,000
2015C	Jun-15	42,125,000	21,175,000
2016A	Apr-16	497,785,000	408,100,000
2017B	Mar-17	22,115,000	15,175,000
2018B	Mar-18	79,085,000	33,425,000
2019A	Mar-19	107,975,000	97,570,000
2019B	Oct-19	90,280,000	59,130,000
2020A	Mar-20	123,860,000	103,830,000
2021A	Mar-21	144,685,000	120,485,000
2021C	Mar-21	208,145,000	183,615,000
2022A	Feb-22	292,240,000	287,205,000
2022C	Mar-22	253,820,000	245,925,000
Total			<u>\$ 1,999,405,000</u>

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

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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 because 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.

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 New County Bonds. The SNWA does not intend to issue any new County Bonds in fiscal year 2023-24. However, the bond market is monitored for savings opportunities via refunding or restructuring existing debt issues.

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.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Bonded Indebtedness. The following table shows the outstanding County Bonds as of June 30, 2023.

Bond Series	Issue Date	Original Amount Issued	Outstanding Principal
2016A	Mar-16	263,955,000	102,485,000
2016B	Aug-16	271,670,000	234,660,000
2017	Mar-17	321,640,000	266,890,000
2021	Nov-21	67,620,000	67,620,000
2022A	May-22	75,090,000	75,090,000
Total			<u>\$ 746,745,000</u>

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.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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 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 New State Bonds. The SNWA does not intend to issue and new State Bonds in fiscal year 2023-24. However, the bond market is monitored for savings opportunities via refunding or restructuring existing debt issues.

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.

Bonded Indebtedness. The following table shows the outstanding State Bonds as of June 30, 2023.

Bond Series	Issue Date	Original Amount Issued	Outstanding Principal
2009	Oct-09	\$ 2,214,457	\$ 822,513
Total			<u>\$ 822,513</u>

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

As of June 30, 2023, there were no SNWA Bonds outstanding.

Proposed Future SNWA Water Bonds. The SNWA does not intend to issue any new SNWA bonds in fiscal year 2023-24.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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).

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

- **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,

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

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

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Appendix

Debt Service and Pledged Revenue Tables

1. Next Five Years of Existing and Proposed Debt Service
2. Existing Debt Service Issued by the LVVWD
3. Existing Debt Service Issued by Clark County
4. Existing Debt Service Issued by the State of Nevada
5. Existing Debt Service by all Issuers
6. Proposed Debt Service
7. Existing and Proposed Debt Service
8. Net Pledged Revenues

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Next Five Years of Existing and Proposed Debt Service
As of June 30, 2023

<u>Fiscal Year</u>	<u>Debt Service</u>
2024	\$ 307,286,471
2025	297,800,971
2026	297,740,471
2027	290,527,921
2028	254,817,796
Total *	<u>\$ 1,448,173,632</u>

* Total may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Existing Debt Service issued by the LVVWD
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 115,880,000	\$ 92,969,050	\$ 208,849,050
2025	112,195,000	87,151,675	199,346,675
2026	117,950,000	81,303,300	199,253,300
2027	114,370,000	75,401,375	189,771,375
2028	83,930,000	70,100,000	154,030,000
2029	74,815,000	66,230,500	141,045,500
2030	77,555,000	62,545,113	140,100,113
2031	70,700,000	58,713,625	129,413,625
2032	90,605,000	55,293,000	145,898,000
2033	106,915,000	51,307,200	158,222,200
2034	111,555,000	46,662,750	158,217,750
2035	83,205,000	42,215,450	125,420,450
2036	87,025,000	38,396,700	125,421,700
2037	91,020,000	34,399,550	125,419,550
2038	119,690,000	30,215,850	149,905,850
2039	149,675,000	24,612,450	174,287,450
2040	49,420,000	17,451,150	66,871,150
2041	51,605,000	15,258,400	66,863,400
2042	53,900,000	12,967,450	66,867,450
2043	37,250,000	10,573,350	47,823,350
2044	38,990,000	8,833,350	47,823,350
2045	40,815,000	7,011,250	47,826,250
2046	42,720,000	5,103,000	47,823,000
2047	14,330,000	3,104,800	17,434,800
2048	14,905,000	2,531,600	17,436,600
2049	15,500,000	1,935,400	17,435,400
2050	16,120,000	1,315,400	17,435,400
2051	16,765,000	670,600	17,435,600
2052	-	-	-
2053	-	-	-
Totals *	<u>\$ 1,999,405,000</u>	<u>\$ 1,004,273,338</u>	<u>\$ 3,003,678,338</u>

* Total may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Existing Debt Service issued by Clark County
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 49,215,000	\$ 31,769,525	\$ 80,984,525
2025	51,740,000	29,261,400	81,001,400
2026	54,410,000	26,624,275	81,034,275
2027	59,510,000	23,793,650	83,303,650
2028	62,575,000	20,759,900	83,334,900
2029	64,320,000	17,855,775	82,175,775
2030	68,735,000	15,057,250	83,792,250
2031	60,330,000	12,139,225	72,469,225
2032	46,050,000	9,635,675	55,685,675
2033	35,870,000	7,780,575	43,650,575
2034	41,330,000	6,358,475	47,688,475
2035	38,785,000	4,878,875	43,663,875
2036	44,555,000	3,443,509	47,998,509
2037	45,910,000	2,085,572	47,995,572
2038	23,410,000	936,400	24,346,400
2039	-	-	-
2040	-	-	-
2041	-	-	-
2042	-	-	-
2043	-	-	-
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
2050	-	-	-
2051	-	-	-
2052	-	-	-
2053	-	-	-
Totals *	<u>\$ 746,745,000</u>	<u>\$ 212,380,082</u>	<u>\$ 959,125,082</u>

* Total may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Existing Debt Service issued by the State of Nevada
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 126,540	\$ -	\$ 126,540
2025	126,540	-	126,540
2026	126,540	-	126,540
2027	126,540	-	126,540
2028	126,540	-	126,540
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	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
2050	-	-	-
2051	-	-	-
2052	-	-	-
2053	-	-	-
Totals *	<u>\$ 822,513</u>	<u>\$ -</u>	<u>\$ 822,513</u>

* Total may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Existing Debt Service by All Issuers
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 165,221,540	\$ 124,738,575	\$ 289,960,115
2025	164,061,540	116,413,075	280,474,615
2026	172,486,540	107,927,575	280,414,115
2027	174,006,540	99,195,025	273,201,565
2028	146,631,540	90,859,900	237,491,440
2029	139,261,540	84,086,275	223,347,815
2030	146,353,270	77,602,363	223,955,633
2031	131,030,000	70,852,850	201,882,850
2032	136,655,000	64,928,675	201,583,675
2033	142,785,000	59,087,775	201,872,775
2034	152,885,000	53,021,225	205,906,225
2035	121,990,000	47,094,325	169,084,325
2036	131,580,000	41,840,209	173,420,209
2037	136,930,000	36,485,122	173,415,122
2038	143,100,000	31,152,250	174,252,250
2039	149,675,000	24,612,450	174,287,450
2040	49,420,000	17,451,150	66,871,150
2041	51,605,000	15,258,400	66,863,400
2042	53,900,000	12,967,450	66,867,450
2043	37,250,000	10,573,350	47,823,350
2044	38,990,000	8,833,350	47,823,350
2045	40,815,000	7,011,250	47,826,250
2046	42,720,000	5,103,000	47,823,000
2047	14,330,000	3,104,800	17,434,800
2048	14,905,000	2,531,600	17,436,600
2049	15,500,000	1,935,400	17,435,400
2050	16,120,000	1,315,400	17,435,400
2051	16,765,000	670,600	17,435,600
2052	-	-	-
2053	-	-	-
Total *	<u>\$ 2,746,972,513</u>	<u>\$ 1,216,653,419</u>	<u>\$ 3,963,625,932</u>

* Totals may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Proposed Debt Service
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 4,183,405	\$ 13,142,951	\$ 17,326,356
2025	4,386,342	12,940,014	17,326,356
2026	4,599,124	12,727,232	17,326,356
2027	4,822,227	12,504,129	17,326,356
2028	5,056,153	12,270,203	17,326,356
2029	5,301,427	12,024,929	17,326,356
2030	5,558,600	11,767,756	17,326,356
2031	5,828,247	11,498,109	17,326,356
2032	6,110,976	11,215,381	17,326,356
2033	6,407,419	10,918,937	17,326,356
2034	6,718,243	10,608,113	17,326,356
2035	7,044,145	10,282,211	17,326,356
2036	7,385,856	9,940,500	17,326,356
2037	7,744,144	9,582,212	17,326,356
2038	8,119,813	9,206,543	17,326,356
2039	8,513,705	8,812,651	17,326,356
2040	8,926,704	8,399,652	17,326,356
2041	9,359,739	7,966,617	17,326,356
2042	9,813,780	7,512,576	17,326,356
2043	10,289,846	7,036,510	17,326,356
2044	10,789,007	6,537,349	17,326,356
2045	11,312,381	6,013,975	17,326,356
2046	11,861,145	5,465,211	17,326,356
2047	12,436,529	4,889,827	17,326,356
2048	13,039,825	4,286,531	17,326,356
2049	13,672,387	3,653,969	17,326,356
2050	14,335,635	2,990,721	17,326,356
2051	15,031,056	2,295,300	17,326,356
2052	15,760,213	1,566,143	17,326,356
2053	16,524,741	801,615	17,326,356
Totals *	<u>\$ 270,932,815</u>	<u>\$ 248,857,866</u>	<u>\$ 519,790,681</u>

* Totals may be off slightly due to rounding.

Southern Nevada Water Authority
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2024

Existing and Proposed Debt Service
As of June 30, 2023

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 169,404,946	\$ 137,881,526	\$ 307,286,471
2025	168,447,883	129,353,089	297,800,971
2026	177,085,664	120,654,807	297,740,471
2027	178,828,768	111,699,154	290,527,921
2028	151,687,694	103,130,103	254,817,796
2029	144,562,968	96,111,204	240,674,171
2030	151,911,870	89,370,119	241,281,989
2031	136,858,247	82,350,959	219,209,206
2032	142,765,976	76,144,056	218,910,031
2033	149,192,419	70,006,712	219,199,131
2034	159,603,243	63,629,338	223,232,581
2035	129,034,145	57,376,536	186,410,681
2036	138,965,856	51,780,709	190,746,565
2037	144,674,144	46,067,334	190,741,478
2038	151,219,813	40,358,793	191,578,606
2039	158,188,705	33,425,101	191,613,806
2040	58,346,704	25,850,802	84,197,506
2041	60,964,739	23,225,017	84,189,756
2042	63,713,780	20,480,026	84,193,806
2043	47,539,846	17,609,860	65,149,706
2044	49,779,007	15,370,699	65,149,706
2045	52,127,381	13,025,225	65,152,606
2046	54,581,145	10,568,211	65,149,356
2047	26,766,529	7,994,627	34,761,156
2048	27,944,825	6,818,131	34,762,956
2049	29,172,387	5,589,369	34,761,756
2050	30,455,635	4,306,121	34,761,756
2051	31,796,056	2,965,900	34,761,956
2052	15,760,213	1,566,143	17,326,356
2053	16,524,741	801,615	17,326,356
Totals *	<u>\$ 3,017,905,328</u>	<u>\$ 1,465,511,285</u>	<u>\$ 4,483,416,612</u>

* Totals may be off slightly due to rounding.

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SECTION 8

STATISTICAL INFORMATION

Table of Contents	8 - 1
Demographic Statistics	8 - 2
Top Ten Employers	8 - 3
Residential Real Estate	8 - 4
Secured Tax Roll	8 - 5
Temperature & Rainfall	8 - 6
Charts: Average Rainfall and Comparison of Lake Elevations	8 - 7

Southern Nevada Water Authority
Statistical Summary

Table of Contents..... 8-1
Demographic Statistics..... 8-2
Top Ten Employers..... 8-3
Residential Real Estate..... 8-4
Secured Tax Roll..... 8-5
Temperature & Rainfall..... 8-6
Charts: Average Rainfall and Comparison of Lake Elevations..... 8-7

Demographic Statistics
Clark County, Nevada
Five Calendar Years

Calendar Year	Clark County Population (1)	Per Capita Income (2)	Clark County Personal Income (In Million \$)(2)	Median Household Income (3)
2022	2,331,934	N/A	N/A	N/A
2021	2,333,092	58,276	133,597	63,735
2020	2,376,683	53,562	121,767	62,496
2019	2,325,798	51,012	114,155	62,131
2018	2,284,616	47,814	104,986	57,155

Calendar Year	School Enrollment (4)	Total Labor Force(5)	Unemployment Rate (6)
2022	304,276	1,130,205	5.4%
2021	310,556	1,100,264	8.3%
2020	310,493	1,104,388	15.5%
2019	323,787	1,131,564	4.2%
2018	325,081	1,093,988	4.6%

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 (e.g. 2022 is for School Year 2022-2023).

(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 Section
Fiscal Year Ending June 30, 2024

Top Ten Employers⁽¹⁾
Clark County, Nevada
Calendar Year 2022

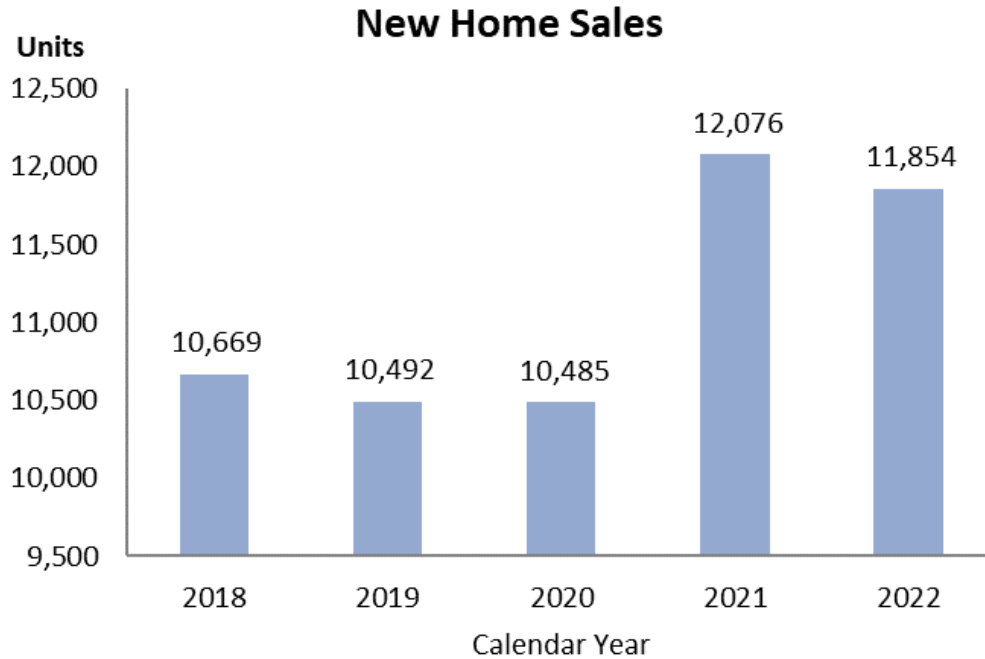
Employer Trade name	Employees ⁽²⁾	Ranking
US Nellis Air Force Base	10,000 or More	1
Intercontinental the Venetian	10,000 or More	2
Encore Casino	10,000 or More	3
Las Vegas Metropolitan Police	5,000 to 9,999	4
Flamingo Las Vegas Hotel-Casino	5,000 to 9,999	5
MGM Grand Las Vegas	5,000 to 9,999	6
Linq	5,000 to 9,999	7
Las Vegas Sands Corp	5,000 to 9,999	8
Orleans Hotel & Casino	5,000 to 9,999	9
Mandalay Bay	5,000 to 9,999	10
 Total Labor Force	 1,130,205	

Sources:

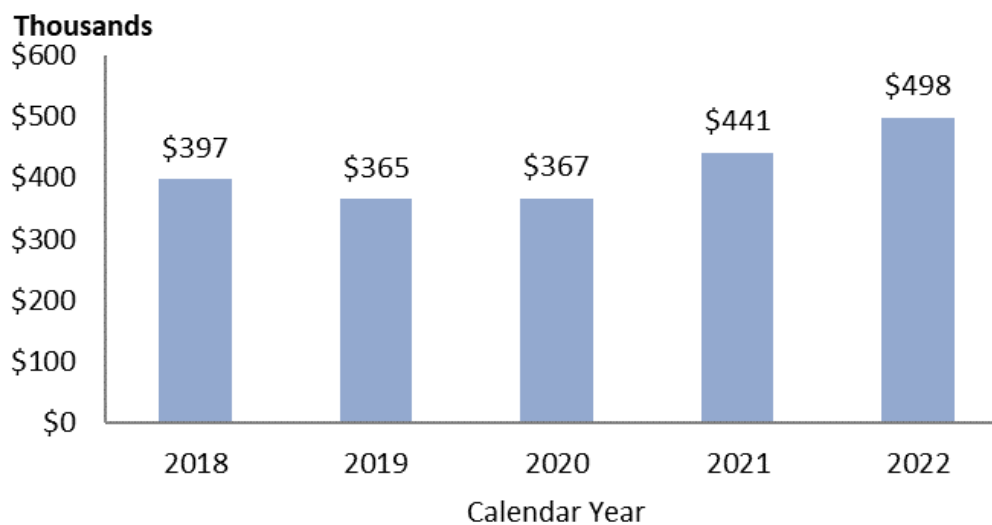
(1) Nevada Department of Employment, Training & Rehabilitation (DETR). The data is as of 1st release of 2023 (as of April 6, 2023). In 2018, DETR changed the data source from internally created to a third party provider (Infogroup). Infogroup collects the data at the establishment level not rolled up into a collective whole. For example in the current method, the data set lists each school and/or department separately instead of aggregating it.

(2) Nevada law prohibits the disclosure of exact employee counts. All employee counts are shown in ranges

Residential Real Estate Clark County, Nevada



New Home Median Price



Southern Nevada Water Authority
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2024

Secured Tax Roll
Clark County, Nevada
2022 - 23

	<u>Taxpayer</u>	<u>Taxable Assessed</u>	<u>Taxable Appraised</u>
1.	VICI PROPERTIES INC	\$3,996,752,110	\$11,419,291,743
2.	THE BLACKSTONE GROUP	1,988,609,070	5,681,740,199
3.	CAESARS ENTERTAINMENT	1,169,684,990	3,341,957,113
4.	WYNN RESORTS LIMITED	926,978,368	2,648,509,622
5.	STATION CASINOS LIMITED LIABILITY	875,632,786	2,501,807,960
6.	GENTING GROUP	734,901,496	2,099,718,561
7.	MGM RESORTS INTERNATIONAL	578,563,575	1,653,038,787
8.	HOWARD HUGHES CORPORATION	547,573,792	1,564,496,548
9.	. BOYD GAMING CORPORATION	489,173,376	1,397,638,217
10.	RUFFIN COMPANIES	458,029,236	1,308,654,960
		<u>\$11,765,898,799</u>	<u>\$33,616,853,710</u>

Source: Clark County Assessor's Report Dated October 31, 2022

Southern Nevada Water Authority
Operating and Capital Budget
Statistical Section
Fiscal Year Ending June 30, 2024

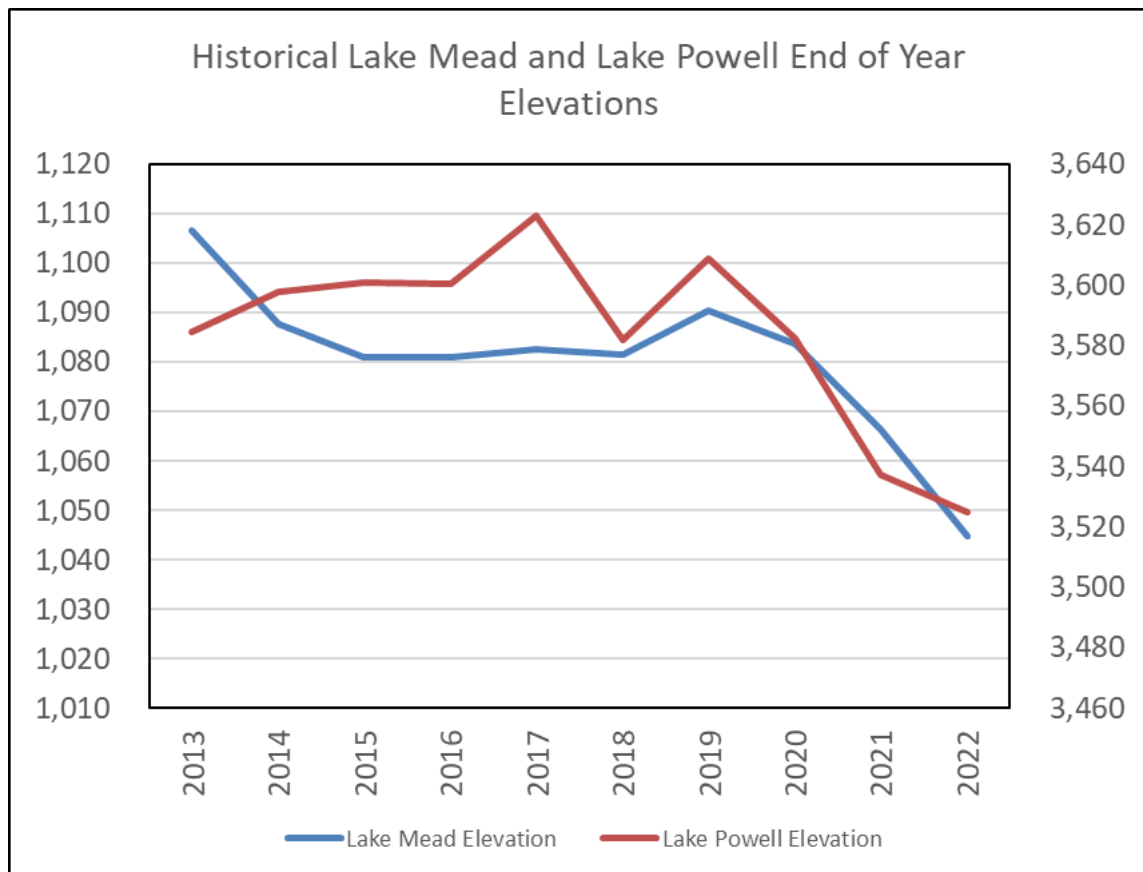
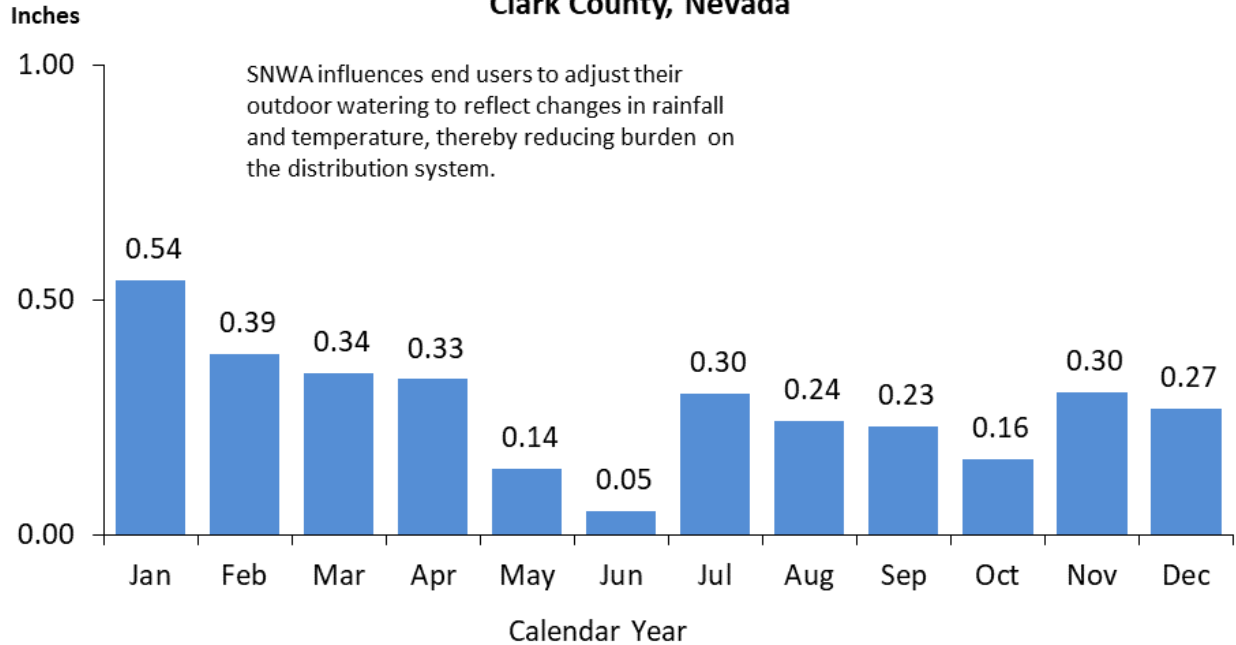
Temperature and Rainfall

Average Maximum and Minimum Daily Temperature
in Degrees Fahrenheit and Monthly Rainfall in Inches

Month	2017			2018			2019		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	57	42	0.9	64	44	1.5	59	42	1.0
February	65	49	0.6	64	44	0.0	56	39	2.1
March	77	54	0.0	70	50	0.3	70	51	0.4
April	81	59	0.0	84	61	0.0	82	60	0.4
May	89	66	0.1	90	68	0.2	82	61	0.8
June	105	79	0.0	103	79	0.0	99	77	0.0
July	107	85	0.1	107	85	0.8	105	83	0.0
August	103	81	0.2	105	84	0.1	107	82	0.0
September	92	72	0.5	100	77	0.0	95	73	0.2
October	84	60	0.0	79	61	0.1	78	55	0.0
November	73	53	0.0	68	48	0.2	69	48	1.1
December	63	42	0.0	59	42	0.2	57	42	0.9
Average Annual Temperature/ Total Rainfall	82.9	61.7	2.4	82.6	61.7	3.4	79.7	59.3	6.9

Month	2020			2021			2022		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	60	41	0.0	59	40	0.2	60	39	0.1
February	64	44	0.3	64	45	0.0	64	42	0.0
March	67	50	1.6	68	47	0.6	73	50	0.1
April	80	59	0.4	83	60	0.0	81	59	0.0
May	92	69	0.0	90	67	0.0	89	66	0.0
June	99	75	0.0	104	81	0.0	101	78	0.0
July	107	83	0.0	106	84	0.5	104	82	0.7
August	107	84	0.0	104	82	0.0	101	82	0.6
September	99	74	0.0	97	75	0.1	97	76	0.5
October	88	62	0.0	78	57	0.1	83	62	0.0
November	69	48	0.0	74	53	0.0	62	43	0.1
December	59	38	0.0	58	41	0.3	58	40	0.1
Average Annual Temperature/ Total Rainfall	82.5	60.5	2.4	82.1	61.0	1.9	81.1	59.8	2.1

Average Rainfall Per Month Ten Year Span (2013 to 2022) Clark County, Nevada



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SECTION 9

FINANCIAL POLICIES

Financial Policy	9 - 2
Reserve Policy	9 - 5
Capitalization Policy	9 - 7

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.

Southern Nevada Water Authority
Operating and Capital Budget
Financial Policies
Fiscal Year Ending June 30, 2024

LAS VEGAS VALLEY WATER DISTRICT DEPARTMENT POLICY	SUBJECT: FINANCIAL POLICY	NUMBER: 1
		ISSUE: 1
ISSUING DEPARTMENT: FINANCE	APPROVED BY: <i>Gina Neilson</i>	PAGE: 1 OF 3
	DIRECTOR OF FINANCE June 1, 2015	

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.

Southern Nevada Water Authority
Operating and Capital Budget
Financial Policies
Fiscal Year Ending June 30, 2024

PROCEDURE NO. 1

Page 3 of 3

- 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.

Southern Nevada Water Authority
Operating and Capital Budget
Financial Policies
Fiscal Year Ending June 30, 2024

LAS VEGAS VALLEY WATER DISTRICT BOARD POLICY	SUBJECT: LAS VEGAS VALLEY WATER DISTRICT RESERVE POLICY	NUMBER: 11
	APPROVED BY: BOARD OF DIRECTORS	ISSUE: 1
ISSUING DEPARTMENT: FINANCE	January 5, 2016	PAGE: 1 OF 2

Purpose

The purpose is to establish a policy for maintaining adequate reserves of cash and investments. Maintaining adequate and prudent cash reserves is an important tool in mitigating the risks of significant and unexpected decreases in sources of funds and/or increases in the uses of funds. The benefits include stable services and fees. This policy applies to all unrestricted cash and investments of the Las Vegas Valley Water District (LVVWD).

Authority

The Government Finance Officers Association (GFOA) recommends local governments adopt a target amount of working capital to maintain in each of their enterprise funds. Because the purposes, customers, and other characteristics of enterprise funds can vary widely, the GFOA recommends that governments develop a target amount of reserves that best fits local conditions for each fund. The following are some of the key considerations for the LVVWD's reserve policy:

1. Volatility in Sources of Funds – Some of the LVVWD's sources of funds have experienced significant volatility; for example, connection charges and sales tax, in periods where the local economy suffers.
2. Likelihood of Successful Rate Increases – Although the LVVWD has enjoyed tremendous support from its Board of Directors and the community, it is possible that these conditions could change in the future, thus impacting the LVVWD's ability to adjust rates to meet increasing costs.
3. Asset Age and Condition – As the infrastructure ages, maintenance and replacement costs will increase. Also, there is the possibility of unexpected failures that can be quite expensive. Such failures could result from age-related causes, terrorism, or natural disasters.

4. Control Over Expenses – Although most of the LVVWD's expenses are predictable, there remains the possibility of large, unexpected expenditures; for example, litigation, natural disasters, increases in water, energy and chemical costs.

Reserve Components

The following four components identified for the LVVWD's reserves listed by funding priority:

1. Base Operating Reserve – Adequate reserves to fund 180 days of operating and maintenance expenses. This will help insulate the LVVWD and its customers from volatility in operating revenues and expenses, as well as from other casual factors that could interrupt cash flow or impose unforeseen costs.
2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, the LVVWD should strive to achieve this level of reserves to ensure access to lower cost capital in future years, help mitigate the impact of disruptions in the credit markets on operations, and provide assurances to investors that the LVVWD has the financial resources necessary to make its ongoing debt service payments.
3. Capital Related Reserve – Adequate reserves to fund a one year average of future capital needs. As a method to determine future capital needs, a capital improvement plan may be used. This reserve will fluctuate over time as projects change. This level of capital reserve will enable the LVVWD to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable the LVVWD to continue with uninterrupted critical capital improvements during times of difficulty within the capital markets.
4. Unforeseen Events Reserve – Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.

Reporting

The General Manager shall notify the Board of Directors of the status of reserves at least annually and more often as significant changes occur.

LAS VEGAS VALLEY WATER DISTRICT FINANCE POLICY		
SUBJECT:	CAPITALIZATION POLICY	NUMBER: 2
APPROVED BY:	CHIEF FINANCIAL OFFICER	
DATE:	January 2, 2023	PAGES: 9

I. PURPOSE

This policy establishes the standards and procedures for ensuring that accounting for capital assets and depreciation follow management's objectives and generally accepted accounting principles ("GAAP").

II. SCOPE

This policy applies to the Las Vegas Valley Water District (LVVWD), the Southern Nevada Water Authority (SNWA) and other entities for which the LVVWD has fiduciary responsibility.

III. CAPITAL ASSETS

Capital assets are defined as tangible and intangible assets used in operations that generally provide benefits well beyond a single reporting period.

Costs related to capital assets can be classified into one of two categories. The accounting treatment of the same type of cost will vary depending upon which of the two categories below that it falls under:

A. Costs to the original purchase/construction of an asset.

For costs related to the original purchase/construction of an asset - All land, improvements to land, buildings, building improvements, vehicles, machinery, equipment, works of art and historical treasures, infrastructure, and all other tangible or intangible assets other than software (assets that lack physical substance such as easements, water rights, etc.) that are used in operations, with an initial individual cost greater than \$10,000 and an estimated useful life of at least three years should be capitalized.

- Cost includes freight, taxes, fees, installation, labor, materials, as well as any other allowable costs necessary to place the asset into service in its intended location.
- Identifying details of any new capital asset will be gathered by Finance and added to the capital asset subledger when applicable. Examples of identifying details consist of, but are not limited to – Model, Manufacturer, General Description, Serial Number, Capital Project Number, Physical Location and Department Owner.
- Generally, the capitalization threshold is applied to individual items rather than groups of items. However, groups of assets with individual unit costs equal to or less than \$10,000 have been identified as significant to our operations and are capitalized regardless of individual unit cost. These groups of assets include meters, service laterals and pipelines. Assets/asset groups deemed significant may be revised only with written approval of the Chief Financial Officer.

B. Costs to an already existing asset, such as a repair or an improvement.

For costs related to an already existing asset, such as a repair or an improvement - A decision must be made as to whether the cost can be capitalized as an improvement to the original asset or should be recorded as an operating maintenance expense.

Capital asset related costs are deemed improvements and should be capitalized only if:

1. The costs exceed the capitalization dollar threshold, and
2. At least one of the following criteria is met:
 - The useful life of the asset is significantly extended past its original estimated life, or
 - The capacity of the asset is significantly increased, or
 - The quality of the output of the asset is significantly increased, or
 - The efficiency of the asset is significantly increased

Otherwise, the cost is considered normal maintenance and repairs since it does no more than return a capital asset to its original condition and does not qualify for capitalization. Costs related to normal maintenance and repairs are expensed and not capitalized. See [Attachment A](#) for a decision-tree to assist in determining whether expenditures are capital or operating and maintenance.

IV. COMPUTER SYSTEM SOFTWARE

Major on-premises computer software and Software-as-a-Service (SaaS) that includes a software license component that allows both the contractual right to take possession of the software at any time during the hosting period without significant penalty, and the ability to run the software on our own hardware or contract with another party unrelated to the vendor to host the software, whether purchased or internally developed, should be capitalized if the capitalizable cost exceeds \$100,000 and the useful life is at least three years.

Internally developed software has three phases of development. The accounting treatment of internally developed software costs depend heavily on both the nature of the activity and what phase of the project the cost is incurred. The type of costs typically found in each phase of the project and its proper accounting treatment are listed in the phases below.

- A. Preliminary Project Phase (Period before the date a commitment was made to purchase the software) – Expensed as incurred
 - Due diligence leading up to selection of software, including evaluation of alternatives and conceptual formulation
- B. Application Development Phase (Period starting after the date a commitment was made to purchase the software, but before the software is deemed substantially complete and operational) – Capitalized into the cost of software and amortized over useful life
 - Initial cost of software
 - Design of chosen path
 - Software configuration and software interfaces
 - Coding
 - Installation of software to hardware
 - Testing (Including parallel processing phase)
 - Data conversion (Only to the extent it is determined to be necessary to make the software operational)
- C. Post-Implementation/Operation Phase (Period after the date that the software is considered substantially complete and operational) – Depends on the situation, see below
 - Software support/maintenance agreement costs – Expense
 - Application training costs – Expense
 - Annual licensing fees – Expense
 - Data conversion – Expense (Only for data conversion that takes place after the software is determined to be operational)

- Modifications/updates – Depends on the situation, see below
 1. Modifications made to the software post-implementation that exceed \$100,000, by either internal parties such as IT, or an outside party, that do any of the following should be capitalized as an improvement to the existing software.
 - a. An increase in the functionality of the computer software, that is, the computer software can perform tasks that it was previously incapable of performing.
 - b. An increase in the efficiency of the computer software, that is, an increase in the level of service provided by the computer software without the ability to perform additional tasks.
 - c. An extension of the original useful life of the software.
 - d. If the modification/update does not result in any of the above outcomes (a., b., or c.) the modification should be considered maintenance, and the associated costs should be expensed as incurred.

NOTE: The activities within the phases of development may occur in a sequence different than described above. The recognition guidance for costs associated with the development of internally generated software should be applied based on the nature of the activity as the overriding factor, not the timing of its occurrence. For example, costs associated with application training activities that occur during the application development phase should still be expensed as incurred.

V. DONATED FACILITIES

Donated developer facilities are capitalized at the engineering estimates of acquisition value at the time the assets are donated.

VI. DISPOSAL OF CAPITAL ASSETS

Departments should notify Finance, via the Capital Asset Change Form found in [Attachment B](#), when disposing of capital assets so that Finance can remove the disposed assets from the capital asset system and properly calculate any gain/loss on disposal.

VII. TRANSFER OF CAPITAL ASSETS

Departments should notify Finance, via the Capital Asset Change Form found in [Attachment B](#), when an asset under their custody is being transferred to another department/location. This allows for Finance to update the location of the asset in the capital asset system.

VIII. IMPAIRMENT OR LOSS OF CAPITAL ASSETS

An impairment of a capital asset is defined as a significant, unexpected decline in the service utility of a capital asset. A capital asset should be tested for impairment by Finance when any one of the following triggering events occurs:

- Significant decline in the market value of the asset
- Significant change in the way the asset is used or a physical change in the asset
- Adverse changes in legal factors or business climate that affect the asset
- Current expectation that the asset will be disposed of significantly before the end of its useful life
- Project cancellation for capital asset still in development/construction
- An asset is lost or stolen

NOTE: If it is determined that a significant and unexpected decline in service utility has occurred that is more than temporary, it must be measured and reported in the financial statements. Departments should notify Finance, via the Capital Asset Change Form found in [Attachment B](#), of any potentially impaired or lost assets.

IX. CONSTRUCTION WORK-IN-PROCESS

In-process capital project costs will be recorded as Construction Work-in-Process (CWIP) until the project is deemed ready to be placed into service. Departments should notify Finance of any capital projects that reach substantial or final completion as soon as possible. Costs to be capitalized include material costs and labor, as well as any allowable ancillary costs that are necessary to place the asset into service in its intended location.

X. DEPRECIATION

Capital assets will be depreciated in the month placed into service using the straight-line method over the assets estimated useful life. Useful lives are determined by asset category. See below for a list of asset types and their useful lives. Assets with indefinite lives, such as land, will not be depreciated.

Major Capital Asset Categories

LVVWD, and other entities for which LVVWD has fiduciary responsibility	Global #	Useful Life (Years)
Collect/Impounding Structure	10201	20-50
Land/Land Rights	10101	Indefinite
Office Furniture/Equip (Excluding Computer System Software)	10901	5-10
Office Furniture/Equip (Computer System Software)	10901	5
Organizations & Improvements	10001	20-50
Pump Station/Wells	10401	11-30
Purification Equipment	10501	15-25
Services/Meters	10801	20-30
Telemetry/Valves/Miscellaneous	10701	10-75
Transportation/Work/Equipment	11001	3-10
Transmission/Distribution/Mains	10601	75

SNWA	Global #	Useful Life (Years)
SNWA - Land Warm Springs Ranch	19513	Indefinite
SNWA - Communication Equipment	19556	12
SNWA - Distribution Reservoirs	19526	50
SNWA - Laboratory Equipment	19552	15
SNWA - Lakes, Rivers, Other Intake	19512	75
SNWA - Land/Land Rights	19506	Indefinite
SNWA - Leasehold Improvement	19500	10
SNWA - Miscellaneous Equipment	19558	15
SNWA - Office Furniture/Equip (Excluding Computer System Software)	19548	5
SNWA - Office Furniture/Equip (Computer System Software)	19548	5
SNWA - Power Operated Equipment	19554	10
SNWA - Pumps & Pumping Equipment	19518	40
SNWA - Silverhawk Power Plant	19564	30
SNWA - Stores Equipment	19560	15
SNWA - Structures & Improvement	19508	20
SNWA - Supply Mains	19514	50
SNWA - Tool Shop/Garage Equipment	19550	15
SNWA - Transmission & Distribution Mains	19528	75
SNWA - Transportation Equipment	19562	5-10
SNWA - Water Treatment Equipment	19534	15
SNWA - Ranch Fencing	19576	7
SNWA - Ranch Machinery & Equipment	19577	7
SNWA- Ranch Miscellaneous	19582	5-7
SNWA- Ranch Office/Computer Equipment	19583	5
SNWA- Ranch Pumping Equipment	19580	7
SNWA- Ranch Residential Property	19579	27
SNWA- Ranch Structures	19578	10
SNWA- Ranch Vehicles	19581	5
SNWA- Ranch Wells	19575	15

XI. PHYSICAL INVENTORY

Departments who are in custody of major capital asset equipment or vehicles shall perform physical inventories of those assets compared to their internal listings and/or listings provided from Finance from the capital assets subledger at least once every five years. The results of these inventories are shared with Finance personnel responsible for updating the asset listing in the capital assets subledger. Those counts are reconciled to the capital asset subledger by Finance.

XII. ANNUAL REVIEW

This policy is to be reviewed annually to ensure compliance with accounting standards, evaluate efficiency of capitalization-related processes, and periodically review established capitalization thresholds.

XIII. GLOSSARY

Capital Assets: Capital assets are constructed or acquired for use in operations and not for resale. They are long term in nature.

Depreciation: The systematic and rational allocation of the historical cost of a capital asset – or if donated, the acquisition value of the capital asset at the time of donation – over its estimated useful service life.

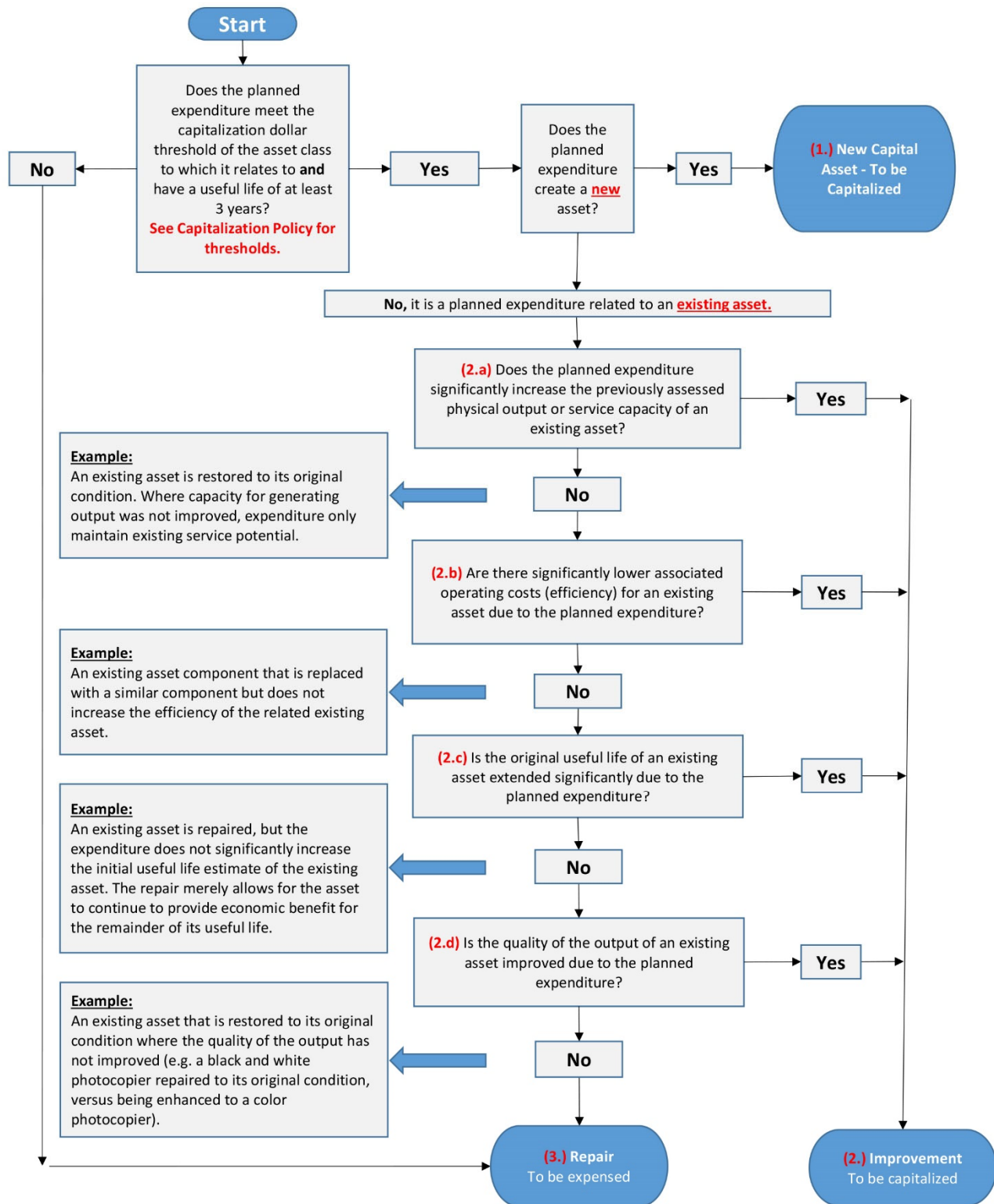
Estimated Useful life: The estimated amount of time that an asset is expected to be useful. It is the period over which an asset's cost will be depreciated.

Historical Cost: The actual exchange value in dollars at the time the asset was acquired. It is measured by cash or cash equivalent price of obtaining the asset and any charges necessary to bring it to its intended location and to place the asset in its intended condition for use.

Straight-Line Depreciation Method: Is determined by the formula: $\text{Cost} - \text{Salvage value} / \text{Estimated useful life} = \text{Depreciation per period}$.

XIV. AUTHORITY

- GASB Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments*
- GASB Statement No. 42, *Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries*
- GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets*
- GFOA Best Practices, *Capitalization Thresholds for Capital Assets*
- GFOA Best Practices, *Inventories of Tangible Capital Assets*

ATTACHMENT A**New Asset vs. Improvement vs. Repair Decision Tree**

ATTACHMENT B

Three companies, one job:
Working for a sustainable Nevada
LVVWD • SNWA • SPRINGS PRESERVE

Capital Asset Change Form

Date of Action: _____

Reason for disposal/move action:

____ Damaged Beyond Repair

____ Obsolete

____ Destroyed

____ Donated to: _____. *Please attach documentation.*

____ Lost/Stolen

____ Sold, Sale Price \$ _____. *Please attach sales paperwork.*

____ Transfer

____ Traded In

____ Other

Explain:

Property Detail				
Asset Manufacturer	Serial #/VIN	Asset Description	Physical Location Before Action Date	New Physical Location

(Attach additional pages if necessary)

Person Completing this form

Date

Transfer Details (If Transferring)

From Department _____ To Department _____

Approvals

Signature of Department Releasing the Capital Asset

Date

Signature of Department Receiving the Capital Asset
(If Transferring)

Date

Please send the completed form to Finance at AssetAccounting@lvvwd.com. Contact Finance with any questions regarding completion of this form:

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SECTION 10

GLOSSARY

Glossary	10 - 1
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Southern Nevada Water Authority
Operating and Capital Budget
Glossary

Fiscal Year Ending June 30, 2024

Accrual Basis Accounting. An accounting method that measures the performance and position of a company by recognizing revenue or expense events regardless of when cash transactions occur.

Acre-Foot (AF). A water measurement equating to 325,851 gallons or 43,560 cubic feet. An acre foot will supply the annual water needs of approximately 2 single family homes in the LVVWD's service area.

Alfred Merritt Smith Water Treatment Facility (AMSWTF). Built in 1971, the Alfred Merritt Smith Water Treatment Facility currently treats most of the Las Vegas Valley's drinking water. The facility can treat up to 600 million gallons a day (MGD).

American Water Works Association (AWWA). A 50,000-member nonprofit dedicated to science, technology, education and the managing and treating of water.

Amortization. Amortization is paying off a debt with a fixed repayment schedule in incremental installments over a period of time.

Annual Comprehensive 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).

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 LVVWD 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.

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 of time, usually one year.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary

Fiscal Year Ending June 30, 2024

Budget Calendar. The schedule of key dates or milestones the LVVWD follows in the preparation and adoption of the budget.

Budgetary Control. The management or control of a governmental unit or enterprise in accordance with an approved budget to keep expenditures within limitations of available appropriations and available revenues.

Budget Document. The official written document prepared by the LVVWD and approved by the LVVWD's Board of Directors.

Budgeted Positions. A position that has been authorized (created by action of the LVVWD Board of Directors) and may be specifically funded through the budget process.

Bureau of Labor Statistics (BLS). A unit of the United States Department of Labor, 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 life of over three 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 project portfolio that identifies the time, cost and scope of capital projects and identifies options for financing.

Captive Insurance. An alternative to self-insurance in which a parent group or groups create a licensed insurance company to provide coverage for itself.

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 2,200 miles of pipeline and 23 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.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

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.

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 LVVWD achieves the benefits of conservation through education of the end user, promoting water efficient hardware, and pricing signals.

Construction Expenditures. Generally, expenses made to build, supervise, or provide materials used in the construction of capital assets.

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.

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 LVVWD.

Debt Service Payments. Funds used for the repayment of annual principal and interest charges on debt the LVVWD has issued.

Department. A basic organizational unit of the LVVWD that is functionally unique in its delivery of services.

Depreciation. A reduction in the value of a physical asset with the passage of time.

Deoxyribonucleic Acid (DNA). A self-replicating material which is present in nearly all living organisms as the main constituent of genetic information.

Disbursements. Funds actually expended.

Dissolved Air Flotation (DAF). A water treatment process that clarifies wastewaters (or other waters) by the removal of suspended matter such as oil or solids.

Division. Organizational component of a department.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

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.

Energy. Collective name for electricity and natural gas purchases used to treat and distribute water throughout the LVVWD's service area as well as power office buildings and other ancillary locations.

Engineering Department Management System. (EDMS)

Engineering Project Management. (EPM)

Engineering Project Scheduling and Management System. (EPSM)

Enterprise Funds. Funds used to account for operations: 1) that are financed and operated in a manner similar to private business enterprises - where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods and services to the general public on a continuing basis be financed or recovered primarily through user charges; or 2) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

Environmental, Health, Safety & Corporate Security (EHS&CS). A department of the SNWA and LVVWD. 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 Las Vegas Valley Water District, the 12-month period begins with July 1, and ends with June 30 of the designated fiscal year; e.g. FY 2023-24 ends on June 30, 2024.

Fringe Benefits. Various types of non-wage compensation provided to employees in addition to their normal wages or salaries.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

Full-Time Equivalent (FTE). The number of positions that equate to a 40-hour work week for 52 weeks, or one full year. For example, two part-time positions, each working 20 hours per week, equals one FTE.

Full-Time Equivalent Employee (FTE). A person employed in the capacity of a Full-Time Equivalent.

Fund. A fiscal and accounting tool with a self-balancing set of accounts to record revenue and expenditures.

Fund Balance. Also known as beginning balance and ending balance. This represents the estimated cash balance in a specific fund at the beginning or ending of an accounting period.

Fund Equity. The excess of an entity's assets over its liabilities.

Gallons Per Minute (GPM). Also known as 'flow rate', GPM is a measure of how many gallons of water flow out of your shower head each minute.

General Obligation Debt. Bonds where the full faith and credit of the issuer is pledged to the repayment of the bonds.

Generally Accepted Accounting Principles (GAAP). A body of accounting and financial reporting standards set by the Governmental Accounting Standards Board (GASB) for state and local governments, and by the Financial Accounting Standards Board (FASB) for private sector organizations.

Government Finance Officers Association (GFOA). A professional association of approximately 21,000 state, provincial, and local government finance officers in the United States and Canada. In 1984, the GFOA signed an agreement with the Financial Accounting Foundation that gave them a voice and appointments in the creation of the Governmental Accounting Standards Board (GASB).

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.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary

Fiscal Year Ending June 30, 2024

Interest Earned. Monies earned by investing idle funds in the open market.

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 LVVWD employee salaries including overtime, longevity pay, and benefits. Labor can either be paid by operating funds or capital funds according to then activity/project in which it was expended.

Laboratory Information Management System (LIMS). A laboratory information management system is a software-based laboratory and information management system with features that support a modern laboratory's operations.

Las Vegas 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.

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.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary

Fiscal Year Ending June 30, 2024

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 largest water retailer in southern Nevada with a customer base of more than 1.5 million people. The LVVWD is the operating agent of the Southern 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.

Lease. A contract that conveys control of the right to use another entity's nonfinancial asset (the underlying asset) as specified in the contract. Lease contracts are bound by a period of time.

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 for SNWA, 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.

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.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

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. 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.

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 LVVWD distribution system.

Power Purchase Agreement. (PPA)

Proprietary Funds. Enterprise Funds and Pension Funds.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary

Fiscal Year Ending June 30, 2024

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 control the speed of an actuator by regulating the flow rate.

Recharge. Lake water injected directly into the aquifer by wells to store it for future use.

Reliability Centered Maintenance.(RCM)

Remote Operated Vehicle (ROV). Unoccupied, highly maneuverable underwater robots, typically operated by at, or above, the water surface.

Remote Terminal Unit, Programmable Logic Controller (RTU/PLC). A microprocessor-controlled electronic device that interfaces objects in the physical world to a distributed control system or SCADA.

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 M CCP 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 LVVWD to finance expenditures.

Revenue Bonds. Bonds where pledges are made to dedicate specific revenue sources to repay the bonds.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

Risk Management. An organized attempt to protect organization's assets against accidental loss in the most economical method.

River Mountains Treatment Plant (RMTP). Facility treats up to 300 million gallons of water per day. The facility provides additional reliability and capacity to Southern Nevada's municipal water treatment and distribution capabilities. It began delivering treated water in October 2002.

Rural System Operator.(RSO)

Safe Drinking Water Act (SDWA). Act is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the Environmental Protection Agency (EPA) is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards.

Salaries and benefits. A budget category that includes all LVVWD employee salaries including overtime, longevity pay, and benefits. Labor can either be paid by operating funds or capital funds according to then activity/project in which it was expended.

Sales Tax. One quarter of one penny of the Clark County sales tax rate that is remitted to SNWA monthly. 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 Authority comprises seven member agencies including the city of Henderson, city of Las Vegas, city of North Las Vegas, Big Bend Water District (Laughlin), the Clark County Water Reclamation District and the Las Vegas Valley Water District. SNWA provides wholesale water treatment and delivery for the greater Las Vegas Valley and is responsible for acquiring and managing long-term water resources for Southern Nevada.

Southern Nevada Water System (SNWS). Refers to the system of distribution facilities that delivers raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water providers.

Southern Nevada Water Authority
Operating and Capital Budget
Glossary
Fiscal Year Ending June 30, 2024

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.

Subscription Based Information Technology Arrangements (SBITA). A SBITA is defined as a contract that conveys control of the right to use another party's information technology software, alone or in combination with tangible capital assets for a period of time specified in the contract.

Supervisory Control and Data Acquisition (SCADA). Water operations control systems.

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 Process Improvement Team. (WQPIT)

Water Quality and Treatment (WQ&T). A department of the LVVWD/SNWA that ensures the quality of the water meets or surpasses SDWA standards.

Wholesale Delivery Charge (WDC). The per acre-foot charge that SNWA charges purveyor members for the treatment and delivery of treated, potable water.

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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