



# OPERATING & CAPITAL BUDGET 2018

Fiscal year ending June 30, 2018



**On the cover:**

Workers install a 55-ton, 180-inch pipeline connector at the Low Lake Level Pumping Station under construction at Lake Mead. The “wye,” named for its Y shape, will link one of the pumping station’s new discharge aqueducts to the Alfred Merritt Smith Water Treatment Facility. The pumping station is slated for completion in 2020.

# **Southern Nevada Water Authority**

## **Operating & Capital Budget Fiscal Year Ending June 30, 2018**



### **Board of Directors**

**Mary Beth Scow, Chair, County Commissioner  
(representing Las Vegas Valley Water District)**  
**Duncan McCoy, Vice Chair, City of Boulder City Councilman**  
**Bob Coffin, City of Las Vegas Councilman**  
**Marilyn Kirkpatrick, County Commissioner  
(representing Clark County Water Reclamation District)**  
**John Marz, City of Henderson Councilman**  
**Steve Sisolak, County Commissioner  
(representing Big Bend Water District)**  
**Anita Wood, City of North Las Vegas Councilwoman**

**John J. Entsminger  
General Manager**

**Brian G. Thomas  
Acting Chief Financial Officer**

**Matt J. Chorpening  
Assistant Chief Financial Officer**

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

**Note of Appreciation**

**We would like to express our appreciation to the Finance department staff, and staff members of other departments for their special work in the preparation of the 2017-18 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 for its annual budget for the fiscal year beginning July 1, 2016.**

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 Authority believes our current budget continues to conform to program requirements, and we are submitting it to the GFOA to determine its eligibility for another award.



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Southern Nevada Water Authority  
Nevada**

For the Fiscal Year Beginning

**July 1, 2016**

Executive Director



**Southern Nevada Water Authority**  
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# SECTION 1

## GENERAL MANAGER'S INFORMATION REPORT

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SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2017-18  
OPERATING AND CAPITAL BUDGET

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# **SOUTHERN NEVADA WATER AUTHORITY**

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

DATE: April 18, 2017

NO. 39

SUBJECT: SOUTHERN NEVADA WATER AUTHORITY  
PROPOSED OPERATING AND CAPITAL BUDGET FOR FISCAL YEAR 2017-18

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The Tentative Operating and Capital Budget of the Southern Nevada Water Authority (SNWA) for fiscal year 2017-18 was submitted by April 15, 2017, to the State of Nevada Department of Taxation in accordance with NRS 354.596. Attached for your review is the General Manager's Information Report.

### **Executive Summary**

The SNWA continues to develop innovative ideas and works with the Upper and Lower Colorado River Basin States to address ongoing drought conditions. The SNWA ensures Southern Nevada has reliable water delivery by implementing multiple strategies and approaches to drought, conservation and identifying present and future infrastructure and resource needs.

Community investment continues to play an important role in combating drought through conservation practices. Improvements to infrastructure and technology, community conservation efforts and collaboration on local, regional and federal levels enable Southern Nevada to further secure a reliable water supply.

While these efforts have yielded considerable progress, Lake Mead water levels are projected to continue to decline and future shortages on the Colorado River are probable. Therefore, fiscally-responsible planning for additional water resources and related infrastructure continues to be imperative moving forward.

The fiscal year 2017-18 Budget Plan reflects the maintenance of SNWA's financial position, continued conservation efforts, and the development and protection of water resources for Southern Nevada.

### **Drought and Water Resources**

The Colorado River supplies 90 percent of the water used in Southern Nevada. The Colorado River has endured persistent drought conditions for more than 15 years, and the SNWA and Colorado River Basin partners continue to develop, implement and extend programs to mitigate drought impacts on a regional level.

Between 2000 and 2016, historically low snowfall and runoff into the Colorado River Basin were recorded, resulting in the lowest 17-year average inflow into the Colorado River system in its recorded history (108 years). In January 2017, Lake Mead's elevations hovered around 1,081 feet above sea level, a decline of 133 feet since the onset of the drought.

Despite current estimates projecting nearly a 30 percent chance of a shortage declaration in 2018, long-standing community conservation practices have positioned Southern Nevada customers in the most favorable position and will largely be unaffected, if and when, such a declaration is made. Moreover, investments made in the regional water system will assist Southern Nevada to reliably deliver water even through severe drought conditions.

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**Low Lake Level Pumping Station**

Current and forecasted conditions project high probability of further declines to Lake Mead's elevation—potentially to as low as 1,000 feet above sea level within the next decade. Intakes 1, 2 and 3 currently draw water from Lake Mead to deliver to customers. In 2015, the Intake No. 3 tunnel was completed, which has the ability to draw water from levels below 875 feet when the construction of the new Low Lake Level Pumping Station (L3PS) is completed.

L3PS construction crews have completed preparation for all 34 pump well shafts and continue with the multi-phased drilling process. These shafts will accommodate submersible pumps, each capable of pumping 30 million gallons of water per day. Adjacent to the well shafts, workers are excavating a 26-foot diameter access shaft. Construction of the access shaft is complete to the top of the future forebay, at elevation 766 feet, which is 494 feet below the surface.

L3PS construction remains on schedule and is expected to be operational by 2020.

**Pilot System Conservation Program**

In July 2014, the Bureau of Reclamation (BOR) signed an agreement with the SNWA, the Metropolitan Water District of Southern California, Denver Water, and the Central Arizona Water Conservation District to jointly fund voluntary water conservation projects benefiting the Colorado River.

Federal and non-federal partners contributed a total of \$11 million. In 2016, Congress appropriated \$100 million to assist with drought in the West. The BOR added \$300,000, and non-federal partners

contributed \$3,020,000.

The SNWA continues to partner with the BOR and water users in the Upper and Lower Colorado River Basins on the System Conservation Pilot program. Over the past three years, SNWA and its partners, have helped fund 10 projects in the Lower Colorado River Basin and more than 25 projects in the Upper Basin. There continues to be broad interest in this voluntary program from water users in both basins and preliminary findings indicate substantial water conservation can be achieved through this type of program.

**Groundwater Hearings**

As recommended by the SNWA's 21-member Integrated Resource Planning Advisory Committee (IRPAC), which convened from 2012 – 2014 to evaluate the interrelated aspects of water resource management, the SNWA continues to maintain the Clark, Lincoln and White Pine Counties Groundwater Development Project as part of its water resource portfolio. While the project is unlikely to be needed in the short-term, it will help meet the community's future demands and provide a water supply separate from the Colorado River.

The Nevada State Engineer (NSE) scheduled an administrative hearing in 2017 to address issues raised by the Seventh Judicial District Court of the State of Nevada concerning prior rulings on the approved SNWA groundwater applications in Spring, Cave, Dry Lake, and Delamar Valleys. In previous rulings, the NSE took careful consideration of the evidence and expert testimony, granting some applications, denying others, and establishing the permitted duties and conditions for the development of water resources. After a review of the administrative record and the

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legal pleadings, the Court upheld the vast majority of the NSE's findings presented in the rulings; however, four narrowly-focused issues raised by the Court were remanded to the NSE for resolution.

The 2017 hearing will provide the SNWA and protestants an opportunity to provide additional evidence related to the specific issues raised by the Court. Rulings are anticipated next year.

### **Climate Change**

In early 2016, the SNWA assumed chairmanship for the Water Utility Climate Alliance (WUCA), an organization comprised of 10 of the nation's largest municipal drinking water agencies with a customer base of more than 40 million people. In this role, the SNWA led a survey of drinking water utilities across the nation to assess how utilities are addressing the risk of climate change to drinking water supplies. Additionally, a workshop is planned in 2017 to focus on climate change research in partnership with the BOR and the Colorado River Basin states.

### **Conservation**

Conservation continues to be a top priority for the SNWA. A multidisciplinary approach has been developed and implemented for conservation that includes private and public partnerships, infrastructure maintenance and investing in innovation.

Southern Nevada has come together and embraced water conservation initiatives. Local businesses, municipalities and citizens have contributed with their efforts to conserve, as evidenced by a significant reduction of Southern Nevada's water use.

Between 2002 and 2015, Southern Nevada customers reduced their use of Colorado River water, despite a population increase of more than 500,000 residents.

**Water Smart Landscapes.** Since the inception of the SNWA's Water Smart Landscapes Program, 182 million square feet of turf has been converted, saving approximately 108 billion gallons of water. The amount of square feet of turf converted would be sufficient to wrap an 18" wide sod roll approximately 92 percent around the Earth.

**Sunday Watering.** Following a comprehensive ordinance review process between the SNWA and its member agencies, the Board approved and implemented a voluntary change to summer watering restrictions in 2016, that was made permanent in 2017. It's estimated that eliminating landscape watering on Sundays saves the community up to 900 million gallons per year.

### **Financial Considerations/ Capital Funding**

Key initiatives for fiscal year 2017-18 include the continuation of Major Construction and Capital Plan (MCCP) projects and water resource management efforts.

#### **Financial Stability.**

The SNWA is consistently engaged in proactive long-term planning efforts to identify the financial impact of future infrastructure and water resource needs. Anticipating necessary improvements and their costs helps minimize the financial impact to the agency and its ratepayers.



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Bond refunding activities have also provided considerable savings for the organization. Over the last two years, the SNWA refunded seven debt series, resulting in over \$215 million in net present value savings. These bond refundings will provide an average annual savings of \$15.9 million in debt service costs, mitigating future rate increases.

### **Infrastructure Charge**

The IRPAC determined the risk of Lake Mead's elevation falling below 1,000 feet above sea level was not acceptable to the community due to the potential impacts on water delivery and resource availability. To help protect the community's water supply in the event of low lake elevations, the committee recommended generating the revenue necessary to construct the L3PS through fixed charges to customers based upon meter size. It also recommended phasing in the rate increases over a three-year period to provide customers sufficient time to adjust to the new charge. The first two increases were implemented in 2016 and 2017, respectively, and the third and final increase will occur in 2018, at which point no additional increases are forecasted through the mid 2020's.

### **Low Lake Level Pumping Station.**

Construction of the L3PS continues to represent a significant part of SNWA's capital commitment for the upcoming fiscal year. Design and construction costs are expected to total approximately \$650 million and L3PS is on track to be operational by 2020.

### **Silverhawk Power Sale**

During the western energy crisis in the early 2000's, the SNWA began pursuing ownership in a power plant to protect against high

energy prices. The SNWA purchased a 25 percent ownership interest in the Silverhawk Power Plant being built by Pinnacle West Energy Corporation.

In 2005, Pinnacle West sold their 75 percent ownership interest in Silverhawk to NV Energy, who became the majority owner and operator of the facility. The SNWA and NV Energy then entered into an Energy Exchange Agreement through which NV Energy operates the SNWA's portion of the plant and the SNWA receives a guaranteed supply of energy at a predictable price.

As Silverhawk's value to the SNWA diminished over time, the SNWA considered potentially selling its ownership in the plant in early 2014. NV Energy made an offer to purchase the SNWA's 25 percent interest for \$77 million, and the sale is expected to close in April 2017.

### **Garnet Valley Water System**

Following a special Legislative Session in December 2015, the SNWA was tasked with building and operating a water system to meet the needs of the proposed developments in the Apex area of Garnet Valley. The SNWA worked quickly to complete its water system design within the previously agreed-upon deadlines. The design phase of the Garnet Valley Water System project was completed in December 2016.

## **Fiscal Year 2017-18 Objectives**

- Treat and deliver high quality drinking water supplies to customers in Southern Nevada
- Monitor declining Lake Mead water levels for impacts to water quality
- Maintain sufficient water resources to meet short and long-term projected water

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demands

- Continue assessments of critical assets
- Direct surplus Connection Charge revenues to support the Rate Stabilization Fund
- Dedicate Silverhawk sale proceeds to fund capital projects to reduce the need for future borrowing
- Continue construction of the L3PS
- Resolve Seventh Judicial District Court concerns at Fall 2017 groundwater hearings
- Continue to seek grant funding to support activities in the areas of drought management, resource development, water quality, infrastructure and environmental management

## **Awards and Recognition**

- The Alfred Merritt Smith and River Mountains water treatment facilities were

each awarded the President's Award from the American Water Works Association (AWWA). Both treatment facilities were examined by trained professionals, who found that both plants satisfied the most stringent measures of water treatment and quality.

- The SNWA was awarded a \$1 million grant to support the Water Smart Landscapes Program from the BOR.
- The University of Colorado Boulder honored Lake Mead's Intake No. 3 with a Tunnel Achievement.

## **Financial Summary**

The table on the following page contains a summary of the SNWA's fiscal years 2015-16, 2016-17 and 2017-18.

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**Budget Summary**  
(\$ Millions)

	Actual 2015-16	Budget 2016-17	Budget 2017-18	Budget-to-Budget Variance	
				\$	%
<b>Sources</b>					
Wholesale Delivery Charge	\$ 125.1	\$ 122.8	\$ 130.8	\$ 8.0	7%
Infrastructure Charge	106.5	149.6	149.1	(0.5)	0%
Commodity Charge	56.6	63.9	68.5	4.7	7%
Connection Charge	63.8	68.4	63.3	(5.2)	-8%
Reliability Surcharge	5.1	5.3	5.3	0.0	1%
Sales Tax	58.2	58.0	62.3	4.3	7%
Investment Income	3.9	2.9	3.8	0.9	31%
Groundwater Management Fees	0.9	0.9	0.9	0.0	4%
LV Wash Program Fees	0.4	0.4	0.4	0.0	3%
Grant Proceeds	0.9	0.9	4.7	3.8	
Other Revenues	53.4	83.6	4.7	(78.9)	-94%
<b>Subtotal</b>	<b>\$ 474.7</b>	<b>\$ 556.6</b>	<b>\$ 493.9</b>	<b>\$ (62.8)</b>	<b>-11%</b>
Debt Issuance Proceeds	520.0	-	-	-	
<b>Total Sources</b>	<b>\$ 994.7</b>	<b>\$ 556.6</b>	<b>\$ 493.9</b>	<b>\$ (62.8)</b>	<b>-11%</b>
<b>Uses</b>					
Energy	\$ 39.3	\$ 38.0	\$ 37.0	\$ (1.0)	-3%
Payroll & Related	71.2	71.5	77.2	5.6	8%
Operating Expenses	39.3	49.2	54.7	5.5	11%
Capital Expenditures	112.6	219.3	225.6	6.3	3%
Debt Service	222.8	271.0	264.0	(7.1)	-3%
<b>Total Uses</b>	<b>\$ 485.3</b>	<b>\$ 649.0</b>	<b>\$ 658.4</b>	<b>\$ 9.4</b>	<b>1%</b>
<b>Total Net Surplus/(Deficit)</b>	<b>\$ 509.4</b>	<b>\$ (92.4)</b>	<b>\$ (164.5)</b>		

**Sources.**

The 2017-18 Budget Plan's total sources of funds are projected to be \$493.9 million, or a 11 percent decrease compared to the 2016-17 Adopted Budget Plan. The decrease is due to the reduced other revenues, which in 2016-17 included the sale of a 25 percent ownership stake in the Silverhawk Power Generation Facility to NV Energy for \$77 million.

Not including other revenues, sources of funds are budgeted to increase \$16.2 million,

or 3 percent. The increase is primarily attributable to growth in the Wholesale Delivery Charge, Commodity Charge, and Sales Tax revenues.

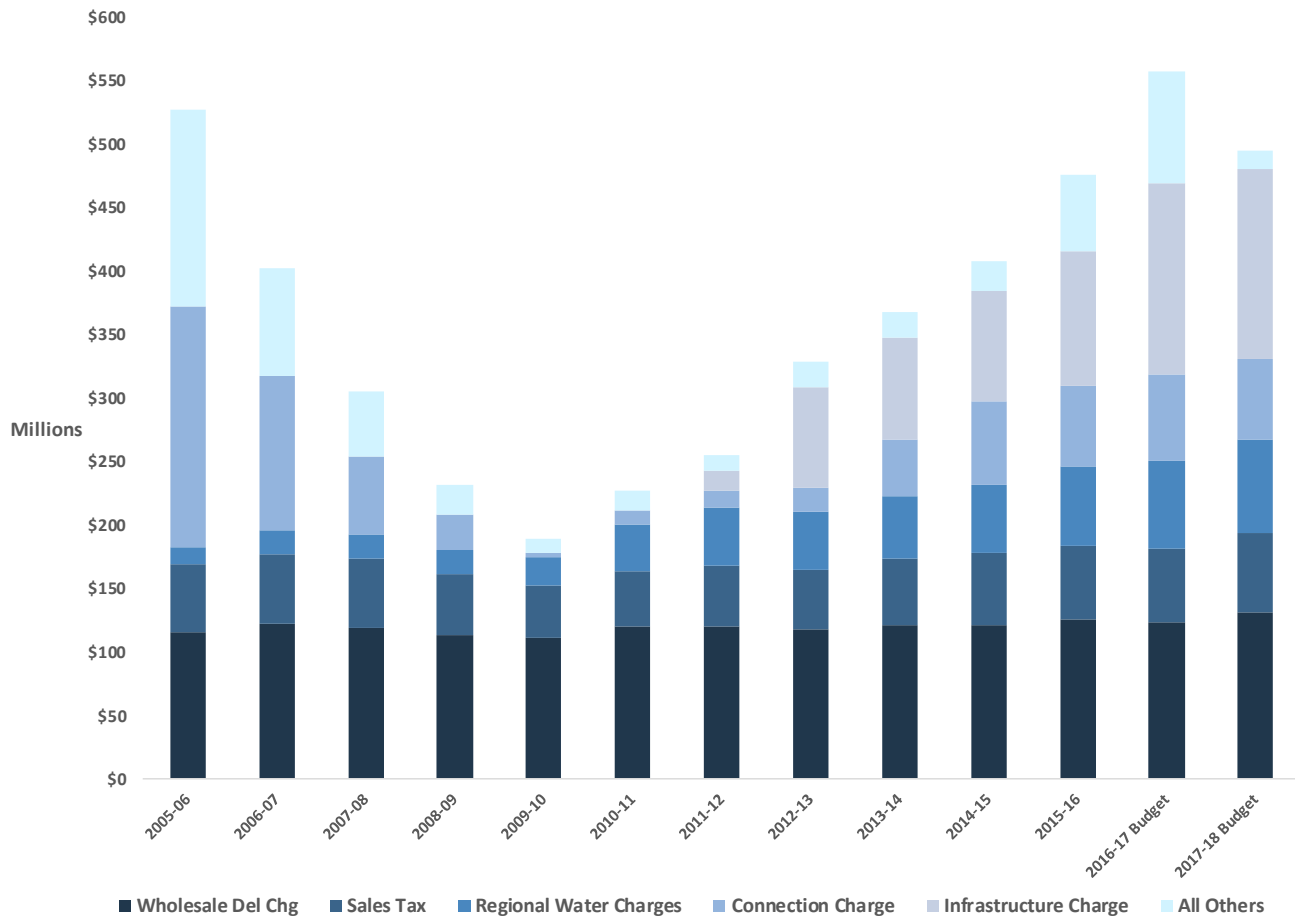
Infrastructure Charges are budgeted to decrease \$0.5 million compared to the 2016-17 Adopted Budget Plan. The decrease reflects actual revenues over the past two years. The SNWA Board approved a series of recommendations by the IRPAC, which included rate increases. The IRPAC Phase II infrastructure charge increases are being

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phased-in over three years. The initial increase was in 2016, with the final increase slated for January 2018. With the infrastructure charge becoming the largest revenue component, the SNWA's sources of

funds have increased stability over past years with reduced dependence on more volatile growth related Connection Charge revenue, as illustrated on the chart below.

**SNWA Sources of Funds History**



Connection Charges are projected to decrease \$5.2 million, which is 8 percent below the 2016-17 Adopted Budget Plan. This projected decrease is due to pace of new service connections moderating recently.

**Uses.**

The 2017-18 Budget Plan's total uses of funds are projected to be \$658.4 million, a \$9.4 million increase compared to the 2016-17 Adopted Budget Plan.

Capital expenditures are budgeted to increase \$6.3 million. The L3PS, in its third year of construction, remains the largest component of capital expenditures.

Debt service is projected to decrease \$7.1 million, which is 3 percent below the 2016-17 Adopted Budget Plan. This decrease is due to the SNWA taking advantage of recent debt refunding opportunities. Debt service costs are projected to remain relatively stable for the next ten years, then decline thereafter. In

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addition, there may be savings from future debt refundings, depending on future market conditions.

Payroll costs are anticipated to increase by \$5.6 million, or 8 percent, compared to the 2016-17 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 have resulted in increased staffing requirements for the SNWA.

Of the remaining uses of funds, energy is budgeted to decrease by \$1 million and non-payroll operating expenses are projected to increase by \$5.5 million. This increase is due to higher costs in materials, supplies, maintenance, and repairs.

**Summary.**

The financial summary table projects a 2017-18 "deficit" of \$164.5 million. This deficit represents the SNWA expenditure of existing bond proceeds for capital improvements. The SNWA's fiscal year 2017-18 Budget Plan presents a stable outlook.

**Approval**

The public hearing for the 2017-18 Budget Plan is scheduled for 9:00 a.m., Thursday, May 18, 2017, in the Colorado River Conference Rooms, 100 City Parkway, Seventh Floor, Las Vegas, Nevada.

  
John J. Entsminger, General Manager

# SECTION 2

## INTRODUCTION AND STRATEGIC PLAN

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OPERATING AND CAPITAL BUDGET

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## **Introduction**

### **Purposes and Powers.**

The Southern Nevada Water Authority (SNWA) is a political subdivision of the State of Nevada created on July 25, 1991, pursuant to Nevada Revised Statutes Chapter 277.080 to 277.180, inclusive, by a cooperative agreement among the Big Bend Water District, the City of Boulder City, the City of Henderson, the City of Las Vegas, the City of North Las Vegas, the Clark County Water Reclamation District, and the Las Vegas Valley Water District (LVVWD). The Cooperative Agreement has been amended on November 17, 1994; January 1, 1996; February 18, 2010; and June 21, 2012.

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

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

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

The Board of the SNWA has the power to periodically assess the member agencies directly for operating and capital budgets and for the satisfaction of any liabilities imposed against the SNWA. Each member made an initial contribution to the SNWA for operating and administrative expenses in the amount of \$15,000. Assessments for additional funds needed by the SNWA, in accordance with operating and capital budgets, have been apportioned to member agencies on the basis of water deliveries to those agencies. Funding received by the SNWA from its member agencies for operations is recorded as operating revenue, while funding received for capital purchases is recorded as capital contributions. Member agencies who are not water purveyors, i.e., the City of Las Vegas and the Clark County Water Reclamation District, each contributes towards the SNWA operations for the fiscal year 2016-17.

### **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

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liabilities of the CRC related to the SNWS were to be transferred to the SNWA.

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

#### **Intergovernmental Relationships.**

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

**Major Water Purveyors.** The SNWA diverts Colorado River water from Lake Mead, treats it to federal Clean Drinking Water Act standards, and delivers treated water to the facilities of water purveyors in the Las Vegas Valley and Boulder City. The major water purveyors and their percentage of total SNWA water deliveries are as follows: Boulder City (2.5 percent), Henderson (15.8 percent), North Las Vegas (12.0 percent), the LVVWD (69.5 percent) and others (0.2 percent).

**Wastewater Treatment Agencies.** Wastewater treatment agencies in the SNWA service area are the Cities of Las Vegas, Henderson, 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

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from CRC to the SNWA. The LVVWD continues to operate the SNWS under contract with the SNWA. The projects in the SNWA's Major Construction and Capital Plan (MCCP) are expansions or improvements of the SNWS.

**Robert B. Griffith Water Project Title Transfer.**

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

The role of the federal government in financing improvements of the SNWS has been declining. When the first phase of the SNWS was completed in 1971 at a total cost of \$62 million, 85 percent of that cost was provided by the federal government. After completion of the second phase in 1983, the ratio provided by the federal government had dropped to 71 percent. In 1995 the SNWA began work on its \$2.1 billion Capital Improvement Plan to expand and improve the

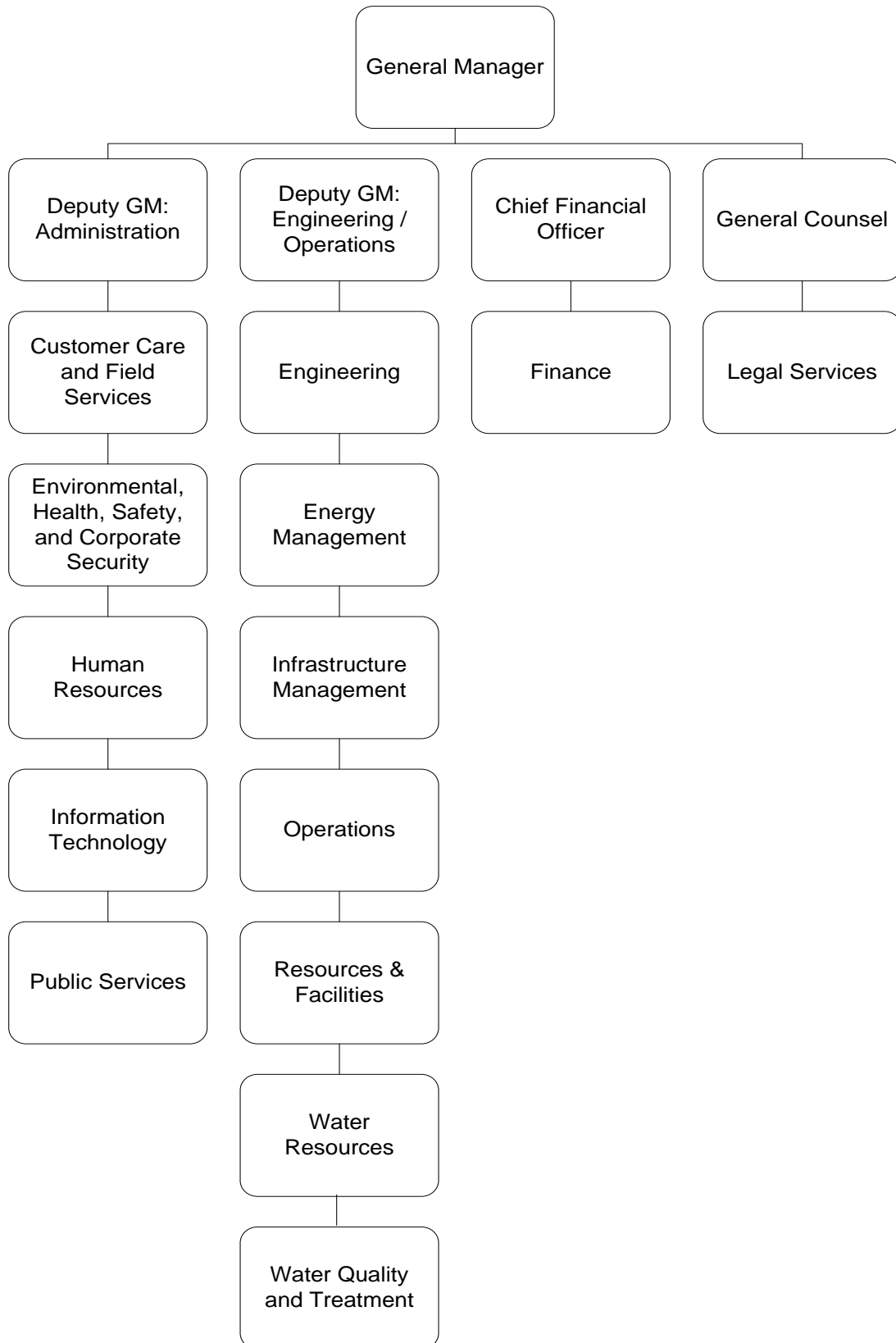
SNWS. Because the Bureau was, and always would be, the owner of the facilities built with federal funding, the SNWA would always be required to obtain Bureau approval to maintain, modify, or improve the federal facilities which are an integral, but increasingly smaller, part of the total system.

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

**Organizational Structure.**

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

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**Financial Structure and Controls.**

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

*Capital and Debt Service Accounting.* Capital and Debt Service finances are accounted for separately within the overall structure of the enterprise fund. Bond issuance resolutions require that the balance of bond proceeds be maintained in restricted acquisition and construction accounts until they are expended. Assets restricted for specific purposes (e.g. additions to plant or repayment of bonds) and liabilities payable from such assets are accounted for separately until disposition. Earnings on these assets are also considered restricted.

*Internal Controls.* In developing the SNWA's accounting system, consideration focused on the adequacy of internal accounting controls. Internal accounting controls are designed to

provide reasonable, but not absolute assurance regarding the safeguarding of assets against loss from unauthorized use or disposition; and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes the cost of a control should not exceed the benefits likely to be derived, and the evaluation of costs and benefits requires estimates and judgment by management. All internal control evaluations occur within the above framework. The SNWA's internal accounting controls safeguard assets and provide reasonable assurance of proper recording of financial transactions. The SNWA will continue to identify ways in which it can strengthen its control procedures.

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

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

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or variable rate debt for the SNWA in addition to standard debt issues.

The State of Nevada general obligation debt is rated "Aa2" by Moody's and "AA" by Standard & Poor's. Clark County's general obligation debt is rated "Aa1" by Moody's and "AA+" by Standard and Poor's. The LVVWD's general obligation debt is rated "Aa1" by Moody's and "AA" by Standard & Poor's. It is expected that the SNWA will still utilize the state and county bond banks and the LVVWD to issue debt. The SNWA obtained the credit rating primarily at the request of parties who wished to enter into long term purchased power agreements with the SNWA and needed an evaluation of the SNWA's credit worthiness.

As of July 1, 2017, the SNWA has \$3.48 billion in outstanding debt. All debt is backed by a pledge of the SNWA's revenues. All applicable bond covenants such as ratios of net income to debt service, sinking funds, and insurance coverage have been met or exceeded.

**Cash Management.** Funds not immediately required for paying operating or capital expenditures are invested in U.S. Government and agency securities and other money market instruments. Nothing in the Cooperative Agreement creating the SNWA or the Facilities and Operations Agreement governing the SNWA's relationship with its purveyor members dictates permitted investments. Also, there is no applicable Nevada law. However, the SNWA chooses to comply with Nevada Revised Statutes (NRS) 355.170, which governs permitted investments for counties, cities, and school districts in Nevada. NRS 355.170 limits investments to obligations of the federal

government and its agencies, commercial bank certificates of deposit, obligations of state and local governments rated A or above, bankers' acceptances, repurchase agreements, and money market mutual funds. All investments are held by a commercial bank's trust department in the name of the SNWA and are insured or collateralized with securities held by a third party in the name of the SNWA.

**Risk Management.** The SNWA employs a multifaceted approach to risk management, which includes the transfer, elimination, avoidance, reduction and/or assumption of risk of loss. The SNWA also purchases risk insurance (including terrorism insurance) from the commercial insurance market on real and personal property, including earthquake and flood, with common policy restrictions, covering direct physical loss of or damage to buildings, fixtures, equipment, boilers, machinery and supplies. The blanket limit of liability under the property insurance program is \$500 million per occurrence with a deductible of \$1 million per occurrence. The program also includes earthquake coverage (\$100 million limit) and flood coverage (\$50 million limit) each having a \$100,000 deductible. The SNWA self-insures the first \$1 million for its automobile and general liability exposure and purchases \$30 million of excess liability insurance.

In contracts, the SNWA obtains indemnification and hold-harmless agreements, and requires that contractors name the SNWA as an additional insured under the indemnitor's insurance coverage, usually \$1 million to \$10 million for commercial general and auto liability

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insurance. The SNWA provides builders risk insurance for all construction projects with a blanket limit of \$100 million per contract, or higher as needed, with a \$50,000 deductible per claim, except earthquake and flood where the deductible is \$500,000 per claim.

**Capital Project Structure and Controls.**

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

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

Identification of existing facilities requiring repair, upgrade or replacement comes about

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

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

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



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(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 annually. The most recent capital plans can be viewed in Section 6 of this 2017-18 Budget Plan document. The capital plan reflects all capital projects, their projected start and end dates, their projected costs, the gross amount of expended or encumbered funds per project, projected future cash requirements, and the budget variance of each project. Finance also tracks expenditures and encumbrances for capital projects and plans future debt service issues on these calculations.

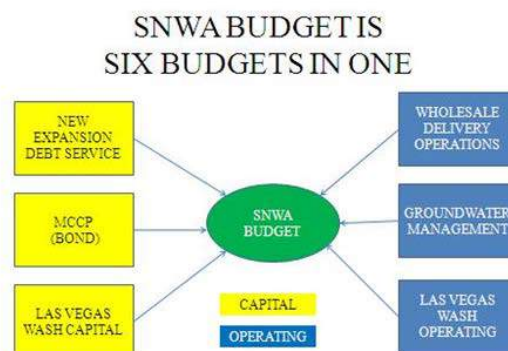
Upon completion of a project, the Engineering department presents a summary of the project to the SNWA Board for their review and approval. The project is then moved from construction work in progress to property, plant and equipment by Finance.

## Budget Controls and Process

### Basis of Accounting.

The SNWA's audited Comprehensive Annual Financial Report (CAFR) 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 CAFR. 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.

### 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

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commercial nature, and the demand for service largely determines the appropriate level of revenues and expenditures. Depending upon the timing and level of the demand for services, expenditures will vary.

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

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

**Budget Process.**

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

Budget staff disseminates current and historical information to managers to assist them in preparation of future budgets within budgeting guidelines. The budget process consists of three major phases. The first phase includes preparing new requests for capital and staff positions for the new fiscal year. The second phase consists of preparing department operating budgets, including payroll and related expenditures. Estimating payroll and related expenditures are based on current approved positions and factors based on historical adjustments throughout the year. The third phase involves department directors, managers and supervisors meeting with Executive Management to justify expenditure requests. After all of the departments' budgets have been reviewed and approved by Executive Management, the budget is consolidated and an initial 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.

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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 Board. The approved final budget document is filed with the State of Nevada. Once approved and filed, departments are provided copies of their budgets. The approved budget is implemented on July 1, the first day of the new fiscal year.

**Budget Augmentation.**

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

# FISCAL YEAR 2017-18 BUDGET CALENDAR

All Departments	Financial Services	Executive Management	Human Resources
<b>Dec</b>	<b>Tue Dec 13</b> Budget instructions and calendar sent to departments		<b>Dec</b> December organization charts distributed to departments. Adjustments to organization charts due to Human Resources by Wednesday, January 18, 2017
	<b>Wed Dec 14</b> Operating expense files sent and departments assistance begins		<b>Thu Dec 22</b> List of existing interns and summer hire positions distributed to departments. Updates, corrections and new requests due to Human Resources by Wednesday, January 18, 2017
	<b>Wed Dec 14</b> Coordination of budget process and schedule begins		
<b>Jan</b>	<b>Wed Jan 18</b> Adjustments to organization charts submitted to Human Resources		<b>Thu Jan 19</b> List of existing interns and summer hire position renewals sent to Financial Services
	<b>Wed Jan 18</b> Final requests for interns and summer hire positions submitted to Human Resources		
	<b>Thu Jan 26</b> Final 2017-18 capital budget requests and operating expense budgets submitted to Financial Services		

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# FISCAL YEAR 2017-18 BUDGET CALENDAR



	All Departments	Financial Services	Executive Management	Human Resources
Feb	<b>Mon Feb 6</b> Budget narrative instructions received	<b>Mon Feb 6</b> Budget narrative instructions sent to departments		
		<b>Mon Feb 27</b> Summaries and detail of operating expense & capital expenditure budgets sent to departments		
		<b>Mon Feb 27</b> Assisting departments in preparation for the Senior Management Team (SMT) budget meeting presentations begins		
Mar		<b>Tue Mar 7</b> Budget overview briefing with Executive Management (E-team)	<b>Tue Mar 7</b> Budget overview briefing with Executive Management (E-team)	
	<b>Tue Mar 14</b> Department proposed budget meetings with SMT	<b>Tue Mar 14</b> Department proposed budget meetings with SMT	<b>Tue Mar 14</b> Department proposed budget meetings with SMT	
	<b>Mon Mar 20</b> Budget narratives submitted to Financial Services		<b>Tue Mar 14 – Mon Mar 20</b> Final budget decisions made by Executive Management	
Apr		<b>Thu Apr 6</b> Proposed draft budgets completed for Budget Workshops with Boards of Directors	<b>Thu Apr 20</b> Board of Directors Budget Workshops for SNWA	
		<b>Thu Apr 13</b> Preliminary Budgets filed with the Nevada State Department of Taxation	<b>Mon Apr 24</b> Board of Directors Budget Workshops for LVVWD (including BBWD & Coyote Springs)	

# FISCAL YEAR 2017-18 BUDGET CALENDAR



All Departments	Financial Services	Executive Management	Human Resources
May	<b>Thu May 4</b> LVVWD, BBWD, and Coyote Springs Public hearing notice published in LVRJ	<b>Mon May 15</b> LVVWD Board of Directors public hearings conducted on proposed budgets of LVVWD, Big Bend, and Coyote Springs for possible adoption  <b>Thu May 18</b> SNWA Board of Directors public hearing conducted on the proposed budget for possible adoption	
	<b>Tue May 9</b> SNWA Public hearing notice published in LVRJ		
	<b>Thu May 25</b> Adopted budgets sent to the Nevada Department of Taxation		
	<b>Thu Jun 22</b> LVVWD, SNWA, BBWD & Coyote Springs annual summary fiscal reports published in LVRJ		
Jun			
Jul	<b>Thu Jul 27</b> Proof of publication of fiscal reports submitted to the Nevada State Department of Taxation		
Aug	<b>Thu Aug 10</b> Budget Award Application submitted to the GFOA		

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

### **Strategic Plan Background.**

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

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

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

### **Strategic Plan and 2017-18 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 2017-18 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 decade, Southern Nevada has weathered unprecedented drought conditions on the Colorado River and, more recently, has survived the effects of the recent



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economic downturn. 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. During this period of economic uncertainty, organizational structure and budgetary issues have been closely evaluated to ensure the organization's focus meets current community needs. The strategic plan represents a roadmap for the next three to five years which realigns the organization's focus on enhancing service levels, improving asset management, providing rate stability and streamlining the organization to meet current and future community needs.

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

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

workgroup has the ability to monitor its own progress through an online administrative tool.

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

**VISION**

**To be a global leader in service,  
innovation and stewardship**

**MISSION**

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

**GOALS**

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

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**Strategic Plan Strategies.**

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

***Assure quality water through reliable and highly efficient systems.***

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

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***Develop innovative and sustainable solutions through research and technology.***

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

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

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

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

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

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# SECTION 3

## OPERATING AND CAPITAL BUDGET PLAN

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The fiscal year 2017-18 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 2017-18 Budget Plan's total sources of funds are projected to be \$493.9 million, or a 11

percent decrease compared to the fiscal year 2016-17 Adopted Budget Plan. The fiscal year 2017-18 Budget Plan's total uses of funds are projected to be \$658.4 million, or a 1 percent increase compared to the fiscal year 2016-17 Adopted Budget Plan. The table below shows the Sources and Uses Summary for the fiscal years 2015-16, 2016-17, and 2017-18.



**Budget Summary**

	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>	<b>Budget-to-Budget Variance</b>	
				<b>\$</b>	<b>%</b>
<b>Sources</b>					
Wholesale Delivery Charge	\$ 125,054,059	\$ 122,759,977	\$ 130,773,096	\$ 8,013,119	7%
Infrastructure Charge	106,459,684	149,563,411	149,098,164	(465,247)	0%
Commodity Charge	56,621,516	63,850,411	68,539,517	4,689,106	7%
Connection Charge	63,781,176	68,446,150	63,284,557	(5,161,593)	-8%
Reliability Surcharge	5,082,720	5,283,282	5,312,719	29,437	1%
Sales Tax	58,152,408	57,992,371	62,294,313	4,301,942	7%
Investment Income	3,852,256	2,936,847	3,849,077	912,229	31%
Groundwater Management Fees	928,893	873,661	906,481	32,821	4%
LV Wash Program Fees	411,893	416,715	429,845	13,130	3%
Grant Proceeds	899,896	890,510	4,685,046	3,794,537	
Other Revenues	53,418,817	83,613,324	4,689,281	(78,924,042)	-94%
<b>Subtotal</b>	<b>\$ 474,663,318</b>	<b>\$ 556,626,659</b>	<b>\$ 493,862,097</b>	<b>\$ (62,764,562)</b>	<b>-11%</b>
Debt Issuance Proceeds	520,000,000	-	-	-	
<b>Total Sources</b>	<b>\$ 994,663,318</b>	<b>\$ 556,626,659</b>	<b>\$ 493,862,097</b>	<b>\$ (62,764,562)</b>	<b>-11%</b>
<b>Uses</b>					
Energy	\$ 39,333,766	\$ 38,008,556	\$ 36,987,491	\$ (1,021,066)	-3%
Payroll & Related	71,210,780	71,530,308	77,173,738	5,643,429	8%
Operating Expenses	39,349,790	49,192,884	54,711,097	5,518,213	11%
Capital Expenditures	112,564,295	219,255,395	225,571,096	6,315,701	3%
Debt Service	222,817,413	271,025,463	263,950,998	(7,074,465)	-3%
<b>Total Uses</b>	<b>\$ 485,276,044</b>	<b>\$ 649,012,607</b>	<b>\$ 658,394,419</b>	<b>\$ 9,381,812</b>	<b>1%</b>
<b>Total Net Surplus/(Deficit)</b>	<b>\$ 509,387,275</b>	<b>\$ (92,385,948)</b>	<b>\$ (164,532,322)</b>		

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## Sources

The fiscal year 2017-18 Budget Plan's total sources of funds are projected to be \$493.9 million, which is an 11 percent decrease compared to the 2017-18 Adopted Budget Plan. The decrease is largely due to reduced other revenues, which in 2016-17 included the sale of a 25 percent ownership stake in the Silverhawk Power Generation Facility to NV Energy for \$77 million. Not including other revenues, sources of funds are budgeted to increase \$16.2 million, which is 3 percent. The rise is primarily attributable to increases in Wholesale Delivery Charge, Commodity Charge, and Sales Tax.

### Wholesale Delivery Charge.

The wholesale delivery charge is the revenue generated from treated 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 2017-18, the wholesale delivery charge will remain at \$303 per acre-foot. Periodic rate increases have kept the wholesale delivery charge revenue relatively stable during periods of flat-to-declining usage. The increase of \$8.0 million (7 percent) in fiscal year 2017-18 is the result of an increase in water sales to purveyor members. As the following chart illustrates, the SNWA makes a concerted effort to keep the wholesale delivery per acre foot charge economical for its purveyor members.

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



### Infrastructure Charge.

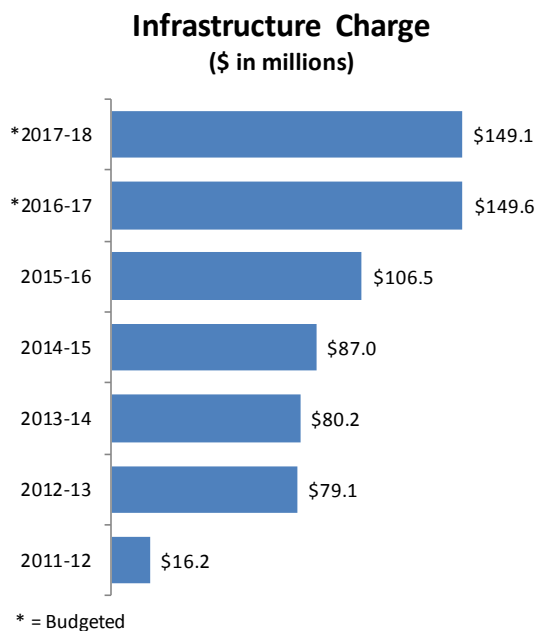
In October 2011, the Board authorized an extensive rate study and a public outreach process to study various alternative rate structures to service the SNWA's outstanding debt. In February 2012, the Board approved an infrastructure charge. This charge is applied by the SNWA purveyor members, typically to retail bills, and is a fixed charge assessed based on meter size and customer class. Consumption is not considered in the application of the charge. Revenue is remitted to the SNWA, from its purveyor members, on a monthly basis. At the same time in 2012, the SNWA Board of Directors (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,



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2014, and increased annually through January 1, 2017.

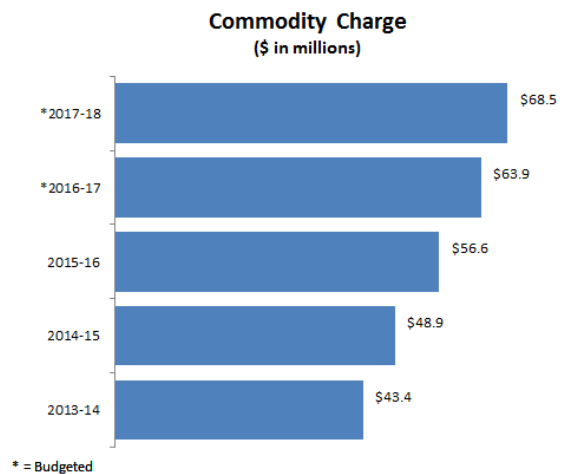
In addition to IRPAC's Phase 1 recommended increases to the infrastructure charge, IRPAC's Phase 2 recommended, with subsequent Board approval in December 2014, to increase the fixed monthly charges. This charge was called the Drought Protection Charge and was added to the infrastructure charge. The fiscal year 2017-18 Budget Plan includes six months of the January 1, 2017, implementation of the charge and six months of the final increase (January 1, 2018). Infrastructure Charges are budgeted to decrease \$0.5 million compared to the 2016-17 Adopted Budget Plan. The decrease reflects actual revenues over the past two years.



### 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. In addition to the infrastructure charge mentioned earlier, IRPAC's Phase 1 recommended, with subsequent Board approval, the commodity charge be increased annually through the same duration as the Phase 1 increases to the infrastructure charge. The \$0.30 per 1,000 gallons rate increased to \$0.34 in January, 2014, to \$0.38 in January, 2015, to \$0.44 in January, 2016, and was the last increase to \$0.48 occurred in January, 2017.

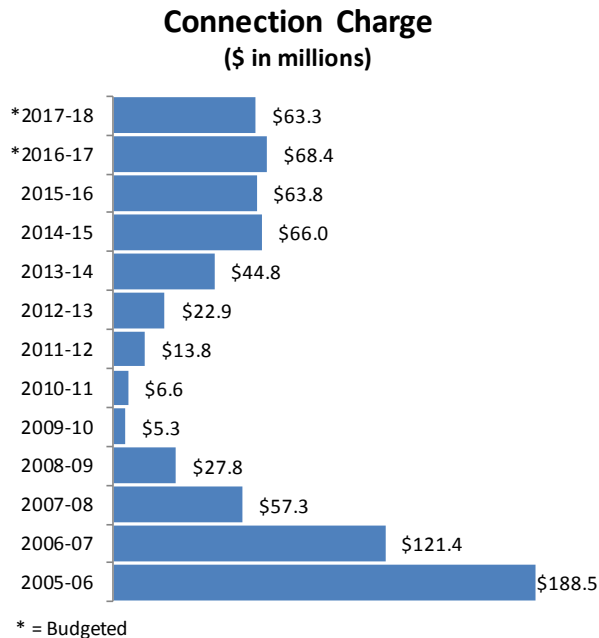


### Connection Charge.

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. The fiscal year 2017-18 projection of connection charge revenue is \$63.3 million, which is lower (8 percent) than the 2016-17 Adopted Budget Plan. Connection charge collections were one of the SNWA's largest sources of funds in the mid-2000s. However, during the recent recession, this revenue fell sharply with the lack of construction activity in the

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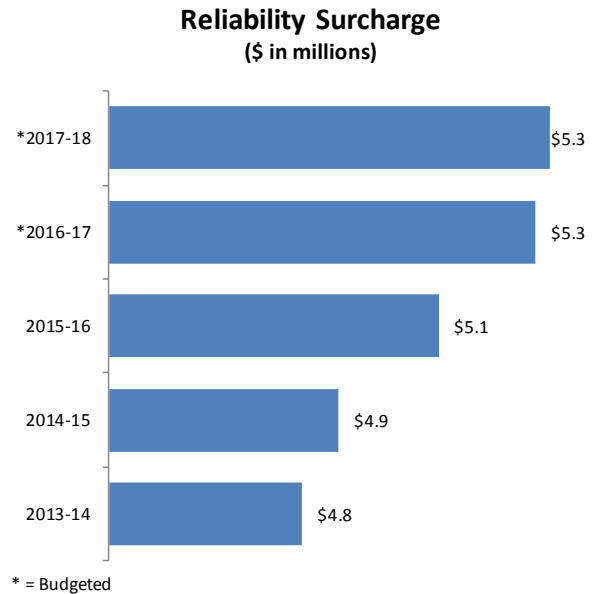
SNWA's service area. Since reaching a low in fiscal year 2009-10, connection charges have increased steadily, however the fiscal year 2017-18 is projecting a decrease is due to pace of new service connections moderating recently.



### 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 2017-18 reliability surcharge is projected to increase slightly (\$0.03 million, 1 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 will increase when a purveyor approves a retail rate increase,

when the SNWA increases the commodity charge and when additional customers are added to the system.



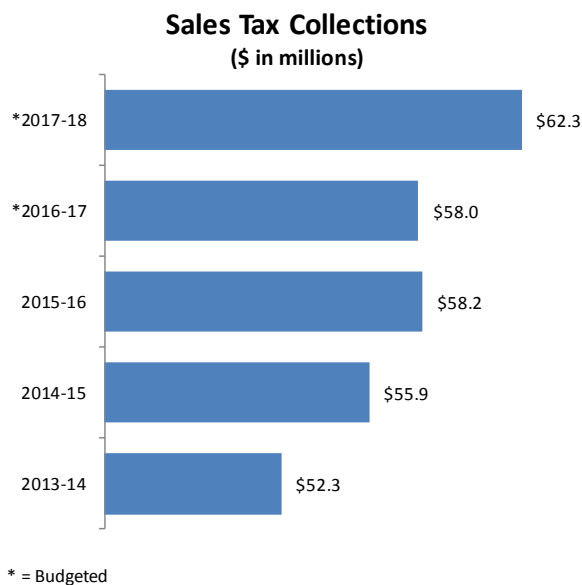
### Sales Tax.

The only taxes the SNWA receives are sales taxes. The SNWA does not levy taxes on its own. The Clark County Water and Wastewater Infrastructure Sales Tax went into effect on April 1, 1999. At that time, this increased the sales tax rate in Clark County from 7.0 percent to 7.25 percent. The 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 3.3 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 Las Vegas 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

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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 2017-18 projection of sales tax revenue is \$4.3 million, or 7 percent, higher than the 2016-17 Adopted Budget Plan, due to an improving economy.



#### **Investment Income.**

Investment income includes both interest from bank accounts and investment earnings. The primary objectives of such investments are, in order of importance, safety of principal, maintenance of liquidity, and return on investment (ROI). Investment income is projected to increase \$0.9 million (31 percent) over the 2016-17 Adopted Budget Plan. This increase is primarily attributable to the investment of unspent

bond proceeds from the 2015-16 debt issuance and an increase in the ROI.

#### **Groundwater Management Program Fees.**

The groundwater management program fees consist of an annual fee of \$30 per acre-foot of permitted groundwater rights or \$30 per domestic well. The fee consists of \$13 reserved for operation and maintenance expenses and \$17 reserved for recharge water purchases. The SNWA will have no recharge water available for purchase for the groundwater management program in fiscal year 2017-18. Consequently, for the fifth year in a row, the SNWA will not charge the \$17 portion of the groundwater management fee. Revenue is projected to be fairly consistent with the fiscal year 2016-17 Adopted Budget Plan.

#### **Las Vegas Wash Program Fees.**

The SNWA, along with the City of Henderson, Clark County Water Reclamation District, City of Las Vegas, Clark County, and the Clark County Regional Flood Control District, has entered into an interlocal agreement establishing funding for annual operations of the Las Vegas Wash. Each participant will be billed for budgeted costs according to the interlocal agreement. The program fees are projected to remain relatively flat in fiscal year 2017-18 as compared to the 2016-17 Adopted Budget Plan.

#### **Grant Proceeds.**

The SNWA attempts to secure grant monies from federal and state sources to help defray some construction, research, and operation costs. These proceeds are expected to increase \$3.8 million in fiscal year 2017-18 from the 2016-17 Adopted Budget Plan. This

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increase is primarily from grant(s) related to water quality associated with the Las Vegas Wash.

#### **Other Revenues.**

Other revenues are budgeted to decrease \$78.9 million (94 percent) from the fiscal year 2016-17 Adopted Budget Plan. The drop in other revenues are largely due to the \$77 million sale of the SNWA's 25% ownership in the Silverhawk Power Generation Facility to NV Energy occurring in 2016-17.

#### **Debt Issuance Proceeds.**

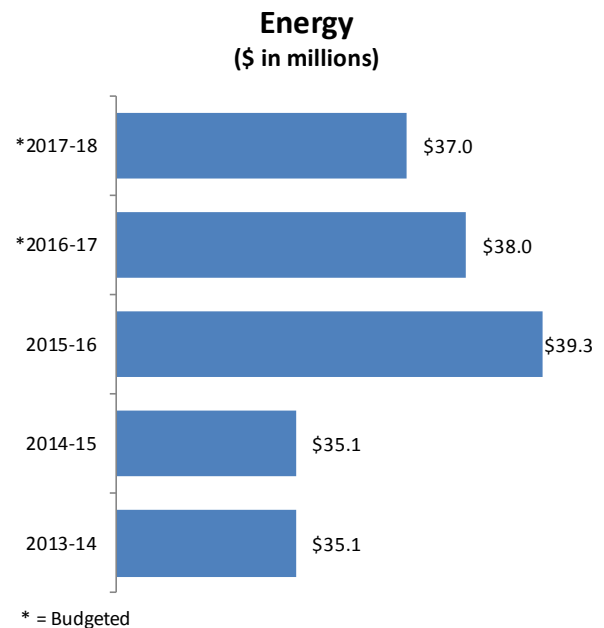
The SNWA is not projected to issue any new money debt in 2017-18.

### **Uses**

The fiscal year 2017-18 Budget Plan's total uses of funds are projected to be \$658.4 million, a 1 percent increase compared to the 2016-17 Adopted Budget Plan. The uses remained fairly constant from the prior year due to increases in operating expenses and capital expenditures being offset by a decrease in energy costs and debt service.

#### **Energy.**

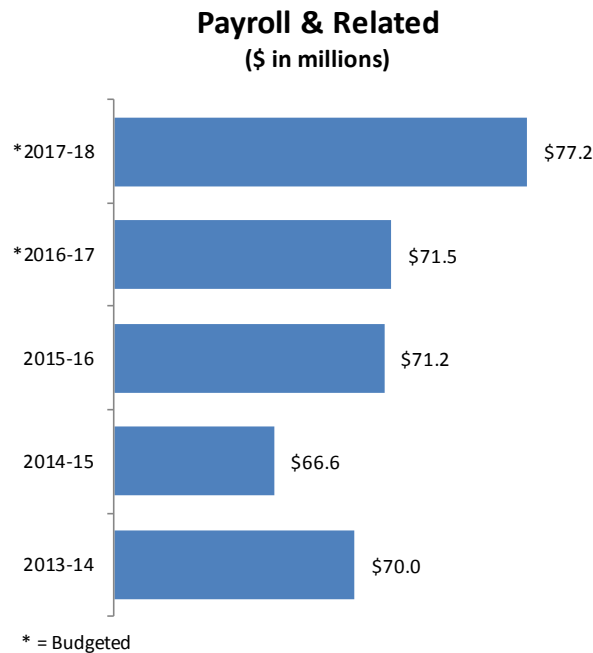
Treating raw water from Lake Mead and delivering it to the Las Vegas area is energy intensive. The cost of energy for fiscal year 2017-18 is projected to decrease \$1.0 million (3 percent) over the fiscal year 2016-17 Adopted Budget Plan. This decrease is primarily due to lower anticipated energy prices.



#### **Payroll & Related.**

The SNWA does not have any employees. As described in the introduction section of this budget document, the Las Vegas Valley Water District (LVVWD) is the operating agent for the SNWA. A significant portion of the SNWA's operating expenses, including payroll costs, are initially paid by the LVVWD and then reimbursed by the SNWA. Payroll and related includes wages, salaries and benefits. For fiscal year 2017-18, payroll and related expenses are anticipated to be \$77.2 million. This represents an increase of \$5.6 million, or 8 percent, compared to the 2016-17 Adopted Budget Plan.

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Full-time equivalent (FTE) is a unit of measurement which represents the workload of one full-time employed person. The SNWA's FTE count is expected to increase by approximately 15 employees over the fiscal year 2016-17 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.

**FTE Summary**

<u>Department</u>	<u>Actual</u> <u>2015-16</u>	<u>Budget</u> <u>2016-17</u>	<u>Budget</u> <u>2017-18</u>
Executive Management	5.3	5.0	5.0
Legal Services	8.8	5.9	8.0
Finance	29.0	19.7	23.0
Information Technology	42.5	43.3	39.6
Human Resources	0.1	4.1	3.5
Public Services	31.2	30.1	40.3
Environmental, Health, Safety & Corporate Security	17.1	16.8	18.6
Customer Care & Field Services	1.7	3.0	2.9
Engineering	31.6	26.6	24.8
Resources & Facilities	62.1	69.9	75.8
Infrastructure Management	17.1	24.2	24.6
Water Resources	43.7	42.4	41.5
Energy Management	6.4	6.0	6.0
Operations	42.3	52.4	54.0
Water Quality & Treatment	91.0	89.3	85.8
<b>Total</b>	<b>429.9</b>	<b>438.4</b>	<b>453.1</b>

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

**Operating Expenses.**

Operating expenses include all normal operating costs of the SNWA except energy, payroll and related, capitalized expenditures, and debt service, which are presented separately. Examples include, but are not limited to, materials and supplies, maintenance and repairs, rental and leases, water treatment chemicals, research and studies, legal fees, and office supplies. Operating expenses are projected to increase \$5.5 million (11 percent) as compared to the 2016-17 Adopted Budget Plan. This increase is due to higher costs in materials, supplies, maintenance and repairs, and other operating expenses.

**Capital Expenditures.**

Capital expenditures are projected to increase \$6.3 million (3 percent), compared to the fiscal year 2016-17 Adopted Budget Plan. Capital expenditures are different from

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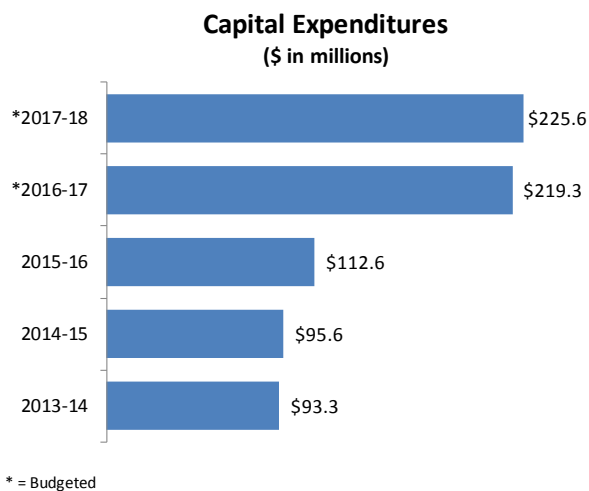
operating expenses in that they are generally related to assets and those assets have useful lives extending beyond three years and surpass an internally established dollar threshold. Typically, capital expenditures of the SNWA are related to infrastructure assets, but can be related to water rights.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

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

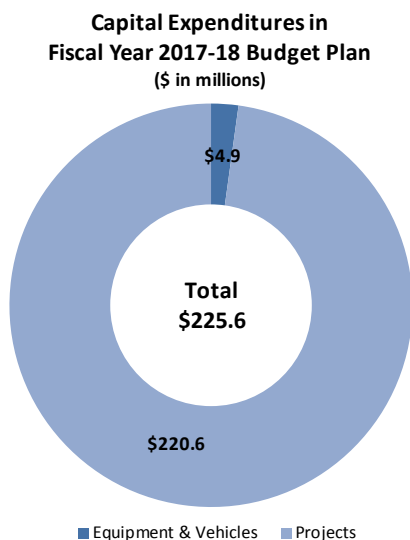
- Major Construction and Capital Plan (MCCP). The projects of this CIP are mainly for the water treatment and delivery infrastructure or the acquisition and retention of water resources. It is funded primarily with publicly issued municipal debt.
- Las Vegas Wash Capital Plan. The projects of this CIP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

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

- Intake No.3 Project – Low Lake Level Pumping Station (L3PS). The construction of a 900 million gallons per day L3PS continues in order to eventually convey water from the new Intake No. 3 tunnel to the existing treatment facilities, 600 million gallons per day (MGD) to the Alfred Merritt Smith Water Treatment Facility and 300 MGD to the River Mountains Water Treatment Facility. The L3PS will function to replace the lost capacities of the existing Intake Pumping Stations No. 1 and No. 2 in the event of extremely low lake levels. The design and construction costs for this project are estimated to be approximately \$650 million and could be complete as early as 2020. The fiscal year 2017-18 Budget Plan includes \$118.3 million to be spent on this project.

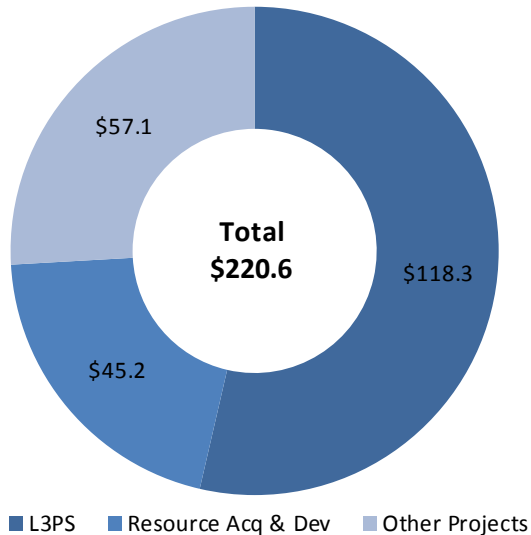


The majority of the SNWA's capital expenditures project related.



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**Capital Projects in  
 Fiscal Year 2017-18 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 expenses of future capital projects, including the ones described above, is tenuous at best. Capital projects are typically instituted for two major reasons – 1) to ensure end users have a reliable, consistent source of water and 2) to deliver that water in the most economical manner possible.

The construction of major capital items fits into an overall goal of system reliability and efficiency. Unlike other government agencies that can highlight a park, school, or street, for example, and immediately determine possible maintenance and operating costs, the capital items for a water utility affect the coordination of the entire water system. An increase in costs for one section of the project may cause a reduction in another connected portion. The SNWA's capital projects utilize state of the art diagnostic

equipment and testing procedures which significantly reduce the risk of catastrophic failures and help to minimize routine operating costs. Additionally, the SNWA utilizes internal cost controls to ensure funds are spent in the most conscientious manner. However, even with comprehensive controls such as these, estimating long range costs, especially in current financial conditions, can be a challenge.

### **Debt Service.**

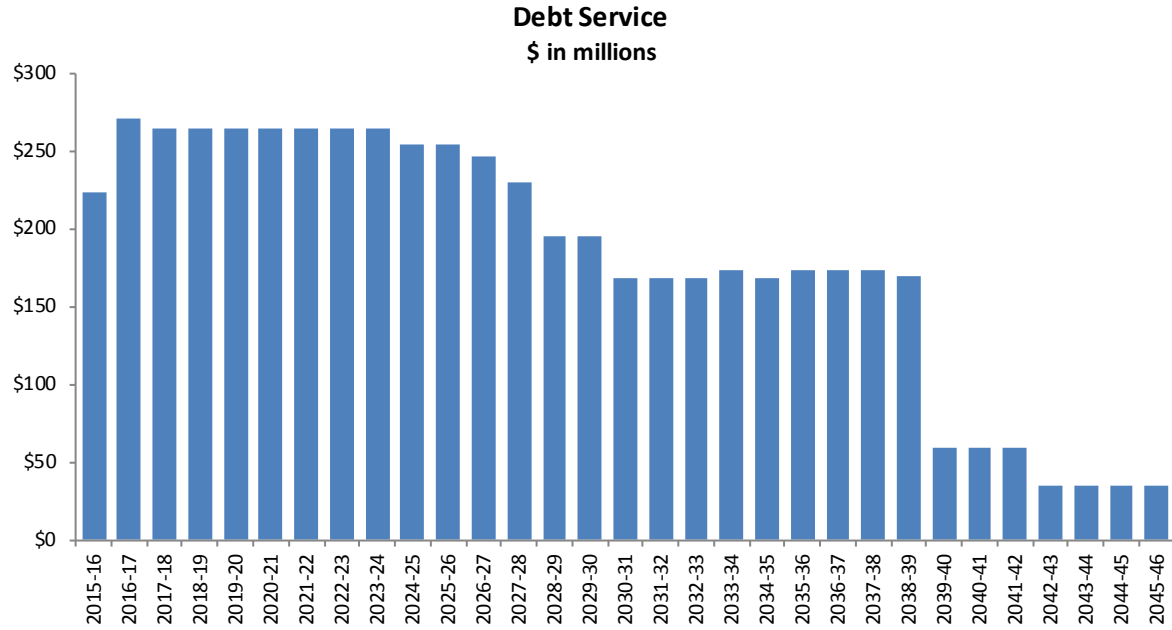
This reflects all outstanding debt of the SNWA. For more detail on the SNWA's outstanding debt, see the Debt Management Policy, which is section seven of this budget document.

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 the infrastructure growth to support such extraordinary population growth. During the recession of the late 2000's, population growth slowed and the SNWA took actions to provide cash flow relief. For example, the SNWA postponed various capital projects and took advantage of historically low borrowing costs to refinance debt.

Debt service payments are anticipated to decrease \$7.1 million (3 percent) compared to the 2016-17 Adopted Budget Plan. This decrease is primarily due a number of bond refundings which have taken advantage of lower interest rates as compared to when the debt was originally issued. The existing debt service is projected to be relatively stable for approximately the next ten years, then declining.

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The following chart illustrates the outstanding debt service.





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

An enterprise fund's year-end balance differs dramatically from other government agencies' fund balances. The enterprise net asset balance closely approximates a private corporation's retained earnings section. As

such, net assets are affected by operating items as presented in this document as well as other financial resources and expenditures. The SNWA accounts for its Net Assets in accordance with GASB Statement 33. The following table summarizes the estimated sources and uses of funds and changes in net assets for the fiscal year 2017-18 Budget Plan.

### Estimated Net Assets Detail Fiscal Year 2017-18 Budget

	Invested in Capital Assets Net of <u>Related Debt</u>	<u>Restricted</u>	<u>Unrestricted</u>	<u>Total Net Assets</u>
Estimated Net Position on June 30, 2017	\$ 806,748,717	\$ 488,103,266	\$ 554,122,595	\$ 1,848,974,578
<i>From Revenues, Expenses, and Net Income Schedule (RENI), Page 4-5</i>				
Operating Revenue	\$ -	\$ -	\$ 136,798,703	\$ 136,798,703
Capital Contributions		62,294,313	286,234,957	348,529,270
Interest Earned	(1,912,991)		3,849,077	1,936,085
Payroll and Related	24,516,188		(77,173,738)	(52,657,549)
Energy			(36,987,491)	(36,987,491)
Operating Expenses			(54,711,097)	(54,711,097)
Depreciation Expense	(95,000,000)			(95,000,000)
Interest Expense (Debt Service)	138,589,439		(263,950,998)	(125,361,559)
<i>Subtotal from RENI</i>	<u>\$ 66,192,636</u>	<u>\$ 62,294,313</u>	<u>\$ (5,940,586)</u>	<u>\$ 122,546,363</u>
<i>Items not on RENI</i>				
Capitalized Expenditures	\$ 225,571,096	\$ (225,571,096)	\$ -	\$ -
Debt Issuance Proceeds		-		-
<i>Subtotal Items not on RENI</i>	<u>\$ 225,571,096</u>	<u>\$ (225,571,096)</u>	<u>\$ -</u>	<u>\$ -</u>
Estimated Net Position on June 30, 2018	<u><u>\$ 1,098,512,449</u></u>	<u><u>\$ 324,826,483</u></u>	<u><u>\$ 548,182,009</u></u>	<u><u>\$ 1,971,520,941</u></u>

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## Sub Funds

According to Generally Accepted Accounting Principles, 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.

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.

The SNWA maintains six sub funds. Since both the Las Vegas Wash Capital sub fund

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**Budget Summary by Sub Fund**  
**Fiscal Year 2017-18**

	Operating Sub Funds		Capital Sub Funds			
	Wholesale Delivery Operations	Groundwater Management Plan	New Expansion Debt Service	Major Capital & Construction Plan	Las Vegas Wash	Total
<b>Sources</b>						
Wholesale Delivery Charge	\$ 130,773,096	\$ -	\$ -	\$ -	\$ -	\$ 130,773,096
Infrastructure Charge	-	-	149,098,164	-	-	149,098,164
Commodity Charge	-	-	68,539,517	-	-	68,539,517
Connection Charge	-	-	63,284,557	-	-	63,284,557
Reliability Surcharge	-	-	5,312,719	-	-	5,312,719
Sales Tax	-	-	58,245,183	-	4,049,130	62,294,313
Investment Income	76,982	-	1,847,557	1,912,991	11,547	3,849,077
Groundwater Management Fees	-	906,481	-	-	-	906,481
LV Wash Program Fees	(623,313)	-	-	-	1,053,158	429,845
Grant Proceeds	165,608	-	57,143	333,367	4,128,928	4,685,046
Other Revenues	612,600	-	4,004,681	72,000	-	4,689,281
<b>Subtotal</b>	<b>\$ 131,004,972</b>	<b>\$ 906,481</b>	<b>\$ 350,389,521</b>	<b>\$ 2,318,358</b>	<b>\$ 9,242,764</b>	<b>\$ 493,862,097</b>
Debt Issuance Proceeds	-	-	-	-	-	-
<b>Total Sources</b>	<b>\$ 131,004,972</b>	<b>\$ 906,481</b>	<b>\$ 350,389,521</b>	<b>\$ 2,318,358</b>	<b>\$ 9,242,764</b>	<b>\$ 493,862,097</b>
<b>Uses</b>						
Energy	\$ 36,987,491	\$ -	\$ -	\$ -	\$ -	\$ 36,987,491
Payroll & Related	50,994,328	491,938	12,949,343	11,588,004	1,150,124	77,173,738
Operating Expenses	41,159,325	798,775	12,139,397	-	613,600	54,711,097
Capital Expenditures	-	-	-	225,571,096	-	225,571,096
Debt Service	-	-	263,950,998	-	-	263,950,998
<b>Total Uses</b>	<b>\$ 129,141,143</b>	<b>\$ 1,290,713</b>	<b>\$ 289,039,738</b>	<b>\$ 237,159,100</b>	<b>\$ 1,763,724</b>	<b>\$ 658,394,419</b>
<b>Total Net Surplus/(Deficit)</b>	<b>\$ 1,863,829</b>	<b>\$ (384,232)</b>	<b>\$ 61,349,783</b>	<b>\$ (234,840,741)</b>	<b>\$ 7,479,040</b>	<b>\$ (164,532,322)</b>

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**Operating Sub Funds.**

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

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

**Capital Sub Funds.**

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

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

Las Vegas Wash sub fund. Although this is a hybrid sub fund paying both capital and operating expenses, the major function of this sub fund is to pay construction costs of the Las Vegas Wash. This sub fund tracks capital and operational revenues and expenses pertaining to the Las Vegas Wash. As stated previously, this sub fund is actually 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.

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# SECTION 4

## STATE OF NEVADA

### BUDGET DOCUMENTS

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SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2017-18  
OPERATING AND CAPITAL BUDGET

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# SOUTHERN NEVADA WATER AUTHORITY®

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

Southern Nevada Water Authority \_\_\_\_\_ herewith submits the (TENTATIVE) (FINAL) budget for the  
fiscal year ending June 30, 2018

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

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

This budget contains 0 governmental fund types with estimated expenditures of \$ 0 and  
1 proprietary funds with estimated expenses of \$ 384,717,696

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 Brian Thomas  
(Print Name)  
Acting Chief Financial Officer  
(Title)

certify that all applicable funds and financial  
operations of this Local Government are  
listed herein

Signed

Dated:

Brian Thomas

5-15-17

## APPROVED BY THE GOVERNING BOARD

Mary Beth Scow, Chair

Duncan McCoy, Vice Chair

Bob Coffin

Marilyn Kirkpatrick

John Marz

Steve Sisolak

Anita Wood

Mary Beth Scow  
Duncan McCoy  
Bob Coffin  
Marilyn Kirkpatrick  
John Marz  
Steve Sisolak  
Anita Wood

## SCHEDULED PUBLIC HEARING:

Date and Time Thursday, May 18th, 2017 09:00AM

Publication Date May 5, 2017

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

Page: 1  
Schedule 1

**SOUTHERN NEVADA WATER AUTHORITY  
BUDGET DOCUMENT INDEX**

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FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

	ACTUAL PRIOR YEAR ENDING 06/30/16	ESTIMATED CURRENT YEAR ENDING 06/30/17	BUDGET YEAR ENDING 06/30/18
General Government			
Judicial			
Public Safety			
Public Works			
Sanitation			
Health			
Welfare			
Culture and Recreation			
Community Support			
TOTAL GENERAL GOVERNMENT			
Utilities	438.4	438.4	453.1
Hospitals			
Transit Systems			
Airports			
Other			
TOTAL			

POPULATION (AS OF JULY 1)	2,193,000	2,233,000	2,278,000
SOURCE OF POPULATION ESTIMATE*	Center for Business & Economic Res. UNLV	Center for Business & Economic Res. UNLV	Center for Business & Economic Res. UNLV
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, 2018

## 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	136,798,703	259,356,136	355,150,402	125,361,559	-	-	107,231,410
TOTAL								

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

\*\* Include Depreciation

Page: 4  
SCHEDULE A-2

<b>PROPRIETARY FUND</b>	(1)	(2)	(3)	(4)
	ACTUAL PRIOR YEAR ENDING 6/30/2016	ESTIMATED CURRENT YEAR ENDING 6/30/2017	BUDGET YEAR ENDING 06/30/18 TENTATIVE APPROVED	BUDGET YEAR ENDING 06/30/18 FINAL APPROVED
OPERATING REVENUES				
Wholesale Delivery Charge	\$ 125,054,059	\$ 122,759,977	\$ 130,773,096	\$ 130,773,096
Groundwater Management Fees	928,893	873,661	906,481	906,481
Administration Costs Recoveries	551,852	459,920	612,600	612,600
Las Vegas Wash Program Fees	411,893	416,715	429,845	429,845
Other Revenues	49,201,788	83,153,404	4,076,681	4,076,681
Total Operating Revenues	176,148,485	207,663,677	136,798,703	136,798,703
OPERATING EXPENSES				
Energy	39,333,766	38,008,556	36,987,491	36,987,491
Payroll and Related	56,252,596	47,415,116	52,657,549	52,657,549
Operating Expenses	39,349,790	49,192,884	54,711,097	54,711,097
Depreciation/Amortization	90,824,289	80,000,000	95,000,000	115,000,000
Total Operating Expenses	225,760,441	214,616,556	239,356,136	259,356,136
Operating Income or (Loss)	(49,611,956)	(6,952,879)	(102,557,433)	(122,557,433)
NONOPERATING REVENUES				
Investment Income	3,852,256	1,477,234	1,936,085	1,936,085
Capital Contributions	300,691,026	345,135,626	353,214,317	353,214,317
Amortization of Bond Premiums & Discounts	10,008,610	-	-	-
Other	198,903	-	-	-
Total Nonoperating Revenues	314,750,795	346,612,860	355,150,402	355,150,402
NONOPERATING EXPENSES				
Interest Expense	134,359,904	121,753,319	125,361,559	125,361,559
Amortization of Refunding Costs	4,581,254	-	-	-
Bond Issue & Commercial Paper Costs	4,378,509	-	-	-
Total Nonoperating Expenses	143,319,667	121,753,319	125,361,559	125,361,559
Net Income before Operating Transfers	121,819,172	217,906,662	127,231,410	107,231,410
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 121,819,172	\$ 217,906,662	\$ 127,231,410	\$ 107,231,410

Southern Nevada Water Authority  
(Local Government)

<b>PROPRIETARY FUND</b>	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/18	
	ACTUAL PRIOR YEAR ENDING 6/30/2016	ESTIMATED CURRENT YEAR ENDING 6/30/2017	TENTATIVE APPROVED	FINAL APPROVED
A. CASH FLOWS FROM OPERATING ACTIVITIES:				
Wholesale Delivery Charge	\$ 124,618,354	\$ 122,759,977	\$ 130,773,096	\$ 130,773,096
Groundwater Management Fees	928,893	873,661	906,481	906,481
Administrative Costs Recoveries	46,883,737	459,920	612,600	612,600
Las Vegas Wash Program Fees	411,893	416,715	429,845	429,845
Other Revenues	2,897,024	83,153,404	4,076,681	4,076,681
Cash Payments to Suppliers of Goods and Services	(109,221,242)	(158,731,749)	(144,356,136)	(144,356,136)
a. Net cash provided by (or used for) operating activities	66,518,659	48,931,928	(7,557,433)	(139,237,010)
B. CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:				
b. Net cash provided by (or used for) noncapital financing activities	-	-	-	-
C. CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
Purchase or Construction of Capital Assets	(127,721,382)	(219,255,395)	(250,087,284)	(250,087,284)
Proceeds from Disposal of Property and Equipment	198,903	-	-	-
Proceeds of Debt Issuance	444,545,000	400,000,000	400,000,000	400,000,000
Principal Paid on Debt	(84,045,251)	(506,181,517)	(512,089,439)	(512,089,439)
Interest Paid on Debt	(138,772,162)	(164,843,946)	(151,861,559)	(151,861,559)
Capital Contributions	289,597,177	345,135,626	353,214,317	353,214,317
c. Net cash provided by (or used for) capital and related financing activities	383,802,285	(145,145,233)	(160,823,966)	(160,823,966)
D. CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of Investment Securities	(1,697,230,549)	(450,000,000)	(1,134,762,479)	(1,134,762,479)
Proceeds from Sales or Maturities of Investment Securities	1,235,417,656	550,000,000	1,327,923,040	1,327,923,040
Investment Income	5,041,988	1,477,234	1,936,085	1,936,085
d. Net cash provided by (or used in) investing activities	(456,770,905)	101,477,234	195,096,647	195,096,647
NET INCREASE (DECREASE) in cash and cash equivalents (a+b+c+d)	(6,449,961)	5,263,929	26,715,248	26,715,248
CASH AND CASH EQUIVALENTS AT JULY 1, 20xx	35,830,190	29,380,229	34,644,158	34,644,158
CASH AND CASH EQUIVALENTS AT JUNE 30, 20xx	29,380,229	34,644,158	61,359,406	61,359,406

\_\_\_\_ 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) REQUIREMENTS FOR FISCAL YEAR ENDING 06/30/18		(11)
NAME OF BOND OR LOAN List and Subtotal By Fund	*	TERM	ORIGINAL AMOUNT OF ISSUE	ISSUE DATE	FINAL PAYMENT DATE	INTEREST RATE	BEGINNING OUTSTANDING BALANCE 7/1/2017	INTEREST PAYABLE	PRINCIPAL PAYABLE	(9)+(10) TOTAL
Nevada Drinking Water State Revolving Fund Loan 1	2	20 Years	\$ 12,269,695	12/30/1999	2/1/2020	3.61%	\$ 2,443,330	\$ 81,179	\$ 785,484	\$ 866,663
Nevada Drinking Water State Revolving Fund Loan 2	2	20 Years	10,000,000	6/29/2001	8/1/2021	3.46%	2,881,305	94,527	602,414	696,941
LVVWD Commercial Paper	2	N/A	400,000,000	3/10/2004	N/A	Variable	400,000,000	5,000,000	400,000,000	405,000,000
Clark County 1106 Refunding Bonds	2	30 Years	604,140,000	11/2/2006	11/1/2036	2.5% - 5.00%	69,545,000	1,965,425	-	1,965,425
LVVWD 2008B Bonds	2	21 Years	171,720,000	2/19/2008	6/1/2026	3.5% - 5.00%	97,470,000	4,680,681	8,835,000	13,515,681
Clark County 2008 Bonds	2	30 Years	400,000,000	7/2/2008	6/1/2018	5.00%	9,635,000	481,750	9,635,000	10,116,750
SNWA Renewable Energy 2008 Bonds	2	14 Years	6,900,000	7/30/2008	12/15/2022	1.17%	2,760,000	29,601	460,000	489,601
LVVWD 2009A Bonds	2	30 Years	90,000,000	8/5/2009	6/1/2039	7.10%	90,000,000	6,390,000	-	6,390,000
LVVWD 2009B Bonds	2	23 Years	10,000,000	8/5/2009	6/1/2019	4.0% - 5.25%	835,000	33,400	410,000	443,400
Clark County 2009 Refunding Bonds	2	20 Years	50,000,000	10/22/2009	6/1/2030	5.00%	40,175,000	2,008,750	2,270,000	4,278,750
State of Nevada 2009 Bonds	2	21 Years	2,214,457	10/22/2009	7/1/2029	0.00%	1,518,485	-	126,540	126,540
LVVWD 2009D Bonds	2	21 Years	71,965,000	12/23/2009	6/1/2030	4.25% - 5.25%	40,990,000	2,045,738	3,550,000	5,595,738
State of Nevada 2010B Refunding Bonds	2	10 Years	7,405,000	6/24/2010	6/1/2020	3.70%	3,405,000	125,815	1,095,000	1,220,815
LVVWD 2011A Refunding Bonds	2	15 Years	58,110,000	5/24/2011	6/1/2026	3.05% - 5.43%	49,355,000	2,398,551	4,560,000	6,958,551
LVVWD 2011B Refunding Bonds	2	16 Years	129,650,000	10/19/2011	6/1/2027	2.79% - 4.96%	110,955,000	4,719,006	9,775,000	14,494,006
LVVWD 2011C Refunding Bonds	2	26 Years	267,815,000	10/19/2011	6/1/2038	2.0% - 5.0%	220,825,000	11,056,963	10,620,000	21,676,963
Clark County 2012 Refunding Bonds	2	20 Years	85,015,000	6/20/2012	6/1/2032	4.0% - 5.0%	79,515,000	3,180,600	-	3,180,600
LVVWD 2012B Bonds	2	30 Years	360,000,000	7/31/2012	6/1/2042	3.0% - 5.0%	339,555,000	16,263,200	7,345,000	23,608,200
State of Nevada 2013 Refunding Bonds	2	15 Years	21,720,000	2/20/2013	8/1/2027	3.00%	21,720,000	651,600	-	651,600
LVVWD 2015 Refunding Bonds	2	24 Years	332,405,000	1/13/2015	6/1/2039	4.0% - 5.0%	332,405,000	16,370,250	-	16,370,250
LVVWD 2015B Refunding Bonds	2	12 Years	177,635,000	6/1/2015	6/1/2028	4.0% - 5.0%	166,960,000	7,952,075	11,165,000	19,117,075
LVVWD 2015C Refunding Bonds	2	14 Years	42,125,000	6/18/2015	9/15/2029	3.0% - 5.0%	39,485,000	1,836,875	2,730,000	4,566,875
Clark County 2016A Refunding Bonds	2	14 Years	263,955,000	3/3/2016	11/1/2029	4.5% - 5.0%	250,200,000	11,927,625	23,295,000	35,222,625
LVVWD 2016A Bonds	2	30 Years	497,785,000	4/6/2016	6/1/2046	3.0% - 5.0%	492,255,000	24,115,000	11,045,000	35,160,000
Clark County 2016B Refunding Bonds	2	18 Years	271,670,000	8/3/2016	11/1/2034	4.0% - 5.0%	271,670,000	12,983,225	3,785,000	16,768,225
LVVWD 2017B Refunding Bonds	2	15 Years	22,115,000	3/14/2017	6/1/2032	4.0% - 5.0%	22,115,000	1,027,125	-	1,027,125
Clark County 2017 Refunding Bonds	2	21 Years	321,640,000	3/22/2017	6/1/2038	4.0% - 5.0%	321,640,000	14,442,600	-	14,442,600
TOTAL ALL DEBT SERVICE							\$ 3,480,313,120	\$ 151,861,559	\$ 512,089,439	\$ 663,950,998

Southern Nevada Water Authority Budget Fiscal Year 2017-2018  
(Local Government)

SCHEDULE C-1 - INDEBTEDNESS

**SCHEDULE OF EXISTING CONTRACTS**  
**Budget Year 2017 - 2018**

**Local Government:** Southern Nevada Water Authority  
**Contact:** Brian Thomas  
**E-mail Address:** [brian.thomas@lvwd.com](mailto:brian.thomas@lvwd.com)  
**Daytime Telephone:** (702) 822-8810

Total Number of Existing Contracts: \_\_\_\_\_ 176 \_\_\_\_\_

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2017-18	Proposed Expenditure FY 2018-19	Reason or need for contract:
1	A Trak Out Solution	08/15/15	07/31/21	\$ 14,000	\$ 14,000	Vegetation removal
2	A Trak Out Solution	10/02/15	06/30/20	8,170	14,000	WSNA Dumpster Service
3	Ab Sciex	03/11/14	03/10/19	183,627	183,627	Service agreement for lab equipment
4	Abbott Trophies	07/22/15	07/21/21	2,800	2,800	Name Badges for Springs Preserve Staff and Volunteers
5	ABC Fire & Cylinder	06/13/12	06/30/17	17,800	-	Fire systems maintenance services
6	ABC Fire & Cylinder	08/25/16	08/24/17	12,918	14,210	Fire systems maintenance
7	ADI-NV Inc	01/10/17	12/31/17	10,000	-	Hydrologic Research services
8	Aerotech Mapping	04/07/15	04/06/20	40,000	40,000	Aerial imagery services
9	Agilent Technologies	04/01/17	03/31/18	111,608	114,956	Service agreement for lab equipment
10	Agilent Technologies, Inc.	04/01/14	03/31/19	148,050	148,050	Laboratory equipment repair services
11	All Star Fence Co.	09/01/16	08/31/22	16,333	16,333	Fence Repairs
12	American Fence	09/01/16	08/31/22	16,334	16,334	Fence Repairs
13	Anzalone Pumps, Inc.	04/25/13	04/30/17	250,000	-	Maintenance and Repairs on Irrigation Wells in White Pine County
14	Anzalone Pumps, Inc.	03/11/13	02/28/18	100,000	-	Repair and Maintenance of Agriculture Irrigation Systems for ranches
15	Anzalone Pumps, Inc.	05/01/13	04/30/18	250,000	-	Irrigation Well Maintenance Services
16	Anzalone Pumps, Inc.	03/01/13	02/28/18	100,000	100,000	Irrigation System Parts and Maintenance
17	Argus Engineering	05/16/15	05/16/20	70,000	70,000	Professional Services - SCADA system
18	Argus Engineering	05/21/15	05/20/20	130,000	130,000	Engineering services
19	Artel	04/01/17	03/31/18	1,350	1,420	Service agreement for lab equipment
20	Aspen Environmental Group	10/13/10	upon notice	100,000	100,000	Legal services
21	Association Of Metropolitan Water Agencies	01/01/17	12/31/17	25,000	-	Administrative support services
22	Avisight, LLC	08/22/16	08/21/17	5,533	-	Aerial imagery services
23	B&W Trucking	01/01/16	12/31/22	24,000	24,000	Transportation services
24	Ballard Spahr LLP	11/26/13	11/27/21	20,000	20,000	Legal services
25	Beckman Coulter, Inc.	01/01/17	12/31/17	9,548	10,025	Lab equip. main. Agreement
26	Biolog, Inc.	01/01/17	12/31/27	2,900	3,045	Lab equip. main. Agreement
27	Bio-West Inc	04/29/16	04/28/19	58,000	19,314	Biological consulting services
28	Bio-West Inc	04/29/16	04/28/19	52,000	17,316	Biological Consulting Services
29	Bio-West, Inc.	03/18/15	03/18/19	52,000	52,000	Biological consulting services- Virgin River
30	Bio-West, Inc.	03/18/15	03/18/19	58,000	58,000	Biological consulting services- Muddy River
31	Bio-West, Inc.	04/29/15	04/28/19	58,000	58,000	Biological consulting services
32	Bio-West, Inc.	04/29/15	04/28/19	52,000	52,000	Biological consulting services
33	Black & Veatch	10/01/14	Until complete	45,740	45,740	Mixing zone modeling services
34	Black & Veatch	11/17/16	Until complete	551,334	-	Engineering Design Services for AMSWTF Filter Improvements Phase II
35	Booky Oren Global Water Technologies Ltd.	10/16/14	complete	100,000	100,000	Organizational development assistance
36	Brown And Caldwell	01/21/16	04/30/17	179,451	-	Engineering services
37	Brown And Caldwell	02/01/16	04/30/17	179,451	-	Engineering services
38	Bsa Environmental Services	07/01/16	06/30/17	35,000	35,000	Zooplankton analysis
39	C. Joseph Guild III	01/02/12	Until complete	92,000	92,000	Natural Resource and Water Issues Consulting
40	C. Joseph Guild III	01/31/12	complete	64,000	64,000	Ranch and Agricultural Consulting
41	Capital Project Law Group, PLLC	03/16/15	03/16/23	50,000	50,000	Legal advisory services
42	Carollo Engineers, Inc.	1/19/2017	complete	674,898	-	Professional engineering services
43	Carter Agri Systems	06/23/14	06/22/19	96,800	96,800	Factory authorized parts and service
44	Cdyne	01/12/16	01/11/18	3,000	-	Web based text message services
45	Chemware Inc.	08/03/16	08/02/17	5,000	-	Chemware products and services for Laboratory Services
46	City Of Henderson, City Of Lv, Cc Water Reclamation District, Reg Transp Comm. Of Sn & Cc Regional Flood Control Dist.	01/01/16	12/31/19	169,308	169,308	Aerial imagery services
47	Com Plus, Inc.	02/01/17	04/30/17	20,915	-	Twin Lakes Tower Removal Project
48	Commercial Fire Protection	07/02/15	06/30/20	14,300	14,300	Fire systems maintenance
49	Cox Business Services	07/01/13	06/30/18	79,200	-	Internet and Ethernet data transmission services
50	Creel Printing Company	11/28/16	11/27/21	80,678	88,746	Water Smart Living Newsletter - Printing Services
51	D & G Scales	07/01/16	06/30/17	7,500	7,500	Maintenance and Inspection of Truck Scale
52	Desert Research Institute	04/02/13	Until complete	69,878	-	Monthly evaporation analysis
53	Digital Mapping, Inc.	02/17/16	02/16/17	75,000	-	Aerial imagery for the Faraday Future electric vehicle mfg facility.
54	Digital Mapping, Inc.	07/20/16	06/30/18	99,500	-	Aerial imagery services for Virgin and Muddy rivers
55	Dotson Law Corp	10/12/16	10/11/23	100,000	100,000	Legal services
56	Eagle View Contractors	09/01/16	08/31/17	16,333	-	Restoration Services
57	Emcor Services Nevada	03/01/16	02/28/17	8,886	-	Chiller maintenance
58	Emcor Services Nevada	03/01/16	02/28/18	18,324	-	Chiller maintenance
59	Epiq Systems	08/19/15	08/18/22	99,639	99,639	Professional services agreement for records management governance process
60	Eppendorf North America	08/23/16	08/22/17	1,700	1,785	Lab equip. main. Agreement
61	Eurofins Eaton Analytical	11/01/16	10/31/21	100,000	100,000	Water Sample Analysis Services
62	Faiss Foley Warren	08/01/13	07/31/19	900,000	900,000	Integrated communications and support services
63	Fei Company	12/05/16	12/04/17	28,092	29,497	Lab equip. main. Agreement
64	Finlinson & Finlinson	01/21/06	Until complete	30,000	30,000	Natural resource consulting services

**SCHEDULE OF EXISTING CONTRACTS**  
**Budget Year 2017 - 2018**

**Local Government:** Southern Nevada Water Authority  
**Contact:** Brian Thomas  
**E-mail Address:** [brian.thomas@lvwd.com](mailto:brian.thomas@lvwd.com)  
**Daytime Telephone:** (702) 822-8810

Total Number of Existing Contracts: \_\_\_\_\_ 176 \_\_\_\_\_

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2017-18	Proposed Expenditure FY 2018-19	Reason or need for contract:
65	Flow Science	07/18/13	07/01/17	125,000	60,000	Lake Mead Modeling
66	Full Spectrum Analytics	08/01/16	07/31/17	8,160	8,568	Lab equip. main. Agreement
67	G&G Systems	06/13/12	06/30/17	38,484	-	Fire systems maintenance
68	Geohydros, LLC	01/19/17	01/18/18	83,150	-	Geologic Model Construction
69	Geophex Surveys	09/17/15	12/31/18	177,549	177,549	Digital aerial imagery
70	Geophex Surveys, Ltd	08/22/16	08/21/17	5,533	-	Aerial imagery services
71	Glass Box Technology Inc.	11/30/15	11/29/20	60,000	60,000	EMC data storage operating system software training
72	Global Water Technologies Ltd	07/25/13	Until complete	70,000	70,000	Innovation development assistance
73	Great Basin Bird Observatory	08/28/14	12/31/20	52,239	52,239	Bird Inventory, habitat assessment & data analysis.
74	Great Basin Bird Observatory	07/01/15	06/30/20	43,159	43,159	Bird Survey service
75	Great Basin Bird Observatory	08/28/14	08/27/20	71,498	75,073	Avian and Vegetation Monitoring
76	Greenberg Traurig, LLP	06/19/12	Until complete	100,000	100,000	Bond counsel
77	Ground Control Systems Inc	02/01/17	01/31/22	45,000	45,000	Satellite Internet Service
78	Henderson Electric Motors, Inc.	05/21/14	05/20/19	175,050	175,050	Electric motors repair services
79	High Sierra Water Laboratory	08/27/14	01/28/19	40,000	40,000	Water sample analysis services
80	Highlights	10/01/15	01/31/21	7,400	7,400	Removal and Storage of Holiday Lights
81	Hobbs, Ong And Associates	03/20/14	Until complete	400,000	400,000	IRPAC Financial advisory services
82	Hobbs, Ong And Associates	07/21/16	07/21/21	150,000	150,000	Financial advisory services
83	Holland & Hart	05/22/12	05/22/19	100,000	100,000	Litigation related services
84	Holland & Hart	08/23/12	08/23/20	100,000	100,000	Legal Services
85	Holland & Hart	07/01/13	06/30/20	1,500,000	1,500,000	Environmental compliance services
86	Horibna Instruments	01/07/17	01/06/18	7,500	7,875	Lab equip. main. Agreement
87	HRA Inc	09/16/13	09/30/18	18,750	-	Archaeological Investigations
88	Institute For Executive Development	08/29/13	08/28/20	90,000	90,000	Development of organizational initiatives
89	James C. Davis	01/19/16	07/19/19	96,000	96,000	Public relations services
90	Jeff Rosenthal	08/30/16	08/31/23	90,000	90,000	Senior management team development
91	JH Davenport	12/24/08	Until complete	10,150	10,150	Water resource and administrative consulting services
92	John Deere Repair Parts And Service	01/01/16	12/31/23	30,000	30,000	John Deere Repair Parts and Service
93	Kay Brothers	05/05/10	Until complete	100,000	100,000	Consulting services on water issues
94	Kokopelli Landscaping Inc	09/01/16	08/31/17	23,500	-	Restoration Services
95	Laguna Productions	02/21/13	02/20/19	145,000	145,000	Production assistance
96	Las Vegas Color Graphics	07/01/14	06/30/19	50,000	50,000	Mailing services for Water Smart Newsletter
97	Las Vegas Color Graphics	11/28/16	06/30/21	48,762	56,077	Water Smart Living Newsletter - Mailing Services
98	Leavitt Enterprises LLC	10/15/15	06/30/20	7,000	7,000	WSNA Handyman Services
99	Lewis & Roca	03/22/10	Until complete	100,000	100,000	Legal Services
100	Life Technologies	03/11/17	03/10/18	8,596	9,025	Lab equip. main. Agreement
101	Lionel, Sawyer & Collins	04/07/04	Until complete	24,999	24,999	Legal representation
102	LJ McCormick Enterprises Inc.	10/01/15	06/30/20	49,000	49,000	WSNA Ecological Restoration
103	LVFamily Puppet Theater Company	10/01/15	06/30/17	30,000	-	Educational Stage Shows
104	Malitzlaw	11/16/16	11/15/23	15,000	15,000	Legal Services
105	Market Decision Corporation	03/04/13	03/04/17	75,000	-	Data collection services
106	Merrick & Company	09/17/15	9/16/2018	260,400	260,400	LIDAR digital elevation data services
107	Merrick & Company	7/21/2016	12/31/2016	86,522	-	LIDAR digital elevation data services
108	Michael J Brennan	08/23/12	07/01/18	100,000	100,000	Environmental compliance consulting
109	Millipore Corp.	08/01/16	07/31/17	6,614	6,945	Lab equip. main. Agreement
110	Molecular Devices	10/08/16	10/07/17	5,686	5,970	Lab equip. main. Agreement
111	Montgomery Watson/Ch2M Hill	07/16/15	Until complete	16,000,000	16,000,000	Lead design engineering services
112	Mountain States Nursery	09/01/16	08/31/17	14,000	-	Plant Propagation
113	Moyle Irrigation	01/01/16	12/31/23	25,000	50,000	Pivot irrigation system parts and maintenance services
114	Muddy River Regional Environmental Impact Alleviation Committee	01/06/14	01/07/19	50,000	50,000	Tamarisk removal services for fire control
115	MWH Americas, Inc.	5/19/2016	Until complete	5,137,370	-	Design of groundwater well equipment, etc.
116	MWH Americas, Inc.	4/21/2016	Until complete	1,261,000	-	Design of a potable water system
117	National Park Service	02/01/17	01/31/22	50,000	50,000	Weed Control Services
118	Nevada Conservation Corps	12/01/16	11/30/19	26,900	14,000	Vegetation control and reduction service
119	Nevada Division Of Forestry	01/31/17	01/31/22	50,000	50,000	Conservation Camp Services
120	NV Energy	12/29/99	12/28/19	1,000,000	1,000,000	SNWA Lease of Fiber Optic Lines
121	O'Flaherty Plumbing & Heating	01/01/16	12/31/23	17,500	35,000	Ranches Plumbing Repair Services
122	Omniticket Network	08/01/15	07/31/21	20,000	20,000	Services related to internet ticket sales for the Springs Preserve
123	Orange Legal Technologies	07/15/14	Until complete	40,000	-	Production of an administrative record
124	Par 3 Landscape & Maint. Inc.	10/01/15	06/01/21	47,000	47,000	WSNA Landscaping
125	Par 3 Landscape & Maint. Inc.	12/29/16	12/28/17	22,500	-	Irrigation Installation Services
126	Par 3 Landscape & Maintenance, Inc.	09/01/16	08/31/17	23,500	-	Restoration Services
127	Parsons Water And Infrastructure	10/21/93	Until complete	5,454,000	5,900,000	Program Management Services for SNWA
128	Patricia Emery	05/18/15	05/17/19	24,900	24,900	Editorial services with finalizing documents & reports on an as-needed basis.
129	PFM Financial Advisors	01/11/17	07/14/17	100,000	-	CFO services

**SCHEDULE OF EXISTING CONTRACTS**  
**Budget Year 2017 - 2018**

**Local Government:** Southern Nevada Water Authority  
**Contact:** Brian Thomas  
**E-mail Address:** [brian.thomas@lvwd.com](mailto:brian.thomas@lvwd.com)  
**Daytime Telephone:** (702) 822-8810

Total Number of Existing Contracts: \_\_\_\_\_ 176

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2017-18	Proposed Expenditure FY 2018-19	Reason or need for contract:
130	Phycotech Inc.	10/25/11	Until complete	50,000	50,000	Water Quality Analysis for Phytoplankton
131	Phycotech, Inc.	08/01/16	07/31/17	70,000	70,000	Phytoplankton analysis in Lake Mead
132	Piercy Bowler Taylor & Kern	03/02/10	06/30/17	191,442	-	Auditing Services
133	Pitney Bowes Management Services	08/28/13	08/27/19	14,500	14,500	Postage Metering services and rental
134	Power Plus Engineering	02/15/17	02/14/18	24,000	25,200	Eaton/Powerware Plus main. Agree.
135	Process Applications Inc	11/06/14	Until complete	20,000	10,000	Ozone dissolution methods
136	Qiagen, Inc.	12/28/16	12/27/17	10,572	11,100	Lab equip. main. Agreement
137	R&R Partners	07/16/15	06/30/21	3,350,000	3,350,000	SNWA Integrated Marketing
138	R&R Partners	07/16/15	06/30/21	3,350,000	3,350,000	Integrated marketing and other media support services
139	R&R Partners, Inc.	07/16/15	06/30/21	3,350,000	3,383,500	Marketing, Communications & Public outreach services
140	R&R Public Affairs	01/22/12	01/21/18	75,000	37,500	Consulting services for state and federal natural resource issues
141	R&R Public Affairs	01/22/12	01/21/18	60,000	-	Consulting services for state and federal natural resource issues
142	R2H Engineering	10/12/16	05/31/17	9,840	-	Eng. svc. For chemical storage tanks at AMS
143	Ram Proline	12/29/16	12/28/17	156,783	165,000	Strip and repaint pump parts
144	Ram Proline LLC	12/29/15	12/29/18	156,783	156,783	Strip and recoat pump parts
145	Ranch Advisory Partners	08/01/16	07/31/19	75,000	75,000	Professional Services Agreement
146	Ranch Advisory Partners LLC	05/15/14	05/19/17	75,000	75,000	Environmental compliance permit support services
147	Robin Rockey	07/01/16	06/30/19	90,000	90,000	Professional Services -River Mountains Solar Project
148	Rogich Communications	06/17/13	06/30/17	75,000	45,000	Communication support & community outreach programs
149	Ronald E. Zegers	03/03/14	Until complete	100,000	100,000	Water quality issue consulting
150	Safe Electronics	11/01/16	10/31/17	5,500	-	Fire alarm inspections and testing
151	Safe Electronics, Inc.	06/13/12	06/30/17	42,000	-	Fire systems maintenance
152	Simplex Grinnell LP	06/13/12	06/30/17	50,077	-	Fire systems maintenance
153	Simplot Growers Solutions	10/01/13	09/30/19	10,000	10,000	Soil testing services
154	Snell & Wilmer, LLP	04/11/12	04/11/20	100,000	100,000	Environmental compliance
155	Soil Tech Inc	09/14/16	09/13/21	496,800	496,800	Wash Revegetation
156	Spring Valley Associates	12/10/14	12/10/20	975,000	975,000	Ranch Operations and Maintenance Services
157	Steve Reagan	01/01/16	12/31/23	17,500	35,000	Ranches Veterinary Services
158	Stinson Leonard Street LLP	01/02/14	Until complete	100,000	100,000	Legal services
159	Stotz Equipment	01/01/16	12/31/23	15,000	30,000	John Deere Repair Parts and Service
160	Stotz Equipment	12/08/16	12/07/21	75,000	75,000	Factory authorized parts and service for John Deere Tractor
161	Stratus Consulting	11/17/10	09/30/17	70,689	-	Consulting services
162	Taggart & Taggart	01/18/07	Until complete	286,000	286,000	Legal services
163	Teledyne Tekmar	11/19/16	11/18/17	4,399	4,620	Lab equip. main. Agreement
164	The Tiberti Fence Company	09/01/16	08/31/22	16,333	16,333	Fence Repairs at WSNA
165	Thermo Electron	04/09/17	04/08/18	103,185	108,345	Lab equip. main. Agreement
166	Total Safety, Inc.	07/01/15	06/30/20	10,000	10,000	Fire systems maintenance
167	Tri-County Weed Control	08/01/14	06/30/19	16,578	-	Weed control
168	United Soil Science	02/22/17	02/21/22	215,124	236,636	Fertilizer Services for the Ranches
169	USGS Nevada Water Science Center	10/01/16	09/30/17	224,970	-	Water Resources Investigations
170	Utility Resources	05/15/97	Until complete	300,000	300,000	PUC Consultant
171	Utility Resources, Inc.	03/17/05	Until complete	530,000	530,000	Public utility commission regulatory hearings
172	Vogue Linen Service	05/01/13	05/01/17	1,000	500	Uniform cleaning services
173	Wag Services Inc.	06/01/15	06/30/20	40,000	40,000	Hay Tarping Services
174	Warren Turkett	06/25/12	Until complete	81,680	81,680	Lower Colorado River water quality database
175	Weck Analytical	11/01/16	10/31/17	110,000	115,500	Water sample analysis services
176	Weck Analytical Enviro. Svcs Inc	06/10/15	06/10/20	300,000	300,000	Water sample analysis
Total Proposed Expenditures				\$ 55,691,024	\$ 45,822,121	

Additional Explanations (Reference Line Number and Vendor):



**SCHEDULE OF PRIVATIZATION CONTRACTS**

**Budget Year 2017 - 2018**

**Local Government:** Southern Nevada Water Authority

**Contact:** Brian Thomas

**E-mail Address:** [brian.thomas@lvwd.com](mailto:brian.thomas@lvwd.com)

**Daytime Telephone:** (702) 822-8810

Total Number of Privatization Contracts: NONE

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Duration (Months/ Years)	Proposed Expenditure FY 2017-18	Proposed Expenditure FY 2018-19	Position Class or Grade	Number of FTEs employed by Position Class or Grade	Equivalent hourly wage of FTEs by Position Class or Grade	Reason or need for contract:
1	NONE									
2										
3										
4										
5										
6										
7										
8	Total									

Attach additional sheets if necessary.

Page: 9  
Schedule 32

**AFFIDAVIT OF PUBLICATION**

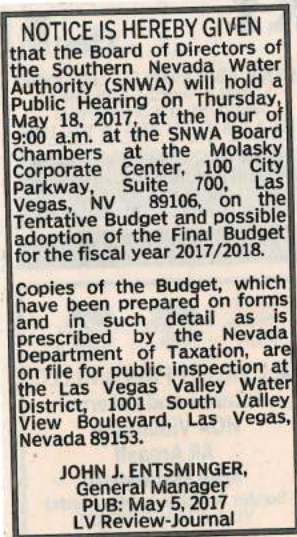
STATE OF NEVADA)  
COUNTY OF CLARK) SS:

**LV WATER DISTRICT  
1001 S VALLEY VIEW BLVD  
LAS VEGAS NV 89153-0001**

**Account # 22455  
Ad Number 0000908801**

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 05/05/2017 to 05/05/2017, on the following days:

05 / 05 / 17

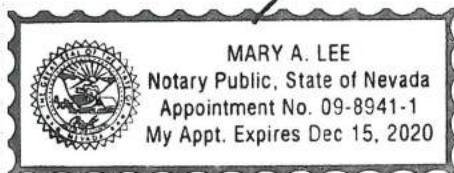


/s/   
**LEGAL ADVERTISEMENT REPRESENTATIVE**

Subscribed and sworn to before me on this 5th day of May, 2017

Notary







**STATE OF NEVADA  
DEPARTMENT OF TAXATION**

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

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

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

**BRIAN SANDOVAL**  
Governor  
**JAMES DEVOLLD**  
Chair, Nevada Tax Commission  
**DEONNE E. CONTINE**  
Executive Director

**LAS VEGAS OFFICE**  
Grant Sawyer Office Building, Suite 1300  
555 E. Washington Avenue  
Las Vegas, Nevada 89101  
Phone: (702) 486-2300 Fax: (702) 486-2373

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

May 25, 2017

Mr. Matt Chorpeneing, Asst. Chief Financial Officer  
Las Vegas Valley Water District  
1001 South Valley View Blvd.  
Las Vegas, NV 89153

Re: Final Budget – Fiscal Year 2017-2018 –Southern Nevada Water Authority

Dear Mr. Chorpeneing:

The Department of Taxation has examined the Fiscal Year 2017-2018 final budget for the above named entity in accordance with NRS 354.598. We find it to be in compliance with applicable statutes and regulations.

Based upon the review of the Final Budget, the following tax rates were presented to the Nevada Tax Commission on June 26, 2017 for certification:

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

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

Sincerely,

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

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# SECTION 5

## DEPARTMENT BUDGETS

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SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2017-18

OPERATING AND CAPITAL BUDGET

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**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Department Budgets**  
Fiscal Year Ending June 30, 2018

## Department Budgets

This section contains summaries of budgets for each of the Southern Nevada Water Authority's (SNWA) departments. Each department's budget narrative contains detailed budget information and other

highlights of the 2017-18 Budget Plan. The following table presents the 2015-16 actual, 2016-17 Adopted Budget and 2017-18 Budget Plan for each of the departments.

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

<b>Departments</b>	<b>2015-16 Actual</b>	<b>2016-17 Budget</b>	<b>2017-18 Budget</b>	<b>Budget-to-Budget Variance</b>
Executive Management	\$ 1,555,527	\$ 1,828,743	\$ 1,602,828	\$ (225,915)
Legal Services	2,747,686	2,673,029	3,960,168	1,287,139
Finance	12,773,855	10,288,371	12,705,963	2,417,591
Information Technology	8,692,515	14,542,923	17,864,765	3,321,842
Human Resources	13,893	743,503	625,138	(118,364)
Public Services	9,940,780	11,512,260	13,288,025	1,775,765
Environmental Health Safety & Corporate Security	2,280,249	2,444,245	2,951,566	507,321
Customer Care & Field Services	307,441	398,859	420,863	22,003
Engineering	112,945,395	160,149,169	141,669,054	(18,480,115)
Resources & Facilities	20,853,757	26,034,027	32,736,399	6,702,372
Infrastructure Management	3,716,001	11,194,187	13,546,215	2,352,027
Water Resources	14,052,169	45,280,569	49,888,482	4,607,914
Energy Management	40,746,921	39,085,579	46,064,068	6,978,489
Operations	11,844,041	20,666,168	17,520,581	(3,145,587)
Water Quality & Treatment	19,988,401	31,145,512	39,599,308	8,453,796
<b>Total Department Expenditures</b>	<b>\$ 262,458,631</b>	<b>\$ 377,987,144</b>	<b>\$ 394,443,421</b>	<b>\$ 16,456,277</b>
Debt Service	\$ 222,817,413	\$ 271,025,463	\$ 263,950,998	\$ (7,074,465)
<b>Total Uses of Funds</b>	<b>\$ 485,276,044</b>	<b>\$ 649,012,607</b>	<b>\$ 658,394,419</b>	<b>\$ 9,381,812</b>

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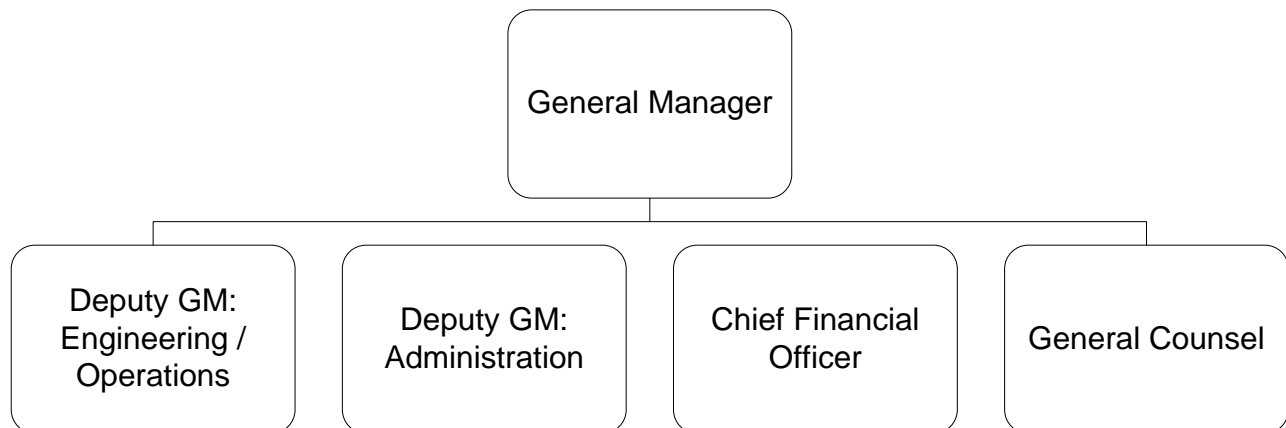


Southern Nevada Water Authority  
Operating and Capital Budget  
Department Budgets  
Executive Management  
Fiscal Year Ending June 30, 2018

## EXECUTIVE MANAGEMENT

Level: 1000

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### Mission

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

### Department Description

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. Two 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 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 LVVWD and SNWA missions, the Executive Management Team petitions the respective boards for direction and approval of funding and 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, 2018

## Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 10,315	\$ 22,500	\$ 28,600
Maintenance & Repairs	-	-	-
Other Employee Expenses	173,210	192,150	183,750
Other Expenses	85,444	572,350	255,980
Total Operating Expenses	\$ 268,970	\$ 787,000	\$ 468,330
Capital Costs	\$ 269,790	\$ -	\$ -
Payroll Costs	\$ 1,016,766	\$ 1,041,743	\$ 1,134,498
<b>Total Department Expenditures</b>	<b>\$ 1,555,527</b>	<b>\$ 1,828,743</b>	<b>\$ 1,602,828</b>
FTE Positions	5.3	5.0	5.0

## Department Performance

Over the past year, the Executive Management Team has directed a wide range of initiatives to ensure reliable water delivery to Southern Nevada by implementing multiple strategies and approaches to drought, conservation and identifying present and future infrastructure and resource needs. Significant initiatives over the past year include:

- Continued construction of a new Low Lake Level Pumping Station (L3PS), which is expected to be complete by 2020.
- Completion of a citizen's advisory committee process for the LVVWD

rates and Service Rules, and implementation of the resulting recommendations.

- Development and approval of the LVVWD's 10-year Capital Improvement Plan.
- Participation in the 2017 Legislative Session.
- Infrastructure design for the Garnet Valley water system.
- Continued collaboration with Colorado River partners on conservation programs that will protect Lake Mead water elevations.
- Continued leadership and involvement in Colorado River issues and initiatives.
- Completion and grand opening of the Boomtown 1905 exhibit at the Springs Preserve.

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Department Budgets**  
**Executive Management**  
Fiscal Year Ending June 30, 2018

## **Low Lake Level Pumping Station**

Following a recommendation from the Integrated Resources Planning Advisory Committee Process in 2015, the SNWA began design and construction on a new low lake level pumping station (L3PS) at Lake Mead. To date, construction crews have completed 27 well shafts and continue with the multi-phased drilling process on seven more. These 34 shafts will accommodate submersible pumps, each capable of pumping 30 million gallons of water per day. Adjacent to the well shafts, workers are finished excavating a 26-foot diameter access shaft to the top of the future fore bay at elevation 766 feet, which is 494 feet below the surface. Crews are now working at the existing surge shaft on the north end of the site to excavate it to the same elevation. Once the well shafts are complete, crews will excavate the underground storage area, known as a fore bay.

L3PS construction remains on schedule and is expected to be operational by 2020. When completed, L3PS will allow the SNWA to pump water from an elevation as low as 875 feet and work with Intake No. 3 to provide the community continued access to Colorado River supplies.

## **Service Rules and Rates Process.**

In February 2016, the LVVWD Board of Directors appointed nine people to serve on a citizens advisory committee tasked with evaluating how to fund the agency's capital needs and make changes to the LVVWD Service Rules.

After nine meetings between February and October 2016, the committee presented 11

recommendations to the Board, including a modest rate increase in 2017 and 2018, and an indexed increase in the years following. Ultimately, these recommendations will fund the LVVWD's capital needs over the next 10 years and meet the reserve targets set forth in the Board-adopted Reserve Policy.

## **Capital Improvement Plan**

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

## **System Conservation Pilot Program**

The SNWA continues to partner with the U.S. Bureau of Reclamation and water users in the Upper and Lower Colorado River Basins on the System Conservation Pilot program. Over the past three years, the SNWA and its partners have helped fund 10 projects in the Lower Colorado River Basin and more than 25 projects in the Upper Basin. There continues to be broad interest in this voluntary program from water users in both basins and preliminary findings indicate that substantial water conservation can be achieved through this type of program.

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Department Budgets**  
**Executive Management**  
Fiscal Year Ending June 30, 2018

## **Garnet Valley Water System**

Following a special Legislative Session in December 2015, the SNWA was tasked with designing and constructing a water system to meet the needs of the proposed developments in the Apex area of North Las Vegas. The SNWA worked quickly to complete design of the water system on time and under budget by December 2016.

## **Groundwater Development Project**

As recommended by IRPAC, the SNWA continues to maintain the Clark, Lincoln and White Pine Counties Groundwater Development Project as part of its long-term water resource plan. The project will help meet the community's long-term demands and provide a water supply separate from the Colorado River. Although the project is unlikely to be needed in the short-term, the SNWA continues permitting activities, including legal review.

## **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***

#### **2017-18 Performance Objectives**

- Develop and maintain existing state, federal and international partnerships to advance and promote water-

related technical development and innovative water-resource solutions.

- 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.
- Continue construction progress on L3PS.
- Demonstrate national and international leadership in water research, conservation and water quality efforts.
- Implement the LVVWD and SNWA Capital Plans.

#### **2016-17 Major Accomplishments**

- Adoption and implementation of the LVVWD's 10-year Capital Improvement Plan, which will guide decisions related to asset management, necessary water system expansion and water quality compliance activities.
- L3PS construction remains on-schedule with completion of all pump well shafts and continuation of the multi-phased drilling process.
- Continued implementation of the Colorado River System Conservation Pilot Program.
- The LVVWD's average monthly water use for residential single services has declined by 38.5 percent over the past 14 years.

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- Commenced filter replacement process at the Alfred Merritt Smith Water Treatment Facility, which will result in increased system efficiency.

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

**2017-18 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.

**2016-17 Major Accomplishments**

- The LVVWD delivered approximately 108 billion gallons of water to customers throughout its service area.
- Installed Itron Analytics software, enabling staff to conduct hourly meter reads and advise customers of possible leaks with increased efficiency.
- Completed construction and held a grand opening for the Springs Preserve Boomtown 1905 exhibit.
- Launched the Springs Preserve mobile app, which offers guests tools to help them navigate the property, purchase tickets or memberships and receive information about current and upcoming attractions, exhibits and classes.
- Recently implemented live closed captioning of all respective board meetings and social media videos to accommodate the Americans with

Disabilities Act as well as social media users who prefer to read captions rather than use headphones.

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

**2017-18 Performance Objectives**

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

**2016-17 Major Accomplishments**

- The SNWA is currently serving as Chair for the Water Utility Climate Alliance, which recently led a survey of drinking water utilities across the nation to assess how utilities are addressing the risk of climate change and its impact to drinking water.
- Initiated a study with the University of California San Diego in 2016 to evaluate the most appropriate climate models for use in Clark County. This effort is anticipated to support various planning and development activities by the SNWA related to climate change.
- Ranked 15th place in the 2016 Green

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Fleet Awards, which recognizes 100 best fleets in North America. The LVVWD has been ranked in the top 25 green fleets for eight consecutive years.

- Commenced work on the Tropicana Weir – one of the last of the 21 weirs planned and constructed at the Las Vegas Wash. The Wash remains an important component to Southern Nevada's watershed by carrying the valley's excess water through wetlands, which serves as critical habitats to birds and plants, but a crucial cleansing point for the runoff.
- Continued monitoring the Moapa dace population, which has been stable since 2014 at approximately 1,800 fish.

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

**2017-18 Performance Objectives**

- Continued implementation of IRPAC recommendations, including the construction of L3PS.
- Continue to lead the implementation of the Las Vegas Wash Comprehensive Adaptive Management Plan.
- Continue development and implementation of a long-term Operations and Maintenance Plan with associated costs and funding options.

**2016-17 Major Accomplishments**

- Recently deployed PipeMinder technology, which monitors underground pipelines and provides

real-time hydraulic data about the behavioral flow of water within the pipelines.

- Partnered with Echologics and AT&T to install acoustic monitoring equipment along Las Vegas Boulevard to acoustically monitor and detect leaks or other infrastructure issues before they become emergency situations.
- Continued to support environmental management efforts at the SNWA's Northern Resource Properties by putting primary groundwater rights to beneficial use. Ranch staff maintains critical assets and provides services to technical staff conducting research and monitoring activities.

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

**2017-18 Performance Objectives**

- Plan and develop opportunities to increase the LVVWD and SNWA investments in alternative and renewable energy supplies.
- Continue to implement the recommendations made by the Rates and Service Rules Citizens Advisory Committee process and monitor results.

**2016-17 Major Accomplishments**

- In 2015 and 2016, the LVVWD saved \$52.2 million and the SNWA saved \$187.4 million refunding bonds.
- Implementation of 11 recommendations, including a modest rate increase in 2017 and 2018, from a

**Southern Nevada Water Authority**  
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citizen's advisory committee to support long-term water system reliability.

- In Fiscal Year 2015-16, Springs Preserve overall revenue increased by approximately 4 percent and third party business events grew by 15 percent over the previous year.

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

**2017-18 Performance Objectives**

- Ensure continual security and safety of the LVVWD's and the SNWA's 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.

**2016-17 Major Accomplishments**

- The American Water Works Association awarded the River Mountains and Alfred Merritt Smith water treatment plants the Partnership for Safe Water Presidents Award for their dedication in optimizing water treatment operation.
- The Springs Preserve—where video is heavily used to promote activities and programs— has had more than 800,000 views on its YouTube videos over the course of the channel's existence.
- The Springs Preserve social media campaign and *Springs Elemental*

television program each received Pinnacle Awards from the Public Relations Society of America, recognizing excellence in public-relations strategies and tactics employed by communicators throughout the metropolitan area.

- In 2016, the SNWA assisted eleven well users to connect to a municipal water supply, in compliance with the SNWA's financial assistance guidelines for the Groundwater Management Program as established by the Nevada Legislature. Through the Sub-meter Assistance Program, seven sub-meters have been distributed to well owners, four rebates have been issued for the installation of those sub-meters, and eight wells have been plugged and abandoned.

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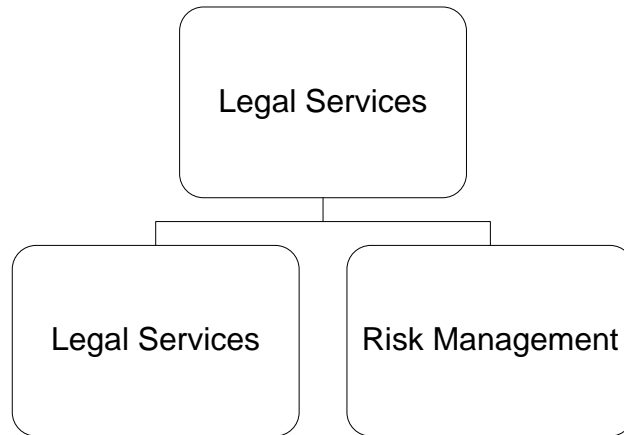


Southern Nevada Water Authority  
Operating and Capital Budget  
Department Budgets  
Legal Services  
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## LEGAL SERVICES

Level: 1200

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### Mission

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

### Department Description

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

and continues to advise on electrical power issues.

The Risk Management division assesses risk and insurance needs on an organization-wide basis, procures appropriate coverage, and manages submitted claims. The department works closely with the General Manager and Deputy General Managers in providing legal advice and in the development and review of proposed legislation and regulations at the local, state, and federal levels.

### Budget Objectives and Highlights

Attorneys in the department are performing a steadily increasing practice before Nevada courts, federal courts, and state and federal administrative agencies. The 2017-18 budget contains continuing funding to support these efforts and for outside counsel who perform a variety of other legal services for the organization. Funds have also been retained in the budget to acquire a contract management software solution.

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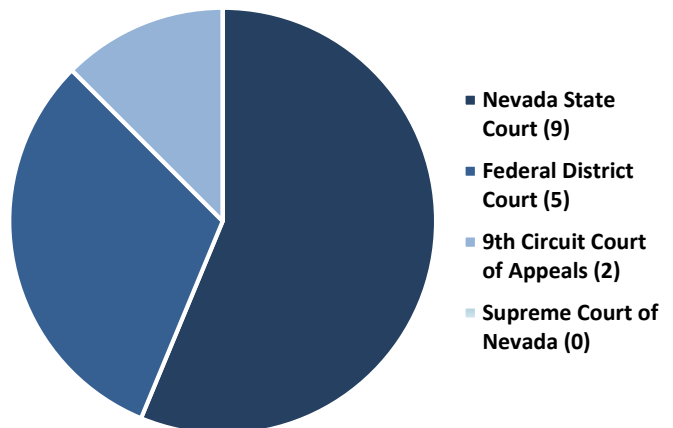
### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 142	\$ 9,000	\$ 500
Maintenance & Repairs	-	-	-
Rental & Leases	-	-	-
Other Employee Expenses	57,130	52,000	62,000
Other Expenses	890,915	1,443,803	2,206,824
Total Operating Expenses	\$ 948,187	\$ 1,504,803	\$ 2,269,324
Capital Costs	\$ (0)	\$ -	\$ -
Payroll Costs	\$ 1,799,499	\$ 1,168,226	\$ 1,690,844
<b>Total Department Expenditures</b>	<b>\$ 2,747,686</b>	<b>\$ 2,673,029</b>	<b>\$ 3,960,168</b>
FTE Positions	8.8	5.9	8.0

### Department Performance

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

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



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**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 and Risk Management have provided and will continue to provide training sessions to organization staff to develop internal capacity and strengthen the culture of excellence.

**2016-17 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.

**2017-18 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.

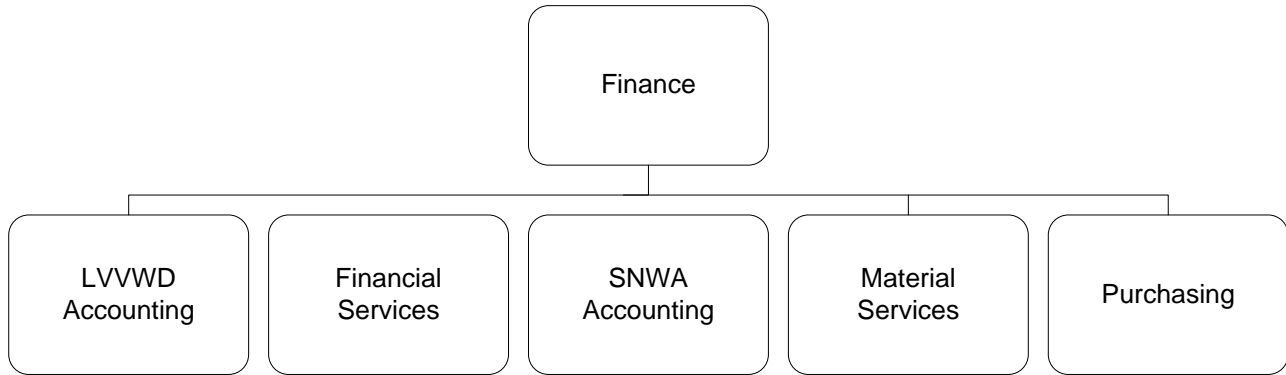
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**FINANCE**  
**Level: 2100**

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## Mission

To provide leadership in finance, accounting, budgeting and debt management, ensuring the financial integrity and safeguarding assets of the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA).

## Department Description

The Finance department is responsible for day-to-day accounting, financial reporting, financial planning, debt and treasury management, budgeting, 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 a Pension Trust Fund. In the Enterprise Funds, financial activities are recorded in a manner similar to that of a private business. The Pension Trust Fund is used to account for the

investments, earnings, contributions, expenses, and projected pension benefits of the LVVWD Pension Plan. The department also coordinates the LVVWD and the SNWA's 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).

## Budget Objectives and Highlights

The 2017-18 Finance department budget contains funding to maintain the necessary functions the LVVWD and the SNWA require to provide quality services to both internal and external customers.

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### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 2,507,560	\$ 79,200	\$ 105,400
Maintenance & Repairs	-	7,300	38,750
Rental & Leases	271	450	1,550
Other Employee Expenses	38,594	73,885	101,005
Other Expenses	4,970,467	7,143,875	8,931,905
Total Operating Expenses	\$ 7,516,891	\$ 7,304,710	\$ 9,178,610
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 5,256,964	\$ 2,983,661	\$ 3,527,353
<b>Total Department Expenditures</b>	<b>\$ 12,773,855</b>	<b>\$ 10,288,371</b>	<b>\$ 12,705,963</b>
FTE Positions	29.0	19.7	23.0

## Department Performance

### LVVWD Accounting.

The LVVWD Accounting division is responsible for accounting, financial reporting, accounts payable and payroll activities, as well as supporting cashing activities at the Springs Preserve. The division ensures adequate controls over all revenues, expenditures, assets and liabilities, and prepares the LVVWD Comprehensive Annual Financial Report (CAFR), which has received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for the last thirty-eight (38) consecutive years. The division provides accounting and payroll services for

the LVVWD, the SNWA, Big Bend Water District (BBWD), Kyle Canyon, Coyote Springs, and three rural systems that are part of the LVVWD. The division also provides accounting services for the Las Vegas Valley Water District Retirement Plan.

Accounting functions include: ensuring financial statements and reports are accurate, complete and consistent; maintaining the general ledger, inventory, fixed asset and other system records; cash management and the accounting and reporting of investments of the LVVWD's funds; reconciling bank statements with thousands of disbursements; processing payroll for approximately 1,250 employees; processing accounts payable for approximately 42,000 payments annually, which earned more than \$275,000 discounts

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in fiscal year 2015-16 including an annual credit card rebate of \$125,000; accounting for the Springs Preserve; and accounts receivable, which includes federal and state agency grant accounting that require preparing and submitting reports to obtain reimbursements.

In October 2014, the LVVWD began outsourcing its mail payment 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 150 satellite pay station locations throughout the Las Vegas valley.

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

**Financial Services.**

A broad range of financial services are provided by this division, including preparing and monitoring the annual operating and capital budgets of the LVVWD and the SNWA; designing, analyzing, and recommending water rates; providing short and long-term financial plans.

Financial Services is responsible for preparing an annual line item operating and capital budget. This includes budget development,

implementation and monitoring for the LVVWD, SNWA, and BBWD. Financial Services prepares variance reports by department, and directors are accountable for expenditures over and under budget. The division also performs a variety of strategic and long-range financial forecasting, financial and water rate scenario analyses and develops water rate, connection and other fee recommendations for the LVVWD and SNWA departments, projects and programs. On an annual basis, the division conducts a survey of water rates from over 60 cities located in the western United States, closely monitors water production and consumption data, and prepares Annual Statistical Reports.

**SNWA Accounting.**

The SNWA Accounting division supports the strategic objectives of the Finance department by providing accounting services, financial reporting, financial analysis, cash management, and coordination with the financial staffs of the SNWA purveyors and other agencies. The SNWA Accounting division is charged with the following responsibilities: the day-to-day accounting of the SNWA; the accounting and reporting associated with investment of the LVVWD and SNWA funds; reconciliation of receivables and payables between the LVVWD and the SNWA; the preparation and tracking of purveyor billings; the collection, tracking, and forecasting of regional connection charges, infrastructure charges, commodity charges, reliability surcharges, sales tax revenues, and other miscellaneous revenue sources; preparing and filing forms and narratives in connection with the LVVWD and SNWA grant receipts; preparation of the SNWA CAFR and other financial reports; fixed assets tracking;

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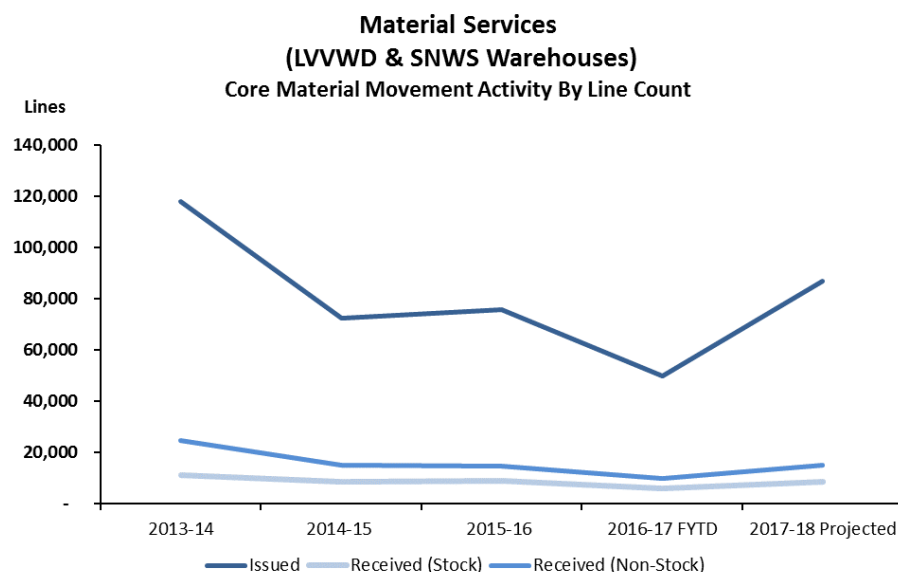
construction contract tracking; and cash management. The SNWA Accounting division also conducts numerous financial analyses such as: arbitrage calculations, cash requirements forecasts, and operating funds analyses.

**Purchasing Services.**

The Purchasing division is responsible for the centralized purchasing activities of the District, the Authority and the Springs Preserve. These activities include: market analysis, developing new, expanded or alternative suppliers, systems contracting, formal and informal bidding processes, sustainable purchasing, disposal of company property, and the support of a diversified supplier program. Negotiations of terms and conditions of contracts, quality products and services, and cost savings are the division's priority.

**Material Services.**

Material Services' primary role is to deliver reliable customer service by providing quality products, material management, storage and retrieval services. To ensure customers material needs are met, Material Services administers \$33.2 million in blanket agreements to purchase inventory and relies heavily on their supplier partnerships. Material Services partners with their internal customers to identify, forecast, and schedule various Capital and O&M project material requirements. Materials are received, inspected, and processed at both the LVVWD and SNWS Main distribution warehouses for delivery to internal customers at the LVVWD, SNWS, and eleven satellite facilities. In March 2017, average inventory assets were valued at \$16.9 million consisting of 16,300 inventory items. Material Services also received, inspected, and processed non-inventory materials purchases by internal users. In fiscal year to date 2016-17, Material Services received and processed a monthly average of \$1.8 million or 1,946 lines combined for stock and non-stock receipts.





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Material Services supports sustainability through inactive inventory reduction, repurposed shipping materials, and administers, coordinates, and manages the investment recovery efforts for various recyclable and repurposed materials through the auction program and bid sales. Additional services include supply chain management; emergency job site deliveries; safety garment administration; coordination of semi-annual first-aid kit replenishment; Safety Data Sheet administration; courier services for organizational needs which includes lab samples; loanable tool support; FedEx and UPS shipping services.

#### **Mail Services.**

Mail Services is the hub for processing incoming and outgoing intercompany and United States Postal Service (USPS) mail and has two locations, one at the LVVWD Valley View office and the other at the Molasky Corporate Center. Mail Services transports between the LVVWD, SNWA, SNWS and Springs Preserve offices and to all remote facilities throughout the LVVWD Service Area. Mail Services' also includes the delivery and posting of agenda public notices; administering the LVVWD's postage budget; desktop delivery of office supplies; and special communication campaign folding and envelope stuffing projects. Terrorism training certification is required annually by all Mail Services personnel.

### **Strategic Plan Objectives and Accomplishments**

By the very nature of its activities, the Finance department either directly or indirectly

impacts all of the Strategic Plan Goals through the prudent and strategic funding of all 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.***

#### **2017-18 Performance Objectives**

- Identify and secure funding for critical infrastructure.
- Provide timely and accurate financial reporting for all capital programs.
- Provide timely and accurate support for the LVVWD, the SNWA and small water system rate proceedings.
- In support of the Emergency Response Plan, continue to develop the Logistics Chief Book Guidelines.

#### **2016-17 Major Accomplishments**

- Provided Emergency Response Plan logistical support in response to BBWD's boil water order by delivering 1,512 1-gallon containers of drinking water to local customers.

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

#### **2017-18 Performance Objectives**

- Develop and Implement an electronic routing application for contract awards within General Manager's authority.

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- Continue to improve and streamline day-to-day accounting practices, specialized processes, and improved financial analyses, reporting, and information sharing for the departments.
- Provide the best possible equipment choices to the departments to assist them in meeting their goals efficiently and effectively.
- Provide material services to support the internal customer's goals and projects by planning, forecasting, scheduling, and coordinating their specific material requirements.

**2016-17 Major Accomplishments**

- Implemented an on-line bidding system in coordination with nine other Nevada local governments.
- Provided Maintenance Engineering forecasting and material management services for the wellsite communications upgrade program.
- Explored cost savings and service improvements by changing supply source providers for Material Services' Vendor Managed Inventory (VMI) strategic areas. This change resulted in a 55 percent O&M cost savings, improved service, and supply reliability for their internal customers.
- Provided Customer Care and Field Services (CC&FS) meter maintenance program material management, forecasting services and utilized just-in-time practices. In support of CC&FS' commercial meter maintenance program, Material Services issued various meters valued at \$1.6 million.

Provided forecasting and material management services to Maintenance Engineering's ControlLogix wellsite communications upgrade program.

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

**2017-18 Performance Objectives**

- Increase purchases of recycled and environmentally friendly products.
- Provide weights and categories for all inventory items required for the computation of the District's carbon footprint.

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

**2017-18 Performance Objectives**

- Begin implementing improved report and automation technology for the upgraded general ledger and accounting system for more timely and useful reports, increased employee efficiency, better control of the approval/authorization process and to maximize vendor discounts. Increase training, evaluation and implementation of new functionality.
- Research and initiate policy changes and alternative payment methods resulting in a reduction in the number of paper customer refund payments issued.

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- Actively participate in CC&B and Workday software upgrades/implementations.
- Encourage the purchase of sustainable products by facilitating meetings with suppliers and interested departments.

**2016-17 Major Accomplishments**

- Identified vendor for accounts payable automation software.
- Actively participated in Avantis and Altru ticketing software upgrades and implementations.
- Fully implemented Phases I and II for the utilization of wireless warehouse hand held devices and barcode technology for issues, item inquiry and location changes. Phase III and IV are scheduled for the 2nd and 4th quarter in 2016.
- Upgraded all LVVWD two-way radios from analog to digital technology in order to improve communications and enhance interoperability throughout the Las Vegas valley.
- Automated several manual payment processes to improve accuracy and efficiency.

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

**2017-18 Performance Objectives**

- Continue the Finance department's long-standing record of excellence in budgeting and financial reporting.
- Continue to enroll vendors and develop payment opportunities for

credit card program in order to increase the credit card rebate.

- Reduce the volume of manually processed payments through customer outreach efforts in coordination with Customer Care and Field Services.
- Implement wireless warehouse barcode software program and hand-held device utilization for core material movement activities.

**2016-17 Major Accomplishments**

- Issued the Clark County 2016B refunding bonds generating net present value savings of \$72 million.
- Issued the Clark County 2017 refunding bonds generating net present value savings of \$39 million.
- Issued the LVVWD 2017A & B refunding bonds generating net present value savings of \$20 million.
- Provided comprehensive financial planning and analytical support for the LVVWD's Citizens Advisory Committee.
- Secured two State Revolving Fund loans totaling \$30 million for LVVWD capital infrastructure.
- Issued the LVVWD 2016B adjustable rate refunding bonds, which refunded the LVVWD's outstanding 2006B and 2006C bonds.
- Mail Services successfully administered the desk top office supply delivery District- wide resulting in improved accountability and process efficiencies.

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

**2017-18 Performance Objectives**

- Submit the LVVWD and SNWA CAFR for the year June 30, 2017, to the GFOA and receive the Certificate of Excellence in Financial Reporting.
- Receive unmodified opinions from external auditors for the LVVWD, SNWA and BBWD fiscal year 2017 audits.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year ended June 30, 2018.
- Enforce regulatory and accounting requirements of inventory asset reporting and accountability.
- Assess Mail Services' office supply delivery process effectiveness and improvement.

SNWA and BBWD fiscal year 2016 audits.

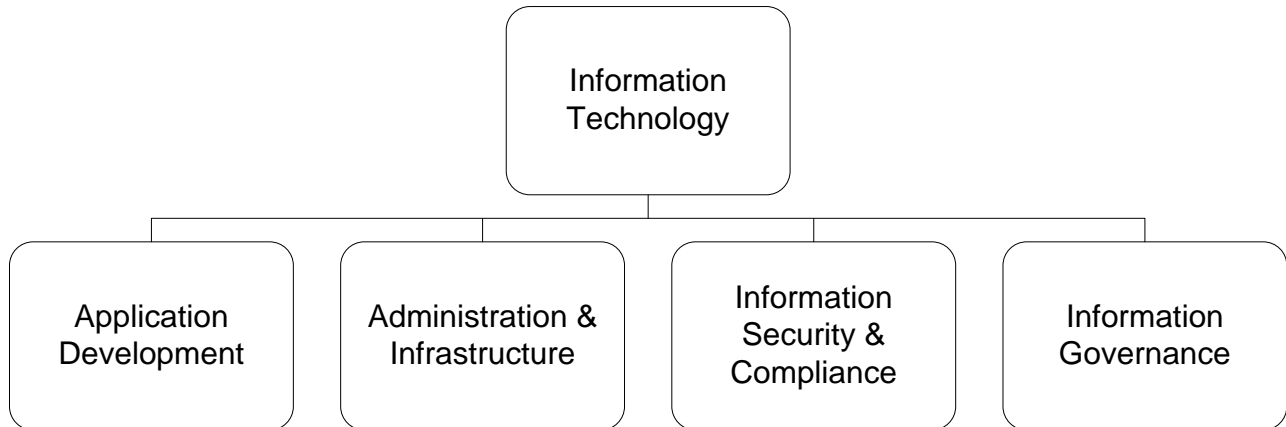
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year ended June 30, 2017.
- The LVVWD Material Services division achieved 22<sup>nd</sup> year and SNWS Material Services achieved 15<sup>th</sup> year without a lost-time accident.
- Received an unmodified opinion for a near-perfect inventory accuracy audit from external auditors, PBT&K, for the LVVWD and SNWS Material Services warehouses.
- Mail Services implemented a process improvement program to have On-Trac deliver all office supply orders direct to the Valley View office. This improvement enabled Mail Services to maximize resources without compromising service level to internal customers.

**2016-17 Major Accomplishments**

- Received the Certificate of Excellence in Financial Reporting from the GFOA of the United States and Canada for the thirty-eighth (38<sup>th</sup>) consecutive year for the LVVWD CAFR for the year ended June 30, 2016.
- Received the Certificate of Excellence in Financial Reporting from the GFOA for the twenty-first (21<sup>st</sup>) consecutive year for the SNWA CAFR for the year ended June 30, 2016.
- Received an unmodified opinion from external auditors for the LVVWD,

## INFORMATION TECHNOLOGY

Level: 2300



### Mission

Establish a leadership position by the use and support of leading information technologies while making customer service top priority.

### 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, ongoing related support, cybersecurity, Geographic Information Systems (GIS), telecommunications and the organization's Information Governance Initiative. The department is also responsible for the acquisition and maintenance of spatial data in support of ongoing projects, such as the Clark

County Imagery Project. Specific support activities are noted for each division herein.

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

### Budget Objectives and Highlights

The 2017-18 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.

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## Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 48,528	\$ 851,500	\$ 767,120
Maintenance & Repairs	254,544	2,619,059	2,748,028
Rental & Leases	2,964	366,000	425,200
Other Employee Expenses	7,448	59,180	106,407
Other Expenses	453,622	1,819,100	2,107,755
Total Operating Expenses	\$ 767,106	\$ 5,714,839	\$ 6,154,510
Capital Costs	\$ 773,211	\$ 1,171,023	\$ 4,525,499
Payroll Costs	\$ 7,152,198	\$ 7,657,061	\$ 7,184,755
<b>Total Department Expenditures</b>	<b>\$ 8,692,515</b>	<b>\$14,542,923</b>	<b>\$17,864,765</b>
FTE Positions	42.4	43.3	39.6

## Department Performance

Information Technology completed a number of projects to improve business processes, functionality, system operations, and security, while reducing expenses and risk to the organization. Major projects during the year included beginning implementation of Workday Human Capital Management System, upgrade of network storage, upgrade of Customer Care & Billing (CC&B) system, migration to Office 365, implementation of new ticketing and point of sale system at the Springs Preserve, continuation of PC/monitor refresh program, development of new Conservation system to manage Water Smart Landscapes program, deployment of business

intelligence system, and completion of the Las Vegas Valley Light Detection and Ranging (LiDAR) Project and the 2016 Clark County Imagery Project.

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

Application Development is continuing to upgrade core enterprise systems, a multi-year process initiated in fiscal year 2014-15. The organization's purchasing system will be re-engineered to consolidate all purchasing activity and provide additional capabilities

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and controls within the organization's existing financial system.

The implementation of Workday Human Capital Management System is on-going and will be completed next fiscal year. Workday will eliminate several disparate systems, reducing operational costs and provide much improved customer self-service, analytics and added capabilities for recruitment, performance management and compensation.

The organization's major customer facing web sites will be reengineered and designed to meet modern design and functionality standards and allow for seamless access to information and self-service features, regardless of device, including a full range of mobile platforms.

A risk management system will be implemented that centralizes claims, Occupational Safety and Health Administration (OSHA) reporting, incident processing, inspections and audits, insurance management, training and certifications. The system will eliminate a variety of custom and legacy software and address key needs of Risk Management and Environmental, Health, Safety & Corporate Security.

Migration and integration support will be provided to Infrastructure Management needed to implement RedEyeDMS, a cloud based system for managing engineering drawings. This system will facilitate drawing access and collaboration needed by Engineering and Asset Management. Ongoing support will continue to be provided to Operations and Water Quality staff through effective delivery of Supervisory Control and

Data Acquisition (SCADA) information required for compliance, metrics, and performance monitoring.

Application Development will be supporting other key Information Technology initiatives including major platform and operating system upgrades, bill payment and design services, meter management and analytics, and systems supporting engineering design, construction and capital projects.

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

The Customer Support Division is responsible for many diverse functions within the company. The Desktop Hardware support group provides remote and on-site support for over 4,000 computers, monitors, and printers. The Desktop Software support group researches, installs, and supports over 1,000 applications, on all company desktop and laptop devices.

The Technical Services division is responsible for the application administration of critical business systems utilized throughout the organization. It is also responsible for the architecture and administrative support for the corporate systems to include database infrastructure, server administration, enterprise storage, e-mail and mobile communication, web services, cybersecurity, network infrastructure, and the telecom group which manages wireless communications devices (cell phones, modems, and air cards) and the main telecom switch for all locations and campuses.

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Additionally, this division is responsible for the maintenance of the SCADA systems for the LVVWD, SNWA, and BBWD. The division maintains and configures the Laboratory Information Management System (LIMS) which supports both the Water Quality and Applied Research Laboratories.

Enterprise application support focuses on providing uninterrupted application services to customers, while providing for 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 the upgrade of the outdated LVVWD and SNWA SCADA systems to refresh hardware and software. This upgrade also includes replacement of outdated field communication technology.

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

Ongoing initiatives include acquisition of very-high resolution imagery for the multi-agency Clark County Imagery Project, acquiring imagery of the Muddy and Virgin Rivers in concert with the Intentionally Created Surplus (ICS) project for the Bureau of Reclamation, continued upgrades for GIS infrastructure, upgrading existing GIS applications to newer programming, and mapping support for a wide range of projects important to the organization.

**Security and Compliance.** This team was formed in July of 2016 to ensure a strong and continued focus on cybersecurity and Payment Card Industry (PCI) compliance.

Major emphasis will continue to be on cybersecurity as world-wide security breaches increase at an alarming rate. Emphasis will continue to be directed toward providing an operationally stable and secure computer system infrastructure, as well as educating employees on cybersecurity topics.

Ongoing initiatives include continued work to provide off-site disaster recovery capability, allowing continuous service and business continuity, defense against cybersecurity threats and vulnerabilities, cybersecurity awareness briefings, system upgrades/replacements to critical infrastructure hardware reaching end of life, implementation of technology to meet required PCI standards, increasing network performance and efficient data storage capacity, ensuring high availability of applications and databases, support to mobile devices, as well as to develop and refine processes to support the infrastructure.

Security efforts include continual review and enhancement to security procedures, timely application of security patches, and audited/controlled system and data access. In addition, the division focuses on ensuring software technologies and business processes meet all required PCI standards.

**Information Governance.** This division was formed in July of 2016 and reports to both the Director of Information Technology and the Director of Legal Services. This team is



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currently responsible for the administration of the organization's corporate records program.

During the upcoming fiscal year, focus will be placed on the implementation of an enterprise content management system. This system will be comprised of strategies, methods and tools used to manage information throughout its useful life cycle within the organization.

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

#### **2017-18 Performance Objectives**

- Enhance corporate data security with emerging technology to identify threats and mitigate risk.
- Re-engineer the organization's major customer facing websites to meet modern design and functionality standards and allow for seamless access to information and self-service features, regardless of device, that includes a full range of mobile platforms.
- Replace Customer Care Communications and Contact Management infrastructure to provide a stable and reliable work

environment, introduce current and next generation multi-media technology, and improve the overall customer experience by providing additional automation and contact options.

- Replace corporate backup infrastructure to streamline backup policies, remove obsolete data stores, and provide enhanced disaster recovery options.
- Combine various GIS application development, data management, and mapping efforts into a single workgroup for maximum efficiency.

#### **2016-17 Major Accomplishments**

- Review of all projects and development of prioritization ranking of Information Technology initiatives and projects by the Information Technology Steering Committee.
- Completed a major upgrade of the CC&B system to stay current on vendor support and provide various business process improvements. CC&B manages all utility customer interactions, service support, and billing.
- Migration of corporate Oracle database infrastructure to the enhanced Super Cluster hardware platform, providing a faster, more fault tolerant, and more secured hardware infrastructure for the organization's primary data store.
- Implemented new ticketing, point of sale and membership management system for the Springs Preserve. The new system significantly improves

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- system reliability, efficiency, and customer relationship management.
- Completed 2016 Las Vegas Valley LiDAR Digital Elevation Data Project, vastly upgrading existing elevation models used within organization and by our partner agencies.

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

**2017-18 Performance Objectives**

- Complete the implementation of the Workday Human Capital Management System to consolidate human resource systems, achieve further reduction in manual workload of Human Resources administrative duties, and add new capabilities for recruitment, performance management and compensation.
- Upgrade the organization's payment systems, including cashiering and automated payments, to be EMV (Europay, Mastercard, and Visa) or chip card compliant, a requirement of PCI Security Standards.
- Re-engineer the organization's purchasing system to consolidate all purchasing activity and provide additional capability and controls within the organization's financial system.
- Implement a risk management system that centralizes all claims, OSHA reporting, incident processing, inspections and audits, insurance management, training, and certifications.

- Make numerous enhancements to cybersecurity which include the implementation of additional threat monitoring tools and further data separation to achieve PCI compliance 3.2.

**2016-17 Major Accomplishments**

- Met the higher standards of PCI Data Security Standard (DSS) 3.1 for payment card processing infrastructure, implemented EMV and PCI compliant payment systems for cashiering, customer service agents, and interactive voice response systems. These systems will ensure the security of our customers electronic and credit card payments and ensure compliance with PCI standards.
- Developed a new Conservation System to manage the Water Smart Landscapes rebate incentive program. The new system, named CICADA, improves efficiency through streamlined work flows, automation of manual business processes, and a reduction of costs incurred with maintenance of aging technology of legacy systems.
- A business intelligence and reporting system, SplashBi, was deployed to support Finance's need for customized and adhoc reporting. They system replaced a legacy reporting application that reached end-of-life.
- Continued implementation of Agile methodology throughout Information Technology utilizing both Scrum and Kanban principles to enhance

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interdepartmental collaboration and improve bidirectional customer communications.

- Major improvements were made in Software Security Development Practices, including adoption of a formal security peer code review process that includes training, use of automated security analysis software, and formal review and acceptance before production release.

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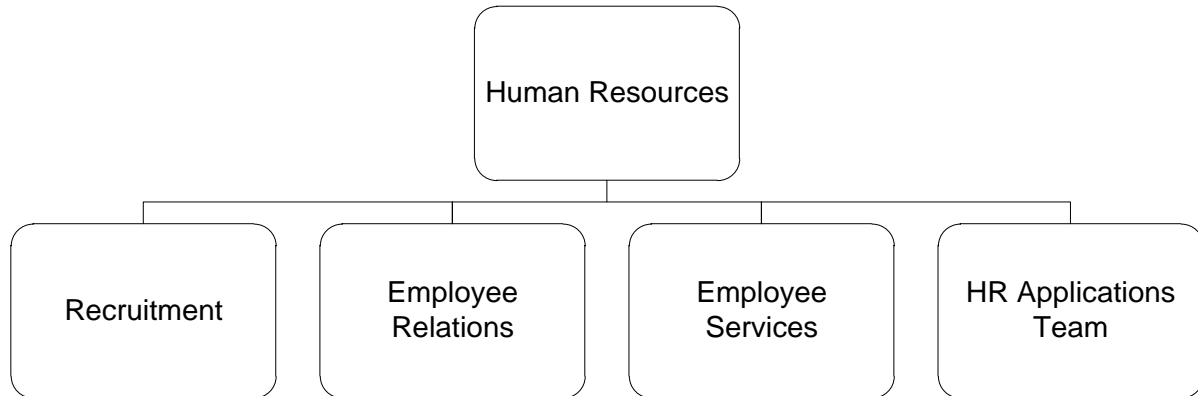


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## HUMAN RESOURCES

Level: 2400

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### Mission

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

### Budget Objectives and Highlights

The Human Resources department continues to monitor budgetary expenditures, while still pursuing its efforts towards diversity, employee development, and productive employee relations.

### Department Description

The Human Resources department is responsible for recruitment and selection; 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 four service groups within the department: Recruitment, Employee Services, Employee Relations and the HR Applications Team.

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### Expenditures

SNWA Uses	Actual 2015-16	Budget 2016-17	Budget 2017-18
Materials & Supplies	\$ -	\$ -	\$ -
Maintenance & Repairs	-	-	-
Rental & Leases	-	-	-
Other Employee Expenses	-	-	-
Other Expenses	-	100,000	100,000
Total Operating Expenses	\$ -	\$ 100,000	\$ 100,000
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 13,893	\$ 643,503	\$ 525,138
<b>Total Department Expenditures</b>	<b>\$ 13,893</b>	<b>\$ 743,503</b>	<b>\$ 625,138</b>
FTE Positions	0.1	4.1	3.5

## Department Performance

**Recruitment.** Provides recruitment and selection services; classification and salary assignment of jobs. This group develops and administers responsive recruitment and selection methods utilizing fair employment practices ensuring employees are properly classified. This group also recruits and staffs the volunteers for the Springs Preserve.

**Employee Relations.** Responsible for light duty and return to work program; administration of collective bargaining agreements; consultation regarding federal, state and local employment laws; and internal mediation services designed to

improve communication and understanding between employees.

**Employee Services.** Responsible for the administration of various employee benefit plans and all employee personal records and payment data. Provides support for HR management programs, activities and processes.

**HR Applications Team.** Responsible for the administration and support of the Human Resources Information System (HRIS) for the organization. This team prepares data in response to requests for employee information; implements organizational changes; provides employee application training.

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**Performance Indicators**  
**Human Resources Department**  
**(Fiscal Year Ending June 30)**

<b>Activity</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Total Hires	106	83	82	239	249
Job Notices	80	59	84	243	453
Written Exams	106	457	149	237	0
Interviews	693	527	420	107	1,029
Job Applications					
Accepted/Processed	1,905	3,021	2,373	5,981	6,947
Job Interest Forms	11,716	8,871	10,467	17,179	13,531
Recruitment				not	not
Letters Sent	6,053	8,513	5,577	available	available
Training Hours	9,111	9,705	8,288	2,070	5,107

**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 hiring; employee development; 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.***

**2017-18 Performance Objectives**

- Coordinate implementation of Workday with a communication plan and training for employees in cooperation with Management Services.
- Implement Workday in September 2017 for Benefits, Compensation, Time Tracking, Payroll and Absence Management.

**2016-17 Major Accomplishments**

- Through an RFI process, selected the new Human Capital Management System (HCMS), Workday, to replace Lawson with Sierra Cedar as the vendor with a September 2017 implementation date.
- Implemented multi-pronged training to include group and individual web based instruction, including supervisor/manager training.

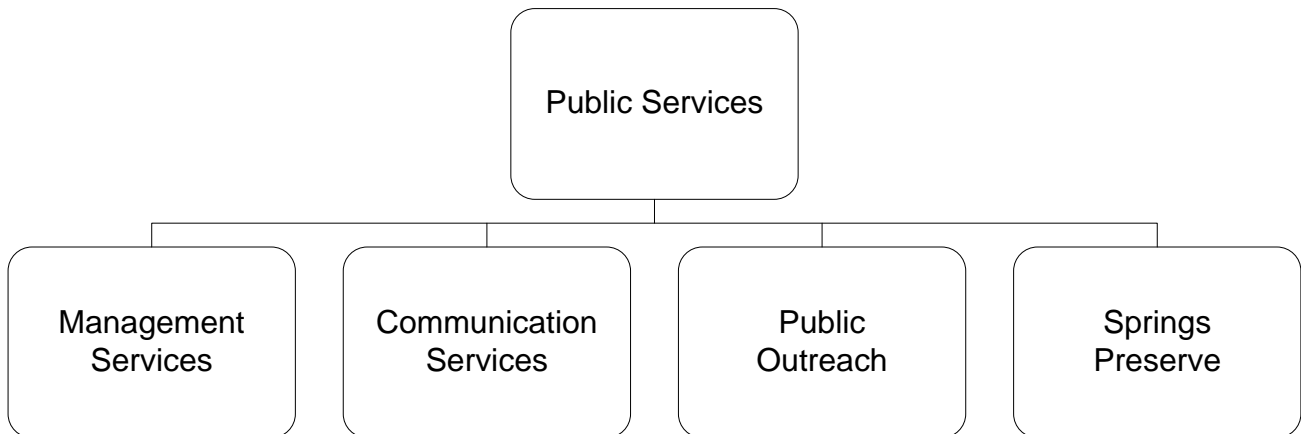
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## PUBLIC SERVICES

Level: 2500



### Mission

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

### Department Description

The department is comprised of four divisions: Management Services; Communication Services; Media Relations and Public Outreach; and the Springs Preserve.

Together, the four divisions work together to provide exceptional customer service to the organization's internal and external customers, and communicate organizational initiatives to various audiences. The Management Services division oversees the organization's government affairs, agenda processes, public participation efforts and

provides expert analysis and support to senior management. Communication Services is responsible for communicating organizational messaging through the development and maintenance of websites, social media platforms, video production, and numerous printed materials such as bill inserts. The Media Relations and Public Outreach division is responsible for providing information to the media and customers. The division also executes special events, including those at the Springs Preserve and the WaterSmart Innovations conference.

The Springs Preserve aims to build community, inspire environmental stewardship, and celebrate the vibrant history of the Las Vegas Valley.

### Budget Objectives and Highlights

The 2017-18 budget remains consistent with the organization's efforts to enhance efficiency and service to internal and external customers.

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### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 174,211	\$ 313,230	\$ 307,400
Maintenance & Repairs	93,499	178,160	237,730
Rental & Leases	-	25,000	26,000
Other Employee Expenses	82,335	188,532	166,089
Other Expenses	4,727,285	6,368,435	6,603,265
<b>Total Operating Expenses</b>	<b>\$ 5,077,330</b>	<b>\$ 7,073,357</b>	<b>\$ 7,340,484</b>
Capital Costs	\$ 19,444	\$ -	\$ -
Payroll Costs	\$ 4,844,006	\$ 4,438,903	\$ 5,947,541
<b>Total Department Expenditures</b>	<b>\$ 9,940,780</b>	<b>\$11,512,260</b>	<b>\$13,288,025</b>
FTE Positions	31.2	30.1	40.3

## Department Performance

In fiscal year 2016-17, the Public Services department continued efforts to provide outstanding service and support of organizational initiatives and priorities:

**Management Services.** Management Services is responsible for board administration, special events, tours, meeting monitoring, presentations, coordination of special processes and offering support to organizational initiatives through a wide variety of activities. Principal achievements over the past fiscal year include completion of the LVVWD Rates and Service Rules Citizens Advisory Committee process, and support

during the 79<sup>th</sup> Nevada State Legislative Session.

**Communication Services.** Communication Services is responsible for developing materials that reach customers through web, social media, television and print. Over the past fiscal year, the organization experienced continued growth in the organization's online presence. The Springs Preserve's Facebook page continued to gain popularity, with more than 52,000 followers and posts that often exceed a reach of 100,000 views. Additionally, LVVWD.com averages more than 1.8 million annual visits, more than 25 percent of which came from a mobile device in 2016. The

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division also was recognized by the Public Relations Society of America (PRSA) Las Vegas Valley Chapter in 2016 for various Springs Preserve campaigns and the LVVWD's internal safety communications program.

**Media Relations and Public Outreach.** The Media Relations and Public Outreach Division is responsible for developing and implementing public awareness and education campaigns that support and advance organizational initiatives. Recent outreach efforts include the launch of multiple public education campaigns to support the LVVWD's infrastructure education initiatives and new exhibit openings at the Springs Preserve. Additionally, the division responded to more than 100 media inquiries from a variety of local, national and international media outlets and news organizations throughout the past year.

**Springs Preserve.** Springs Preserve staff are responsible for overall facility operations and developing programs and events that enhance the visitor experience and Southern Nevada as a community. In fiscal year 2016-17, the Springs Preserve was able to increase volunteer interest, with nearly 500 volunteers providing more than 30,000 hours of service. Also, there were approximately 30,000 students that attended the Preserve through school field trips. In 2016 the Preserve started to compost food waste onsite. Nearly 13,000 pounds of food waste, including Divine Café waste, have gone through this process.

## **Strategic Plan Objectives and Accomplishments**

The Public Services Department is committed to accomplishing the goals and objectives set forth within the organization's Strategic Plan. While the department is not solely responsible for one goal, it works to support each goal through the coordination and administration of support functions.

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

#### **2017-18 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.
- 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.

#### **2016-17 Major Accomplishments**

- The American Water Works Association awarded the River Mountains and Alfred Merritt Smith water treatment plants the Partnership for Safe Water Presidents Award for their dedication in optimizing water treatment operation.

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- Secured \$6,169,538 in grant funding to support water-related initiatives.
- Prepared a Capital Improvement Plan to identify capital projects over the next 10 years.
- Assisted 6 well users to connect to the municipal water supply and responded to approximately 501 phone inquiries on the Groundwater Information Line.

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

**2017-18 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.
- Monitor other organizations and industries to identify innovations, best practices and ways to improve the customer experience.

**2016-17 Major Accomplishments**

- In 2016, 25 percent of visitors to the LVVWD website accessed it through a mobile device.

- Public Services, in conjunction with Information Technologies, launched a new “Find Your Watering Group” online app in Spanish. “AjustaTuReloj.com” launched in September 2016 and provides watering group information in Spanish.
- The Springs Preserve launched a Spanish language social media campaign, which included a Facebook page.
- Made enhancements to the Springs Preserve mobile application, enabling visitors to navigate the property, purchase tickets and stay current on upcoming attractions and classes.

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

**2017-18 Performance Objectives**

- Enhance understanding of climate change impacts among ourselves and our stakeholders.
- Conduct long-term water resources and facilities planning to ensure adequate resources are available when needed.
- Champion innovative water efficiency initiatives to maximize beneficial use of resources.

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- Incorporate sustainable best practices into organizational initiatives and inspire positive change.

**2016-17 Major Accomplishments**

- Continued support of the Sustainability Cross-Departmental Team (CDT) to examine internal processes and develop sustainable practices within the organization.
- Updated the LVVWD Service Rules to reflect new conservation resolutions, specifically the prohibition of watering on Sundays during the summer watering schedule.

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

**2017-18 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.
- Establish and utilize benchmarks to explore new opportunities for improved efficiencies.
- Formulate risk assessments and develop alternatives for expenditure decisions.

**2016-17 Major Accomplishments**

- Coordinated the LVVWD's Advisory

Committee that recommended a comprehensive funding strategy to meet the LVVWD's capital needs and reserve targets set forth in the Reserve policy.

- Applied for and received a \$15 million loan from the Nevada State Revolving Fund loan to fund system improvements outlined in the LVVWD's Asset Management Plan.
- Successfully coordinated several Springs Preserve special events to sell-out crowds, including Ice Cream Festival, Brews & Blues, Grapes & Hops, Haunted Harvest, Día de Muertos, and Holiday Express.

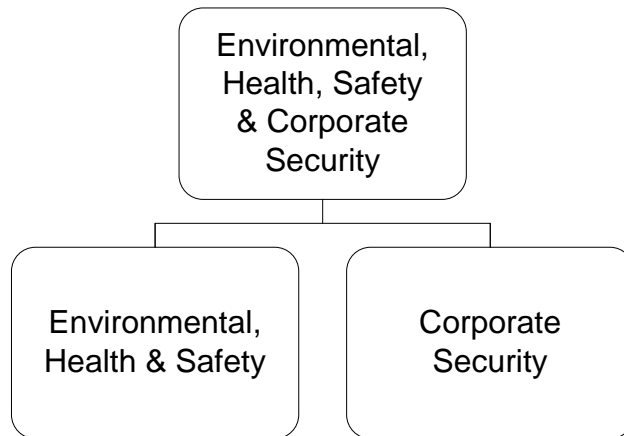
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**ENVIRONMENTAL, HEALTH, SAFETY &  
CORPORATE SECURITY**  
**Level: 2700**

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### **Mission Statement**

To excel in providing a safe and secure environment for our employees, customers and the community.

### **Department Description**

The Environmental, Health, Safety & Corporate Security (EHSCS) department works to ensure organizational compliance with all applicable statutes; maintain the safety and security of our employees, facilities and customers, as well as a high performance environmental, health and safety (EHS) culture; and develop strategies and programs to eliminate or mitigate risk and cost exposure.

### **Budget Objectives and Highlights**

The 2017-18 EHSCS budget contains the funding necessary to support the safety and security of our organization's workforce, customers and facilities. Our departmental strategic planning efforts have allowed us to streamline processes to reduce costs.

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### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 19,882	\$ -	\$ -
Other Employee Expenses	346	-	-
Other Expenses	278,723	275,000	320,000
Total Operating Expenses	\$ 298,951	\$ 275,000	\$ 320,000
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 1,981,298	\$ 2,169,245	\$ 2,631,566
<b>Total Department Expenditures</b>	<b>\$ 2,280,249</b>	<b>\$ 2,444,245</b>	<b>\$ 2,951,566</b>
FTE Positions	17.1	16.8	18.6

## Department Performance

### Environmental, Health and Safety Division.

The EHS division is responsible for permitting and compliance with federal, state and local agency environmental regulations regarding pollution control (including air pollution, water pollution and land disturbances), and for environmental permitting and compliance reporting for operations and maintenance. Proactive development, implementation and administration of environmental management systems and process safety programs are also responsibilities of this team. The division develops and publishes safety procedures, ensuring compliance with Occupational Safety and Health Administration (OSHA) and state regulations, and employs an aggressive accident prevention program that includes processes for hazard identification and

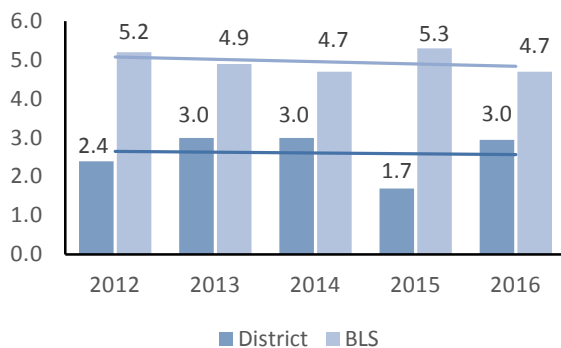
abatement. Further, EHS team members investigate all on-the-job accidents and injuries and develop written investigation reports that include the root cause and corrective actions to mitigate recurrence. EHS manages an extensive education and training curriculum to ensure workers are trained in programs such as water discharges, chemical spill prevention, lockout/tagout, confined space entry, aerial lift and forklift operations, and Commercial Driver Licenses. The division conducts monthly meetings with the EHS Steering Committee, comprised of employees from various departments and labor management representatives. The health discipline manages the Radiation Safety Program as well as the Asbestos, Lead, Respiratory Protection and Hearing Conservation programs for the organization.



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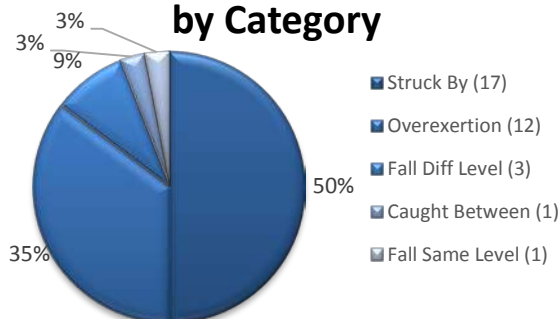
EHS tracks recordable injuries and illnesses annually and compares them to the Bureau of Labor Statistics (BLS) annual averages for similar industries. The incidence rate of injuries and illnesses is computed using the following formula:  $(\# \text{ injuries/illnesses} \times 200,000) / \text{Employee hours worked} = \text{incidence rate}$ .

### Recordable Injury Rates



A total of 34 recordable injuries occurred in 2016. The 2016 severity rate is nearly half the 2015 rate: 12.44 vs. 24.74; thus, the recordable injuries sustained in 2016 were less severe than the previous year.

### Recordable Injuries by Category

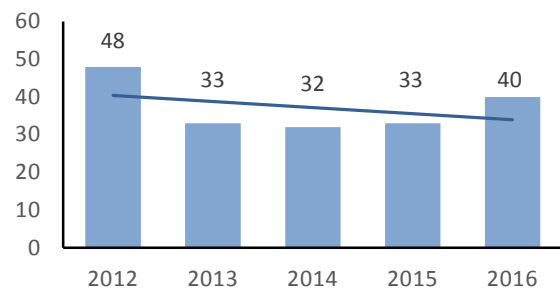


Of the 34 recordable injuries incurred in 2016, 17 are categorized as “struck by” and resulted from employees being hit by equipment and other objects while on the job. “Overexertion”

comprises the next highest category of recordable injuries, with 12 reports stemming from employees pushing, pulling or lifting tools and equipment.

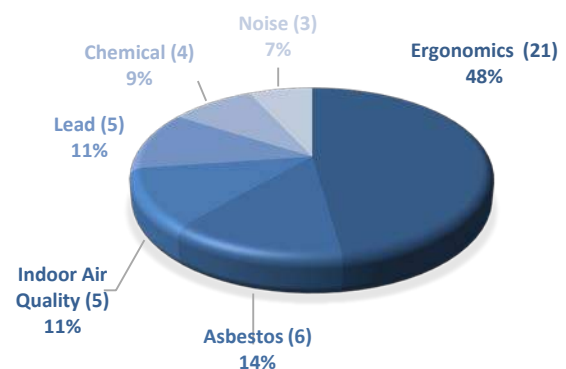
Overall, the District experienced 40 at-fault vehicle accidents in 2016. There was a decrease in Category II (>\$5,000) accidents in 2016, and a reduction of \$7,000 in repair costs, which indicates the accidents sustained were less severe than the previous year.

### Vehicle Accidents



EHS staff conducted 44 health assessments in 2016, 28 of which were required by regulations and 16 (predominantly related to ergonomics issues) that were initiated by employees.

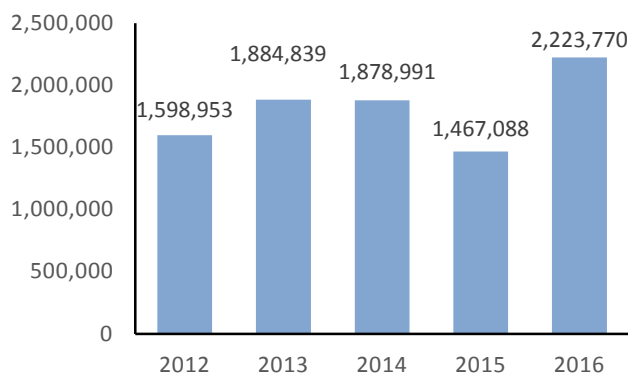
### 2016 Health Assessments



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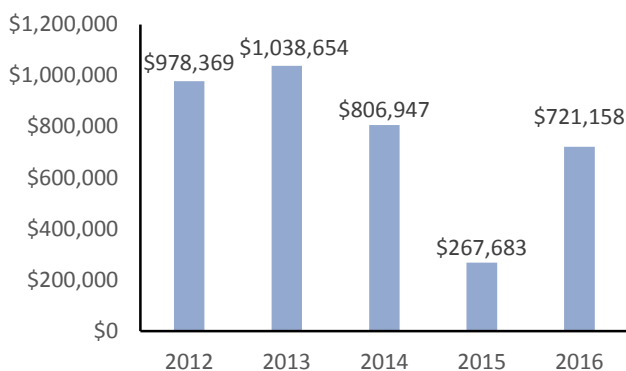
The District recycled a combined total of 2,223,770 pounds of materials in 2016. The increase in recycled materials can be attributed to the recycling of copper in 2016 and capturing the weights of vehicles sent to auction.

**Total Pounds Recycled  
Year to Year**



The total revenue for 2016 was \$721,158 (scrap = \$207,659, auctions = \$19,784, vehicles = \$493,715).

**Total Revenue Year to Year**



**Corporate Security Division.** The mission of the Corporate Security division is to provide security services on a system-wide basis assuring the protection of people, property, facilities, water treatment and delivery systems. Corporate Security is responsible for

the protection of the water supply, employees, and customers 24 hours every day. Corporate Security staff and officers provide fire protection equipment inspections, assist with customer parking, escort customers and visitors to areas where they can conduct their business, provide information assistance, monitor access to restricted areas, and provide access to facilities and monitoring of vendors' visits during and after business hours. Security officers patrol and protect all LVVWD/SNWA properties by responding to intrusion alarms at outlying properties and patrolling reservoir and pumping station sites. Physical security networks and systems (e.g., electronic access control systems, security camera systems, alarms, and locking systems) are in place and monitored 24 hours daily by security officers. Corporate Security staffs and operates a 24/7 "Security Center" for central response to alarms, calls for assistance, accidents, video surveillance, and communication. Corporate Security also provides on-scene incident command services in emergency situations, and has formed partnerships with federal, state and local law enforcement authorities and other utilities/infrastructures in a collaborative effort to protect against malicious acts toward people, sites and systems.

### Strategic Plan Objectives and Accomplishments

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

#### 2017-18 Performance Objectives

- Operate the Security Center,

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monitoring organizational security systems, and continue to implement automated security systems to improve the protection of facilities.

- Expand the use of security system technologies to enhance efficiency.
- Expand the use of card activated access control.
- Review maintenance and services contracts to ensure EHS operational compliance.
- Train key employees and conduct drills on the LVVWD/SNWA combined Emergency Response Plan (ERP).
- Explore new technologies and methods of utilizing the security surveillance system.
- Continue partnership with the Department of Homeland Security and the Southern Nevada Counter-Terrorism Center to prepare for potential threats to facilities or the water industry.
- Conduct weekend/after-hours spot audits of industrialized work activities supporting water treatment, water quality, water distribution or other activities.
- Complete four comprehensive audits of departments involved in high-hazard activities to measure regulatory compliance.
- Review and update the EHS Manual and all internal EHS procedures.
- Maintain a formalized training schedule for all EHS instructor-led courses.
- Benchmark accident/injury standards to comparable industries via BLS rates.
- Obtain all required operational water pollution control permits and continually monitor water discharge

parameters to reduce pollutants discharged.

**2016-17 Major Accomplishments**

- Continued supporting and promoting the Department of Homeland Security's national "If You See Something, Say Something™" campaign.
- Developed a security system utilizing motion detection and camera analytics to help protect new facilities at the Springs Preserve.
- Converted Fayle Reservoir to the new P2000 card reader system.
- Installed an electronic access control system in the HR file room.
- Implemented a new locking system pilot program at remote locations.
- Continued testing a solar-powered camera program for remote facilities.
- Instituted the LobbyGuard visitor badge system for improved accountability and tracking of visitors.
- Installed shepherd hooks and anti-climb mesh on perimeter wall near HR.
- Completed 96 documented spot audits in 2016 and five audits that included comprehensive program management review.
- Reviewed and updated the EHS Manual and administrative policies 3 and 17 during the 2016 off-site meeting.
- Conducted 206 investigations related to recordable injuries, at-fault vehicle accidents, at-fault property damage incidents, near-misses, chemical spills and first-aid events, and recommended corrective actions as appropriate to reduce the chance of

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recurrence.

- Conducted 41 instructor-led training courses, which included 2,161 participants and 4,190 training hours.
- Achieved a District incidence rate of 3.0, compared to the BLS rate of 4.7, extending the District's yearslong history of rates falling below BLS rates.
- Replaced the National Pollution Discharge Elimination System water discharge permit issued to the Alfred Merritt Smith Water Treatment Facility with two De Minimis discharge permits.

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

**2017-18 Performance Objectives**

- Explore and test new security technology and systems.
- Identify additional opportunities for security service and collaboration with internal departments.
- Attend briefings and meetings, and support groups such as the Utility Pipeline and Coordinating Group, InfraGard, Southern Nevada Counter-Terrorism Center, and Department of Homeland Security.
- Provide evaluation forms for instructor-led courses to assess customer satisfaction.
- Participate in local association meetings to gather information on best management practices to support the Safety Management System, and adopt and implement proven work methods.
- Participate in internal and external committees or groups to improve

communication and enhance customer service in 2017-18.

- Seek professional training opportunities to augment EHS skills and knowledge.

**2016-17 Major Accomplishments**

- Collected student evaluation forms after each EHS instructor-led course to improve future course curriculums.
- Participated in local professional organizational meetings, national professional seminars and conferences specific to water treatment and delivery, with EHS staff presenting at several events.
- Represented EHS in all department safety action teams, the EHS Steering Committee and several CDTs throughout the District, including the northern ranches and sustainability.
- Updated electronic materials on the Hydroweb to ensure that LVVWD employees have access to useful safety and health literature, information and videos for training.
- Participated in continuing EHS education, including webinars, local training opportunities and online training to assist in professional development and maintenance of professional certifications.
- Updated all evacuation procedures on the Hydroweb and conducted emergency evacuation drills at all facilities.
- Increased employee awareness of potentially dangerous situations and spoke at multiple department and division meetings on security issues.
- Attended a Basic Collision

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Investigation class to improve skills in responding to company vehicle accidents.

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

**2017-18 Performance Objectives**

- Identify non-compliance items through organization-wide collaboration.
- Prepare and submit environmental reports to regulatory agencies.
- Review current recycling and waste streams at manned facilities to identify new recycling opportunities.

**2016-17 Major Accomplishments**

- Reduced paper records with the implementation of the LobbyGuard visitor badge system and the use of Panasonic FZ-G1 tablets for officers to complete reports and maintain logs.
- Continued testing a solar-powered live video camera system for possible use at rural facilities.
- Generated a District-wide combined total of 5,825 pounds of hazardous waste—which translates to an 89 percent decrease from the previous year—at a cost of \$17,354; the significant decline is attributed to the continued focus on reducing pollution through reduced chemical use and waste, and substituting for more environmentally preferable chemicals.
- Safely disposed of more than 120 pounds of the District's unusable

pesticides through the Nevada Department of Agriculture's Pesticide Disposal Program.

- Recycled a combined total of 2,223,770 pounds of District materials for a total revenue of \$721,158 (scrap = \$207,659, auctions = \$19,784, vehicles = \$493,715).

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

**2017-18 Performance Objectives**

- Streamline the records inventory and utilize electronic documentation capabilities and accessibility.
- Experiment with new security technologies such as Sensera cameras, implement controls such as internal motion detection through the P2000 system, and install Wallace gates.
- Develop innovative solutions for security vulnerabilities.
- Work with IT and Risk Management to implement an automated information system (Origami).
- Evaluate mobile technologies to improve EHS efficiency.

**2016-17 Major Accomplishments**

- Utilized the security blotter to track trends and patterns in theft, vandalism and suspicious activity to be proactive on illegal activities.
- Developed and implemented the automated Safety Management System for recordkeeping.
- Assisted with the purchase of two additional EPA Tier 4 cleaner burning

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diesel fueled engines that will emit 40 percent less air pollution than the previous engines.

- Obtained a blanket Dust Control Permit with the Clark County Department of Air Quality to cover various dust emitting maintenance activities.

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

**2017-18 Performance Objectives**

- Identify new regulations and policy changes and collaborate with other pertinent agencies.
- Assess all security processes, priorities and resource utilization to improve efficiency.
- Monitor progress on ISO 45001 and evaluate the program for possible implementation at the District.

**2016-17 Major Accomplishments**

- Adjusted security priorities and utilized technology assistance to absorb additional facilities at the Springs Preserve without increasing required labor.
- Adjusted security supervisors' schedules to provide better leadership during weekends and after hours.
- Adjusted instructor-led EHS training schedule to ensure critical safety training is offered more frequently.
- Reduced volume of air monitoring equipment in operation, at an annual cost savings of \$17,000.

- Safely disposed of more than 120 pounds of unusable pesticides through the Nevada Department of Agriculture's Pesticide Disposal Program, saving the District \$2,500 in disposal costs.

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

**2017-18 Performance Objectives**

- Engage in future construction and maintenance contracts to ensure security issues and concerns are addressed at the earliest stages.
- Develop a comprehensive security manual for District employees.
- Conduct a monthly division staff meeting to update EHS employees on all major projects and communicate status changes and challenges.
- Conduct instructor-led EHS courses for District employees.
- Provide EHS information updates to the District through electronic management advisory and safety alert messages, Pipeline and Hydroweb articles, etc.
- Provide diverse learning opportunities in all department disciplines.
- Conduct EHS annual off-site meeting to discuss future initiatives and to evaluate and update EHS programs, policies and procedures.
- Recognize employees/teams for their unique talents and accomplishments.
- Disseminate an annual EHS trend report.

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**2016-17 Major Accomplishments**

- Participated in several professional development courses while continually searching for and participating in relevant low- or no-cost training opportunities.
- Achieved a 2016 Safety Stand Down Day participation rate of over 300 employees, and visitation rate of over 450 employees to the EHSCS booth at the organization's annual Employee Expo.
- Completed the annual EHS trend report which highlights major EHS accomplishments throughout 2016.
- Received zero OSHA citations in 2016.
- Reviewed and updated the safety awards program.
- Received 17 Safety Action Requests, each of which were tracked and monitored to ensure corrective actions were implemented.
- Utilized the monthly security report and blotter system to track suspicious activity and behavior to adjust security patrols and staff to be proactive on potential illegal activities and act as deterrents.
- Continued 100 percent ID badge checks at all entrance points to facilities, maintaining tighter control on access points.
- Assisted with the major move that Customer Care made to the Molasky Corporate Center.

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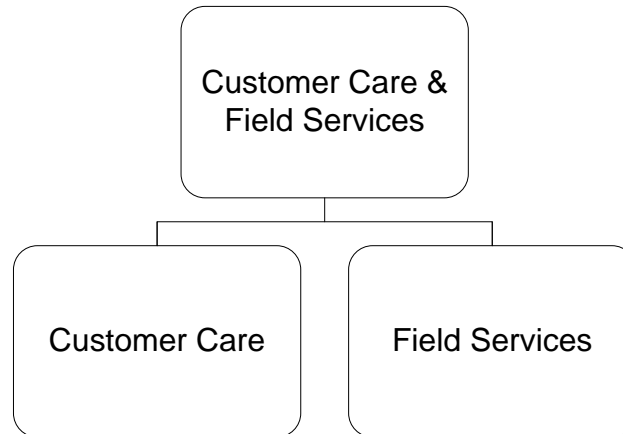


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## CUSTOMER CARE AND FIELD SERVICES

Level: 2800

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### Mission

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

### Department Description

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

### Budget Objectives and Highlights

The 2017-18 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 in order to provide the optimum customer experience.

**Customer Care.** Continuing efforts to reengineer business processes around the meter to cash philosophy. This should minimize field impacts and expand proactive customer notification.

**Field Services.** The 2017-18 Budget Plan contains funding for a read verification program, large meter maintenance, advanced metering infrastructure, and operational costs.

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### Expenditures

SNWA Uses	Actual 2015-16	Budget 2016-17	Budget 2017-18
Materials & Supplies	\$ 3,570	\$ 6,000	\$ 6,000
Maintenance & Repairs	3,264	3,500	3,500
Total Operating Expenses	\$ 6,834	\$ 9,500	\$ 9,500
Capital Costs	\$ 4,007	\$ -	\$ -
Payroll Costs	\$ 296,599	\$ 389,359	\$ 411,363
<b>Total Department Expenditures</b>	<b>\$ 307,441</b>	<b>\$ 398,859</b>	<b>\$ 420,863</b>
FTE Positions	1.7	3.0	2.9

## Department Performance

In 2016-17, the Customer Care and Field Services department continued to refine business processes and advance technology in service to the Las Vegas Valley Water District's (LVVWD) customers. The department focused efforts on maximizing the customer experience through four strategic goals: Delivering an Outstanding Customer Experience; Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship for our Environment; Develop Innovative and Sustainable Solutions through Research and Technology; 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—

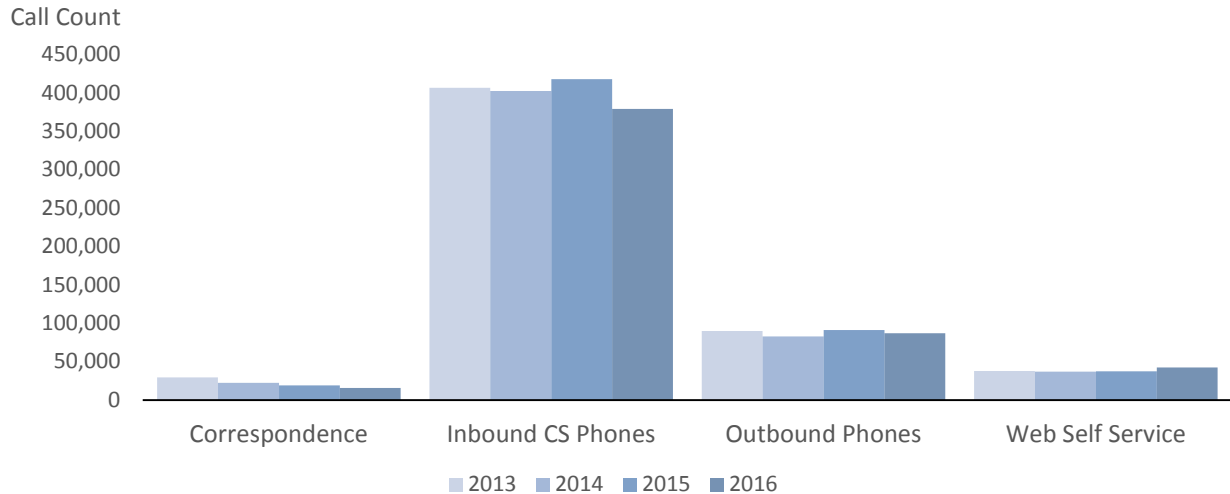
supporting approximately 386,000 active services. The division manages the customer care phones, web requests, correspondence and walk-in requests. Customer Care handles payments, pay arrangements, collection courtesy calls, delinquent account processing, high consumption requests, water-waste complaints, 24/7 emergency phone coverage, along with providing monthly billing to the LVVWD's customers.

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

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

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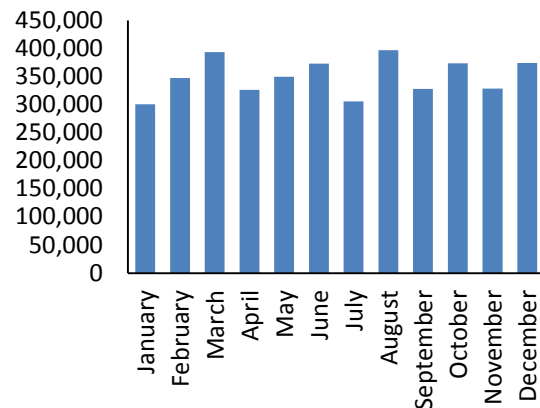
### Customer Care Phone and Correspondence Volume



Advanced metering technology and proactive outreach has 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 large services, developer accounts, adjustments, investigations, quality control, supplemental, fire protection services, consumption notifications and mobile meters.

The following chart depicts the total number of bills generated monthly in 2016.

#### Bills Generated 2016

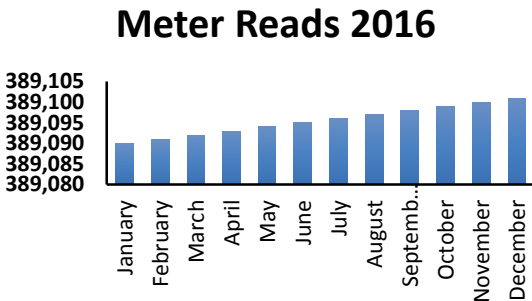


**Field Services:** The Field Services division is responsible for reading and maintaining meters for approximately 386,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle Canyon, Laughlin and Jean. The division also

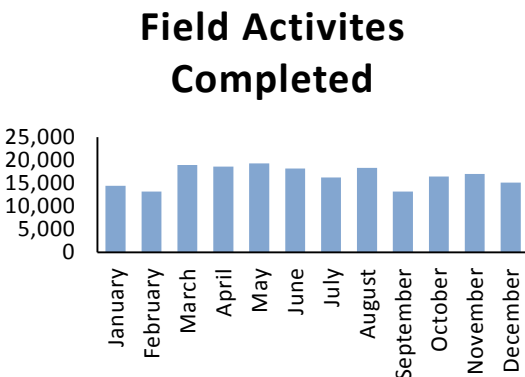
responds to leak investigations, low pressure, high consumption, water waste inquiries, billing requests, and turn ons/shut offs.

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The 2016 Meter Reads chart illustrates the number of meter reads processed by Field Services in 2016 (Over 4.6 million total).



The following chart illustrates the number of work orders processed by Field Services in 2016 (Over 200,000 processed).



## Strategic Plan Objectives and Accomplishments

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

### 2017-18 Performance Objectives

- Continued assessment of customer satisfaction, establish benchmarks and identify all avenues for enhancement.
- Establish culture of continuous

improvement of processes and practices through the use of 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 in order to enhance the customer experience, increase efficiencies, create multi-channel platform capabilities as well as eliminate external vendor dependencies.
- Identify and assess the viability of additional technologies aimed at the promotion of efficiencies, reduction of appurtenant expenses as well as informational integration.
- Provide continuous training and development to ensure a quality customer service experience.
- Communicate with and receive continuous feedback from employees on organizational policy changes and procedural/process improvements.
- Monitor and collaborate with other organizations/industries to identify innovations, best practices and ways to improve the customer experience.

- Enhance our quality program for Field Services.
- Continue read verification project for all meters 2" and smaller.
- Enhancement of the Quality Assurance initiatives to improve call assessment, incorporate more feedback and interactional based

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- development.
- Assess customer satisfaction results against overall quality outcomes for actionable improvement.
- Continue to improve customer care technologies, tools, training and implementation.
- Conduct roundtables and focus groups focused on employee engagement and quality of life in the workplace.

**2016-17 Major Accomplishments**

- Achieved 48 percent success rate with added administrative process for resolving severe arrears through proactive notification.
- Outbound collection calls yielded \$2.3 mm cost avoidance in truck rolls.
- Improved internal resources within the call center resulted in more than 15,825 calls thus improving the customer experience.
- Dedicated 1900 hours of training throughout 2016 to consistently provide optimum customer experience.
- Deployed business processes and training critical to annual PCI compliance standards.
- Improved safety measures for securing employees in the event of an evacuation emergency.
- Assisted 1,471 customers in the field with consumption related questions resulting in a 49 percent reduction from 2015.
- Performed 69 customer escalation field meets 2016.

- Added additional training to staff for water waste compliance to assist in educating our customers.

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

**2017-18 Performance Objectives**

- Reduce and dispose of waste responsibly.
- Maintain proper disposal of scrap and waste products, especially lithium batteries.
- Continue to support organizational water conservation efforts through improved technology, customer and interdepartmental communication.

**2016-2017 Major Accomplishments**

- Disposed of toxic waste material in compliance with OSHA regulations.
- Recycled tons of cardboard boxes through Opportunity Village, a not-for-profit organization.
- Mailed 6,062 water waste letters in 2016.
- Completed 5,911 Water Waste investigations resulting in \$51,000 in fees assessed.
- Field Services participated in filming two water waste segments, a Water Works Wednesday episode and hosted two media related site visits
- Large Services completed over 830 preventative maintenance work orders.

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- After Hours / Dispatch staff processed over 18,400 work tasks and handled over 10,400 Springs Preserve related inquiries in 2016.

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

**2017-18 Performance Objectives**

- Begin to collect event and more refined interval data from the meter reading system to reduce truck rolls and increase customer service.
- Develop and strengthen global partnerships to leverage resources and advance innovations in Customer Service.
- Continued identification, assessment and implementation of customer care technologies, tools and resources.
- Upgrade and enhance various call center technologies including but not limited to: IVR with increased self-service options and flexible design, a streamlined and integrated agent interface and more robust reporting tools.
- Integrate hourly interval data into business processes.
- Improve technology solutions for revenue protection and greater collection gains.
- Enhance outreach through modernized trickle notification technology.
- Continue to educate customers through field meets and courtesy letters.

**2016-17 Major Accomplishments**

- Lobby payments and transactions continue to decline with successful expanded payment and self-service options, reducing lobby traffic and carbon footprint.
- Implementation and training of the Itron Analytic software.
- Implemented and trained a new Web Self Service user interface that meets ADA compliance standards.
- Implemented Record on Demand technology to achieve compliance with the PCI DSS.
- Host and participate in education and technical venues for business advancement throughout 2016.

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

**2017-18 Performance Objectives**

- Provide and seek timely feedback on individual, team and departmental performance to enhance collaboration, accountability and excellence.
- Continue Read Verification Program to resolve any discrepancies from AMR to meter reads.
- Ensure timely and consistent communication with team to provide feedback and solicit recommendations.
- Maintain weekly communications to keep the team informed of business impacts and process improvements.

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- Continuous communication forum between workgroups to address interdepartmental challenges and business impacts.
- Share service level results across workgroups.
- Leverage the existing resources for expert training classes to employee skill development.

**2016-17 Major Accomplishments**

- Completed service verification project with verified reads on all services
- Increased Quality Monitoring to enhance the functional capabilities of the individual, team and departmental performance.
- Enhanced the Employee Performance Development System (EPDS) for all front-line employees.
- Re-engineered the Customer Care Quality Monitoring Program to be in alignment with industry standards and in furtherance of the District's strategic goals.
- Utilized various subject matter experts throughout the department to support training initiatives.

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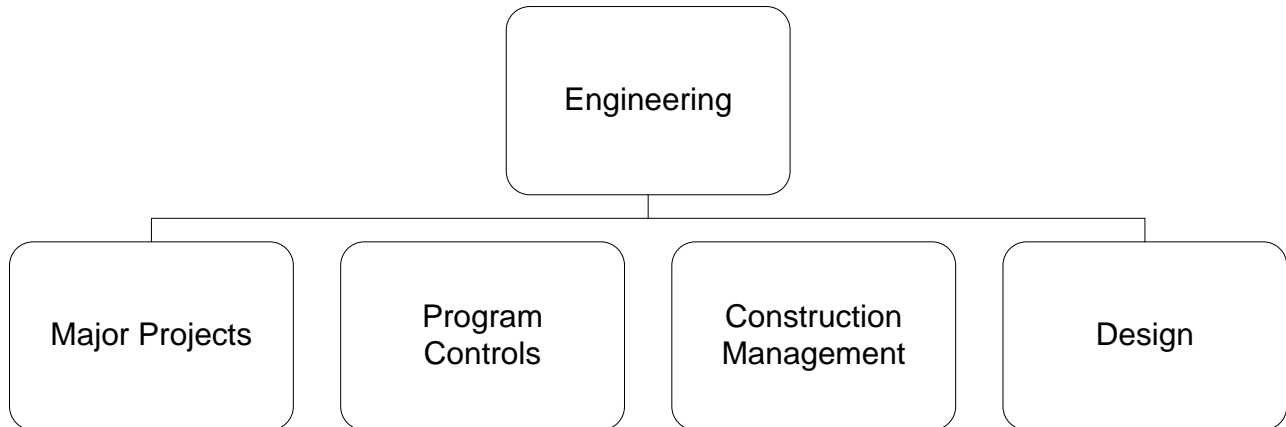


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## ENGINEERING

Level: 3400

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### Mission

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

### Department Description

The Engineering department is responsible for implementing capital improvements projects for both the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA).

The LVVWD's capital projects are currently focused on the repair, rehabilitation, and replacement of aging pipelines, reservoirs, pumping stations, and related components within the large water distribution system spread across the vast Las Vegas Valley and in nearby rural areas. These projects are described in the LVVWD Capital Improvements Plan (LVVWD CIP). In

coordination with the Operations and Infrastructure Management departments, Engineering provides the design and construction services for many of the larger LVVWD 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 the SNWA's purveyor members in the Las Vegas Valley. Improvement projects for the SNWS are identified in the Major Construction and Capital Plan (MCCP). The MCCP is the vehicle for authorizing 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 and Infrastructure Management departments, Engineering provides the design and construction services for many of the larger MCCP projects.

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

Using its project tracking systems, construction management, permitting surveying and rights-of-way resources, Engineering offers support services to other departments for their operating and capital projects.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 300	\$ 53,050	\$ 40,554
Maintenance & Repairs	189,141	705,000	713,000
Other Employee Expenses	2,331	59,475	55,950
Other Expenses	800,910	250,150	218,750
Total Operating Expenses	\$ 992,681	\$ 1,067,675	\$ 1,028,254
Capital Costs	\$ 106,533,837	\$ 154,415,162	\$ 135,783,762
Payroll Costs	\$ 5,418,876	\$ 4,666,332	\$ 4,857,037
<b>Total Department Expenditures</b>	<b>\$ 112,945,395</b>	<b>\$ 160,149,169</b>	<b>\$ 141,669,054</b>
FTE Positions	31.6	26.6	24.8

### Budget Objectives and Highlights

The 2017-18 Engineering department budget demonstrates significant ongoing commitment for the major projects associated with Lake Mead Intake No. 3 and the Wash CIP. In addition, a major portion of the department staff will continue to be focused on many projects directly supporting the Operations and Infrastructure Management departments in preserving the

facilities needed to assure a reliable, quality water supply for water customers.

The Intake No. 3 tunnel and intake project was completed and became operational in 2015. This achieved the goal of access to better quality water deep in Lake Mead, but does not, on its own, protect against lost system capacity if lake levels drop below the operational levels of the two existing intake pumping stations. Accordingly, in 2015 the SNWA launched design and construction

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activities for a Low Lake Level Pumping Station (L3PS) that would function at levels as deep as possible for the new intake tunnel and preserve system capacity well below the operational levels of the existing intakes. Capital expenditures for the new pumping station will continue through project completion in 2020.

Construction of the Tropicana Weir began this fiscal year and is scheduled for completion in July 2018. Construction of the Historic Lateral Weir Expansion and Sunrise Mountain Weir is anticipated to begin fall of 2017.

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

## **Department Performance**

The Engineering department is organized around five functional areas.

**Major Projects.** Teams are organized, as needed, to successfully manage completion of major capital projects of the LVVWD and the SNWA capital plans. Currently, there are two active major project efforts, one for the L3PS and one for the Las Vegas Wash, and staff are dedicated to those project activities.

**Design.** The design team is comprised of professional engineers, technicians, permit coordinators, and support staff who work with operators, planners and asset managers in

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

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

**Program Controls.** A technical team organized to assist with the implementation and management of the LVVWD and SNWA capital programs through the establishment and monitoring of scheduling and cost controls. This team provides cost and schedule reporting along with cost and schedule analysis of capital projects. This team makes use of computer-based tools which compile relevant project data from

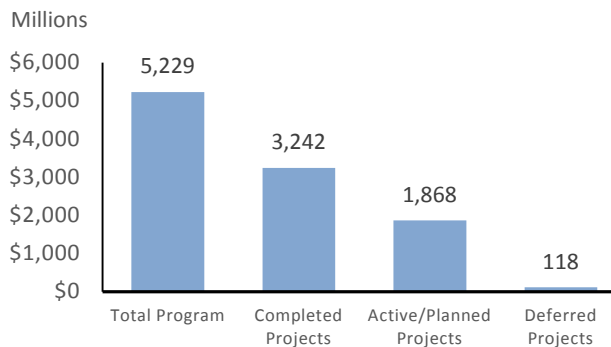
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various departments. This team also performs a vital function in collecting projected capital expenditures as a tool for forecasting future funding requirements and coordinates closely with the Finance department.

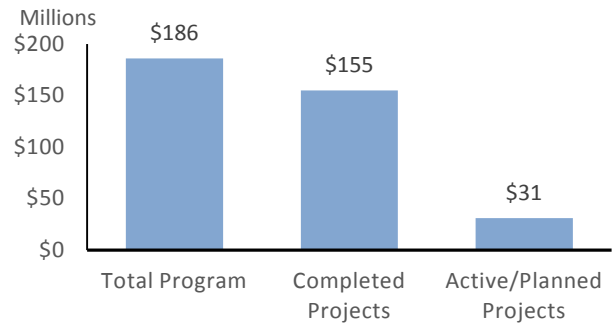
**Survey, Property Management and Infrastructure Mapping Services.** Professional staff within the department support design and construction of infrastructure by providing land surveying, water rights surveying, line location, right of way acquisition and property management and as-built record drawings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

The following charts compare completed projects to active and planned projects for each of the SNWA's capital plans and give perspective for the magnitude of the capital plan activities.

**Major Construction & Capital Plan Status**  
**As of March 2017**

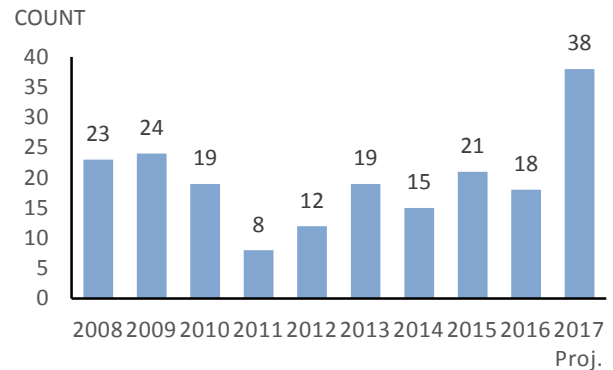


**Las Vegas Wash Capital Improvements**  
**As of March 2017**



The chart below (Completed LVVWD Construction Projects) represents the number of the LVVWD construction projects completed by Engineering since 2008 and the number expected to be completed in 2016.

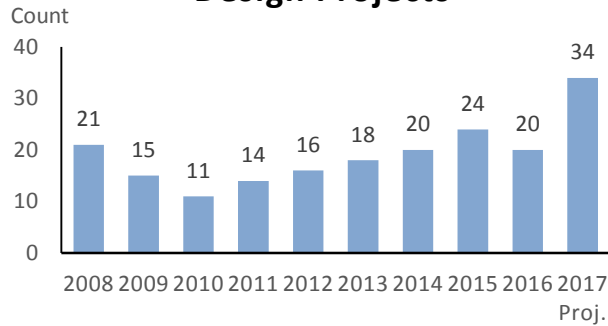
**Completed LVVWD Construction Contracts**



The following chart (Completed LVVWD Design Projects) illustrates the number of projects Engineering has designed since 2008 to support the infrastructure management requirements of the LVVWD.

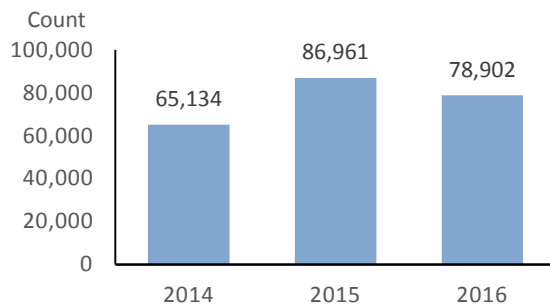
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**Completed LVVWD  
Design Projects**



The chart below 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 three years. The chart mirrors the increase in development activities experienced in the service area over this time.

**Number of GIS Project-  
Related Feature Edits**



**Strategic Plan Objectives and  
Accomplishments**

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

**2017-18 Performance Objectives**

- Complete design and construction of projects in accordance with forecasted capital budgets, the cost estimates and schedules identified in the capital plans.
- Complete the underground and discharge aqueducts construction for the L3PS.
- Provide the Infrastructure Management and Operations departments with a high level of technical services and capital project support.
- Consolidate project tracking applications and align work processes to improve staff efficiency.
- Improve methods for direct electronic capture in the field of attributes of constructed water facilities.

**2016-17 Major Accomplishments**

- Made significant progress on the underground portion and completed the design for the above-ground construction for the L3PS.
- Completed the discharge aqueducts connection work within the critical treatment plant outages.
- Completed design of water system facilities necessary for development in Garnet Valley.
- Completed construction of 18 LVVWD projects valued at \$17 million related to improvement of the LVVWD's facilities, including the \$12.3 million Fayle Reservoir Rehabilitation project.
- Awarded 17 LVVWD construction

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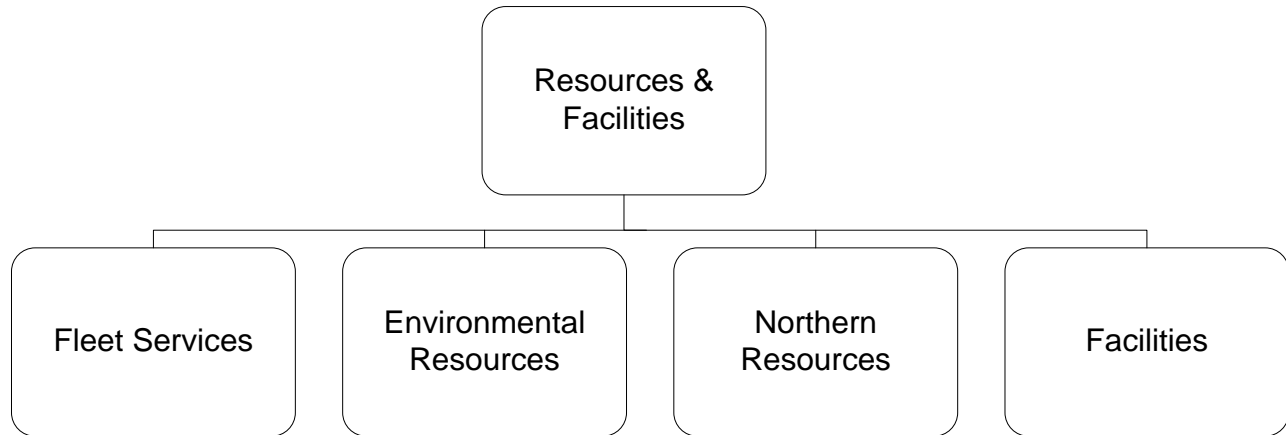
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contracts valued at \$12.6 million related to improvement of the LVVWD's facilities.

- Awarded one weir construction contract valued at \$8.95 million related to the Las Vegas Wash Capital Improvements Plan.
- Awarded one SNWA construction contract valued at \$3.07 million related to the Filter Demonstration Project at AMSWTF.
- Performed inspections on approximately 550 different projects, involving over 42,200 individual inspection actions.
- Implemented new enterprise-wide budgeting tools for capital projects.

## RESOURCES & FACILITIES

Level: 3600



### Mission

The mission of the Resources & Facilities department is to sustainably manage the Southern Nevada Water Authority's (SNWA) land and environmental resources through sound policy, applied science and advanced technology; and, to sustainably manage the SNWA and the Las Vegas Valley Water District (LVVWD) facilities and fleet assets through cost effective strategies supporting operations and organizational business.

### Department Description

The Resources & Facilities department consists of four divisions that include the Fleet Services division, Facilities division, Northern Resources division and Environmental Resource division. Additional responsibilities assigned to the department include, climate change science and policy analysis, and leadership in organizational sustainability.

### Budget Objectives and Highlights

The 2017-18 Resources & Facilities department budget contains funding for a wide-range of initiatives discussed below.

**Facilities.** The Facilities division budget contains \$4.7 million in operational funding for the repair, maintenance, cleaning and servicing of all the LVVWD and the SNWA buildings and facilities, including landscape and roadways.

**Fleet Services.** The Fleet Services division budget contains approximately \$8.8 million for new & replacement vehicles and related equipment having reached their end of life cycle. An additional \$305,000 is for new GPS equipment for all fleet vehicles. This equipment will be used to better manage the fleet as well as reduce fuel usage and enhance safety.

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**Environmental Resources.** The Environmental Resources division budget contains \$2.4 million in operational funding to continue environmental and biological planning, compliance and resource management activities for the SNWA. The division will continue to provide environmental support and ensure regulatory compliance for the Las Vegas Wash, Northern Resources, Water Resources, Engineering, and other departments. The division will also continue to manage the Warm Springs Natural Area property to meet agreements and further the SNWA resource management objectives. In fiscal year 2017-18, the division anticipates receiving \$1 million in revenue from Federal and State grants and local contributions.

**Northern Resources.** The Northern Resources division budget totals \$7.97 million, of which, \$500,000 is for livestock inventory purchase and \$3.53 million capital improvements to develop, utilize and maintain primary groundwater rights. Total gross revenues are projected to exceed \$2.2 million. The Northern Resources division consists of seven

individual properties that have been consolidated into one independent operating entity. The consolidation and management of these ranch properties has created operational efficiency, but increased gross operating costs. Increased operating costs are attributed to building livestock populations and re-establishment of perennial crops on irrigated fields, replacing aging non-functional infrastructure, renovation of historical ranch structures and construction of additional facilities. Program diversification including water development, nutrient management, cropping structure, propagation of multiple species of livestock, water and energy application have created sustainable revenue centers supporting operations. The primary goal for this division is to integrate the management of water, land and agricultural resources such that environmental and social conflicts are minimized and the Groundwater Development (GWD) Project is maintained as a viable and sustainable alternative future source of supply.



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### Expenditures

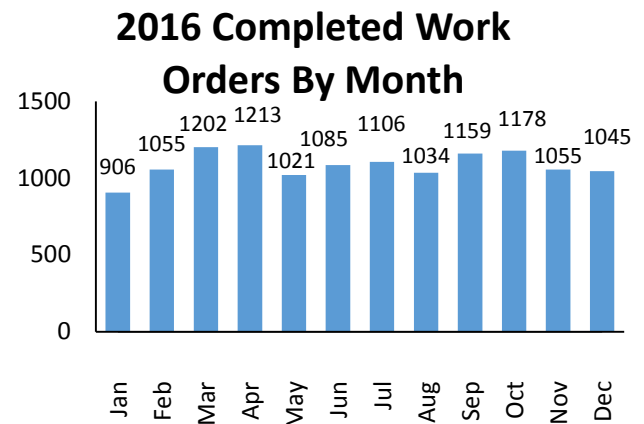
<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Water	\$ 3,482,008	\$ -	\$ -
Energy	822	-	-
Materials & Supplies	1,975,138	1,888,450	1,797,950
Maintenance & Repairs	1,638,546	2,018,000	2,096,750
Rental & Leases	591,642	2,135,078	2,143,000
Other Employee Expenses	52,729	128,025	157,625
Other Expenses	2,159,568	2,015,500	2,458,800
<b>Total Operating Expenses</b>	<b>\$ 9,900,453</b>	<b>\$ 8,185,053</b>	<b>\$ 8,654,125</b>
Capital Costs	\$ 2,480,413	\$ 8,018,000	\$13,015,496
Payroll Costs	\$ 8,472,892	\$ 9,830,974	\$11,066,779
<b>Total Department Expenditures</b>	<b>\$20,853,757</b>	<b>\$26,034,027</b>	<b>\$32,736,399</b>
FTE Positions	62.1	69.9	75.8

### Department Performance

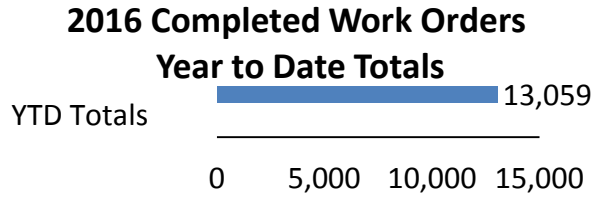
**Facilities.** The Facilities division is divided into three (3) subsets: Facilities Maintenance, Facilities Services, and Buildings and Grounds. The division is responsible for ensuring the four (4) major epicenters and the two hundred seven (207) offsite properties totaling 1,452 acres exceed the LVVWD standards for appearance, quality and cost-effectiveness. Additionally, Facilities supports numerous rural system sites including Big Bend Water District, Warm Springs, Mount Charleston, Jean, Searchlight, Northern Resource Properties, and others. The division provides support during the design and construction of new facilities, as well as, site

remodeling and/or retro-fit support for existing structures.

The following charts depict the total work orders completed by month and calendar year.



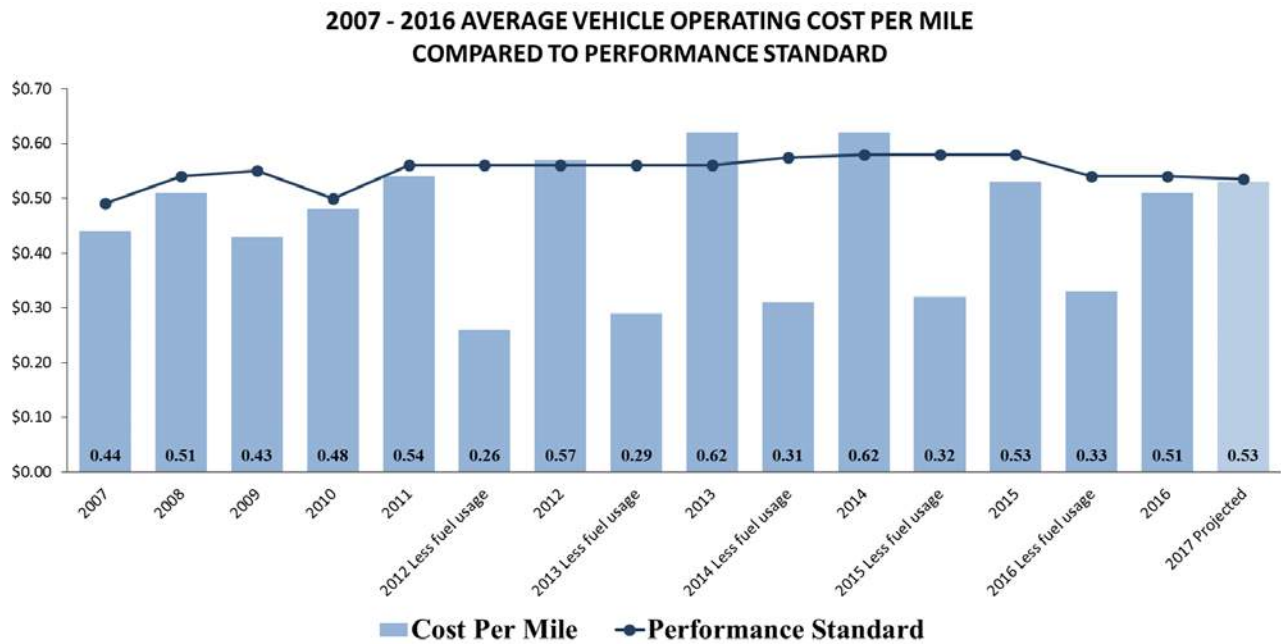
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**Fleet Services.** The mission of the Fleet Services division is to provide safe, reliable and functional vehicles, equipment, tools, fuel, and communications equipment to the LVVWD, SNWA, LVSP, and BBWD operations. Currently the division maintains more than 1,500 vehicles and support equipment pieces

and 1,200 pieces of communications equipment for the organization. This includes services for repair, maintenance, acquisition and disposition of all vehicles, support equipment, communications equipment and loanable tools. Fleet Services also operates six service facilities and six fueling facilities located in Las Vegas, Boulder City, Henderson and White Pine County.

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



**Environmental Resources.** The Environmental Resources division is responsible for conducting environmental monitoring, and management to ensure compliance with environmental laws, permits, and agency agreements. This includes preparing environmental compliance

documents for resources and infrastructure, conducting natural resources studies, and completing environmental compliance monitoring and reporting, in accordance with Federal environmental regulations, state water right rulings, and interagency environmental agreements. The division is

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also responsible for fulfilling organizational responsibilities related to management and restoration of the Las Vegas Wash, and the Warm Springs Natural Area.

**Northern Resources.** The Northern Resources division has developed and sustained global markets for sales of internally produced agricultural products, including beef calves, lambs, wool and alfalfa. These commodities represent approximately \$2.2 million in projected ranch revenue for fiscal year 2017-18. Improvements in agricultural practices, livestock genetics, program diversity and husbandry have resulted in increased efficiency and effectiveness in utilizing Federal rangeland and private forage, and added alfalfa acreage to increase overall production. The strategic plan for Ranch Operations is to produce and deliver quality products and service, exhibit scientific based stewardship and, demonstrate financial and organizational efficiency. The ranch infrastructure, resource stewardship, water rights, personnel development, and financial stability are priorities integrated into the management program. Ranch operations also support cross-departmental initiatives concerning the collection of environmental and hydrologic monitoring data and various other aspects of the GWD Project.

## **Strategic Plan Objectives and Accomplishments**

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

### **2017-18 Performance Objectives**

- Maintain critical equipment and building systems to ensure a safe and comfortable work environment; measure equipment uptime percentage.
- Develop and implement 10 year rolling asset management plan.
- Comply with environmental permit requirements for construction and operation of weirs in Las Vegas Wash.
- Conduct research and public outreach in the Las Vegas Wash in accordance with agreements and the Las Vegas Wash Comprehensive Adaptive Management Plan (LVWCAMP).

### **2016-17 Major Accomplishments**

- Conducted aquatic bird, marsh bird, and invertebrate surveys along the Las Vegas Wash, including identification of the first endangered yellow-billed cuckoo.
- Conducted compliance monitoring and reporting in support of weir construction on the Las Vegas Wash without a single incident of non-compliance.
- Re-vegetated approximately 50 acres along the Las Vegas Wash, removed more than 12 acres of tamarisk, and conducted vegetation monitoring on nearly 300 acres.
- Conducted two Las Vegas Wash Green-Up events, where 340 volunteers planted approximately 13.5 acres.
- Coordinated and hosted a two-day science symposium for approximately 300 high school students as part of World Wetlands Day.

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- Developed a Long-Term Operating Plan on the Las Vegas Wash.
- Completed the following projects designed to maintain uninterrupted operations: replaced dilapidated sewer and chiller piping at the AMWSTF, conducted major repairs to the RMWTF Laboratory HVAC units, and installed new HVAC units for the AMSWTF SCADA computer room.

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

**2017-18 Performance Objectives**

- Achieve an 80 percent or greater satisfaction rating for facilities-related customer interactions.
- Continue to include customers in the specification process of new and/or replacement vehicles and equipment.
- Partner with other departments to create vehicle/equipment committees to better assess needs and improve end products provided.
- Minimize equipment down time through the use of technology, technician training and good parts availability.
- Provide the best possible equipment choices to the departments to assist them in meeting their goals efficiently and effectively.
- Respond to changing customer needs and implement and/or change services to better support the mission.

**2016-17 Major Accomplishments**

- Enhanced customer service in outlying areas through the use of technology, improved parts availability, and scheduling of technicians.
- Maintained Automotive Service Excellence (ASE) “Blue Seal of Service Award”.
- Maintained Automotive Service Excellence (ASE) “World Class Technician Status”, adding one additional technician to the World Class Standings.
- Managed and facilitated the move of 110 Customer Care employees to the Molasky or Field Services Building in a prompt and efficient manner, significantly reducing anticipated downtime.
- Project 7S9016 – completed the installation of insulation in the north soffit of the AMSWTF Administration Building to eliminate all cold complaints.
- Facilitated major internal events including: all Divisional holiday parties, Safety Stand-Down Day, Celebrating You week.
- Implemented successful proactive disinfection program to minimize employee impact during the flu season.

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

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**2017-18 Performance Objectives**

- Continue to lead and develop the alternative fuel vehicle program in support of clean air in the Las Vegas Valley.
- Recondition and reuse service bodies for light duty vehicles.
- Expand the Districts plug-in electric vehicles fleet.
- Expand the use of compressed natural gas as an automotive fuel.
- Sustain the SNWA's central Nevada groundwater rights and right-of-way grant for future groundwater development.
- Conduct monitoring and submit annual hydrologic and biological data and reports to the Nevada State Engineer as required by water-right permits.
- Sustainably manage the Great Basin Ranches such that annual gross revenue covers at least 100 percent of direct costs, measured as a five-year running average.
- Develop and certificate 100 percent of ranch water rights.
- Maintain Great Basin Ranch assets, including property, facilities, water rights, and grazing allotments in accordance with annual work plans.
- Inspect 100 percent of ranch irrigation, stock, and domestic wells at least annually, and maintain at least 90 percent of the wells at full operational capacity.
- Complete environmental compliance and monitoring for existing infrastructure and projects initiated by other divisions and departments.

- Collaborate on all major local and regional climate change initiatives relevant to the SNWA.
- Make progress towards achieving the goals of the Recovery Plan for rare aquatic species on the Muddy River (Moapa dace).
- Provide public access at the Warm Springs Natural Area in accordance with the Southern Nevada Public Land Management Plan funding agreement.
- Mow fields at least once annually, and trim palms and maintain fire breaks annually as needed at the Warm Springs Natural Area in accordance with the Fire Management Plan.
- Communicate sustainability goals and progress to the organization.

**2016-17 Major Accomplishments**

- Replaced older diesel and gasoline powered vehicles and flex fuel vehicles, lowering capital cost and reducing the Districts carbon foot print.
- Recycled and reused several service bodies and mounted equipment on light and medium duty utility vehicles, reducing the Districts use of raw materials.
- Recycled used oil to be used as heating fuel for the fleet maintenance facility in Spring Valley.
- Selected as one of the 100 Best Fleets "Top 100 Fleets in North America" and "Top Green Fleets in North America"..
- Supported preparation of legal briefs in defense of the Groundwater Development Project rights-of-way.

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- Prepared expert reports for water rights hearing remand for SNWA's central Nevada groundwater rights.
- Monitored more than 200 ground photography fixed monitoring locations across the SNWA's grazing allotments, conducted vegetation monitoring at 48 sites, and conducted riparian surveys at 21 sites to document SNWA's use of the rangeland, drought conditions, and general range health.
- Obtained 3 rights-of-way for historic ditches and pipelines associated with ranch operations.
- Negotiated with federal agencies, collected data, and prepared reports in support of renewal of permits for 16 SNWA grazing allotments.
- Conducted native fish surveys on the Virgin and Muddy Rivers.
- Conducted desert tortoise, migratory bird, and sensitive species surveys, and responded to 2 calls for dangerous animals at various SNWA/LVVWD facilities.
- Reviewed 146 draft policies, regulations, and projects potentially relevant to the SNWA and the LVVWD, and submitted 11 formal comments letters.
- Completed environmental compliance processes and obtained federal right-of-way for Silver State Energy Association's Eastern Nevada Transmission Project.
- Conducted bi-annual Moapa dace counts.
- Initiated construction of the second phase of public access trails and kiosks at the WSNA, which is being paid for with Federal grant funding.
- Treated and removed weeds on 44 acres on the WSNA, and grew over 5,000 native plants at the greenhouse for restoration at Warm Springs and the Las Vegas Wash.
- Trimmed 150 palm trees, resurfaced approximately 3,500 feet of firebreaks with gravel, installed 4,430 feet of new barbwire fence to preserve defensible space around structures and Moapa dace streams.
- Outreach at the Warm Springs Natural Area included 80 students from Moapa Valley Future Farmers of America who assisted in planting and property cleanup, and Boy Scouts of America who installed over 2,000 native plants and a foot bridge.
- Maintained and improved Great Basin Ranch properties through building renovations at the Robison ranches, Harbecke, Bransford, Wahoo houses 1 and 2, Phillips and Bastian; improving calving areas, shipping facilities, built feedlot facilities enhancement to support livestock program; fencing, stock water development, trough and pipeline installation, and pond projects on several deeded sites; clearing all ranches of waste and other hazards.
- Supported better range ecology by controlling livestock distribution, forage utilization and protection of riparian areas by resting, rotating and placing into conservation allocated AUM's.

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- Completed installation and brought online four new irrigation systems at Huntsman/Phillips.
- Established and harvested marketable crop under these systems.
- Completed the re-fencing development area and perimeter fence along CR894, approximately 3 miles of fence line including approximately 2 miles of internal fences.
- Built water infrastructure to support livestock production at Huntsman, Phillips, Bransford and Scotty Meadows.
- Produced 11,226 ton of marketable forage products with a value of \$1,852,290.
- The ranch produced 460,390 pounds of beef with a value of \$642,194 and added 980 beef replacement females to the inventory with a value of \$1,470,000.
- The ranch produced 278,510 pounds of lambs with a value of \$479,225 and added 1,160 replacement sheep to the inventory with a value of \$232,000.
- Completed re-habilitation of the Bastain well, prepared ground for pivot installation and planting.
- Placed approximately 50 percent of permitted AUMs in non-use for conservation due to drought impact.
- Continued audit of Spring Valley Associates administration and developed strategies for management compliance with DOL regulation.
- Participated with Environmental Resources team completing reclamation at four well sites.
- Monitored climate change science and potential impacts to the SNWA through coordinated activities with the Water Utilities Climate Alliance and Association of Metropolitan Water Agencies.
- Recycled existing furniture to modify or upgrade work areas or offices for 120 employees.
- Participated in the annual holiday drive, recycling over 2,500 Christmas trees.
- Continued to employ energy efficient upgrades in the lighting and climate control applications.
- Facilitated the Sustainability CDT, which met more than six times to coordinate the organization's sustainability goals.

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

**2017-18 Performance Objectives**

- Without compromising safety and/or service level, reduce operating costs through standardization opportunities, inactive inventory reduction, and continuous process improvements.
- Reduce the overall cost per mile/hour of operation for the LVVWD's vehicles and equipment.
- Continue to reduce the number of vehicles/equipment that are low usage and not cost effective.
- Through research and testing, purchased vehicles and equipment exhibiting the lowest cost of

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ownership while at the same time providing the most ergonomic and reliable means for employees to carry out their mission in the most efficient manner.

- Annual department expenditures remain within budget.
- Facilitate renovation projects utilizing in-house labor whenever possible.

### **2016-17 Major Accomplishments**

- Replace older diesel and gasoline powered vehicles with flex fuel vehicles, saving an estimated \$260,000 in capital replacement costs.
- Reconditioned and reused several service bodies and mounted equipment on light and medium duty utility vehicles saving over \$125,000.
- Replaced ninety-five (95) vehicles and equipment pieces that were no longer cost effective to operate and maintain.
- Recovered over \$782,529 in vehicle resale at auction.
- Obtained \$875,000 in Southern Nevada Public Land Management Act grant funding for construction of the second phase of public access at the Warm Springs Natural Area.
- Increased beef and sheep herd numbers substantially to provide future revenue growth.
- Completed Valley View Information Technology – Phase C upgrading forty (40) work stations and seven (7) offices using predominately in-house labor.
- Used in-house labor to renovate the Valley View Engineering Planning to upgrade twenty (20) work stations, ten

(10) offices, a kitchenette, and a conference room.

- Completed the main administration area at AMSWTF upgrading six (6) work stations, fourteen (14) offices, a copy center and a brand new data feed using in-house labor.
- Continued to provide proper care and operation of fire protection and life safety systems, climate control for personnel and mission-critical areas, repair and maintenance of plumbing systems, and integrity of facility components including: lighting, building facades, sidewalks, roofs, roads, and perimeter walls.

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

### **2017-18 Performance Objectives**

- Department staff completes 90 percent of mandatory Knowledge Reservoir training on schedule.
- Department average annual incident rate exhibits a downward trend, based on a five-year average.
- Ensure 90 percent of Facilities preventive maintenance work is completed by the due date.
- Ensure 98 percent or greater, fire and life safety inspections or tests are completed by the due date.
- Partner with other departments to create vehicle/equipment committees to better assess needs and improve end products provided.
- Maintain good parts and supply inventories.



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- Comply with industry standard repair procedures.
- Provide comprehensive preventive and predictive maintenance.
- Team safety. Zero lost-time accidents.
- Train and certify maintenance and service personnel in new technology and repair techniques.
- Fleet certification as an "Industry Competitive Fleet Management Operation" through the Fleet Counselor Services (FCS).
- Maintain Automotive Service Excellence (ASE) "World Class Technician Status."
- Maintain I-CAR Platinum Class Certification for Fleet Services paint and body operations.

**2016-17 Major Accomplishments**

- Renovations for safer operation of El Tejon Ranch irrigation lift station; replacement of hazardous irrigation electrical CT stand at Shoshone.
- The Facilities division comprised of a team of custodians reliably maintains an orderly, clean and compliant environment at all sites.
- Facilitated over 5,000 meeting room set-ups over the past 12-months.
- Completed 13,286 Work Tasks over the past 12-months.
- Created vehicle/equipment committees with key customers in order to better assess needs and improve end products provided.
- Maintained Automotive Service Excellence (ASE) "Blue Seal of Service Award."

- Maintained Automotive Service Excellence (ASE) "World Class Technician Status."
- Achieved I-CAR Platinum Class Certification for Fleet Services paint and body operation.
- No lost-time accidents occurred.

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

**2017-18 Performance Objectives**

- Continue to equip fleet facilities with state of the art testing and diagnostic equipment in order to properly diagnose and repair vehicle and equipment failures in a timely cost effective manner.
- Implement GPS/telematics technology throughout the fleet in order to enhance fleet management capabilities, save fuel and improve fleet utilization.

**2016-17 Major Accomplishments**

- Equipped all fleet repair facilities with state of the art manufacture specific diagnostic equipment, reducing vehicle down time and repair costs.
- Provided online technical training and diagnostic information to technicians at all repair locations, giving them the tools needed to become more proficient and efficient in their job duties.

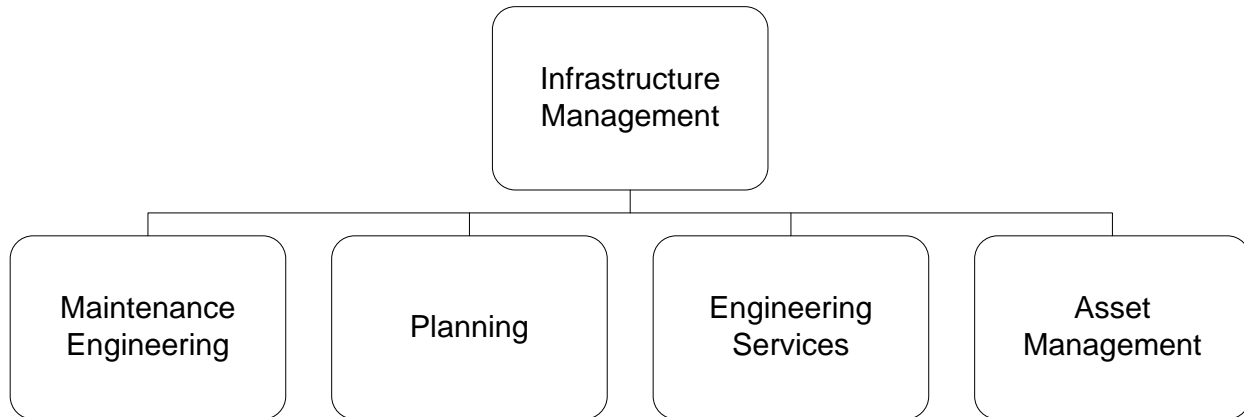
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## INFRASTRUCTURE MANAGEMENT

Level: 3700

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### Mission

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

### Department Description

The primary responsibility of the Infrastructure Management department is to manage the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA) assets by developing and maintaining the asset management program. To accomplish this, the Engineering Services and Planning divisions review water plan submittals for proposed development to ensure they meet the LVVWD's construction standards, and provide adequate pressures and fire flow. The Maintenance Engineering division conducts pumping unit efficiency tests, provides technical support, and develops capital projects for the Operations,

Resources and Facilities, and Water Quality and Treatment (WQ&T) departments. The Asset Management division tests for leaks on large diameter pipelines, provides inspection support, develops future cost projections, and maintains the LVVWD and the SNWA cathodic protection systems. All of these efforts are directly in support of the department's mission.

### Budget Objectives and Highlights

The 2017-18 Infrastructure Management department budget contains a comprehensive view of ongoing efforts to maintain costs at current levels, provides funding to continue the development and maintenance of the asset management program, and demonstrates a commitment to providing daily operational support for the LVVWD and the SNWA projects.

Infrastructure Management's total operating expense budget between the LVVWD and the SNWA increased \$2,137,145 from the budget year 2016-17 to 2017-18. The addition of the

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Communication Systems group; increased funding in the amount of \$1,750,000 for the SNWA emergency work, fiber optic leases, communication equipment; and the addition of \$450,000 for backflow, pipeline replacements and improvements - completed

in conjunction with other agency projects, and the RedEye projects are contributing factors to the operating expense increase. The department will continue to focus efforts on maintaining cathodic protection, SCADA, and the 4-1-1 developer review process.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Materials & Supplies	\$ 133,018	\$ 74,000	\$ 177,000
Maintenance & Repairs	58,263	425,000	2,460,000
Rental & Leases	-	-	200,000
Other Employee Expenses	9,753	17,750	39,500
Other Expenses	44,061	626,700	100,825
Total Operating Expenses	\$ 245,095	\$ 1,143,450	\$ 2,977,325
Capital Costs	\$ 202,567	\$ 5,601,000	\$ 5,877,000
Payroll Costs	\$ 3,268,339	\$ 4,449,737	\$ 4,691,890
<b>Total Department Expenditures</b>	<b>\$ 3,716,001</b>	<b>\$11,194,187</b>	<b>\$13,546,215</b>
FTE Positions	17.1	24.2	24.6

## 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, water treatment facilities, the distribution and transmission pipelines, and wells in a safe and efficient manner. Specific responsibilities of

Maintenance Engineering include PLC/HMI/SCADA programming and 24x7 support, SNWA communications infrastructure and 24x7 support, water quality projects, electrical coordination study analysis, motor control center and switchgear upgrades, administration of on-call vault repair and distribution service contracts, administration of pump and motor repair contracts, design and implementation of cathodic protection projects, tank re-coating projects, as-built documentation, and

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facilities improvements. The division also provides day-to-day engineering support for the LVVWD and SNWA, Big Bend Water District (BBWD), Alfred Merritt Smith Water Treatment Facility (AMSWTF), River Mountains Water Treatment Facility (RMWTF), and rural systems.

The division is currently managing over 250 projects between the LVVWD and the SNWA, with a capital budget of more than \$14 million. Major projects include the SCADA upgrade at the SNWA, Automation control system upgrades at the SNWA and the LVVWD, VFD replacements at WRC and Lamb Pump Stations, Blue Diamond wells rehabilitation, cathodic protection system installations at East Valley Lateral, West Valley Lateral, and Gibson Lateral, chemical storage tank repairs, fluoride system upgrades at AMSWTF, Stewart North and South Basin floor and wall joint replacements, and the electrical system upgrade at Campbell Pump Station.

**Planning.** The Planning division provides research, analysis, modeling, and forecasting to support a number of activities at both the LVVWD and the SNWA. The division provides long-term forecasts, water use analyses, and conservation analyses to the SNWA as inputs into regional water resource planning. The division provides economic analysis, water demand projections, population distributions, and water demand distributions to the LVVWD as inputs into financial planning and rate setting, infrastructure planning, and small systems analysis. This data is utilized for the evaluation of system additions initiated by the LVVWD and large system additions initiated by developers. The data is also used for hydraulic criticality assessment of distribution system components to ensure system

reliability. The division maintains an industry leading hydraulic model, with cutting edge modeling capabilities, of the distribution system which is utilized for engineering analysis and decision support. The division locates, sizes, and schedules new pumping stations, reservoirs, wells, and major pipelines. In coordination with the Operations department, the division develops operating and emergency strategies to improve water quality and reduce energy consumption. The division collaborates with the Engineering Services division in the review of pressure and fire flow availability for new developments and writes cost sharing agreements for the design and construction of major water facilities. The division collaborates with the WQ&T and Operations departments to address water quality compliance issues, to research and develop alternative technologies applicable to the LVVWD water distribution system, and to plan for capital improvements and required monitoring for regulatory compliance. The division conducts distribution system pressure and flow investigations in support of Customer Care and Field Services, Operations and Public Information. The division also performs planning for artificial recharge, small systems, recycled water distribution systems, and out-of-valley transmission systems.

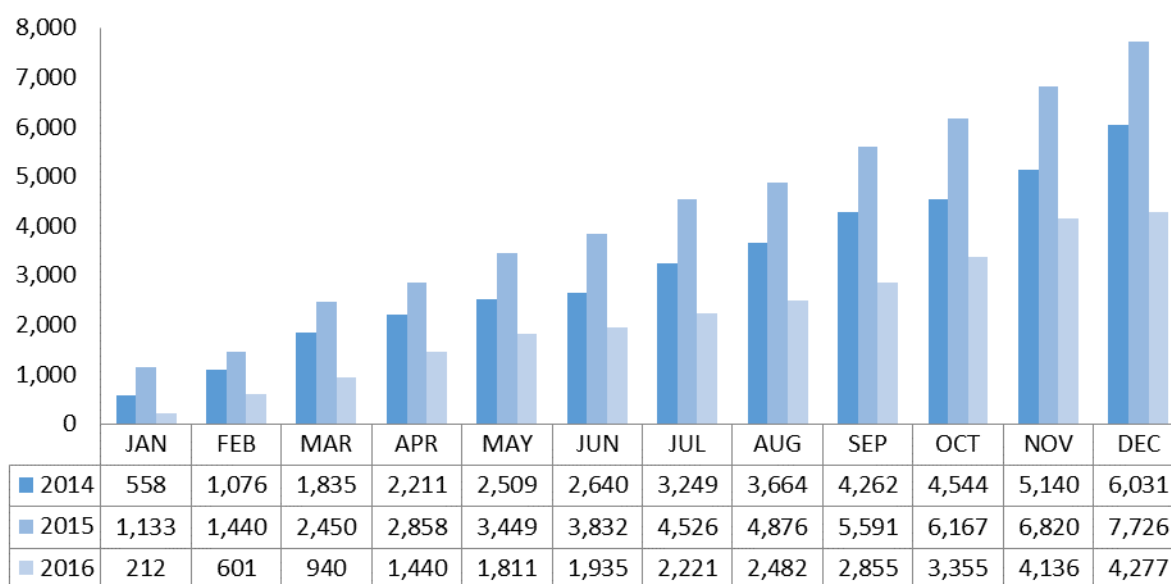
**Engineering Services.** The Engineering Services division is responsible for reviewing plans for additions and modifications to the systems of the LVVWD and the SNWA, initiated by developers, utilities, and public entities. Engineering Services approves the water plans for these system additions, and ensures system additions meet the LVVWD's requirements for reliability and maintainability, calculates fees, processes

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agreements, commits water resources to new developments, and ensures water facility construction is per the LVVWD's standards. The division also coordinates with other public works construction to minimize both the LVVWD costs and inconvenience to the public. Engineering Services is also responsible for the

evaluation and testing of products for use in the water distribution system and is in charge of the LVVWD Approved Products List. The following chart represents the LVVWD's cumulative data representing new service points.

**New Service Points**  
**2014-2016 Cumulative New Service Points Received**



**Asset Management.** The Asset Management division assesses infrastructure conditions and forecasts short and long-term capital renewal needs to meet service level expectations. The division is responsible for managing the corrosion control program for the LVVWD, SNWA, and associated small systems. The goal of the corrosion control program is to extend the life of steel pipe and other steel structures by applying and maintaining cathodic protection (CP). Corrosion Control Systems Technicians collect annual corrosion data on over 2,762 CP test

stations and 17 impressed current rectifiers for the LVVWD, as well as 1,025 CP test stations and 73 impressed current rectifiers for the SNWA. The division also maintains CP system components, installs new anodes and test stations, and performs corrosion assessments. The long-term capital renewal needs were utilized as a basis for the LVVWD's 10-Year Capital Plan; which was recommended by the Citizen's Advisory Committee (CAC).

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**Estimated Annual Infrastructure Renewal Needs  
Asset Management**

ACTIVITY	10-YEAR PROJECTION	PERCENTAGE
Meter Program	\$32.4 million	8%
Vault Program	22.5 million	6%
Service Laterals	70 million	18%
Pipelines rehabilitation and replacement	130 million	33%
Facilities Improvements	27 million	7%
SCADA	6 million	2%
Pump Stations	6.7 million	2%
Reservoirs	4.65 million	1%
Wells	15.6 million	4%
Reclaimed Water	1.7 million	< 1%
Fleet, Safety & Security	39.3 million	10%
Misc. capital	34.5 million	9%
<b>TOTAL</b>	<b>\$390.3 million</b>	

The LVVWD's distribution infrastructure is comprised of over 4,462 miles of piping, 4-inch in diameter and larger, 1,680 miles of ¾-inch to 3-inch services, 117,715 valves, and 36,801 fire-hydrants. In order to meet conservation objectives and rate-payer expectations, the distribution infrastructure must be maintained, replaced, or rehabilitated at an appropriate level. The division will continue to update renewal needs based on condition assessments, water losses, break rates and overall risk.

### Strategic Plan Objectives and Accomplishments

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

#### 2017-18 Performance Objectives

- Replace obsolete site automation equipment with current technology utilizing industry standard protocol.
- Maintain a capital improvements program for the LVVWD and small systems, and review development submittals in a timely manner.
- Monitor and evaluate water quality in the distribution system, and recommend improvements in

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response to changing water quality and regulatory conditions.

- Provide stewardship of the chemical processes used at all water treatment facilities.

### **2016-17 Major Accomplishments**

- Completed PLC automation system upgrades at sixteen LVVWD sites. Clarifiers, flocculation, chemicals, and raw water automation systems completed at RMWTF with ozone and filters scheduled for the fall. This, in combination with the Emerson negotiated SCADA upgrade, will close out project 300E at the SNWA.
- Completed five cost sharing agreements with land developers for the design and construction of major facilities.
- Developed a water quality mitigation strategy to address changing water quality associated with water distribution system expansion and performed hydraulic criticality analysis and provided recommendations to minimize costs for water main rehabilitation projects.
- Identified and repaired two leaks on the SNWA transmission system.
- Executed the first ever cross-departmental multi-manufacturing plant approved products tour.

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

### **2017-18 Performance Objectives**

- Maintain efficiency in reviewing water plan submittals, network analyses, and hydraulic grade line requests.
- Continue the 4-1-1 review process for Developer projects; four-week first review, one-week resubmittal review, and one-week for final Mylar review/approval; with a target success rate of 90 percent.
- Collaborate with the City and County Building departments to establish plan review criteria for existing developments requiring backflow retrofit and meter upsizing.
- Continue to work with other agencies to include water facility upgrades and replacements in road improvement projects.

### **2016-17 Major Accomplishments**

- Approved 4,277 new water service connections, 330 hydraulic grade line requests, 230 water network analyses, and 458 sets of development plans.
- Assisted engineering consultants in integrating water quality considerations into their network analyses.
- Implemented an online fire flow inquiry system in coordination with the Clark County Fire Department and processed 168 fire flow requests.
- Reviewed 1,868 sets of developer and public works plans for the LVVWD and the SNWA, including brand new submittals, re-submittals, and revisions.
- Reduced the length of time to review water plan submittals, network analyses, and hydraulic grade line requests through expansion of the



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digital submittal system and process improvements.

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

**2017-18 Performance Objectives**

- Update master planning areas and associated facilities needed to serve developed and vacant acreages based on new development trends.
- Continue to utilize in-house resources to inspect infrastructure and only utilize outside resources for specialized testing the technicians and engineers are not experts in conducting. This includes Corrosion Control Technicians utilizing remote submarines to inspect smaller tanks instead of hiring divers.
- Continue to utilize the latest condition assessment technologies to determine the true condition and expected remaining life of the infrastructure.
- Maintain an industry leading hydraulic model, with state-of-the-art modeling tools, of the distribution system for effective decision support and further automate the hydraulic model and tools for maintenance, calibration, asset rehabilitation, emergency response, shutdown analysis, and water quality applications.
- Generate a pipeline risk of failure score for all pipelines in the system for use in the development of a prioritized pipeline replacement program.

**2016-17 Major Accomplishments**

- Completed 64 projects, with another 98 projects scheduled to be completed by the end of the fiscal year.
- Incorporated the LVVWD facility replacements and improvements into City, County, and Nevada Department of Transportation projects, reducing future costs and minimizing the public's impact due to construction.
- Developed a 10-year major facility requirement plan for the northwest, southwest, and Summerlin areas; and prepared a master plan for Downtown Las Vegas and the Las Vegas Medical District, identifying system improvements required to maintain adequate level of service as the area continues to redevelop.
- Completed a comprehensive price elasticity study. Evaluated the impact of price changes on 25 different industry types and built a system-wide model for all commercial/industrial users. Combined with recent work done at UNR, these models explained 95 percent of all water use at the LVVWD.
- Utilized remote submarine to inspect critical infrastructure, such as the low level intake structure and a number of reservoirs to reduce costs with diver services and used Magnaflux Leakage (MFL) technology to scan steel tank floors to measure wall thickness and identified holes.

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

- Completed a master plan for the Garnet Valley Water System Phase I.

**2017-18 Performance Objectives**

- Merge the individual division capital plans into one comprehensive cost loaded capital plan.
- Provide updated cost curves and risk assessments for the LVVWD and the SNWA pipelines.
- Continue to conduct Uniform Design and Construction Standards (UDACS) training sessions for engineering firms; addressing each firm's needs and assisting them in submitting more accurate plans.

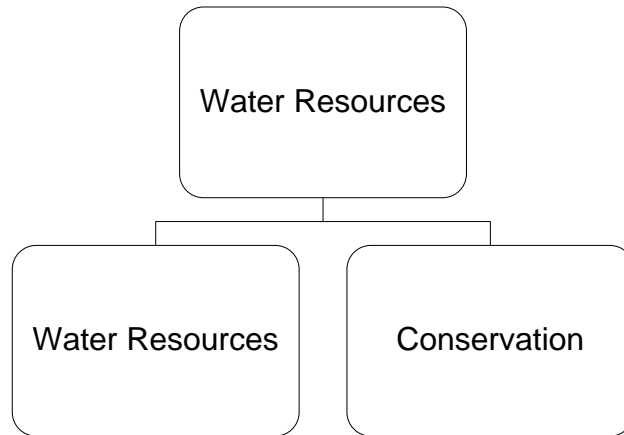
**2016-17 Major Accomplishments**

- Processed 1,282 record drawing requests for developer and public works projects for the facilities.
- Completed three UDACS' training seminars (two firms and CLV Public Works).
- Processed 338 tentative, parcel and final map reviews for new development.
- Implemented a SCADA/PLC work ticket system to expedite small automation tasks that fall outside of the Maintenance Engineering Project Tracking System; and met with SCADA operators on a weekly basis and attended Operation's biweekly staff meetings to ensure that problems and concerns are dealt with quickly, and software and operating philosophy changes are understood.

## WATER RESOURCES

### Level: 3800

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### Mission

The mission of the Water Resources department is to ensure adequate water resources are available to meet the community's current and future water needs in the face of climate uncertainty.

### Department Description

The Water Resources department manages SNWA's water resource portfolio to ensure a reliable water supply for the community. Primary responsibilities include the management of existing water supplies, the acquisition of new water supplies, and water demand management. The department supports policy initiatives on the Colorado River, conducts forward planning for water resource needs, assesses future water supply risks, provides technical hydrological support for the operations of the LVVWD and the SNWA groundwater wells, and administers regional water conservation programs.

### Budget Objectives and Highlights

In March of 2017 the Water Resources Department was formed by merging the Colorado River team with the Water Resources and Conservation Divisions from the Resources and Facilities Department. The work of the Colorado River team has largely been integrated into the functions of the other divisions. The department also oversees environmental programs related to Colorado River resources.

The department's budget is \$50,341,375 which represents an increase of \$4.5 million compared to the division and team budgets from the previous organizational structure for fiscal year 2016-2017. Increases are primarily attributed to anticipated partnerships with Colorado River Basin States and Mexico to undertake system conservation projects designed to protect critical elevations in Lake Powell and Lake Mead and developing and expanding Tributary Conservation

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Intentionally Created Surplus (ICS) supplies through the lease and purchase of Muddy River and Virgin River water. Budgets for other ongoing Colorado River activities, and environmental compliance costs remain similar to previous years' budgets. The budget for conservation activities reflects SNWA's long-term commitment to increased water conservation.

### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Water	\$ 272,323	\$ -	\$ -
Materials & Supplies	676,024	1,570,200	1,428,200
Maintenance & Repairs	72,200	23,300	31,300
Other Employee Expenses	95,869	171,375	186,775
Other Expenses	4,835,387	3,808,300	4,366,300
<b>Total Operating Expenses</b>	<b>\$ 5,951,803</b>	<b>\$ 5,573,175</b>	<b>\$ 6,012,575</b>
Capital Costs	\$ 859,571	\$32,330,598	\$36,156,339
Payroll Costs	\$ 7,240,795	\$ 7,376,796	\$ 7,719,568
<b>Total Department Expenditures</b>	<b>\$14,052,169</b>	<b>\$45,280,569</b>	<b>\$49,888,482</b>
FTE Positions	43.7	42.4	41.5

## 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. This responsibility involves managing existing

Colorado River allocations and agreements including those for river related environmental compliance; conducting regional water resource planning, including: integrated water resource planning, population forecasting, regional water demand analyses, and water accounting; identifying, evaluating, and developing sources of additional groundwater and

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surface water supplies; managing banked resources; establishing hydrologic and climatological monitoring networks; securing water rights from the Nevada State Engineer's (NSE) Office; and, ensuring all water-resource assets remain in good standing.

	<b>Supply</b>	<b>Consumptive Use</b>
<b>Permanent</b>	Colorado River (SNWA)	272,205 AFY
	Nevada Unused Colorado River (Non-SNWA)	0-21,000 AFY
	Tributary Conservation/ Imported Intentionally Created Surplus	41,500 AFY
	Las Vegas Valley Groundwater Rights	46,830 AFY
	Direct-Reuse	21,800 AFY
<b>Temporary</b>	Southern Nevada Groundwater Bank	336,091 AF
	Interstate Banks (California and Arizona)	931,266 AF
	Intentionally Created Surplus (storage in Lake Mead)	531,562 AF

**Conservation.** The Conservation division develops and implements programs and strategies to sustain and promote water conservation. The SNWA monitors water use in terms of Net Gallons Per Capita per Day

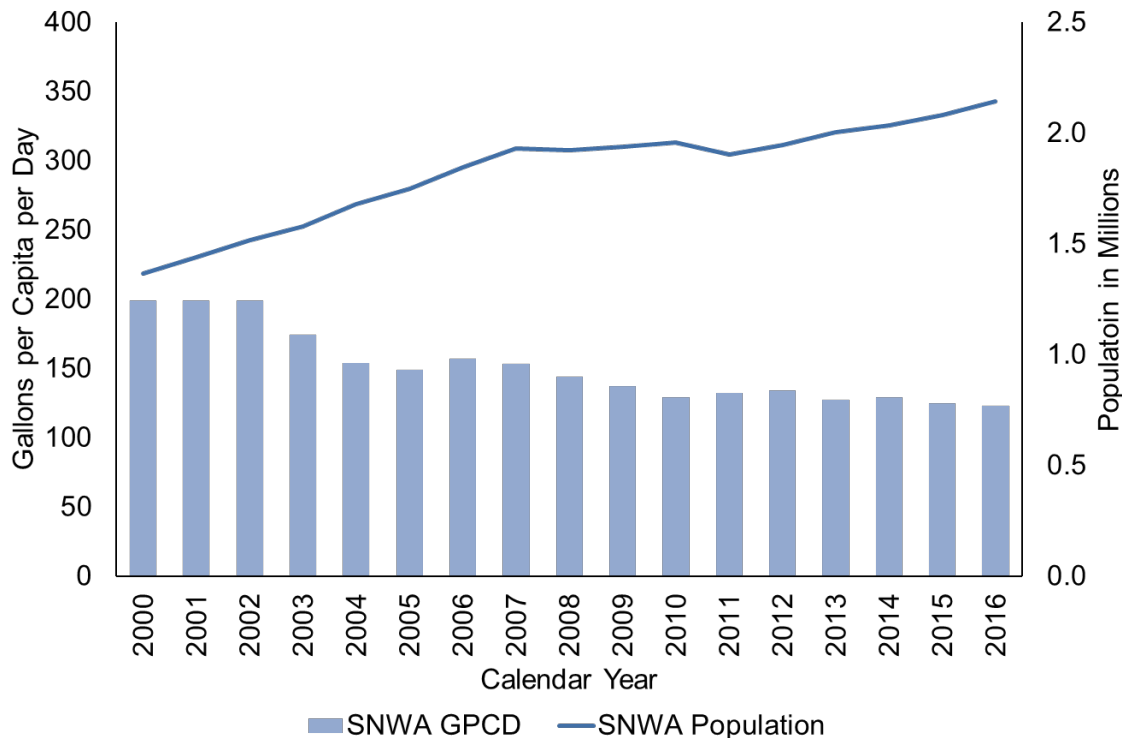
(GPCD), since the SNWA recycles nearly all indoor water use, either through return-flow credits or direct reuse. Net GPCD more accurately reflects the community's use of water resources and improves comparability with other communities. The SNWA's net GPCD was 123 in 2016. This is a reduction of 38 percent, since onset of drought policies in 2002.

In 2016, the SNWA supported 2,277 projects comprising 4.4 million square feet of landscape conversion. These conversions will produce perpetual annual savings of more than 245 million gallons. The cumulative benefit of landscape conversions completed since 2000 reduced the SNWA's 2016 consumptive water use by more than 10.1 billion gallons.

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

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SNWAGPCD and Population



## Strategic Plan Objectives and Accomplishments

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

#### 2017-18 Performance Objectives

- Cooperate with other Colorado River water users on programs that protect critical elevations in Lake Powell and Lake Mead.
- Ensure reliability of Colorado River supplies through active participation in environmental compliance and management programs.
- Maintain all the SNWA and LVVWD groundwater, surface water, and artificial recharge permits through

efficiently managed monitoring and reporting in order to comply with permit terms.

- Inspect the SNWA and the LVVWD wells annually to ensure appropriate operational capacity for each service area. Develop and certificate water rights, as appropriate.

#### 2016-17 Major Accomplishments

- Continued implementation of the Colorado River Pilot System Conservation Program and the Lower Basin Memorandum of Understanding for Pilot Drought Response Actions. Combined with other water storage initiatives, nearly 20 feet of additional water resulted in Lake Mead.

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- Completed all compliance monitoring and reporting for the LVVWD's and SNWA's groundwater rights, and permits to recharge, store, and recover water from the Southern Nevada Water Bank.
- Provided water resources and technical assistance for development in Garnet Valley (including the well design and water rights to support Hyperloop One, Faraday Future, and Playa Solar projects).
- Completed an investigation of elevated concentrations of regulated chemical constituents in the Las Vegas Valley groundwater, and devised mitigation measures to lower the concentration of these constituents in the LVVWD's production wells.
- Filed over 120 water-right applications, proofs and extensions with the NSE to maintain and perfect the LVVWD and SNWA groundwater and surface water rights while optimizing operation flexibility.
- Implemented a maintenance and repair plan to optimize efficiencies of irrigation wells and the development of water rights associated with the NR Ranch properties. Completed the rehabilitation of four irrigation wells.
- Administered U.S. Geological Survey joint funding agreements to ensure proper measurement of Las Vegas Wash surface water flows and the timely reporting of Colorado River return flow credits.
- Participated in the development of a 20 year operating plan for Glen Canyon Dam that protect downstream

environmental resources and water quality in Lake Mead.

- Continue funding and participation in the Lower Colorado River Multi-Species Conservation Program.

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

**2017-18 Performance Objectives**

- Maintain 90 percent or greater client satisfaction rating for delivery of the Water Smart landscapes program.
- Improve the Water Smart Contractor program for consumers and subscribing contractors.
- Revise the Water Smart Home program to afford greater flexibility to homebuilders.

**2016-17 Major Accomplishments**

- Served more than 5,000 customers through conservation programs. Maintained a conservation customer feedback rating of 4.59 out of 5 (91.8%).

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

**2017-18 Performance Objectives**

- Cooperate with other Colorado River water users on programs that protect critical elevations in Lake Powell and Lake Mead

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- Advance programs and projects that benefit multiple uses on the Colorado River including the health of the system and the environment.
- Host a hydrology symposium with other Colorado River water users, federal agencies, and stakeholders to advance hydrological research and improve existing modeling tools.
- Collaborate with the Bureau of Reclamation and other Colorado River water users to provide accurate near-term, mid-term, and long-term projections of Colorado River conditions including Lake Mead elevations
- Complete actions as required under the SNWA / Department of Interior Stipulated Agreements.
- Monitor, account, and conduct reporting for ICS credits for Muddy and Virgin River water rights and leases.
- Publish the annual SNWA Water Budget and review and update, as necessary, the SNWA Water Resource Plan.
- Ensure compliance with terms of the SNWA Cooperative Agreement and Section 5 contracts with the Secretary of the Interior to fully utilize Nevada's 300,000 acre-feet of Colorado River apportionment.
- Communicate conservation goals and progress to the organization.
- Host 10<sup>th</sup> Annual WaterSmart Innovations Conference.
- Continue to implement water efficiency programs identified in the SNWA 5-Year Conservation Plan.
- Support conservation plans that benefit endangered and threatened

species to ensure access to current and future water supplies.

- Monitor, and when appropriate participate in, external activities that might interfere with SNWA's access to current and future water supplies.

**2016-17 Major Accomplishments**

- Contributed approximately 60,000 acre-feet of unused Nevada water for the protection of Lake Mead elevations.
- Participated in the ongoing implementation of the Pilot System Conservation Program.
- Conducted Colorado River modeling in support of ongoing negotiations and resource management activities.
- Achieved 2016 Net GPCD of 123.
- Provided more than 5,000 conservation rebates saving the community over 320 million gallons per year.
- Partnered with NV Energy, Southwest Gas, and the Desert Research Institute to supply 1,000 Water and Energy home retrofit kits to schools through a school sustainability curriculum.
- Hosted approximately 1,000 attendees from 40 U.S. states at the 9th Annual WaterSmart Innovations Conference and Expo.
- Implemented new regional regulations to restrict landscape watering on Sundays.
- Administered a professional services agreement with the UNLV Center for Business and Economic Research to develop annual Clark County population forecasts.



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- Published the SNWA 2016 Water Budget and completed a comprehensive review of the SNWA 2015 Water Resource Plan.
- Monitored Colorado River Basin water-supply conditions and the SNWA's water use.
- Created and delivered approximately 25,300 acre-feet of Tributary Conservation ICS and over 7,600 acre-feet of System Conservation water from the Muddy and Virgin Rivers to Lake Mead.
- Negotiated and entered into new long-term (10-year) leases for Muddy and Virgin River water that is eligible for Tributary Conservation ICS credits.
- Negotiated and entered into an agreement to develop recovery capacity for water banked in Arizona.
- Purchased 24.64 acre-feet of Virgin River water.
- standards and other national water efficiency initiatives.
- Conduct a joint study with WaterStart and MGM Resorts International on water efficiency technology for resort and large facility management.
- Implement a pilot program to deliver residential water use audits to clients with extraordinary use characteristics.
- Participate in development of national standards and performance verification methods for Energy Service Companies conducting Water and Energy retrofits to public buildings.

**2016-17 Major Accomplishments**

- Collaborated with the State of Nevada's WaterStart program to review water efficiency technology and select award recipients.
- Collaborated with the RESNET network to develop a national water efficiency rating system for new homes.
- Collaborated with the nation's major manufacturers of "smart" irrigation controllers to develop and improve features.
- Conducted a pilot research program to quantify potential water savings from residential audits conducted for clients with extraordinary water use characteristics.
- Increased participation in the SNWA Smart Irrigation Controller Rebate program by 266 percent from 2015.
- Hosted the nation's largest event for exhibiting and presenting water efficiency technologies (WaterSmart Innovations).

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

**2017-2018 Performance Objectives**

- Continue to collaborate with water efficiency technology incubators and accelerators, including WaterStart, ImagineH2O, the Metropolitan Water District of Southern California's Innovative Conservation Program, and others.
- Lead a multi-agency, national research initiative on cooling technology and water demand.
- Participate in development of industry standards, voluntary green program

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- Partnered with the Metropolitan Water District of Southern California and Central Arizona Project to implement the Innovative Conservation Program.

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

**2017-18 Performance Objectives**

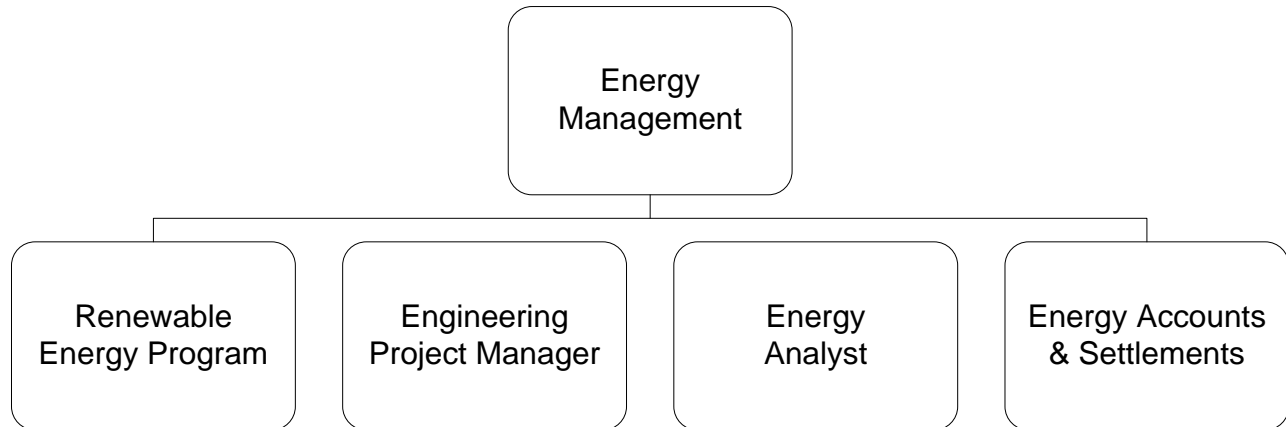
- Implement hydrologic monitoring efficiencies with remote data collection.
- Obtain at least \$100K in grant funding for conservation programs.
- Leverage conservation research dollars through regional/national projects that attract funding and participation from peer utilities.
- Implement a new business system to streamline workflows, maintain accountability, reduce labor intensity through automation and expand use of electronic documents.

**2016-17 Major Accomplishments**

- Installed Geostationary Operational Environmental Satellite telemetry systems to monitor and provide real-time access to important hydrologic sites in remote locations and to reduce travel-related expenses.
- Obtained \$1,300,000 in grant funding. A \$300K grant for conservation programs in 2016 and a three-year, \$1M grant to be dispersed from FY17 through FY19.

## ENERGY MANAGEMENT

Level: 3900



### 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 needs and the needs of the other SSEA members.

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

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also support the renewable energy initiatives of the SNWA and the LVVWD.

## Budget Objectives and Highlights

The fiscal year 2017-18 Energy Management department budget contains funding for all expenses associated with the procurement and management of energy resources for the SNWA's electrical loads. Expenses for the LVVWD, other SNWA member agencies, and

other SSEA members, are not included in this budget. The majority of budget funding is for energy commodities and services purchased by the SSEA from the energy and financial marketplace to meet the SNWA's needs. Other expenditures include transmission, distribution and ancillary services; operation and maintenance expenses associated with transmission and generating assets; and administrative and general expenses for CRC and the personnel of the SNWA.

## Expenditures

SNWA Uses	Actual 2015-16	Budget 2016-17	Budget 2017-18
Energy	\$39,202,614	\$ 37,708,556	\$36,687,491
Materials & Supplies	1,742	2,500	2,500
Maintenance & Repairs	4,646	-	-
Rental & Leases	137,876	-	-
Other Employee Expenses	7,593	8,250	8,250
Other Expenses	501	1,250	1,250
Total Operating Expenses	\$ 39,354,971	\$ 37,720,556	\$ 36,699,491
Capital Costs	\$ -	\$ -	\$ 7,920,000
Payroll Costs	\$ 1,391,950	\$ 1,365,023	\$ 1,444,577
<b>Total Department Expenditures</b>	<b>\$40,746,921</b>	<b>\$ 39,085,579</b>	<b>\$ 46,064,068</b>
FTE Positions	6.4	6.0	6.0

## Department Performance

### Silver State Energy Association.

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

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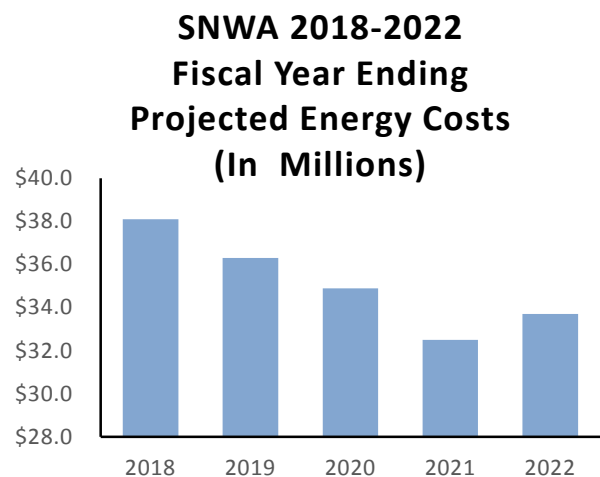
minimum size of labor and infrastructure is required. The employees and systems of the Energy Management department and the CRC Energy Services group have met this need for many years now.

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 without increasing the size of the labor and overhead required to properly manage it. Over \$1 million per year of general overhead and operating costs are now being paid for by non-SNWA entities, costs that otherwise would be paid for by the SNWA.

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

**Energy Price Stability.** Energy Management measures its success on the basis of how well it is meeting its objective to provide energy to the SSEA members yielding stable, low and predictable prices. Consistent with the SSEA's Energy Risk Procedures the price exposure of

the SNWA's energy portfolio has largely been eliminated through calendar year 2021. 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 gas financial products to meet the needs of its members. Physical contracts for electricity are secured whenever there are sufficient buyers and sellers to create liquid markets. Financial products are secured when physical contracts are unavailable or market liquidity is unacceptably low. Financial products protect against price movements in the market and can be converted to physical supplies at a later time when physical power markets are more liquid. Because the SNWA portfolio cost is substantially fixed through calendar year 2021, changes in the market price of energy are expected to have little effect on the SNWA's expected costs during this period. The chart below shows the SNWA's actual and projected energy costs through calendar year 2021 as of the end of January 2017.



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

The SNWA's energy costs are expected to be approximately \$39 million, excluding the estimated cost of capital associated with the SNWA's energy assets for the fiscal year 2016-17. This amount is recovered through the SNWA wholesale water delivery charge

**SSEA Eastern Nevada 230 kV Transmission Project.** For the past several years, the SSEA members have been working cooperatively to develop the 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. Mead is the major regional wholesale market access point in Southern Nevada. The SSEA has completed an Environmental Assessment and received full project right-of-way grant and permits from the Bureau of Land Management. Management is presently evaluating various opportunities to move this project forward into the design phase.

**SNWA and LVVWD Sustainability Initiatives.** The SNWA continues to pursue economical energy contributing to the SNWA's and the LVVWD's goal of providing 25 percent of the

supply portfolio with renewable energy by 2025.

## **Strategic Plan Objectives and Accomplishments**

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

### **2017-18 Performance Objectives**

- Maximize the value of existing renewable energy facilities.
- Develop new economical renewable energy supply options.
- Complete evaluation of options for moving the ENTP forward into the design phase.
- Complete design and other preparation work for the ENTP.

### **2016-17 Major Accomplishments**

- Secured Right of Way Grants to develop the SSEA's 230 kV Eastern Nevada Transmission Project.
- Coordinated the installation of the electric power delivery system for the Lower Lake Level Pumping Station (L3PS).
- Developed economical options for several alternative energy project proposals.
- Completed the sale of 25 percent interest in the Silverhawk Power Plant for \$77 million cash and will also realize \$5 million in annual operating savings.

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- Executed new Portfolio Energy Credit (PEC) sales agreements with Barrick, Goldstrike and Switch.
- Consolidated all of the LVVWD solar renewable systems under Energy Management and transitioned ongoing maintenance oversight of the facilities to CRC.

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

**2017-18 Performance Objectives**

- Continue to work with the SSEA members and the SNWA member agencies to understand and meet their energy related information and reporting needs.
- Evaluate the usefulness of the information being posted to the SSEA website and modify the website accordingly.
- Provide in-depth training for our customers so that they understand all components of their energy budgets and bills.

**2016-17 Major Accomplishments**

- Collaborated with the SNWA Finance department to define and implement improved energy reporting and accounting practices.
- Created a more comprehensive and timely report of actual energy expenses.
- Supported member agency efforts to apply for, and obtain, federal hydropower allocations from Hoover Dam.

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

**2017-18 Performance Objectives**

- Reduce or eliminate unexpected changes to the cost of energy provided to customers.
- Develop internal tools and/or streamline internal processes, allowing for production of energy information that is more understandable and easily accessible to our internal and external customers.
- Enhance accounting system actual transaction detail to provide more robust cost versus actual comparison reports.
- Determine optimal balance of operating funds and short-term investments and identify available vehicles to achieve optimal fund balances.
- Investigate alternative methods for collateral posting.
- Test and evaluate a model for estimating the creditworthiness of energy suppliers that do not have an established credit rating.
- Develop a transmission wheeling rate for the Power Delivery Project.
- Implement a new system for the accurate and timely tracking performance of renewable energy systems and portfolio energy credits.
- Create a timely and accurate PEC/REC report management tool.

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- Prepare comprehensive documentation for all revenue and cost allocations.
- Completed another clean external audit, without any significant audit findings, of the SSEA's financial records after converting to QuickBooks, allowing for the regular production of improved financial reports.

**2016-17 Major Accomplishments**

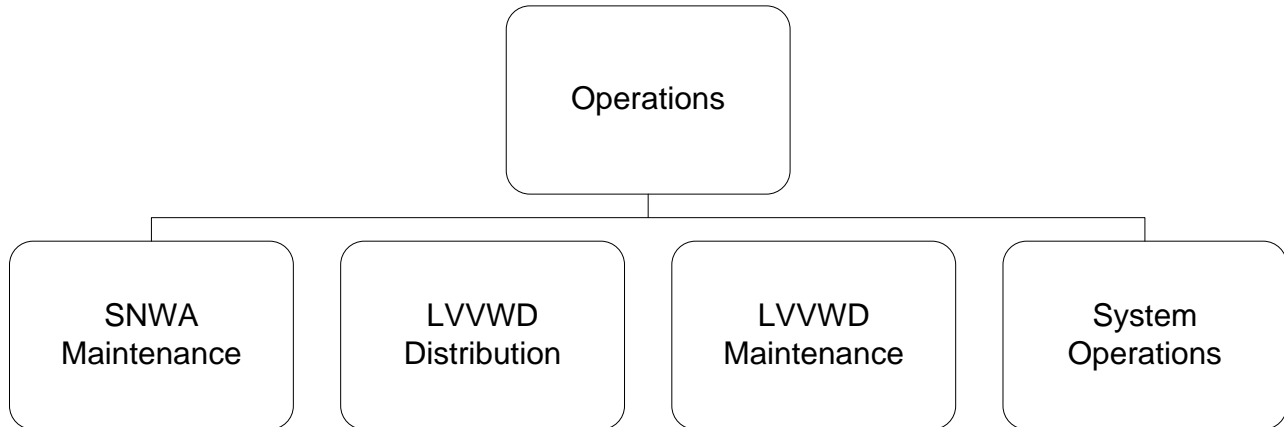
- Maintained a fixed cost energy portfolio for our customers within compliance requirements.
- Secured new 50 year Hoover Dam federal hydropower contracts for the SNWA and LVVWD.
- Created a model to help evaluate the creditworthiness of suppliers of renewable energy products and services.
- Entered into a new contract with Pioneer Solutions to upgrade trade capture system and streamline risk management and reporting processes.
- Increased the efficiency of SSEA financial operations and improved financial reporting through timely book closing.
- Identified information bottlenecks preventing the timely closing of the SSEA books and implemented solutions.
- Migrated member agency book accounting records to Quickbooks and eliminated the need to maintain those records in the Revenue & Expense workbook.
- Successfully completed the accounting records Quickbooks upgrade increasing both efficiency and availability of financial information and began developing systems to facilitate the import of data into Quickbooks.
- Improved internal control points through the addition of new accounting and risk management process reviews.



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## 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 include various pumping stations ranging in size from 7,500 gallon per minute (GPM) to 93,000 GPM and various reservoirs ranging in size from 10 million gallon (MG) to 50 MG, for a total storage of just over 900 MG. The LVVWD has 64 potable wells capable of producing 200 MGD, 31 specially constructed wells dedicated to recharging the groundwater

basin with treated Colorado River water during the winter months, and two recycled water distribution systems that include two reservoirs, five pumping stations and four wells.

The SNWA system consists of 31 pumping plants, 36 ROFCS also referred to as metering sites, 163 miles of large diameter pipeline, and over 60 regulating tanks, reservoirs and surge towers.

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

### Budget Objectives and Highlights

In October 2014, the SNWA/Southern Nevada Water System (SNWS) and LVVWD Operations department's divisions and functions were merged into a single department. Building on this action, the

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department was further reorganized in October 2015 to create a combined Systems Operations division with separate maintenance divisions for the LVVWD and SNWA.

Operations' divisions are responsible for the day-to-day and long term operations of a complex network of pumping stations, reservoirs, rate of flow control stations (ROFCS), sodium hypochlorite facilities, and ground water wells necessary to meet water delivery demands. Wholesale customers of the SNWA include LVVWD, City of Henderson, City of North Las Vegas, Boulder City, Nellis Air Force Base, and the 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, and the Moapa Water

Treatment Plant.

**Equipment and Project Budget.**\_\_The Operations department 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 \$6,837,540 for the fiscal year 2017-18 Budget Plan between the LVVWD and the SNWA.

**Operating Expense Budget.**\_The department's Operating Expenses 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 2017-18 Budget Plan are shown on the following table.

Operations' fiscal year 2017-18 overall budget totals \$66,180,658 between the LVVWD and the SNWA.

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### Expenditures

<b>SNWA Uses</b>	<b>Actual 2015-16</b>	<b>Budget 2016-17</b>	<b>Budget 2017-18</b>
Water	\$ 210,472	\$ 250,000	\$ 250,000
Energy	130,330	200,000	220,000
Materials & Supplies	1,525,534	2,054,000	2,232,500
Maintenance & Repairs	14,799	280,000	430,000
Rental & Leases	140,775	175,000	-
Other Employee Expenses	22,866	78,150	85,400
Other Expenses	1,712	222,600	221,100
Total Operating Expenses	\$ 2,046,487	\$ 3,259,750	\$ 3,439,000
Capital Costs	\$ 1,391,760	\$ 9,553,000	\$ 5,328,000
Payroll Costs	\$ 8,405,794	\$ 7,853,418	\$ 8,753,581
<b>Total Department Expenditures</b>	<b>\$11,844,041</b>	<b>\$20,666,168</b>	<b>\$17,520,581</b>
FTE Positions	42.3	52.4	54.0

## Department Performance

**SNWA Maintenance.** The 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 31 pumping plants, 36 metering sites called rate-of-flow control stations (ROFCS), 163 miles of large

diameter pipeline, and over 60 regulating tanks, reservoirs and surge towers.

The SNWA Maintenance is also responsible for supporting the activities of the Computerized Maintenance Management System (CMMS) which is an integral component of the planning and scheduling activities for the maintenance and repair of all equipment.

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The following table is a comparative listing of the major SNWS water facilities over time:

**1998-2015 Increase In Major Water Facilities**  
**Fiscal Year Ending June 30**

<u>Facility Type</u>	<u>1998</u>	<u>2000</u>	<u>2002</u>	<u>2004</u>	<u>2008</u>	<u>2015</u>
<b>Plant Facilities</b>	1	1	2	2	2	3
<b>Plant Capacity</b>	400	600	750	750	900	1,015
<b>Metering Stations</b>	19	25	30	31	35	36
<b>Pumping Plants</b>	14	21	26	27	28	31
<b>Reservoirs and Forebays</b>	16	23	27	27	28	32
<b>Rechlorination Facilities</b>	-	8	12	12	9	11
<b>Ozone Treatment Facilities</b>	-	-	2	2	2	3
<b>Ozone Treatment Capacity</b>	-	-	750	750	900	1,015
<b>Miles of Pipeline</b>	77	119	136	155	163	163
<b>Acres</b>	122	161	508	508	559	560
<b>Square Feet</b>	138,875	353,403	509,405	509,405	610,133	624,804
<b>Total Facilities</b>	<b>50</b>	<b>78</b>	<b>99</b>	<b>101</b>	<b>104</b>	<b>116</b>

\*\*\*Totals include facilities located at Big Bend Water District, Laughlin, NV

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 pump 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, consisting of two teams, is 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-valley 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

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repair and fabrication of equipment needed to support the mission.

**LVVWD Distribution.** The Distribution division (Distribution) is responsible for maintaining 6,532 miles of pipeline and laterals, 123,080 valves, 395,213 service laterals, 38,570 fire hydrants, and appurtenances comprising the LVVWD's distribution system. In fiscal year 2015-16, Distribution crews completed 8,012 work orders consisting of repairs to pipelines, and repairing and replacing valves and fire hydrants; additionally, replaced 1,982 leaking service laterals. 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 58,350 of these services have been replaced, leaving 21,750 in unreliable service. Distribution also assists other departments, such as Asset Management, by installing cathodic test stations, and Inspections with valve corrections and water quality.

Distribution continues the preventative maintenance valve program which locates, operates, and maintains valves within the distribution system. Distribution located and exercised 10,393 valves in fiscal year 2015-16, 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 backsiphonage condition exists. The backflow technicians are certified by the California/Nevada section of the American Water Works Association (AWWA). They are currently managing approximately 28,000 backflow prevention devices.

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

Field Booster Pump/Valve Repair  
Pump System Repair  
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 valve vaults.

The Pump System Repair section expedites repair of major pumps and motors. This is accomplished through the use of machinists, mechanical, and coating and painting skills of the section members. The section also implements the predictive maintenance tool of vibration analysis on the LVVWD 300+ motors. Another major responsibility is to maintain the natural gas industrial engines at the Campbell Pumping Station and field deployed emergency generators.

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The Electrical section maintains, repairs, and installs electrical equipment typically used as a control voltage for starting electrical motors. This involves providing preventive maintenance as determined by the RCM process and implementing the infrared predictive maintenance technology, knowing and understanding 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 radios and repeater system, spread spectrum radios and repeater system, 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.

**System Operations.** The System Operations division is comprised of the management team, LVVWD System Operations, SNWS System Operations, the Disinfection Reservoir shop, and a 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 an energy analyst. The energy analyst is integral in compiling the monthly water usage for which the SNWA bills its customers.

The LVVWD SCADA Operations section provides around-the-clock monitoring and control of the all retail water distribution systems using the SCADA computer system. Daily tasks include coordinating water deliveries from the SNWS and operating pumps and wells to maintain reservoir levels and water system pressure. This section remains instrumental in the continuing development of an Energy Water Quality Management System (EWQMS) module designed to further improve pumping efficiencies and distribution system water quality.

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 and power orders from the LVVWD. They also operate pumps and valves at all pump 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 rate-of-flow control stations, where the water is metered for billing. The SCADA system data is used to develop trends,

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reports and statistical information required for effective system operation.

The Disinfection and Reservoir section performs maintenance on equipment associated with the disinfection systems used to maintain a safe residual in the system. They are also responsible for reservoir structure maintenance and provide extensive support to the maintenance groups for valve and mixer maintenance.

The Small Systems section is staffed with two rural systems operators (RSO) and a superintendent. The RSOs are responsible for maintenance on the water system equipment at five locations throughout Clark County. The superintendent is aligning the Cross Departmental Teams (CDT) under his chairmanship to ensure operational, community growth, and system finances remain transparent to all work groups supporting the small systems.

## **Strategic Plan Objectives and Accomplishments**

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

### **2017-18 Performance Objectives**

- Replace/upgrade critical infrastructure components that have reached the end of their useful lives and retire assets that are no longer needed.
- Continue to collaborate with Infrastructure Management to complete SNWS PAC and LVVWD DNP3 program-mable logic controller upgrades.
- Continue to identify best operational and maintenance practices of various

divisions and implement them as the standard practice.

- Continue to collaborate with Infrastructure Management to complete an upgrade to the LVVWD SCADA system.
- Partner with Information Technology to renew the Energy Water Quality Management System software so it is supportable and useable with advanced software and current server systems.
- Remain active and involved in major contracts involving new pump stations, reservoirs, wells, and other system additions or rehabilitations. After several years of no major projects, implementing advances in technology will need to be a team effort.
- Continue to work in partnership with various departments to identify and correct causes of water losses. These could be SCADA related, maintenance related, or leak related. The goal is to return to 1 percent or less total losses.

### **2016-17 Major Accomplishments**

- Identified the steps and equipment needed to convert the Boulder City Raw Water line to deliver treated water to Boulder City. The process had become lost due to retirements over the years and now the written plan is in place for all to refer to and use, if or when it is necessary.
- Teamed with Maintenance Engineering and Asset Management to install weko seals at Hacienda Rate of Flow and Forebay. Repairs fixed an estimated 500,000 gallons per day water leak from five piping joints.

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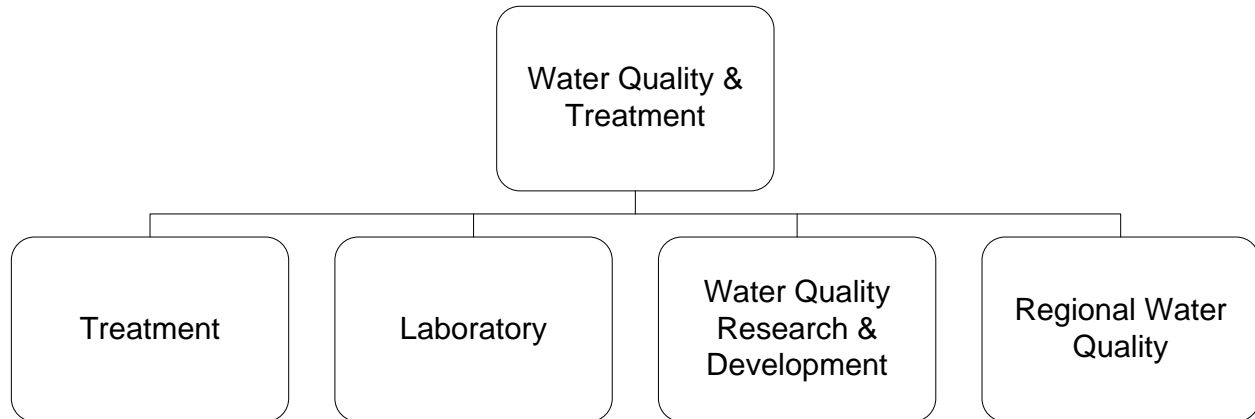
- Use of groundwater wells to meet system demands is limited by the 40,760 af allocation. This year's pumping came in at 40,756 af.
- Joined forces with Human Resources to develop an Operator Trainee job description. This allowed for training of Limited Term Employees in preparation for future retirements.
- The LVVWD system grew by one pumping station, one storage tank, one recycled water system customer, and one intertie with the City of Henderson. Operational methods were converted to programming by Maintenance Engineering and all systems were successfully started up with no major issues.
- Executed 29 major SNWS outages in support of maintenance, engineering, or construction projects. Three outages were to tie in the L3PS discharge lines. Additionally, there was an unplanned outage for the repair of a four-million- gallons per day water leak on an AVAR line at Butterfly Valve Vault 5.



## WATER QUALITY & TREATMENT

Level: 4500

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### Mission

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

### Department Description

Presently, the functions under the Water Quality and Treatment (WQ&T) department include: Treatment, Laboratory, Water Quality Research and Development (R&D), 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, all of the divisions in 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 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 coordinating water quality in the SNWA source waters. All of these efforts are in support of the primary responsibility for the department.

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### Expenditures

LVVWD Uses	Actual 2015-16	Budget 2016-17	Budget 2017-18
Energy	\$ 71,278	\$ 100,000	\$ 80,000
Materials & Supplies	3,954,008	4,534,100	4,318,100
Maintenance & Repairs	897,925	1,086,000	1,115,000
Other Employee Expenses	507,385	642,162	679,950
Other Expenses	(122,798)	1,120,310	854,010
Total Operating Expenses	\$ 5,307,798	\$ 7,482,572	\$ 7,047,060
Capital Costs	\$ 29,693	\$ 8,166,612	\$16,965,000
Payroll Costs	\$ 14,650,910	\$15,496,328	\$15,587,248
<b>Total Department Expenditures</b>	<b>\$ 19,988,401</b>	<b>\$31,145,512</b>	<b>\$39,599,308</b>
FTE Positions	91.0	89.3	85.8

## Department Performance

controls all water treatment, chemical dosages, filter backwashing, and water quality. Treatment plant operators have direct responsibility for the operation of the water treatment facilities. The operator must comply with the SDWA, the Surface Water Treatment Rule and optimize treatment while minimizing cost.

Each operator must be certified for water treatment by the Nevada Division of Environmental Protection (NDEP) to the appropriate level for their responsibilities. The water treatment process consists of ozonation for disinfection, followed by

flocculation and filtration, as well as corrosion control, fluoridation and chlorination.

**Laboratory.** The Laboratory division is responsible for routine water quality monitoring, testing, and reporting. The sections within the Laboratory include Chemistry, Microbiology, Monitoring, and Laboratory Services. 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.

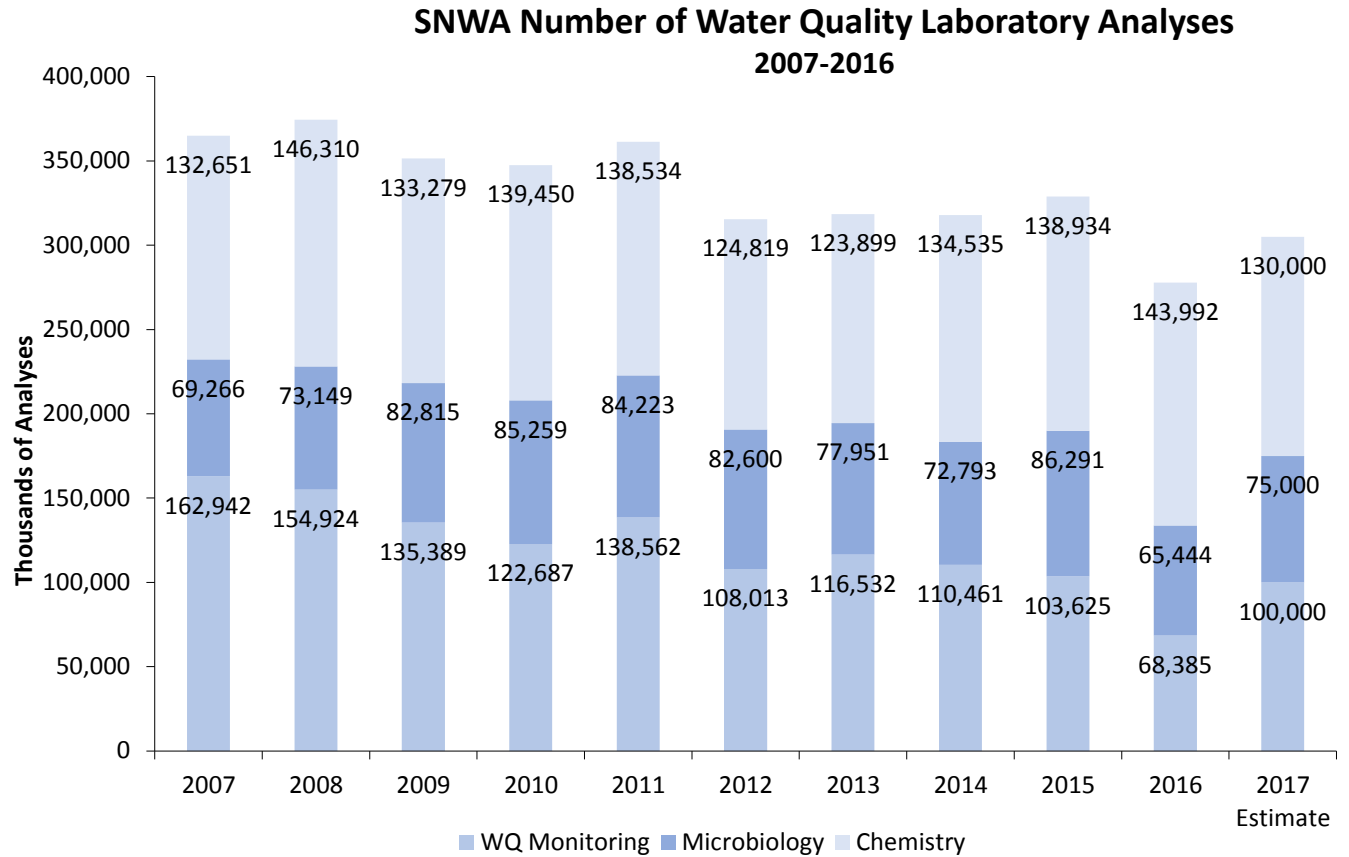
Analyses associated with the SDWA compliance testing are the highest priority in the Laboratory. The SDWA requires each

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public water system to perform or have performed a comprehensive set of analyses on its delivered water. The Laboratory Services section is responsible for scheduling all the routine and non-routine sampling events and receiving these samples into the laboratory. In addition, staff in this section serve as the primary point of contact for all Laboratory customers, including the private laboratories contracted for analytical services. The Monitoring section is responsible for collecting samples in the distribution systems of the SNWA purveyors. The Monitoring, Chemistry and Microbiology sections subsequently perform a variety of analyses on these samples. In addition, the Laboratory completed all the 2016 SDWA monitoring requirements for the 14 Clark County public water systems it serves.

The Laboratory conducts numerous analyses on samples from Lake Mead and its sources. Results of this work provide a general indication of the quality of water that will be received by the regional water treatment plants. The Laboratory also provides analytical support to the R&D division pilot plant and grant-funded research projects. With 38 employees, approximately 29,000 samples were collected and 277,821 analyses performed in 2016. The chart below presents the total number of laboratory analyses through calendar years 2007-2016 (2017 estimate). Groundwater sampling is not required every year. The wells were only sampled for nitrates in 2016; hence, the 2016 Laboratory Analyses were lower. (See chart below).

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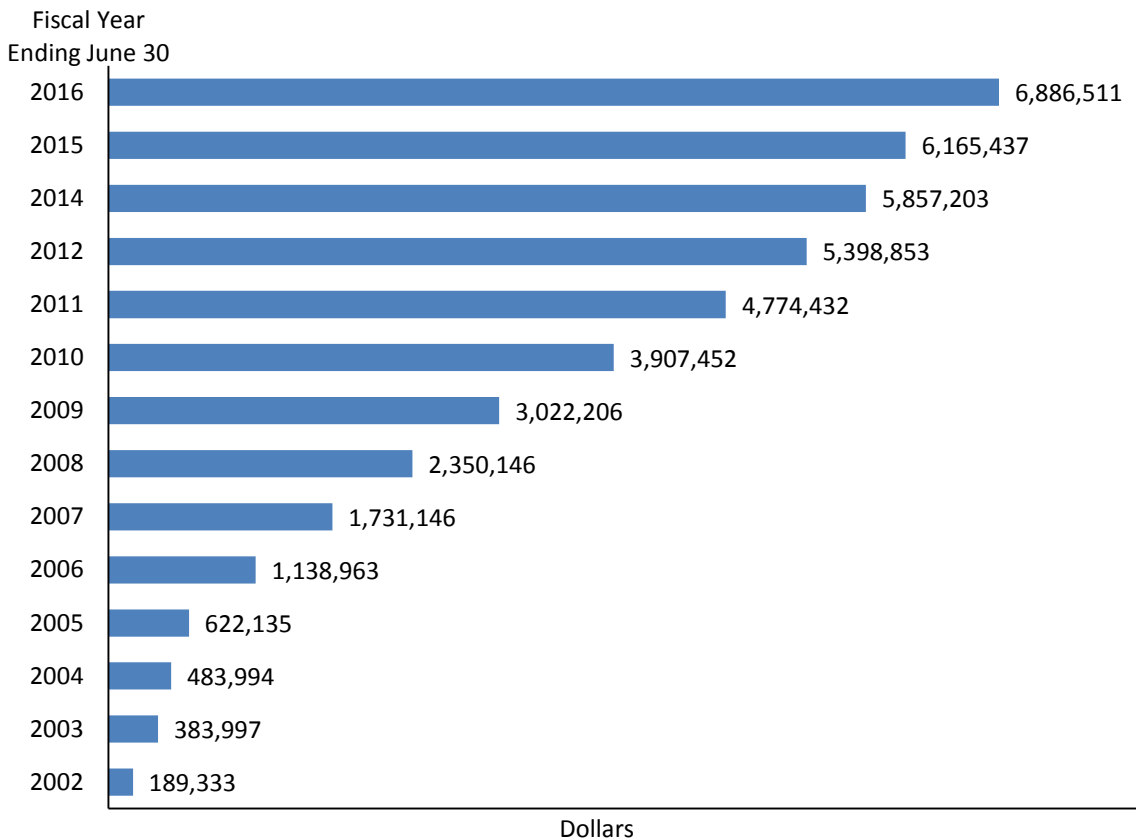
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**Water Quality Research and Development.**

The R&D division is involved in cutting-edge investigations of low-level environmental contaminants and water treatment plant processes. The low-level environmental contaminant research is generally in support of existing or future compliance monitoring requirements mandated by the U.S. Environmental Protection Agency (EPA) under the SDWA. The water treatment plant process research involves bench or pilot plant investigations to optimize existing treatment

or evaluate alternative treatment technologies to meet future regulatory requirements. The R&D division is comprised of Research and Development, Analytical Research and Development, and Applied Water Quality Research sections. The chart below represents the cumulative amount of water quality research funding received from outside sources through calendar years 2002 - 2016.

**SNWA Water Quality Research & Development**  
**2002-2016 Cumulative External Funding Received**



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**Regional Water Quality.** The Regional Water Quality division is responsible for coordination of regional water quality issues within the SNWA and other local, state, and federal agencies. Another essential function is to collect data in the Muddy and Virgin Rivers and the Las Vegas Wash, and to compile, validate, and analyze 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 (Database) available at: [www.snwawatershed.org/members](http://www.snwawatershed.org/members).

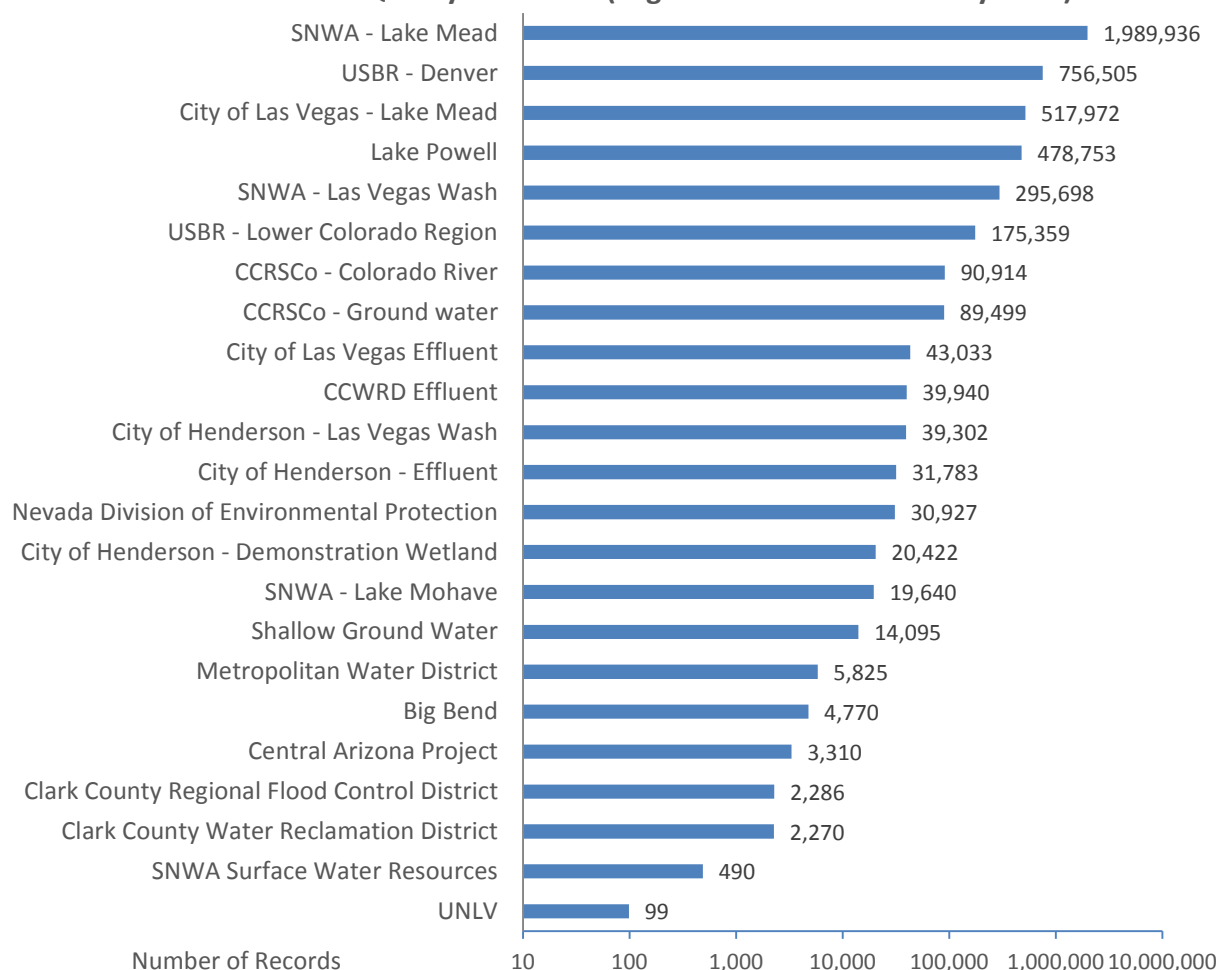
Data is also analyzed to assess impacts of nutrients, quagga mussels, perchlorate, total dissolved solids, selenium, Microcystis, and other contaminants on the water quality in Lake Mead and the drinking water supply. The division continued its efforts to integrate data and understanding of Colorado River dynamics upstream of Lake Mead including Lake Powell, the Colorado River through Grand Canyon, and releases during High Flow Experiments.

In 2016-17, the Regional Water Quality division completed a second grant from the Clark County Water Reclamation District to develop a shallow groundwater database, to conduct monitoring of the shallow groundwater, to assess the gaps, and to make recommendations for future monitoring. Additionally, a draft Sanitary Survey of the watershed was completed for submission to the NDEP to update the 2012 survey. The division continued to coordinate the Lake Mead Monitoring and Ecosystem and the Interagency Monitoring Workgroups.

The division actively seeks out new sources of data for the Database. Water quality information can be found in the Colorado River from Lake Powell to the international border with Mexico, which makes the Database a truly regional database. There are currently 4,652,828 records in the Database. The following chart is a summary of the data that has been uploaded by each agency into the Database.

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**SNWA Number of Records in Lower Colorado River  
Water Quality Database (Logarithmic Scale - February 2016)**



**Strategic Plan Objectives and Accomplishments**

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

**2017-18 Performance Objectives**

- Continue Operator-in-Training program.

- Continue to refurbish AMSWTF filters.
- Continue to refurbish AMSWTF Fluorosilicic Acid (fluoride) storage system.
- Refurbish RMWTF Sodium Hypochlorite manufacturing system and reconfigure with several dilution options.
- Work closely with IT to complete the installation and implementation of the new Laboratory Information

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Management System (LIMS) to improve sample scheduling and tracking of water quality monitoring required under the SDWA for the 14 Public Water Systems (PWSs) served by the Laboratory.

- Execute the Lake Mead Model to predict conditions in the lake that could result in increased sediment loading to the drinking water intakes. This effort will incorporate conditions predicted by water managers, potential long term shifts due to climate change, and changes in sediment loading resulting from upstream management activities.
- Continue to develop Lake Mead on-line water quality buoy network.

#### **2016-17 Major Accomplishments**

- Completed modifications to the fluoride system at AMSWTF to improve reliability and safety.
- Began Programmable Area Controller (PAC) replacements at RMWTF.
- Installation of on-line TTHM analyzers.
- Completed all SDWA monitoring requirements for the SNWA, LVVWD, North Las Vegas (NLV), City of Henderson (COH), City of Boulder City (CBC), Nellis Air Force Base, Coyote Spring Valley – Moapa (CSVM), BBWD, Blue Diamond, Kyle Canyon, Jean, Searchlight, and Kapex with no monitoring violations.
- Completed the second round of *Cryptosporidium* monitoring for the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) for the SNWA and COH treatment plants.

- Limnology Modeling Project Manager assumed primary oversight and operation of the Lake Mead Model and is working to develop the SNWA's in-house modeling capabilities for the lake. The SNWA migrated the existing model parameterization to a new model platform, and has integrated and improved model drivers and planned future modeling activities.

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

#### **2017-18 Performance Objectives**

- Complete BBWD Optimization Study.
- Continue serving the International Ozone Association – Pan American Group as President (Eric Wert) and Administrative Communications Officer (Jen Fuel).
- Continue support of various ongoing research projects by providing quality data in a timely manner, including extensive lake and sources monitoring, complex storage/distribution system THM monitoring, as well as ad-hoc water quality monitoring requests. Provide outstanding customer service to external customers via water quality investigations by responding to water quality complaints in a timely manner, teaching customers about water quality and what to look for, and leaving them feeling that their concerns matter and that we want to help them resolve their problem.
- Collaborate with COH, NLV, and CBC to prepare and submit the fourth Unregulated Contaminant Monitoring



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Rule (UCMR4) monitoring plans early.

### **2016-17 Major Accomplishments**

- Enhanced payment options were made available to BBWD customers.
- Worked with the Hydrologic Analysis & Modeling Division to provide pharmaceutical and personal care product analysis to understand nitrate occurrence in District wells.
- Provided support service and guidance to the International Ozone Association resulting in a surplus of \$70,000 from the 2016 IOA-PAG Conference in Las Vegas.
- Completed and submitted Water Quality Monitoring Plans (WQMPs) for 14 PWSs served by the Water Quality Laboratory.
- Regional Water Quality coordinated and facilitated meetings of the Lower Colorado River Water Quality Partnership and the Lake Mead Monitoring and Ecosystem Workgroup to meet the information dissemination needs of our partners.
- Regional Water Quality worked with both internal and external partners to finalize the Shallow Groundwater Study of the Las Vegas.
- Fully supported the WaterStart Program.

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

### **2017-18 Performance Objectives**

- Continue rehabilitation of filters at AMSWTF.
- Evaluate performance of the new and existing filter media design to remove high turbidity at pilot-scale.
- Continue rehabilitation of RMWTF Sodium Hypochlorite system and install new style generator.
- Apply for two US Bureau of Reclamation grants through their WaterSMART Drought Response Program: 1) “Building long-term resiliency to drought through real-time water quality monitoring and forecast modeling”, and 2) “Building long-term resiliency to drought by employing riverbank filtration to improve water quality”.
- Regional Water Quality will continue to investigate the possible linkages between environmental changes driven by climate and the occurrence of Harmful Algal Blooms.
- Begin process for constructing a well at Big Bend to bring surface water into the treatment plant.

### **2016-17 Major Accomplishments**

- Completed rehabilitation of Filters 1 and 2 at AMSWTF.
- Coordinated several plant shutdowns in support of L3PS aqueduct construction and filter rehabilitation projects.
- Completed a US Bureau of Reclamation grant through their WaterSMART Drought Response Program: “Lake Mead water quality monitoring to mitigate impacts caused by the drought”, resulting in the completion of a comprehensive on-line raw water quality monitoring station.

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- Participated in project kickoff meeting for Water Research Foundation Project 4636 titled “An Integrated Modeling and Decision Framework to Evaluate Adaptation Strategies for Sustainable Drinking Water Utility Management Under Drought and Climate Change”.
- Published the following journal article: Brouillard, B., Dickenson, E., Mikkelsen, K., Sharp, J., “Water quality following extensive beetle-induced tree mortality: Interplay of aromatic carbon loading, disinfection byproducts, and hydrologic drivers”, *Science of the Total Environment*. 572 (2016) 649-659.  
<http://dx.doi.org/10.1016/j.scitotenv.2016.06.106>.
- The Laboratory implemented the Cyanotoxin Automated Assay System (CAAS) for the monitoring of total and free microcystin levels in our source and finish waters.

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

**2017-18 Performance Objectives**

- Evaluate the use of ATP and flow cytometry for early detection of harmful algal blooms.
- Continue work on externally funded projects funded by the Water Environment & Reuse Foundation (#TIRR2R15, #16-02), U.S. EPA (#83582301), USDA, the State of Alaska, and the City of Altamonte Springs, Florida.
- The Laboratory will implement an electronic logbook manager on

Laboratory tablets which will eliminate the purchase, storage, and destruction of paper logbooks.

- Work with Partner and Stakeholder Agencies to streamline and, where possible, increase the use of technological advancements in water quality sampling.

**2016-17 Major Accomplishments**

- Installed copper sulfate injection system for biological control of pilot plant and raw water sampling pipe.
- Developed methodology for the analysis of total microcystins in water by conversion to 3-methoxy-2methyl-4phenylbutyric acid followed by LC-MS/MS.
- The Laboratory has continued to support R&D studies involving Assimilable Organic Carbon (AOC) removal using an innovative, state-of-the-art, automated analytical technique.
- Regional Water Quality continues to lead the Interagency Monitoring and Sampling Workgroup to ensure and verify the performance of sampling instruments used on Lake Mead and the Las Vegas Wash.
- Grant proposal was submitted to the US Bureau of Reclamation WaterSMART program to fund additional automated water quality sampling platforms.
- Commenced with new standardization of water treatment plant maintenance.

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

**2017-18 Performance Objectives**

- Continue to revise and update preventive maintenance program.
- Enhance cross-training efforts of staff at RMWTF and AMSWTF.
- Pursue externally funded research grants from Water Research Foundation (e.g., Tailored Collaboration Project on Disinfection Framework for Biofilters), U.S. EPA, National Science Foundation, Water Environment & Reuse Foundation, and the US Bureau of Reclamation.
- Continue collaborating with sampling partners to collect data on Lakes Mead and Mohave in order to ensure efficiency of time and financial resources while collecting sufficient information to protect the resource.

**2016-17 Major Accomplishments**

- Implemented paperless work order process at both AMSWTF and RMWTF.
- Began training Electrical/Ronics Systems Technician II at RMWTF in anticipation of staff retirements.
- Converted one Electrical/Ronics Systems Technician II position to a Mechanical Systems Technician II to better balance workloads and resources.
- Received over \$500,000 from external grants.
- Regional Water Quality has continued to partner with US Bureau of

Reclamation, Lake Mead National Recreation Area, and the City of Las Vegas to share resources and to combine efforts where possible. This allows for broader and more efficient sampling of Lakes Mead and Mohave to the benefit of the SNWA and the other agencies.

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

**2017-18 Performance Objectives**

- Investigate AWWA performance awards at BBWD.
- Continue presenting scientific research at conferences and publishing on research projects.
- Coordinate and complete all required lead and copper sampling for the small water systems administered by the LVVWD: Blue Diamond, Kyle Canyon, Jean, and Searchlight.
- Increase the participation of the Limnology Modeling Project Manager in regional water quality groups.
- Continue cross-training of employees to ensure performance and to enable skills development.

**2016-17 Major Accomplishments**

- Received AWWA Partnership for Safe Water President's Award at both AMSWTF and RMWTF.
- Published nine articles in scientific journals.
- Presented three papers at 2016 ACS Fall Conference, four papers at IOA

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conference, two papers at 2016 WEFTEC, 13 papers at the 2016 AWWA WQTC Conference, one paper at 2016 Tri-State Seminar, five papers at the 2017 ACS Spring Conference, and two papers at the 2017 AWWA ACE Conference.

- Coordinated and completed all required lead and copper sampling for the LVVWD.
- The Regional Water Quality division continues to be called upon for expert opinions and guidance for a wide range of lake and river water quality issues in the Las Vegas Valley and throughout the Lower Colorado River Basin.

# SECTION 6

## CAPITAL PLANS

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## **Capital Budget**

The Southern Nevada Water Authority (SNWA) maintains a long-range valley-wide facility planning process to determine the type, size and location of water distribution and treatment facilities needed to meet the water services 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 construction program for 2017-18, totaling \$220.6 million, consists of continuing construction of the new Low Lake Level Pumping Station at Lake Mead, groundwater development, 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 over \$4.9 million consists of vehicles, information technology equipment, water works and diverse industrial equipment.

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

For the SNWA 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 require little or no 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

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assets to the SNWA's water system is not easily quantified.

The tables below show a listing of all the capital equipment and specific active design and construction projects included in the SNWA's capital expenditures for the next fiscal year.



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**SNWA: CAPITAL BUDGET 2017-18**

**CAPITAL EQUIPMENT**

**2300 - Information Technology:**

Internet Router	8,000
IronPort Replacement	16,000
Gig-Ring Switches	18,000
KVM Switches	28,000
EMC Data Domain Storage Growth	30,000
Storage Tek Tape Drives	32,000
EMC Isilon Storage Growth	50,000
Network Closet Switches	80,000
General Infrastructure	100,000
Corporate Servers	104,000
Oracle Database Firewall Software	110,400

**3600 - Resources & Facilities:**

1 Each Electric Cart with two seats, load deck & ladder rack	12,000
1 Each 26 Foot Flatbed Goose Neck Trailer	14,000
Fuel Pump Dispenser Replacement at AMSWTF	16,000
Diesel Exhaust Fluid (DEF) Dispensing Equipment	17,000
Tool Box and Tool Set for the RMWTF Fleet Garage	18,000
1 Each 25,000 lb. Capacity Trailer with Air Brakes	25,000
Mid Size Crew Cab Short Bed 4X4 Pickup	35,000
1/2 Ton Crew Cab, short Bex 4X4 with Camper Shell	40,000
Regular cab, long bed, 4X4 pickup	42,000
1 Each Massey Ferguson 1386 Pull Type Swather	50,000
1 Each 18-20 foot Pull type Heavy Disk	55,000
2750 GPM Diesel Driven Pump Trailer Mounted	72,000
2 Each 1 Ton Regular Cab Utility SRW Truck	80,000
1 Each Compact Track Loader JD 333G or equal	90,000
1 lot of 7 replacement pieces of equipment	93,000

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1 Each Vac. Trailer W/Pressure Washer and Tool Circuit	100,000
GPS/Telematics Equipment and Setup	100,000
1 Ton Utility Truck W/Crane and Generator	165,000
Replace Defective SNWA HVAC Units	200,000
2 Each 19,500 lb. Utility Trucks with Cranes & Welders	430,000
1 lot of 7 Replacement vehicles used at the SNWA Ranches	439,000
1 Each 55,000 lb. Capacity Fork Lift	450,000
Livestock Purchases	500,000
1 Lot of 14 Replacement vehicles	516,000
1 lot of 7 pieces of replacement equipment Ranch use	790,000

<b>TOTAL CAPITAL EQUIPMENT</b>	<b>\$ 4,925,400</b>
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## **CAPITAL PROJECTS**

### **2300 - Information Technology:**

Clark, Lincoln, and White Pine Counties Groundwater Development	435,110
Water Resource Acquisition and Development	435,110
Workday HCM	531,000
Water Resource Acquisition and Development	535,574
Enterprise Content Management System	540,000
Clark, Lincoln, and White Pine Counties Groundwater Development	608,305
Purchase and Budget System Consolidation	864,000

### **3400 - Engineering:**

Clark, Lincoln, and White Pine Counties Groundwater Development	47,250
Archery Weir Revegetation	79,421
AMSWTF Tortoise Fencing	90,000
Flood Repair Allocation	90,000
Silver Bowl Revegetation	104,990
Three Kids Replacement Revegetation	128,273
AMS Asphalt Repair and Resurface - Phase II	180,000
BOR Materials & Equipment	270,000
RM Warehouse Expansion	288,000
Tropicana Outfall Weir	6,300,000
Sunrise Mountain Weir & Historic Lateral Weir Expansion	9,914,850
Lake Mead Intake No. 3	118,290,977

### **3600 - Resources & Facilities:**

Upgrade AMSWTF Admin. Bldg North Soffitt Insulation	18,000
AMS Exterior Renovation	22,500

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SNWA AMSWTF Restoration Project	28,540
SNWA Tortoise Fence Installation	45,000
SNWA Water Treatment Facility Roadway Lighting	90,000
AMS Wing Mold and Rust Remediation (eng currently engaged)	90,000
Water Resource Acquisition and Development	100,800
AMS Entry Gate Upgrade	108,000
Entry Gate for Foothill Complex	108,000
AMS Warehouse Office Reconfiguration	135,000
SNWA Energy Management System Expansion	135,000
SNWA Paint Pump Stations	148,500
AMSWTF Miscellaneous Facilities Improvements	153,000
SNWA Pump Train Maintenance (Painting)	153,000
Clark, Lincoln, and White Pine Counties Groundwater Development	156,616
Hay Barn #3	211,500
Hacienda Pump Station Abatement and Painting	225,000
Clark, Lincoln, and White Pine Counties Groundwater Development	440,100
Clark, Lincoln, and White Pine Counties Groundwater Development	1,131,552
Water Resource Acquisition and Development	1,269,720
Water Resource Acquisition and Development	1,436,967
Water Resource Acquisition and Development	2,459,700

**3700 - Infrastructure:**

AMS Communications Closet Rehabs (MEPS 7905)	27,000
Pumping Station 5 Site - PP5 Forebay Drain Valve Replacement	36,000
AMS Return Wash Water Reduction	45,000
Multi-Site - Forebay Hatch Repairs - PP3, PP4, PP5, PP7 Forebays and Reg Tank 6	45,000
District Service Area - Flow Transmitter Upgrade Project	45,000
Twin Lakes Pumping Station Site - Motor Control Center Upgrade Project	67,500
Multi-site - Bilco Hatch Upgrade Project for SNWS Forebays and Reservoirs (MEPS-7642)	90,000
AMSWTF Site - Decant Valve Operability and Maintenance Issues (MEPS-7617)	90,000
AMSWTF Site - Pilot Plant and Softened Water Waste Pump addition (MEPS-7590)	90,000
Multi-site - Redundent Power to Comms Battery Charger and PLC (MEPS-7363)	90,000
AMSWTF Site - Drying Bed Influent Valve Access Vaults	90,000
Sloan Pumping Station Foundation Repairs	90,000
Flamingo ROFC Fence	90,000
AMSWTF Site - Auxiliary Chlorine Scrubber	112,500
PP1A Flooring	112,500
MRV DWDM Upgrade LVVWD to Flamingo ROFCS (MEPS 7902)	121,500
R-8 Equestrian Pump Replacement	135,000
Simmons ROFCS Pipeline Repairs	135,000
RMWTF Cable Project (MEPS 7904) 	144,000
AMS SCADA Room Halon System (MEPS-7753)	180,000
RMWTF Site - Lab Flooring Replacement	180,000

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SNWS - Multi-site - Emerson Evergreen - Server Hardware upgrade (MEPS 7441)	180,000
SNWS - Ovation SCADA Server Virtualization (MEPS 7870)	180,000
Foothills Site Valve Vaults for BFV5, 6, 7, 10 ladder access project (MEPS-7786)	202,500
Stage I and II Facilities PLC Upgrades	216,000
SNWS - Replace PLC 5 Processors and Remote Racks From Production Sites (MEPS 7867)	225,000
AMSWTF Site - Back-up VPSA Blower Project (MEPS-7664)	270,000
AMSWTF Site - Treatment Chemical Storage Tank Repairs	270,000
Control System Improvements	382,500
South Valley Lateral Actuator Replacement Project (MEPS-7802)	450,000
AMSWTF Replace MCC BO1, B03, B04, Swbd X010, Swbd X011 (MEPS-7781)	675,000
PS 1C, 2C, BPS1A, and BPS2 Variable Frequency Drive Enhancements	810,000

**3800 - Water Resources:**

Interim Colorado River Supplies	21,600
Virgin and Muddy Rivers Water Resource Acquisition	522,000
Hydrologic and Water-Quality Monitoring and Assessment of Las Vegas Valley Groundwater	913,500
Water Resource Acquisition and Development	1,143,000
Clark, Lincoln, and White Pine Counties Groundwater Development	2,684,615
Water Resource Acquisition and Development	3,071,155
Virgin and Muddy Rivers Water Resource Acquisition	5,066,715
Interim Colorado River Supplies	9,900,000
Water Resource Acquisition and Development	12,833,755

**3900 - Energy Management:**

Eastern Nevada Transmission Project - Design/Engineering	7,920,000
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**4100 - Operations:**

Electrical Equipment Inspection Windows	45,000
5S006 - Recoat Pump Casings at BPS1A and BPS2	63,000
PS 1A, 2A, 1B and 2B Pump Repairs and Flow Meter Installation	90,000
Sleeve and Miscellaneous Valve Repairs	270,000
Machine Shop Equipment	337,500
"A" Lateral Motor Refurbishment	360,000
Motor Refurbishment (originally 6S027)	450,000
Pumping Station Electrical Transformer Repairs	810,000
Sleeve Valve Installation at Galleria, Simmons, Carlton, and Gibson ROFC Stations	1,260,000
5S013 - Stage 2 ROFC Valve & Venturi Flow Control Unit Replacements	1,642,500

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**4500 - Water Quality & Treatment:**

Microfiltration Plant Renovation	90,000
R&D Necessary Unforeseen Projects	180,000
Ozone System Related Needs (originally 5S017)	225,000
Innovation Projects	450,000
SNWA Necessary Unforeseen Projects (originally 6S032)	450,000
Sampling Buoys on Lake Mead	540,000
Sodium Hypochlorite System Upgrades at RMWTF	6,750,000
AMSWTF Filter Improvements	8,280,000

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<b>TOTAL CAPITAL PROJECTS</b>	<b>\$220,645,696</b>
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<b>TOTAL CAPITAL BUDGET</b>	<b>\$225,571,096</b>
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# SECTION 7

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## **Debt Management Policy**

In Accordance With  
NRS 350.013



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## Debt Management Policy

### NRS 350.013 Subsection 1(c)

#### Introduction

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

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

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

- The SNWA can request the Las Vegas Valley Water District (LVVWD) to sell debt on its behalf. Standard & Poor's

rates the LVVWD bonds "AA", and Moody's Investors Service rates them at "Aa1". This rating makes the LVVWD's bonds "high investment grade". This option has generally been used to sell most debt.

- The SNWA can sell its bonds to the State of Nevada's (State) Bond Bank, which then sells the State general obligation bonds. The 1997 Nevada Legislature made this option available. Standard & Poor's rates State bonds "AA", and Moody's Investors Service rates them at "Aa2". This rating classifies the State's bonds as "high investment grade". This option has generally been used to sell long term fixed rate debt.
- The SNWA can sell its bonds to the Clark County (County) Bond Bank, which can then sell County general obligation bonds. The 1999 Nevada Legislature made this option available. Standard & Poor's rates County bonds "AA+", and Moody's Investors Service rates them at "Aa1". This rating classifies the County bonds as "high investment grade". This option has generally been used to sell long term fixed rate debt.
- The SNWA can issue debt in its own name. However, the SNWA is unable to make a general obligation (property tax) pledge, therefore interest rates 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

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to use the options listed above to issue debt.

The SNWA Major Construction and Capital Plan (MCCP) outlines the phased construction plan developed to meet the growing demands for water in the Las Vegas Valley. Originally the MCCP was provided in two documents. The first was the Capital Improvements Plan (CIP), first produced in December 1995 and updated sixteen times hence. This plan detailed treatment facilities and intake systems needed to expand the SNWS capacity to 900 million gallons per day (MGD). The second was called the MCCP and covered other construction and capital projects not included in the CIP. The original MCCP was first published in June 2002. In February 2010, the Board of Directors of SNWA (the Board) approved the merger of the two capital plans into a new MCCP. The MCCP is reviewed semi-annually and is presented to the Board as determined appropriate by the SNWS work group. The most recent update was adopted by the Board in May 2015. The SNWA anticipates using debt to fund the projects in the MCCP.

The Las Vegas Wash Capital Improvements Plan (LVWCIP) covers projects the SNWA is building in the Las Vegas Wash. The LVWCIP is updated annually with the most recent update occurring in July 2015. The SNWA intends to use an inter account loan from the New Expansion Debt Service sub fund, as well as grant proceeds, to pay for these projects. Four percent of the SNWA's overall sales tax proceeds received are dedicated to the Las Vegas Wash and will be used to make debt service payments on this inter account loan.

This document is not intended to review the

SNWA's total financial position. Analysis of the SNWA's debt position is important, as growth in the County has 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. The facility improvements described by the MCCP are intended to ultimately provide a total water delivery system (including the current operating system) of 900 MGD gallons per day. 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 and a five-year capital improvement plan:

*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:*

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

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

*(c) A written statement of the debt management policy of the municipality, which must include, without limitation:*

*(1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt;*

*(2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit;*

*(3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in this State;*

*(4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality;*

*(5) Policy regarding the manner in which the municipality expects to sell its debt;*

*(6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and*

*(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal*

*years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (d), if those costs and revenues are expected to affect the property tax rate.*

*(d) Either:*

*(1) Its plan for capital improvement for the ensuing 5 fiscal years, which must include any contemplated issuance of general obligation debt during this period and the sources of money projected to be available to pay the debt; or*

*(2) A statement indicating that no changes are contemplated in its plan for capital improvement for the ensuing 5 fiscal years.*

*(e) A statement containing the name, title, mailing address and telephone number of the chief financial officer of the municipality.*

*(2) The governing body of a municipality may combine a statement or plan required by subsection 1 with the corresponding statement or plan of another municipality if both municipalities have the same governing body or the governing bodies of both municipalities agree to such a combination.*

*(3) Except as otherwise provided in subsection 4, the governing body of each municipality shall update all statements and plans required by subsection 1 not less frequently than once each fiscal year.*

*(4) In a county whose population is 100,000 or more, the governing body of each municipality shall update all statements and plans required by subsection 1 not less often than once each fiscal year 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.*

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## **Affordability of Debt**

Response to NRS 350.013 1(c):

*(1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and*

*(6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt*

### **Existing, Authorized and Proposed General Obligation/Revenue Supported Bond Indebtedness Issued by the Las Vegas Valley Water District ("LVVWD Bonds").**

The SNWA's Bonds issued in the name of the LVVWD constitute direct and general obligations of the LVVWD, and the full faith and credit of the LVVWD is pledged to the payment of principal and interest due thereon, subject to Nevada constitutional and statutory limitations on the aggregate amount of ad valorem taxes. The LVVWD Bonds are payable from general ad-valorem taxes on all taxable property in the LVVWD service area, and are additionally secured by certain pledged revenues as set forth in Section 4, Chapter 631, Statutes of Nevada 1993. The 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. Beginning in 1999, proceeds received by the SNWA from the County ¼ cent sales tax for water and wastewater infrastructure are also pledged revenues.

In any year in which the total property taxes levied within the LVVWD's service area by all applicable taxing units (e.g. the State, Clark County, the Clark County School District, any city, or any special district including the LVVWD) exceed such property tax limitations, the reduction to be made by those units must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness.

Nevada statutes provide that no act concerning the LVVWD Bonds or their security may be repealed, amended, or modified in such a manner as to adversely impair the Bonds or their security until all of the Bonds have been discharged in full, or provision for their payment and redemption has been fully made.

The payment of the LVVWD Bonds is not secured by an encumbrance, mortgage or other pledge of property of the LVVWD or the SNWA, and no property shall be liable to be forfeited or taken in payment of the LVVWD Bonds; provided the payment of the Bonds is secured by the proceeds of general (ad valorem) taxes and the LVVWD's and the SNWA's revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act provides no recourse shall be 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

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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.

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

**Proposed Future SNWA Water Bonds.** The SNWA does not intend to issue new money debt in fiscal year 2017-18. However, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

**Bonded Indebtedness.** The first table on General Obligation Indebtedness shows the SNWA's outstanding LVVWD Bonds as of June 30, 2017.

**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. Appendix 4 illustrates the SNWA's historic pledged revenues and debt service coverage.

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**Issued By The Las Vegas Valley Water District**  
As of June 30, 2017

	Issue Date	Original Amount	Outstanding Amount
LVVWD Commercial Paper	Mar-04	\$ 400,000,000	\$ 400,000,000
LVVWD 2008B Bonds	Feb-08	171,720,000	97,470,000
LVVWD 2009A Bonds	Aug-09	90,000,000	90,000,000
LVVWD 2009B Bonds	Aug-09	10,000,000	835,000
LVVWD 2009D Bonds	Dec-09	71,965,000	40,990,000
LVVWD 2011A Refunding Bonds	May-11	58,110,000	49,355,000
LVVWD 2011B Refunding Bonds	Oct-11	129,650,000	110,955,000
LVVWD 2011C Refunding Bonds	Oct-11	267,815,000	220,825,000
LVVWD 2012B Bonds	Jul-12	360,000,000	339,555,000
LVVWD 2015 Refunding Bonds	Jan-15	332,405,000	332,405,000
LVVWD 2015B Refunding Bonds	Jun-15	177,635,000	166,960,000
LVVWD 2015C Refunding Bonds	Jun-15	42,125,000	39,485,000
LVVWD 2016A Bonds	Apr-16	497,785,000	492,255,000
LVVWD 2017B Refunding	Mar-17	22,115,000	22,115,000
<b>Total</b>		<b><u>\$ 2,631,325,000</u></b>	<b><u>\$ 2,403,205,000</u></b>

SOURCE: Southern Nevada Water Authority

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**Existing, Authorized and Proposed Revenue Supported Bond Indebtedness Issued by Clark County, Nevada ("County Bonds").**

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

payment and redemption has been fully made.

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.

*Bonded Indebtedness.* The following Revenue Supported Indebtedness table sets forth the SNWA's proposed County Bonds as of June 30, 2017.

*Debt Service Requirements.* See the appendix for the table illustrating the debt service to maturity for the existing and proposed 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 historic pledged revenues and debt service coverage.



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**Southern Nevada Water Authority Debt**  
**Issued By Clark County, Nevada**  
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	Issue Date	Original Amount	Outstanding Amount
Clark County 2006 Refunding Bonds	Nov-06	\$ 604,140,000	\$ 69,545,000
Clark County 2008 Bonds	Jul-08	400,000,000	9,635,000
Clean Renewable Energy 2008 Bonds	Jul-08	6,900,000	2,760,000
Clark County 2009 Refunding Bonds	Nov-09	50,000,000	40,175,000
Clark County 2012 Refunding Bonds	Jun-12	85,015,000	79,515,000
Clark County 2016A Refunding Bonds	Mar-16	263,955,000	250,200,000
Clark County 2016B Refunding	Aug-17	271,670,000	271,670,000
Clark County 2017 Refunding Bonds	Mar-17	321,640,000	321,640,000
<b>Total</b>		<b><u>\$ 2,003,320,000</u></b>	<b><u>\$ 1,045,140,000</u></b>

SOURCE: Southern Nevada Water Authority

**Existing Colorado River  
Commission/Federal Repayment  
Contracts/Water Revenue Bonds Issued by  
the State of Nevada ("State Bonds").**

The SNWS was originally financed by a combination of State of Nevada, Colorado River Commission General Obligation Bonds (the CRC 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 CRC 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 CRC 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 CRC 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 CRC Bonds is further secured by a lien on the net pledged revenues derived from the operation of the SNWA 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)

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exceed such property tax limitations, the reduction to be made by those units (including the State) must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness, subject to any implied police power exception.

Nevada statutes provide that the faith of the State be pledged and any law supplemental or otherwise appertaining thereto, and any act concerning the Bonds, or other municipal securities, taxes or pledged revenues, shall not be repealed, amended, or modified in such a manner as to impair adversely the Bonds or their security until all of the Bonds have been discharged in full or provision for their payment and redemption has been fully made.

The payment of the State Bonds is not secured by an encumbrance, mortgage or other pledge of property of the State, except the proceeds of general taxes, net pledged revenues, and other money pledged for the payment of the Bonds shall be liable or forfeited for, or taken in payment of, the Bonds.

The Federal Repayment Contracts were general obligations of the State. To secure reimbursement by the State, the Repayment Contract grants the United States a prior claim to part of the CRC's net revenues derived through the Federal Facilities from the Water User Contracts with the LVVWD, the City of Boulder City, the City of

Henderson, the City of North Las Vegas and the USAF at Nellis Air Force Base.

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 Interior to transfer title to the Robert E. Griffith Project to the SNWA, subject to prepayment of the project's federal repayment obligation. On July 3, 2001, the SNWA transferred \$116.2 million to the U.S. Bureau of Reclamation to prepay the federal repayment contracts. This amounted to a discount of approximately \$48 million. As a result, the SNWA now holds title to the Robert E. Griffith Project and the federal repayment contracts are no longer shown as outstanding debt.

*Bonded Indebtedness.* The following State Bonds table sets forth the SNWA's outstanding State Bonds as of June 30, 2017.

*Debt Service Requirements.* See the appendix for the table illustrating the debt service to maturity on the 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 historic pledged revenues and debt service coverage.

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**Southern Nevada Water Authority Debt**  
**Issued By The State of Nevada**  
**As of June 30, 2017**

	Issue Date	Original Amount	Outstanding Amount
Nevada Drinking Water State Revolving Fund Loan 1	Dec-99	\$ 12,269,695	\$ 2,443,330
Nevada Drinking Water State Revolving Fund Loan 2	Jun-01	10,000,000	2,881,305
State of Nevada 2009 Bonds	Oct-09	2,214,457	1,581,755
State of Nevada 2010B Refunding Bonds	Jun-10	7,405,000	3,405,000
State of Nevada 2013 Refunding Bonds	Feb-13	21,720,000	21,720,000
<b>Total</b>		<b>\$ 53,609,152</b>	<b>\$ 32,031,390</b>

SOURCE: Southern Nevada Water Authority

## 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 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; and*

*(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. 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

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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 related to the requirements of the Nevada Open Meeting Law.

#### **Competitive Sale.**

In a competitive sale, all underwriter(s) are invited to submit a proposal to purchase an issue of bonds. The bonds are awarded to the underwriter(s) presenting the best bid according to stipulated criteria set forth in the notice of sale. The best bid is determined based on the lowest overall interest rate.

#### **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 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

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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 structuring, marketing, expected yield, and credit strategies. Before selecting a firm or firms, the CFO may, but is not required, conduct interviews of firms who submit responses to the RFP.
- The selection of underwriter(s) 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 5 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.

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- Designation rules.
- Liabilities.
- Order priority (unless otherwise agreed by the CFO, the order priority will be Nevada Retail, National Retail, Group Net or Net Designated, Member).
- Definition of a retail order (unless otherwise determined by the CFO) will include orders placed by individuals, bank trust departments, financial advisors and money managers acting on behalf of individuals with a maximum of \$1 million per account.
- Assignment of SDC Credit.
- The Syndicate Policy Memo may include other relevant information (e.g., management fee or other fees, description of the sale timeline).

### **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 M CCP**

Response to NRS 350.013 1(c):

*(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (c), if those costs and revenues are expected to affect the tax rate.*

As illustrated in the Net Pledged Revenues table in the Appendix of this document, operational costs are funded with water revenues. It is the 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

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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.
- **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 5 percent of the par amount of the refunded or refunding bonds (whichever is greater) when initially presented to the Board and escrow efficiency is at least 60 percent.

- Escrow efficiency is defined as net present value savings divided by the sum of net present value savings and negative arbitrage in the escrow.
- For current refundings, net present value savings of at least 3 percent or 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

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or by an underwriter for either an entire issue or specific maturities to guarantee the payment of principal and interest. While this security provides a higher credit rating, and thus a lower borrowing cost for an issuer, such cost savings must be measured against the premium required for such insurance. The decision to purchase insurance directly versus bidder's option is based on:

- Market volatility.
- Current investor demand for insured bonds.
- Level of insurance premiums.
- Ability 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 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 is reset typically either daily, weekly or monthly. This rate may be based on a remarketing or on an index such as LIBOR or SIFMA. In most markets, the interest rate on variable rate debt will be lower than the interest rate on fixed rate debt since the interest rate is based on a shorter term. But, variable rate debt has more interest rate risk as the interest rate is not set for the life of the bonds. In times of market stress, short-term interest rates have suffered significant increases, albeit for short periods of time.

Since variable rate debt has more interest rate risk, it shall not constitute more than 25 percent of the SNWA's overall debt portfolio. The CFO, in consultation with the General Counsel and the SNWA's Financial Advisors, will determine the appropriate form of variable rate debt, subject to the approval of the Board of Trustees.

**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 of Trustees.



Southern Nevada Water Authority  
Operating and Capital Budget  
Debt Management Policy  
Fiscal Year Ending June 30, 2018

## 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: Brian Thomas

TITLE: Acting Chief Financial Officer

ADDRESS: 1001 South Valley View Boulevard  
Las Vegas, Nevada 89153

TELEPHONE: (702) 822-8810

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

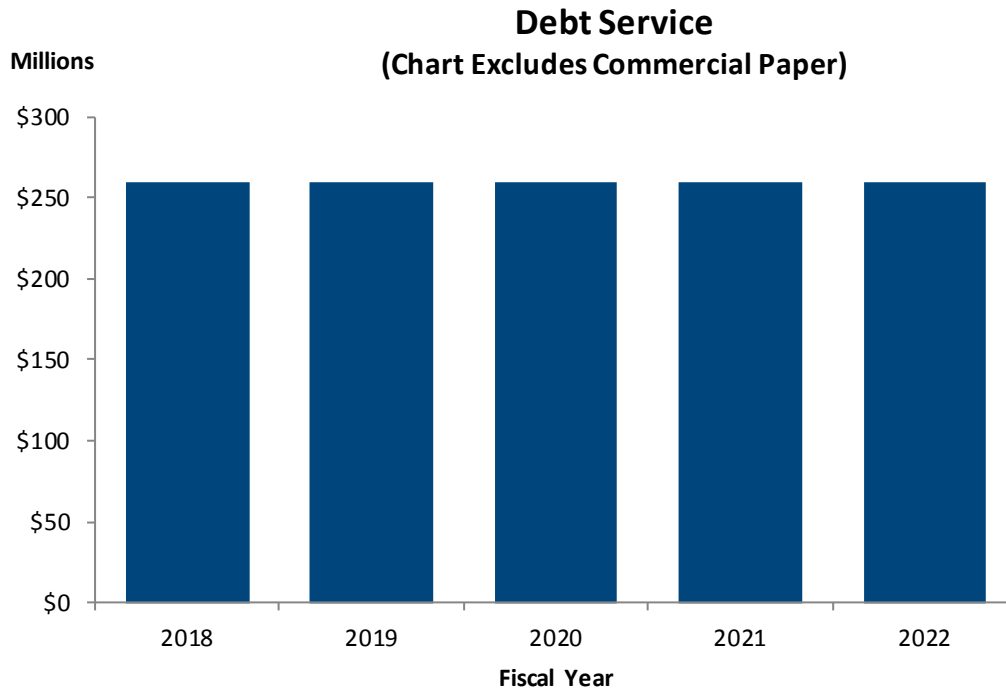
**Appendix**  
**Debt Service and Pledged Revenue Tables**

1. Five Year Schedule of Debt Service Requirements
2. Combined Schedule of Debt Service Requirements
3. Combined Schedule of Existing and Proposed Debt Service Requirements
4. Net Pledged Revenues
5. Schedule of Debt Service by Issuer

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

**Five Year Schedule of Debt Service Requirements**  
As of June 30, 2017

#	Fiscal Year	Commercial Paper	Bonds	Total Debt
1	2018	\$405,000,000	\$258,950,998	\$663,950,998
2	2019	-	259,356,306	259,356,306
3	2020	-	259,258,688	259,258,688
4	2021	-	259,273,535	259,273,535
5	2022	-	259,341,928	259,341,928



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

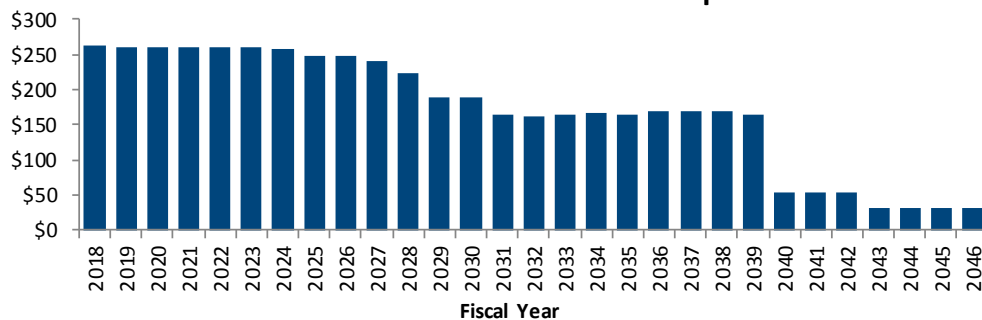
**Combined Schedule of Debt Service Requirements**

As of June 30, 2017

<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2018	\$ 512,089,439	\$ 151,861,559	\$663,950,998
2019	117,564,074	141,792,232	259,356,306
2020	122,960,486	136,298,202	259,258,688
2021	128,829,253	130,444,282	259,273,535
2022	135,069,085	124,272,843	259,341,928
2023	141,681,540	117,601,107	259,282,647
2024	148,191,540	110,651,838	258,843,378
2025	146,056,540	103,299,185	249,355,725
2026	153,531,540	95,771,106	249,302,646
2027	152,756,540	88,002,809	240,759,349
2028	144,286,540	80,407,738	224,694,278
2029	115,036,540	74,505,038	189,541,578
2030	120,923,270	69,235,913	190,159,183
2031	99,595,000	63,761,525	163,356,525
2032	103,735,000	59,327,875	163,062,875
2033	109,035,000	54,610,775	163,645,775
2034	118,655,000	49,488,755	168,143,755
2035	119,390,000	44,164,005	163,554,005
2036	129,730,000	38,637,630	168,367,630
2037	135,375,000	32,940,213	168,315,213
2038	140,910,000	27,357,510	168,267,510
2039	144,500,000	20,095,840	164,595,840
2040	42,160,000	11,836,350	53,996,350
2041	44,205,000	9,788,000	53,993,000
2042	46,355,000	7,640,150	53,995,150
2043	25,000,000	5,387,750	30,387,750
2044	26,250,000	4,137,750	30,387,750
2045	27,565,000	2,825,250	30,390,250
2046	28,940,000	1,447,000	30,387,000
<b>Total</b>	<b>\$ 3,480,376,390</b>	<b>\$ 1,857,590,227</b>	<b>\$ 5,337,966,617</b>

Millions

**Chart Excludes Commercial Paper**



**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

**Combined Schedule of Existing and Proposed Debt Service Requirements**  
as of June 30, 2017

Fiscal Year	Existing Debt			Proposed (New Money)		
	Principal	Interest	Total	Principal	Interest	Total
2018	\$ 512,089,439	\$ 151,861,559	\$ 663,950,998	\$ -	\$ -	\$ -
2019	\$ 117,564,074	\$ 141,792,232	\$ 259,356,306	-	-	-
2020	\$ 122,960,486	\$ 136,298,202	\$ 259,258,688	-	-	-
2021	\$ 128,829,253	\$ 130,444,282	\$ 259,273,535	-	-	-
2022	\$ 135,069,085	\$ 124,272,843	\$ 259,341,928	-	-	-
2023	\$ 141,681,540	\$ 117,601,107	\$ 259,282,647	-	-	-
2024	\$ 148,191,540	\$ 110,651,838	\$ 258,843,378	-	-	-
2025	\$ 146,056,540	\$ 103,299,185	\$ 249,355,725	-	-	-
2026	\$ 153,531,540	\$ 95,771,106	\$ 249,302,646	-	-	-
2027	\$ 152,756,540	\$ 88,002,809	\$ 240,759,349	-	-	-
2028	\$ 144,286,540	\$ 80,407,738	\$ 224,694,278	-	-	-
2029	\$ 115,036,540	\$ 74,505,038	\$ 189,541,578	-	-	-
2030	\$ 120,923,270	\$ 69,235,913	\$ 190,159,183	-	-	-
2031	\$ 99,595,000	\$ 63,761,525	\$ 163,356,525	-	-	-
2032	\$ 103,735,000	\$ 59,327,875	\$ 163,062,875	-	-	-
2033	\$ 109,035,000	\$ 54,610,775	\$ 163,645,775	-	-	-
2034	\$ 118,655,000	\$ 49,488,755	\$ 168,143,755	-	-	-
2035	\$ 119,390,000	\$ 44,164,005	\$ 163,554,005	-	-	-
2036	\$ 129,730,000	\$ 38,637,630	\$ 168,367,630	-	-	-
2037	\$ 135,375,000	\$ 32,940,213	\$ 168,315,213	-	-	-
2038	\$ 140,910,000	\$ 27,357,510	\$ 168,267,510	-	-	-
2039	\$ 144,500,000	\$ 20,095,840	\$ 164,595,840	-	-	-
2040	\$ 42,160,000	\$ 11,836,350	\$ 53,996,350	-	-	-
2041	\$ 44,205,000	\$ 9,788,000	\$ 53,993,000	-	-	-
2042	\$ 46,355,000	\$ 7,640,150	\$ 53,995,150	-	-	-
2043	\$ 25,000,000	\$ 5,387,750	\$ 30,387,750	-	-	-
2044	\$ 26,250,000	\$ 4,137,750	\$ 30,387,750	-	-	-
2045	\$ 27,565,000	\$ 2,825,250	\$ 30,390,250	-	-	-
2046	\$ 28,940,000	\$ 1,447,000	\$ 30,387,000	-	-	-
Totals	\$ 3,480,376,390	\$ 1,857,590,227	\$ 5,337,966,617	\$ -	\$ -	\$ -

Fiscal Year	Total Existing & Proposed Debt		
	Principal	Interest	Total
2018	\$ 512,089,439	\$ 151,861,559	\$ 663,950,998
2019	117,564,074	141,792,232	259,356,306
2020	122,960,486	136,298,202	259,258,688
2021	128,829,253	130,444,282	259,273,535
2022	135,069,085	124,272,843	259,341,928
2023	141,681,540	117,601,107	259,282,647
2024	148,191,540	110,651,838	258,843,378
2025	146,056,540	103,299,185	249,355,725
2026	153,531,540	95,771,106	249,302,646
2027	152,756,540	88,002,809	240,759,349
2028	144,286,540	80,407,738	224,694,278
2029	115,036,540	74,505,038	189,541,578
2030	120,923,270	69,235,913	190,159,183
2031	99,595,000	63,761,525	163,356,525
2032	103,735,000	59,327,875	163,062,875
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2034	118,655,000	49,488,755	168,143,755
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2036	129,730,000	38,637,630	168,367,630
2037	135,375,000	32,940,213	168,315,213
2038	140,910,000	27,357,510	168,267,510
2039	144,500,000	20,095,840	164,595,840
2040	42,160,000	11,836,350	53,996,350
2041	44,205,000	9,788,000	53,993,000
2042	46,355,000	7,640,150	53,995,150
2043	25,000,000	5,387,750	30,387,750
2044	26,250,000	4,137,750	30,387,750
2045	27,565,000	2,825,250	30,390,250
2046	28,940,000	1,447,000	30,387,000
Totals	\$ 3,480,376,390	\$ 1,857,590,227	\$ 5,337,966,617

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

**Net Pledged Revenues**  
as of June 30, 2017

Fiscal Year End	2014 Actual	2015 Actual	2016 Actual	2017 Budget	2018 Budget
<b>REVENUES</b>					
Wholesale Delivery Charges	\$ 121,045,154	\$ 121,100,263	\$ 125,054,059	\$ 122,759,977	\$ 130,773,096
Regional Connection Charges	44,819,669	66,015,927	63,781,176	68,446,150	63,284,557
Regional Infrastructure Charges	48,209,644	53,761,657	61,704,236	149,563,411	149,098,164
Regional Water Charges	80,244,881	87,046,856	106,459,684	69,133,694	73,852,236
Sales Tax	52,308,926	55,933,316	58,152,408	57,992,371	62,294,313
Groundwater Management Fees	842,191	882,331	928,893	873,661	906,481
Las Vegas Wash Revenues	397,408	404,578	411,893	416,715	429,845
Investment Income (including Capitalized Portion)	3,016,366	2,058,437	4,803,855	2,936,847	3,849,077
Other Revenues <sup>1</sup>	9,174,959	15,236,337	59,447,266	84,503,833	9,374,328
Total Revenues	<u>360,059,198</u>	<u>402,439,702</u>	<u>480,743,470</u>	<u>556,626,659</u>	<u>493,862,097</u>
<b>OPERATING EXPENSES</b>					
Energy	53,409,820	35,071,725	39,333,766	38,008,556	36,987,491
Payroll	50,216,887	49,951,688	56,252,596	59,752,206	52,657,549
Operating Expenses	34,483,860	42,471,373	39,349,790	49,192,884	54,711,097
Pay-as-you-go Capital Expenditures				23,734,000	4,925,400
Total Operating Expenses	<u>138,110,567</u>	<u>127,494,786</u>	<u>134,936,152</u>	<u>170,687,646</u>	<u>149,281,536</u>
<b>NET PLEDGED REVENUES</b>	221,948,631	274,944,916	345,807,318	385,939,013	344,580,560
Add Beginning Unrestricted Funds <sup>2</sup>	<u>308,634,591</u>	<u>322,928,812</u>	<u>382,138,848</u>	<u>422,711,617</u>	<u>537,625,166</u>
Net Available for Debt Service	530,583,222	597,873,728	727,946,166	808,650,630	882,205,726
<b>ANNUAL DEBT SERVICE<sup>3</sup></b>	<u>146,324,785</u>	<u>167,810,691</u>	<u>216,455,955</u>	<u>271,025,463</u>	<u>263,950,998</u>
<b>DEBT SERVICE COVERAGE RATIO</b>	3.6	3.6	3.4	3.0	3.3
<b>SNWA REVENUE AND FUNDS AVAILABLE AFTER DEBT SERVICE</b>	<u>\$ 384,258,437</u>	<u>\$ 430,063,037</u>	<u>\$ 511,490,211</u>	<u>\$ 537,625,166</u>	<u>\$ 618,254,728</u>

1 Includes receipts from the Southern Nevada Public Lands Management Act (SNPLMA), raw water facilities charge and minor billings of purveyor members (Big Bend, City of Las Vegas, and Clark County Water Reclamation District).

2 Unrestricted funds include unrestricted cash and unrestricted investments as shown on the Comprehensive Annual Financial Report and sales tax proceeds on hand regardless of classification.

3 Includes the interest amounts paid on the 2004 Commercial Paper Notes. Net of credits from the Build America Bonds (BABs) through fiscal 2015-16, gross amounts for BAB in fiscal 2016-17 and 2017-18

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Debt Management Policy**  
Fiscal Year Ending June 30, 2018

**Schedule of Debt Service By Issuer**

As of Fiscal Year Ending June 30, 2017

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Fiscal Year	Southern Nevada Water Authority Through the Las Vegas Valley Water District			Southern Nevada Water Authority Through Clark County		
	Principal	Interest	Total	Principal	Interest	Total
2018	470,035,000	103,888,863	573,923,863	39,445,000	47,019,576	86,464,576
2019	73,645,000	95,899,013	169,544,013	41,220,000	45,030,194	86,250,194
2020	76,890,000	92,577,840	169,467,840	43,280,000	42,950,687	86,230,687
2021	82,585,000	88,997,398	171,582,398	45,450,000	40,766,055	86,216,055
2022	86,865,000	85,144,269	172,009,269	47,735,000	38,471,048	86,206,048
2023	91,390,000	80,890,466	172,280,466	50,165,000	36,059,041	86,224,041
2024	95,810,000	76,474,263	172,284,263	52,255,000	33,525,975	85,780,975
2025	91,000,000	71,781,735	162,781,735	54,930,000	30,865,850	85,795,850
2026	95,645,000	67,050,281	162,695,281	57,760,000	28,069,225	85,829,225
2027	89,600,000	62,280,109	151,880,109	63,030,000	25,071,100	88,101,100
2028	56,170,000	58,220,588	114,390,588	66,270,000	21,861,350	88,131,350
2029	45,670,000	55,732,563	101,402,563	69,240,000	18,772,475	88,012,475
2030	46,965,000	53,497,563	100,462,563	73,895,000	15,738,350	89,633,350
2031	38,140,000	51,188,350	89,328,350	61,455,000	12,573,175	74,028,175
2032	56,510,000	49,303,250	105,813,250	47,225,000	10,024,625	57,249,625
2033	73,165,000	46,488,250	119,653,250	35,870,000	8,122,525	43,992,525
2034	76,815,000	42,795,980	119,610,980	41,840,000	6,692,775	48,532,775
2035	80,605,000	38,958,480	119,563,480	38,785,000	5,205,525	43,990,525
2036	84,550,000	34,977,055	119,527,055	45,180,000	3,660,575	48,840,575
2037	88,675,000	30,800,900	119,475,900	46,700,000	2,139,313	48,839,313
2038	117,500,000	26,421,110	143,921,110	23,410,000	936,400	24,346,400
2039	144,500,000	20,095,840	164,595,840			
2040	42,160,000	11,836,350	53,996,350			
2041	44,205,000	9,788,000	53,993,000			
2042	46,355,000	7,640,150	53,995,150			
2043	25,000,000	5,387,750	30,387,750			
2044	26,250,000	4,137,750	30,387,750			
2045	27,565,000	2,825,250	30,390,250			
2046	28,940,000	1,447,000	30,387,000			
Totals	\$ 2,403,205,000	\$ 1,376,526,415	\$ 3,779,731,415	\$ 1,045,140,000	\$ 473,555,839	\$ 1,518,695,839

**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
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Fiscal Year Ending June 30, 2018

**Schedule of Debt Service By Issuer**

As of Fiscal Year Ending June 30, 2017

Page 2 of 2

Fiscal Year	Southern Nevada Water Authority Through the State of Nevada			Total Debt Service		
	Principal	Interest	Total	Principal	Interest	Total
2018	2,609,439	953,120	3,562,559	512,089,439	151,861,559	663,950,998
2019	2,699,074	863,024	3,562,099	117,564,074	141,792,232	259,356,306
2020	2,790,486	769,674	3,560,160	122,960,486	136,298,202	259,258,688
2021	794,253	680,829	1,475,082	128,829,253	130,444,282	259,273,535
2022	469,085	657,526	1,126,611	135,069,085	124,272,843	259,341,928
2023	126,540	651,600	778,140	141,681,540	117,601,107	259,282,647
2024	126,540	651,600	778,140	148,191,540	110,651,838	258,843,378
2025	126,540	651,600	778,140	146,056,540	103,299,185	249,355,725
2026	126,540	651,600	778,140	153,531,540	95,771,106	249,302,646
2027	126,540	651,600	778,140	152,756,540	88,002,809	240,759,349
2028	21,846,540	325,800	22,172,340	144,286,540	80,407,738	224,694,278
2029	126,540	-	126,540	115,036,540	74,505,038	189,541,578
2030	63,270	-	63,270	120,923,270	69,235,913	190,159,183
2031				99,595,000	63,761,525	163,356,525
2032				103,735,000	59,327,875	163,062,875
2033				109,035,000	54,610,775	163,645,775
2034				118,655,000	49,488,755	168,143,755
2035				119,390,000	44,164,005	163,554,005
2036				129,730,000	38,637,630	168,367,630
2037				135,375,000	32,940,213	168,315,213
2038				140,910,000	27,357,510	168,267,510
2039				144,500,000	20,095,840	164,595,840
2040				42,160,000	11,836,350	53,996,350
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2044				26,250,000	4,137,750	30,387,750
2045				27,565,000	2,825,250	30,390,250
2046				28,940,000	1,447,000	30,387,000
	<u>\$ 32,031,390</u>	<u>\$ 7,507,974</u>	<u>\$ 39,539,364</u>	<u>\$ 3,480,376,390</u>	<u>\$ 1,857,590,227</u>	<u>\$ 5,337,966,617</u>



# SECTION 8

## STATISTICAL INFORMATION

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SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2017-18

OPERATING AND CAPITAL BUDGET

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**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Statistical Information**  
Fiscal Year Ending June 30, 2018

**Southern Nevada Water Authority**  
**Statistical Summary**

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**Southern Nevada Water Authority**  
**Operating and Capital Budget**  
**Statistical Information**  
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**Demographic Statistics**  
**Clark County, Nevada**  
**Five Calendar Years**

Calendar Year	Clark County Population <sup>(1)</sup>	Per Capita Income <sup>(2)</sup>	Clark County Personal Income (In Million \$) <sup>(2)</sup>	Median Household Income <sup>(3)</sup>
2016	2,205,207	56,258	N/A	N/A
2015	2,114,801	51,575	85,970.0	51,575
2014	2,069,450	39,533	81,821.0	60,168
2013	2,034,140	37,424	76,125.7	52,394
2012	2,000,759	36,542	70,289.1	51,159

Calendar Year	School Enrollment <sup>(4)</sup>	Total Labor Force <sup>(5)</sup>	Unemployment Rate <sup>(6)</sup>
2016	321,308	1,324,600	5.1%
2015	319,172	1,042,587	6.9%
2014	314,598	990,900	6.2%
2013	311,429	992,000	10.1%
2012	308,447	980,700	12.1%

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Sources:

(1) Nevada State Demographer.

(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, Average Daily Membership.

(5) The Department of Employment, Training & Rehabilitation.

(6) Bureau of Labor Statistics (annual averages).

**Southern Nevada Water Authority  
Operating and Capital Budget  
Statistical Information**

Fiscal Year Ending June 30, 2018

**Top Ten Employers<sup>(1)(2)</sup>  
Clark County, Nevada  
Calendar Year 2016**

<b>Employer Trade name</b>	<b>Employees</b>	<b>Ranking</b>	<b>% of Total Labor Force <sup>(4)</sup></b>
Clark County School District	30,000 to 39,999	1	3.5%
Clark County	8,000 to 8,499	2	0.8%
Wynn Las Vegas	8,000 to 8,500	3	0.8%
Bellagio LLC	8,000 to 8,500	4	0.8%
MGM Grand Hotel & Casino	8,000 to 8,500	5	0.8%
Aria Resort & Casino LLC	7,000 to 7,499	6	0.7%
Mandalay Bay Resort & Casino	7,000 to 7,499	7	0.6%
Caesar's Palace	5,000 to 5,499	8	0.6%
University of Nevada Las Vegas	5,000 to 5,499	9	0.5%
Las Vegas Metropolitan Police	4,500 to 4,999	10	0.5%

Total Labor Force 1,042,587

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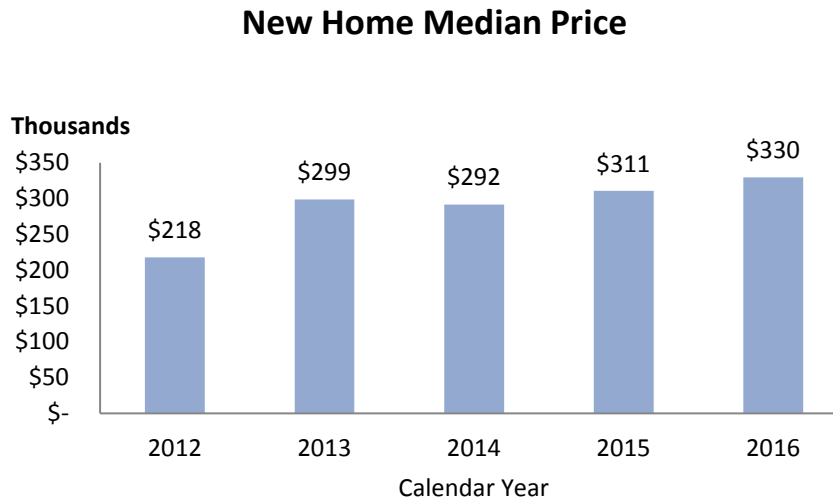
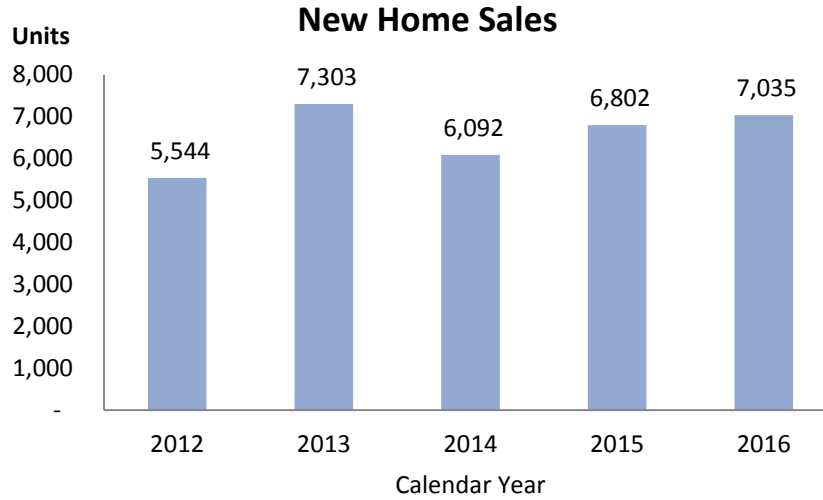
Sources:

(1) Nevada Workforce Informer, Nevada Employer Directory, GASB 44 report as of June, 2013. Most recent figures available. Trade names are as described in the source document. No attempt has been made to trace corporate name changes if any.

(2) Nevada law prohibits the disclosure of exact employee counts. All employee counts are shown in ranges. Calculations of total labor force per employer (column (4)) are estimates.

Southern Nevada Water Authority  
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Statistical Information  
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**Residential Real Estate**  
**Clark County, Nevada**



**Southern Nevada Water Authority**  
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**Secured Tax Roll**  
**Clark County, Nevada**  
**2016 - 17**

<u>Taxpayer</u>	<u>Taxable Assessed</u>	<u>Taxable Appraised</u>
1. MGM Resorts International	\$ 3,586,896,698	\$ 10,248,276,280
2. NV Energy	1,982,725,527	5,664,930,077
3. Caesar's Entertainment Corp.	1,859,895,091	5,313,985,974
4. Las Vegas Sands Corporation	972,201,925	2,777,719,786
5. Wynn Resorts Limited	926,778,374	2,647,938,211
6. Station Casinos Incorporated	705,871,212	2,016,774,891
7. Nevada Property 1 LLC	382,335,596	1,092,387,417
8. Eldorado Energy LLC	380,134,297	1,086,097,991
9. Boyd Gaming Corporation	328,880,459	939,658,454
10. Howard Hughes Corporation	327,790,058	936,543,023
	<u>\$ 11,453,509,237</u>	<u>\$ 32,724,312,104</u>

SOURCE: Clark County Assessor's Report Dated October 31, 2016

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## 2011 - 2016 Temperature and Rainfall

Average Maximum and Minimum Daily Temperature  
in Degrees Fahrenheit and Monthly Rainfall in Inches

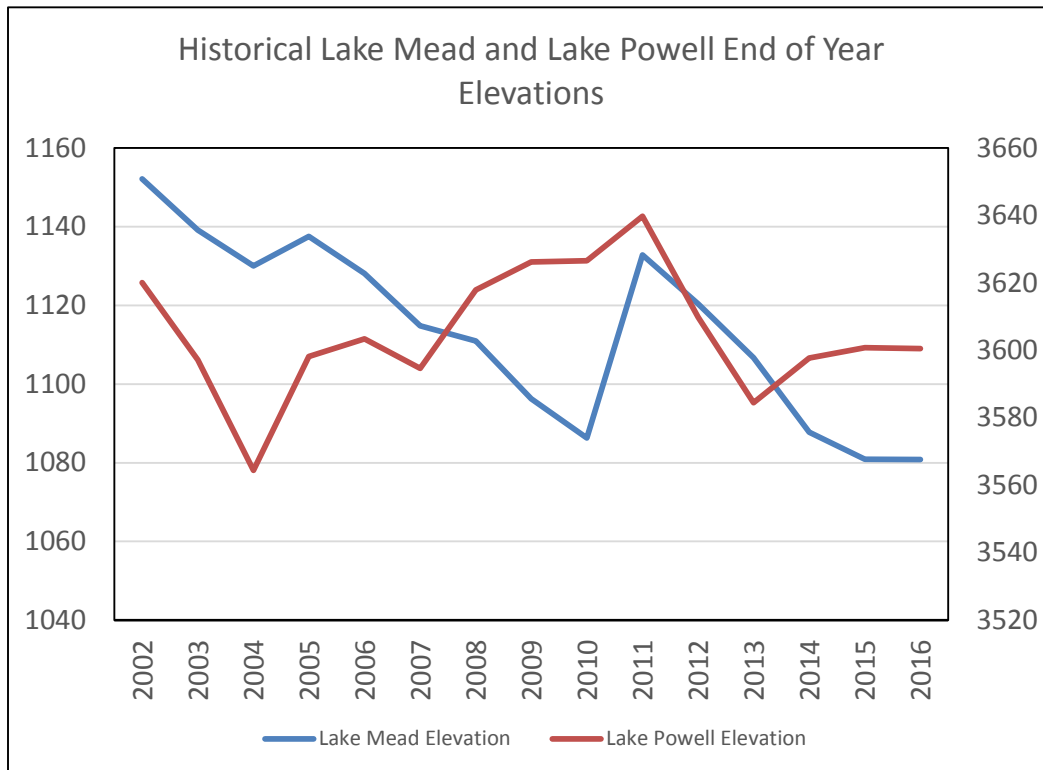
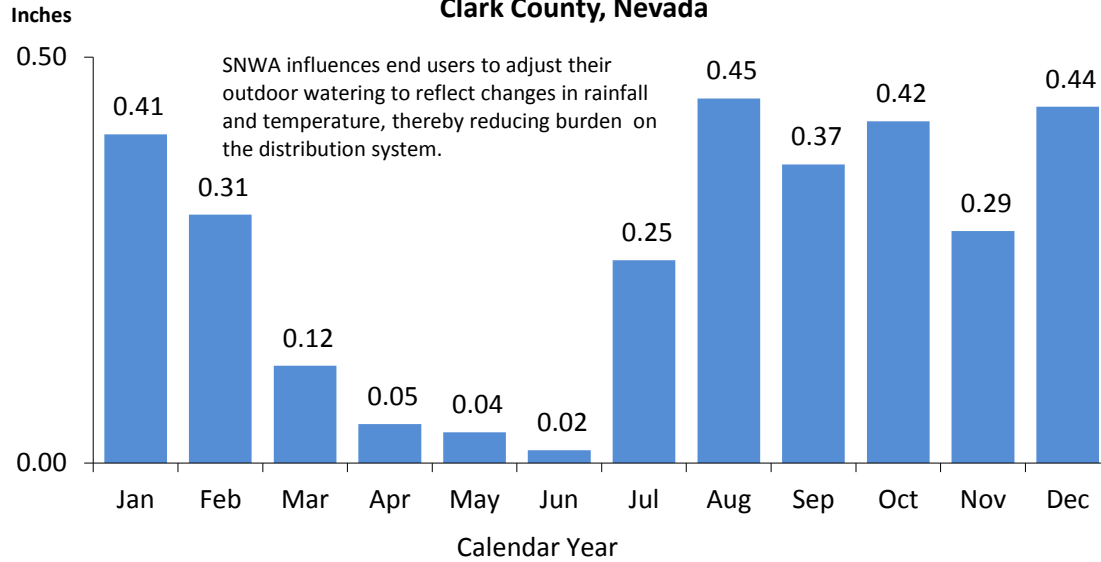
Month	2011			2012			2013		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	74	27	0.0	68	34	0.0	65	23	0.4
February	71	26	0.1	74	38	0.1	71	35	0.0
March	88	39	0.2	86	37	0.2	87	44	0.2
April	93	41	0.0	99	44	0.0	99	48	0.0
May	96	51	0.0	107	52	0.0	102	58	0.0
June	110	60	0.0	108	68	0.0	117	73	0.0
July	112	74	0.8	114	71	0.2	115	75	0.3
August	112	74	0.0	112	68	2.3	109	70	0.3
September	105	64	0.8	102	68	1.2	102	57	0.4
October	95	49	0.2	99	50	0.9	92	47	0.0
November	79	38	0.1	83	37	0.0	79	42	1.4
December	65	28	0.1	72	30	0.5	69	26	0.1
<b>Average Annual Temperature/ Total Rainfall</b>	<b>91.7</b>	<b>47.6</b>	<b>2.3</b>	<b>93.7</b>	<b>49.8</b>	<b>5.3</b>	<b>92.3</b>	<b>49.8</b>	<b>3.0</b>

Month	2014			2015			2016		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	64	42	0.0	62	44	0.9	57	40	0.5
February	68	46	0.0	71	49	0.5	70	46	0.1
March	74	52	0.0	78	56	0.3	75	53	0.0
April	81	59	0.0	80	58	0.3	79	58	2.3
May	90	67	0.0	85	64	0.2	86	65	0.4
June	101	77	0.0	104	80	0.0	105	81	0.5
July	105	83	0.2	101	80	0.2	107	84	0.2
August	99	78	0.4	104	82	0.7	102	80	0.2
September	96	74	0.6	98	76	0.0	93	71	0.0
October	86	63	0.0	84	65	1.2	84	64	0.2
November	70	49	0.0	64	45	0.0	71	51	0.0
December	58	44	0.3	56	38	0.0	57	40	0.8
<b>Average Annual Temperature/ Total Rainfall</b>	<b>82.6</b>	<b>61.3</b>	<b>1.5</b>	<b>82.2</b>	<b>61.3</b>	<b>4.25</b>	<b>82.1</b>	<b>61.0</b>	<b>5.1</b>



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## Average Rainfall Per Month Ten Year Span (2007 to 2016) Clark County, Nevada



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# SECTION 9

## FINANCIAL POLICIES

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Reserve Policy .....	9-5



SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2017-18  
OPERATING AND CAPITAL BUDGET

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## **Financial Policy**

As operating agent for the Southern Nevada Water Authority, the Las Vegas Valley Water District (LVVWD) conducts a process to update and improve its operating policies and procedures on an ongoing basis. The attached financial policies represent a portion of the approved operating policies of the LVVWD.

LAS VEGAS VALLEY WATER DISTRICT  DEPARTMENT POLICY	SUBJECT:  FINANCIAL POLICY	NUMBER: 1
	APPROVED BY: <i>Lina Neilson</i>	ISSUE: 1
ISSUING DEPARTMENT:  FINANCE	DIRECTOR OF FINANCE  June 1, 2015	PAGE:  1 OF 3

I. PURPOSE

The purpose of this policy is to establish guidelines for the planning and monitoring of financial activities in a responsible manner.

II. SCOPE

This policy applies to the Las Vegas Valley Water District (LVVWD) and other entities for which the LVVWD has fiduciary responsibility i.e., Southern Nevada Water Authority (SNWA).

III. FINANCIAL PLANNING

- A. BALANCED BUDGET – Under normal circumstances, the organization shall strive to prepare and adhere to a balanced operating budget, meaning sources of funds are greater than or equal to the uses of funds.
- B. LONG-TERM PLANNING – A long-term, entity-wide Strategic Plan shall be adopted and maintained to guide the decisions of the organization. Preparation of operating and capital budgets, as well as other financial planning activities, shall consider their long-term financial implications and reflect the Strategic Plan. Also, the organization shall strive to obtain the highest credit ratings.
- C. ASSET INVENTORY – The organization shall maintain an inventory of major capital assets and periodically assess the condition of those assets to plan for ongoing financial commitments necessary to ensure services in support of the Strategic Plan.

#### IV. REVENUE

- A. REVENUE DIVERSIFICATION – To the extent reasonable, revenues shall be diversified in order to improve the ability to handle fluctuations in individual sources.
- B. FEES AND CHARGES – Fees and charges are set to cover the cost of the services provided. For example:
- Water Rates pay for current water system operation and maintenance.
  - Connection Fees pay for water system infrastructure expansion to support population growth.
  - Fees pay for the annual inspection and maintenance of system facilities.
  - Fees pay for any additional administrative or operating cost burden generated by certain customer activities.
  - Deposits assure customer payment of financial obligations.
- C. USE OF ONE-TIME REVENUES – One-time revenues shall generally be matched to one-time expenditures. Ongoing financial commitments shall not be dependent upon anticipated one-time revenues.
- D. USE OF UNPREDICTABLE REVENUES – Ongoing programs or expenditure commitments shall not be dependent upon revenues that cannot be reasonably predicted. Reasonable prediction involves the use of historical data, projected data, and prudent judgment.

#### V. EXPENDITURES

- A. DEBT CAPACITY – The organization has no fixed aggregate monetary debt limit. The ability to issue debt is governed by state law allowing for the pledge of revenues and the assessment of ad valorem taxes with the requirement that the Board of Directors establish reasonable rates and charges for the products and services provided. The assessment of ad valorem taxes shall be avoided and emphasis shall be placed on the reliance of revenues to pay debt obligations.

- B. DEBT ISSUANCE AND MANAGEMENT – Debt shall be issued by either negotiated or competitive sale in accordance with Nevada law. Competitive sale awards shall be made to the underwriter(s) presenting bids resulting in the lowest interest rate. Negotiated sales may be utilized and underwriters will be selected in accordance with specific criteria specified in the Debt Management Policy. The Debt term shall not exceed the useful life of the project or equipment being financed and bond insurance may be utilized.
- C. RESERVES – The organization shall maintain sufficient reserves to protect against the need to reduce service levels or raise rates and fees due to temporary revenue shortfalls or unpredicted one-time expenditures. ‘Sufficient reserve’ is defined as 180 days of operating expenditures. A reserve study shall be conducted at least once every five years to determine if 180 days remains sufficient.
- D. OPERATING/CAPITAL EXPENDITURE ACCOUNTABILITY – Actual expenditures shall be periodically compared to the budget. Each department Director shall be primarily responsible for keeping their actual expenditures from exceeding their budget. Department Directors shall provide timely notification to the Director of Finance when it appears that their actual expenditures for the fiscal year will exceed their budget. Also, the Director of Finance shall monitor the actual expenditures of the entire organization and provide timely notification to the General Manager when it appears that the actual expenditures for the fiscal year may exceed the Board approved budget.



<b>SOUTHERN NEVADA WATER AUTHORITY</b>  <b>BOARD POLICY</b>	<b>SUBJECT:</b>  <b>SOUTHERN NEVADA WATER AUTHORITY RESERVE POLICY</b>	<b>NUMBER:</b>  <b>11</b>
	<b>APPROVED BY:</b>  <b>BOARD OF DIRECTORS</b>	<b>ISSUE:</b>  <b>1</b>
<b>ISSUING DEPARTMENT:</b>  <b>FINANCE</b>	<b>January 21, 2016</b>	<b>PAGE:</b>  <b>1 OF 2</b>

### Purpose

The purpose is to establish policy for maintaining adequate reserves of cash and investments. Maintaining adequate and prudent cash reserves is an important tool in mitigating the risks of significant and unexpected decreases in sources of funds and/or increases in the uses of funds. The benefits include stable services and fees. This policy applies to all unrestricted cash and investments of the Southern Nevada Water Authority (SNWA).

### Authority

The Government Finance Officers Association (GFOA) recommends local governments adopt a target amount of working capital to maintain in each of their enterprise funds. Because the purposes, customers, and other characteristics of enterprise funds can vary widely, the GFOA recommends that governments develop a target amount of reserves that best fits local conditions for each fund. The following are some of the key considerations for the SNWA's reserve policy:

1. Volatility in Sources of Funds – Some of the SNWA's sources of funds have experienced significant volatility; for example, connection charges and sales tax, in periods where the local economy suffers.
2. Customer Concentration – The SNWA receives the majority of its unrestricted funds from its member agencies. Although none have ever defaulted, such a default or a significant delay could have a substantial impact on the SNWA's operations.
3. Likelihood of Successful Rate Increases – Although the SNWA has enjoyed tremendous support from its member agencies and the community, it is possible that these conditions could change in the future, thus impacting the SNWA's ability to increase rates to meet increasing costs.
4. Asset Age and Condition – As the infrastructure ages, maintenance and replacements costs will increase. Also, there is always the possibility of unexpected failures that can be quite expensive. Such failures could result from age-related causes or natural disasters.

5. Control Over Expenses – Although most of the SNWA's expenses are predictable, there remains the possibility of large, unexpected expenditures; for example, litigation, natural disasters, increases in energy and chemical costs.

### Reserve Components

The following are the four components identified for the SNWA's reserves listed by funding priority:

1. Base Operating Reserve – Adequate reserves to fund 180 days of operating and maintenance expenses. This will help insulate the SNWA and its customers from volatility in operating revenues and expenses, as well as from other casual factors that could interrupt cash flow or impose unforeseen costs.
2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, the SNWA should strive to achieve this level of reserves to ensure access to lower cost capital in future years, help mitigate the impact of disruptions in the credit markets on the SNWA operations, and provide assurances to investors that the SNWA has the financial resources necessary to make its ongoing debt service payments.
3. Capital Related Reserve – Adequate reserves to fund a one year average of future capital needs. As a method to determine future capital needs, the capital improvement plan may be used. This reserve will fluctuate over time as projects change. This level of capital reserve will enable the SNWA to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable the SNWA to continue with uninterrupted critical capital improvements during times of difficulty within the capital markets.
4. Unforeseen Events Reserve – Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.

### Reporting

The General Manager shall notify the Board of Directors of the status of reserves at least annually and more often as significant changes occur.

# SECTION 10

## GLOSSARY

Glossary.....	10-1
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SOUTHERN NEVADA WATER AUTHORITY®

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OPERATING AND CAPITAL BUDGET

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**Southern Nevada Water Authority**  
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**Accrual.** The act of recognizing a revenue or expense incurred in one accounting period that has not been paid by the end of it.

**Acre-Foot (af).** A water measurement equating to 325,851 gallons. An acre foot will supply the annual water needs of approximately 2 single family homes in the SNWA 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).

**Amortization.** Amortization is the paying off of debt with a fixed repayment schedule in regular installments over a period of time.

**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.

**Balanced Budget.** A budget where revenues are equal to or exceed expenses. SNWA is not required to issue a balanced budget.

**Beginning Balance.** Cash and cash equivalent balances at the beginning of an accounting period. For budget years this amount is an estimate. For actual years this amount is the actual amount of cash either in demand deposits or investments.

**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 major capital projects.

**Budget.** Proposed plan of revenue and expenditures over a given period of time, usually one year.

**Budget Calendar.** The schedule of key dates or milestones that the SNWA follows in the preparation and adoption of the budget.

**Budgetary Control.** The control or management of a governmental unit or enterprise in accordance with an approved budget for the purpose of keeping expenditures within the limitations of available appropriations and available revenues.

**Budget Document.** The official written statement prepared by the SNWA and approved by the SNWA's Board of Directors.

**U.S 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.

**Capital Contributions.** For net position purposes, defined as regional connection, commodity, reliability and infrastructure surcharge revenues as well as grant receipts.

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**Capital Expenditure.** Fixed assets to be acquired during a fiscal year, generally with a value of over \$10,000 and an estimated life of over three years.

**Capitalized Expenses.** This classification contains expenses such as professional services, rental expenses, research and studies, etc. that are projected to be spent in the acquisition and improvement of capital items. These costs are identical to Operating Expenses in form but are paid for with capital revenues and bond proceeds. On a GAAP prepared financial statement, these costs can appear on the Statement of Revenues, Expenses and Changes in Net Position if they are paid by the New Expansion Debt Service sub fund -- otherwise they would merely appear as a cash expenditure for a capital asset.

**Capital Revenue.** A revenue source that is used solely to either retire debt or pay for construction of capital assets. Examples include Regional Connection Charges, Regional Commodity Charges, Reliability Surcharges, Infrastructure Surcharges, sales tax revenues and contributions from the Southern Nevada Public Lands Fund.

**Colorado River Commission (CRC).** An agency of the of the State of Nevada created to acquire and hold in trust Nevada's right to water and power resources from Colorado River water apportioned among the seven Colorado River Basin states and Mexico.

**Commercial Paper.** Short-term, unsecured, discounted, and negotiable notes sold through the open market. In most cases commercial paper provides immediate cash

needs at lower rates than standard debt issues.

**Comprehensive Annual Financial Report (CAFR).** A set of U.S. government financial statements comprising the financial report of a state, municipal or other governmental entity that complies with the accounting requirements promulgated by the Governmental Accounting Standards Board (GASB).

**Connection.** Generic term for a retail customer. Currently a connection is estimated to increase the annual load on the water delivery system by 0.45 acre-foot per year. A customer whose annual load is estimated at more than 0.45 acre-foot per year is said to have multiple connections.

**Conservation.** The act of using less water in a more efficient manner. SNWA achieves the benefits of conservation through education of the end user, promoting water efficient hardware, and pricing signals.

**Construction Expenditures.** Generally, construction expenses that are spent on third party vendors who build, supervise, or provide materials used in the construction of capital assets.

**Construction In Progress (CIP).** An accountancy term that records the cost of construction work, which is not yet completed (typically, applied to capital budget items). A CIP item is not depreciated until the asset is placed in service. Normally, upon completion, a CIP item is reclassified, and the reclassified asset is capitalized and depreciated.

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**Debt Issuance Proceeds.** Principal amount of debt issues. These proceeds are used to pay for major construction expenditures incurred by the SNWA.

**Debt Service Payments.** Funds used to pay annual debt payments and interest expense.

**Department.** A basic organizational unit of the SNWA that is functionally unique in its delivery of services.

**Depreciation.** The decrease in value of physical assets due to use and the passage of time.

**Disbursements.** Funds actually expended.

**Division.** Organizational component of a department.

**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 use to treat and distribute water throughout the valley as well as power office buildings and other ancillary locations.

**Enterprise Funds.** Funds used to account for operations: 1) that are financed and operated in a manner similar to private business enterprises - where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods and services to the general public on a continuing basis be financed or

recovered primarily through user charges; or 2) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

**Environmental Protection Agency (EPA).** An agency of the U.S. federal government which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

**Expenditure.** The payment of cash on the transfer of property or services for the purpose of acquiring an asset, service or settling a loss.

**Fiscal Year (FY).** For the Southern Nevada Water Authority, the 12-month period begins with July 1, and ends with June 30 of the designated fiscal year; e.g. FY 2017-18 ends on June 30, 2018.

**Fringe Benefits.** Various types of non-wage compensation provided to employees in addition to their normal wages or salaries.

**Full-Time Equivalent (FTE).** The number of positions that equate to a 40-hour workweek for 52 weeks, or one full year. For example, two part-time positions, each working 20 hours per week, equals one FTE.

**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

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the estimated cash balance in a specific sub-fund at the beginning or ending of an accounting period.

**General Obligation Debt.** Bonds where the full faith and credit of the issuer is pledged to the repayment of the bonds.

**Generally Accepted Accounting Principles (GAAP).** A body of accounting and financial reporting standards set by the Governmental Accounting Standards Board (GASB) for state and local governments, and by the Financial Accounting Standards Board (FASB) for private sector organizations.

**Government Finance Officers Association (GFOA).** A professional association of approximately 17,500 state, provincial, and local government finance officers in the United States and Canada. In 1984, the GFOA signed an agreement with the Financial Accounting Foundation that gave them a voice and appointments in the creation of the Governmental Accounting Standards Board (GASB)

**Grant.** A contribution by a government or other organization to support a particular function. Grants may be classified as categorical or block, depending upon the amount of discretion allowed the grantee.

**Great Recession.** A global economic decline which began in the late-2000's and lasted roughly through the end of that decade.

**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.

**Intake No. 3.** One of the largest municipal water projects in the United States designed to draw water from Lake Mead at levels as low as 1,000 feet, 75 feet lower than SNWA's highest intake.

**Intentionally Created Surplus.** A type of surplus water that has been created or credited to a water agency through actions that conserve water and increase Lake Mead storage.

**Interest Earned.** Monies earned by investing idle funds in the open market.

**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



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form of grants, entitlements, shared revenues or payments in lieu of taxes.

**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 Authority employee salaries including overtime, longevity pay, and benefits. Labor can either be paid by operating funds or capital funds according to the project in which it was expended.

**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.

**Las Vegas Wash (LVW) Sub Fund.** Sub fund that tracks capital and operational revenues and expenses pertaining to the Las Vegas Wash.

**Las Vegas Valley Water District (LVVWD).** The major water retailer in southern Nevada. The District 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.

**Major Construction and Capital Program (MCCP).** A schedule of approved capital projects, their estimated costs, and funding sources.

**Megawatt Hour (MWh).** A unit of power equal to one million watt hours. Energy in watt hours is the multiplication of power in watts and time in hours.

**Million-Gallon per Day (MGD).** A unit of flow measurement. MGD is a standard measurement in the water utility industry.

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**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 Position.** The excess of an entity's assets over its liabilities. Net position was originally known as fund equity until the application of GASB 65.

**Nevada Revised Statutes (NRS).** The current codified laws of the State of Nevada.

**New Expansion Debt Service (NEDS) Sub Fund.** Sub fund that tracks revenues and expenses relating to debt service incurred from the expansion of the SNWA transmission and distribution system.

**Northern Resources.** All inclusive term for water rights, land, and ranching operations owned by the SNWA and found in Lincoln and White Pine County, Nevada.

**Occupational Health and Safety Administration (OSHA).** An agency of the United States Department of Labor. OSHA's mission is to "assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance".

**Operating Budget.** Authorized expenditures for on-going day-to-day services; e.g., maintenance, materials, supplies, etc.

**Operating Expenses.** This classification contains expenses such as professional services, rental expenses, research and studies, etc. that are projected to be spent in the course of operations of the SNWA's treatment and distribution system and through the Las Vegas Wash and groundwater management program. These expenses are identical to Capital Expenses in form but are paid with operating revenues. On a GAAP prepared financial statement, these costs will appear on the Statement of Revenues, Expenses and Changes in Net Position.

**Operating Revenue.** For net position purposes, defined as wholesale delivery charge, net income from ranch operations, program fees collected from the operation of the Las Vegas Wash and groundwater management fees.

**Other Revenues.** Various sundry revenues from minor sources. Other revenues include, but are not limited to, reimbursement of Authority operating expenses for purveyors who do not use the SNWA's treatment facilities and income from the SNWA's Northern Resource holdings.

**Payroll and Related.** For net position purposes, this classification includes all non-capitalized labor costs.

**Period.** The date (usually a 12 month span) that expenditures, encumbrances, etc. are recorded for reporting purposes.

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**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.

**Positions.** Authorized (created by the LVVWD Board of Directors and approved by the SNWA Board of Directors) employee slots (either currently filled or vacant) that are specifically funded through the budget process.

**Potable water.** Water that has been treated and meets or exceeds standards set by the Safe Water Drinking Act.

**Power.** Electricity and natural gas costs that are used for the transportation and transmission of water throughout the SNWA distribution system.

**Proprietary Fund.** Synonym in this document for Enterprise Fund.

**Purveyor.** A subset of the members of SNWA consisting of City of Boulder City, City of Henderson, City of Las Vegas, City of North Las Vegas, and the Las Vegas Valley Water District. These members purchase potable water from SNWA and remit a form of capital revenue.

**Recharge.** Lake water injected directly into the aquifer by wells for the purpose of storing it for future use.

**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.

**Restricted Revenues.** For net position purposes, defined as operating capital and expenses, payroll, recharge purchases and power costs. However it excludes these

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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 SNWA to finance expenditures.

**Revenue Bonds.** Bonds where pledges are made to dedicate specific revenue sources to repay the bonds.

**Risk Management.** An organized attempt to protect a government's assets against accidental loss in the most economical method.

**River Mountains Treatment Plant (RMTP).** Facility treats up to 300 million gallons of water per day. The facility provides additional reliability and capacity to Southern Nevada's municipal water treatment and distribution capabilities. It began delivering treated water in October 2002.

**Salaries & Wages.** A budget category that includes employee salaries including overtime, longevity pay and benefits.

**Sales Tax.** One quarter of one penny addition to the Clark County sales tax rate that is remitted to SNWA on a monthly basis. The rate was added on April 1999, and is shared with wastewater agencies, rural water and wastewater systems and the Las Vegas Wash.

**Significant financial impact.** Five years immediately following when a capital item is placed into service. The term is required by

the Government Finance Officers Association.

**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).** Was formed in 1991 to manage Southern Nevada's water needs on a regional basis. The SNWA comprises seven member agencies including the city of Henderson, city of Las Vegas, city of North Las Vegas, Big Bend Water District (Laughlin), the Clark County Water Reclamation District and the Las Vegas Valley Water District. SNWA provides wholesale water treatment and delivery for the greater Las Vegas Valley and is responsible for acquiring and managing long-term water resources for Southern Nevada.

**Southern Nevada Water System (SNWS).** Refers to the system of distribution facilities that delivers raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water providers.

**Sub Fund.** An internal control measure used to ensure that revenues and expenses from similar operations are matched. Although SNWA is an enterprise fund under Nevada law, the sub fund philosophy assists SNWA in analyzing and controlling its costs throughout the year.

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**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.

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