



A G E N D A
LAS VEGAS VALLEY WATER DISTRICT
BOARD OF DIRECTORS

SPECIAL MEETING
9:45 A.M. – MAY 21, 2018

COMMISSION CHAMBERS
CLARK COUNTY GOVERNMENT CENTER
500 S. GRAND CENTRAL PARKWAY, LAS VEGAS, NEVADA
(702) 258-3100

Board of Directors
Marilyn Kirkpatrick, President
Steve Sisolak, Vice President
Susan Brager
Larry Brown
Jim Gibson
Chris Giunchigliani
Lawrence Weekly

John J. Entsminger,
General Manager

Date Posted: May 14, 2018

The Las Vegas Valley Water District makes reasonable efforts to assist and accommodate persons with physical disabilities who desire to attend the meeting. For assistance, call the Agenda Coordinator (702) 258-3939 at least 24 hours prior to the meeting.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

LAS VEGAS VALLEY WATER DISTRICT
1001 SOUTH VALLEY VIEW BOULEVARD
LAS VEGAS, NEVADA

CLARK COUNTY GOVERNMENT CENTER
500 SOUTH GRAND CENTRAL PARKWAY
LAS VEGAS, NEVADA

GRANT SAWYER STATE OFFICE BUILDING
555 EAST WASHINGTON AVENUE
LAS VEGAS, NEVADA

REGIONAL JUSTICE CENTER
200 LEWIS AVENUE
LAS VEGAS, NEVADA

All items listed on this agenda are for action by the Board of Directors, unless otherwise indicated. Items may be taken out of order. The Board of Directors may combine two or more agenda items for consideration, and/or may remove an item from the agenda or delay discussions relating to an item on the agenda at any time.

Visit our website at http://www.lvvd.com/about/board_meetings.html or main office at 1001 S. Valley View Boulevard, Las Vegas, Nevada for Las Vegas Valley Water District agenda postings, copies of supporting material and approved minutes. To receive meeting information, including supporting material, contact the LVVWD Agenda Coordinator at (702) 258-3939 or agendas@lvvd.com.

CALL TO ORDER, INVOCATION AND PLEDGE OF ALLEGIANCE

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: At this time, the Board of Directors will hear general comments from the public on items listed on this agenda. If you wish to speak to the Board about items within its jurisdiction, but not appearing on this agenda, you must wait until the "Comments by the General Public" period listed at the end of this agenda. Please limit your comments to three minutes or less.

ITEM NO.

1. *For Possible Action:* Approve agenda with the inclusion of tabled and/or reconsidered items, emergency items and/or deletion of items.
2. *For Possible Action:* Conduct a Public Hearing on the Tentative Budget for the Las Vegas Valley Water District and subsequently adopt a Final Budget for Fiscal Year 2018/19.

Copies of the Budget, which have been prepared on forms in such detail as prescribed by the Nevada Department of Taxation, are on file for public inspection at the Las Vegas Valley Water District, 1001 S. Valley View Boulevard, Las Vegas, Nevada.

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: At this time, the Board of Directors will hear general comments from the public on matters under the jurisdiction of the Las Vegas Valley Water District. Please limit your comments to three minutes or less.

**LAS VEGAS VALLEY WATER DISTRICT
BOARD OF DIRECTORS
AGENDA ITEM**

May 21, 2018

Subject: Conduct Public Hearing	Director's Backup
Petitioner: John J. Entsminger, General Manager	
Recommendations: That the Board of Directors conduct a Public Hearing on the Tentative Budget for the Las Vegas Valley Water District and subsequently adopt a Final Budget for Fiscal Year 2018/19.	

Fiscal Impact:

The approval of a Final Budget will establish revenue and expenditure levels for the District for Fiscal Year 2018/19.

Background:

Pursuant to NRS 354.596, the District filed a Tentative Budget with the State of Nevada Department of Taxation on or before April 15, 2018. The Tentative Budget has been reviewed by the Department of Taxation for compliance with state statutes, regulations, and guidelines. A delineation of budget components was provided to the Board in General Manager's Information Report Number 173. A budget workshop was held with Board members on April 23, 2018.

NRS 354.596 requires that the District conduct a Public Hearing on the Tentative Budget, and the hearing may be consolidated with all local government budgets administered by the Board of County Commissioners on the third Monday in May (May 21, 2018). Notice of this hearing has been published in the *Las Vegas Review-Journal* in accordance with law.

Subsequent to conducting the Public Hearing, NRS 354.598 requires the Board to adopt a Final Budget for the District no later than June 1, 2018, and transmit it to the Department of Taxation.

The Board is being asked to conduct a Public Hearing on the District's Tentative Budget and adopt a Final Budget for Fiscal Year 2018/19.

This action is authorized pursuant to NRS 354.596, NRS 354.598, and Section 9(1) of the Las Vegas Valley Water District Act, Chapter 167, Statutes of Nevada 1947. The office of the General Counsel has reviewed and approved this agenda item.

Respectfully submitted:



John J. Entsminger, General Manager

JJE:BT:MC:nf

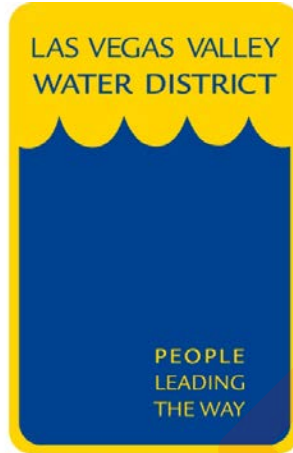
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AGENDA
ITEM #

2

Las Vegas Valley Water District

Operating & Capital Budget Fiscal Year Ending June 30, 2019



COMMUNITY SERVICE ENVIRONMENT

Board of Directors

Marilyn Kirkpatrick, President

Steve Sisolak, Vice President

Susan Brager

Lawrence L. Brown III

James Gibson

Chris Giunchigliani

Lawrence Weekly

John J. Entsminger

General Manager

Brian G. Thomas

Chief Financial Officer

Matt J. Chorpene

Assistant Chief Financial Officer

**Prepared by the Finance Department
1001 South Valley View Blvd., Las Vegas, Nevada 89153
702-870-2011 www.lvwd.com**

DRAFT

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 2018-19 budget document.

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

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

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

The **MISSION** of the Las Vegas Valley Water District is to
**Provide world-class water service in a sustainable, adaptive
and responsible manner to our customers through reliable,
cost-effective systems**

CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) presented an award of Distinguished Presentation to the **Las Vegas Valley Water District for its annual budget for the fiscal year beginning July 1, 2017.**

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



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**Las Vegas Valley Water District
Nevada**

For the Fiscal Year Beginning

July 1, 2017

Christopher P. Morrill

Executive Director

Las Vegas Valley Water District
Operating and Capital Budget
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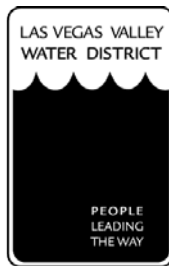
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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

LAS VEGAS VALLEY WATER DISTRICT

GENERAL MANAGER'S INFORMATION REPORT

DATE: April 17, 2018

NO. 173

SUBJECT: LAS VEGAS VALLEY WATER DISTRICT
PROPOSED OPERATING AND CAPITAL BUDGET FOR FISCAL YEAR 2018-19

The Tentative Operating and Capital Budget of the Las Vegas Valley Water District (LVVWD) for fiscal year 2018-19 was submitted by April 15, 2018, 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

In accordance with its mission, the LVVWD works to provide a safe, reliable water supply to 1.4 million residents in Southern Nevada. These efforts include maintaining critical water infrastructure, protecting water quality and ensuring system capacity meets customer demand.

With the implementation of the LVVWD's Capital Improvements Plan (CIP) in 2017, major efforts commenced to ensure that the community water system would be well suited to continue to operate at peak performance well into the future. The fiscal year 2018-19 Budget Plan largely reflects the LVVWD's continued efforts to reliably operate and maintain the water distribution system, address state-mandated water quality issues, meet new development needs and provide world-class service to its customers.

LVVWD Operations

The LVVWD provides water service to customers in the City of Las Vegas and much of unincorporated Clark County. The LVVWD

also operates the public water systems in Blue Diamond, Coyote Springs, Jean, Kyle Canyon, Laughlin and Searchlight. In 2017, the LVVWD delivered approximately 108 billion gallons of water to customers throughout its Las Vegas service area.

System Profile

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

- More than 6,500 miles of transmission and distribution pipelines
- 79 reservoir basins that collectively hold nearly a billion gallons of water
- 53 pump stations with the capacity to move more than 1 million gallons of water per minute
- 76 production wells
- 26 recharge wells capable of producing more than 200 million gallons of water per day

Each of these components is critical to ensuring the people in Las Vegas and surrounding areas have reliable access to water at all times.

Capital Improvements and Asset Management

In January 2017, the LVVWD Board of Directors adopted a 10-year CIP to guide

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Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2019

decisions related to maintaining and replacing water system assets, as well as necessary water system expansion and water quality compliance activities. The CIP, which represents an investment through fiscal year 2026-27 of approximately \$616 million (in 2016 dollars), supports the LVVWD's ongoing commitment to ensure the community water system remains stable and reliable for decades to come.

Following approval of the CIP by the LVVWD Board of Directors, work began on various major projects throughout the Las Vegas area:

Backflow Program. To support its mission of providing customers with a safe, reliable water supply, the LVVWD works closely with the State of Nevada to identify and reduce potential vulnerabilities to water contamination. This includes conditions known as backsiphonage or backpressure, often referred to as backflow.

To meet State requirements, approximately 35,000 meters within the LVVWD service area require backflow protection. To that end, staff has prioritized backflow installations based on their degree of risk to the system and has begun systematically retrofitting properties that require backflow protection.

Staff is currently working to install 11,600 backflow prevention devices to commercial properties throughout the LVVWD service area. The first contract for installation was for 600 small backflow prevention devices and began in October 2017. More than 150 devices have been installed to date.

Twelve workgroups across the organization are collaborating on this project to minimize customer impacts during the installation

process, ensuring customers are informed of potential service interruptions and increasing efficiency in managing and tracking the backflow installations.

3665 Zone Reservoir. The LVVWD is completing the design phase for a new 10-million gallon reservoir along the western edge of Las Vegas. Approximately 3,000 feet of 42-inch pipeline will also be installed to connect the reservoir to the existing water distribution system. Construction is expected to begin this summer. In addition to providing enhanced system reliability to existing customers in the far western part of the Las Vegas area, the new reservoir and pipelines will offer additional capacity and emergency storage for current and future demands in the area.

I-15 Pipeline. Last summer, crews completed the rehabilitation of nearly 600 feet of 42-inch pipeline under the I-15 Freeway, adjacent to Desert Inn Road. This section of pipe was installed in the 1970s, and based on a comprehensive leak examination, the pipeline was determined to be in poor condition and required prompt rehabilitation work. By making proactive repairs, the possibility of an unplanned service outage to the surrounding area, including several Las Vegas Boulevard (Strip) properties, was avoided.

Vault Repairs. The LVVWD has commenced meter vault repair projects at several locations throughout the Las Vegas area. These repairs are driven by safety needs for staff and customers, as well as the operability and maintainability of the facilities within the vault structures.

The vaults proposed for modification under this project have exhibited moderate to

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severe structural deterioration as well as significant corrosion of the piping and equipment contained within them. Reconstruction of the vaults will increase safety for staff working within these structures and improve system reliability. This project is scheduled to be complete this summer.

WaterStart

In 2013, the Nevada Governor's Office of Economic Development partnered with the Desert Research Institute (DRI), the LVVWD, the Southern Nevada Water Authority (SNWA) and other organizations to create a joint water technology venture called WaterStart. The goal of WaterStart is to leverage expertise and leadership in identifying practical, innovative solutions to water-related issues. As these issues are connected with companies that are uniquely qualified to address them, the community's economic development is bolstered and jobs are created.

Positive results of WaterStart's efforts can be seen in companies such as Syrinix and RedEye, which are headquartered overseas, but have recently opened offices in Nevada.

Syrinix Pipeline Monitoring System. Based in the United Kingdom, Syrinix works to provide water utilities with tailored data that can help increase the effectiveness and efficiency in monitoring and managing their water networks.

The LVVWD recently placed Syrinix sensors in different areas of the distribution system to monitor the water pressure running through its service area. Based on the data received, minor adjustments were made to decrease pressure fluctuations throughout the system.

These adjustments will minimize leaks, avert costly emergency repairs and enhance the longevity of the community's water infrastructure.

RedEye Digital Management System. In January 2018, the LVVWD launched RedEye, a cloud-based engineering and drawing management platform. Using the program, employees can more conveniently store, find, share, manage and update engineering drawings and data using computers or mobile devices.

While still in the early stages of implementation, RedEye is expected to realize significant efficiencies in engineering drawing management by consolidating engineering plans into one easily accessible digital platform. It has already been used to consolidate more than 500,000 engineering documents, reducing duplicate paper and electronic versions.

Customer Care and Field Services

The Customer Care and Field Services (CCFS) department provides support to all of the LVVWD's customers, including managing the customer service telephone lines, account processing, and monthly meter reading of the more than 375,000 water meters in Las Vegas, Searchlight, Jean, Kyle Canyon and Blue Diamond. The department's efforts to increase customer care efficiency continue to yield positive results, and staff continually evaluates opportunities to streamline operations, reduce costs and enhance the customer experience.

Analytics Software. The CCFS department has been using Itron Analytics software for advanced meter data collection and analysis over the past year. As its available capabilities

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have been implemented over that time, it has yielded significant benefits in workflow efficiency, customer service, education and water conservation.

Because of the detailed analysis the software provides, CCFS associates are able to gain a greater depth of background knowledge prior to interacting with customers regarding their accounts and water use. In the near future, the application will allow staff to quickly advise customers of possible leaks, resulting in decreased water waste and fewer service requests to monitor meters in person.

Workspace Renovation. Beginning in August 2016, the LVVWD's Customer Care offices underwent a two-year overhaul. The recently-completed renovation includes the installation of all-new electrical and data infrastructure to support Genesys customer management software. This new software will enhance customer service engagement efforts and provide additional avenues of customer-associate interaction, including Interactive Voice Response, push notifications, and eventually, online chat.

LVVWD.com Re-design. The LVVWD launched its new mobile-friendly website in August 2017 with improved bill paying and customer self-service options. Post-launch surveys show an increase in customer satisfaction with the more responsive website, which gets over 1.75 million visits and more than 12 million page views annually.

Workday Human Capital Management

In October 2017, the LVVWD implemented Workday Human Capital Management software (Workday) to manage critical organizational functions such as personnel management, timekeeping, recruiting, payroll

and benefits. The LVVWD's Human Resources department had previously used several different software systems to manage these functions, many of which were in need of significant and costly upgrades.

In addition to consolidating several functions into one platform, Workday has increased functionality for employees and managers, enhanced cybersecurity protection, improved human resources reporting and analytic capabilities and mobile device compatibility.

Finance

The LVVWD is continually involved in proactive, long-term financial planning to ensure financial resources are available to meet future infrastructure needs. In addition, the LVVWD actively engages in the community to communicate the need for rate adjustments to ensure rates are predictable and increases controlled.

Financial Stability

In January 2016, the LVVWD Board of Directors established a policy for maintaining adequate reserves of unrestricted cash and investments. This policy serves as an important tool in long-term financial planning, as credit rating agencies consider the availability of reserves in their evaluations of continued creditworthiness. The policy also aids in mitigating the risks of significant or unexpected fluctuations in funding and helps to ensure stable services, rates and fees.

Citizens Advisory Committee Recommendations

In January 2017, the LVVWD Board of Directors approved Citizens Advisory Committee recommendations that will help

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fund the LVVWD's capital needs through 2027 and meet the reserve targets set forth in the Board-adopted Reserve Policy. Among the recommendations were 3 percent water rate increases in 2017 and 2018, and inflation-indexed increases in the years following. The first water rate modifications became effective in February 2017 and resulted in the typical residential monthly water bill increasing by approximately 75 cents. A similar increase occurred in January 2018, and inflation-based adjustments will continue to be made annually.

In 2017, the LVVWD, as the operator of the Big Bend Water District (BBWD), which provides water service to the town of Laughlin, identified more than \$9 million in capital improvement as necessary to maintain and enhance the reliability of the BBWD's system and avoid costly service interruptions. The BBWD Board of Trustees appointed a Citizens Advisory Committee (CAC) in June 2017 to offer community perspective on how best to fund the capital program. Nine individuals representing a broad spectrum of community interests served on the committee and met five times between July and September 2017. Their perspectives and ideas helped shape six recommendations to help guide the BBWD Board of Trustees' decisions on how to meet revenue deficiencies and support a reliable water system.

Ultimately, the CAC recommended two different funding scenarios for consideration and vote by the Laughlin Town Advisory Board (LTAB). The LTAB, and subsequently the BBWD Board of Trustees, approved a funding plan that would increase a typical monthly household water bill of a BBWD customer by approximately \$2.50 in 2018, 2019, 2020, and 2021, with annual inflation-indexed rate increases in the years following.

In conjunction with the BBWD rate modifications, the LVVWD will continue working to secure grants and low-interest loans for the BBWD to help fund necessary capital improvements.

Water Resources and Conservation

The LVVWD's primary water sources include Colorado River water and groundwater rights within the local aquifer. Colorado River water is purchased from the SNWA, which diverts and treats water from Lake Mead. In 2017, the LVVWD's water deliveries from these combined sources totaled approximately 108 billion gallons.

Water conservation efforts continue to yield savings for the community. In calendar year 2017, the LVVWD issued 4,015 water waste letters and completed 3,875 water waste orders, resulting in \$36,080 in assessed fees. This enforcement, along with persistent public outreach regarding the importance of water conservation, has resulted in a 36 percent decline in the LVVWD residential single service customer's average monthly water use since the year 2000.

Springs Preserve

Calendar Year 2017 marked the Springs Preserve's 10-year anniversary. It was also the Preserve's most successful year to date in terms of attendance, membership and community involvement.

A record 300,000 people visited the Springs Preserve in 2017. Much of the increased attendance can be attributed to the opening of several new and highly-anticipated exhibits and features, including the WaterWorks

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Exhibit, Boomtown 1905, a new children's playground and Teaching Garden.

Boomtown 1905, which opened in February 2017, transports visitors to a re-created historical streetscape depicting Las Vegas' humble beginnings between 1905 and 1920. The streetscape was funded primarily through the Southern Nevada Public Land Management Act.

Open to the public in September 2017, the WaterWorks Exhibit offers visitors an in-depth look at the treatment and delivery process that takes place before water comes out of the tap. This exhibit was funded primarily by the One Drop Foundation, with support from the Royal Bank of Canada.

A newly re-designed children's playground also opened in fall 2017. UNLV students had the unique opportunity to participate in the re-design after receiving conceptual input from a large group of children ranging from 5 to 10 years old.

In October, a 13,000 square-foot Teaching Garden opened, providing a non-traditional outdoor center for community learning. The garden offers an opportunity to receive hands-on gardening tips as well as lessons in Science, Technology, Engineering and Math (STEM). The Rogers Foundation generously donated \$100,000 to the Springs Preserve to develop and equip the garden.

Springs Preserve Website Re-design

In November 2017, the Springs Preserve launched its new mobile-friendly website, which featured a modern design and improved events and activities calendar. With 65 percent of the Springs Preserve web traffic

coming from mobile devices, the responsive website provides easier access to the Preserve's events, ticketing, membership and information. The SpringsPreserve.org website receives nearly 900,000 visits and 2.4 million page views annually.

Membership Program

The Springs Preserve also kicked-off a new membership campaign in December 2017, offering more family benefits than ever before. The newly-introduced Silver State Pass is a premier family membership that includes free family admission to signature events, unlimited seasonal access to the Butterfly Habitat, two annual guest admissions and general-admission train rides. Within the first month of implementation, the new program generated \$10,000 more than December of the previous year. Springs Preserve membership totals increased by 13 percent in 2017, a number expected to grow as a result of the new membership benefits.

Financial Summary

The table on the following page contains a summary of sources and uses of funds for the LVVWD's fiscal years 2016-17, 2017-18 and 2018-19.

Las Vegas Valley Water District
Operating and Capital Budget
General Manager's Information Report
Fiscal Year Ending June 30, 2019



Budget Summary
(\$ Millions)

	Actual 2016-17	Budget 2017-18	Tentative Budget 2018-19	Budget-to-Budget Variance	
				\$	%
Sources					
Tiered Consumption	\$ 263.3	\$ 267.4	\$ 287.0	\$ 19.6	7%
Service Charge	63.8	67.0	70.5	3.4	5%
Backflow Charge	9.1	10.6	11.7	1.0	10%
Reclaimed Water	7.3	7.7	7.2	(0.5)	-7%
Other Water Bill Charges	6.4	5.3	6.8	1.4	27%
Facilities Connection Charge	12.2	15.6	15.5	(0.2)	-1%
Application & Inspection Fees	2.1	3.0	2.2	(0.8)	-27%
Investment Income	1.3	2.7	3.3	0.7	26%
Springs Preserve	2.8	3.0	3.0	0.0	1%
Other Revenues	10.6	-	-	-	
Subtotal	\$ 379.0	\$ 382.4	\$ 407.1	\$ 24.7	6%
Debt Issuance Proceeds	22.5	122.1	8.5	(113.6)	-93%
LVVWD Sources	\$ 401.5	\$ 504.5	\$ 415.5	\$ (88.9)	-18%
Uses					
Purchased Water	\$ 90.3	\$ 89.8	\$ 96.9	\$ 7.1	8%
Energy	9.0	11.2	10.7	(0.5)	-5%
Payroll & Related	122.5	128.8	139.0	10.2	8%
Operating Expenses	37.5	47.9	59.9	12.0	25%
Capital Expenditures	49.6	85.9	103.3	17.4	20%
Debt Service	62.2	65.4	70.6	5.2	8%
LVVWD Uses	\$ 371.1	\$ 429.0	\$ 480.4	\$ 51.4	12%
LVVWD Net Surplus/(Deficit)	\$ 30.4	\$ 75.5	\$ (64.8)		
SNWA Charges					
Infrastructure Charge	\$ 94.3	\$ 106.2	\$ 112.7	\$ 6.5	6%
Commodity Charge	47.1	49.4	50.3	0.9	2%
Connection Charge	41.4	44.5	42.5	(2.0)	-4%
Reliability Surcharge	3.9	3.9	4.0	0.2	4%
SNWA Charges	\$ 186.6	\$ 204.0	\$ 209.6	\$ 5.6	3%
Total Sources	\$ 588.1	\$ 708.5	\$ 625.1	\$ (83.4)	-12%
Total Uses	557.7	633.0	690.0	56.9	9%
Total Net Surplus/(Deficit)	\$ 30.4	\$ 75.5	\$ (64.8)		

Sources

The 2018-19 Budget Plan's total sources of funds are projected to be \$625.1 million, or a 12 percent decrease compared to the 2017-18 Adopted Budget Plan. The decrease is largely

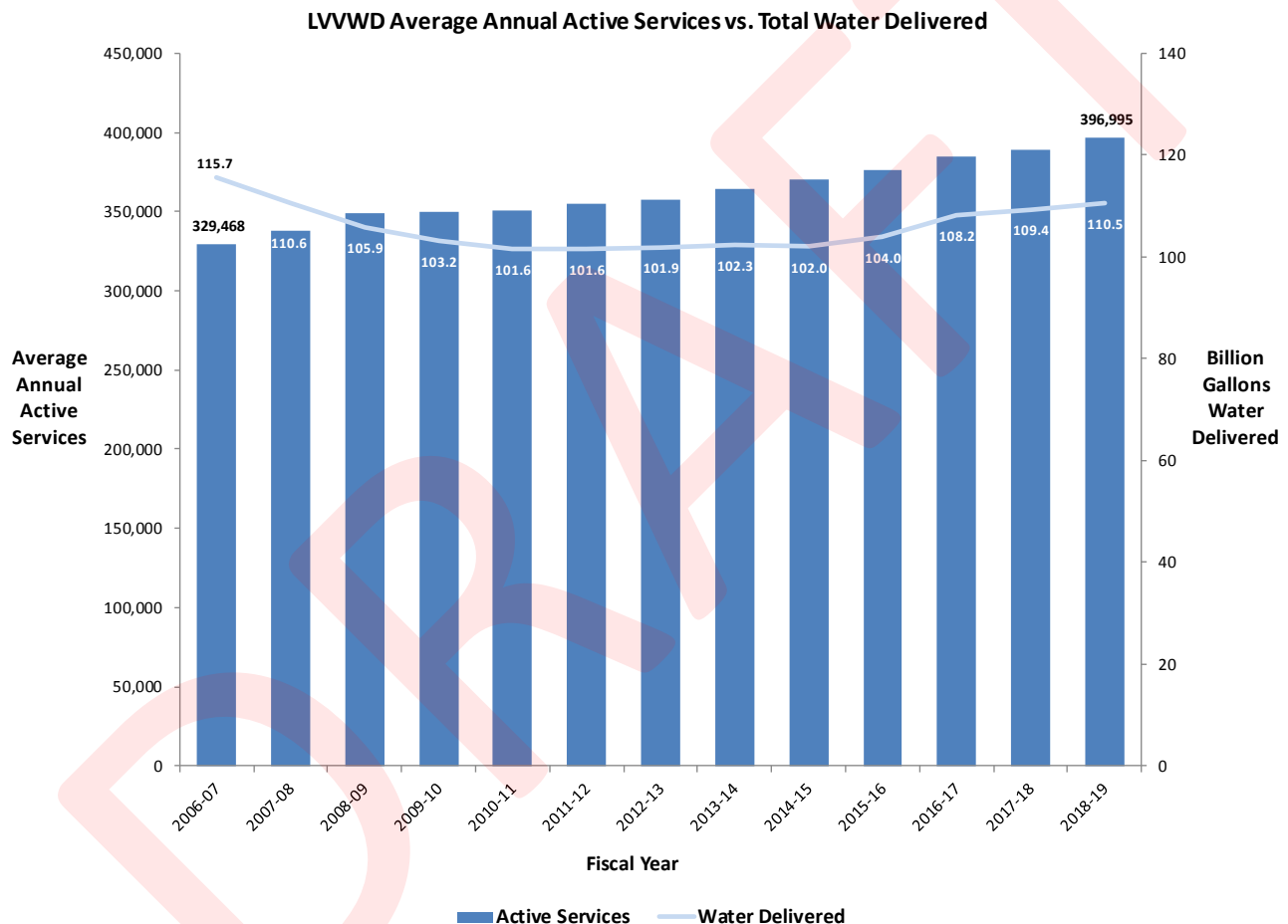
due to proceeds from debt issuances in 2018-19 projected to be much lower than 2017-18. The LVVWD revenue-based sources of funds are increasing \$24.7 million, or 6 percent.

Tiered consumption charges are projected to

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General Manager's Information Report
 Fiscal Year Ending June 30, 2019

increase \$19.6 million, or 7 percent, reflecting a rise in consumption, as well as an increase in rates. The service charge is anticipated to increase \$3.4 million, or 5 percent. Tier consumption charges and service charge revenues are rising based on water rate increases adopted by the Board in January 2017, and 2 percent projected growth in the

number of active services, aligning with the population growth projection from UNLV's Center for Business and Economic Research. While account growth continues, water deliveries (sales) were relatively flat for several years, but have increased recently as illustrated in the chart below.



The Backflow Charge, collected on services with a backflow device, is expected to rise by \$1 million, or 10 percent. The expected increase is due to a greater quantity of customers incurring the backflow charge. Facilities Connection Charges are expected to decline by \$0.2 million, or 1 percent. The Springs Preserve's revenue is also expected to rise slightly, continuing its trend of growth.

The 2018-19 budget includes \$8.5 million in proceeds from the SRF loan program. The SRF loans from the Nevada State Board for Financing Water Projects are facilitating water system infrastructure improvements. In fiscal year 2018-19, \$8.5 million is projected to be reimbursed through the SRF loan program.

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Uses

The 2018-19 Budget Plan's total uses of funds are projected to be \$690.0 million, or a 9 percent increase compared to the 2018-19 Adopted Budget Plan. The increase is largely due to the increase in capital expenditures, which are expected to rise by \$17.4 million, or 20 percent. This increase is attributable to alignment with the \$616 million 10-year CIP adopted by the Board in January 2017.

Purchased water costs are projected to increase by \$7.1 million, or 8 percent, due to increases in water demands and the cost of wholesale water purchased from the SNWA. Energy costs are projected to decrease by 5 percent. Payroll costs are anticipated to increase by \$10.2 million, or 8 percent, compared to the 2017-18 Adopted Budget Plan. The full time equivalent (FTE) employee count is projected to increase to support the CIP and operational demands.

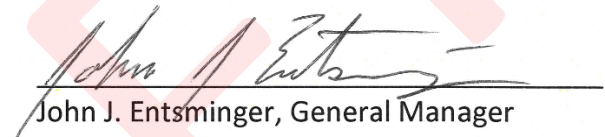
Non-payroll operating expenses are projected to increase \$12.0 million, or 25 percent. The rise in this area is due to increased operations and maintenance costs, including large meter repairs and an organizational shift to more "cloud-based" software solutions. Capital Expenditures are budgeted to rise by \$17.4 million in continuation of the adopted 10-year CIP. Debt service is anticipated to increase by \$5.2 million, due to the issuance of about \$100 million of new debt in 2017-18.

Summary

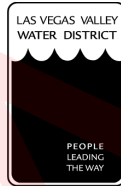
Overall, the LVVWD's fiscal year 2018-19 Budget Plan presents a stable outlook, with revenues exceeding expenses and a mix of revenues, reserves, and debt proceeds funding capital expenditures.

Approval

The public hearing on the LVVWD's 2018-19 Tentative Budget, and adoption of the Final Budget, is scheduled for 9:45 a.m., Monday, May 21, 2018. The public hearing will be held in the Clark County Commission Chambers of the Clark County Government Center at 500 South Grand Central Parkway, Las Vegas, Nevada.


John J. Entsminger, General Manager

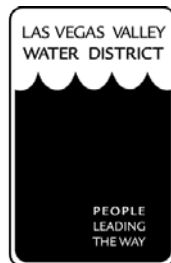
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SECTION 2

INTRODUCTION AND STRATEGIC PLAN

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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

Las Vegas Valley Water District
Operating and Capital Budget
Introduction and Strategic Plan
Fiscal Year Ending June 30, 2019

Introduction

Purposes and Powers.

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

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

The LVVWD is governed by a seven-member Board of Directors (LVVWD Board), all of whom are elected Clark County Commissioners. The LVVWD Board has the sole power to set rates and charges for water, and charges cannot be put into effect until the conclusion of a public hearing process. The Las Vegas Valley Water District Act and applicable Bond Covenants provide that rates and charges should be sufficient to provide for operation and maintenance costs, general expenses of the LVVWD, and principal and interest payments on outstanding debt. Although the LVVWD Board may levy a tax on all taxable property within the LVVWD service

area, such a tax never has been levied. The daily operations of the LVVWD are overseen by the General Manager, appointed by the LVVWD Board.

Intergovernmental Relationships.

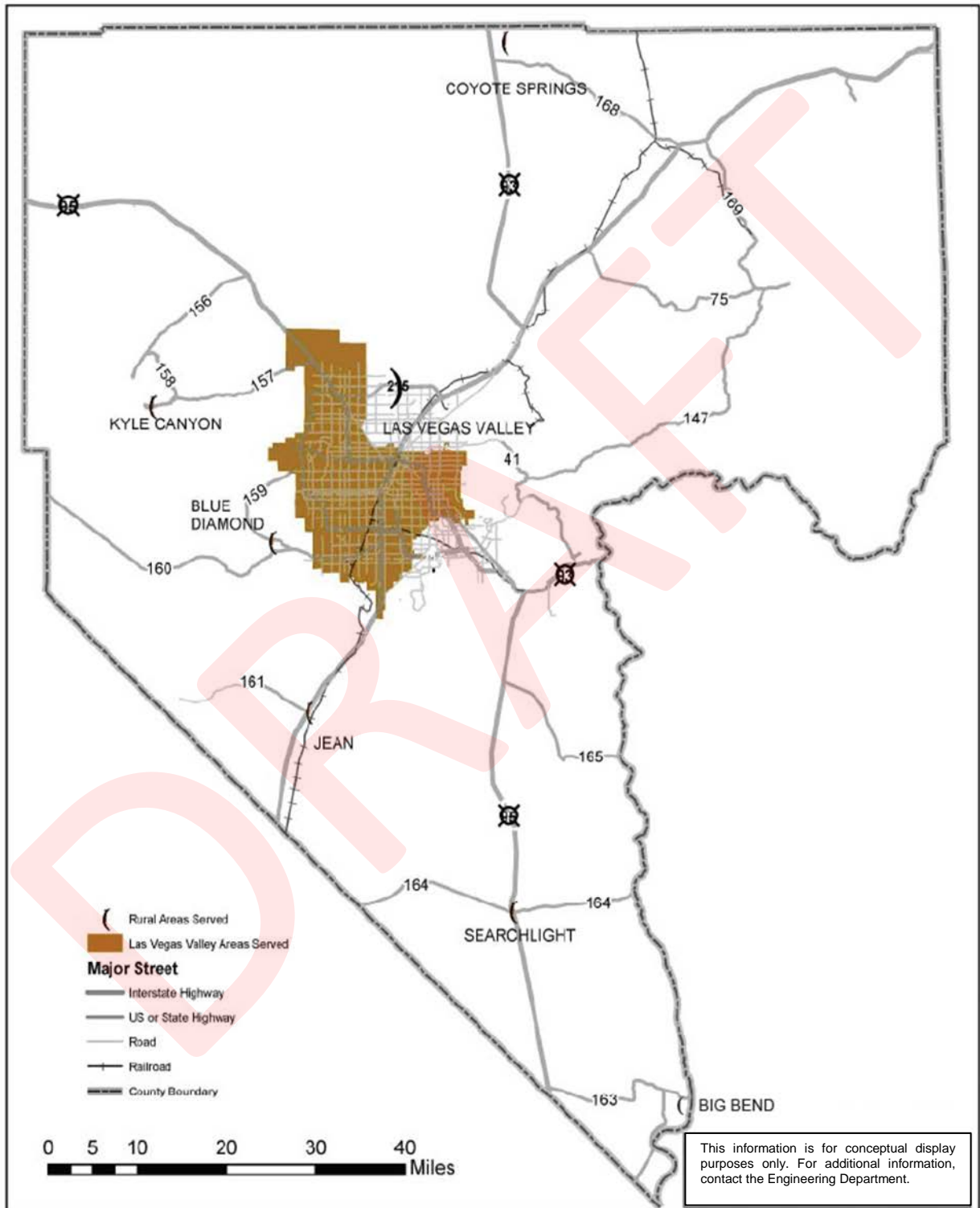
The LVVWD plays a vital role in the management of water resources in Southern Nevada. To fulfill this role, the LVVWD must work effectively and cooperate with state and federal governments, numerous local jurisdictions and other local water purveyors. These relationships play a vital role in shaping not only the demands on the LVVWD, but also the fiscal year 2018-19 Budget Plan. The following describes these intergovernmental relationships.

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

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

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Areas Currently Served



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

Major Water Purveyors. The major water purveyors and the percentages of Colorado River water distributed in the Las Vegas area for the fiscal year ended June 30, 2016, are as follows: Boulder City (2.5 percent), Henderson (15.8 percent), North Las Vegas (12 percent), the LVVWD (69.5 percent) and others (0.2 percent).

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

Colorado River Commission (CRC). The CRC is a Nevada State agency created in the mid-1930's to acquire and protect Nevada's

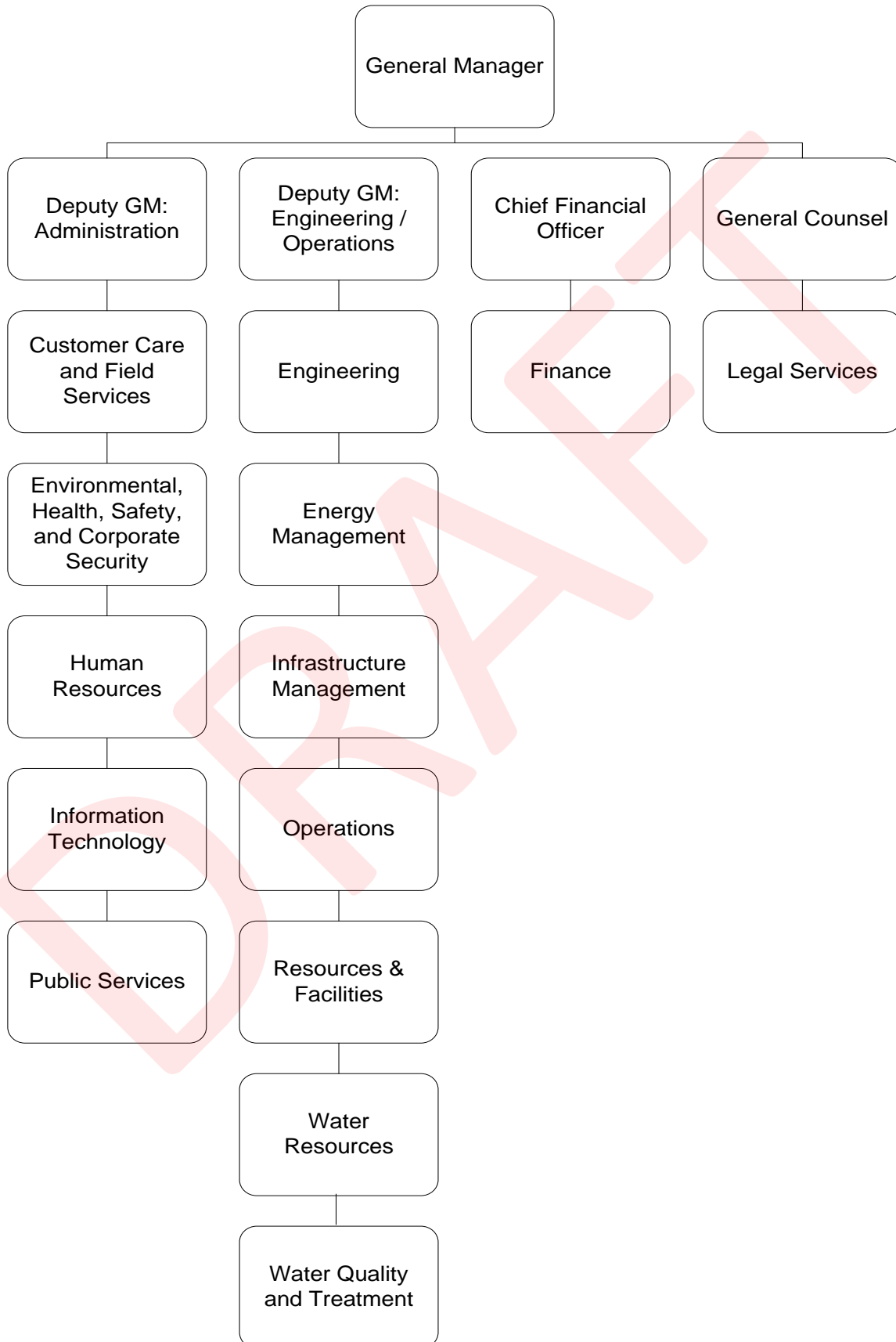
right to water and power resources from the Colorado River. Colorado River water is apportioned among the seven Colorado River basin states and Mexico. The seven-member CRC consists of four members appointed by the Governor (including the Chairperson) and three SNWA Board members.

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

Organizational Structure.

The LVVWD's organizational structure has evolved to meet the demands of major water facility expansions, conservation, customer service initiatives, and special projects. During the past two years, the LVVWD's departments and divisions went through extensive restructuring to provide more cost efficiencies and a better customer service experience. The organization chart on the following page reflects the LVVWD's current organizational structure.

Las Vegas Valley Water District
Operating and Capital Budget
Introduction and Strategic Plan
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Financial Structure and Controls.

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

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

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

Capital and Debt Service Accounting. Capital and debt service finances are accounted for separately within the overall structure of the Enterprise Fund. Bond issuance resolutions require that bond proceeds be maintained in restricted acquisition and construction accounts until they are expended. Assets restricted for specific

purposes (e.g. additions to plant or repayment of bonds) and liabilities payable from such assets are accounted for separately until disposition. Earnings on these assets also are considered restricted. Fund equity is restricted for assets, less related liabilities, which are restricted by law or other externally imposed regulations, such as bond covenants.

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

Debt Administration. It is the general intent of the LVVWD that rates and charges are adequate to provide for all costs, and reliance on taxes is to be avoided. Ad valorem taxes have never been required to support the LVVWD's operations or debt service. As of June 30, 2018, the LVVWD has \$831 million in outstanding general debt. All applicable bond covenants, such as ratios of net income to

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debt service, sinking funds and insurance coverage have been met or exceeded. The LVVWD does not have a statutory debt limit. Currently, Standard and Poor's (S&P) Corporation rating for the LVVWD's general obligation bond issues has been increased to "AA+", while Moody's Investor Service, Inc. rating for outstanding LVVWD general obligation bonds is "Aa1".

Standard and Poor's Global Ratings recently raised its long-term rating to "AA+" from "AA" based on the Southern Nevada's continued economic growth along with LVVWD maintenance of strong cash reserves. Potential ratings increases from Moody's will further lower the LVVWD's ongoing cost of debt service.

Cash Management. During the year, available operating funds are invested in obligations of the United States agencies and in commercial paper with credit ratings of A-1, P-1 or its equivalent, or better. Investments are purchased through recognized and regulated brokers dealing in government securities. Investments are made with the objective of obtaining a market rate of return appropriate in relation to the prevailing budgetary and economic environment. Investments of the LVVWD are independently reviewed by an external auditor, and are reported in the LVVWD's annual financial report. All investments are held by a bank's trust department in the LVVWD's name.

Risk Management. The LVVWD employs a multifaceted approach to risk management, which includes the transfer, elimination, avoidance, reduction and/or assumption of risk of loss. The LVVWD also purchases risk insurance (including terrorism insurance) from the commercial insurance market on real

and personal property, including earthquake and flood, with common policy restrictions, covering direct physical loss of or damage to buildings, fixtures, equipment, boilers, machinery and supplies. The blanket limit of liability under the property insurance program 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 LVVWD self-insures the first \$1 million for its automobile and general liability exposure and purchases \$30 million of excess liability insurance. The LVVWD self-insures its workers' compensation exposure up to \$500,000 per claim and purchases excess workers' compensation insurance, which provides statutory limits over the self-insured limit.

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

Budget Controls and Process.

Budget Controls. By state statutes, the LVVWD's budget is approved annually, following a public hearing process, by the LVVWD Board. The LVVWD annually prepares a budget on a modified cash basis. The LVVWD also prepares and submits a budget to the

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Nevada State Department of Taxation in accordance with statutory laws based on a full accrual basis. Budgetary controls are established at the levels of total estimated operating and non-operating expenses. A utility or other enterprise is a self-supporting operation of a commercial nature, and the demand for service largely determines the appropriate level of revenues and expenditures. Depending upon the timing and level of the demand for services, revenues and expenditures will vary.

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

Budget Process. The LVVWD's budget process starts in December of each year, and proceeds with a series of meetings involving department directors and/or managers. Financial analysis is done to project the revenues under the projected water rate structure. The revenue projections are based

on the estimated water the LVVWD is planning to deliver in the coming year. The budget reflects the strategies and goals adopted by the LVVWD.

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

The LVVWD, in late April or early May, conducts a working session with the LVVWD Board to review the proposed budget in detail. On the third Monday in May, the LVVWD Board conducts a public hearing to allow the public an opportunity to discuss the proposed budget, and after discussion and/or amendments, the proposed budget receives final approval from the LVVWD Board. The approved final budget document is filed with


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


Budget Augmentation. Nevada 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 LVVWD Board must adopt a resolution providing for an augmentation at a regular meeting of the LVVWD Board by majority vote of all members. Budget augmentation becomes effective when an executed copy of the resolution for augmentation is delivered to the State of Nevada Department of Taxation.

FISCAL YEAR 2018-19 BUDGET CALENDAR

	All Departments	Financial Services	Executive Management	Human Resources
Dec	Tue Dec 12 – Wed Jan 17 Personnel related requests will be coordinated through each department's Director and Deputy General Manager	Tue Dec 12 Budget instructions and calendar sent to departments		Dec December organization charts distributed to departments. Adjustments to organization charts due to Human Resources by Wednesday, January 17, 2018
		Wed Dec 13 Operating expense files sent and departments assistance begins		Thu Dec 21 List of existing interns and summer hire positions distributed to departments. Updates, corrections and new requests due to Human Resources by Wednesday, January 17, 2018
		Wed Dec 13 Coordination of budget process and schedule begins		
Jan	Wed Jan 17 Adjustments to organization charts submitted to Human Resources	Thu Jan 18 Major data processing and equipment requests submitted to Information Technology and Fleet Services for review and coordination		Thu Jan 18 List of existing interns and summer hire position renewals sent to Financial Services
	Wed Jan 17 Final requests for interns and summer hire positions submitted to Human Resources	Mon Jan 22 Coordination with departments incurring intercompany and overtime payroll costs begins		
	Thu Jan 25 Final 2018-19 capital budget requests and operating expense budgets submitted to Financial Services			

FISCAL YEAR 2018-19 BUDGET CALENDAR

	All Departments	Financial Services	Executive Management	Human Resources
Feb	Mon Feb 5 Budget narrative instructions received	Mon Feb 5 Budget narrative instructions sent to departments		
		Mon Feb 26 Summaries and detail of operating expense & capital expenditure budgets sent to departments		
		Mon Feb 26 Assisting departments in preparation for the Senior Management Team (SMT) budget meeting presentations begins		
Mar		Tue Mar 6 Budget overview briefing with Executive Management (E-team)	Tue Mar 6 Budget overview briefing with Executive Management (E-team)	
	Tue Mar 13 Department proposed budget meetings with SMT	Tue Mar 13 Department proposed budget meetings with SMT	Tue Mar 13 Department proposed budget meetings with SMT	
	Mon Mar 19 Budget narratives submitted to Financial Services		Tue Mar 13 – Mon Mar 19 Final budget decisions made by Executive Management	
Apr		Thu Apr 5 Proposed draft budgets completed for Budget Workshops with Boards of Directors	Thu Apr 19 Board of Directors Budget Workshops for SNWA	
		Thu Apr 12 Preliminary Budgets filed with the Nevada State Department of Taxation	Mon Apr 23 Board of Directors Budget Workshops for LVVWD (including BBWD & Coyote Springs)	

FISCAL YEAR 2018-19 BUDGET CALENDAR



All Departments	Financial Services	Executive Management	Human Resources
May	Thu May 3 SNWA Public hearing notice published in LVRJ	Thu May 17 SNWA Board of Directors public hearing conducted on the proposed budget for possible adoption Mon May 21 LVVWD Board of Directors public hearings conducted on proposed budgets of LVVWD, Big Bend, and Coyote Springs for possible adoption	
	Tue May 8 LVVWD, BBWD, and Coyote Springs Public hearing notice published in LVRJ		
	Thu May 24 Adopted budgets sent to the Nevada Department of Taxation		
Jun	Thu Jun 21 LVVWD, SNWA, BBWD & Coyote Springs annual summary fiscal reports published in LVRJ		
Jul	Thu Jul 26 Proof of publication of fiscal reports submitted to the Nevada State Department of Taxation		
Aug	Thu Aug 9 Budget Award Application submitted to the GFOA		

**Las Vegas Valley Water District
Operating and Capital Budget
Introduction and Strategic Plan
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Las Vegas Valley Water District Strategic Plan

Strategic Plan Background.

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

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

In fall 2012, the Senior Management Team

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

Strategic Plan and 2018-19 Budget Plan Preparation.

The LVVWD's Strategic Plan serves as a guide in the development of the LVVWD's annual Budget Plan. The Strategic Plan is used to guide and focus operational objectives and subsequently budget plan investments for the upcoming year. In section 5 of the 2018-19 Budget Plan, each department has established objectives for the upcoming year according to the relevant and existing Strategic Plan goal it is designed to address.

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

For the past decade, Southern Nevada has weathered unprecedented drought conditions on the Colorado River and, more recently, has survived the effects of the 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.

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Operating and Capital Budget
Introduction and Strategic Plan
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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, mission and goals were developed:

VISION

To be a global leader in service, innovation and stewardship

MISSION

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

GOALS

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

Strategic Plan Strategies.

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

Assure quality water through reliable and highly efficient systems.

- Provide a high quality drinking water

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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.

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.

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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.

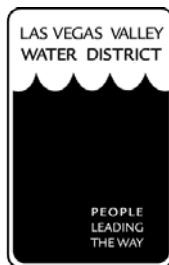
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SECTION 3

OPERATING AND CAPITAL BUDGET PLAN

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LAS VEGAS VALLEY WATER DISTRICT
FISCAL YEAR 2018-19
OPERATING AND CAPITAL BUDGET

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget Plan
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The fiscal year 2018-19 Budget Plan reflects the continued commitment of the Las Vegas Valley Water District (LVVWD) to provide water resources and services to meet the demands of Southern Nevada. The LVVWD utilizes its Strategic Plan as a guide in shaping its annual Budget Plan. The fiscal year 2018-19 Budget Plan's total sources of funds are projected to be \$625.1 million, or a 12 percent

decrease compared to the fiscal year 2017-18 Adopted Budget Plan. The fiscal year 2018-19 Budget Plan's total uses of funds are projected to be \$690.0 million, or a 9 percent increase compared to the fiscal year 2017-18 Adopted Budget Plan. The table below shows the Sources and Uses of Funds Summary for the 2016-17, 2017-18, and 2018-19 fiscal years.



Budget Summary

	Actual 2016-17	Budget 2017-18	Budget 2018-19	Budget-to-Budget Variance	
				\$	%
Sources					
Tiered Consumption	\$ 263,343,105	\$ 267,429,244	\$ 287,018,477	\$ 19,589,233	7%
Service Charge	63,805,135	67,033,028	70,466,473	3,433,446	5%
Backflow Charge	9,140,419	10,643,537	11,677,963	1,034,426	10%
Reclaimed Water	7,267,657	7,684,175	7,161,630	(522,545)	-7%
Other Water Bill Charges	6,389,227	5,339,627	6,756,119	1,416,492	27%
Facilities Connection Charge	12,241,154	15,620,696	15,457,665	(163,032)	-1%
Application & Inspection Fees	2,097,655	2,992,749	2,182,400	(810,349)	-27%
Investment Income	1,312,388	2,652,683	3,331,271	678,588	26%
Springs Preserve	2,784,944	2,997,596	3,029,465	31,870	1%
Other Revenues	10,620,299	-	-	-	
Subtotal	\$ 379,001,982	\$ 382,393,334	\$ 407,081,464	\$ 24,688,130	6%
Debt Issuance Proceeds	22,463,898	122,098,200	8,462,299	(113,635,901)	-93%
LVVWD Sources	\$ 401,465,880	\$ 504,491,534	\$ 415,543,763	\$ (88,947,771)	-18%
Uses					
Purchased Water	\$ 90,345,870	\$ 89,765,896	\$ 96,890,139	\$ 7,124,244	8%
Energy	9,019,972	11,225,500	10,676,500	(549,000)	-5%
Payroll & Related	122,524,701	128,842,350	139,029,285	10,186,935	8%
Operating Expenses	37,511,121	47,914,785	59,877,426	11,962,641	25%
Capital Expenditures	49,559,748	85,873,520	103,304,440	17,430,920	20%
Debt Service	62,150,502	65,376,847	70,601,752	5,224,904	8%
LVVWD Uses	\$ 371,111,913	\$ 428,998,898	\$ 480,379,542	\$ 51,380,644	12%
LVVWD Net Surplus/(Deficit)	\$ 30,353,967	\$ 75,492,636	\$ (64,835,779)		
SNWA Charges					
Infrastructure Charge	\$ 94,278,922	\$ 106,191,818	\$ 112,695,027	6,503,209	6%
Commodity Charge	47,122,474	49,439,360	50,317,179	877,819	2%
Connection Charge	41,373,197	44,513,446	42,543,034	(1,970,412)	-4%
Reliability Surcharge	3,854,858	3,888,655	4,041,996	153,341	4%
SNWA Charges	\$ 186,629,451	\$ 204,033,279	\$ 209,597,236	\$ 5,563,957	3%
Total Sources	\$ 588,095,330	\$ 708,524,813	\$ 625,140,999	\$ (83,383,814)	-12%
Total Uses	557,741,364	633,032,177	689,976,778	56,944,601	9%
Total Net Surplus/(Deficit)	\$ 30,353,967	\$ 75,492,636	\$ (64,835,779)		

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Sources

The fiscal year 2018-19 Budget Plan's total sources of funds are projected to be \$625.1 million, which is a 12 percent decrease compared to the 2017-18 Adopted Budget Plan. The decrease is largely due to proceeds from debt issuances in 2018-19 projected to be much lower than 2017-18.

The LVVWD revenue-based sources of funds are projected to rise by \$24.7 million, or 6 percent. This increase is related to the implementation of the LVVWD Board of Directors (Board) adopted water rate adjustments, which were a result of the LVVWD's citizen's advisory committee (CAC) recommendations. The Board adopted water rate adjustments included modest tier consumption rate and service charge increases of 3% each in 2017 and 2018, and annual inflation-indexed increases in the years following.

In January 2017, the Board approved the CAC recommendations, which included the water rate adjustments noted above, to help fund the LVVWD's capital program through fiscal year 2026-27. The capital needs were included as part of the 10-year, \$616 million (in 2016 dollars) Capital Improvement Plan (CIP). The CIP was also adopted by the Board in January 2017. The CIP guides decisions related to asset management, necessary water system expansion and water quality compliance activities.

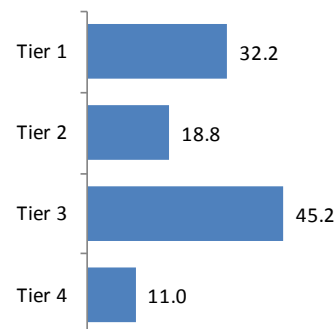
Tiered Consumption.

The LVVWD service rules have consumption rates of four tiers with thresholds for each tier varying by meter size and customer class. In

establishing water rates, the LVVWD strives to set reasonable rates and considerations for the equitable allocation and recovery of costs of providing facilities and delivery of water service are made, except that the rates may be established in such a way as to encourage the conservation of water. Construction water and reclaimed water are sold at uniform rates. The historical 10-year average mix of actual water deliveries between the consumptive tiers is as follows:

- Tier 1 – 27%
- Tier 2 – 17%
- Tier 3 – 45%
- Tier 4 – 11%

**2018-19 Water
Deliveries by Tier
(Billion Gallons)**



Tier 1. Tier 1 rates have typically been considered the rate for “lifeline” water, i.e. the amount of water a small residence needs to satisfy typical indoor water uses such as bathing, washing clothes, toilets, etc. The tier 1 consumption rate is currently set at \$1.23 per 1,000 gallons.

Tier 2. Tier 2 rates allow a typical small residence with very limited outdoor water use

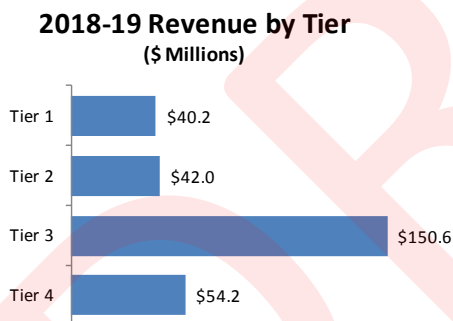
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to avoid the 3rd tier. In addition, tier 2 thresholds have been compressed for residential services with a meter size of ¾" or above in order to encourage conservation. The tier 2 consumption rate is currently set at \$2.20 per 1,000 gallons.

Tier 3. Tier 3 typically delivers 40 – 45 percent of the water sold. The tier 3 consumption rate is currently set at \$3.28 per 1,000 gallons.

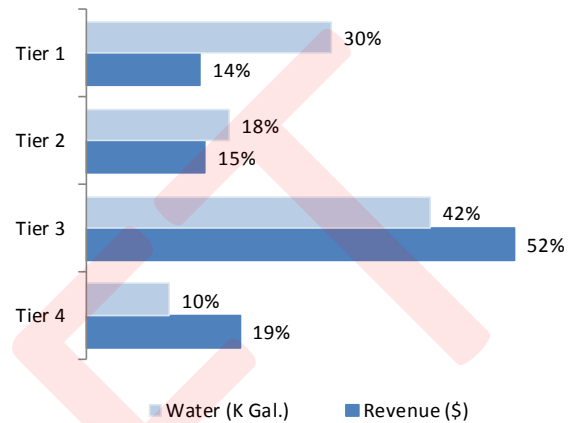
Tier 4. Tier 4 rates are designed to encourage conservation. The tier 4 consumption rate is currently set at \$4.86 per 1,000 gallons.

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



The following chart shows the percent of budgeted water deliveries and revenue by tier for the fiscal year 2018-19. This chart illustrates the revenue impact on the water flowing through the tiers. In Tiers 1 and 2, the percentage revenue impact is less than the percent of water delivered, and the reverse is true in Tiers 3 and 4. While conservation is important, from a revenue perspective, it is financially beneficial to the LVVWD to deliver water in the upper tiers.

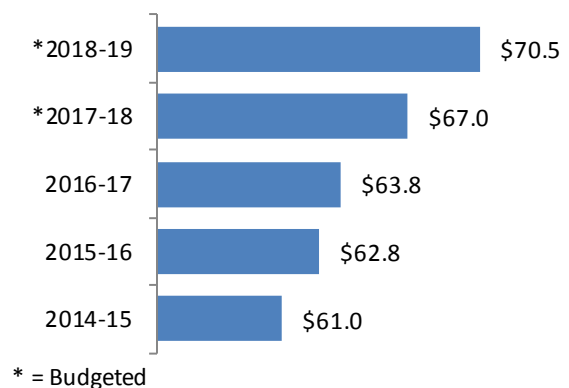
Percent Budgeted Water Deliveries & Revenue by Tier



Service Charge.

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

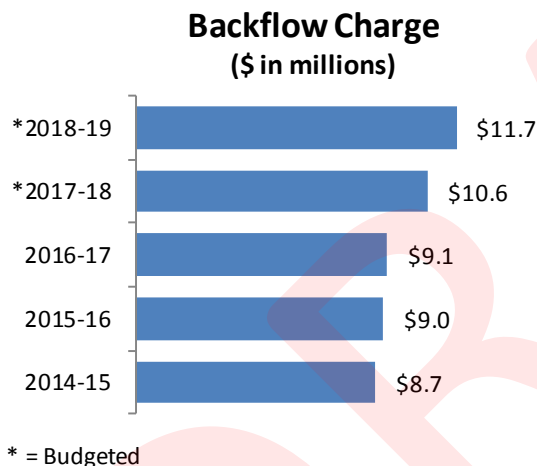
Service Charge
(\$ in millions)



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Backflow Charge.

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



Reclaimed Water.

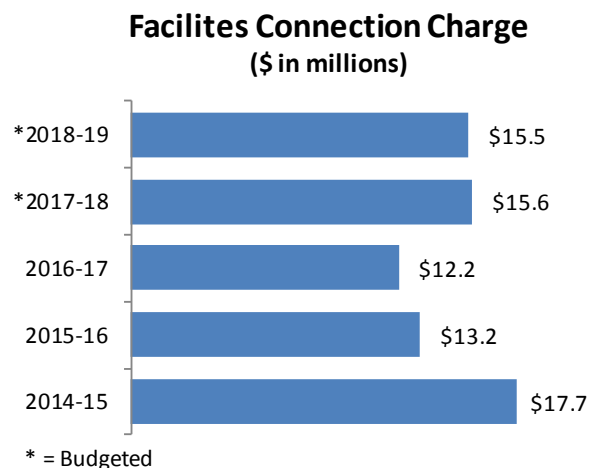
Reclaimed water is treated effluent from water reclamation centers, typically blended with potable water, and delivered to golf courses. The flat rate for reclaimed, or non-potable, water is \$2.33 per 1,000 gallons. Reclaimed water services are not subject to the Daily Service Charge or the SNWA Commodity Charge or the SNWA Reliability Surcharge, but they are subject to the SNWA Infrastructure Charge. For the fiscal year 2018-19 Budget Plan, reclaimed water revenues are estimated to be \$7.2 million.

Other Water Bill Charges.

The water bill may contain various other charges which appear on customer's water bills, such as turn on charges, late fees, delinquent processing charges, lockout fees, returned check charges, etc. For the fiscal year 2018-19 Budget Plan, other water bill charges are anticipated to be \$6.8 million.

Facilities Connection Charge.

The facilities connection charge is based on meter size and is designed to offset costs of providing and/or expanding the LVVWD's water facilities. For the fiscal year 2018-19 Budget Plan, connection charges are anticipated to be \$15.5 million, which represents a \$0.2 million, or 1 percent, decrease compared to the fiscal year 2017-18 Adopted Budget Plan. Similar to the water rates, the Board adopted increases to the facilities connection charge in 2017, 2018, and beyond. However, the recent pace of new service connections has moderated, therefore the estimate is slightly below 2017-18.



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Application & Inspection Fees.

The Application and Inspection fees are developer fees charged at the time a customer applies to connect to the water system or applies for changes in water service connection. These fees cover the costs associated with handling the application, setting up the service and reviewing plans. Inspection fees are those developer fees charged for the inspection of all new water facility installations and water services constructed by private contractors. In the fiscal year 2018-19 Budget Plan, application and inspection fees total \$2.2 million, a decrease of \$0.8 million, or 27 percent compared to the fiscal year 2017-18 Adopted Budget Plan. This reflects the recent pace of growth and development moderating in the LVVWD's Service Area.

Investment Income.

Investment income is revenue earned from earnings on accumulated reserve balances. For the fiscal year 2018-19, interest earnings are anticipated to be \$3.3 million, a \$0.7 million increase compared to the fiscal year 2017-18 Adopted Budget Plan estimate. This increase is the result of larger reserve balances and higher interest rates.

Springs Preserve.

In 1998, the LVVWD entered into a partnership with the Las Vegas Springs Preserve Foundation (the Foundation), a tax-exempt charitable organization founded to provide funding for the Springs Preserve. The Springs Preserve is a cultural and historic attraction located on the LVVWD property. The 180-acre national historic site is widely known as the "birthplace" of Las Vegas. The

presence of an abundant water supply at the site was the original catalyst for the growth, development, and the resulting economic prosperity of the Las Vegas area. The Springs Preserve opened in June 2007.

For the fiscal year 2018-19 Budget Plan, revenues for the Springs Preserve are anticipated to total \$3.0 million, a 1% increase compared to the fiscal year 2017-18 Adopted Budget Plan.

Debt Issuance Proceeds.

Municipal Bond Proceeds. The 2018-19 Budget Plan does not include debt proceeds from municipal bond issuances.

Nevada State Revolving Fund (SRF) Loan Proceeds. In December 2014, the LVVWD entered into an agreement with the State of Nevada Department of Conservation and Natural Resources to receive a loan from the SRF to finance construction of water infrastructure. The LVVWD will ultimately receive \$50 million in SRF financing, but the first loan was for \$20 million. The second loan of \$15 million was part of the 2015-16 Adopted Budget Plan. The final \$15 million was included in the 2016-17 Budget Plan.

The SRF loan is secured by general obligation bonds the LVVWD provided to the State of Nevada as collateral for the loan. The SRF loan is funded on a reimbursement basis, i.e. the LVVWD must first fund the construction expenditures with its own assets and then be reimbursed through the SRF loan. After the full principal has been drawn, or three years from the closing date, whichever occurs first, the LVVWD is obligated to make roughly equal semiannual payments of principal and interest over the remaining term of the loan. Until

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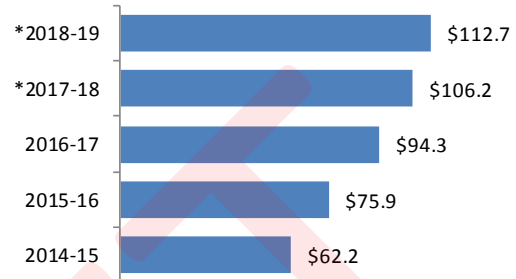
then, the LVVWD is obligated to pay interest only on the outstanding amount of the loan. For the fiscal year 2018-19, the LVVWD projects to spend approximately \$8.5 million, which is expected to be reimbursed through the SRF loans.

SNWA Infrastructure Charge.

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

This source of revenue for the SNWA, which went into effect beginning May 2012, is projected to generate \$112.7 million from the LVVWD customers, which represents an increase of \$6.5 million, or 6 percent, for the SNWA in the fiscal year 2018-19 Budget Plan when compared to the fiscal year 2017-18 Adopted Budget Plan. This charge is on the LVVWD customer's water bills and the funds pass directly to the SNWA. Similar to other SNWA charges, the Infrastructure Charge receipts will have no impact on the LVVWD's net surplus or deficit.

Infrastructure Charge
(\$ in millions)



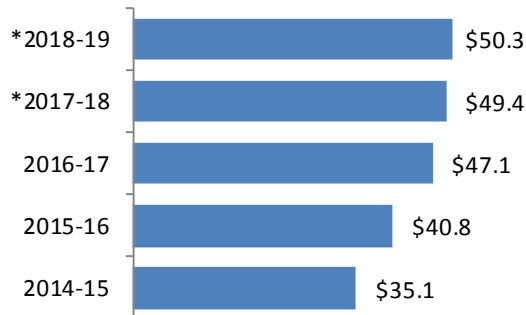
* = Budgeted

SNWA Commodity Charge.

The Commodity Charge was approved by the SNWA Board and the LVVWD Board in December 1995 and went into effect on purveyor water bills beginning in November 1996. This charge consists of a usage cost per 1,000 gallons sold by each of the SNWA's participating purveyor members to their customers. The charges are paid by the purveyors' customers based on the benefit they will accrue from the expansion of the SNWA's regional water treatment and transmission system. For fiscal year 2018-19, commodity charge revenues are anticipated to be around \$50.3 million, an increase of \$0.9 million, or 2 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.

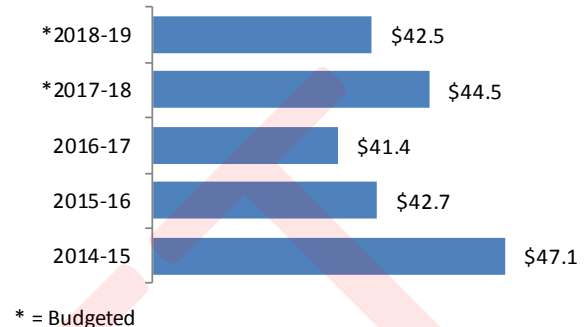
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Commodity Charge
(\$ in millions)



* = Budgeted

Connection Charge
(\$ in millions)



SNWA Connection Charge.

The Connection Charge was approved by the SNWA Board and the LVVWD's Board in December of 1995 and became effective March 1, 1996. It was established to pay the majority of the costs of expanding the SNWA's regional water treatment and transmission system. It assesses new development to partially pay the costs of the system's current and future expansions. These revenues are passed directly from the LVVWD to the SNWA and are offset in the LVVWD's sources of funds with an equal amount of uses of funds. These revenues (as well as the SNWA Commodity and Reliability charges) are not used to support any of the LVVWD's ongoing operations or capital projects.

The fiscal year 2018-19 Budget Plan anticipates the SNWA connection charge collections of \$42.5 million, a decrease of \$1.9 million, or 4 percent, compared to the fiscal year 2017-18 Adopted Budget Plan. As with other sources of development-based revenue, this decrease reflects the recent pace of growth and development moderating in the LVVWD's Service Area.

SNWA Reliability Surcharge.

The Reliability Surcharge was approved by the SNWA Board and the LVVWD Board in November 1997 and went into effect on purveyor water bills beginning in April 1998. It is applied to the total dollar amount of customers' bills, excluding the SNWA Infrastructure Charge. Residential customers are charged 0.25 percent of their total bill, while all other customers are charged 2.5 percent. The reliability surcharge is an additional charge to be paid by the purveyors' customers based on the benefit they will accrue from the expansion of the SNWA's regional water treatment and transmission system. In the fiscal year 2018-19 Budget Plan, it is estimated this charge will total \$4.0 million.

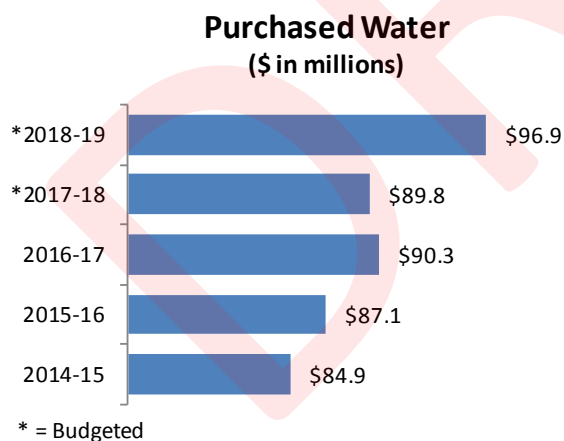
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Uses

The fiscal year 2018-19 Budget Plan's total uses of funds are projected to be \$690.0 million, which is a 9 percent increase compared to the 2017-18 budget. A significant factor in the rise in uses of funds is due to increases in capital expenditures attributable to the \$616 million 10-year Capital Improvement Plan (CIP) adopted by the Board in January 2017.

Purchased Water.

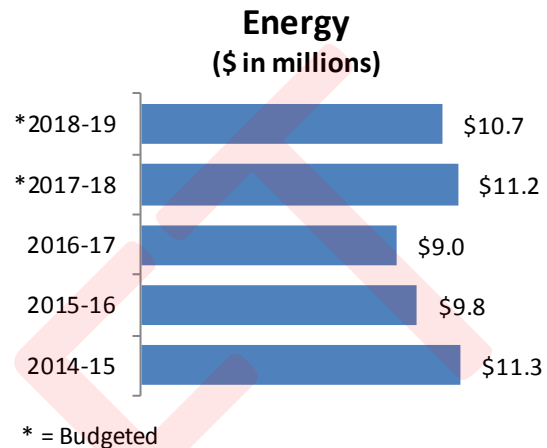
The LVVWD purchases nearly 90 percent of its water from the SNWA. For the fiscal year 2018-19 Budget Plan, water costs are projected to be \$96.9 million, which is an 8 percent increase compared to the fiscal year 2017-18 Adopted Budget Plan. This \$7.1 million rise in costs is due to increases in water demands and the wholesale water rate on water purchased from the SNWA.



Energy.

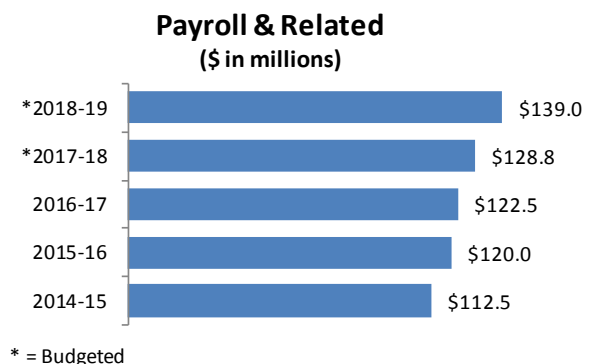
Compared to the 2017-18 Adopted Budget Plan, the cost of energy is expected to decrease by \$0.5 million, or 5 percent, for the fiscal year 2018-19 Budget Plan. This slight

decrease is attributable to an expected decrease in power prices.



Payroll & Related.

Payroll costs include wages, salaries and benefits. For the fiscal year 2018-19 Budget Plan, payroll and related expenses are anticipated to be \$139.0 million. This represents an increase of \$10.2 million, or 8 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.



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

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year 2017-18 Adopted Budget Plan. Demands to continue providing safe and reliable water service under current operational conditions and the new CIP have resulted in increased staffing requirements for the LVVWD. The following chart summarizes the number of equivalent FTE positions by department charging time to the LVVWD.

FTE Summary

<u>Department</u>	<u>Actual 2016-17</u>	<u>Budget 2017-18</u>	<u>Budget 2018-19</u>
Executive Management	2.0	5.0	5.5
Legal Services	8.2	8.0	8.5
Finance	48.6	53.0	53.8
Information Technology	106.3	101.0	101.5
Human Resources	16.9	19.6	23.5
Public Services	60.1	65.8	71.3
Environmental, Health, Safety & Corporate Security	33.1	30.2	30.9
Customer Care & Field Services	152.5	171.1	170.1
Engineering	68.1	78.3	81.7
Resources & Facilities	67.9	64.8	63.7
Infrastructure Management	60.7	63.7	64.6
Water Resources	7.5	1.5	2.5
Energy Management	1.6	-	-
Operations	185.8	189.5	189.3
Water Quality & Treatment	4.8	1.0	0.4
Total	824.1	852.1	867.1

**Totals may be off slightly due to rounding*

Operating Expenses.

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

Operating Expense Detail

	<u>Actual 2016-17</u>	<u>Budget 2017-18</u>	<u>Budget 2018-19</u>
Operating Expenses			
Materials & Supplies	\$ 11.4	\$ 12.9	\$ 14.7
Maintenance & Repairs	15.9	19.2	24.2
Rental & Leases	2.4	1.1	2.7
Other Employee Expenses	1.4	2.3	2.4
Other Operating Expenses	6.4	12.3	15.8
Total	\$ 37.5	\$ 47.9	\$ 59.9

**Totals may be off slightly due to rounding*

Materials and Supplies. This classification includes, but is not limited to, pipe, asphalt, concrete, office supplies, and materials required for the normal operation of The LVVWD's facilities. The fiscal year 2018-19 Budget Plan anticipates total expenditures of \$14.7 million for this expense category. This represents an increase of \$1.8 million, or 14 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.

Maintenance and Repairs. This classification includes, but is not limited to, the outside purchase of goods and services associated with maintaining and repairing the water transmission system; buildings and grounds; and computer equipment. The fiscal year 2018-19 Budget Plan anticipates this expense will total \$24.2 million, an increase of \$4.9 million, or 26 percent compared to the fiscal year 2017-18 Adopted Budget Plan.

Rental and Leases. The fiscal year 2018-19 Budget Plan anticipates expenses of \$2.7 million, which includes rent/lease office space, communication equipment and outside storage facilities. This expense increased by \$1.6 million when compared to the fiscal year 2017-18 Adopted Budget Plan.

Other Employee Expense. This classification includes such items as safety equipment,

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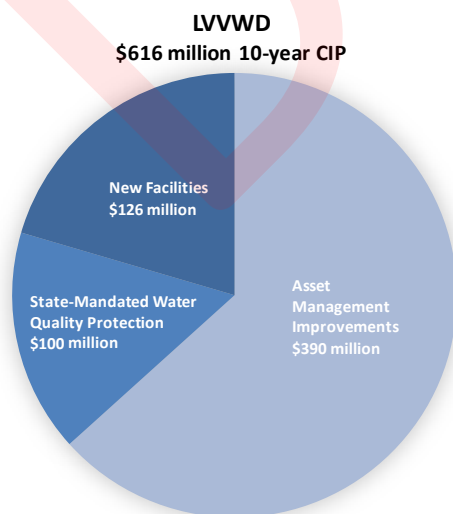
dues, travel and training, and tuition reimbursement. The Budget Plan anticipates a total of \$2.4 million spent within this category. This amount represents an increase of \$0.1 million when compared to the fiscal year 2017-18 Adopted Budget Plan.

Other Operating Expense. This classification includes, but is not limited to postage, legal fees and professional services. For the fiscal year 2018-19 Budget Plan, other operating expenses are anticipated to total \$15.8 million, an increase of \$3.5 million, or 28 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.

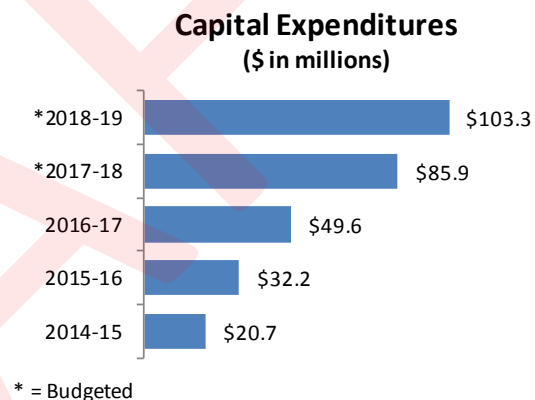
Capital Expenditures.

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

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



For the fiscal year 2018-19 Budget Plan, the CIP and continued focus on asset management efforts to replace and maintain the LVVWD's essential equipment and water distribution facilities resulted in an increase in capital equipment and construction expenditures. For the fiscal year 2018-19 Budget Plan, total equipment and construction expenditures are budgeted at \$103.3 million, or an increase of 20 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.



Capital Equipment and Vehicles. For the fiscal year 2018-19 Budget Plan, equipment purchases are anticipated to total \$7.8 million, a decrease of \$0.5 million, or 6 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.

Capital Projects. For the fiscal year 2018-19 Budget Plan, the adopted CIP enhances the emphasis in capital projects, along with asset management, maintenance, and improvement of the LVVWD's water distribution system. In the fiscal year 2018-19 budget, the LVVWD anticipates spending \$95.5 million for capital projects, an increase of \$18.0 million, or 23 percent, compared to the fiscal year 2017-18 Adopted Budget Plan.

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The increases are prudent and necessary to fund new facilities and a number of large water distribution system maintenance projects. Both in the fiscal year 2018-19 Budget Plan, and in the fiscal year 2017-18 Adopted Budget Plan, expenditure increases for included projects are considered to be crucial for the continued operation of the water distribution system and include reservoir, well, pump, vault, pipe, motor and valve renovation and replacement projects.

Debt Service.

This classification includes bond payments made for debt that the LVVWD has issued, or expects to issue, for funding capital projects as well as ongoing capital needs. For the fiscal year 2018-19 Budget Plan, total bond payments are expected to total \$70.6 million, which is an 8 percent increase compared to the fiscal year 2017-18 Adopted Budget Plan. The increase is attributable to a new municipal bond debt issuance of \$100 million to fund the CIP, as well as additional utilization of the SRF.

SNWA Charges.

As described in the sources section above, the overall SNWA Charges for the fiscal year 2018-19 Budget Plan are expected to be \$209.6 million. This amount represents an increase of \$5.6 million, or 3 percent, when compared to the fiscal year 2017-18 Adopted Budget Plan.

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

An enterprise fund's year-end balance differs dramatically from other government agencies' fund balances. The enterprise net asset balance closely approximates a private corporation's retained earnings section. As such, net assets are affected by operating items as presented in this document as well as other financial resources and expenditures. The LVVWD accounts for its Net Assets in accordance with GASB Statement 33. The table on the following page summarizes the estimated sources and uses of funds and changes in net assets for the fiscal year 2018-19 Budget Plan.

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Estimated Net Assets Detail
Fiscal Year 2018-19 Budget

	<u>Invested in Capital Assets Net of Related Debt</u>	<u>Restricted for Debt Service</u>	<u>Restricted for Capital Projects</u>	<u>Unrestricted Net Assets</u>	<u>Total Proprietary Fund Net Position</u>	<u>Pension Trust Fund</u>	<u>Total Net Assets</u>
Estimated Equity June 30, 2018	\$ 838,011,414	\$ 25,121,157	\$ 162,776	\$ 192,798,839	\$ 1,056,094,186	\$ 454,476,130	\$ 1,510,570,316
Capital Acquisitions	(103,304,440)				(103,304,440)		(103,304,440)
Bond Payments							
Principal	33,282,209	(33,282,209)			-		-
Interest		(37,319,543)			(37,319,543)		(37,319,543)
Transfer for Debt Service		70,601,752		(70,601,752)	-		-
Operating Revenues				388,292,528	388,292,528	58,838,590	447,131,118
Operating Expenses				(306,473,350)	(306,473,350)	(20,400,000)	(326,873,350)
Non Operating Revenue				18,788,936	18,788,936		18,788,936
Estimated Equity June 30, 2019	<u>\$ 767,989,183</u>	<u>\$ 25,121,157</u>	<u>\$ 162,776</u>	<u>\$ 222,805,201</u>	<u>\$ 1,016,078,317</u>	<u>\$ 492,914,720</u>	<u>\$ 1,508,993,036</u>

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

Restricted for Debt Service. Assets from this classification are transferred from Unrestricted Assets to the Debt Service classification on a monthly basis. Total transfers (\$70.6 million) are used to pay current portions of general obligation bonds.

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

- **Transfer to Debt Service** - Described in preceding section.
- **Operating Revenue** - This represents the cumulative financial results of operations. Operating Revenue consists of water revenue, application

and inspection fees, other revenues (backflow and hydrant service charges; delinquent charges, late charges and returned-check charges), and Springs Preserve revenues. For the fiscal year 2018-19, these revenues are anticipated to total approximately \$388.3 million.

- **Operating Expense** - Operating Expenses include all categories in the Use of Funds, excluding pension expense, which is listed separately in preceding table, bond payments, capital equipment, major construction expenditures, and the SNWA charges (Regional Connection, Commodity, Reliability Surcharge and the Infrastructure Charge). For the fiscal year 2018-19 these expenses are anticipated to total approximately \$306.5 million.
- **Pension Expense** - For the fiscal year 2018-19, this expense has been separated from the Payroll Expense listed in the Uses of Funds, and is shown as a separate operating

Las Vegas Valley Water District
Operating and Capital Budget
Operating and Capital Budget Plan
Fiscal Year Ending June 30, 2019

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

- **Non-operating Revenues (net)** - Non-operating revenue consists of interest income.

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

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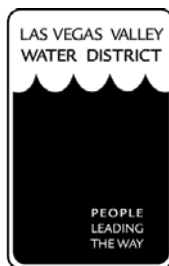


SECTION 4

STATE OF NEVADA

BUDGET DOCUMENTS

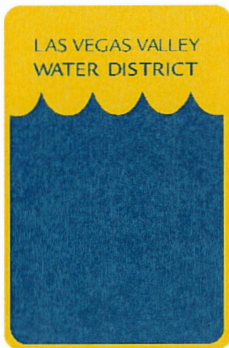
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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET



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

Las Vegas Valley Water District _____ herewith submits the (TENTATIVE) (FINAL) budget for the
fiscal year ending 6/30/2019

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 \$ 641,536,966

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)
Chief Financial Officer
(Title)

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

Signed Brian Thomas

Dated: 4-12-18

APPROVED BY THE GOVERNING BOARD

Marilyn Kirkpatrick, President

Steve Sisolak, Vice President

Susan Brager

Lawrence L. Brown III

James Gibson

Chris Giunchigliani

Lawrence Weekly

SCHEDULED PUBLIC HEARING:

Date and Time Monday, May 21, 2018 at 9:45 AM

Publication Date May 8, 2018

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

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

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FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

	ACTUAL PRIOR YEAR ENDING 06/30/17	ESTIMATED CURRENT YEAR ENDING 06/30/18	BUDGET YEAR ENDING 06/30/19
General Government			
Judicial			
Public Safety			
Public Works			
Sanitation			
Health			
Welfare			
Culture and Recreation			
Community Support			
TOTAL GENERAL GOVERNMENT			
Utilities	824.1	852.1	867.1
Hospitals			
Transit Systems			
Airports			
Other			
TOTAL			

POPULATION (AS OF JULY 1)	2,205,207	2,248,000	2,291,000
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.**

Las Vegas Valley Water District
(Local Government)

SCHEDULE S-2 - STATISTICAL DATA

Las Vegas Valley Water District
(Local Government)

[illegible]

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

**** Include Depreciation**

Page: 4
SCHEDULE A-2

PROPRIETARY FUND	(1)	(2)	(3) BUDGET YEAR ENDING 06/30/19	
	ACTUAL PRIOR YEAR ENDING 6/30/2017	ESTIMATED CURRENT YEAR ENDING 6/30/2018	TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Water Sales	\$ 349,945,542	\$ 358,129,610	\$ 383,080,663	
Application & Inspection Fees	2,097,655	2,992,749	2,182,400	
Springs Preserve	2,784,944	2,997,596	3,029,465	
Other Operating Revenue	60,374	-	-	
SNWA Infrastructure Charge	94,278,922	106,191,818	112,695,027	
SNWA Commodity Charge	47,122,474	49,439,360	50,317,179	
SNWA Connection Charge	41,373,197	44,513,446	42,543,034	
SNWA Reliability Charge	3,854,858	3,888,655	4,041,996	
Total Operating Revenue	541,517,966	568,153,234	597,889,765	
OPERATING EXPENSE				
Purchased Water	\$ 90,345,870	\$ 89,765,896	\$ 96,890,139	
Energy	9,019,972	11,225,500	10,676,500	
Payroll & Related	113,855,787	120,230,330	128,421,525	
Materials & Supplies	11,500,799	12,940,853	14,746,569	
Maintenance & Repairs	15,882,171	19,233,275	24,160,844	
Rent/Lease	2,401,881	1,115,500	2,708,270	
Other Employee Expense	1,430,663	2,286,331	2,434,612	
Other Operating Expense	6,295,614	12,338,826	15,827,131	
SNWA Infrastructure Charge	94,278,922	106,191,818	112,695,027	
SNWA Commodity Charge	47,122,474	49,439,360	50,317,179	
SNWA Connection Charge	41,373,197	44,513,446	42,543,034	
SNWA Reliability Charge	3,854,858	3,888,655	4,041,996	
Depreciation/Amortization	83,928,107	85,000,000	100,000,000	
Total Operating Expense	521,290,313	558,169,790	605,462,827	
Operating Income or (Loss)	\$ 20,227,653	\$ 9,983,444	\$ (7,573,062)	
NONOPERATING REVENUES				
Capital Contributions	\$ 37,040,324	\$ 35,000,000	\$ 35,457,665	
Investment Income - Unrestricted Funds	1,042,888	2,402,683	2,321,795	
Investment Income - Restricted Funds	269,500	250,000	1,009,476	
Other Nonoperating Revenue	2,386,071	-	-	
Total Nonoperating Revenues	40,738,783	37,652,683	38,788,936	
NONOPERATING EXPENSES				
Interest Expense	\$ 27,777,621	\$ 32,760,733	\$ 36,074,139	
Total Nonoperating Expenses	27,777,621	32,760,733	36,074,139	
Net Income before Operating Transfers	\$ 33,188,815	\$ 14,875,394	\$ (4,858,265)	
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 33,188,815	\$ 14,875,394	\$ (4,858,265)	

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND _____ ENTERPRISE _____

PROPRIETARY FUND	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/19	
	ACTUAL PRIOR YEAR ENDING 6/30/2017	ESTIMATED CURRENT YEAR ENDING 6/30/2018	TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Contributions - Employer	\$ 31,069,130	\$ 37,118,152	\$ 40,459,545	
Contributions - Employee	118,901	150,000	200,000	
Investment Earnings	49,216,856	16,721,165	18,179,045	
Total Operating Revenue	80,404,887	53,989,317	58,838,590	
OPERATING EXPENSE				
Administrative & General Expenses	\$ 344,057	\$ 400,000	\$ 400,000	
Benefits Paid	14,388,343	16,000,000	20,000,000	
Total Operating Expense	14,732,400	16,400,000	20,400,000	
Operating Income or (Loss)	\$ 65,672,487	\$ 37,589,317	\$ 38,438,590	
NONOPERATING REVENUES				
Interest Earned	\$ 173,415	\$ 200,000	\$ 150,000	
Total Nonoperating Revenues	173,415	200,000	150,000	
NONOPERATING EXPENSES				
Investment Expense	\$ 121,863	\$ 125,000	\$ 150,000	
Total Nonoperating Expenses	121,863	125,000	150,000	
Net Income before Operating Transfers	\$ 65,724,039	\$ 37,664,317	\$ 38,438,590	
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ 65,724,039	\$ 37,664,317	\$ 38,438,590	

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND _____ PENSION TRUST _____

Page: __6__
Schedule F-1.1

PROPRIETARY FUND	(1)	(2)	(3)	(4)
	ACTUAL PRIOR YEAR ENDING 6/30/2017	ESTIMATED CURRENT YEAR ENDING 6/30/2018	BUDGET YEAR ENDING 06/30/19	
			TENTATIVE APPROVED	FINAL APPROVED
OPERATING REVENUE				
Contributions - Employer			\$ 29,902,511	
Contributions - Employee				
Investment Earnings			500,000	
Total Operating Revenue			30,402,511	
OPERATING EXPENSE				
Administrative & General Expenses			\$ 200,000	
Benefits Paid			4,902,511	
Total Operating Expense			5,102,511	
Operating Income or (Loss)			\$ 25,300,000	
NONOPERATING REVENUES				
Interest Earned			\$ 50,000	
Total Nonoperating Revenues			50,000	
NONOPERATING EXPENSES				
Investment Expense			\$ 50,000	
Total Nonoperating Expenses			50,000	
Net Income before Operating Transfers			\$ 25,300,000	
Transfers (Schedule T)				
In				
Out				
Net Operating Transfers				
CHANGE IN NET POSITION	\$ -	\$ -	\$ 25,300,000	

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-1 REVENUES, EXPENSES AND NET POSITION

FUND OTHER POST EMPLOYMENT BENEFITS (OPEB) TRUST

	(1)	(2)	(3) (4) BUDGET YEAR ENDING 06/30/19	
	ACTUAL PRIOR YEAR ENDING 6/30/2017	ESTIMATED CURRENT YEAR ENDING 6/30/2018	TENTATIVE APPROVED	FINAL APPROVED
PROPRIETARY FUND				
A. CASH FLOWS FROM OPERATING ACTIVITIES:				
Cash Received from Customers	\$ 348,578,694	\$ 364,119,955	\$ 388,292,528	
Cash Payments to Suppliers for Goods and Services	(120,377,286)	(148,906,180)	(167,444,065)	
Cash Payments for Salaries and Benefits	(117,418,084)	(120,230,330)	(128,421,525)	
Other Cash Receipts	398,727	-		
Other Cash Payments	(6,410)	-	(29,902,511)	
a. Net cash provided by (or used for) operating activities	111,175,641	94,983,444	62,524,427	
B. CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:				
b. Net cash provided by (or used for) noncapital financing activities	\$ -	\$ -	\$ -	
C. CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
Acquisition and Construction of Capital Assets	\$ (45,811,647)	\$ (94,485,540)	\$ (113,912,200)	
Capital Contributed for Construction	20,801,855	35,000,000	35,457,665	
Proceeds from Sale of Property and Equipment	653,975	-		
Proceeds from Sale of Bonds	1,520,000	100,000,000	-	
Proceeds from State Revolving Fund Loan	22,463,868	22,098,200	8,462,299	
Bond Issue Costs	(500,443)	-		
State Revolving Fund Loan Issue Costs	(65,224)			
Principal Paid on Bonds	(28,525,849)	(31,616,115)	(33,282,209)	
Interest Paid	(33,624,653)	(33,760,733)	(37,319,543)	
Interest Rebate	1,405,623	-		
Construction Deposits	(465,748)	-		
c. Net cash provided by (or used for) capital and related financing activities	(62,148,243)	(2,764,187)	(140,593,988)	
D. CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchase of Investment Securities	\$ (282,828,870)	\$ (238,617,600)	\$ (410,147,063)	
Proceeds from Maturities of Investment Securities	217,139,996	138,051,400	431,167,723	
Investment Income	3,134,454	2,652,683	3,331,271	
d. Net cash provided by (or used in) investing activities	(62,554,420)	(97,913,517)	24,351,932	
NET INCREASE (DECREASE) in cash and cash equivalents (a+b+c+d)	\$ (13,527,022)	\$ (5,694,260)	\$ (53,717,629)	
CASH AND CASH EQUIVALENTS AT JULY 1, 20xx	\$ 77,806,133	\$ 64,279,111	\$ 58,584,851	
CASH AND CASH EQUIVALENTS AT JUNE 30, 20xx	\$ 64,279,111	\$ 58,584,851	\$ 4,867,222	

Las Vegas Valley Water District
(Local Government)

SCHEDULE F-2 STATEMENT OF CASH FLOWS

FUND ENTERPRISE

Page: 8
Schedule F-2

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

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

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NAME OF BOND OR LOAN List and Subtotal By Fund	*	TERM	ORIGINAL AMOUNT OF ISSUE	ISSUE DATE	FINAL PAYMENT DATE	INTEREST RATE	BEGINNING OUTSTANDING BALANCE 7/1/2018	REQUIREMENTS FOR FISCAL YEAR ENDING 06/30/19 INTEREST PAYABLE	PRINCIPAL PAYABLE	(9)+(10) TOTAL
ENTERPRISE FUND										
LVVWD 2008 Clean Energy	2	14 Years	\$ 2,520,000	7/15/2008	12/15/2022	1.30%	\$ 840,000	\$ 9,828	\$ 168,000	\$ 177,828
LVVWD 2010A BABS	2	30 Years	75,995,000	6/15/2010	3/1/2040	5.60%-5.70%	75,995,000	4,311,398	-	4,311,398
LVVWD 2010B	2	28 Years	31,075,000	6/15/2010	3/1/2038	2.00%-4.625%	27,040,000	1,174,740	895,000	2,069,740
LVVWD 2011D	2	16 Years	78,680,000	10/19/2011	6/1/2027	2.00%-5.25%	53,360,000	2,712,850	4,840,000	7,552,850
LVVWD 2012A	2	20 Years	39,310,000	9/5/2012	6/1/2032	5.00%	39,310,000	1,965,500	-	1,965,500
LVVWD 2014 \$20 Million SRF	10	20 Years	19,929,329	12/1/2014	7/1/2034	2.57%	19,452,114	493,790	960,146	1,453,936
LVVWD 2015A	2	11 Years	172,430,000	6/1/2015	6/1/2027	2-5%	136,085,000	6,804,250	13,060,000	19,864,250
LVVWD 2016B	2	20 Years	108,220,000	4/6/2016	6/1/2036	2.5-5%	101,910,000	4,948,250	3,725,000	8,673,250
LVVWD 2016D	2	20 Years	125,650,000	7/18/2016	6/1/2036	3.00%	117,840,000	3,535,200	4,190,000	7,725,200
LVVWD 2016 \$15 Million SRF	10	20 Years	15,000,000	9/1/2016	7/1/2036	1.78%	15,000,000	223,171	-	223,171
LVVWD 2017 \$15 Million SRF	10	20 Years	15,000,000	5/1/2017	1/1/2037	2.41%	15,000,000	203,050	-	203,050
LVVWD 2017A	2	21 Years	130,105,000	3/14/2017	2/1/2038	4-5%	129,510,000	5,955,900	3,955,000	9,910,900
LVVWD 2018A	11	30 Years	100,000,000	6/19/2018	7/1/2048	5.00%	100,000,000	4,981,617	1,489,063	6,470,679
TOTAL ALL DEBT SERVICE							\$ 831,342,114	\$ 37,319,543	\$ 33,282,209	\$ 70,601,752

Las Vegas Valley Water District Budget Fiscal Year 2018-2019
(Local Government)

SCHEDULE C-1 - INDEBTEDNESS

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Schedule C-1

LOBBYING EXPENSE ESTIMATE

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

Nevada Legislature: 80th Session; February 4, 2019 to June 3, 2019

1. Activity:	<u>Legislature 2019 - Las Vegas Valley Water District</u>	
2. Funding Source:	<u>Operating Revenues</u>	
3. Transportation	\$	<u>22,205</u>
4. Lodging and meals	\$	<u>23,995</u>
5. Salaries and Wages	\$	<u>38,041</u>
6. Compensation to lobbyists	\$	<u>-</u>
7. Entertainment	\$	<u>-</u>
8. Supplies, equipment & facilities; other personnel and services spent in Carson City	\$	<u>1,302</u>
Total	\$	<u><u>85,543</u></u>

Entity: Las Vegas Valley Water District

Budget Year 2018-2019

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Schedule 30

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2018 - 2019

Local Government: Las Vegas Valley Water District

Contact: Brian Thomas

E-mail Address: brian.thomas@lvvwd.com

Daytime Telephone: 702-882-8802

Total Number of Existing Contracts: 236

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2018-19	Proposed Expenditure FY 2019-20	Reason or need for contract:
1	A Company Inc.	09/03/15	09/02/21	\$ 15,000	\$ 15,000	Septic Tank Pump Out at Various Locations
2	ABC Fire & Cylinder	08/25/15	08/24/20	12,612	13,000	Special Hazard Fire Suppression Systems and Fire Hydrant Inspection and Testing
3	ABC Fire Extinguisher Company	07/01/15	06/30/20	14,300	14,300	Fire Sprinkler Wet Systems and Pre-Action/Dry Systems Inspection and Testing
4	Access	02/01/13	01/31/19	25,000	-	
5	Accurate Corrosion Control	10/03/17	10/02/23	14,925	14,925	Pipeline Cathodic Protection Services
6	Acme Underground Inc.	03/26/15	03/26/20	216,776	216,776	Cathodic Protection
7	Acme Underground, Inc.	11/01/17	10/31/18	235,000	246,750	Misc. Vault Repairs-On Call Services
8	Adobe Communications	12/05/17	12/05/22	1,000,000	1,000,000	Network Infrastructure Upgrade Services
9	Aerotech Mapping	04/07/15	04/06/20	20,000	20,000	Ad Hoc Aerial Imagery and Data Services
10	Aggregate Industries	11/02/13	11/01/18	97,794	45,000	Cold Mix Construction Material for Distribution
11	Aggregate Industries	10/22/17	10/21/18	500,000	500,000	On-Call Oper. & Main. Svc-Big Bend
12	Aimone-Martin Associates	12/11/17	12/10/18	50,000	-	Blasting Plan Review for Howard Hughs Park
13	Allied Universal Security Services	03/07/17	02/28/22	960,000	960,000	Security Services
14	Altivon, L.P.	11/07/17	11/06/22	4,771,023	4,771,023	Purchase of Call Center Software, Network Access Lines, Installation & Training
15	American Pavement Preservation, LLC	01/30/18	02/15/18	128,893		Pavement Replacement Svcs. - Residential Street Phase 2
16	Amy Ayoub	01/01/15	12/31/20	98,500	98,500	Springs Preserve Fundraising Assistance
17	Apple Inc.	10/14/15	10/13/20	50,000	40,000	Direct Purchase of Apple Hardware, Third-Party Application Software, and Maintenance
18	Arc	08/01/17	07/31/18	40,000	40,000	Printing of Construction Related Contracts
19	Argus Engineering	07/01/15	06/30/20	70,000	70,000	Support & Enhancement of The Scada System.
20	Attraction Technology Ltd	02/16/16	12/31/21	50,000	50,000	Smart Phone Mapping Application Services
21	Audio Visual Advisors	11/01/17	10/31/23	15,000	15,000	Audio/Visual Technician
22	Automic Software, Inc.	12/01/16	11/30/21	94,093	108,207	Appworx Software Maintenance and Support
23	Baker & Hostetler, LLP	03/29/17	06/30/23	100,000	100,000	Representation in the event of a cyber security data breach.
24	BancTec, Inc.	05/06/14	05/06/19	205,696	181,000	Remittance Processing
25	Benchmark Contracting, Inc., dba Cobblestone Construction	04/04/17	On Completion	1,887,000		Customer Svcs Elec & Data Upgrades
26	Black & Veatch	02/06/18	02/06/25	993,948	993,948	Engineering and construction support services
27	Blackbaud Inc	11/12/15	11/11/24	240,000	240,000	Altru Point of Sale and Donation Mgmt Software Subs. Fees & Assistance With Implementation.
28	Blue Locker Commercial Diving	10/08/14	10/07/20	50,000	69,850	Diver Inspection and Cleaning Services for Tanks and Reservoirs
29	Braintrust Software, LLC/dba The Braintrust Consulting Group	10/26/17	10/25/22	47,600	71,400	Scrum developer credential training
30	Broniec Associates	08/21/17	08/20/23	100,000	100,000	Auditing Services - Accounts Payable
31	CA Group, Inc.	09/05/17	On Completion	200,435		Water Refunding Bonds, Series 2018B,
32	Capital Project Law Group	03/16/15	03/15/22	-	50,000	Legal Services for The Low Lake Pumping Station Project
33	Capitol North American	10/13/16	10/12/22	20,000	20,000	Exhibit Transport
34	Carpenter Sellers Del Gatto Architects, PC	08/15/17	On Completion	15,000		Design & modifications to the Customer Service work area
35	CDW Government LLC	02/01/16	01/31/21	500,000	500,000	Personal Computer Hardware, Software & Maintenance.
36	Celebrate Kids	02/03/16	02/02/20	12,605	6,000	Performances at SP Year Round Events
37	Center For Progressive Policy & Practice	08/28/15	08/27/21	24,000	24,000	Grant Proposal and Award Nominating Writing Services In Support of Public Affairs
38	CH2M Hill	03/12/14	03/14/19	80,000	-	Control Systems Engineering Services
39	CH2M Hill	10/04/16	04/04/18	23,351	-	PSA for Campbell Pump Elec. Upgrade
40	CH2M Hill	11/20/17	11/19/18	89,546	-	PSA for Fiber Optics
41	CH2M Hill	11/09/17	12/31/18	137,132	-	PSA for Luce upgrades
42	CH2M Hill	03/19/17	03/18/18	100,000	100,000	PSA for PLC programming
43	CH2M Hill Engineers & HDR Engineering	07/01/17	06/30/22	300,000	300,000	Engineering Services
44	CH2M Hill Engineers, Inc.	07/01/17	06/30/22	175,000	175,000	Engineering Services for Misc Civil, Electrical, Mechanical & Control Sys Projects
45	CH2M Hill Engineers, Inc.	04/04/17	On Completion	106,343		Engineering Services for Campbell Pumping Sta Electrical Equipment Upgrades-Amendment
46	Chem-Aqua	07/01/14	06/30/18	26,620		Cooling Tower Maintenance
47	Clark County	02/21/18	02/21/18	990,000	990,000	LVVWD Escrow Services
48	Commercial Fire Protection	07/02/15	06/30/20	14,300	14,300	Fire Sprinkler Wet Systems and Pre-Action Dry Systems Inspection and Testing Services
49	Computer Technical Services	12/01/15	11/30/20	50,000	50,000	Maintenance and Repair of Both In-Warranty and Out-of-Warranty Personal Computer Systems
50	Construction Product Marketing	11/01/17	10/31/22	20,000	20,000	CCTV Inspections and Other Pipeline Assessment Services
51	Consumer Opinion Services Las Vegas	09/01/16	08/31/18	25,000	6,250	Research Services. Focus Groups
52	Cool Dogs	09/21/17	09/20/19	23,775	23,775	Performances at SP

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2018 - 2019

Local Government: Las Vegas Valley Water District

Contact: Brian Thomas

E-mail Address: brian.thomas@lvvwd.com

Daytime Telephone: 702-882-8802

Total Number of Existing Contracts: 236

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2018-19	Proposed Expenditure FY 2019-20	Reason or need for contract:
53	Core 4 Consulting, LLC	11/15/17	11/14/21	90,000	90,000	Training, Development, Recruitment & Selection Services
54	Cowen Search Inc	03/01/17	02/28/24	30,000	30,000	Recruitment Services
55	Cox Business Services	07/01/13	06/30/18	96,200	100,000	Internet and Video Access
56	Crown Fabricators	12/05/17	03/31/18	24,564		Fabrication of SS Covers
57	D.R. Backflow Services	04/01/17	03/31/22	234,000	234,000	Backflow Assembly Testing Services
58	Digital Guardian Inc	12/29/17	12/28/21	137,374	137,374	Data Loss Prevention
59	Digital Mapping Inc.	04/07/15	04/06/20	20,000	20,000	Aerial Imagery and Data Services
60	Divdat	03/10/14	06/30/18	55,000	60,000	Payment Kiosk Services for Valley View Lobby
61	Dorsey & Whitney LLP	07/10/17	07/09/24	49,000	49,000	Professional Services for Legal Team
62	Drew Asphalt Paving Inc.	02/03/15	02/02/18	840,788	1,681,582	Permanent Pavement Replacement & Concrete Appurtenances at Various Locations.
63	Dyno Plumbing	01/19/18	02/12/18	15,296		Various LVVWD Plumbing and Drain Repairs
64	Echologics LLC	07/01/17	06/30/22	100,000	100,000	Leak Detection Services
65	Ecosynthesis Scientific	07/10/17	07/09/22	75,000	75,000	Biological Consulting Services
66	Eldorado Springs, LLC	06/06/17	On Completion	269,000		Design & Construction of the Eldorado 2168 Zone Pipeline
67	Electric Power Systems Intl	02/18/15	02/18/20	173,644	173,644	ARC for Multi-Site Testing
68	Emtec Consulting Services, LLC	01/31/18	01/30/22	100,000	100,000	Data Conversion Services
69	Epcor Software Corporation	09/28/17	09/27/24	194,483	204,207	AP Automation Software & Technical Installation Services
70	Epiq Ediscovery Solutions Inc	02/23/17	On Completion	150,804		Preservation/collection of email from CCA
71	Epiq Ediscovery Solutions, Inc.	08/19/15	08/18/22	99,639	80,000	Analyze, Assess & Review Processes & Practices of Records Mgmt & Info Governance Function.
72	Ewing Irrigation Products	07/25/17	07/24/22	20,000	20,000	Irrigation Supplies
73	Experian Information Solutions, Inc.	11/01/17	10/31/22	96,000	96,000	Risk Credit Assessment
74	Fairway Chevrolet Company	11/25/14	07/31/19	79,800	79,800	Automotive Body Work and Repairs
75	Faiss Foley Warren	04/01/15	03/31/21	96,000	96,000	Community & Stakeholder Education, Obtaining Sponsorships, Event Planning & Logistical Support
76	Fencing Specialists Inc.	08/03/16	08/02/20	24,000	24,000	Tortoise Fencing Repairs/Replacement
77	Fireeye Inc. Dbm Mandiant	03/16/17	03/15/19	115,920	115,920	Software Products and Services
78	First Choice Tree Service	09/01/16	08/31/18	16,000	-	Holiday Lights Installation Services at Springs Preserve
79	First Data Resources, LLC	07/01/14	06/30/23	950,000	1,000,000	Water Bill Printing, Mailing, and Iv Services
80	Fiserv	03/16/10	12/31/23	1,838,050	1,842,217	Electronic Bill Presentation and Payment Services
81	Fisher & Phillips LLP	03/18/15	03/17/22	15,000	15,000	Professional Services for Legal Advice Relating To Labor and Employment Law and Representation
82	Fleet Management Solutions Inc	11/30/15	06/30/19	50,000	50,000	District Vehicle Tracking System Services
83	Fleetwash, Inc.	09/15/15	09/14/20	40,000	45,000	On-Site Vehicle Exterior Washing Services
84	Frasco Investigative Services	02/02/18	02/01/23	15,000	15,000	Investigative Services
85	Frazier & Deeter LLC	01/04/18	01/03/19	80,000	-	Accounting & Budget Operations Advisory Services
86	FTN Financial Main Street Advisors	10/08/14	03/04/19	172,000	172,000	Fixed Income and Cash Investment Management Services
87	Gatekeeper Systems	07/01/16	07/01/21	110,000	121,000	Software Maintenance - Mapping Software
88	General Design And Construction Co., Inc.	09/05/17	On Completion	2,274,950		Misc. Small Backflow Installation, Phase XV
89	George T. Hall	07/01/17	06/30/18	300,000	300,000	Technical Services for Automation Projects
90	Glass Box Technology, Inc.	11/30/15	11/29/19	560,000	151,000	Hardware & Operating System Software & Maintenance
91	Graphic Imaging Services, Inc.	06/20/17	06/30/20	90,000	90,000	Professional Scanning Services
92	Guardian Elite Medical Services LLC	09/01/17	08/30/18	17,000	-	Medical Services
93	Gutic Enterprises Inc	09/15/16	09/14/22	35,000	35,000	Professional Services for LVSP
94	HDR Engineering, Inc.	11/22/17	06/30/18	67,404		PSA for Well 29A Site Improvements
95	HDR Engineering, Inc.	07/01/17	06/30/22	125,000	125,000	Eng. Services for Misc Civil, Electrical, Mechanical & Control Sys Projects
96	Heatherington Consulting Group	01/27/14	upon notice	70,000	70,000	Employee Training
97	Heidi Culver	03/05/15	03/04/18	49,920	49,920	PSA To Assist With Springs Preserve Events
98	Henderson Electric Motors	05/21/14	05/20/19	100,000	100,000	Repair Services of Electric Motors
99	Highlights	10/01/14	03/04/18	49,920	49,000	PSA Springs Preserve Special Events
100	Highlights	11/13/17	11/12/21	10,800	10,800	Holiday Decor
101	Hispana Comunicacion Integral	04/06/16	04/05/22	83,000	83,000	PSA for Spanish-Language Marketing, Social Media and Advertising Supporting Lvvwd and Springs Preserve
102	Hispana Comunicacion Integral	03/17/16	04/05/23	60,000	60,000	PSA for Spanish-Language Marketing, Social Media and Advertising Supporting Lvvwd and Springs Preserve
103	Hobbs, Ong And Associates	05/01/12	upon notice	150,000	150,000	Financial Advisory Services
104	Holland And Hart	09/23/08	upon notice	1,500,000	1,500,000	Legal Services
105	Industrial Scientific Corp	01/01/16	12/31/19	34,374	240,626	Gas Detection Equipment, Repair & Maintenance Services.
106	Infor (US) Inc	05/14/15	05/14/20	147,622	147,622	Agreement for Lawson Software Suite Human Resources Software Maintenance and Support
107	Institute For Executive Development	08/21/13	08/20/20	90,000	90,000	Consulting Services for Strategic Planning

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2018 - 2019

Local Government: Las Vegas Valley Water District

Contact: Brian Thomas

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Daytime Telephone: 702-882-8802

Total Number of Existing Contracts: 236

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2018-19	Proposed Expenditure FY 2019-20	Reason or need for contract:
108	Institute For Executive Development	11/06/12	10/09/19	99,000	45,000	Executive/Leadership Development & Training
109	It'll Gro Inc.	11/01/13	10/31/18	26,000	26,000	Pickup of Compost and Recycling Green Waste at The Springs Preserve
110	J & J Enterprises Services	01/23/17	01/22/22	25,000	15,000	Asphalt Milling Services
111	J & J Enterprises Services, Inc.	07/05/17	07/04/19	2,800,000	320,752	Pavement Replacement Services, Phase I, 2017-2019
112	J & J Enterprises Services, Inc.	04/04/17	04/04/19	1,000,000	359,849	Pavement Replacement Svcs Phase II, 2017-2019
113	Jena Antonchuk	04/01/16	03/31/21	99,000	99,000	PSA To Assist Public Services With Outreach Communication
114	Joanne Robinson	10/02/17	On Completion	100,000		Backflow Prevention Research Services
115	Joshua Tree Productions	06/15/17	06/14/22	72,000	72,000	Professional video services
116	JT Fasteners	03/01/15	02/29/20	35,000	35,000	Miscellaneous Fasteners, With Bi-Weekly Bin Stocking Service From The Vendor
117	Katarina Hradilek dba Double Vision Art & D	06/14/17	06/13/21	97,000	97,000	Professional Design Services
118	Klarquist Sparkman LLP	06/10/15	06/09/22	30,000	30,000	Professional Services Related To Patent Law and Other Matters
119	Kokopelli Landscaping Inc	09/01/17	08/31/20	17,416	17,416	Landscaping Services
120	Korn Ferry Hay Group, Inc.	11/29/17	03/28/18	60,000		Talent Mgmt Strategy Consulting Services
121	Laguna Productions	02/21/17	02/20/19	145,000	36,250	Water Ways TV Show
122	Las Vegas Paving Corp.	10/04/17	10/03/18	1,500,490		Critical On-call Aid for Emergency Main Breaks & Support
123	Las Vegas Plumbing	11/13/14	10/31/20	20,000	20,000	Meter Repair Change Out Plumbing Repair Services
124	Las Vegas Plumbing	03/20/17	03/29/22	3,500	20,000	On Call Plumbing Services
125	Lebenson Actuarial Svcs Inc	06/01/16	05/13/19	40,000		Actuarial Services
126	Lenovo (Us) Inc/IBM	12/23/15	12/22/20	21,000	42,000	24/7 Maintenance of Lenovo Server Hardware for Both Production and Development Windows and ESX Servers
127	Lewis Michaelson	07/10/17	06/30/18	50,000	-	Consulting Services
128	Lighting Specialties	04/25/15	04/24/21	15,000	7,000	Provide Various Light Bulbs and Lamps for SP Exhibits
129	Lincoln County Telephone System	02/18/10	02/17/19	30,250	33,275	Telephone Circuit Usage
130	Little Ray's Reptiles Inc	12/13/17	09/30/18	102,000	-	Programming-Curation
131	LJ McCormick Enterprises Inc	09/01/17	08/31/20	34,168	34,168	Restoration of Disturbed Lands at WSNA
132	Lou Mccammon	12/15/17	01/08/18	28,500		LVSP Entertainment Services - Dog Shows
133	Lucidity Consult. Group LP An Emtec Co.	05/19/15	05/19/18	61,880	61,880	Technical Services To Assist With Oracle Customer Care & Billing Software Upgrade
134	Lynn Belcher Lnc Associates	01/26/18	01/25/23	15,000	15,000	Nursing Consulting Services
135	Maile Concrete	11/22/17	03/31/19	450,000		Replac. of Reservoir Joing Mat.-Campbell
136	Manpower Inc. Of Southern Nevada	04/01/13	03/31/21	968,000	1,064,800	Temporary Staffing
137	Market Decisions Corporation	04/01/17	03/31/22	150,000	150,000	Data Collection Services
138	Mars Company	03/26/15	03/25/21	15,000	15,000	Annual Maintenance for Meter Test Bench
139	Marsh USA Inc.	05/01/15	04/30/20	1,112,766	1,112,766	Property & Casualty Insurance & Brokerage Services.
140	Melvyn Green & Associates Inc	12/06/17	11/24/20	15,900	15,900	PSA
141	MHC Companies	06/23/15	06/22/20	80,000	80,000	Software and Professional and Technical Services for Employee Self Service Applications
142	Microsoft Corporation	08/31/15	08/30/20	67,630	67,630	Premier Level Enhanced Maintenance Support of Microsoft Software Products
143	Mike's Drain & Plumbing	11/13/14	10/31/21	15,000		On Call Plumbing Services
144	Milliman, Inc.	12/06/16	12/05/21	-	16,000	Actuarial Services for Risk Mgmt Self-Insured Workers' Comp and Liability Programs
145	Mines And Associates Inc	10/07/15	11/30/20	60,000	60,000	Employee Assistance Program Services
146	Moapa Valley Telephone Company	03/15/12	Perputual	14,000	14,500	T1 Communication Lines
147	Moredirect, Inc.	02/01/16	01/31/21	500,000	500,000	Personal Computer Hardware, Software & Maintenance.
148	NDL Group, Inc.	07/06/17	03/31/18	110,906		Construct 7 Access Vaults
149	Nevada Dept Of Transportation	03/07/17	On Completion	385,138		Design & construction of the Boulder City Bypass Phase 1 Project
150	Nevada Division Of Forestry	11/07/17	11/06/23	262,500	262,500	Inmate conservation camp program services
151	Nice Systems Inc	09/29/15	09/30/20	100,000	100,000	Support for Products Used for Customer Service Quality Control and Workforce Management App'S
152	NV Energy	01/01/16	12/28/19	178,714	178,714	Lease of Fiber Optic Lines
153	Ogletree Deakins	06/06/16	05/31/23	100,000	100,000	PSA for Legal Services
154	Olson Precast Company	12/04/17	12/04/22	235,000	235,000	Misc. Vault Pipe Coatings
155	Omniticket	08/01/15	07/31/21	20,000	10,000	Services Related To Internet Ticket Sales
156	Opportunity Village	04/01/16	03/31/20	40,000	40,000	Shredding & Recycling Svcs. All Sites
157	Opportunity Village	05/01/16	04/30/19	448,050	112,013	Custodial Svcs. Springs Preserve
158	Oracle America Inc.	12/10/13	09/28/19	10,600	10,600	Premier Support for Hardware Upgrades: LTO Tape Drives
159	Oracle Support Services	03/30/14	03/29/19	809,500	809,500	Software Maintenance and Support
160	Origami Risk, LLC	03/30/17	03/29/21	120,000	120,000	Risk Mgmt software & implementation services.
161	Osisoft LLC	12/24/15	12/31/20	60,000	60,000	Continued Maintenance of Data Historian Software for SCADA Sys Data
162	Quivx Discovery & Document Sol	06/18/15	06/17/20	45,000	45,000	Professional Services for the Forensic Transfer of Data

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2018 - 2019

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Total Number of Existing Contracts: 236

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2018-19	Proposed Expenditure FY 2019-20	Reason or need for contract:
163	Pacific Studio, Inc.	10/06/15	on completion	1,250,000	1,250,000	Design, Fabricate & Install New Exhibits Within the Waterworks Exhibit Area at the SP
164	Par 3 Landscape & Maintenance, Inc.	09/07/17	08/31/19	25,000	25,000	Irrigation work
165	Park Landscape	09/28/16	09/27/21	362,960	362,960	Grounds Maintenance Services
166	Paso Robles Tank	12/13/17	03/20/18	195,000		Steel Tank Rehabilitation
167	Pathfinder Communication Solutions LLC	06/03/15	06/02/24	500,000	500,000	Avaya Telecommunications Hardware, Software, Maintenance, and Technical Services
168	Patricia Montgomery	06/23/14	06/30/19	75,000	75,000	PSA Social Media Development
169	Peopleready Inc	04/01/17	03/30/22	15,000		Temporary Staffing
170	PFM Financial Advisors, LLC	02/07/17	07/14/18	100,000		CFO Services
171	Phycotech, Inc.	08/01/14	07/31/19	70,000	70,000	Analysis of Phytoplankton Samples in Lake Mead
172	Piercy Bowler Taylor & Kern	03/30/17	03/29/22	82,500	82,500	District/BBWD Auditor Services
173	Pitney Bowes	08/28/13	08/27/19	14,448	14,448	Folding Machine in Mail Services
174	Plante & Moran, PLLC	08/15/17	07/31/18	84,785	-	Purchasing Consolidation Program - Consulting Services
175	Platinum Edge, LLC	02/09/17	02/08/22	93,000	98,000	"Scrum" Training Services for Supervisors, Managers and Executives
176	Poggemeyer Design Group, Inc.	04/04/17	On Completion	113,426	-	Eng Svcs for 6th Street Waterline Repl
177	Pontifex Consulting Group, LLC	12/14/17	12/13/24	80,000	80,000	Classification & Compensation Consulting Services
178	Precision Crane And Hoist	02/06/17	02/05/22	67,350	68,000	Overhead Crane Maintenance and Repair
179	Quantum Spatial	04/07/15	04/06/20	25,000	25,000	Aerial Imagery and Data services
180	R&R Partners	07/16/15	06/30/21	4,053,500	4,458,850	Provide Integrated Marketing and Other Media Support to SNWA
181	R&R Partners	05/18/17	05/17/22	50,000	50,000	Consulting Services
182	R&R Partners	07/01/17	06/30/22	2,000,000	2,000,000	Integrated Marketing
183	Rafael Construction	04/23/14	04/22/19	387,200	-	ARC for Cathodic Protection
184	Reward Strategy Group	11/01/14	10/31/21	95,000	95,000	HR Consulting
185	Richard Stearns Designers Studio	07/01/16	06/30/19	55,000	13,750	Consultant for the Springs Preserve Gift Shop
186	Rimon, P.C.	08/22/17	08/21/18	79,000		Inventory Records Services
187	River Valley Air Conditioning Inc	01/01/18	12/31/23	25,000	25,000	HVAC Maintenance, Filter Changes and related non-construction services
188	Robin Rockey	07/01/16	06/30/19	90,000	22,500	Professional Services Agreement with Robin Rockey
189	Rogich Communications Group	04/01/17	03/31/21	96,000	96,000	Consulting Services
190	S & S Concrete And Materials	08/03/16	08/02/20	25,000	25,000	Type II Material and Waste Disposal Services
191	Safety-Kleen Corporation	03/01/17	02/28/22	50,000	50,000	Removal of Hazardous, Toxic, and Regulated Waste Products
192	Safety-Kleen Corporation	06/15/15	12/31/18	500,000	-	Recycling & Disposal of AMR components
193	Safety-Kleen Corporation	03/01/17	02/28/22	50,000	50,000	Removal of Hazardous, Toxic, and Regulated Waste Products
194	Santoro Whitmire Ltd	09/24/15	05/31/23	100,000	100,000	Provide Legal Representation and Services for a Class Action Lawsuit
195	Schneider Electric Software, LLC	01/01/17	12/31/21	187,736	199,375	Maint of Avantis Work Order, Purchasing, & Materials Mgmt Sftwr
196	Sectran Security Inc.	04/13/15	04/12/22	22,500	22,500	Armored Car Services
197	Sherman & Howard	07/30/15	07/29/23	100,000	100,000	Miscellaneous Bond and Financial Services
198	Sierra Nevada Administrators	11/01/17	10/31/22	100,000	100,000	Self-Funded Workers' Compensation Program Third Party Administration Services
199	Sierra-Cedar Inc	10/04/16	06/30/18	1,600,000		Workday Deployment
200	Signature Botanica LLC	09/01/16	08/31/22	28,000	28,000	Plant Propagation
201	Slater Hanifan	09/25/17	09/24/24	34,902	34,902	Engineering Services for Spring Preserve Cienega Improvements Project
202	Soil Tech	09/01/16	09/13/21	475,000	496,000	Las Vegas Wash Revegetation
203	Spineless Wonders	10/20/14	10/19/20	20,000	10,000	Live Adult Butterflies for the SP Butterfly Habitat
204	Statera Inc	07/06/17	07/08/24	276,300	276,300	Implement Aptus Software
205	Stradling Yocca Carlson & Rauth	12/05/17	12/05/24	100,000	10,000	Bond Disclosure Counsel Services
206	Studio J Inc	02/01/18	02/26/18	20,143		Professional Photography
207	Sunrise Paving, Inc.	01/30/18	02/15/18	122,386		Pavement Replacement Svcs. - Residential Street Phase 1
208	Support Product Services Inc	01/16/18	02/12/18	16,989		Heat Exchanger Repairs
209	Swendseid And Stern	01/10/00	upon notice	-	100,000	Bond Counsel
210	Switch Communications Group, LLC	09/10/14	09/09/19	580,000	600,000	Data Colocation Services
211	Synaptec Software, Inc.	12/13/17	12/12/23	100,000	100,000	Software Products & Technical Services
212	T & M Controls, Inc.	11/22/17	01/31/18	28,067		Electrical upgrades
213	T4S Partners Inc	06/23/17	06/22/23	65,200		Technical Services
214	Talentwise	09/04/15	upon notice	10,500	12,500	Pre-employment Screening and Background Checks
215	Technology West Group	08/01/17	07/31/23	15,000	15,000	A/V Related Exhibit Repairs and Maintenance
216	The Druckman Company LLC	01/29/18	02/07/18	13,500		Scrum Master Certification
217	The Howard Hughes Company, LLC	03/07/17	On Completion	16,166,000		Design & construct the 3665 Zone Reservoir & Inlet/Outlet Pipeline
218	The Louis Berger Group, Inc.	02/07/17	On Completion	235,439		Eng. Services for Paradise Road Waterline Replacement Project (Contract No. C1477)
219	Top Notch Services Inc	07/13/16	07/09/22	65,403	65,403	Street Sweeping Services
220	Tre Barnen	01/11/18	01/10/19	180,000	180,000	Misc. Fence Installations

SCHEDULE OF EXISTING CONTRACTS

Budget Year 2018 - 2019

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Total Number of Existing Contracts: 236

Line	Vendor	Effective Date of Contract	Termination Date of Contract	Proposed Expenditure FY 2018-19	Proposed Expenditure FY 2019-20	Reason or need for contract:
221	Tree Dr Services	07/01/14	06/30/20	45,000	45,000	Tree Trimming and Removal Service
222	Trench Shoring	03/20/14	03/19/20	50,000	50,000	Rental Services for Trench Shoring and Plates
223	Tri-County Weed Control	09/01/16	08/31/20	30,000	30,000	Weed Control Service
224	U S Captioning Co.	08/01/16	07/31/21	12,000	12,000	Closed Captioning Services
225	Unifirst Corp	10/31/17	10/31/21	20,000	20,000	Laundering of Uniforms
226	Unifirst Corporation	08/01/11	07/31/20	100,000	100,000	Uniform Rental and Laundry Services
227	Universal Protection Service, LLC dba Allied Universal Security Services	03/07/17	03/07/22	960,000	960,000	Security Services at LVVWD & SNWA
228	Vertice Communication Corporation	06/16/14	06/30/20	90,000	90,000	Spanish Language Advertising and Marketing Services for the Springs Preserve
229	Veterinarian Aquarium Group	04/14/14	04/14/21	85,000	85,000	Veterinarian Services
230	Viryanet Inc.	11/05/15	10/04/21	332,500	332,500	Maintenance of Field Work Order Software
231	Viryanet, Inc.	05/03/17	05/02/22	151,750	159,338	Upgrading Field Dispatch Service Software
232	Wells Cargo Inc.	06/05/13	06/30/18	150,000	150,000	Virgin Aggregate II and Spoils Disposal for Distribution
233	Wells Fargo Bank National Association	07/06/17	07/06/22	17,500	17,500	Custody Services
234	Wilson Elser Moskowitz Edleman & Dicker	10/06/15	10/05/23	100,000	100,000	Legal Services
235	Work Zone	07/01/17	06/30/23	198,790	198,790	Traffic Control and Barricade Services
236	Wunderlich-Malec Engineering, Inc.	07/01/17	06/30/22	300,000	300,000	Technical Services
Total Proposed Expenditures				\$ 74,239,499	\$ 43,556,342	

SCHEDULE OF PRIVATIZATION CONTRACTS

Budget Year 2018 - 2019

Local Government: Las Vegas Valley Water District

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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 2018-19	Proposed Expenditure FY 2019-20	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									

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Schedule 32

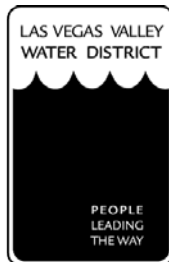
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SECTION 5

DEPARTMENT BUDGETS

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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
Fiscal Year Ending June 30, 2019

Department Budgets

This section contains summaries of budgets for each of the Las Vegas Valley Water District's (LVVWD) departments. Each department's budget narrative contains detailed budget information and other

highlights of the 2018-19 Budget Plan. The following table presents the 2016-17 actual, 2017-18 Adopted Budget and 2018-19 Budget Plan for each of the departments.

LVVWD Summary of Department Expenditures

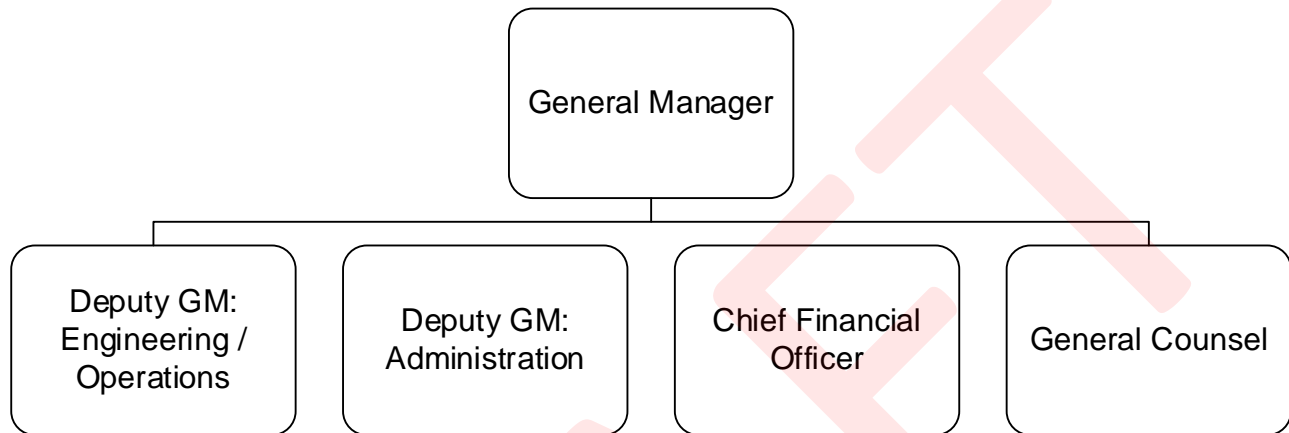
Departments	2016-17 Actual	2017-18 Budget	2018-19 Budget	Budget-to-Budget Variance
Executive Management	\$ 681,488	\$ 1,404,378	\$ 1,529,906	\$ 125,528
Legal Services	3,414,569	4,436,757	5,228,083	791,326
Finance	280,687,008	300,042,048	314,320,628	14,278,580
Information Technology	32,540,523	39,806,904	45,461,883	5,654,979
Human Resources	5,253,545	4,979,977	5,662,195	682,218
Public Services	13,235,399	15,582,648	18,863,867	3,281,219
Environmental Health Safety & Corporate Security	6,371,414	6,083,933	6,794,326	710,393
Customer Care & Field Services	25,174,119	26,466,077	30,780,053	4,313,976
Engineering	49,097,262	65,625,692	84,524,578	18,898,886
Resources & Facilities	13,644,965	22,485,671	23,328,120	842,449
Infrastructure Management	18,889,575	30,924,259	28,693,830	(2,230,429)
Water Resources	221,482	450,470	4,094,374	3,643,904
Energy Management	27,211	-	-	-
Operations	45,635,762	48,660,077	49,986,956	1,326,879
Water Quality & Treatment	716,536	706,439	106,228	(600,211)
Total Department Expenditures	\$ 495,590,858	\$ 567,655,330	\$ 619,375,027	\$ 51,719,697
Debt Service	\$ 62,150,502	\$ 65,376,847	\$ 70,601,752	\$ 5,224,904
Total Uses of Funds	\$ 557,741,360	\$ 633,032,177	\$ 689,976,779	\$ 56,944,601

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EXECUTIVE MANAGEMENT

Level: 1000



Mission Statement

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

Managers, a Chief Financial Officer and a General Counsel also oversee administrative and operational activities.

The Executive Management Team

The Executive Management Team is responsible for strategic planning, general administration and operational oversight of the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA). The function is staffed by a General Manager, who has responsibility for managing the two organizations. Two Deputy General

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.

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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 7,895	\$ 15,600	\$ 11,350
Maintenance & Repairs	57	-	100
Rental & Leases	-	-	-
Other Employee Expenses	55,408	85,100	104,100
Other Expenses	118,870	169,180	169,640
Total Operating Expenses	\$ 182,230	\$ 269,880	\$ 285,190
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 499,258	\$ 1,134,498	\$ 1,244,716
Total Department Expenditures	\$ 681,488	\$ 1,404,378	\$ 1,529,906
FTE Positions	2.0	5.0	5.5

Major Activities

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

- Continued progress in constructing a new Low Lake Level Pumping Station (L3PS), which is expected to be complete by 2020
- Continued implementation of LVVWD's 10-year Capital Improvement Plan
- Participation in the WaterStart partnership
- Completion of a Citizens Advisory Committee process for Big Bend Water District water rates, and implementation of the resulting recommendations
- Collaboration with Colorado River partners on conservation programs to help protect Lake Mead water elevations
- Leadership and involvement in Colorado River issues and initiatives
- Continuation of the Nevada State Engineer's public hearing process to review water rights associated with the

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Clark, Lincoln and White Pine Counties
Groundwater Development Project

- The 10-year anniversary of the Springs Preserve, which experienced record-breaking attendance, membership and community involvement in 2017

Minute 323

On August 17, 2017, the SNWA Board of Directors approved six “Minute 323” related agreements between Colorado River water users and the country of Mexico.

Under Minute 323, Mexico will be able to defer delivery of a portion of its Colorado River water, which will remain in Lake Mead. This will help maintain elevation levels and avoid shortage declarations. Mexico has also agreed to absorb a share of the mandatory shortages should they be declared.

As part of the agreement, the SNWA Board authorized up to \$7.5 million in contributions for conservation projects in Mexico, which could potentially yield up to 35 billion gallons of water. A portion of this water would then be designated for Nevada’s use.

The Minute 323 agreement between the U.S and Mexico was officially executed and became effective September 21, 2017.

Low Lake Level Pumping Station

In 2015, SNWA began design and construction on L3PS at Lake Mead. To date, construction on all 34 of the project’s well shafts has been completed. These shafts will accommodate submersible pumps that are each capable of pumping 30 million gallons of water per day.

More than 500 feet beneath the well shafts, crews continue to excavate a 377-foot-long, 36-foot-high, 33-foot-wide underground forebay, which will be used to store water for pumping.

Crews have also completed the two 144-inch discharge pipelines that will connect the new pumping station to the transmission systems that deliver raw lake water to the River Mountains and Alfred Merritt Smith treatment plants.

L3PS construction remains on-schedule and is expected to be operational by 2020. Once complete, L3PS will allow 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.

LVVWD Capital Improvement Plan

In January 2017, the LVVWD Board of Directors approved a 10-year Capital Improvement Plan to guide decisions related to asset management, necessary water system expansion and water quality compliance. Since then, significant progress has been made on various projects provided for within the Capital Plan; including the backflow retrofit program, beginning a 10 million-gallon storage reservoir in Summerlin and rehabilitation of major distribution lines. Once complete, these and other projects will increase water system reliability, enhance protection against water contamination and provide additional capacity for current and future water demands.

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WaterStart

In 2013, the Nevada Governor's Office of Economic Development partnered with the Desert Research Institute, LVVWD, SNWA and other organizations to create a joint water technology venture called WaterStart. The goal of WaterStart is to leverage expertise and leadership in identifying practical, innovative solutions to water-related issues. Ultimately, the community's economy is strengthened and jobs are created as these issues are taken on by companies that are uniquely qualified to address them.

For example, companies such as Syrinix and RedEye are headquartered overseas, but have recently opened offices in Nevada as part of the WaterStart initiative. Each company offers its own specific, innovative product that is currently being used to increase efficiency and bolster the reliability of the community water system.

Big Bend Water District Rates Process

In 2017, more than \$9 million in capital improvements were identified as being necessary to maintain system reliability and avoid costly service interruptions to Big Bend Water District (BBWD) customers.

In response, the BBWD Board of Trustees appointed a Citizens Advisory Committee (CAC) in June 2017 to offer community perspective on how best to fund necessary capital expenditures for the water system. Nine individuals representing a broad spectrum of community interests served on the committee and met with LVVWD staff five times between July and September 2017. The group provided six recommendations to help

guide the Board of Trustees' decisions on how to meet revenue deficiencies and support a reliable water system.

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 to jointly fund voluntary water conservation projects that benefit the Colorado River. Under the funding agreement, participating partners have the authority to provide more than \$30 million to support projects in both basins.

By the end of 2017, the program had supported 10 projects in the Lower Basin and 45 projects in the Upper Basin, with more expected to be complete in 2018.

State Engineer Groundwater Hearings

In September of 2017, the Nevada State Engineer held a continuation of the public-hearing process to review water rights associated with the SNWA's Clark, Lincoln and White Pine Counties Groundwater Development Project. The hearings focused on monitoring, management and mitigation plans for protection of existing water rights and the environment, as well as verification that specified quantities of groundwater can be sustainably developed. A decision from the State Engineer is expected in 2018.

Springs Preserve 10-Year Anniversary

The Springs Preserve celebrated its 10-year anniversary in 2017. The Preserve also had its most successful year to date in terms of

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attendance, membership and community involvement.

A record 300,000 people visited the Springs Preserve in 2017. The increased attendance can largely be attributed the opening of several new and highly-anticipated exhibits and features, including the WaterWorks Exhibit, Boomtown 1905, a new children's playground and the Teaching Garden.

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.

2018-19 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.
- Demonstrate national and international leadership in water

research, conservation and water quality efforts.

- Implement the LVVWD and SNWA Capital Plans.

2017-18 Major Accomplishments

- The SNWA Board approved multiple Minute 323-related agreements among Colorado River water users and the country of Mexico to boost reservoir levels by adding billions of gallons of water to Lake Mead. The agreements will also support water conservation projects, expand wildlife habitat and provide for environmental restoration.
- The SNWA Board approved an updated Water Resource Plan in 2017 that extends water supply and demand planning scenarios through the year 2068.
- L3PS construction remains on-schedule with forebay construction in progress and the completion of pump well shafts and discharge pipelines.
- Continued progress on asset management, necessary system expansion and water quality compliance projects provided within LVVWD's 10-year Capital Improvement Plan.
- Supported a total of 55 Colorado River System Conservation Pilot Program projects throughout the Basin.
- Implementation of the Syrinix Pipeline Monitoring System, which monitors water pressure throughout the service area and provides staff data that can be used to minimize leaks, avert costly emergency repairs and enhance the

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- longevity of the community's water infrastructure.
- Implementation of the RedEye Digital Management System, a cloud-based engineering and drawing management platform, by which employees can more efficiently store, find, share, manage and update engineering drawings and data using computers or mobile devices.
- The LVVWD's average monthly water use for residential single services was approximately 10,800 gallons in 2017, representing a 39 percent decrease from calendar year 2000 consumption.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2018-19 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.

2017-18 Major Accomplishments

- In 2017, LVVWD delivered approximately 108 billion gallons of water to customers throughout its service area.
- Fully installed and implemented Itron Analytics software, yielding significant benefits in workflow efficiency, water conservation and customer service and education.

- Installation of all-new electrical and data infrastructure in LVVWD Customer Service center, which will support software that will enhance customer service engagement efforts and provide additional avenues of customer-staff interaction.
- Launched a re-designed and mobile-friendly LVVWD website, with improved bill paying and customer self-service options.
- Launched a re-designed and mobile-friendly Springs Preserve website, which features an improved events calendar and easier access to ticketing, membership and visitor information.
- Opened the WaterWorks Exhibit at the Springs Preserve, which offers visitors an in-depth look at the treatment and delivery process that takes place before water comes out of the tap.
- Introduced the Springs Preserve's "Silver State Pass," a premier family membership that includes free family admission to signature events, unlimited seasonal access to the Butterfly Habitat, two annual guest admissions and general-admission train rides.

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

2018-19 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

Las Vegas Valley Water District
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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.

2017-18 Major Accomplishments

- SNWA continues to serve as a member of the Water Utility Climate Alliance, and recently participated in the completion and approval of a Strategic Plan that will serve as the primary guidance document for the alliance's long-term efforts.
- Ranked 1st place in the 100 Best Fleets ratings for environmental practices, an award for which applicants were graded on a comprehensive set of criteria including use of renewable and alternative sources of fuel. More than 90 percent of the organization's fleet is now powered by alternative fuels.
- Attained 20 percent overall project completion on the Tropicana Weir – 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, and a crucial cleansing point for the runoff.
- Continued monitoring of 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.

2018-19 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.

2017-18 Major Accomplishments

- Continued participation in the WaterStart partnership. Implementation of the aforementioned Redeye and Syrinx systems are a direct result of the WaterStart initiative and are yielding significant benefits.
- Continued to support environmental management efforts at SNWA 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.
- Participated with Israel-based company, WellToDo, to investigate technology that removes nitrate from LVVWD groundwater supplies. Future testing will continue to optimize performance and begin to evaluate other water contaminants.
- Participated with Japan-based company, Metawater, to investigate bromate-monitoring technology that

Las Vegas Valley Water District
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Fiscal Year Ending June 30, 2019

monitors the formation of bromate in our treatment plants. Bromate is a byproduct of ozone disinfection process and currently regulated by USEPA. The analyzer would be first of its kind to monitor bromate to help ensure regulatory compliance.

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

2018-19 Performance Objectives

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

2017-18 Major Accomplishments

- Implementation of 6 recommendations made by a citizen's advisory committee, including annual 9.4 percent rate increases in years 2017-2020, to support long-term water system reliability in Laughlin, NV.
- Continued implementation of 11 recommendations, including a modest rate increase in 2017 and 2018, from a citizen's advisory committee to support long-term LVVWD water system reliability.

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

2018-19 Performance Objectives

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

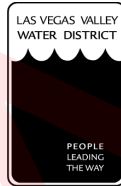
2017-18 Major Accomplishments

- 2017 was the Springs Preserve's most successful year to date in terms of attendance, membership and community involvement.
- Provided free admission to the Springs Preserve from November 20-24 for first responders, and other critical personnel for their service to the community on October 1.
- The Public Relations Society of America recognized LVVWD, SNWA and the Springs Preserve with 5 Pinnacle Awards.
- The Springs Preserve was named as one of "The Seven Best Places to Keep Kids Entertained" by vegasseven.com.
- The Springs Preserve earns the TripExpert Experts' Choice Award which reflects the views of journalists and professional travel writers and is bestowed on the best attractions around the world. The Preserve also received the TripExperts Best of Las Vegas award.

Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
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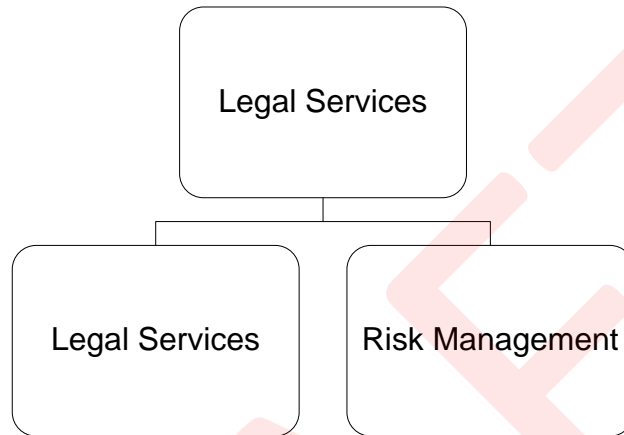
- In 2017, SNWA assisted 17 well users to connect to the municipal water supply, in compliance with the SNWA's financial assistance guidelines for the Groundwater Management Program as established by the Nevada Legislature. Through the Sub-Meter Assistance Program, eight sub-meters have been distributed to well owners, seven rebates have been issued for the installation of those sub-meters, and seven wells have been plugged and abandoned.
- Hosted a federally-funded disaster management training for emergency response partners to prepare for, respond to and mitigate incidents affecting water and wastewater facilities.

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LEGAL SERVICES

Level: 1200



Mission

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

and continues to advise on electrical power issues.

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

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 2018-19 budget contains continuing funding to support these efforts and for outside counsel who perform a variety of other legal services for the organization.

Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
Legal Services
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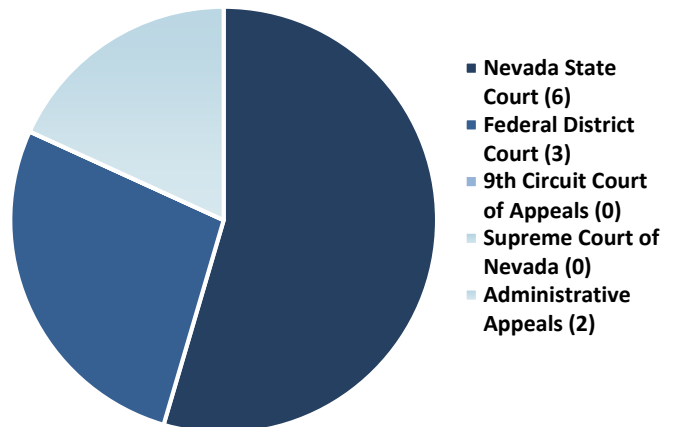
Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Water	\$ -	\$ -	\$ -
Energy	-	-	-
Materials & Supplies	\$ 12,045	\$ 28,700	\$ 74,450
Maintenance & Repairs	16,205	-	-
Rental & Leases	-	-	-
Other Employee Expenses	27,405	62,000	80,600
Other Expenses	1,697,862	2,655,213	3,232,350
Total Operating Expenses	\$ 1,753,517	\$ 2,745,913	\$ 3,387,400
 Capital Costs	 \$ 4,179	 \$ -	 \$ -
 Payroll Costs	 \$ 1,656,874	 \$ 1,690,844	 \$ 1,840,683
Total Department Expenditures	\$ 3,414,569	\$ 4,436,757	\$ 5,228,083
 FTE Positions	 8.2	 8.0	 8.5

Department Performance

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

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



**Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
Legal Services**
Fiscal Year Ending June 30, 2019

**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.

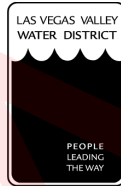
2017-18 Major Accomplishments

- 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.
- Began implementation of the District/SNWA Contract Management Software.

2018-19 Performance Objectives

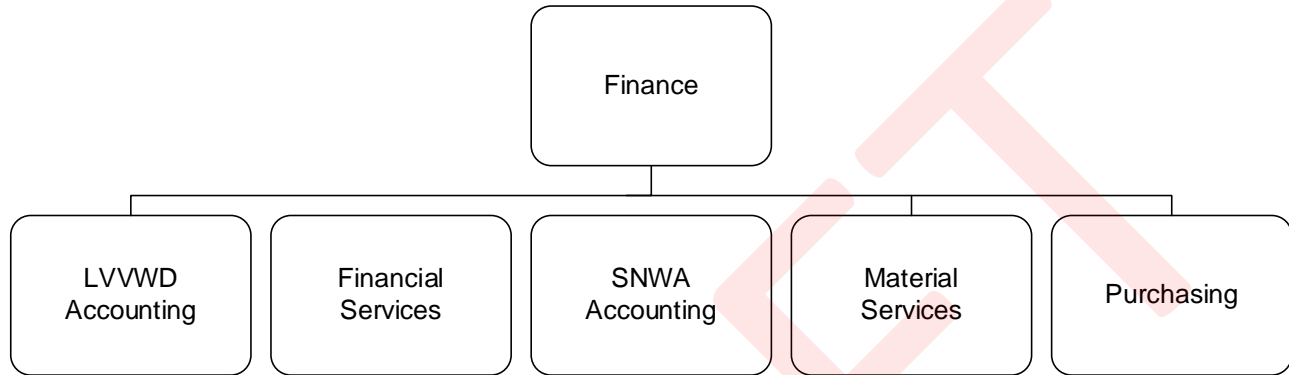
- To be highly responsive to the needs of our clients and provide concise, clear and accurate legal opinions.
- To increase communication between Legal Services and organization staff in a coordinated response to legal issues.
- To provide proactive contract reviews to minimize the threat of extended 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
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FINANCE
Level: 2100



Mission

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

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 similar manner 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 Las Vegas Valley Water District Retirement Plan. The department also coordinates the LVVWD's 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 2018-19 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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Operating and Capital Budget
Department Budgets
Finance
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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Water	\$ 90,327,324	\$ 89,716,896	\$ 96,851,139
Materials & Supplies	880,485	801,025	1,031,325
Maintenance & Repairs	4,336,339	3,924,200	4,340,500
Rental & Leases	25,355	24,300	22,000
Other Employee Expenses	101,077	331,675	310,800
Other Expenses*	177,518,046	197,711,879	203,621,436
Total Operating Expenses	\$273,188,625	\$292,509,975	\$306,177,201
Capital Costs	\$ 869,940	\$ -	\$ -
Payroll Costs	\$ 6,628,444	\$ 7,532,073	\$ 8,143,428
Total Department Expenditures	\$280,687,008	\$300,042,048	\$314,320,628
FTE Positions	48.6	53.0	53.8

*Includes SNWA Pass-Throughs and Allocations

Department Performance

LVVWD Accounting. The LVVWD Accounting division is responsible for accounting, financial reporting, treasury and debt management, 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-nine (39) 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

**Las Vegas Valley Water District
Operating and Capital Budget
Department Budgets
Finance**

Fiscal Year Ending June 30, 2019

other system records; cash management and the accounting and reporting of investments of the LVVWD's funds; debt management; reconciling bank statements with thousands of disbursements; processing payroll for approximately 1,250 employees; processing accounts payable for approximately 42,000 payments annually, earning more than \$256,000 discounts in fiscal year 2016-17 including an annual credit card rebate of \$99,000; 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.

The LVVWD outsources 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 the annual operating and capital budgets for the LVVWD, SNWA, BBWD and Coyote Springs. 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 organization. On an annual basis, the division conducts a survey of water rates from over 50 cities located in the western United States, closely monitors water production and consumption data, and prepares Annual Statistical Reports.

SNWA Accounting. The SNWA Accounting division is responsible for the SNWA's financial reporting, treasury and debt management, revenue billing, and various financial analyses.

The financial reporting includes the SNWA's monthly and quarterly financial statements, as well as, the SNWA's Comprehensive Annual Financial Report and corresponding audit. In addition, the SNWA Accounting division prepares and submits the financial reporting related to grant activities for both the SNWA and LVVWD.

The SNWA Accounting division supports both senior management and other workgroups within the SNWA with financial analysis.

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Some areas include construction related activities, groundwater management programs, conservation related activities, Las Vegas Wash, energy management, and various water rights related activities.

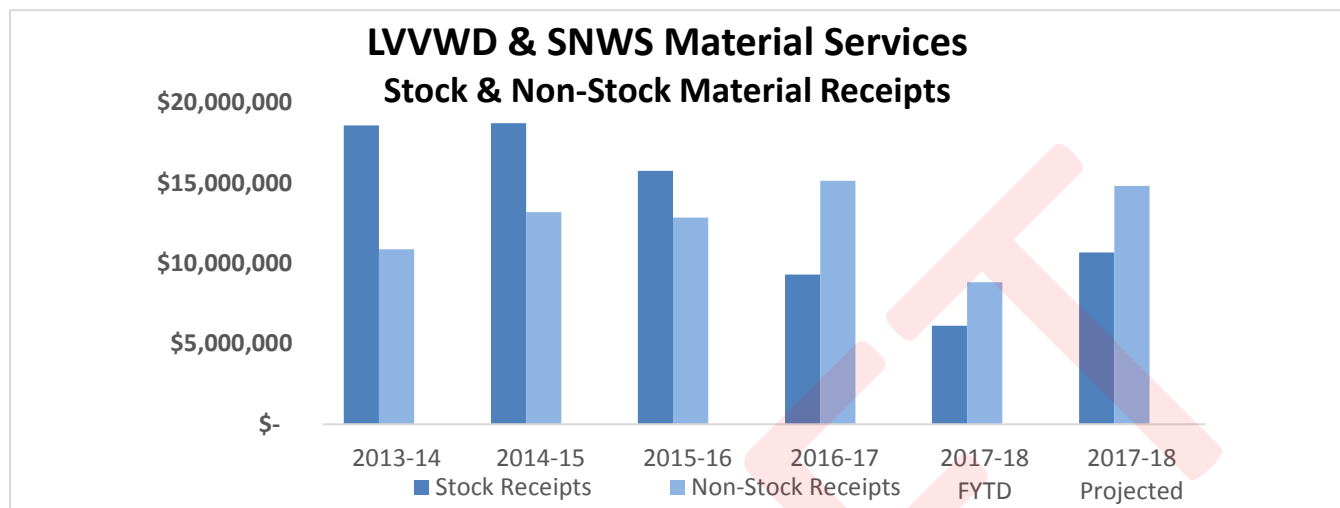
delivery to internal customers at the LVVWD, SNWS, and eleven satellite facilities.

Purchasing. The Purchasing division is responsible for the centralized purchasing activities of the LVVWD, the SNWA 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. The development of supply agreements containing appropriate contract terms and conditions, in conjunction with the Legal department, are an integral function of the Purchasing division. Ensuring compliance with is all applicable purchasing statutes, obtaining quality products and services to serve our customers, and cost savings are among the division's priorities.

Material Services. Material Services' primary role is to deliver reliable customer service by providing quality operating and maintenance products, material requirements planning, inventory management, storage and retrieval services. To ensure customers' material needs are met, Material Services administers \$13.5 million in blanket agreements to replenish inventory. Material Services partners with their internal customers to identify, forecast, and schedule various Capital and operations and maintenance project material requirement deliveries.

These non-stock material items are received, inspected, and processed at both the LVVWD and SNWS Main distribution warehouses for

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In February 2018, average inventory assets were valued at \$16 million consisting of approximately 16,452 inventory items. Material Services also received, inspected, and processed stock replenishment deliveries. In fiscal year 2017-18, Material Services is projected to receive and process \$25.5 million or 23,890 lines combined for stock and non-stock receipts and projected to issue \$10.7 million or 76,078 lines of operating and maintenance inventory to internal users.

Material Services supports sustainability through inactive and obsolete inventory reduction, repurposed shipping materials, and administers, coordinates, and manages the investment recovery efforts for various recyclable and repurposed equipment and material through the auction program and bid sales. Additional services include emergency response planning, system emergency readiness, job site deliveries, safety garment administration, first-aid kit replenishments, Safety Data Sheet administration, and courier services for organizational business needs. Terrorism training certification is required annually by all Material Services personnel.

Mail Services. Mail Services processes incoming and outgoing intercompany and United States Postal Service (USPS) mail and processes office supply deliveries. Mail Services has two locations, one at the LVVWD Valley View office and the other at the Molasky Corporate Center. Mail Services delivers between the LVVWD, Molasky Corporate Center, SNWA, SNWS and Springs Preserve offices and to all remote facilities throughout the LVVWD service territory. Mail Services also performs the delivery and posting of agenda public notices, administers LVVWD's postage budget, desktop delivery of office supplies, and processes special communication campaign projects for Public Services. Terrorism training certification is required annually for 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 the Strategic Plan Goals through the prudent and strategic funding of all the various activities and services provided by the LVVWD and the SNWA.

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

2018-19 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.
- Develop long-term financial plans to ensure a sustainable revenue base to support operations.

2017-18 Major Accomplishments

- Standard & Poor's (S&P) raised its long-term credit rating for the LVVWD to AA+ from AA. The ratings upgrade reflects S&P's view of the LVVWD's strong financial management practices and policies, maintenance of robust cash reserves, and continued economic growth in the Las Vegas area.
- Board approved a long-term rate plan for the Big Bend Water District.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2018-19 Performance Objectives

- Begin implementation of a new procure-to-pay and inventory management system that streamlines the procurement process, creating efficiencies that will allow staff the time to manage their assigned commodities and services more effectively.
- Streamline the warehousing processes to provide better functionality for inventory planning and forecasting.
- Continue to improve and streamline day-to-day accounting practices, specialized processes, improved financial analyses, reporting, and information sharing to departments.
- Provide the best possible equipment choices to departments to assist them in meeting their goals efficiently and effectively.
- Provide material services support to the internal customer's strategic goals and projects by planning, forecasting, scheduling, and coordinating their specific material requirements while maintaining optimal inventory availability.
- Complete financial month end close within 30 days of the end of the month.

2017-18 Major Accomplishments

- Provided Maintenance Engineering division forecasting and material management services for the wellsite

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- communications upgrade program.
- Explored cost savings and service improvements by changing supply source providers for Material Services' Vendor Managed Inventory (VMI). This change resulted in a 55 percent O&M cost savings, improved service, and supply reliability for their internal customers.
- Provided internal customers with forecasting and material management services for their capital and/or maintenance projects. For example, Backflow Device Retrofit Program; PLC5 Remote Rack Replacement at well sites; Service Line and Pipeline Rehab/Replacement Program; Vault Rehabilitation Program.
- Provided Customer Care and Field Services (CC&FS) with material management and forecasting services and utilized just-in-time delivery methods to support their commercial and residential meter maintenance program.
- The combined metals recycling sales netted \$388,194 and \$46,615 for obsolete equipment and material auctions.
- Expanded use of electronic systems for the submission and analysis of bids for goods, services, construction, and evaluation of complex Request for Proposals. The ability to submit bids and proposals electronically helped increase competition, and exposure of the LVVWD's contracting activity to a larger supply base, including diverse suppliers.
- Began testing and implementation of a program to replace a manual user

purchase order process for small dollar purchases. This program will increase transparency and accountability for small dollar purchases, and decrease the transactional costs for such items.

- Streamlined the internal approval process for contracts allowing a shorter turnaround time for contract implementation.

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

2018-19 Performance Objectives

- Increase purchases of recycled and environmentally friendly products.
- Provide weights and categories for all inventory items required for the computation of the LVVWD's carbon footprint.
- Administer the LVVWD's investment recovery program for the sale or repurposing of obsolete material and equipment.

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

2018-19 Performance Objectives

- Continue 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

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the approval/authorization process and to maximize vendor discounts.

- Actively participate in CC&B and Workday software.
- Encourage the purchase of sustainable products by facilitating meetings with suppliers and interested departments.
- Utilize mobile technologies for mail and warehousing processes and activities.

2017-18 Major Accomplishments

- Identified vendors for accounts payable automation software and began implementation.
- Implemented Workday payroll.
- Implemented a P-Card Program.
- Actively participated in vendor selection for new purchasing software.
- Actively participated in Avantis and Altru ticketing software upgrades and implementations.
- Implemented the Pitney Bowes Tracking Online System for mail and material deliveries. This system provides real time status, chain of custody tracking, and final delivery recording to the requestor and requires scanning the employee's ID badge and obtaining their signature.
- Upgraded two-way radios from analog to digital technology to improve communications and enhance interoperability.
- 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.

2018-19 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 to increase the credit card rebate.
- Reduce the volume of manually processed payments through customer outreach efforts.
- Replace decades old purchasing and inventory management system.

2017-18 Major Accomplishments

- Upgraded bond ratings from AA and AA- Standard and Poor's (S&P) to AA+ and AA for the LVVWD and SNWA respectively.
- Issued the Las Vegas Valley Water District General Obligation Bonds (additionally secured by SNWA Revenues) Series 2018B Refunding Bonds generating net present value savings of \$10.2 million.
- Issued Las Vegas Valley Water District General Obligation Bonds Series 2018A to provide \$100 million of proceeds to fund the CIP.
- Renegotiated terms for the 2016D Bonds with a savings of \$270,000.
- Provided comprehensive financial planning and analytical support for the BBWD Citizens Advisory Committee, resulting in the BBWD rate plan.

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- Completed an Accounts Payable audit of overpayments/missed credits with minimal findings.
- Participated in implementation of new unclaimed property system.
- Participated in implementation of new job order ledger system.
- Implemented Pitney Bowes Tracking Online System for mail and material deliveries with real time status, chain of custody tracking, and final delivery recording to the requestor and requires scanning the employee's ID badge and obtaining their signature.
- Implemented remote mobile laptop and printer equipment and technology enabling paperless receipting by the warehouse staff, decreased processing time from 45 minutes per package to 3 minutes on average.
- Increased the AMS Material Services' Warehouse storage space by 37 percent to accommodate the L3PS's Andritz, Ebara and Indar pump's critical spare parts managed as an inventory asset.
- Reorganized the LVVWD Main Warehouse in-bound receiving and inventory storage sections to maximize space, improve safety and reduce physical movement of material handling staff and equipment by 26.2 miles over a year timeframe.
- Initiated RFP for a new Procure-to-Pay and Inventory Management System to replace a decade's old system.

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

2018-19 Performance Objectives

- Submit the LVVWD and SNWA CAFR for the year ending June 30, 2018, 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 2018 audits.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year ending June 30, 2019.
- Enforce regulatory and accounting requirements of inventory asset reporting and accountability.
- Update strategic goal tactics, which align with Strategic Goals 2, 5 and 6.

2017-18 Major Accomplishments

- Received the Certificate of Excellence in Financial Reporting from the GFOA of the United States and Canada for the thirty-ninth (39th) consecutive year for the LVVWD CAFR for the ended June 30, 2017.
- Received the Certificate of Excellence in Financial Reporting from the GFOA for the twenty-second (22nd) consecutive year for the SNWA CAFR for the year ended June 30, 2017.
- Received an unmodified opinion from external auditors for the LVVWD, SNWA and BBWD fiscal year 2017 audits.
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and

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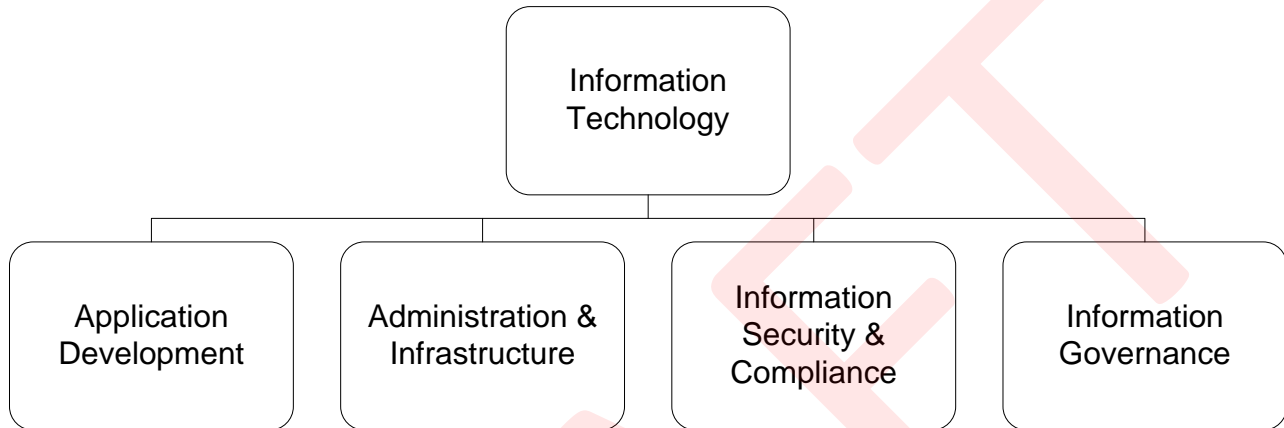
Fiscal Year Ending June 30, 2019

Capital Budgets for the year ending June 30, 2018.

- LVVWD Material Services achieved 23 years, SNWS Material Services 16 years, and Mail Services 5 years without a lost-time accident.
- Received an unmodified opinion for a near-perfect inventory accuracy audit from external auditors for the LVVWD and SNWS Material Services warehouses.

INFORMATION TECHNOLOGY

Level: 2300



Mission

Establish a leadership position by the use and support of leading information technologies while making customer service the 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, cybersecurity, Payment Card Industry (PCI) Compliance, Geographic Information Systems (GIS), telecommunications and the organization's Information Governance Initiative. The department is also responsible for the acquisition and maintenance of spatial data in support of ongoing projects, such as

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

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

Budget Objectives and Highlights

The 2018-19 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

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 902,760	\$ 1,297,500	\$ 1,149,702
Maintenance & Repairs	8,236,267	7,550,235	8,670,804
Rental & Leases	560,158	691,800	742,000
Other Employee Expenses	118,623	295,384	322,699
Other Expenses	3,328,282	5,092,932	6,701,564
Total Operating Expenses	\$13,146,091	\$14,927,851	\$17,586,769
Capital Costs	\$ 28,375	\$ 6,056,800	\$ 8,037,350
Payroll Costs	\$19,366,058	\$18,822,253	\$19,837,764
Total Department Expenditures	\$32,540,523	\$39,806,904	\$45,461,883
FTE Positions	106.3	101.0	101.5

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 completion of the first phase of the Workday Human Capital Management System, upgrade of network storage, initiated the Call Center upgrade, 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 2017 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 including Avantix Asset Management Software, Itron Meter Field Collection System and Primavera Capital Project Management software. Efforts to stream-line the organization's purchasing

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systems will continue and include a new procure-to-pay system with inventory management capabilities to streamline the procure-to-pay functions, centralize purchasing and improve inventory management.

A system will be implemented to automate financial accounting month-end reconciliation processes. Significant efficiencies will be gained through elimination of manual reconciliation processes and use of a centralized on-line portal for reviewing and approving reconciled accounts.

DocStar ECM will be implemented to automate financial accounts payable functions. System features include automated invoice processing through workflow, automated data capture, auto-matching invoices with requisitions, facilitating vendors to electronically submit invoices, archiving documents and real-time reporting.

BBWD Customer Information System (CIS) will be integrated into LVVWD 's Customer Care & Billing System to eliminate redundant computer systems, provide consistency of CIS management, streamline accounting and meter reading processes and improve customer service for BBWD.

Flairdocs is a cloud-based software solution that will be implemented to replace four existing legacy applications. The Right-of-Way and Land Management teams will realize significant improved efficiencies in performing their work and interacting with property owners.

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 IT initiatives including major platform and operating system upgrades, bill payment and design services, systems supporting conservation, water resources, SCADA and 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. This group supports desktops, field and personal laptops and all supporting desktop applications. This group provides remote and on-site support for over 4,000 computers, monitors, and printers, as well as over 1,000 applications, on all company desktop and laptop devices.

The Technical Services division is responsible for application administration of business systems utilized throughout the organization. It is also responsible for the architecture and administrative support for the corporate infrastructure to include server, storage, and database administration, e-mail, web services, network infrastructure, and the telecom group. Additionally, this division is responsible for the maintenance of the SCADA

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systems for LVVWD, SNWA, and BBWD and the Laboratory Information Management System (LIMS).

Enterprise application support focuses on providing uninterrupted application services to customers, while providing 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 implementation of the Genesys call center upgrade project with phase one go-live in second quarter of 2018-19, the upgrade of the corporate wide area network backbone to support 10GB between campuses and to the Internet, upgrades to the enterprise storage infrastructure, and the implementation of a new multimedia and imagery storage appliance.

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

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 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 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. Significant effort will continue to be directed toward providing an operationally stable and secure computer system and infrastructure, developing strategies with Legal and Risk Management to reduce and manage cyber risk, as well as educating employees on cybersecurity topics.

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

Security efforts include continual review and enhancement to security procedures, monitoring for cyber threats, managing vulnerabilities in addition to promoting the timely application of security patches, and

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establishing audited/controlled system and data access for Data Loss Prevention (DLP). In addition, the division focuses on ensuring software technologies and business processes meet the continuously evolving PCI-DSS requirements.

Information Governance. This division was formed in July of 2016. The distributed nature of data assets at the organization is becoming increasingly complex. In part, Information Governance (IG) strives to support the organization in optimizing the management and use of its data.

A significant project that is currently being undertaken and will be implemented 2018-19, is the simplifying of our records retention schedule into Big Buckets. The new schedule will follow State and Federal regulations and IG will work with subject matter experts in all departments to successfully train and implement the new schedule. Another key project will involve identifying and curating historical records in conjunction with University of Nevada Las Vegas School of Library Sciences. This effort will lead to a sustainable approach to identifying and preserving historic records.

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

During 2018-19, focus will be placed on convening the IG Strategic Planning Committee, whose members will help guide and inform future IG initiatives. The implementation of an Enterprise Content Management System (ECMS) will be one of the key deliverables for the committee. This system will be comprised of strategies, methods and tools used to manage information throughout its useful life cycle within the organization. The ECMS will also facilitate the tracking of information and data contained in disparate silos and provide a platform for achieving compliance and improved governance of this data.

Strategic Plan Objectives and Accomplishments

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

Strategic Plan Goal – Deliver an outstanding customer service experience.

2018-19 Performance Objectives

- LVVWD bill design will be outsourced to a professional services company providing customers with better messaging, advanced bill forwarding and more modern bill design capabilities.
- BBWD billing and customer service functions will be integrated within the LVVWD Customer Care & Billing

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System providing customers with access to 24x7 customer service.

- LVVWD will replace its current resource reservation system with a new modern digital application that will be used within Office 365 and use state-of-the-art digital signage for greater security, resource efficiency, and improved visibility to the various resources used throughout the organization.

2017-18 Major Accomplishments

- The organization's major customer facing web sites were reengineered 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.
- Completion of the first full 3-year cycle of the desktop and monitor refresh project, which has increased staff efficiency and reduced downtime and labor/maintenance cost.

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

2018-19 Performance Objectives

- Work will continue to re-engineer the organization's purchasing system to consolidate purchasing activities and provide additional capabilities and controls within the organization's financial system.

- A system will be implemented to automate and help assist Accounts Payable's business processes with automated data capture, auto-match, workflow and analytics.
- Accounting will be provided a service to help automate and standardize their month-end reconciliation processes. The system will create workflows to standardize the reconciliation tasks, enable auditing and approvals to track the status of the closing process and provide analytics to identify issues and concerns.
- Project HUB, a system currently being developed to support engineering plan acceptance, construction and approval of service connections will be fully implemented in 2018-19. This effort will replace Hansen, a legacy system that has reached end-of-life and enhance corporate data security with emerging technology to identify threats and mitigate risk.
- 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.
- Complete the 2018 Las Vegas Valley LiDAR Digital Elevation Data Project which will upgrade the existing elevation models used within the organization and by our partner agencies.

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- Replace the existing facilities mapping application with a streamlined application which will improve the organization's ability to meet long-term management of water infrastructure assets and mapping needs.
- Upgrade the current LIMS software to the latest release to support the Water Quality and Research Lab to allow better automation, data reporting, workflows, and instrument integration.
- Upgrades to the Corporate Business Storage platform to allow for future application data growth and replacement of end of life storage arrays/platforms.

2017-18 Major Accomplishments

- The Workday Human Capital Management System was implemented on time and under budget. Workday eliminated several disparate systems, reducing operations costs, and provides improved customer self-service and analytics.
- RedEyeDMS, a cloud-based system for managing engineering drawings was implemented. This system will facilitate drawing access and collaboration needed by engineering and asset management.
- A new risk management information system was implemented that centralizes claims, Occupational Safety and Health Administration (OSHA) reporting, incident processing, inspections and audits, insurance

management, training and certifications. The system eliminated a variety of custom and legacy software and addresses key needs of Risk Management and Environmental, Health, Safety & Corporate Security.

- An upgrade of Customer Care and Field Service's mobile workforce management system was completed. The upgrade improved dispatch services, enhanced route optimization and standardized map services.
- Continued development of CiCADA, the new Conservation System, adding support for incentive programs for Water Smart Homes, Water Efficient Technologies, Pool Covers and Smart Irrigation Coupons. Consolidation of Conservation programs in this new system improves efficiency and reduces costs incurred with maintenance of aging technology of legacy systems.
- AssetWorks, Fleet's Management and Maintenance System, was upgraded to maintain version and vendor support. The latest version includes store-and-forward functionality through its mobile application which addressed data latency issues encountered by users at remote sites.
- Completed the upgrade of our enterprise print and fax capabilities to the next generation of newer printer features and integration of fax capabilities, which advanced the organization from analog to digital fax, reducing overall print costs and increased staff efficiency.
- Completed the replacement of the corporate backup infrastructure to

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streamline backup policies, remove obsolete data stores, and provide enhanced disaster recovery options.

- Review of all projects and development of prioritization ranking of Information Technology initiatives and projects by the Information Technology Steering Committee.
- Completed the upgrade of the Corporate Oracle Database to support the future upgrades to critical business applications and position the organization for DevOps.
- Combined the various GIS application development, data management, and mapping efforts into a single workgroup for maximum efficiency.

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

2018-19 Performance Objectives

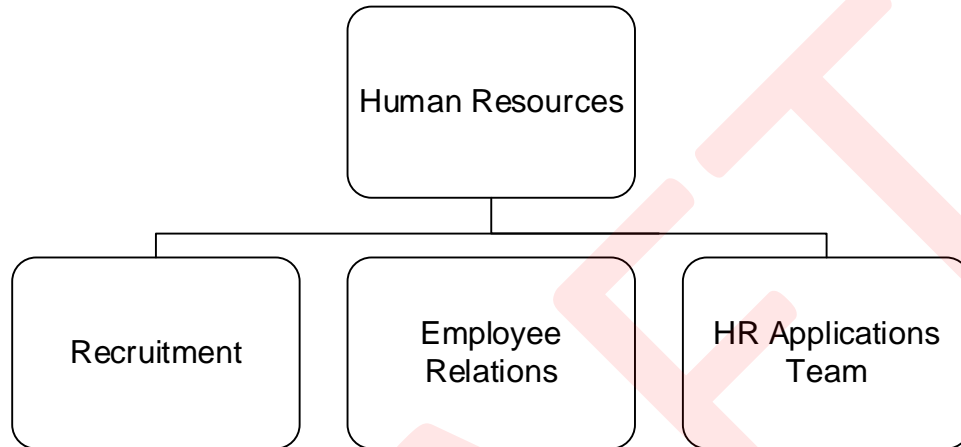
- Make numerous enhancements to cybersecurity which include the implementation of additional threat monitoring tools and further data separation to achieve PCI compliance 3.2.

2017-18 Major Accomplishments

- Continued implementation of Agile methodology throughout Information Technology utilizing both Scrum and Kanban principles to enhance interdepartmental collaboration and improve bidirectional customer communications.

HUMAN RESOURCES

Level: 2400



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 progress with the Human Capital Management System, 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 three service groups within the department: Recruitment, Employee Relations and the HR Applications Team.

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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 120,704	\$ 331,000	\$ 340,000
Maintenance & Repairs	14	500	500
Other Employee Expenses	264,713	248,500	248,500
Other Expenses	2,265,524	1,331,100	1,322,100
Total Operating Expenses	\$ 2,650,955	\$ 1,911,100	\$ 1,911,100
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 2,602,590	\$ 3,068,877	\$ 3,751,095
Total Department Expenditures	\$ 5,253,545	\$ 4,979,977	\$ 5,662,195
FTE Positions	16.9	19.6	23.5

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. 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)

Activity	2013	2014	2015	2016	2017
Total Hires	83	82	239	249	226
Job Notices	59	84	243	453	620
Written Exams	457	149	237	0	0
Interviews	527	420	107	1,029	870
Job Applications					
Accepted/Processed	3,021	2,373	5,981	6,947	9,879
Job Interest Forms	8,871	10,467	17,179	13,531	14,278
Recruitment			not	not	not
Letters Sent	8,513	5,577	available	available	available
Training Hours	9,705	8,288	2,070	5,107	10,674

Strategic Plan Objectives and Accomplishments

The Human Resources department provides a foundation for all departments to reach the goals of the Strategic Plan through appropriate recruitment; employee 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.

2018-19 Performance Objectives

- Continue to coordinate implementation of Workday modules, including recruitment, with a communication plan and training for employees in cooperation with Management Services.
- Centralize training and development within Human Resources. Work with the departments to track all training and education.

2017-18 Major Accomplishments

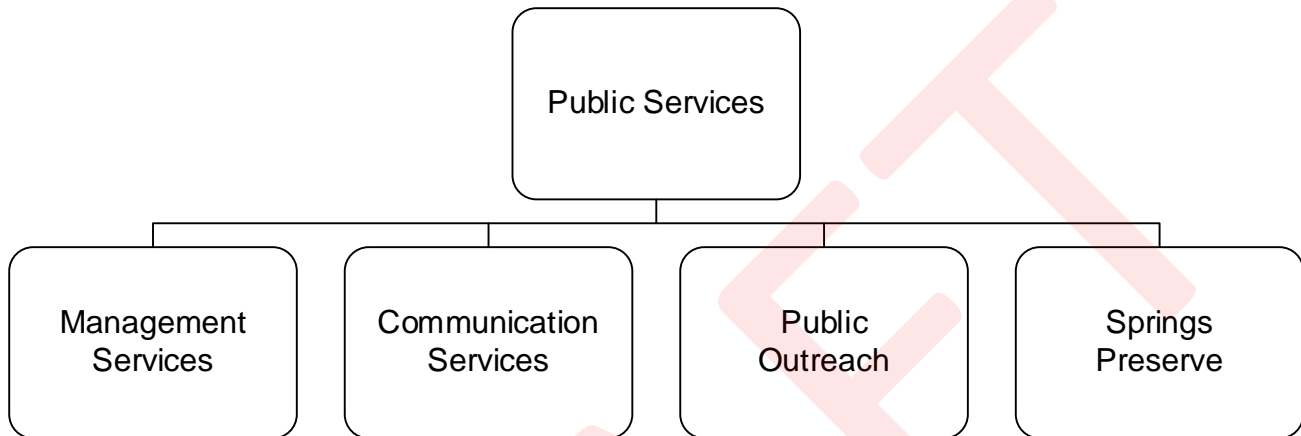
- Coordinated the successful implementation of Workday with a communication plan and training for employees in cooperation with Management Services.
- Implemented Workday for Benefits, Compensation, Time Tracking, Payroll, and Absence Management.

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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; Public Outreach; and the Springs Preserve.

Together, the four divisions work together to support customer service efforts to the organization's internal and external customers, and communicate organizational initiatives to various audiences.

The Management Services division oversees the organization's government affairs, agenda processes, public participation efforts and 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 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.

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Budget Objectives and Highlights

The 2018-19 budget remains consistent with the organization's efforts to enhance efficiency and service to internal and external customers.

Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Water	\$ -	\$ -	\$ -
Energy	-	-	-
Materials & Supplies	\$ 650,817	\$ 1,027,151	\$ 1,071,410
Maintenance & Repairs	476,170	570,840	777,940
Rental & Leases	26,205	27,000	3,200
Other Employee Expenses	169,708	206,982	276,288
Other Expenses	4,056,669	4,282,175	4,722,877
Total Operating Expenses	\$ 5,379,569	\$ 6,114,148	\$ 6,880,515
Capital Costs	\$ 320,240	\$ 1,422,000	\$ 2,567,016
Payroll Costs	\$ 7,535,591	\$ 8,046,500	\$ 9,416,336
Total Department Expenditures	\$13,235,399	\$15,582,648	\$18,863,867
FTE Positions	60.1	65.8	71.3

Department Performance

In fiscal year 2017-18, 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.

Over the past fiscal year, the division concluded the Big Bend Water District's advisory committee process, which

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represented a major community inclusive process in the Laughlin service area. The division was also responsible for securing millions of dollars of funding for projects through grants, including \$4.4 million for Las Vegas Wash weir construction. The division supported the rehearing process for the SNWA's groundwater rights in eastern Nevada through material and exhibit development.

Communication Services. Communication Services is responsible for developing materials that reach customers through web, social media, television, email and print.

The division, in collaboration with Information Technologies, launched a mobile-friendly LVVWD.com website which features improved bill paying and customer self-service options. Communication Services and IT also launched a new SpringsPreserve.org website, featuring a mobile-first design and improved events calendar. The division also manages the social media accounts for LVVWD, SNWA and the Springs Preserve, which continue to add followers and earn accolades. The Communication Services team won first place for the LVVWD.com website redesign, Springs Preserve mobile app and Boomtown streetscape opening campaign from the Public Relations Society of America (PRSA) Las Vegas Valley Chapter's Pinnacle Awards.

Public Outreach. The Public Outreach Division is responsible for developing and implementing public awareness and education campaigns that support and advance organizational initiatives, managing external communications with media and journalists, and coordinating the Springs Preserve's cultural and community events.

Recent outreach efforts include the development of an integrated communications campaign for the Springs Preserve, the launch of a public education campaign highlighting community investment in water infrastructure, and updates to awareness and education campaigns supporting SNWA's water conservation initiatives. Additionally, the division managed more than 100 inquiries and records requests from a variety of local, national and international news organizations throughout the past year.

Springs Preserve. Calendar Year 2017 marked the Springs Preserve's 10-year anniversary. It was also the Preserve's most successful year to date in terms of attendance, membership and community involvement. Also, there was an increase in volunteer interest, with 526 volunteers providing more than 30,000 hours of service. The Springs Preserve also opened two new permanent exhibits, which drew many new and repeat visitors to the site. New exhibits include Boomtown 1905, which features a recreated historical streetscape and preserved railroad cottages. WaterWorks provides visitors a one-of-kind inside view of water-resource treatment and delivery system. Other new features include the grant-funded Teaching Garden that opened in September 2017 and the Children's Playground that reopened with new equipment and concepts designed with the help from architecture UNLV students.

Strategic Plan Objectives and Accomplishments

The Public Services Department is committed to accomplishing the goals and objectives set

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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.

2018-19 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.

2017-18 Major Accomplishments

- Secured over \$4 million in grant funding to support water-related initiatives.
- Assisted 9 well users who connected to the municipal water supply and responded to approximately 188 phone inquiries on the Groundwater Information Line.
- Supported the Groundwater Hearings, as the SNWA continues to maintain the Clark, Lincoln and White Pine Counties Groundwater Development

Project as part of its water resource portfolio.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2018-19 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.

2017-18 Major Accomplishments

- The Water District launched its new mobile-friendly website in August with improved bill paying and customer self-service options. Surveys show an increase in customer satisfaction with the responsive website.
- In November, the Springs Preserve launched its new mobile-friendly website, which featured a modern design and improved events and activities calendar.
- The Springs Preserve social media program won a first place and "Best in Show" Award from the Public Relations Society of America (PRSA) Las Vegas Valley Chapter.

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- Responded to more than 100 media requests.
- Completed an inclusive community rate setting process in Laughlin.
- Conducted surveys that show increased customer satisfaction with LVVWD.com, which receives more than 2 million visits and 15 million-page views annually.
- The SpringsPreserve.org website receives nearly 900,000 visits and 2.4 million-page views annually. Almost 12,000 people have downloaded the Springs Preserve mobile app, which features an interactive map to help guests find their way around the Preserve. Between 175 and 250 visitors actively use this app each week.
- In 2017, the Springs Preserve had 300,055 visitors. This represents approximately a 15 percent increase in attendance from 2016.
- Distributed approximately 170 letters per day during mid-April through early-July to manage the notification process and possible inquiries to Customer Care on the new requirement regarding the installation of backflow retrofits. A special phone line was established for customers to directly contact Customer Care regarding these notices. Customers were made aware of the importance of the program, how it affected their water bills and how backflow protects water quality.

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

2018-19 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.
- Incorporate sustainable best practices into organizational initiatives and inspire positive change.

2017-18 Major Accomplishments

- Continued support of the Sustainability Cross-Departmental Team (CDT) to examine internal processes and develop sustainable practices within the organization.
- Worked with Resources to update the Water Resource Plan to include a scenario-based approach that looked at a wide range of conditions that may be experienced over the 50-year planning horizon.

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

2018-19 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.

water conservation initiatives. Also, communications campaign for the Springs Preserve and the launch of a public education campaign highlighting community investment in water infrastructure.

- 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.

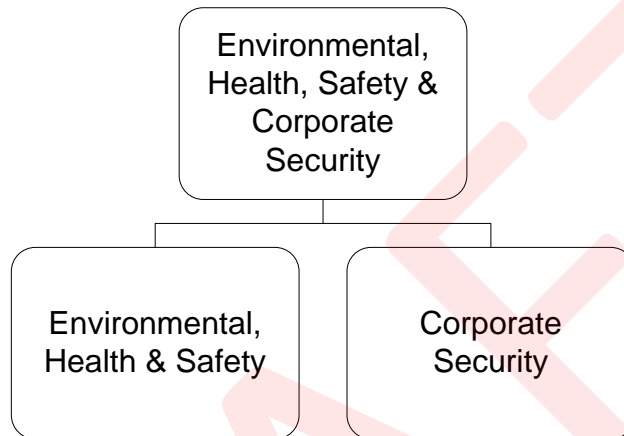
2017-18 Major Accomplishments

- Supported the LVVWD's Citizens Advisory Committees' recommendations including modest annual rate increases.
- Opened the Warm Springs Natural Area to the public on December 9, 2017. The facility includes public access walking trails and interpretive signage to educate and inform the public about its environmental resources.
- Successfully assisted the Big Bend Water District's Citizen's Advisory Committee. The committee reviewed 17 different scenarios, and ultimately recommended small rate increases beginning in January 2018.
- Community outreach efforts continue to raise awareness and provide education supporting the SNWA's

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ENVIRONMENTAL, HEALTH, SAFETY & CORPORATE SECURITY

Level: 2700



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 2018-19 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

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 174,563	\$ 211,000	\$ 241,000
Maintenance & Repairs	75,706	81,000	333,000
Other Employee Expenses	209,342	317,500	329,500
Other Expenses	1,188,733	1,216,150	1,192,300
Total Operating Expenses	\$ 1,648,344	\$ 1,825,650	\$ 2,095,800
Capital Costs	\$ -	\$ -	\$ 81,600
Payroll Costs	\$ 4,723,070	\$ 4,258,283	\$ 4,616,926
Total Department Expenditures	\$ 6,371,414	\$ 6,083,933	\$ 6,794,326
FTE Positions	33.1	30.2	30.9

Department Performance

Environmental, Health and Safety Division.

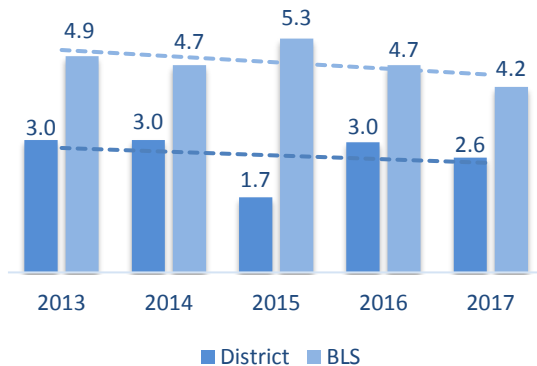
The EHS division is responsible for overall management of the District's Environmental, Health and Safety program to guarantee a safe workplace for all employees. EHS tracks negative trends in the program, making necessary adjustments to ensure a positive safety culture is maintained, and provides ongoing environmental, health and safety training for employees. The division is responsible for permitting and compliance with the federal, state and local agency environmental regulations regarding pollution control (including air pollution, water pollution, land disturbances, implementation of chemical control and waste management) and manages environmental permitting and compliance reporting for operations and maintenance. Additionally, the division is

responsible for proper upkeep and care of the District's Process Safety Management program for a highly hazardous chemical (chlorine) at Alfred Merritt Smith Water Treatment Facility (AMSWTF), and develops and publishes safety procedures ensuring compliance with Occupational Safety and Health Administration (OSHA) and state regulations. EHS employs an aggressive accident prevention program, investigates on-the-job accidents, and manages a comprehensive Fleet Safety program that encompasses vehicle and heavy equipment training and defensive driving education. 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, Asbestos, Lead Awareness, 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.

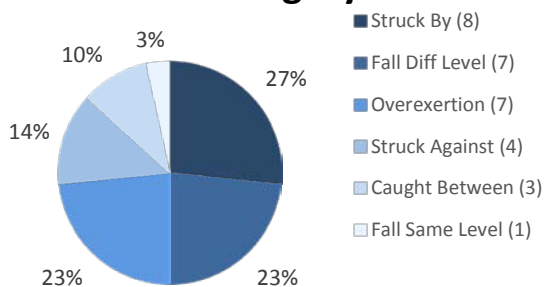
Recordable Injury Rates



The injuries sustained in 2017 were less severe than in 2016. There were 134 lost-work days in 2017 versus 423 in 2016. As a result, the severity rate in 2017 was reduced by 68 percent.

There were eight “struck by” injuries where employees were hit by equipment and other objects while on the job. Both the “overexertion” and “fall from different level” categories had seven injuries each.

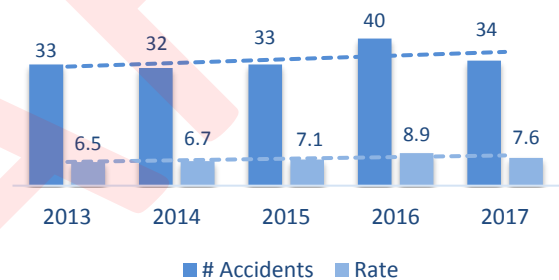
Recordable Injuries by Category



Overexertion injuries resulted from employees lifting objects, and fall related injuries were caused by employees slipping on walking surfaces.

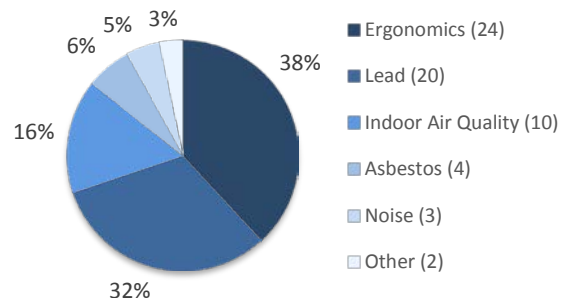
Overall, the District experienced 34 at-fault vehicle accidents in 2017, a decrease of six from 2016. The District’s vehicle accident frequency rate decreased from 8.9 in 2016 to 7.6 in 2017.

Vehicle Accidents & Rates



In 2017, all 178 employees enrolled in the Hearing Conservation program were audiometrically tested and the 260 employees enrolled in the Respiratory Protection program were respiratory fit tested. There were 63 health assessments conducted in 2017 (vs. 44 in 2016); the 43 percent increase is primarily due to construction and maintenance projects.

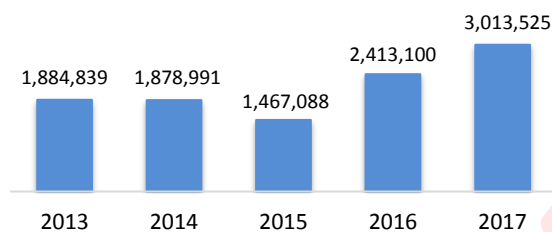
2017 Health Assessments



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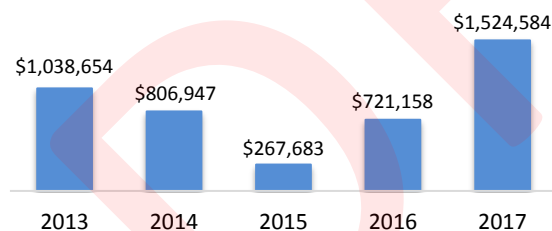
LVVWD and SNWA recycled a combined total of 3,013,525 pounds of materials in 2017. The increase in recycled material can be attributed to an increase in the amount of miscellaneous metals recycled and vehicles sent to auction.

Total Pounds Recycled



Total revenue increased for 2017 to \$1,524,584 (scrap \$440,928, auctions \$46,616, vehicles \$1,037,040) from the auction of scrap metal and fleet vehicles.

Total Revenue Generated



Corporate Security Division. Corporate Security's mission is to assure the protection of people, property, facilities and water treatment/delivery systems by providing 24-hour security services on a system-wide basis.

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 operates a 24/7 "Security Center" where security officers conduct video surveillance, log all radio communications, and provide central response to alarms, calls for assistance, and accidents. 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.

2018-19 Performance Objectives

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

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- Expand the use of card activated access control, and security system technologies to enhance efficiency.
- 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.
- Continued supporting and promoting the Department of Homeland Security's national "If You See Something, Say Something™" campaign.
- Installed access control card readers at the Fulton gate entrance and in the LVVWD Warehouse.
- Installed anti-climb mesh on the executive parking garage.
- Tested Bosch thermal imaging camera at Fayle Reservoir to enhance surveillance methods.
- Converted Spring Mountain Durango site to Bosch Starlight closed-circuit television cameras and converted card readers to P2000 system for access improvement and control.
- Completed over 130 documented spot audits and two comprehensive audits that included a program management review.
- Reviewed and updated the EHS Manual and Administrative Policies 3 and 17 during the 2017 off-site meeting.
- Conducted 274 investigations related to recordable injuries, at-fault vehicle accidents, at-fault property damage incidents, near-misses, chemical spills and first-aid events. Recommended corrective actions were included as appropriate to reduce the chance of recurrence.
- Conducted 34 instructor-led EHS training courses, which included 2,457 participants and 4,836 training hours.
- Achieved a District incidence rate of 2.6, compared to the BLS rate of 4.2, extending the District's yearslong history of falling below BLS rates.

2017-18 Major Accomplishments

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- Terminated four environmental permits (Big Bend Water District air permit; Springs Preserve dust control permit; and AMSWTF and River Mountains Water Treatment Facility drying bed permits) and negotiated an annual stormwater pollution prevention permit rather than individual permits that resulted in a cost savings of \$3,500.00.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2018-19 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.
- Seek professional training opportunities to augment EHS skills

and knowledge.

2017-18 Major Accomplishments

- Collected student evaluation forms after each EHS instructor-led course to improve future course curriculums.
- Participated in local and national professional organizational meetings, seminars and conferences specific to water treatment and delivery, with EHS staff conducting presentations at several events.
- Represented EHS in all department safety action teams, the EHS Steering Committee and several CDTs - 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.
- Installed indoor motion detectors tied to the card reader system in Boomtown at the Springs Preserve to increase security in the area.
- Improved situational awareness in the Customer Care lobby by converting standard cameras to 360-degree capable cameras.

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

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2018-19 Performance Objectives

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

2017-18 Major Accomplishments

- Enhanced security at remote locations by installing a solar powered motion activated security camera at the Searchlight site and Warm Springs Natural Area.
- Tracked and submitted operational environmental permits in a timely fashion with zero negative impact to the District.
- Recorded significant increase in recycling numbers for 2017 compared to 2016: 3,013,525 lbs. vs. 2,413,100 lbs., resulting in \$1,524,584 in revenue in 2017.
- Contained and cleaned six unintentional releases of regulated materials, with minimal environmental impact, at various District facilities.
- Registered a 5 percent decrease in hazardous waste generation and corresponding 47 percent decrease in costs.

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

2018-19 Performance Objectives

- Improve security and reliability of gate function by installing Wallace gates at AMSWTF.
- Enhance security blotter system to track theft, vandalism and suspicious activity accurately.
- Support IT and Risk Management divisions in the design and implementation of Phase II of the new risk management information system (Origami).
- Evaluate mobile technologies to improve EHS efficiency.

2017-18 Major Accomplishments

- Improved Security Center capability to monitor over 700 cameras by using video analytics in the current camera system.
- Acquired and implemented an EHS database system that automates management of the audiometric test program, resulting in a more efficient and effective Hearing Conservation program.
- Participated in the development and implementation of the new risk management information system (Origami) for the District, contributing to the increased technological and operational capabilities of the EHSCS department and reducing our overall carbon footprint.

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

2018-19 Performance Objectives

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- 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 of International Organization for Standardization (ISO) 45001 and evaluate the program for possible implementation at the District.

2017-18 Major Accomplishments

- Established a five-year professional services agreement for contract security to supplement in-house security staff.
- Adjusted instructor-led EHS training schedule to ensure critical safety training is offered more frequently.
- Actively monitored progress of ISO 45001 program via ISO committee membership and professional training seminars.

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

2018-19 Performance Objectives

- Engage in future construction and maintenance contracts to ensure security issues and concerns are addressed at the earliest stages.
- Conduct a monthly division staff meeting to update EHS employees on all major projects and communicate status changes and challenges.
- Conduct instructor-led EHS training for

District employees.

- Provide EHS information updates to the District through electronic Management Advisory and Safety Alert messages, Pipeline articles, Hydroweb postings, 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.

2017-18 Major Accomplishments

- Participated in several professional development courses while continually searching for and participating in relevant low- or no-cost training opportunities.
- Achieved a 2017 Safety Stand Down Day participation rate of over 280 employees.
- Completed the annual EHS trend report which highlights major EHS accomplishments throughout 2017.
- Received zero OSHA citations in 2017.
- Received 21 Safety Action Requests, each of which were tracked and monitored to ensure corrective actions were implemented.
- Developed and implemented the 101 Critical Days of Summer safety campaign.
- Developed the Corporate Security Manual to define and explain the organization's security strategy, systems, procedures and practices.

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- Applied Origami software risk accident/incident tracking and reporting process through the Security Center.
- Continued 100 percent ID badge checks at all entrance points to facilities, maintaining tighter control of access points.
- Assisted with the move of Customer Care from the Molasky Corporate Center to the Valley View campus.

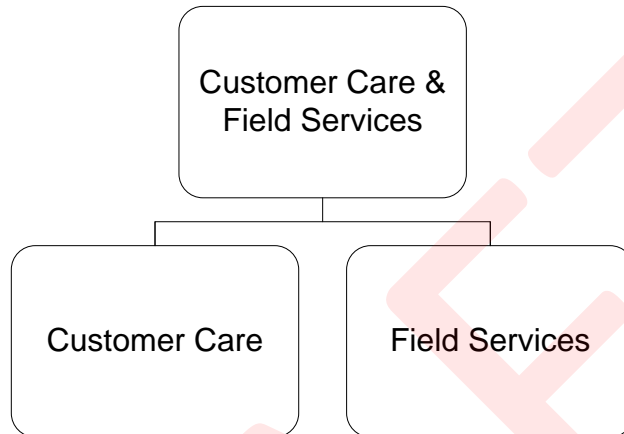
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Customer Care and Field Services
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CUSTOMER CARE AND FIELD SERVICES

Level: 2800



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 2018-19 budget for the Customer Care and Field Services department is consistent with the organization's efforts to reduce costs where possible while continuing to improve departmental efficiencies through both technological and performance based enhancements to provide the optimum customer experience.

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

Field Services. The 2018-19 Budget Plan contains funding for large meter maintenance, advanced metering infrastructure, and operational costs.

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Customer Care and Field Services
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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 810,906	\$ 1,114,250	\$ 2,496,250
Maintenance & Repairs	76,310	81,500	123,000
Other Employee Expenses	77,563	131,000	112,500
Other Expenses	2,304,139	3,646,300	3,472,100
Total Operating Expenses	\$ 3,268,918	\$ 4,973,050	\$ 6,203,850
Capital Costs	\$ 3,362,329	\$ -	\$ 1,665,000
Payroll Costs	\$18,542,872	\$21,493,027	\$22,911,203
Total Department Expenditures	\$25,174,119	\$26,466,077	\$30,780,053
FTE Positions	152.5	171.1	170.1

Department Performance

In 2017-18, 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.

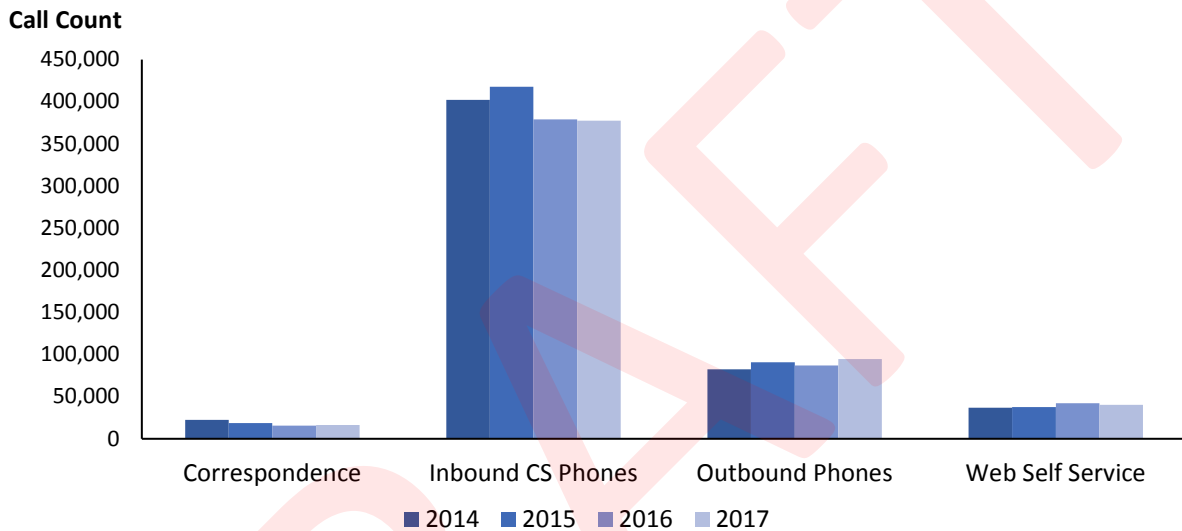
Customer Care. The Customer Care division serves as the primary point of contact for internal and external service inquiries—supporting approximately 391,000 active services. The division manages the customer care phones, web requests, correspondence and walk-in requests. Customer Care handles payments, 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.

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Department Budgets
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Fiscal Year Ending June 30, 2019**

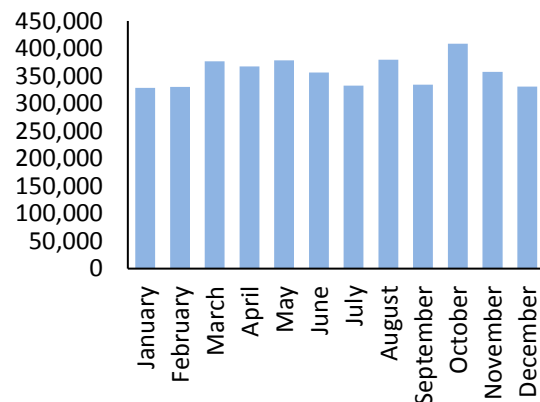
The following graph illustrates the shift in volume distribution over the past four years as process and technical innovations advance the meter to cash philosophy.

Customer Care Phone and Correspondence Volume



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

Bills Generated 2017



The following chart depicts the total number of bills generated monthly in 2017.

Field Services: The Field Services division is responsible for reading and maintaining meters for approximately 391,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle

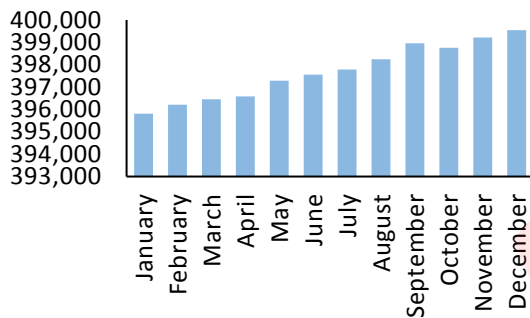
Canyon, Laughlin and Jean. The division also responds to leak investigations, low pressure, high consumption, water waste

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inquiries, billing requests, and turn ons/shut offs.

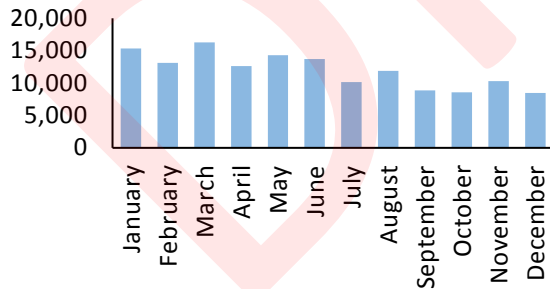
The 2017 Meter Reads chart illustrates the number of meter reads processed by Field Services in 2017 (Over 4.6 million total).

Meter Reads 2017



The following chart illustrates the number of work orders processed by Field Services in 2017 (Over 200,000 processed).

Field Activities Completed 2017



Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Deliver on Outstanding Customer Service Experience.

2018-19 Performance Objectives

- Continued assessment of customer satisfaction, establish benchmarks and identify all avenues for enhancement.
- Convert BBWD to Oracle CC&B and new bill print vendor and support call center operations.
- Redesign bill to updated format to improve communications to our customers.
- Outsource letter print to a local vendor to streamline process and eliminate internal support.
- Establish culture of continuous improvement of processes and practices using feedback from our customers, customer care stakeholders as well as affiliated departments throughout the LVVWD.
- Work with IT for continued integration of state of the art technologies to enhance the customer experience, increase efficiencies, create multi-channel platform capabilities as well as eliminate external vendor dependencies.
- 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

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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.
- Enhancement of the Quality Assurance initiatives to improve call assessment, incorporate more feedback and interactional based development.
- Assess customer satisfaction results against overall quality outcomes for actionable improvement.
- Continue to improve customer care technologies, tools, training and implementation.

2017-18 Major Accomplishments

- Dedicated 1900 hours of training throughout 2017 to consistently provide optimum customer experience.
- Deployed business processes and training critical to annual PCI compliance standards.
- Continue to refine safety measures for securing employees in the event of an evacuation emergency.
- Assisted over 680 customers in the field with consumption related questions.
- Performed 55 customer escalation field meets 2017
- Continued 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.

2018-19 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.

2017-18 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 4,015 water waste letters in 2017.
- Completed 3,875 Water Waste investigations resulting in \$36,080 in fees assessed.
- Large Services completed over 3,700 Field Activities.
- Dedicated staff handled over 9486 Springs Preserve related inquiries in 2017.

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

2018-19 Performance Objectives

- 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.
- Adding infrastructure to support additional customer communication channels including chat, sms and email.
- Improve technology solutions for revenue protection and greater collection gains.
- Continue to educate customers using advanced meter reading data. Evaluating current meter population to create and implement an appropriate preventative maintenance plan and schedule.
- Enhancing and expanding current field and dispatch Quality Monitoring program.

2017-18 Major Accomplishments

- Lobby payments and transactions continue to decline with successful expanded payment and self-service options, reducing lobby traffic and carbon footprint.
- Collected event and more refined interval data from the meter reading system to reduce truck rolls and increase customer service.
- Successfully supported the District's backflow retrofit program with both inbound and outbound customer calls.
- Integrated hourly interval data into business processes.
- Implementation and training of the Itron Analytic software.
- Host and participate in education and technical venues for business advancement throughout 2017.

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

2018-19 Performance Objectives

- Provide and seek timely feedback on individual, team and departmental performance to enhance collaboration, accountability and excellence.
- Ensure timely and consistent communication with team to provide feedback and solicit recommendations.
- 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.
- Leverage the existing resources for expert training classes to employee skill development.

2017-18 Major Accomplishments

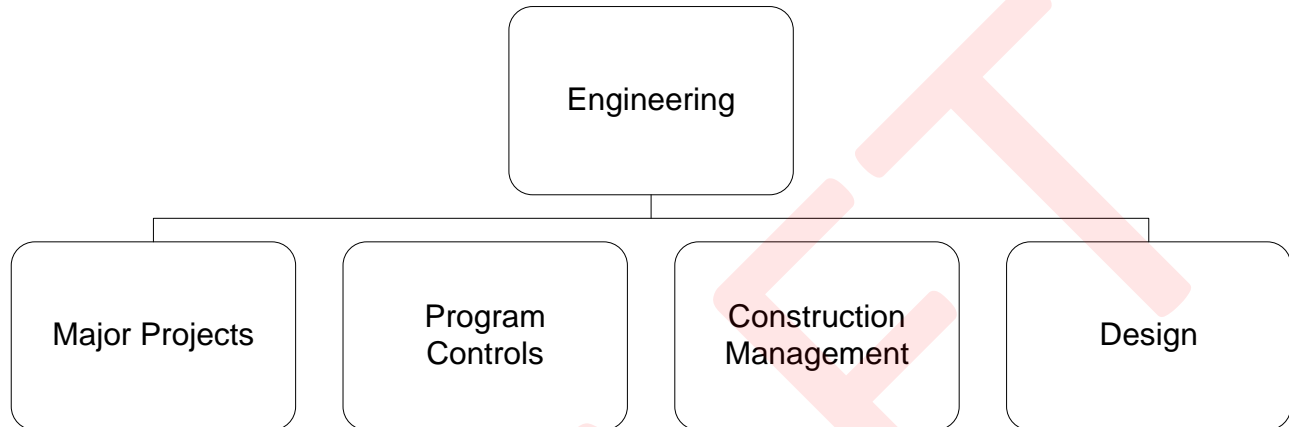
- Increased Quality Monitoring to enhance the functional capabilities of the individual, team and departmental performance.
- Utilized various subject matter experts throughout the department to support training initiatives.
- Upgraded Oracle CC&B to ensure future upgrade capabilities and implemented new payment vendor to ensure PCI compliance.
- Successful relocation of contact center from Molasky Corporate Center to Valley View campus without significant impacts on the operation.
- Reclassified and uptrained Field Services staff to better support organizational and customer service related efficiencies
- Transitioned from a Read Verification quality control program, to incorporating an enhanced verification and maintenance process to all Field Activity types.
- Moved our Curbing Water Waste test to an on-line version.
- Completed AMI deployment in Blue Diamond, Searchlight, and Kyle Canyon

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ENGINEERING

Level: 3400



Mission

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

Improvements Plan (LVVWD CIP). In coordination with the Operations, Resources and Facilities, and Infrastructure Management departments, Engineering provides the design and construction services for many of the larger LVVWD CIP projects.

Department Description

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

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 Las Vegas Valley and in nearby rural areas. These projects are described in the LVVWD Capital

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, Resources and Facilities, 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 all projects defined by the Wash CIP.

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

Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Water	\$ -	\$ -	\$ -
Energy	\$ -	\$ -	\$ -
Materials & Supplies	\$ 99,786	\$ 110,685	\$ 141,200
Maintenance & Repairs	5,396	50,000	1,300,000
Rental & Leases	1,564,869	-	-
Other Employee Expenses	56,365	94,625	139,950
Other Expenses	85,965	79,100	180,900
Total Operating Expenses	\$ 1,812,382	\$ 334,410	\$ 1,762,050
 Capital Costs	 \$ 35,848,242	 \$ 52,096,380	 \$ 68,120,490
Payroll Costs	\$ 11,436,639	\$ 13,194,902	\$ 14,642,038
Total Department Expenditures	\$ 49,097,262	\$ 65,625,692	\$ 84,524,578
 FTE Positions	 68.1	 78.3	 81.7

Budget Objectives and Highlights

The 2018-19 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, Resources and Facilities, and Infrastructure Management departments in preserving the facilities needed to assure a reliable, quality water supply.

The Intake No. 3 tunnel and intake project was completed and became operational in 2015. This achieved the goal of access to better

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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 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.

Work continued on the AMSWTF filter media replacement with two filters completed and three in progress. The remaining 15 filters to be upgraded will be under contract in the Fall of 2018 with completion scheduled for 2021.

Construction of the Historic Lateral Weir Expansion and Sunrise Mountain Weir began the Fall of 2017 and will be completed the Winter of 2019.

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, the L3PS is the one active major project effort. Staff are dedicated to that project activity.

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

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

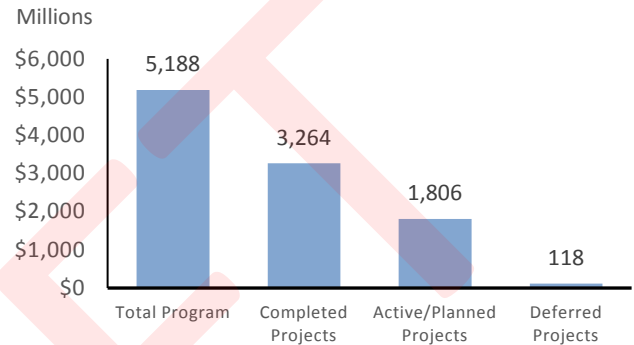
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Program Controls. A technical team organized to assist with the implementation and management of the LVVWD and SNWA capital programs through the establishment of consistent project management practices and reporting systems for effective cost and schedule control. This team provides cost and schedule reports and analysis of capital projects. This team makes use of computer-based tools which compile relevant project data from 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.

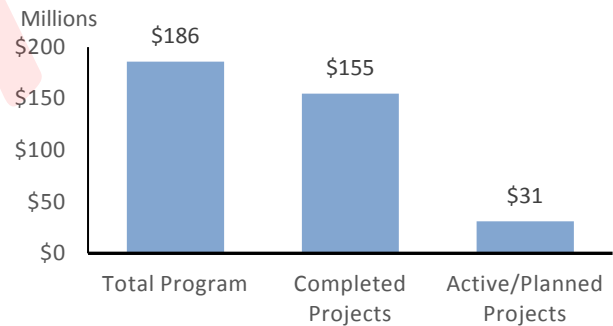
Survey, Property Management and Infrastructure Mapping Services. Professional staff within the department support design and construction of infrastructure by providing land surveying, water rights surveying, line location, right of way acquisition and property management and as-built record drawings 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 2018**



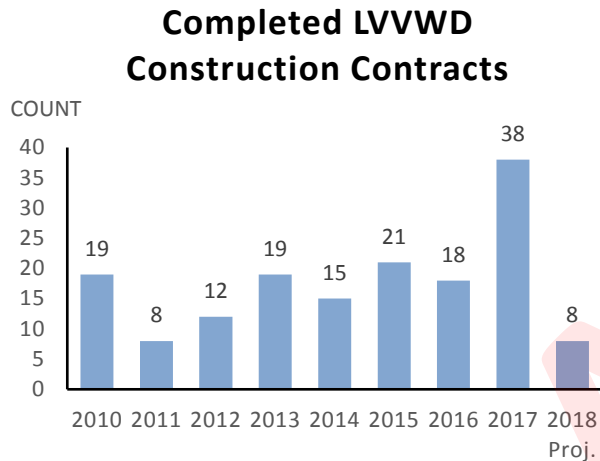
**Las Vegas Wash Capital
Improvements
As of March 2018**



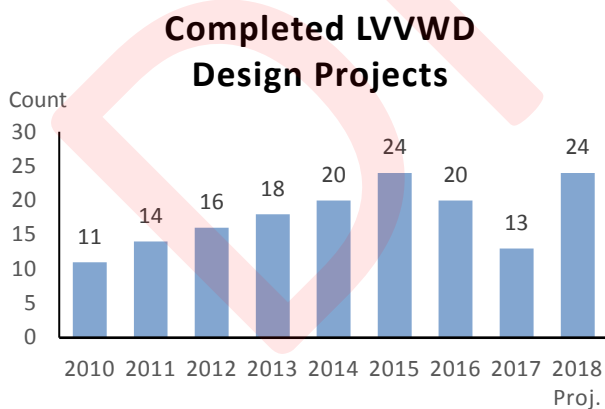
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The chart below (Completed LVVWD Construction Projects) represents the number of the LVVWD construction projects completed by Engineering since 2010 and the number expected to be completed in 2018.



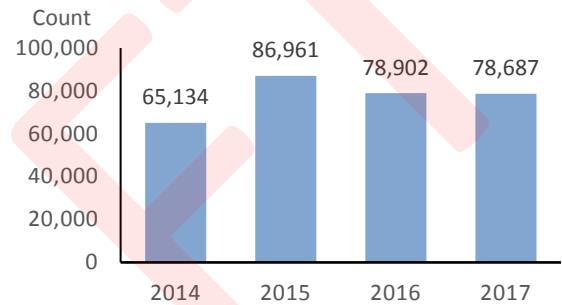
The following chart (Completed LVVWD Design Projects) illustrates the number of projects Engineering has designed since 2010 to support the infrastructure management requirements of the LVVWD.



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.

2018-19 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 excavation work and discharge aqueducts construction contract for the L3PS.
- Complete the design and award the electrical substation contract for the L3PS.
- Provide the Infrastructure Management, Resources and Facilities, and Operations departments with a high level of technical services and capital project support.

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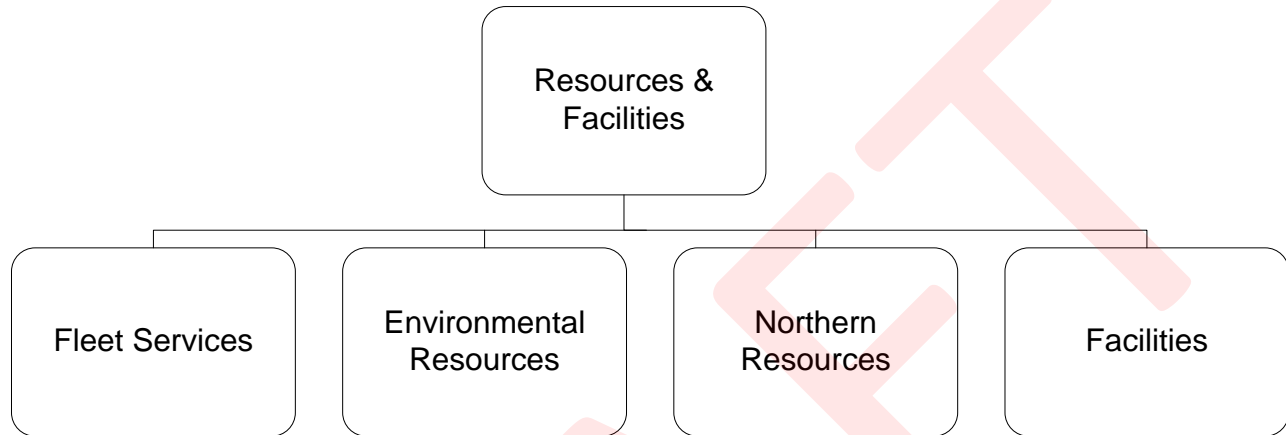
- Consolidate project tracking applications and align work processes to improve staff efficiency.
- Improve methods for direct electronic capture in the field of attributes of constructed water facilities.
- Complete combination of SNWA Facility Engineering Guides and LVVWD Guidance Documents into a single Engineering Design Guides document.
- construction cost of approximately \$16.3 million.
- Performed inspections on approximately 540 different projects, involving over 41,800 individual inspection actions.
- Created the System Reliability Team to oversee the \$100 million LVVWD Backflow Retrofit Program.

2017-18 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 construction of 8 LVVWD projects valued at \$9.5 million related to improvement of the LVVWD's facilities.
- Awarded 13 LVVWD construction contracts valued at \$19.2 million related to improvement of the LVVWD's facilities.
- Awarded one weir construction contract valued at \$14.3 million related to the Las Vegas Wash Capital Improvements Plan.
- Awarded five SNWA construction contract valued at \$6.9 million related to the Filter Demonstration Project at AMSWTF and tortoise fence improvements at numerous facilities.
- Completed construction on seven SNWA contracts for a total

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 2018-19 Resources & Facilities department budget contains funding for a wide-range of initiatives discussed below.

Facilities. The Facilities division budget contains \$5.6 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 \$8.26 million for new & replacement vehicles and related equipment having reached their end of life cycle. An additional \$95,000 is for new telematics equipment for all fleet vehicles. This equipment will be used to better manage the fleet as well as reduce fuel usage and enhance safety. Fleet Services is also requesting \$240,000 for replacement of two-way radios that are becoming obsolete and will soon be inoperable on the Southern

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Nevada Area Communications Council (SNACC) radio system.

Environmental Resources. The Environmental Resources division budget contains \$3.4 million to continue environmental 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, Energy Management, 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 2018-19, the division anticipates receiving \$483,800 in revenue from Federal and State grants and local contributions.

Northern Resources. The Northern Resources division gross budget totals \$4.25 million, of which, \$2.93 million allocated to operations, \$455,000 is for livestock inventory purchase and \$1.3 million capital improvements to

develop, utilize and maintain primary groundwater rights. Total gross revenues are projected to exceed \$2.9 million for commodity sales. The Northern Resources division consists of seven individual properties that have been consolidated into one coordinated operating entity. The consolidation and management of these ranch properties has created operational efficiency and increased productivity. Program enhancements including water development, nutrient management, cropping structure, and propagation of systematically bred livestock 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

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 2,863,616	\$ 3,176,900	\$ 3,274,000
Maintenance & Repairs	1,805,937	2,202,000	2,469,000
Rental & Leases	206,035	372,400	1,912,270
Other Employee Expenses	55,245	168,710	165,460
Other Expenses	(4,233)	142,350	117,800
Total Operating Expenses	\$ 4,926,600	\$ 6,062,360	\$ 7,938,530
Capital Costs	\$ 197,384	\$ 8,229,000	\$ 6,852,000
Payroll Costs	\$ 8,520,981	\$ 8,194,311	\$ 8,537,590
Total Department Expenditures	\$13,644,965	\$22,485,671	\$23,328,120
FTE Positions	67.9	64.8	63.7

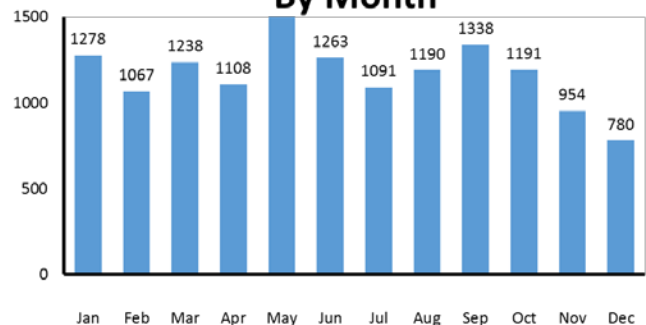
Department Performance

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.

**2017 Completed Work Tasks
By Month**



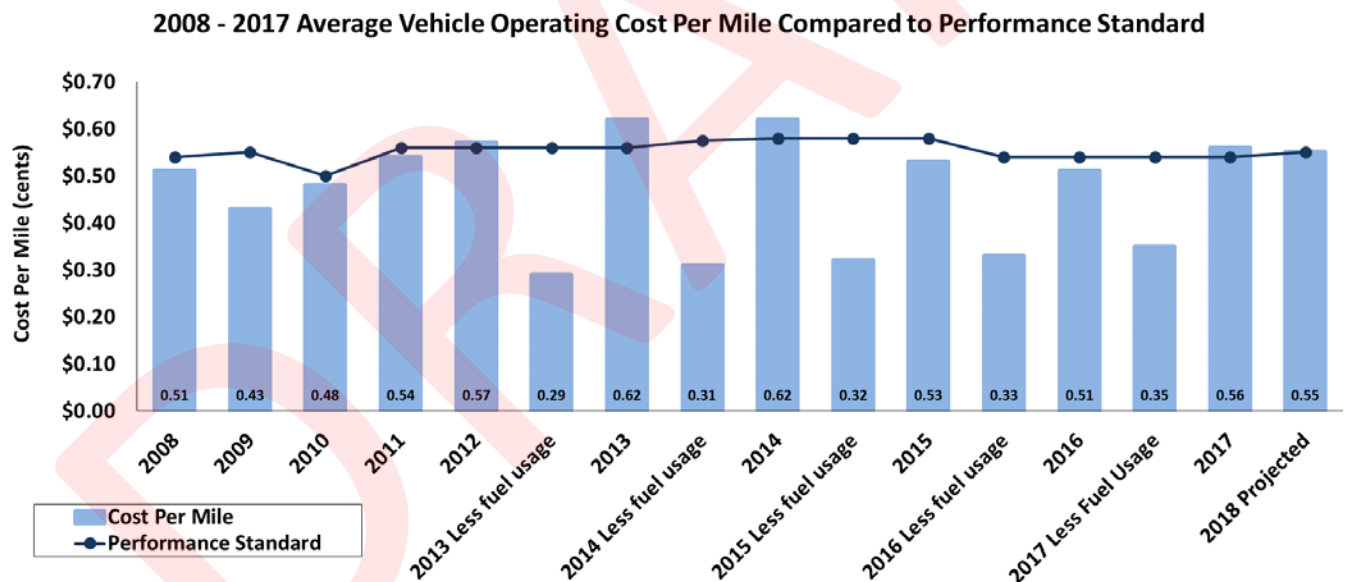
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Fleet Services. The mission of the Fleet Services division is to provide safe, reliable and functional vehicles, equipment, tools, fuel, and communications equipment to the LVVWD, SNWA, LVSP, and BBWD operations. Currently the division maintains more 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 seven service facilities and seven fueling facilities located in Las Vegas, Boulder City, Henderson and White Pine County.

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



Environmental Resources. The Environmental Resources division is responsible for conducting environmental planning, 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 also responsible for fulfilling organizational responsibilities related to management and restoration of the Las Vegas Wash, and the Warm Springs Natural Area.

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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 \$2.9 million in projected ranch revenue for fiscal year 2018-19. 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. 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.

2018-19 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 for the Las Vegas Wash in accordance with agreements and the Las Vegas Wash Comprehensive Adaptive Management Plan.

2017-18 Major Accomplishments

- Conducted threatened and endangered bird, fish, vegetation, and invertebrate surveys along the Las Vegas Wash; an endangered Yuma Ridgway's rail and a threatened yellow-billed cuckoo were identified in 2017.
- 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 30 acres along the Las Vegas Wash, removed nearly 12 acres of tamarisk, and conducted vegetation monitoring on approximately 530 acres.
- Conducted two Wash Green-Up events, where more than 800 volunteers planted approximately 17 acres.
- Coordinated and hosted a two-day science symposium for approximately 150 high school students as part of World Wetlands Day.
- Educated about 100 fifth grade students from Mabel Hoggard Elementary School about the Las Vegas Wash and Lake Mead.

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- Provided eight tours of the Las Vegas Wash for elected officials, agency regulators, conference attendees, organizations, and other interested stakeholders.
- Provided public outreach promoting the Las Vegas Wash and the Las Vegas Wash Coordination Committee at eight local events.

Strategic Plan Goal – Deliver an Outstanding Customer Service Experience.

2018-19 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 all departments to better assess vehicle/equipment needs and improve end products provided.
- Minimize equipment down time through the use of technology, technician training and good parts availability.
- Continue to provide the best possible equipment choices to the departments to assist them in meeting their goals efficiently and effectively.
- Respond to changing customer needs and implement and/or change services to better support the mission.

2017-18 Major Accomplishments

- Enhanced customer service in outlying areas through the use of technology,

improved parts availability, and scheduling of technicians.

- Added a fueling facility at our Tropical Satellite facility to better support customers and reduce travel time.
- Maintained Automotive Service Excellence (ASE) “Blue Seal of Service Award”.
- Maintained Automotive Service Excellence (ASE) “World Class Technician Status”.
- 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.

2018-19 Performance Objectives

- Continue to lead and develop the alternative fuel vehicle program in

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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-eastern Nevada groundwater rights and right-of-way grant for the future.
- Sustainably manage the Great Basin Ranches such that annual gross revenue covers at least 100 percent of direct costs, measured as a five-year running average.
- Develop and certificate 100 percent of ranch water rights.
- Maintain Great Basin Ranch assets, including property, facilities, water rights, and grazing allotments in accordance with annual work plans and permits.
- Inspect 100 percent of ranch irrigation, stock, and domestic wells at least annually, and maintain at least 90 percent of the wells at full operational capacity.
- Complete environmental compliance and monitoring for existing infrastructure and future projects initiated by other 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).
- Support continued public access at the Warm Springs Natural Area in

accordance with the Southern Nevada Public Land Management Act funding agreement.

- Mow fields, trim palms, and maintain fire breaks annually at the Warm Springs Natural Area in accordance with the property Fire Management Plan.
- Communicate sustainability goals and progress to the organization.

2017-18 Major Accomplishments

- Maintained ranch assets through roof repair or replacement on Harbecke office, Home Ranch main house, Bransford house, Phillips shop and sheep barn, Shoshone cow barn roof completed both for asset maintenance and historical preservation.
- Removed failing building at Meadow Creek.
- Installed truck fill station at Bastain well for hauling water, which will reduce total travel with water trucks.
- Drilled new domestic well at Bransford, installed new electrical, replaced plumbing, pressure tank and controls, which provides safe drinking water for field staff.
- Replaced windows and painted interior at McCoy, extending life of structure.
- Installed power to Huntsman feedlot, hospital, wash down pump, scale and commodity barn.
- Constructed a concrete commodity barn for feed storage at Huntsman.
- Constructed hospital pens and installed troughs for sick cattle.

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- Purchased and installed a livestock scale at Huntsman feedlot to be used for marketing and test weighing performance.
- Built clean water diversion and make-up waste water containment at Huntsman feedlot with compliance to CAFO permitting.
- Installed pivot 6 along with electrical service and plumbing at Huntsman which improves water efficiency and reduces manpower input for irrigation.
- Constructed new intake and screen system on the Williams Creek pipe line. Additionally, installed 1600 feet on steel pipeline on the Williams Creek to tie the screen to the 894-road crossing.
- Abandoned and concrete plugged four old wells, 2 at Huntsman, 1 at Bransford, and 1 at Harbecke, following state regulation for well abandonment.
- Replaced water troughs for cattle at Tippet Pass Mike springs and Majors North Twin tanks.
- Completed rehabilitation of old Harbecke North livestock well, installed solar panels and pump for cow watering on Osceola use are.
- Rehabilitated two irrigation wells at Harbecke, replaced old pump systems, will improve output and pump efficiency.
- Remodeled small Harbecke House completely from roof to basement, completely new structure, including HVAC, electrical, plumbing, lightening, lawn, etc.
- Constructed storage building for Fleet Services.
- Installed law sprinkler system at Goff.
- Sourced used WACO field house for seasonal labor, located at Wahoo.
- Constructed new horse corrals at Wahoo.
- Constructed hay barn at Wahoo.
- Added 780 head of replacement cows to the herd. Converted old population to 100% black Angus animals.
- Added 1100 head of replacement ewes to the herd.
- Met or exceeded the projected Ranch Revenue budget.
- Replaced older diesel and gasoline powered vehicles with 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.
- 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 and oral arguments in defense of the federal right-of-way for the future development of SNWA’s central-eastern Nevada groundwater rights.
- Prepared expert reports and provided testimony for water rights hearing remand for SNWA’s central-eastern Nevada groundwater rights.
- Monitored more than 300 ground photography fixed monitoring locations across the SNWA’s grazing allotments to document SNWA’s use

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- of the rangeland, drought conditions, and general health.
- Coordinated extensively with local ranchers in central-eastern Nevada and the BLM regarding management of shared grazing allotments.
 - Conducted desert tortoise, migratory bird, dark kangaroo mouse, pygmy rabbit, sage grouse, and other sensitive species surveys, and responded to calls for dangerous animals at SNWA/LVVWD facilities.
 - Conducted bi-annual Moapa dace counts, and validated the results with a mark-recapture study; the winter 2018 dace count is statistically flat from the previous winter.
 - Completed construction of the second phase of public access trails and kiosks at the Warm Springs Natural Area, and held an official public opening.
 - Conducted threatened and endangered bird species and marsh bird surveys at the Warm Springs Natural Area; nesting southwestern willow flycatchers (with successful nestlings) and a migrant yellow-billed cuckoo were identified in 2017.
 - Hosted the Audubon Society Christmas Bird count that counted over 7,400 birds of about 92 different species in the Upper Moapa Valley.
 - Grew over 5,000 native plants at the Warm Springs greenhouse for restoration areas on both Warm Springs and the Las Vegas Wash.
 - Trimmed 150 palm trees and mowed and maintained 9,000 feet of fire breaks to protect infrastructure and Moapa dace streams at the Warm Springs Natural Area.
 - Monitored 20 ecological restoration sites at Warm Springs Natural Area for restoration success.
 - Provided public outreach to 80 students from Moapa Valley Future Farmers of America who assisted in planting and property cleanup, 112 local fifth-graders for repotting event and World Wetlands Day information, and Boy Scouts of America who installed over 2,000 native plants and a foot bridge.
 - 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.
 - 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.***
- 2018-19 Performance Objectives**
- Without compromising safety and/or service level, reduce operating costs through standardization opportunities, inactive inventory

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- reduction, and continuous process improvements.
- Reduce the overall cost per mile/hour of operation for the LVVWD's vehicles and equipment.
- Annual department expenditures remain within budget.
- Continue to seek grant funding, and provide support to other departments who are applying for grant funding, for SNWA, LVVWD, and Small Systems projects.
- Facilitate renovation projects utilizing in-house labor whenever possible.

2017-18 Major Accomplishments

- Produced 19,182 bales of forage or 11,974 tons of marketable products with a value of \$1,975,738, presently sold \$624,102, balance is in inventory.
- The ranch produced 1472 beef calves, sold 920 head at 504,931 pounds of beef with a value of \$803,159 and added 530 beef replacement females to the inventory with a value of \$795,000.
- The ranch produced 283,944 pounds of lambs with a value of \$537,719. Additionally, produced 44,061 pounds of wool with a value of \$100,228.
- Replace older diesel and gasoline powered vehicles with flex fuel vehicles, saving an estimated \$300,000 in capital replacement costs.
- Reconditioned and reused several service bodies and mounted equipment on light and medium duty utility vehicles saving over \$50,000.

- Replaced 104 vehicles and equipment pieces that were no longer cost effective to operate and maintain.
- Recovered over \$1,043,401 in vehicle resale at auction.
- Recovered over \$89,354 in vehicle warranty repairs through our in-house warranty programs.
- Recovered over \$20,000 from insurance companies for the in-house repair of not at fault vehicle accident damage.
- Obtained \$436,500 in Federal and State grant funding to support water quality monitoring, archaeological resources, program management, revegetation, and public outreach for the Las Vegas Wash.
- 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.

2018-19 Performance Objectives

- 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.

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- 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.
- 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.
- Maintain Automotive Service Excellence (ASE) "World Class Technician Status."
- Maintain I-CAR Platinum Class Certification for Fleet Services paint and body operations.

2017-18 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.
- 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."

- Maintained I-CAR Platinum Class Certification for Fleet Services paint and body operation.
- Completed 34,337 repair tasks on vehicles and equipment over the past 12 months.
- No lost-time accidents occurred.

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

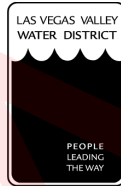
2018-19 Performance Objectives

- 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.

2017-18 Major Accomplishments

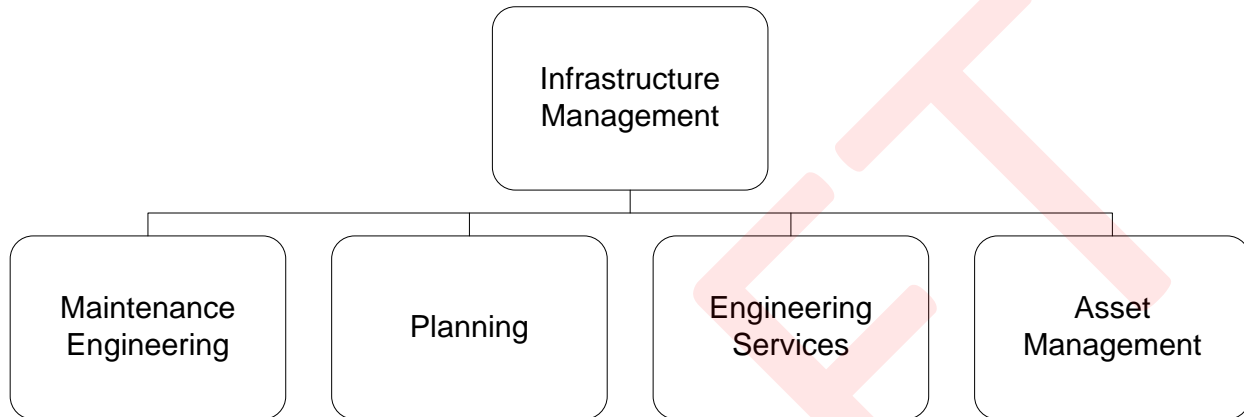
- Equipped all fleet repair facilities with state of the art manufacture specific diagnostic equipment, reducing vehicle down time and repair costs.
- Provided online technical training and diagnostic information to technicians at all repair locations.

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INFRASTRUCTURE MANAGEMENT

Level: 3700



Mission

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

Department Description

The primary responsibility of the Infrastructure Management department is to manage the Las Vegas Valley Water District (LVVWD) and the Southern Nevada Water Authority (SNWA) assets by developing and maintaining the asset management program. To accomplish this, the Engineering Services division reviews water plan submittals for proposed development to ensure they meet the LVVWD's construction standards. The Planning division ensures new developments have adequate water pressure and fire flow, and evaluates future system requirements and develops future capital cost projections. 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, and maintains the LVVWD and the SNWA cathodic protection systems. These efforts are all directly in support of the department's mission.

Budget Objectives and Highlights

The 2018-19 Infrastructure Management department budget contains a comprehensive view of ongoing efforts to maintain existing service levels, provides funding to continue the development and maintenance of the asset management program, and demonstrates a commitment to providing daily operational support for the LVVWD's and SNWA's projects.

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Infrastructure Management's total operating expense budget between the LVVWD and the SNWA increased \$1,152,050 from budget year 2017-18 to 2018-19. Contributing factors to the increased operating expense budget include SNWA and LVVWD emergency and

maintenance work, joint replacements, and reservoir improvements. The department will continue to focus efforts on maintaining cathodic protection, SCADA, and the 4-1-1 developer review process.

Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 197,530	\$ 366,240	\$ 373,580
Maintenance & Repairs	1,457,745	2,326,500	3,661,500
Other Employee Expenses	60,949	117,705	116,765
Other Expenses	352,956	215,625	216,950
Total Operating Expenses	\$ 2,069,180	\$ 3,026,070	\$ 4,368,795
Capital Costs	\$ 4,693,312	\$15,423,300	\$11,177,500
Payroll Costs	\$12,127,083	\$12,474,889	\$13,147,535
Total Department Expenditures	\$18,889,575	\$30,924,259	\$28,693,830
FTE Positions	60.7	63.7	64.6

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 facilities improvements. The division also provides day-to-day engineering support for

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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 \$20 million. Major projects include the Emerson SCADA upgrade; Hacienda ROFC renovations; multi-site ROFC valve and venturi replacements; south valley lateral actuator replacements; RMWTF lab floor replacement; AMSWTF VPSA blower replacement; medium voltage transformer replacements; the AMSWTF electrical distribution upgrade; electrical distribution and engine controls upgrade at Campbell Pump Station; VFD replacements at the Rampart Pump Station; reservoir joint replacements at Campbell and Luce Pump Stations; emergency power system upgrade at Stewart Pump Station; and the build out of the fiber optic communications network.

Planning. The Planning division provides research, analytics, statistical analytics, modeling, and forecasting to support several activities at both the LVVWD and the SNWA. The division provides long-term forecasts, estimates of customer demand curves, analysis of changing demand patterns, and conservation model results to the SNWA as inputs into regional water resource planning. The division provides economic analysis, water demand projections, population distributions, statistical support and water demand distributions to the LVVWD as inputs into financial planning and rate setting, infrastructure planning, operations planning, and small system 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 of the distribution system, with cutting edge modeling capabilities, which is utilized for engineering analysis and decision support. The division locates, sizes, and schedules new pumping stations, reservoirs, wells, and major pipelines. The division also maintains the District's Asset Management model which is used to prioritize asset renewal projects and provide capital cost projections. The division reviews pressure and fire flow availability for new developments and writes cost sharing agreements for the design and construction of major water facilities. The division collaborates with the WQ&T and Operations departments to address water quality compliance issues, to research and develop alternative technologies applicable to the LVVWD 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.

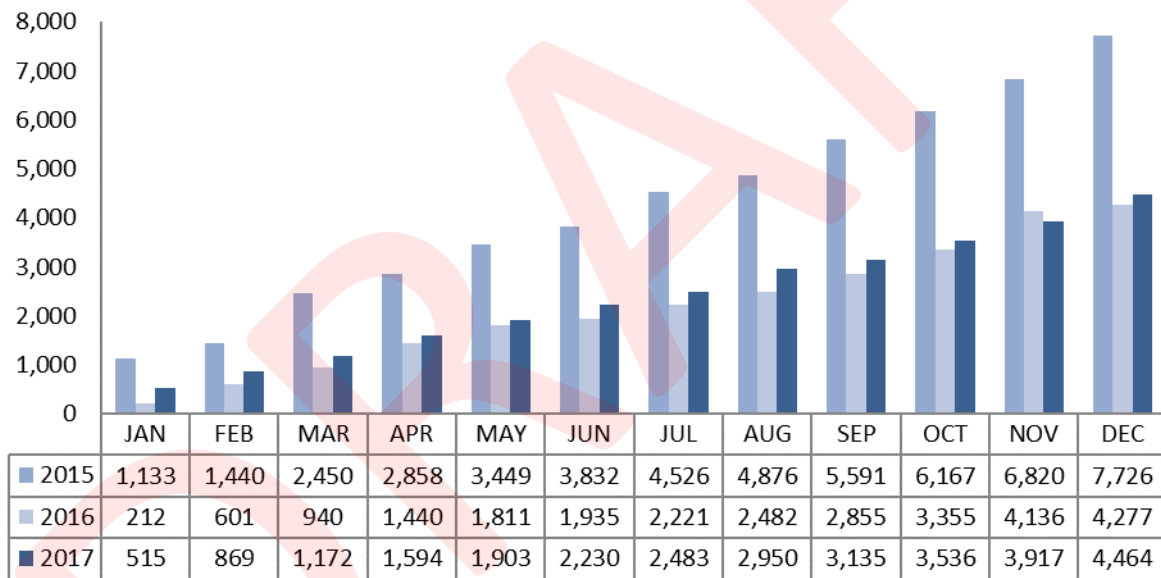
Engineering Services. The Engineering Services division is responsible for reviewing plans for additions and modifications to the systems of the LVVWD and the SNWA, initiated by developers, utilities, and public entities. The division approves the water

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plans for these system additions, and ensures system additions meet the LVVWD's and the SNWA's requirements for reliability and maintainability, calculates fees, processes agreements, commits water resources to new developments, and ensures water facility construction is per the LVVWD's standards. The division coordinates with other public

works construction to minimize both the LVVWD costs and inconvenience to the public. The division is responsible for the evaluation and testing of products for use in the water distribution system and oversees the LVVWD Approved Products List. The following chart represents the LVVWD's cumulative data representing new service points.

New Service Points
2015-2017 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. Asset Management performs condition assessments on LVVWD pipelines with the latest technology such as acoustic leak detection, pipe wall measurements, and CCTV internal inspections to determine the remaining useful life of the pipelines and identify pipelines in need of rehabilitation. Reservoirs are inspected while in service with

potable divers or the District owned Remote Operated Vehicle (ROV), or are inspected while out of service with Magnaflux Leakage Technology (MFL) and a visual assessment. Pump performance evaluations are conducted utilizing SCADA data without the need for field testing to determine the current pump efficiency. The division is responsible for managing the corrosion control program for the LVVWD, SNWA, and associated small systems. The goal of the corrosion control program is to extend the life of steel pipe and

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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.

Strategic Plan Objectives and Accomplishments

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

2018-19 Performance Objectives

- Replace obsolete site automation equipment with current technology utilizing industry standard protocol. This includes the Phase 3 SCADA system upgrade at LVVWD and the Emerson SCADA system upgrade at SNWA.
- Continue to build out fiber optic communications network over the next five years.
- Maintain a capital improvements program for the LVVWD, SNWA, and small systems, and review development submittals in a timely manner.
- Monitor and evaluate water quality in the distribution system, and recommend improvements in response to changing water quality and regulatory conditions.

2017-18 Major Accomplishments

- Completed SNWA and LVVWD PLC automation system upgrade projects at various sites.
- Completed site selection for a pilot test of the Blue Smart LEA, an advanced real-time water quality analyzer, in water distribution systems.
- Coordinated the trial installation of Primus liners to rehabilitate two pipelines to reduce construction costs.
- Installed new cathodic protection systems are protecting an additional 30 miles of steel pipelines.
- Worked with Clark County and SNWA in-house staff to coordinate the review and approval of the installation of 1,000 linear feet of 84-inch steel pipe.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2018-19 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.
- Encourage pre-submittal meetings with developers, the agency, and their engineers to identify potential issues and/or special conditions resulting in one less plan review required per project.

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- Launch the SNWA digital plan submittal portal as part of the LVVWD DPS Website.
- Continue to work with other agencies to include water facility upgrades and replacements in road improvement projects.

2017-18 Major Accomplishments

- Approved 4,464 new water service connections, 441 hydraulic grade line requests, 753 water network analyses, 566 sets of development plans, and 267 fire flow information requests.
- Reviewed 4,142 sets of developer, utility, and public works plans for the LVVWD and the SNWA, including brand new submittals, re-submittals, and revisions.
- Hosted 408 project review meetings with developers and engineers.

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

2018-19 Performance Objectives

- Update master planning areas and associated facilities needed to serve developed and vacant acreages based on new development trends.
- 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.

- Coordinate with the City of Las Vegas to finalize a new master agreement between the City and the LVVWD.

2017-18 Major Accomplishments

- Acquired and implemented a sophisticated new software platform and generated a risk of failure score for all pipelines within the LVVWD water distribution system to facilitate prioritization of pipeline replacement.
- Updated the District's Table 1 demand factors used by developers to size pipelines and facilities to reflect current water demand usage patterns.
- Completed 140 projects, with another 131 projects scheduled to be completed by the end of the fiscal year.
- Created a dataset that linked all customer water demand and county employment to locations and land use codes. This table was utilized by UNR as the foundation of a Computable General Equilibrium (CGE) Model which is useful for regional economic impact analysis. This is the first CGE model ever to include a water sector.
- Utilized remote submarine to inspect critical infrastructure, such as the low-level intake structure and several reservoirs to reduce costs with diver services and used Magnaflux Leakage (MFL) technology to scan steel tank

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floors to measure wall thickness and identified holes.

- Completed maintenance engineering projects with an approximate capital value of \$5.7M.

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

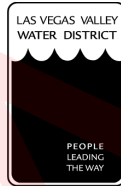
2018-19 Performance Objectives

- 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.
- Support the Nevada Department of Environmental Protection (NDEP) and the water utilities in Nevada by providing engineering expertise in a state-wide working group and suggested edits to the Nevada Administrative Code.

2017-18 Major Accomplishments

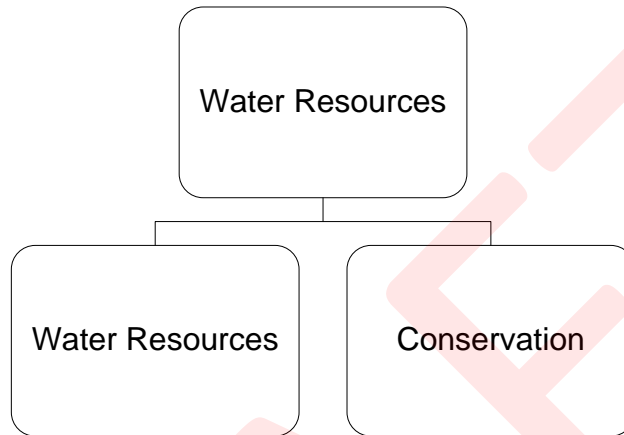
- Processed 1,386 record drawing requests for developer and public works projects.
- Completed three UDACS' training seminars (two engineering firms and Southwest Gas).
- Participated in the Southern Nevada Code Council's Industry Review of the 2018 International Fire Code.

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WATER RESOURCES

Level: 3800



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.

recharge, and irrigation wells, and administers regional water conservation programs.

Budget Objectives and Highlights

The department's budget is \$61,685,027 which represents an increase compared to the division and team budgets from the previous organizational structure for fiscal year 2017-18. 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 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.

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, water demand management, and monitoring of regional hydrologic and water-quality conditions. The department supports policy initiatives on the Colorado River, conducts forward planning for water resource needs, assesses future water supply risks, provides technical support for the operations of LVVWD and SNWA production, artificial-

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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 163	\$ 54,500	\$ 193,000
Maintenance & Repairs	-	1,000	10,000
Other Employee Expenses	-	2,000	2,300
Other Expenses	2,718	108,000	79,000
Total Operating Expenses	\$ 2,881	\$ 165,500	\$ 284,300
Capital Costs	\$ -	\$ -	\$ 3,352,500
Payroll Costs	\$ 218,601	\$ 284,970	\$ 457,574
Total Department Expenditures	\$ 221,482	\$ 450,470	\$ 4,094,374
FTE Positions	7.5	1.5	2.5

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 forecasts and analyses, and water use accounting and reporting; identifying,

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

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SNWA Permanent and Temporary Resources		
	Supply	Consumptive Use
Permanent	Colorado River (SNWA)	272,205 AFY
	Nevada Unused Colorado River (Non-SNWA)	0-21,151 AFY
	Tributary Conservation/ Imported Intentionally Created Surplus	39,000 AFY
	Las Vegas Valley Groundwater Rights	46,961 AFY
	Direct-Reuse	21,800 AFY
Temporary	Southern Nevada Groundwater Bank	335,410 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 demand reduction programs and strategies with emphasis on consumptive uses. The SNWA monitors water use in terms of Net Gallons Per Capita per Day (GPCD), since SNWA agencies recycle nearly all indoor water use, either through return-flow credits or direct reuse. Net GPCD more

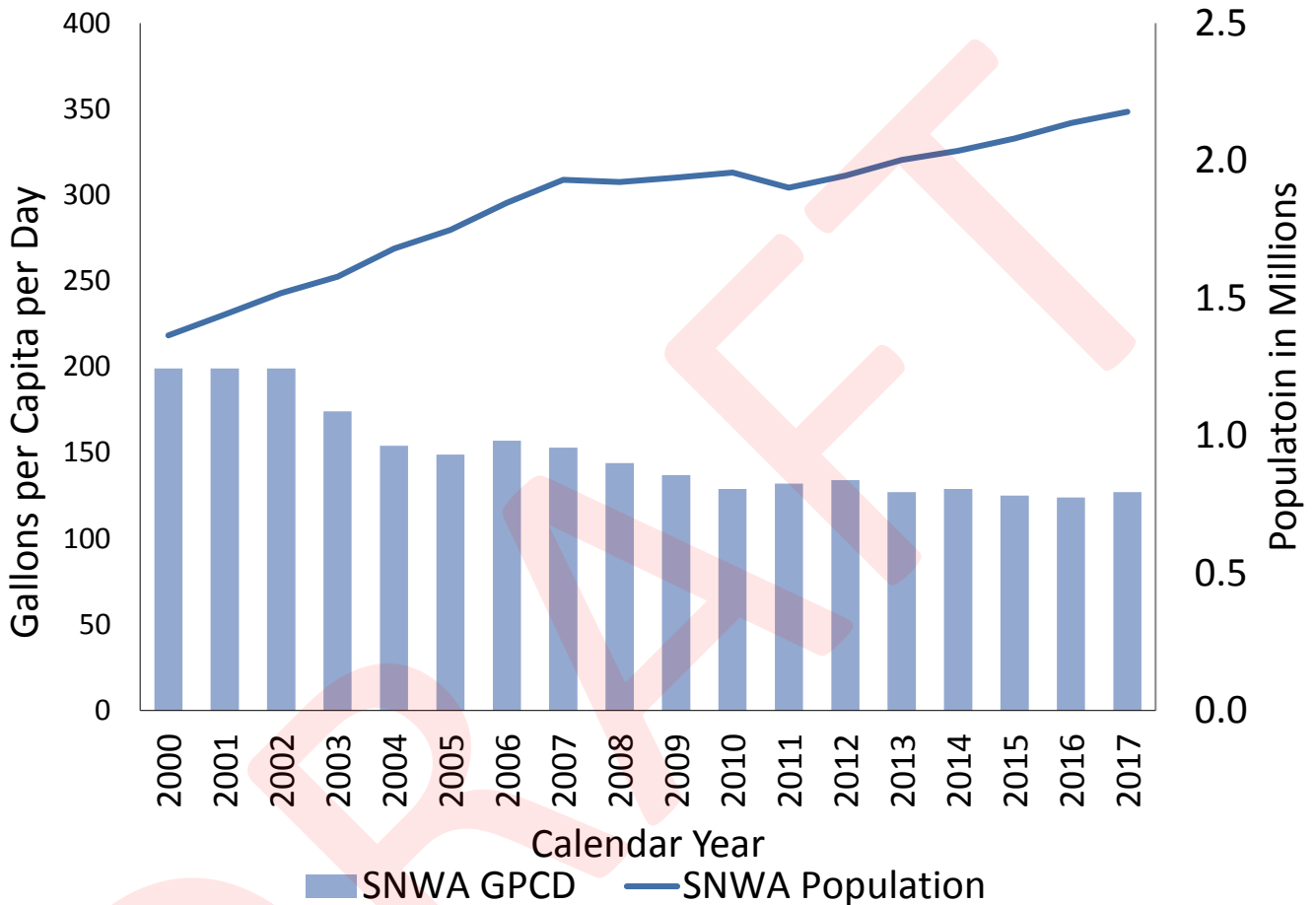
accurately reflects the community's use of water resources and improves comparability with other communities. The SNWA's net GPCD was 127 in 2017. This is a reduction of 36 percent, since onset of drought policies in 2002.

In 2017, the SNWA supported 2,016 projects comprising 3.5 million square feet of landscape conversion. These conversions will produce perpetual annual savings of more than 196 million gallons. The cumulative benefit of landscape conversions completed since 2000 reduced the SNWA's 2017 consumptive water use by more than 10.3 billion gallons.

The Conservation division employs three water-efficiency strategies: 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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SNWA GPCD and Population



Strategic Plan Objectives and Accomplishments

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

2018-19 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.
- Inspect the SNWA and the LVVWD wells annually to ensure appropriate operational capacity for each service area. Manage, develop, and certificate water rights, as appropriate.

2017-18 Major Accomplishments

- Continued implementation of the Colorado River Pilot System

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Conservation Program. Lake Mead contains nearly 20 feet of additional water from the program and other storage initiatives.

- Prepared numerous scientific reports and provided expert testimony to the NSE in support of SNWA's water-right applications in Spring, Cave, Dry Lake, and Delamar valleys.
- 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.
- 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.
- Continued funding and/or participation in the Lower Colorado River Multi-Species Conservation Program and the Glen Canyon Dam Adaptive Management Program.

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

2018-19 Performance Objectives

- Maintain 90 percent or greater client satisfaction rating for delivery of the Water Smart Landscapes program.

2017-18 Major Accomplishments

- Conservation customer satisfaction rating increased 2.8 percent to 94.4 percent (4.72/5-point scale).
- Revised the Water Smart Home program to afford greater flexibility to homebuilders and recruited two additional builders.
- Improved the Water Smart Contractor program for consumers and subscribing contractors.

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

2018-19 Performance Objectives

- Cooperate with other Colorado River water users on programs that protect critical elevations in Lake Powell and Lake Mead.
- Complete actions as required under the SNWA / Department of Interior Stipulated Agreements.
- Publish annual updates to SNWA's Water Resource Plan and Water Budget.
- 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.
- Develop and submit the 2019-2023 5-Year Conservation Plan.

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- 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.
- 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.
- Implemented a uniform conservation policy for water features among all municipalities.
- Published the SNWA 2017 Water Budget and the SNWA 2017 Water Resource Plan.
- Completed an impact assessment of potential out-of-valley water use on water resources.
- Created approximately 32,000 acre-feet of Tributary Conservation ICS and over 740 acre-feet of System Conservation water from the Muddy and Virgin Rivers to Lake Mead.
- Negotiated and entered an additional agreement to develop recovery capacity for water banked in Arizona.
- Initiated interstate banking of 13,000 acre-feet in Arizona.
- Purchased 24.64 acre-feet of Virgin River water.

2017-18 Major Accomplishments

- Issued more than 5,000 conservation rebates saving the community nearly 260 million gallons per year.
- Contributed approximately 57,000 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.
- Partnered with Colorado River stakeholders to identify and prioritize research initiatives that would improve the accuracy of hydrological forecasts, enhance the performance of predictive and decision support tools, and to reduce uncertainty related to future supply and demand conditions in the CRB.
- Maintained a regional monitoring network in east central and southern Nevada to collect long-term hydrologic and climatological data.
- Designed and oversee construction of replacement wells within the Las Vegas Valley and for the ranches.
- Achieved 2017 Net GPCD of 127.

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

2018-19 Performance Objectives

- Increase participation in SNWA conservation incentive programs such as Water Smart Landscapes Program and Water Efficient Technologies Program
- Host 11th Annual WaterSmart Innovations Conference.

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- Continue to collaborate with water efficiency technology incubators and accelerators, including WaterStart, ImagineH2O, the Metropolitan Water District of Southern California's Innovative Conservation Program, the Alliance for Water Efficiency and others.
- Participate in a multi-agency, national research initiative on cooling technology and water demand.
- Collaborate with WaterStart on a study of water efficiency technology for resort and large facility management.
- Implement a pilot program to provide residential water use audits to clients with extraordinary use characteristics.
- Develop a 3-hour Conservation continuing education course for Homeowner Association Managers.
- Participate in the implementation of Minute No. 323, "Extension of Cooperative Measures and Adoption of a Binational Water Scarcity Contingency Plan in the Colorado River Basin".
- "smart" irrigation controllers to develop and improve features.
- Continued a research program to quantify potential water savings from residential audits conducted for clients with extraordinary water use characteristics.
- Partnered with the Alliance for Water Efficiency and major utilities to fund and develop a research venture to explore water conserving approaches to cooling.
- Increased participation in SNWA Smart Irrigation Controller Rebate by 13 percent from 2016.
- Hosted approximately 1,000 attendees at the 10th Annual WaterSmart Innovations Conference and Expo, the nation's largest event for exhibiting and presenting water efficiency technologies.
- Partnered with the Metropolitan Water District of Southern California and Central Arizona Project to implement the Innovative Conservation Program.
- Participated in the development of a scope of work for the study of water desalination opportunities in the Sea of Cortez.

2017-18 Major Accomplishments

- Ongoing collaboration with the State of Nevada's WaterStart program and ImagineH2O to review water efficiency technology and select award recipients.
- Ongoing collaboration with the RESNET network to develop a national water efficiency rating system for new homes.
- Ongoing collaboration with the nation's major manufacturers of

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

2018-19 Performance Objectives

- Implement hydrologic monitoring efficiencies with remote data collection.

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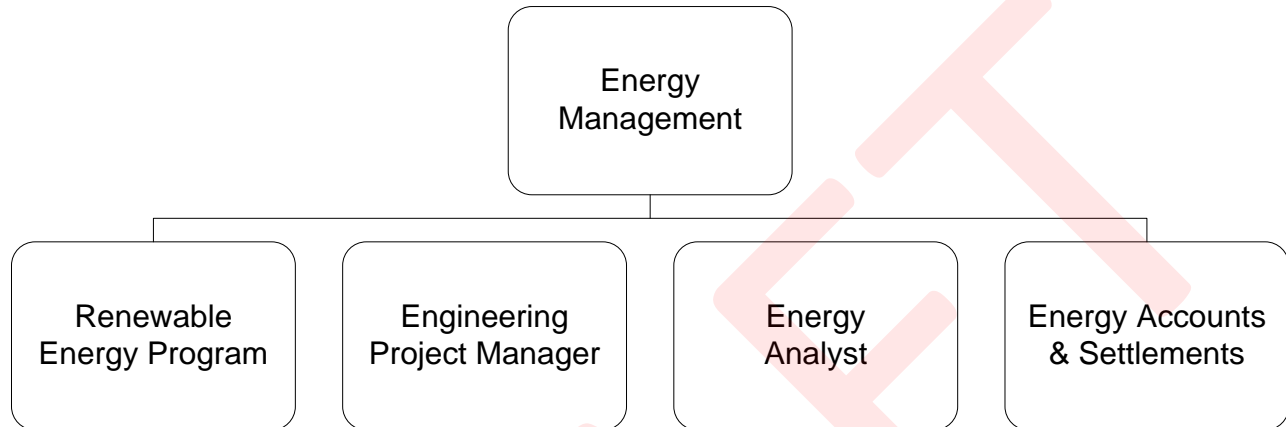
- Leverage conservation research dollars through regional/national projects that attract funding and participation from peer utilities.
- Implement a new business system to streamline workflows, maintain accountability, reduce labor intensity through automation and expand use of electronic documents.

2017-18 Major Accomplishments

- Continued installation of Geostationary Operational Environmental Satellite telemetry systems to monitor and provide real-time access to important hydrologic sites in remote locations and reduce travel-related expenses.
- Collected \$342,518 in grant funding to support conservation programs.

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 2018-19 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

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 211	\$ -	\$ -
Total Operating Expenses	\$ 211	\$ -	\$ -
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 27,000	\$ -	\$ -
Total Department Expenditures	\$ 27,211	\$ -	\$ -
FTE Positions	1.6	-	-

Department Performance

Silver State Energy Association (SSEA).

The SNWA has been instrumental in the formation and development of the SSEA, which has brought significant benefits to the SNWA, its member agencies and the SSEA members. In order to properly manage the

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

Expanding the energy portfolio managed by this group to include the SNWA member

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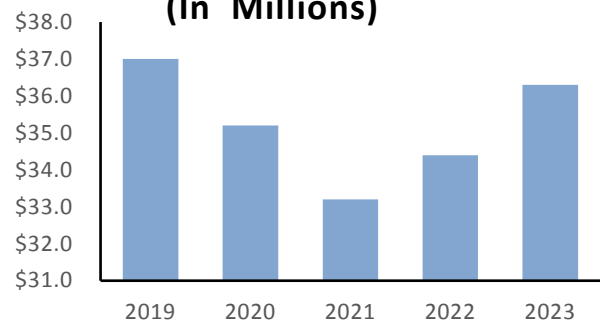
agencies and the members of the SSEA has brought significant economies of scale and portfolio synergies to each of the participants, including the SNWA. Furthermore, the energy portfolio has been able to be expanded in this way with only a minimal increase in the size of the labor and overhead required to properly manage it. Over \$1 million per year of general overhead and operating costs are now being paid for by non-SNWA entities, costs that otherwise would be paid for by the SNWA.

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

Energy Price Stability. Energy Management measures its success 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 2022. 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 2022, changes in the market price of energy are expected to have little effect on the SNWA's expected costs during this period. The chart below shows the SNWA's actual and projected energy costs through fiscal year 2023 as of the end of January 2018.

SNWA 2019-2023
Fiscal Year Ending
Projected Energy Costs
(In Millions)



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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 \$37 million, excluding the estimated cost of capital associated with the SNWA's energy assets for the fiscal year 2018-19. 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 and currently stands at 18%.

Strategic Plan Objectives and Accomplishments

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

2018-19 Performance Objectives

- Install 2 MW of solar covered carports at the LVVWD campus by the end of the first quarter of 2019. Installations will cover four employee parking areas at the main campus and the Springs Preserve.
- Evaluate Microgrid applications for the water delivery system. Identify possible pilot projects and assess performance if implemented.
- Develop a structure and business case for the Eastern Nevada Transmission and Solar Project that enables this strategic project to move into the design phase.

2017-18 Major Accomplishments

- Increased the value of existing renewable energy facilities through the application of strategic maintenance activities.
- Obtained management approval for moving forward on additional solar facilities.
- Completed evaluation of options for moving the ENTP forward into the design phase.

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- Completed integration of budget and accounting records into common system to produce timely and informative budget variance reports.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2018-19 Performance Objectives

- Reach out to new customer representatives with a customized training program to meet their needs.
- Produce training videos to enhance customer understanding of our operations and resulting impacts on their costs.
- Offer our energy expertise in support of our customers' energy goals and objectives.

2017-18 Major Accomplishments

- Initiated the timely production and distribution of monthly energy budget to actual financial reports to all SSEA customers.
- Collaborated with the SNWA Finance department to provide an accurate and timely final accounting of all costs, deposits and refunds associated with the sale of the Silverhawk Power Plant and the administrative termination of the SNWA energy contract trading account.
- Implemented quarterly Energy Accounting Review meetings with SNWA Finance personnel.
- Implemented new customer agency federal hydropower allocations from Hoover Dam.

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

2018-19 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.

2017-18 Major Accomplishments

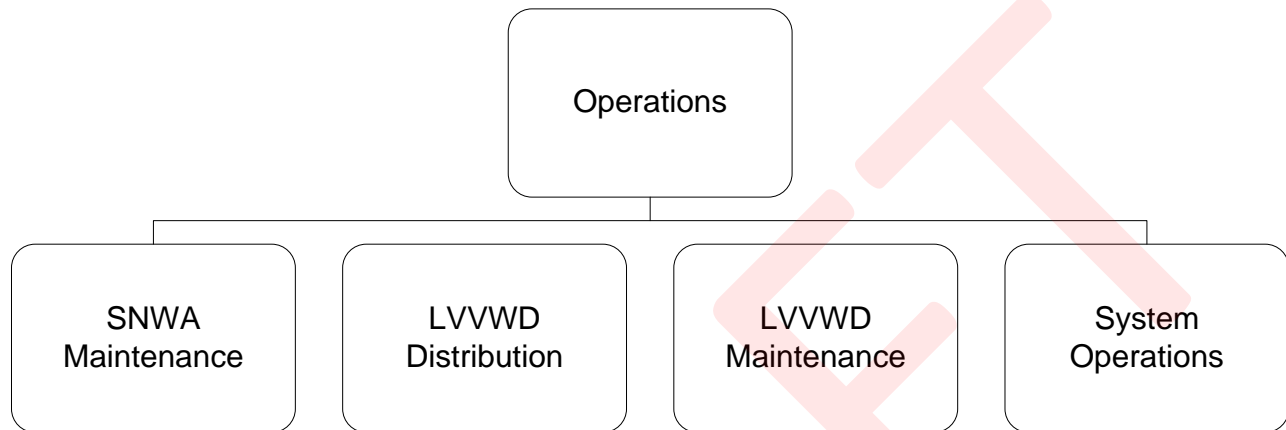
- Developed a transmission wheeling rate for the Power Delivery Project.
- Implemented a new system for the accurate and timely tracking performance of renewable energy systems and portfolio energy credits.
- Created a timely and accurate PEC/REC report management tool.

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- Created a schedule and procedures to facilitate the timely data upload, certification and invoicing of PECs.
- Prepared comprehensive documentation for all revenue and cost allocations.
- Maintained a fixed cost energy portfolio for our customers within compliance requirements.
- Executed and began administering new 50 year Hoover Dam federal hydropower contracts for the SNWA and LVVWD.
- Tested and evaluated a model for estimating the creditworthiness of energy suppliers that do not have an established credit rating.
- Completed a Pioneer Solutions trade capture system upgrade.
- Migrated member agency book budget records to Quickbooks and commenced producing monthly budget variance reports for all customers.
- 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.
- Completed a clean SNWA Energy Management Department operational audit.
- Provided input and justification for rent expense allocation methodology.

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 the 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 Operation division with separate maintenance divisions for the LVVWD and the 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 the 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 \$3,467,484 for the fiscal year 2018-19 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 2018-19 Budget Plan are shown on the following table.

Operations' fiscal year 2018-19 overall budget totals \$65,270,389 between the LVVWD and the SNWA.

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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Water	\$ 18,546	\$ 49,000	\$ 39,000
Energy	9,019,972	11,225,500	10,676,500
Materials & Supplies	4,695,793	4,408,302	4,349,302
Maintenance & Repairs	(603,977)	2,445,500	2,474,500
Rental & Leases	19,259	-	-
Other Employee Expenses	230,207	226,150	225,150
Other Expenses	89,601	396,100	395,350
Total Operating Expenses	\$13,469,401	\$18,750,552	\$18,159,802
Capital Costs	\$ 4,235,747	\$ 1,509,540	\$ 1,450,984
Payroll Costs	\$27,930,614	\$28,399,985	\$30,376,170
Total Department Expenditures	\$45,635,762	\$48,660,077	\$49,986,956
FTE Positions	185.8	189.5	189.3

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 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).

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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 repair and fabrication of equipment needed to support the mission.

LVVWD Distribution. The Distribution division (Distribution) is responsible for maintaining 6,706 miles of pipeline and laterals, 125,124 valves, 399,836 service laterals, 39,027 fire hydrants, and appurtenances comprising the LVVWD's distribution system. In fiscal year 2016-17, Distribution crews completed 8,131 work orders consisting of repairs to pipelines, and repairing and replacing valves and fire hydrants; additionally, replaced 2,111 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 60,628 of these services have been replaced, leaving 19,472 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 10,092 valves in fiscal year 2016-17, 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 29,000 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,

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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.

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

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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, 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.

2018-19 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 programmable logic controller upgrades.
- Work with Infrastructure Management to upgrade SCADA communication system from radio to fiber optics.
- 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.

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- 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.
- 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.
- Install new actuators and control valves at Hacienda ROFC, Fayle ROFC and Oakey ROFC.
- Continue motor refurbishments on the A Lateral, C Lateral and PS06.
- Establish temporary generator power Emergency Preparedness program for all In Valley ROFCs.
- RF6A/RF6B/RF6C – Install new venturis, control valves and actuators in ROFC6A, 6B, 6C and Flamingo ROFC.
- Begin valve actuator replacement project in the South Valley Lateral.
- Replace the failing variable frequency drive at BPS1A for Unit No.1.
- Install fail safes (R6 relays) on all motor protection relays at Production facilities.
- Repair/replace all inoperable valves at River Mountains' reservoirs.
- Searchlight's water system suffered damage when a flash flood roared through a low area and washed out about 40 feet of transmission piping. Responding staff isolated the line within 15 minutes of arrival on site. Distribution staff made repairs the next business day and the Small Systems CDT collaborated to obtain Army Corp of Engineering funding support for a permanent repair.
- 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.
- 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.

2017-18 Major Accomplishments

- Averted a potential disaster in the Jean water system by assisting Letica Corporation in isolating their on-site piping. A piping failure was causing a leak approaching 1,000 gpm and this prompt isolation support prevent the small storage tank from draining.
- 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 44 major SNWS outages in

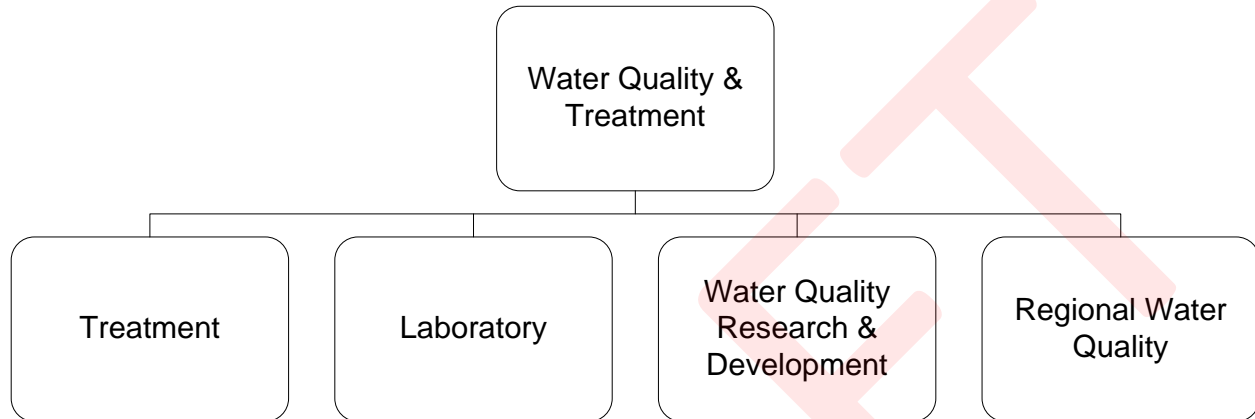
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- support of maintenance, engineering, or construction projects. One outage was a 10-day shutdown of the Pittman Lateral to allow relocation of the piping in support of a Clark County construction project for an overpass at Valley View and Harmon. Additionally, there was an unplanned shutdown of the South Valley Lateral to for a repair to a blown out plug. This required both LVVWD and City of Henderson to use alternative delivery plans to meet November demands. were to tie in the L3PS discharge lines.
- Conducted both a table-top and practical field exercise of Loss of SCADA scenario within the LVVWD system. Staff responded to start and/or stop pumping equipment as needed, field level measurements were taken, and after 48 hours of exercising the lessons learned list was prepared and shared.
 - Removed the old variable frequency drive and installed a new reduced voltage soft starter on Unit No. 10 at Sloan Pump Station.
 - Installed the RIVENTA Pump Monitoring System at Hacienda Pump Station.
 - System wide installation of the new FOXBORO flow transmitters at all rate-of-flow-control stations.
 - Installed new manual and electric guard/isolation valves and actuators at Oakey ROFC and Fayle ROFC.
 - Installed new station power distribution equipment and motor control centers at Twin Lakes Pump Station.
 - Isolated, drained and rewatered the South Valley Lateral at Gibson and Horizon for a leak repair.
 - Isolated, drained and rewatered the Pittman lateral in support of the 84" pipeline relocation.
 - PS06 Unit No. 1 – Remove for repair/refurbish by KOFFLER Electric.
 - Installation of level transmitters at Foothills Pumping Station surge tanks to replace Warrick level probes.
 - Installed infrared survey windows on switchgear at Production facilities.
 - Installed a new variable frequency drive to replace the failed Unit No. 3 at IPS2.
 - Completed North and Foothills ROF control valve installations.
 - 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.
 - Worked with Infrastructure Management to complete the multi-year LVVWD DNP3 programable logic controller upgrades.
 - Replaced the two-remaining variable frequency drive units at WRC main pump station.
 - Replaced 23-year-old Ronzone pump station valve actuators.
 - Replaced the Blue Diamond well pumping equipment and upgraded well site to meet State requirements and provide for a more reliable source of water for the community.
 - Refurbished the Jean Midway well to provide backup well capacity.
 - Replaced Carlton Square 3000 kVa electrical transformer based on age and oil condition.

WATER QUALITY & TREATMENT

Level: 4500



Mission

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

Department Description

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 Research and Development (R&D) division is responsible for performing research and process optimization studies to ensure the Treatment division is prepared for changing and emerging water quality challenges. The Regional Water Quality division is responsible for coordinating water quality in the SNWA source waters. All of these efforts are in support of the primary responsibility for the department.

Department Performance

Treatment. The Treatment division is responsible for the operation and maintenance of three treatment facilities: the Alfred Merritt Smith Water Treatment Facility (AMSWTF), the River Mountains Water Treatment Facility (RMWTF), and the Big Bend Water District (BBWD), with a combined design treatment capacity of 1 billion gallons per day. The division, through a Supervisory Control and Data Acquisition System (SCADA),

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Expenditures

LVVWD Uses	Actual 2016-17	Budget 2017-18	Budget 2018-19
Materials & Supplies	\$ 3,894	\$ -	\$ -
Other Employee Expenses	4,060	-	-
Other Expenses	(444)	-	-
Total Operating Expenses	\$ 7,509	\$ -	\$ -
Capital Costs	\$ -	\$ 459,500	\$ -
Payroll Costs	\$ 709,027	\$ 246,939	\$ 106,228
Total Department Expenditures	\$ 716,536	\$ 706,439	\$ 106,228
FTE Positions	4.8	1.0	0.4

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 American Water Works Association (AWWA) certifies operators at journeyman level and above as laboratory analysts. 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.

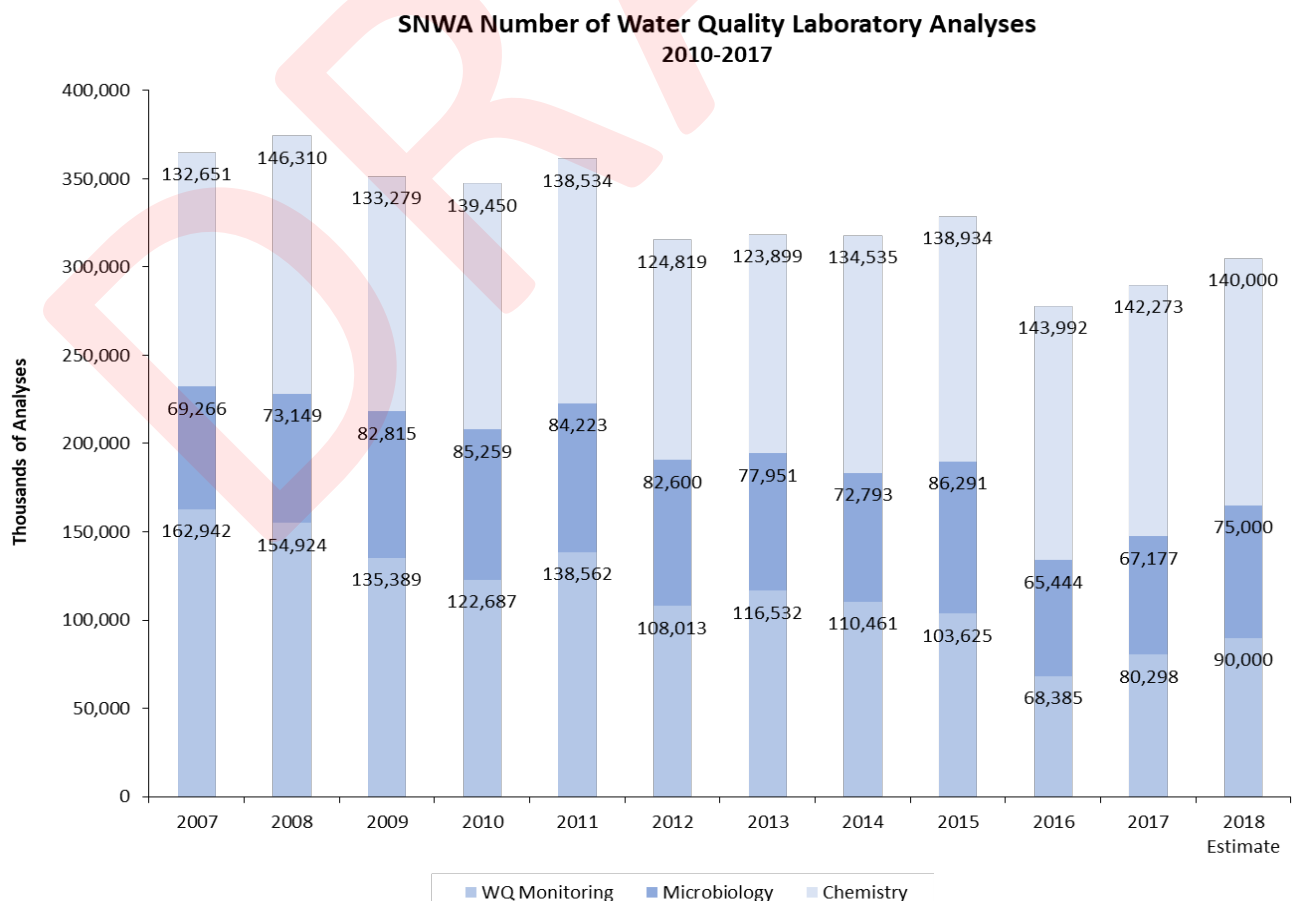
Analyses associated with the SDWA compliance testing are the highest priority in the Laboratory. The SDWA requires each public water system to perform or have performed a comprehensive set of analyses on its delivered water. The Laboratory

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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 2017 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 41,400 samples were collected and 289,748 analyses performed in 2017. The chart below presents the total number of laboratory analyses through calendar years 2007-2017 (2018 estimate). The number of analyses can fluctuate year-to-year depending on the year's monitoring requirements. A significant increase in sampling and analyses performed this year was because all LVVWD wells required full SDWA analyses including inorganics, synthetic organics, volatile organics, and radiological testing. (See chart below).



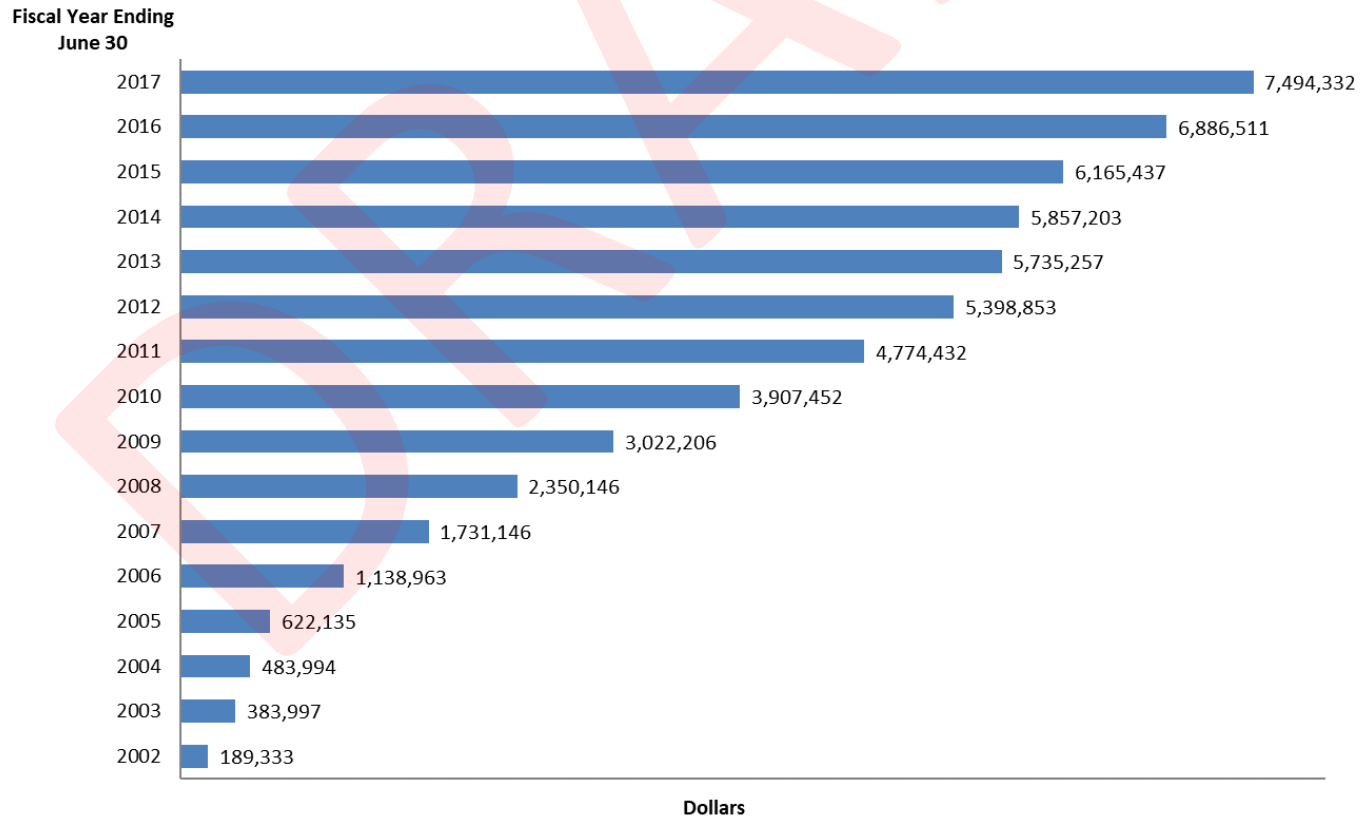
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Water Quality Research and Development.

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 - 2017.

**SNWA Water Quality Research & Development
2002-2017 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.

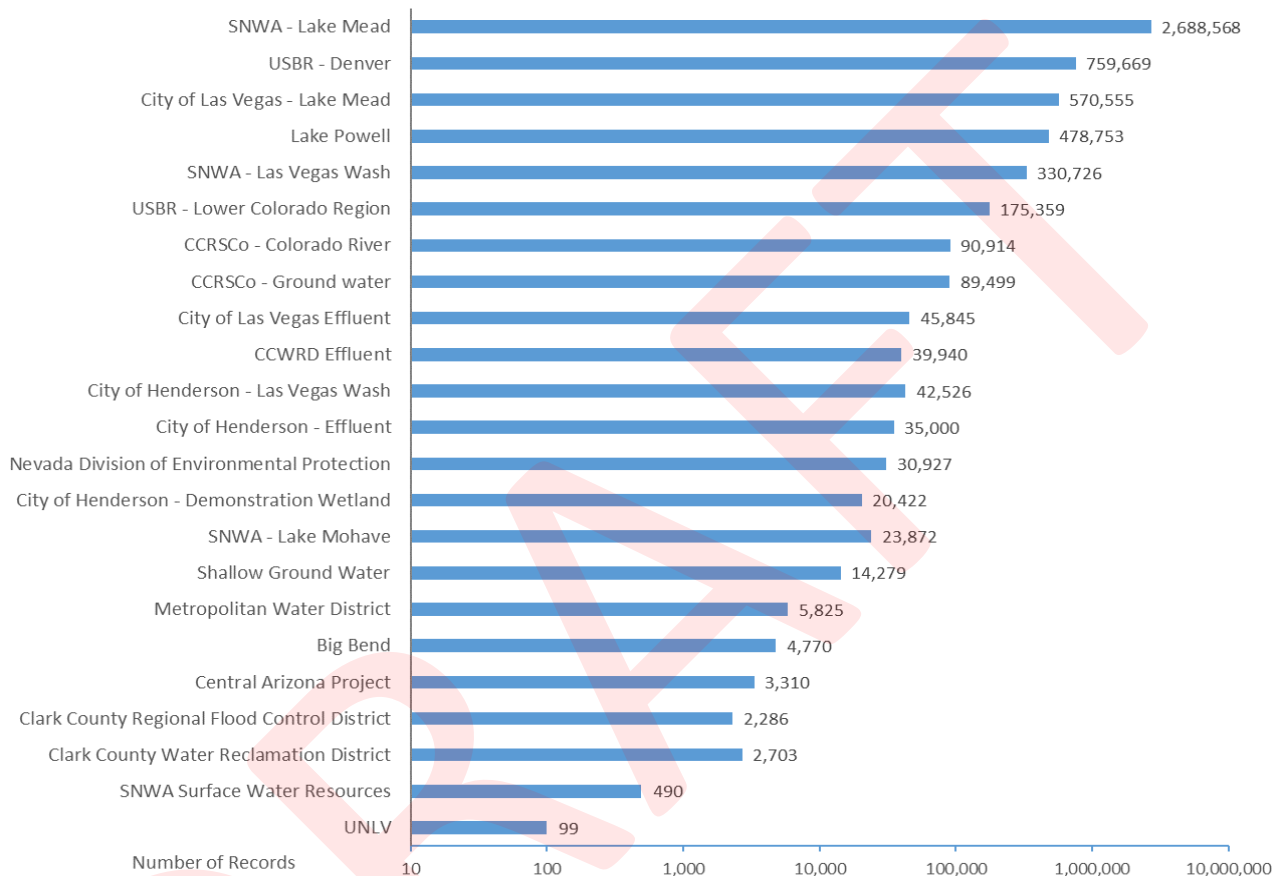
Data is also analyzed to assess impacts of nutrients, quagga mussels, perchlorate, total dissolved solids, selenium, Microcystis, and other contaminants on the water quality in Lake Mead and the drinking water supply. The division continued its efforts to integrate data and understanding of Colorado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

In 2017-18, the Regional Water Quality division updated the 3-dimensional Lake Mead Water Quality Model, including a transfer to a new modeling package. The model transfer included updating model code, verifying the performance of the new model software to ensure compatibility and use of the updated model. The division continued to coordinate the Lake Mead Monitoring and Ecosystem and the Interagency Monitoring Workgroups and hosted the Lower Colorado River Water Quality Symposium.

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 over 4.5 million 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 (Logrithmeic Scale - December 2017)**



Strategic Plan Objectives and Accomplishments

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

2018-19 Performance Objectives

- Pending completion of contacting and funds availability, proceed to develop a linked model to describe water quality in Lake Mead and the treatment of this water through the drinking water treatment process. This work will be done in conjunction with UNLV utilizing grant funding from the USBR WaterSMART program. This work will allow for the exploration of potential future conditions and changes to the water treatment system that may be required.
- To work closely with Information Technology (IT) to complete the upgrade of ChemWare Laboratory

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Information Management System (LIMS) software and become proficient in use of the new upgrade.

- Continue to work with Fleet Services to ensure the SNWA sampling vessel is safe and reliable by compiling information regarding the necessary requirements needed for a new SNWA sampling boat by collaborating with stakeholders including the Water Quality Monitoring team, SNWA Fleet Services, and/or customers.
- Continue Operator-in-training.
- Complete update of 100 percent of Standard Operating Procedures (SOP).
- Refurbish AMSWTF filters 3, 4 and 5, and conduct performance study.
- Refurbish AMSWTF Fluorosilicic Acid (fluoride) storage system.
- Refurbish RMWTF Sodium Hypochlorite manufacturing system and reconfigure with several dilution options.
- Replacement of online instrumentation with the latest technology available.
- Evaluate full-scale filter performance following the renovation of Filters 1 and 2 at AMSWTF.

2017-18 Major Accomplishments

- Migrated the existing ELCOM/CAEDYM 3-dimensional water quality model to the AEM3D modeling platform. Including model revisions, performance verification and implementation of the new platform.
- Continued to analyze Lake Mead and Mohave water quality data and to advise Water Quality and Treatment

staff on possible impacts to the treatment system.

- Evaluated the laboratory's requirements for an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) to replace a current instrument that had reached obsolescence. Worked with Purchasing to formulate a "Request for Proposal" based on those requirements. After staff identified an opportunity for a significant discount, the laboratory was able to purchase a second identical ICP-MS to replace an instrument nearing obsolescence with a minor increase in funding.
- Implemented the use of automated total coliform and *Escherichia coli* instrument for evening and weekend work.
- Completed re-write of approximately 80 percent of all SOPs.
- Refurbished AMSWTF filters 1 and 2 and conducted filter performance study.
- Completed update of 100 percent of chlorine SOPs and implemented annual training program.
- Programmable Area Controller (PAC) replacements at RMWTF.
- Completed removal of Granular Activated Carbon (GAC) in filters 19 and 20 at RMWTF.
- Evaluated performance of the old and new filter media design to remove high turbidity at pilot-scale.
- Completed research study leading to the replacement of Granulated Activated Carbon (GAC) media with anthracite in filters 19 and 20 at RMWTF.

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- Completed research study recommending the use of zinc orthophosphate to mitigate lead corrosion at Kyle Canyon.
- Developed strategy to use chloramines to eliminate biological activity in the filters at Big Bend Water District(BBWD).

Strategic Plan Goal – Deliver an outstanding customer service experience

2018-19 Performance Objectives

- Complete all Unregulated Contaminant Monitoring Rule 4 (UCMR4) monitoring required in 2018 for Henderson and LVVWD.
- Continue support of various ongoing research projects by providing quality data in a timely manner, including extensive lake and sources monitoring, complex storage/distribution system trihalomethane (TTHM) monitoring, as well as ad-hoc water quality monitoring requests.
- Refurbish AMSWTF Ozone Generator 3.
- Upgrade breaker/contactors on ozone generators at RMWTF.
- Continue with PAC replacements at BBWD.
- Refurbish BBWD filter 2.
- Obtain UV Disinfection Credit for BBWD.
- Continue serving the International Ozone Association – Pan American Group (IOA-PAG) as President and Administrative Communications Officer.
- Continue to interact with internal and

external customers of Lake Mead, Lake Mohave, Lower Colorado River and Las Vegas Wash water quality data to ensure a leadership role for SNWA in environmental issues.

- Implement updated water quality monitoring equipment and real-time data transfer capabilities for the Las Vegas Wash to support the activities of the Las Vegas Valley Watershed Advisory Committee.

2017-18 Major Accomplishments

- The Water Quality Monitoring and Microbiology sections worked together to implement a new instrument, Endetec TECTA detection system, allowing for early detection of total coliform (TC) and *E. coli* (EC) in a sample. This new procedure allows the laboratory to provide customers with quicker results than current TC and EC procedures.
- Supported R&D division, LVVWD Operations, and Rainbow Canyon residents with quick-turn analysis for various analytical parameters related to corrosion control and lead and copper issues.
- Chloramination system for bromate mitigation installed at BBWD.
- Provided support service and guidance to the IOA-PAG resulting in a surplus of \$57,000 from the 2017 IOA World Congress in Washington, DC.
- Reconstructed the IOA-PAG website on the platform Wild Apricot that is designed for member associations.
- Developed a predictive, model-based relationship between Lake Mead

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elevations and the dilution of Las Vegas Wash waters upon traveling through the lake for the benefit of Las Vegas Valley wastewater dischargers. This relationship will help the dischargers plan to meet water quality requirements of their NPDES permits.

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

2018-19 Performance Objectives

- Use the AEM3D Lake Mead water quality model to evaluate changes in the quality of water leaving Lake Mead and entering Lake Mohave at various lake surface elevations.
- Continue rehabilitation of filters at AMSWTF.
- Water quality conversion to input data into Avantis for RMWTF.
- Rehab RMWTF Sodium Hypochlorite system and install new style generator.
- Operate, maintain and perform challenge testing for water quality instrumentation at the AMSWTF Star Lab and buoys in Lake Mead. Develop standard operation procedures for the online instrumentation.
- Supply data and attend the project meeting to discuss the final report for Water Research Foundation (WRF) Project 4636 titled “An Integrated Modeling and Decision Framework to Evaluate Adaptation Strategies for Sustainable Drinking Water Utility Management Under Drought and Climate Change.”

2017-18 Major Accomplishments

- Completed rehabilitation of filters 3, 4 and 5 at AMSWTF.
- Coordinated several plant shutdowns in support of SCADA hardware upgrades.
- Implemented paperless work order process at BBWD.
- Awarded a US Bureau of Reclamation (USBOR) grant through WaterSMART Drought Response Program: “Building long-term resiliency to drought by employing riverbank filtration to improve water quality”.
- Completed the USBOR grant through their WaterSMART Drought Response Program: “Lake Mead water quality monitoring to mitigate impacts caused by the drought”.
- Regional Water Quality has continued to analyze Lake Mead water quality data in the context of changing climactic conditions. In 2017 – 2018 this analysis has focused on the impact of the ongoing drought in the Colorado River Basin.

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

2018-19 Performance Objectives

- Pending completion of contacting and funds availability, proceed to develop a linked model to describe water quality in Lake Mead and the treatment of this water through the drinking water treatment process.

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This work will be done in conjunction with UNLV utilizing grant funding from the USBR WaterSMART program.

- Expand the collection of Lake Mead water quality data through the use of automated data collection and analysis.
- Coordinate high-turbidity filter study with R&D division.
- Investigate use of Next Generation Sequencing of Deoxyribonucleic acid (DNA) to differentiate between the types of microorganism present in our source waters.
- Continue support of R&D division projects involving algal toxin monitoring, Polymerase chain reaction (PCR) analysis, and other microbial methods.
- Continue work on externally-funded projects by WRF (Projects 4692, 4719, 4716, 4711, Reuse 16-02) and US Department of Agriculture (USDA).

2017-18 Major Accomplishments

- Install copper sulfate injection system for biological control of pilot plant and raw water sampling pipe.
- Fully implemented the electronic tablet-based Horizon Logbook Manager (HLM) for Water Quality Monitoring in 2017.
- Completed the R&D division studies involving Assimilable Organic Carbon (AOC) removal
- Evaluated the use of ATP and flow cytometry for early detection of harmful algal blooms.
- Completed WaterStart research project with Metawater.

- Completed WaterStart research project with WellToDo.
- Completed externally-funded projects with WRF (Projects 4555, 4559, 4560, 4536, Reuse-14-16, TIRR2R15), City of Altamonte Springs, FL, and USBOR.

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

2018-19 Performance Objectives

- Revise and update preventive maintenance program.
- Enhance cross-training efforts of staff at RMWTF and AMSWTF.
- Pursue solicited and unsolicited externally-funded research grants from the WRF (e.g., Tailored Collaboration Project on disinfection framework for biofilters), US EPA, National Science Foundation, Water Environment & Reuse Foundation, and the USBOR.
- Pursued new position for microbiology, and started renovations on the microfiltration plant at the RMWTF.

2017-18 Major Accomplishments

- Began training Electrical/Electronic Systems Technician II at the RMWTF in anticipation of staff retirements.
- Operator-in-training completed training and advanced to Operator II position.
- The laboratory collaborated with procurement to negotiate a significant five-year discount for quality control

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- standard and samples from its proficiency testing vendor.
- Received over \$315,000 from external grants.
- Relocated the pilot plant into the ozone utilidor at the AMSWTF.
- Began publishing articles open access so research is readily available.

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

2018-19 Performance Objectives

- Investigate AWWA performance awards at the BBWD.
- Continue presenting scientific research at conferences and publishing on research projects.

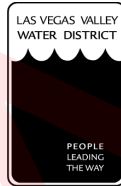
2017-18 Major Accomplishments

- Applied to the AWWA Partnership for Safe Drinking Water for both the AMSWTF and the RMWTF for the “Excellence in Water Treatment” award.
- NDEP completed annual sanitary survey and found no deficiencies in the treatment process.
- A member of the Water Quality & Treatment Department’s Chemistry team won the General Manager’s (GM’s) Distinguished Award of Excellence.
- Published twelve articles in scientific journals.
- Presented twelve papers at the 2017 American Water Works Association (AWWA) Water Quality Technology

Conference.

- Presented seven papers at the 2017 IOA World Congress.
- Presented six papers at 11th International Water Association Reclamation and Reuse Conference.
- Presented five papers to the AWWA International Symposiums on Potable Reuse and Biological Treatment.
- Presented 3 posters at the Disinfection By-Products Gordon Research Conference.
- Presented a paper at the Tri-State Seminar.
- Presented a Water Research Foundation Webcast (Project WRF 4588).
- Submitted five papers at the 2018 AWWA Annual Conference and Exposition.
- Submitted a paper for the spring 2018 American Chemical Society Conference.
- Submitted a paper for the 2018 Water Research Foundation Conference.

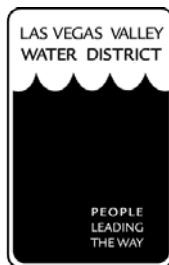
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SECTION 6

CAPITAL PLANS

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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

Capital Budget

The Las Vegas Valley Water District (LVVWD) maintains a long-range facility planning process to determine the type, size and location of water distribution facilities needed to meet the water services demands of the areas in Clark County served by the LVVWD. As water system facilities are defined they are added into the LVVWD's overall construction program. The ongoing capital equipment and construction program is a dynamic program, with projects added, changed, or deleted as necessary to meet the changing conditions in the LVVWD's Service Areas. The construction program consists of new pumping stations, reservoirs and wells, land acquisition, new water pipelines, and other distribution system facilities. The capital equipment budget consists of vehicles, Information Technology equipment, water works and diverse industrial equipment. LVVWD is planning to acquire over \$7.8 million in capital equipment during the next fiscal year. Some of the capital projects will become operational by the end of fiscal year 2018-19, while other projects will be completed in subsequent fiscal years.

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

Impact of Construction Program on Operation and Maintenance Expenses

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

- First, the facilities being added to the LVVWD's system are new and require little or no maintenance.
- Second, the facilities are designed and constructed with the latest available technology, and are not accepted by the LVVWD until they are fully inspected and tested and ready for operation.
- Third, over the past several years the LVVWD has conducted numerous process improvement investigations and adopted recommendations that have resulted in significant on-going operational and maintenance efficiencies and savings.

In the long term, the LVVWD anticipates incurring maintenance expenses for the rehabilitation of facilities such as reservoirs, pump stations, and pipelines. However, these costs are minimized through the LVVWD's use of state-of-the-art diagnostic equipment and testing procedures, which significantly lower maintenance costs and reduces the rate of catastrophic failures. Finally, these facilities were, and are being constructed, for new

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customers who generate additional operating revenues. These revenues in the past have offset, and in the future are anticipated to continue to offset, the added long-term maintenance expenses.

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

The LVVWD's overall construction program is funded by a planned \$100 million debt issuance in 2017-18, the LVVWD's State Revolving Fund Loans (SRF) and pay-as-you-go funding sources. The projects consist of new pumping stations, reservoirs and wells, land acquisition, new water pipelines and recycled water distribution system facilities. The LVVWD capital project-related expenditures are estimated to be approximately \$95.5 million.

In December 2014, the LVVWD entered into an agreement with the State of Nevada Department of Conservation and Natural Resources to receive a loan from the State

Revolving Fund to finance construction of water infrastructure. It is projected the LVVWD will ultimately receive \$50 million in SRF loans, but the first loan was for \$20 million. A second loan of \$15 million was part of the 2015-16 Adopted Budget Plan. The final \$15 million was included in the 2016-17 adopted Budget Plan.

The SRF loan is secured by a general obligation bond that the LVVWD provided to the State of Nevada as collateral for the loan. The SRF loan will be funded on a reimbursement basis, i.e. the LVVWD must first fund the construction expenditures with its own assets and then be reimbursed by the SRF loan. Until the loan is fully funded, the LVVWD is obligated to pay interest only on the outstanding amount of the loan. After the loan is fully funded, the LVVWD is obligated to make roughly equal semiannual payments of principal and interest over 20 years.

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

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LVVWD: CAPITAL BUDGET 2018-19

CAPITAL EQUIPMENT

2300 - Information Technology

LVVWD SCADA Routers	\$ 14,500
Plotter Replacements	15,000
Bridgewave 10Gig	18,000
Large Format Scanners for IG	21,000
IP Phones for CCFS	34,950
Production Large Format Printer	38,000
Struxware Appliance	45,000
Corporate Intrusion Prevention System (IPS)	75,000
SCADA Intrusion Prevention System (IPS)	90,000
Virtual Infrastructure Additions	90,000
Network Edge Switch Replace	120,000
PC Monitor Refresh	135,000
FireEye NX Replacement	147,000
General Infrastructure	150,000
Mobile Device Refresh	174,000
ITRON Handheld Replacement	200,000
Multimedia Storage Appliance	235,800
Data Storage Growth	294,000
PC Refresh	345,000
Subtotal	\$ 2,242,250

2500 - Public Services

Replacement of cafe kitchen equipment	\$ 50,000
Replace 22 outdated wireless microphones	60,016
Subtotal	\$ 110,016

2700 - EHS & CS

MEDECO XT Key System	\$ 51,600
MIC Series 612 Thermal Cameras	30,000
Subtotal	\$ 81,600

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3400 - Engineering

GPS Base Station Receivers and Antennas	\$ 86,250
Subtotal	\$ 86,250

3600 - Resources & Facilities

Industrial Vacuum system	\$ 10,000
2 Passenger Electric Utility Cart.	12,000
2 Passenger Utility Cart	12,000
4 Passenger Electric Cart with Small load platform.	14,000
Furniture and Chair Request for Upcoming Projects	20,000
2 Electric Utility Carts	24,000
10 Passenger Electric Cart with W/Wheel Chair Ramp	25,000
Mid Size SUV, 4-Door, 4X2	33,000
Extended Cab Short Bed Pickup 4X4	35,000
Extended Cab Short Bed Pickup 4X4	35,000
21' Dovetail Backhoe Transport Trailer.	36,000
3/4 Ton Crew Cab, Long Bed Utility 4X4	50,000
32' End Dump Trailer.	50,000
GPS Equipment for LVVWD Fleet	50,000
Extended Cab 4 Yard Dump Truck	115,000
Regular Cab 10 Yard Dump Truck	170,000
LVVWD HVAC Unit Replacement	200,000
80 Replacement Motorola Two Way Radios	240,000
Furniture and Chair Request for Upcoming Projects	250,000
Extended Cab Utility W/Crane, Dist. Service Truck	262,000
2 Each 19,500 lb. Trucks With Cranes	310,000
Regular Cab 12 Yard Hydro-Excavator	420,000
1 Lot of 21 Replacement Equipment Pieces	505,000
1 Lot of 33 Replacement Vehicles.	2,003,000
Subtotal	\$ 4,881,000

3700 - Infrastructure Management

Raider Pipeline Echoshore Leak Monitoring System	\$ 100,000
Pipeline CCTV Inspection System	120,000
Subtotal	\$ 220,000

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4100 - Operations

Office Furniture	\$ 5,000
12 Volt Electric Pumps	6,864
Replacement Office Chairs	7,840
Replace various Chairs and provide a Map Holder to view 600 Maps	9,900
Additel Signal Generator	15,000
Conex Storage Container	15,420
Tropical Conex Storage	16,000
Welding Fabrication Tables	16,000
Office Furniture	26,460
Fiber Optic OTDR and Ethernet Tester	95,000
Subtotal	\$ 213,484

TOTAL CAPITAL EQUIPMENT	\$ 7,834,600
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Las Vegas Valley Water District
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2019

CAPITAL PROJECTS

2300 - Information Technology

Enterprise Content Management System	\$ 1,800,000
Genesys Call Center	1,835,100
Purchase and Budget System Consolidation	2,160,000
Subtotal	\$ 5,795,100

2500 - Public Services

Springs Preserve Garden Paving	\$ 67,500
Springs Preserve Exhibit Upgrades	67,500
Springs Preserve Gardens Lighting	72,000
Sustainability Gallery Exhibit Acquisition	90,000
Spring Preserve Outdoor Speaker Installation	135,000
Springs Preserve Gardens speakers and low voltage wiring installation	135,000
Springs Preserve Butterfly Playground	900,000
Springs Preserve Gardens Electrical Service Expansion, Phase II	990,000
Subtotal	\$ 2,457,000

2800 - Customer Care and Field Services

Annual Large Meter Replacement	\$ 1,665,000
Subtotal	\$ 1,665,000

3400 - Engineering

Pipeline Installation in Rip Van Winkle Lane at Matterhorn Way	\$ 25,200
Pipeline Installation near Bromley Ave and Michael Way	27,000
Installation of Diesel Exhaust Fluid Dispenser at the fuel islands LVVWD campus	27,000
3090 Zone North Interim Tank	27,000
3090 Zone North Interim Tank Inlet/Outlet Pipeline	27,000
Pipeline Installation in Sunland Ave between Tonopah Dr and Montrose St	28,800
Pipeline Relocation from Alley between 7th and 8th St from Ogden Ave to Stewart Ave	29,880
Pipeline Installation at Mayfair Place and 16th St	36,000
Fleet Services antifreeze and used oil storage area upgrade	45,000
On-Call Concrete Replacement Services, 2017	45,000
Pipeline Installation Walnut Road from Welter Ave to Boston Ave	51,840

Las Vegas Valley Water District
Operating and Capital Budget
Capital Plans

Fiscal Year Ending June 30, 2019

Miscellaneous Reservoir Modifications	54,000
Cottonwood Grove trail and Clark St Pump St evaluation	54,000
Christy Lane Emergency PRV from City of North Las Vegas	54,900
Pipeline Replacement in Shadow Ln between Pinto Ln and Goldring Ave	57,420
Pipeline Replacement in Warm Springs Rd between Caliente St and Spencer St	58,140
Springs Preserve Event Site	62,100
Backflow ROW/Survey Support	72,000
Pipeline Replacement in Bourbon Way between Torrey Pines Dr and Salem Dr	84,240
Well Derrick Restoration	90,000
West Admin Renovation Design & Assessment	108,000
Pipeline Replacement in Cameron St between Tropicana Ave and Quality Crt	116,820
Pipeline Replacement in Atlantic St between St Louis Ave and Oakey Blvd	117,720
Pipeline Replacement in Burnham Ave between Flamingo Road and Rochelle Ave	126,630
Valley View Asphalt Repair and Resurfacing - Phase II	144,000
Implement recommendations from the Operations Building power study	180,000
Replace reservoir Sliding Hatches	180,000
On-Call Pavement Replacement Services	180,000
Water Service Replacements, 1555 E. Flamingo Rd. And 900 N. Las Vegas Blvd.	180,000
Pipeline Replacement in Sammy Davis Jr. Dr between Sahara Ave and Circus Circus Dr	190,620
2150 Zone Emergency PRV from City of North Las Vegas	196,380
East Admin EHS Renovation	225,000
Paradise Road Water Line Replacement	252,000
Pipeline Replacement in Ronald Lane	253,620
Linq and Audrie Pipeline Replacement	259,200
Springs Preserve Origen Floor	261,000
Replace degraded and leaking 24" SCCP and 2800ft of degraded 10" ACP on Flamingo from Las Vegas Blvd to Koval	270,000
Pipeline Replacement in Decatur Blvd between Alta Dr and Charleston Blvd	321,030
East Admin Roof Replacement	405,000
East Admin IT Area Plumbing Upgrade	405,000
Francisco Park Pipeline Replacement	450,000
Miscellaneous Main Replacements, Harmon Ave.	450,000
Miscellaneous Large Backflow Installations, Phase V	450,000
Pipeline Replacement, Vegas Dr, Pyramid Dr. to Tonopah Dr.	450,000
Charleston Blvd/Rancho Dr Pressure Zone Conversion	472,500
Springs Preserve Cienega Modifications	504,000
Pipeline Replacement in Paradise Rd between Flamingo Rd and Harmon Ave	525,600
East Admin Human Resources Renovation	540,000
Las Vegas Blvd Improvements, Phase III	540,000

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

Fiscal Year Ending June 30, 2019

Rehab 2,500 feet of 18" SCCP in Sahara Ave between Las Vegas Blvd & Industrial	859,500
PAVEMENT REPLACEMENT SERVICES, PHASE II	900,000
Miscellaneous Vaults, Reconstruction and Repair, Phase XXII	900,000
Pavement Replacement Services, Phase II	1,080,000
Necessary Site Improvements, Stewart Reservoir Landscaping	1,156,500
Alts 3205 Zone Reservoir Aeration System Addition	1,170,000
Miscellaneous Large Backflow Installations, Phase IV	1,215,000
West Craig Road 2635 Zone Pipeline	1,215,000
Miscellaneous Vaults, Reconstruction and Repair, Phase XXIII	1,350,000
Las Vegas Blvd Improvements - Resorts World	1,485,000
Miscellaneous Main Replacement, Elvis Presley Blvd. And Paradise Rd.	1,800,000
Las Vegas Blvd Improvements Phase 1	2,250,000
Pavement Replacement Service, Phase I	2,520,000
Centennial 2635 Zone Reservoir and 2745 Zone Pumping Station	2,740,500
Summerlin 3665 Zone Reservoir Inlet/Outlet Pipeline	2,753,100
Pipeline Replacement, Washington Ave./Decatur Blvd.	3,546,000
Miscellaneous Small Backflow Installations, Phase XV	3,600,000
Backflow Retrofit Program	3,663,000
Rome 2745 Zone Reservoir, 2975 Zone Pumping Station and 2975-2860 Zone PRV (assumes design complete 12/31/18)	4,500,000
Miscellaneous Main Replacement, The Dales Subdivision	8,100,000
Summerlin 3665 Zone Reservoir	11,520,000
Subtotal	\$ 68,034,240

3600 - Resources & Facilities

Zoology Exhibit HVAC replacements and lab counter	\$ 18,000
Valley View Fleet Office Renovation	18,000
Springs Preserve Energy Conservation	22,500
Springs Preserve Renovate the Group Sales Area	31,500
East Admin Supervisor's Office	40,500
Valley View Hoover Room	40,500
Springs Preserve - Nature Exchange Floor Replacement	45,000
Springs Preserve Plumbing Upgrade	45,000
Springs Preserve Renovate the Origen Bldg. Second Floor	90,000
LVVWD Miscellaneous Projects	90,000
Replace Ops Building SCADA Room Ductwork	99,000
IT Facilities Upgrades	99,000
Valley View Sodium Hypo Bldg HVAC Upgrades	126,000
Valley View - Renovate Restrooms (East Admin - lower level)	153,000

Las Vegas Valley Water District
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2019

Springs Preserve Building C2 AC Upgrade	180,000
Springs Preserve Miscellaneous	180,000
Valley View Field Services Upgrade	180,000
Tropical Satellite Perimeter Fence Upgrade	243,000
Remodel Operations Building Lab Space	270,000
Subtotal	\$ 1,971,000

3700 - Infrastructure Management

LVVWD Campus - Equip East Admin Building Emergency Power w/Diesel Generator Connection	\$ 31,500
Montessori South High Bay Lighting Replacements	31,500
Smoke Ranch Site - Tank and Pumping Station Demolition	36,000
Multi-site - Install Redundant Chlorine Monitors	45,000
District Service Area - PRV 196 and 197 - Install Data Monitoring	45,000
LVVWD - Feasibility and Design for Control Room Upgrades	45,000
South Well Field/LVVWD Campus Site - Fleet Service Building Electrical Upgrade	67,500
Charleston Heights Pumping Station - Security Fencing	67,500
LVVWD - Golf Course Radio Tower Improvements	67,500
LVVWD - Site CyberSecurity Upgrades	67,500
Searchlight S1 Lateral Wash Crossing Improvements	72,000
High Lot P5 Motor Starter Replacement	76,500
Searchlight Hobson Street and Church Lateral Pipeline Replacements	81,000
Kyle Canyon - Rainbow Well Discharge Pipeline Relocation	90,000
District Service Area - Multi-Site Fence Installations 18/19 FY	90,000
Multi-Site Transformer Replacements 18-19 FY	90,000
Well Waste Line to Incorporate Flapper Valve and Air Gap	90,000
Springs Preserve Landscape Lighting Installation	90,000
LVVWD - Multi-site - Fire Alarm Signal Monitoring	90,000
Rehabilitation of the Fayle 2420 and Rice 2635 Zone Pumps	135,000
LVVWD - Campbell Site - Engine Control Standardization	135,000
District Service Area - Cathodic Protection Test Station Installation/Repair 2018/2019	162,000
Multi Site - Multi-Site Vault Pipe Coating FY 18-19	180,000
Fayle ICCP System Phase II - Raiders Stadium Area	225,000
Stewart Site - Emergency Power Source Upgrade	270,000
District Service Area - Misc. Vault Repair 18-19 FY	315,000
Campbell Pumping Station Control Room Upgrades	315,000
District Service Area - Multi-Site Large Backflow Installations 18/19 FY	405,000
LVVWD - Replace PLC 5 Remote Racks From Sites	450,000

Las Vegas Valley Water District
Operating and Capital Budget
Capital Plans
Fiscal Year Ending June 30, 2019

Luce Site - THM Mitigation System Installation	513,000
6th Street Waterline Replacement	729,000
LVVWD Campus - Telvent Upgrade	1,125,000
LVVWD - Multi-site - Fiber Optic Cable Installation	1,125,000
Pipeline Participation Project	1,800,000
Oversizing Project	1,800,000
Subtotal	\$ 10,957,500

3800 - Water Resources

Replace Wells at end of service life	\$ 351,000
LVVWD Exploratory Boreholes and Monitor Wells	1,201,500
District Service Area - Replace Wells at End of Service Life 18-19 FY	1,800,000
Subtotal	\$ 3,352,500

4100 - Operations

Electric Motors Repair or Replace	\$ 45,000
Repair or Replace System Valves	45,000
Motor Control Center, Starters, Transformers, and Other Repairs	45,000
Annual Pump Repair	67,500
Replace Large Magnetic Flow Meters	90,000
Replace Aging/Failed Surveillance and Networking Equipment	360,000
Well and Pump Rehabilitation	585,000
Subtotal	\$ 1,237,500

TOTAL CAPITAL PROJECTS	\$ 95,469,840
TOTAL CAPITAL BUDGET	\$ 103,304,440

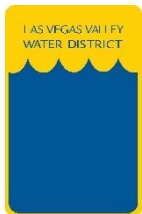


LAS VEGAS VALLEY WATER DISTRICT CAPITAL IMPROVEMENTS PLAN 2017



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LAS VEGAS VALLEY
WATER DISTRICT



LAS VEGAS VALLEY WATER DISTRICT
Capital Improvement Plan 2017-2027

About the Las Vegas Valley Water District

The Las Vegas Valley Water District (LVVWD) is a subdivision of the State of Nevada. The agency was created by a special act of the Nevada Legislature in 1947 to acquire and distribute water, primarily in the Las Vegas Valley. The not-for-profit LVVWD commenced operations in July 1954 and has served as the Southern Nevada region's largest municipal water provider since that time. As of 2017, the water distribution system comprises more than 6,500 miles of pipeline, 53 pumping stations, 70 reservoirs/tanks, 76 production wells, approximately 400,000 water meters and a 3.1 megawatt solar-electric system.

Vision

The Las Vegas Valley Water District's aims to be a global leader in service, innovation and stewardship.

Mission

The Las Vegas Valley Water District's strives to provide world class water service in a sustainable, adaptive and responsible manner to our customers through reliable, cost effective systems.



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CAPITAL IMPROVEMENT PLAN

EXECUTIVE SUMMARY

The Capital Improvement Plan (CIP) outlines the District's plan for achieving organizational goals and objectives. The plan outlines the projected capital needs over a 10-year period.

Doing Business

For much of its past, the District focused on developing new facilities to meet the evolving needs of the community. Between 1980 and 1998, Clark County was among the fastest-growing communities in the nation, which necessitated major capital investments in new infrastructure. However, beginning in late 2007, these conditions changed significantly when much of the nation began to experience significant economic disruption. Local expansion efforts halted abruptly and many projects in progress were put on hold.

During this time and continuing today, the Water District's focus shifted from system expansion to asset management, with an increased emphasis on customer care. In accordance with its mission, the District works to provide a safe, reliable water supply to more than 1.4 million residents within the City of Las Vegas and unincorporated portions of Clark County, Nevada. All functions in support of this mission—from maintaining infrastructure to ensuring accurate metering and protecting water quality—require properly functioning physical assets.

Capital Improvement Plan

Capital improvements are needed to reliably operate and maintain the District's extensive water distribution system, as well as to address state-mandated water quality issues and new development needs. This 10-Year Capital Improvement Plan serves to guide decisions related to maintaining and, as required, replacing those assets, as well as necessary water system expansion and water quality compliance activities.

The following provides a brief introduction to system needs, which are further detailed in the latter portions of this document. Costs represented herein are intended only to detail the size and scope of improvements needed over the 10-year planning

horizon. Cost authorizations for improvements will be considered by the Board of Directors annually as part of the organization's regular budget process.

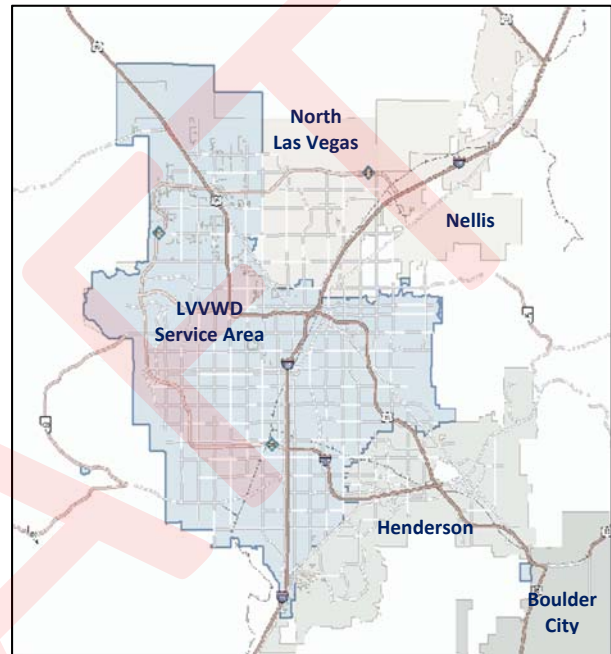


Image: LVVWD Service Area

Asset Management Improvements

The Infrastructure Management department is primarily responsible for overseeing the organization's physical assets, with considerable input and support from the Engineering, Operations, Water Quality and Finance work groups. Because the service life of individual components comprising a large water system can vary by decades, Infrastructure Management uses sophisticated planning tools to develop repair/replacement schedules, allowing for orderly and fiscally prudent implementation.

The agency's infrastructure management strategy is based on five foundational principles:

- Extend infrastructure life and prevent failures through timely maintenance and repairs
- Protect system assets through continual condition assessments
- Assess and prioritize projects to ensure critical

system operations remain functional

- Minimize financial impacts through orderly, phased implementation
- Minimize financial outlays by maximizing asset life cycle

A substantial percentage of the community's water system was constructed in the 1980s to address increasing demands. As a result, numerous facilities now exceed 30 years of age. Research has demonstrated that replacing or repairing utility components under emergency conditions—for instance, a broken water main—is both more expensive and disruptive to customers than affecting maintenance through a systematic approach. Key system components that must be addressed during the 10-year planning horizon include:

- Reservoirs
- Pumping Stations
- Pipelines and Service Laterals
- Valves and Vaults
- Meters
- Water Quality Systems
- Groundwater Wells
- Facilities and Building Improvements
- Electrical Systems
- Communication Systems

Cumulative costs associated with the repair and/or replacement of these hundreds of thousands of components—measures necessary to maintain current service levels, system reliability and water quality—are projected to be approximately \$390 million over the next decade.

Maintaining Water Quality

As a Public Water System, the LVVWD is responsible for ensuring compliance with all water quality regulations, enforced by the Environmental Protection Agency and the Nevada Division of Environmental Protection's Bureau of Safe Drinking Water. In addition to rigorous testing for more than 100 constituents—the Water District collects more than 33,000 water samples annually for analysis—it must comply with mandates from these agencies designed to protect water quality.

Chief among these mandates is what is termed "backflow protection," a mechanism that prevents the reintroduction of water from private properties into the

municipal water system. Compliance with this State requirement will entail the installation of approximately 35,000 backflow prevention devices on meters throughout the District's service area.

New Development Improvements

During the recession, the District deferred all non-essential construction projects. While this decision was fiscally prudent, it required engineers to devise mid-term solutions that could provide access to the municipal water supply for residents and businesses in newly developed areas without investing in additional reservoirs and pumping stations. While those solutions proved effective, the absence of core infrastructure in affected areas undermines system reliability and subjects customers to vulnerability that is inconsistent with organizational standards.



Image: LVVWD Field Repair

To address this issue and ensure these customers receive the same level of reliability as their counterparts in other parts of the valley, the District plans to construct a total of four reservoirs, four pumping stations and associated appurtenances during the planning horizon. The District anticipates to expend approximately \$125.7 million to design and construct these facilities, which will both serve existing customers and support additional development. Additional costs associated with facilities needed to support new communities will be borne by developers.

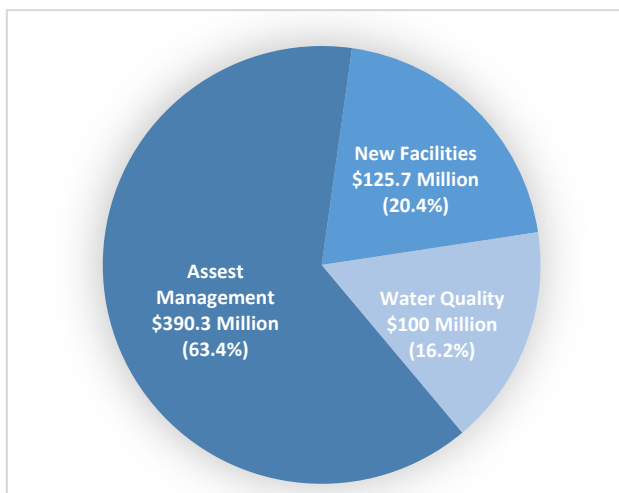


Figure 1.2: Cost Distribution by Improvement Type

10-Year Capital Planning

In total, the asset management, water quality protection and system expansion activities outlined in this document represent an investment of \$616 million over the 10-year planning horizon. These improvements will help the District to maintain current service and water quality standards, ensuring continued reliability for the residents and businesses that depend upon this vital resource.

CAPITAL IMPROVEMENT PLAN

ORGANIZATIONAL OVERVIEW

Introduction

The Nevada State Legislature created the Las Vegas Valley Water District in 1947 to help manage local groundwater supplies. The newly-formed agency acquired the assets of its predecessor and began operations in 1954 as the municipal water provider for Las Vegas and unincorporated Clark County.

Transition and Growth

In the period between its creation and the early 1970s, the District got to work repairing and expanding the water system to meet the growing needs of the community. These efforts included installing more than 800 linear miles of pipeline and increasing reservoir storage to approximately 160 million gallons. At the same time, the District also entered into an agreement with what is now known as Basic Management Inc. for expansion of its small industrial line to deliver Colorado River water to the District's service area. These efforts decreased the community's reliance on groundwater supplies and marked the organization's first major initiative to help stabilize the local water table.

Post-war expansion paled in comparison to the unprecedented population growth that occurred over the years that followed. In the 1980s and '90s, Las Vegas ranked as the nation's fastest-growing city virtually every year. In response and to fulfill its mission of meeting the community's water needs, the District engaged in an infrastructure construction initiative without parallel in the United States. At the same time, water demands soared, necessitating a cohesive, regional approach to resource management. This resulted in the creation of the Southern Nevada Water Authority (SNWA), of which the District serves as the administrative entity.

Current Environment and Operating Priorities

Beginning in 2007, the nation began to experience the most significant economic downturn since the Great Depression. Southern Nevada was hit harder than almost any other region in the nation, and this period of recession marked the first time in decades

that the Las Vegas area experienced a sustained period of little or no growth. During this time, most new residential and commercial development projects came to a halt. While economic recovery is occurring, the massive booms of prior decades have not returned. As a result, the District's operational priorities have changed in response to meet the evolving needs of the community. While expanding the water system to accommodate new customers remains a core responsibility, the emphasis has shifted to ongoing operations and infrastructure management.

Today, the District provides water service to an area approximately 300 square miles in size, serving more than 375,000 residential and commercial customers through a network of approximately 6,500 linear miles of pipelines and service laterals. Accomplishing this task requires the agency to maintain millions of individual components, ranging in size from the small service laterals that deliver water to individual homes to massive pumping stations and reservoirs.

Strategic Approach

As a public, not-for-profit water agency, the District is committed to managing its finances and assets responsibly. The system represents a significant community investment; in total, the agency's capital assets were valued at \$1.7 billion as of the last fiscal year. As with all capital assets, depreciation is inevitable, although the rate and degree thereof are influenced by many factors. The responsibility for optimizing the value of these assets—maximizing service life while maintaining the reliability of water delivery—rests with the LVVWD's infrastructure management and maintenance programs.

Calculating the necessary rate of replacement for water facilities is the responsibility of the District's Infrastructure Management department, which maintains an inventory of water system components categorized by type, age and material. The service life of a given pipeline, pump or valve is influenced by a variety of factors, but knowing when to replace assets is the key to operational efficiency, as well as minimizing leaks and service interruptions. These engineering professionals also work to optimize

infrastructure value by refurbishing equipment when possible instead of prematurely replacing it.

Given that the community's water system comprises millions of discrete components—from small 5/8" laterals serving individual homes to massive pumping stations that move water to the Las Vegas Strip—fully accounting for the entirety of an infrastructure network is a significant challenge. Infrastructure Management, Operations and Engineering work in concert to ensure that facilities are maintained in working condition and upgraded or replaced when needed.

As shown in Figure 1.3, the LVVWD evaluates the condition of its assets to identify potential issues, manage operational risks and reduce costs. By maintaining a comprehensive infrastructure inventory and reflecting factors such as age, material type, operating environment and historical failure rates, LVVWD is able to project capital reinvestment needs over decades, phasing projects to minimize spikes in financial outlays while maintaining the system's integrity. This strategy has proven highly effective; LVVWD customers enjoy one of the nation's most reliable water systems, with a leak rate far below the national average and an efficiency rating that has been classified as "world-class" by the International Water Association.

As with all systems, age is becoming a factor for the LVVWD infrastructure network. Some system components are now approaching or are more than 50 years old. The issue of aging infrastructure is hardly unique to Southern Nevada. To the contrary, the LVVWD's system is relatively young compared to other metropolitan communities. It is incumbent upon the LVVWD to undertake strategically guided rehabilitation and replacement initiatives in order to assure that Las Vegas does not experience similar service outages and leak rates such as have befallen other metropolitan communities. In total, current estimates by the American Water Works Association indicate that communities in the United States will need to collectively invest more than \$1 trillion over the next 25 years to restore and expand public water systems.

To finance capital projects associated with system maintenance and expansion, the LVVWD uses funds generated through a combination of bond proceeds, water rate revenue and low-interest loans from the State Revolving Fund for drinking water systems. These three revenue streams provide access to funds for necessary improvements and save ratepayers money by reducing interest costs, a benefit of the LVVWD's AA Standard & Poor's rating and Aa1 Moody's rating.

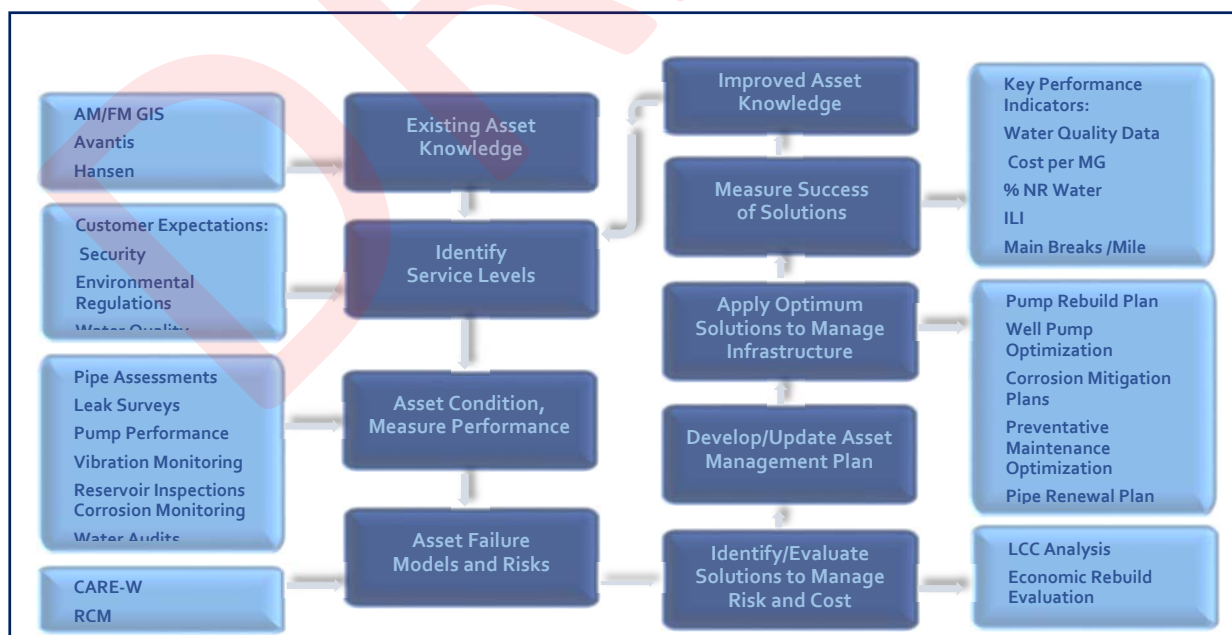


Figure 1.3: LVVWD Asset Management Life Cycle

Maintaining a fiscal balance between the “pay-as-you-go” approach and long-term financial instruments is key. Overuse of bonds can negatively impact the agency’s credit rating, resulting in higher interest rates, while funding all projects as they occur results in financial instability and significant rate fluctuations. Another important aspect related to project financing is maintaining appropriate reserves; strong reserves positively impact credit ratings and improve the agency’s ability to respond to short-term capital needs or economic fluctuations.

This Capital Improvement Plan is intended to reflect projected capital improvement needs in the LVVWD service area over a 10-year planning horizon (2017 – 2027). The precise timing and cost of individual elements will be prioritized from year to year based on need and accounted for as part of the LVVWD’s annual budget process. The following section provides an overview of purpose and need, and estimated cost in the areas of asset management, new facilities and water quality improvements.

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CAPITAL IMPROVEMENT PLAN

ASSET MANAGEMENT

Introduction

In the context of a public water system, asset management refers to the proactive approach employed by utilities to reduce the life-cycle cost of infrastructure while maintaining high levels of reliability and meeting water-quality standards. At the District, this initiative is spearheaded by the Infrastructure Management department with considerable support and input from the Engineering, Operations and Finance work groups. Given the millions of individual water system components that must be evaluated based upon age, materials and projected service life, the District's asset management process is complex. However, the objective is simple: optimize system efficiency and the use of ratepayer dollars.

Achieving this goal requires the District to balance several factors, including cost, quality, reliability and safety. An excessively conservative approach could result in higher cost, particularly if equipment and facilities are replaced well before the end of their useful life cycle. Conversely, too little vigilance opens the door to frequent service outages, high leak rates and compromised water quality.

The LVVWD's infrastructure management strategy is based on several foundational principles:

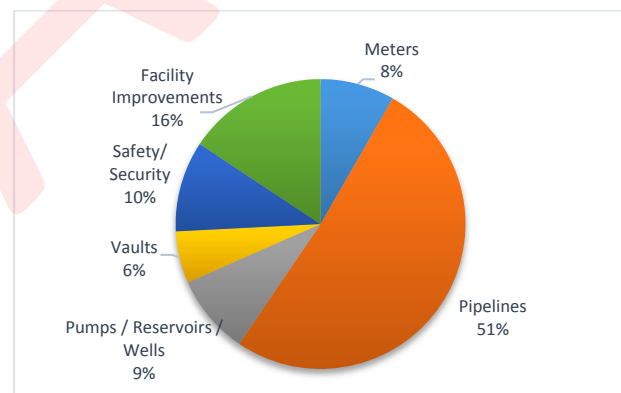
- Extend infrastructure life and prevent failures through timely maintenance and repairs
- Protect system assets through continual condition assessments
- Assess and prioritize projects to ensure critical system operations remain functional
- Minimize financial impacts through orderly, phased implementation
- Minimize financial outlays by maximizing asset life cycle

While it is not unusual to implement numerous asset management-related projects simultaneously, the overall program must be managed on a longer-term basis to execute activities in an orderly manner. For the LVVWD, that means anticipating needs and

scheduling work over a 10-year planning horizon. On an annual and ongoing basis, the LVVWD will conduct assessments to gauge progress and identify any necessary course adjustments.

The agency projects that an investment of approximately \$390 million will be required over the planning horizon to maintain system infrastructure in a manner that meets current service levels and water quality standards. As shown in the Figure 1.5, key projects include: reservoir and pumping station maintenance and rehabilitation; replacement and renewal of vaults and valves; pipeline and service lateral replacement; cyclical water meter replacement; upgrades to the Supervisory Control and Data Acquisition (SCADA) operations control system and improvements to existing facilities throughout the valley.

Figure 1.5: Cost Distribution (%) by Asset Type



Asset Management Activity Detail

A detailed overview of major asset management activities included in the District's 10-year Capital Improvement Plan is provided below. While this plan reflects long-term projected expenditures, it does not represent a blanket authorization of funding for these improvements. Projected expenditures will be considered before the Board of Directors through an annual budgeting process for consideration and authorization. Each individual project also requires further authorization, with a majority of the projects requiring Board approval. This ensures that the Board is provided timely and complete information about asset management priorities and associated annual

costs, and has the opportunity to assess progress related to the plan's implementation.

Reservoirs

The Las Vegas Valley's bowl-like topography features approximately 2,000 feet of elevation change from downtown to the far reaches of the community, effectively precluding a "direct delivery" water system. Instead, water is pumped to higher-elevation storage reservoirs and delivered to customers via gravity. Reservoirs provide far greater reliability than direct-delivery systems, which are vulnerable to service interruptions caused by outages. In total, the District maintains more than 70 reservoir basins and tanks throughout the Las Vegas Valley. Collectively, these facilities hold nearly a billion gallons of water for delivery to customers.

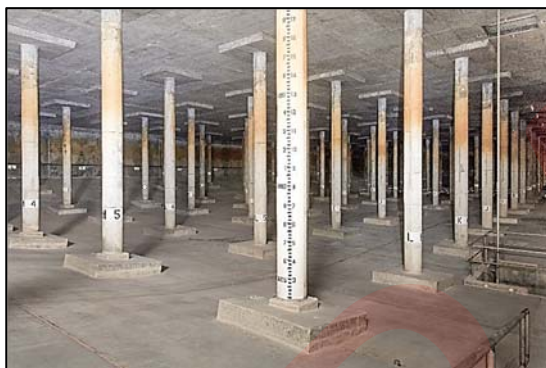


Image: Alta Reservoir

District reservoirs are typically constructed of concrete and installed below ground. This design protects them from the elements, helps safeguard water quality, stabilizes temperatures and provides for an exceptionally long service life if properly maintained. The District also maintains a small number of above-ground steel tanks as dictated by operating conditions and location. In addition to regular inspections of reservoir components critical to protecting water quality, these facilities are fully assessed every five years and serviced as needed. Typical capital reinvestment needs associated with these facilities include replacement of basin inlet and outlet valves, cathodic protection anodes, valve actuators, mixers, aeration systems, vent screening and back-up electrical generators. Over the next 10 years, the District projects that annual costs associated with maintaining reservoirs will be less than \$500,000, bringing the cumulative 10-year total to approximately \$4.65 million.

Pumping Stations

Most of Southern Nevada's drinking water comes from the Colorado River, drawn from pipelines within Lake Mead. The regional entity responsible for treating this water, the Southern Nevada Water Authority, sells water to local purveyors like the District at a wholesale rate and delivers it through facilities called Rate-of-Flow-Control Stations into receiving reservoirs.



Image: LVVWD Pumping Station

For most customers, this is only the beginning of their water's journey. From these receiving reservoirs, water is pumped to dozens of District-operated reservoirs located

throughout the valley. During summer months, when water use is highest, the District delivers more than 400 million gallons a day to its customers. To accomplish this, the agency operates more than 50 pumping stations that collectively produce 90,000-plus horsepower and have the capacity of 1.2 million gallons of water per minute. This is sufficient to meet even the highest "peak" demand. The ability to move water quickly around the valley is especially critical for fire suppression; there are approximately 30,000 fire hydrants within the District service area.

While variables such as the manufacturer and usage patterns affect the service life of individual pumps and ancillary equipment, a full pumping station is estimated to have a 100-year service life. The District evaluates pump performance semiannually by using an analysis of SCADA data to identify any issues. Major rehabilitation is typically performed at intervals of 35 and 65 years, while individual pumps undergo regular preventative maintenance. Performance monitoring systems automatically shut pumps down if anomalies occur, minimizing the impact of a failure. Several of the LVVWD's major pumping stations are

at or beyond the 35-year threshold and require refurbishment.

Expenditures associated with pumping stations are expected to be relatively modest given the District's successful ongoing maintenance activities. The cumulative 10-year cost associated with asset management on these facilities will be approximately \$6.7 million.

Pipelines and Service Laterals

If pumping facilities represent the water system's heart, pipelines and service laterals are the veins that keep the community's lifeblood flowing. From the 5/8" service laterals that connect homes to the water mains beneath neighborhood streets to enormous 7-foot pipelines, the District must maintain approximately 6,500 miles of pipes, all constructed during different decades from a variety of materials.

The type of material from which pipelines are manufactured largely dictates their service life. In many parts of the District's service area, water mains are more than 40 years old. Where feasible, engineers incorporate auxiliary interconnections into the design that allow water to be rerouted to a property in the event of a pipeline break. Areas without such interconnections are most vulnerable to service outages, making their maintenance or replacement an even greater priority.

Given the immensity of the pipeline and service lateral network, it is not surprising that this category of infrastructure represents the largest reinvestment need for the organization. The pipeline system consists primarily of ACP (cement), PVC, steel and ductile-iron, while service laterals are fabricated largely from copper with a small percentage of polyethylene lines. Service life projections vary dramatically by material. For instance, polyethylene (an industry standard during the 1970s and '80s) has a far shorter service life than copper, exemplified by a failure rate 50 times that of copper. As a result, the District is aggressively replacing these laterals, which pose an unacceptable risk to the organization's high service reliability standards.

The District uses an array of tools—including acoustic wave technology—to perform pipe condition assessments, often without excavation. Based upon data collected in the field and service life status, the

Asset Management team prioritizes replacement activities. To minimize disruption to customers and commuters during replacement, the District coordinates with other entities that may be executing construction projects such as road repaving or sewer system upgrades. For example, the District has developed a comprehensive master plan for replacement of the major pipelines serving the Las Vegas Strip; given the implications of major construction-related traffic impacts to employees and businesses in that corridor, the District will work in tandem with other agencies to minimize the duration of construction windows.



Image: LVVWD Pipeline Repair

Throughout the distribution system, the LVVWD is scheduling replacement of older sections of pipeline based upon leak incidence, breakage history and direct assessments. Addressing these issues systematically and proactively is critical given the implications of a prolonged service interruption for residential and commercial customers. Over the next decade, the LVVWD projects pipeline replacement costs of \$130 million, with an additional \$70 million required for service lateral replacements.

Valves

Most people are familiar with the water valves used in their landscape irrigation system. Within the context of a community water system, valves serve much the same function, but on a far larger scale—allowing water to be quickly shut off or rerouted in the event of a pipeline break or other failure. Given the importance of an uninterrupted water supply in this desert community, the ability to isolate a failed pipeline or appurtenance does more than simply reduce water loss. It also expedites the repair or replacement of the faulty component, minimizing the duration of service interruptions. Operations crews work to ensure that

the system's approximately 120,000 valves are maintained in working condition, "cycling" them periodically to prevent seizing and replacing them as necessary. Valves are also systematically changed out when the water main they serve is replaced. As a result of these efforts, the average elapsed time between notification of a pipeline break and shutdown is less than one hour.

Valves associated with large-diameter pipelines are housed in below-ground concrete structures called vaults; within the District's service area, there are approximately 2,300 vaults, which allow working access to underground equipment for testing, maintenance and replacement without excavating streets or private property. There are two categories of vaults: system vaults and meter vaults. System vaults house the isolation valves and are installed in public rights-of-way. Meter vaults, which house equipment used for accounts with meters sized 3" and larger, are located on individual properties. While both types of vaults are structurally designed to withstand traffic and soil loadings, they do have a finite service life. Inspections are conducted on a three-year cycle, with repair/replacement conducted as warranted by conditions.

On average, the District anticipates the need to replace 240 valves and execute 40 vault rehabilitation projects per year, in addition to "cycling" nearly 10,000 valves annually to ensure that they remain functional. The total cost associated with these activities is cumulatively projected at \$22.5 million during the next decade.

Meters

In the early days of the District, the introduction of meters to measure water use was controversial, which is not surprising given that the average person used more than 600 gallons per day. Today, our community is among the world's leaders in water conservation, and meters are the foundation of a system that rewards efficiency by directly linking costs with water consumption. In addition to providing an equitable way to share costs for both the water and the infrastructure necessary to deliver it, metering encourages water efficiency. Allowing customers to track their water consumption is one of the tools Southern Nevada has used to cumulatively save more than half a trillion gallons of water during the current Colorado River drought.

The LVVWD is responsible both for installing meters at new services and for maintaining approximately 375,000 water meters already installed in the LVVWD service area. There are currently 11 different meter sizes in the system, ranging from the 5/8" units that serve many homes to 12" meters that support large-scale water users such as resort properties. New technology allows meter reading to be performed remotely, saving on labor costs.

However, as with all mechanical devices, meters have a finite service life and must be replaced periodically.

Additionally, because meter technology has changed significantly over time, many meters—particularly large meters serving businesses—can no longer be repaired because the parts have become obsolete and are no longer



Image: Valve/Vault Repair

manufactured. As meters age, they can begin to under-report usage, resulting in customers using more water than is accounted. Potential revenue loss associated with this is estimated to be as much as \$1 million annually.

To address failing meters, the District has implemented a Preventative Maintenance Program to replace aging metering equipment. In addition to ensuring that customers' bills are commensurate with their demand, replacing high-volume meters with new technology—such as turbine meters—mitigates pressure loss, improving those properties' level of service. The LVVWD anticipates that costs associated with this program will be approximately \$3.25 million annually over the next decade. A portion of those outlays will be recovered as those customers' water use is more accurately billed through the new meters.

Water Quality Controls

Although water delivered to the District from the Southern Nevada Water Authority and groundwater wells has been treated and tested to ensure it meets all state and federal health standards, the integrity of customers' drinking water must be maintained and carefully monitored all the way to the tap. For instance, chlorine levels dissipate over time, requiring periodic rechlorination to prevent bacteria from entering the water. Conversely, levels of chlorination byproducts—which themselves can have harmful effects—must be carefully managed.

To maintain water quality in the distribution system, the District operates scores of sampling stations, from which more than 30,000 samples are drawn annually for analysis. Additionally, the centralized Supervisory Control and Data Acquisition (SCADA) center allows operators to monitor the water system 24 hours a day, including the use of in-line sensors to detect subtle changes in water quality.

Costs associated with this critical function are relatively modest. The high-tech SCADA center, for instance, is projected to require approximately \$6 million in upgrades over the planning horizon—much of it associated with upgrades to rapidly-advancing computer hardware and software. Other investments in water quality are embedded in broader facility maintenance initiatives that cover security enhancements and a host of other water quality protection-oriented projects.



Image: Supervisory Control and Data Acquisition (SCADA) center.

Groundwater Wells

Originally the sole source of water for Las Vegas residents, groundwater today represents about 10 percent of the District's supply. Despite its relatively modest role as a resource, groundwater is integral to meeting summer peak demand. The ability to supplement water from Lake Mead with this renewable supply reduces the strain on the region's water treatment facilities and extends our community's Colorado River allocation. Additionally, wells—which can be operated if necessary by generators—represent an excellent emergency water source.

To prevent adverse hydrologic impacts associated with withdrawals, groundwater pumping is distributed through more than 70 wells, largely located in the central and western parts of the Las Vegas Valley. Some of these wells are also used to store water saved through the community's successful conservation efforts; by reversing the powerful pumps, water can be injected into the aquifer for storage and future use.

A well system is comprised of two major components: the pumping equipment, and the wellbore itself. The service life expectancy of a wellbore can vary significantly depending upon its composition. Newer



Image: LVVWD Groundwater Well window.

wells have an expected lifespan of 75 years, while older wells typically last between 40 and 60 years. Pumping equipment has a far shorter service life, rarely exceeding 13 years. Technicians monitor pumping efficiency to determine the optimal replacement or refurbishment

Over the next 10 years, 13 wellbores will require significant rehabilitation or redrilling, while five well pumps require replacement or rebuilding annually. During the 10-year planning horizon, the District anticipates that well- and pump-related costs will be approximately \$15.6 million.

Facilities and Capital Improvements

Treating and delivering water requires a tremendous amount of electrical energy; from pumping stations and reservoirs to well facilities and the LVVWD's main campus, maintaining the reliability of the power supply is critical to the agency's operations. This entails assessing and servicing transformers and electrical panels throughout the valley. In support of its sustainability initiatives, the LVVWD also operates several solar photovoltaic generation facilities, which are co-located with existing infrastructure and provide electrical power to support operations.

Information systems also play a crucial role in ensuring that the community's water supply remains both reliable and safe. As noted above, the SCADA control center—which monitors water quality and production levels in virtually real-time—relies upon an extensive communications network. In addition, electronic facility intrusion detection and cyber-security are central to the ongoing protection of the community's water system.

The District maintains a fleet of more than 600 automotive vehicles and a similar number of heavy machines, including cranes, used to support facility maintenance and replacement, respond to emergency service outages, and conduct routine functions like valve cycling and meter reading. This award-winning fleet is housed at the District's main campus on Valley View Boulevard, which also serves as the base for the agency's customer service center,

equipment warehouse, fleet maintenance center, administrative offices and other core functions. This 300,000-square-foot complex encompasses numerous buildings with all of the associated electrical, HVAC, communications and office infrastructure, and equipment.

Security, safety and fleet-related expenditures are projected at approximately \$3.9 million annually over the next decade. Costs associated with electrical, telemetry and other related infrastructure is budgeted at \$3.45 million per year over the next 10 years, with an additional \$2.7 million annually for repair, replacement, and upgrades to infrastructure and equipment housed at the primary campus.

Asset Management Summary

A summary of forecasted Asset Management activities and associated costs over the 10-year planning horizon is detailed in Figure 1.6. Costs are represented in aggregate; however, LVVWD work efforts will be executed in a phases based on asset assessment results and need. Proposed expenditures to support this work will be presented to the Board of Directors for consideration and authorization as part of the annual budget process.

Figure 1.6: Projected Asset Management Activity and Cost by Asset Type

ACTIVITY	10-YEAR	PERCENTAGE
Meter Program	\$32.4 million	8%
Vault Program	22.5 million	6%
Service Laterals	70.0 million	18%
Pipeline Rehabilitation and Replacement	130.0 million	33%
Facilities Improvements	27.0 million	7%
SCADA	6.0 million	2%
Pump Stations	6.7 million	2%
Reservoirs	4.65 million	1%
Wells	15.6 million	4%
Reclaimed Water	1.7 million	<1%
Fleet, Safety and Security	39.3 million	10%
Misc. Capital	34.5 million	9%
TOTAL	\$390.3 million	

CAPITAL IMPROVEMENT PLAN

WATER QUALITY

The District is responsible for ensuring that municipal water supplies meet strict state and federal health standards. To accomplish this, the agency collects more than 33,000 water samples a year and analyzes them for more than 100 regulated and unregulated contaminants. The instrumentation used to test water quality can detect some compounds at one part per trillion, the equivalent of one teaspoon of water in 2,100 Olympic-size swimming pools. Additionally, the LVVWD's high-tech SCADA operations center uses advanced instrumentation to detect minute changes in water quality, providing a greater degree of protection.

To support its mission of providing customers with a safe, reliable water supply, the District works closely with the State of Nevada to identify and reduce any potential vulnerabilities to water contamination, including conditions known as backsiphonage or backpressure, more commonly referred to as backflow. This occurs when negative pressure in the system causes water to reverse its flow. There are a number of situations that can potentially cause this to occur. For example, a sudden decrease of water pressure due to a main break or a significant draw on hydrants for firefighting efforts can potentially cause backflow conditions. When this occurs, water from an individual property's plumbing system can be drawn back into the public portion of the water distribution network.

To prevent this from occurring, the State of Nevada in the mid-1990s began requiring the installation of backflow prevention devices on all new properties except single-family homes. These valve-like devices protect the community's drinking water system by preventing water from being siphoned back into water mains from private properties. This mandatory program is managed by the Nevada Division of Environmental Protection and requires that all backflow devices be tested annually by a certified technician.

System Needs

Approximately 35,000 meters within the District's service area require backflow protection. To fulfill state requirements, the District prioritized backflow installations based on their degree of risk to the system and has begun systematically retrofitting properties that require backflow protection. An annual cost of \$10 million is needed over the 10-year planning horizon to implement its backflow retrofit program. The cost of individual retrofits varies by meter size and range from approximately \$3,000 for small meters to more than \$33,000 for 10" meters. The projected cost is anticipated to address approximately one-third of outstanding retrofit needs over the next decade. The quantity of devices involved and labor-intensive nature of the installations precludes a more aggressive approach.



Image: Commercial Backflow Assembly

CAPITAL IMPROVEMENT PLAN

NEW FACILITIES

Since its inception, the District has worked to develop, operate and maintain its water distribution system in a manner that meets the needs of the community. This includes ensuring the reliable delivery of high-quality water to all customers. Over the decades, this has required the agency to install thousands of miles of water mains, hundreds of millions of gallons worth of reservoir storage and massive pumping stations necessary to move water around the valley.

When the recession that began in 2007 brought commercial and residential development to a virtual standstill, the District quickly responded by curtailing facility expansion and reliability enhancement projects, and by deferring many of the major asset management needs discussed in the preceding section. In total, hundreds of millions of dollars' worth of construction activities were postponed, which increased the strain on the community's water system. Given the uncertain financial climate, it was determined this action to be in the best interest of both ratepayers and the organization.

System Needs

Today, development activity has resumed in Southern Nevada, although certainly not to the degree experienced in the decades prior to the recession. Accordingly, the LVVWD has resumed planning activities associated with expansion of the community's water delivery system. This action is necessary for the organization to fulfill its mission of providing a safe, reliable water system to all municipal water customers in its service area.

Below is a summary of three major system improvement projects planned for development within the 10-year planning horizon. None of these projects are being constructed exclusively for prospective development; rather, all simultaneously benefit existing customers while facilitating access to the municipal water supply for planned developments.

NEW FACILITIES

Northwest Major Facilities (NW)

Within the northwest portion of the Las Vegas Valley, approximately 21,000 customers in three separate pressure zones are serviced by a single pumping

station and a single reservoir; a major development currently under construction is anticipated to bring that number to nearly 30,000 customers. In the event of a service interruption, current reservoir storage is inadequate to support customers for extended periods of time. New facilities are needed to address the strain on existing infrastructure and to reduce residents' vulnerability to service interruptions associated with scheduled or emergency outages.

New facilities planned for construction include the development of two new water storage reservoirs—one with a capacity of 10 million gallons, the other with a capacity of 5 million gallons—along with two pumping stations and associated appurtenances. The estimated cost of these improvements is \$61.8 million.

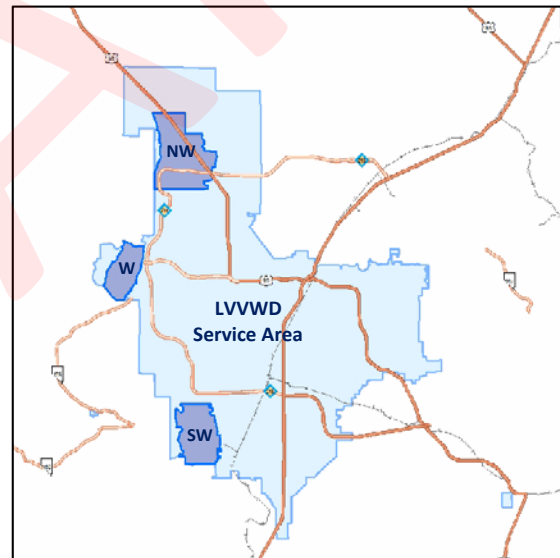


Figure 1.7: Customers to be served by new facilities

West Major Facilities (W)

Unlike the vast majority of customers in the District's service area, residents and businesses in this portion of the valley depend on direct delivery for their water service. As discussed previously, direct delivery is less reliable and impacts could arise in the event of scheduled and unanticipated outages, such as a water main break. Without storage or other redundant systems, customers could experience immediate service impacts.

New facilities planned for construction in this service area include the development of a 10-million-gallon water storage reservoir, a pumping station and associated appurtenances. Constructing this long-planned but deferred reservoir will reduce vulnerability and enhance overall system reliability. Additionally, it will provide additional capacity and emergency storage for any additional residential or commercial expansion that may occur in the area. The estimated cost of these improvements is \$30.1 million.

Southwest Major Facilities (SW)

Within the southwest portion of the valley, there are more than 6,600 customers served by a single water storage reservoir and pumping station. These facilities are located approximately 3 miles away from

their furthestmost service connection. In the event of a service interruption, current reservoir storage is inadequate to support customers for extended periods of time. New facilities are needed to address the strain on existing infrastructure and reduce residents' vulnerability to service interruptions associated with scheduled or emergency outages.

New facilities planned for construction include a 10-million-gallon water storage reservoir, pumping station and associated appurtenances. In addition to providing an emergency water supply in close proximity to customers, the proposed reservoir will alleviate pressure variability issues associated with the current engineering configuration. This benefits existing customers not only in terms of reliability, but in service quality as well. The estimated cost of these improvements is \$33.8 million.

Figure 1.8: Projected Activity and Cost by Asset Type

ACTIVITY	COST
Northwest Facilities	
5 MG Reservoir & Associated Inlet/Outlet Pipeline	\$10.6 million
10 MG Reservoir & Associated Inlet/Outlet Pipeline	26.0 million
Pumping Station & Discharge Pipeline	13.6 million
Pumping Station & Discharge Pipeline	10.9 million
Pressure Reducing Valves	700,000
<i>Subtotal</i>	<i>\$61.8 million</i>
Summerlin Facilities	
10 MG Reservoir & Inlet/Outlet Pipeline	\$22.5 million
Pumping Station	7.6 million
<i>Subtotal</i>	<i>\$30.1 million</i>
Southwest Facilities	
10 MG Reservoir	\$20.8 million
Pumping Station	12.3 million
Pressure Reducing Valves	700,000
<i>Subtotal</i>	<i>\$33.8 million</i>
TOTAL	\$125.7 million

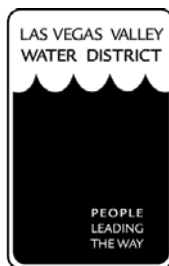
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SECTION 7

DEBT MANAGEMENT POLICY

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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

Debt Management Policy

In Accordance With
NRS 350.013



LAS VEGAS VALLEY
WATER DISTRICT

June 30, 2018

Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2019

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Debt Management Policy

NRS 350.013 Subsection 1(c)

Introduction

The Las Vegas Valley Water District (LVVWD) is a quasi-municipal corporation created by the State of Nevada (State) pursuant to a Special Act (the Act) of the Legislature in March 1947. The Las Vegas Valley Water District Act is available online at:

<https://www.leg.state.nv.us/SpecialActs/55-LasVegasValleyWater.html>

The LVVWD was created for the purpose of obtaining and distributing water, primarily in the Las Vegas Valley, which includes the metropolitan area of Clark County (County) and the City of Las Vegas. Because the County Board of Commissioners serves as the LVVWD Board of Directors (Board), the LVVWD is included as a blended component unit within the County's Comprehensive Annual Financial Report. A component unit can be a legally separate organization for which the elected officials of the primary government are financially accountable. For purposes of this report, the LVVWD alone is the reporting entity.

The LVVWD's current debt structure is presented in the Appendix. The LVVWD has three options to issue debt;

- The LVVWD can issue debt in its own name. Standard & Poor's rates the LVVWD bonds "AA+", and Moody's Investors Service rates them "Aa1". This rating makes the LVVWD Bonds

"high investment" grade.

- The LVVWD can issue debt through the Clark County Bond Bank. Standard & Poor's rates County bonds "AA+", and Moody's Investors Service rates them "Aa1".
- The LVVWD can issue debt through the State of Nevada (State) Bond Bank. Standard & Poor's rates State bonds "AA", and Moody's Investors Services rates them "Aa2".

By contract, the LVVWD operates the Southern Nevada Water Authority (SNWA), and the LVVWD has issued debt for the SNWA, which is additionally secured by the SNWA Pledged Revenues. See the Appendix for a listing of the LVVWD debt secured by the LVVWD revenues, and debt the LVVWD has issued for the SNWA, additionally secured by the SNWA Pledged Revenues.

The proceeds of debt issued by the LVVWD is restricted to purchase and/or construction of capital assets. The LVVWD capital plan is a phased construction program outlining current construction expenditures, as well as projected future expenditures for construction of capital assets. In addition to issuing debt to fund the purchase and/or construction of capital assets, the LVVWD also budgets a portion of operating revenues to fund capital assets on a pay-as-you-go basis.

This document is not intended to review the LVVWD's total financial position. In addition to being required by state law, this analysis of the LVVWD's debt position is important for capital asset planning purposes, and to determine if the LVVWD rates and charges are sufficient to cover current and future

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operating expense and debt service. Decisions regarding the use of debt will be based in part on the long-term needs of the LVVWD and the amount of equity (cash) dedicated in a given year to capital expenditures.

Listed below are excerpts from Nevada Law which requires local governments to submit a debt management policy:

(1) Except as otherwise provided in this section, on or before August 1 of each year, the governing body of a municipality which proposes to issue or has outstanding any general obligation debt, other general obligations or special obligations, or which levies or proposes to levy any special elective tax, shall submit to the department of taxation and the commission:

(c) A written statement of the debt management policy of the municipality, which must include, without limitation;

(1) A discussion of its ability to afford existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt;

(2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit;

(3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in the state;

(4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality;

(5) Policy regarding the manner in which the municipality expects to sell its debt;

(6) A discussion of its sources of money projected to be available to pay existing general obligation debt, authorized future general obligation debt and proposed future general obligation debt; and

(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (c), if those costs and revenues are expected to affect the tax rate.

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 Supported by Water System Pledged Revenues ("LVVWD Water Bonds").

The LVVWD Water Bonds constitute direct and general obligations of the LVVWD, and the full faith and credit of the LVVWD is pledged to the payment of principal and interest due thereon. The LVVWD Water Bonds are payable from general property taxes on all taxable property in the LVVWD service area, subject to Nevada constitutional and statutory limitations on the aggregate amount of property taxes. The LVVWD's Water Bonds are secured additionally by

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certain pledged revenues described below. The LVVWD has never levied a property tax because the LVVWD revenues have always been sufficient to pay debt service on all of the LVVWD's bonds and obligations secured by such revenues.

In any year in which the total property taxes levied within the LVVWD service area by all applicable taxing units (e.g. the State of Nevada, Clark County, the Clark County School District, any city, or any special district including the LVVWD) exceed such property tax limitations, the reduction to be made by those units must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness.

Nevada statutes provide that no act concerning the LVVWD Water Bonds or their security may be repealed, amended, or modified in such a manner as to impair adversely the Bonds or their security until all of the Bonds have been discharged in full or provision for their payment and redemption has been fully made.

The payment of the LVVWD Water Bonds is not secured by an encumbrance, mortgage or other pledge of property of the LVVWD, and no property shall be liable to be forfeited or taken in payment of the LVVWD Water Bonds, provided the payment of the bonds is secured by the proceeds of general (*property*) taxes and the LVVWD's revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act provides that no recourse shall be had for the payment of principal or interest, or any prior redemption premiums due in connection with municipal securities such as the LVVWD Water

Bonds, or for any claim based thereon or otherwise upon the resolution authorizing their issuance, against any individual trustee, officer, employee or other agent of the LVVWD, past, present or future, either directly or indirectly by virtue of any statute or rule of law.

Pledged Revenues. The LVVWD Water Bonds are additionally secured by the revenue received from the sale and distribution of water, connection charges or otherwise derived from the works or property of the LVVWD, after payment of reasonable and necessary costs of the operation and maintenance expenses of the water system (Water System) and the general expenses of the LVVWD (Net Pledged Revenues). Operation expenses generally include the costs of the purchase of water from the SNWA, power and pumping, purification, transmission and distribution, and customer accounting and collection.

The LVVWD Act authorizes the Board to establish, from time to time, reasonable rates and charges for the products and services furnished by the LVVWD's works and properties. Subject to the limitation that rates and charges must be reasonable, the Board must fix rates and charges which will produce sufficient revenues to pay (1) operating and maintenance expenses of the Water System, (2) the general expenses of the LVVWD, and (3) the principal of and interest on the LVVWD's first lien bonds and second lien bonds (the "Superior Lien Bonds") including any required sinking fund payments, and (4) debt service on all other securities payable from Net Pledged Revenues. It is the general intent of the LVVWD Act and policy of the

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Board that rates and charges be adequate to provide for all costs and that reliance on property taxes is to be avoided. There has, historically, been no reliance on property taxes to support the LVVWD's operations and there is no current plan or intention to call upon property taxes to support the LVVWD's financial requirements.

Authorized and Proposed Future LVVWD Water Bonds. During fiscal year 2014-15, the LVVWD issued a \$20 million new money bond as collateral to the State of Nevada for a State Revolving Fund (SRF) Loan. In fiscal year 2015-16, the LVVWD issued a \$15 million new money bond as collateral to the State for a SRF loan. In fiscal year 2016-17, the LVVWD issued a \$15 million new money bond as collateral to the State for a SRF loan. The LVVWD has three separate SRF loans which cumulatively total \$50 million. The SRF Loans are funded on a reimbursement basis. By June 30, 2018, the LVVWD was reimbursed approximately \$20.2 million. The remainder of the \$50 million in SRF loans are projected to be reimbursed in the next two fiscal years. With each SRF loan, until the principal amount has been completely reimbursed, the LVVWD is obligated to pay only interest on the amount reimbursed. After the principal amount has been completely reimbursed, the LVVWD will begin making equal semiannual payments, amortized over the remainder of each SRF Loan's 20 year loan term.

The LVVWD plants to issue \$100 million in new money debt in June 2018. Therefore, for purposes of this Debt Management Policy section, it is assumed that \$100 million is issued. This debt issuances is intended to primarily fund the LVVWD's Capital

Improvement Plan (CIP). In addition, the bond market is constantly monitored for savings opportunities via refunding or restructuring existing debt issues.

Bonded Indebtedness. The following table sets forth the LVVWD's outstanding general obligation bonded indebtedness supported by water system pledged revenues as of June 30, 2018.

Debt Service Requirements. See Appendix for a table showing the debt service to maturity on the LVVWD Water Bonds.

Property Tax Rate Impact. Principal and interest on the LVVWD Water Bonds is payable from the Water System pledged revenues. There will be no direct impact on the property tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds. See Appendix for a table illustrating the LVVWD's historic pledged revenues and debt service coverage.

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EXISTING GENERAL OBLIGATION INDEBTEDNESS
SUPPORTED BY WATER SYSTEM PLEDGED REVENUES
Las Vegas Valley Water District, Nevada
As of June 30, 2018

Description	Issued	Original Amount	Outstanding
LVVWD 2008 Clean Energy	Jul-08	\$ 2,520,000	\$ 840,000
LVVWD 2010A BABS	Jun-10	75,995,000	75,995,000
LVVWD 2010B	Jun-10	31,075,000	27,040,000
LVVWD 2011D	Oct-11	78,680,000	53,360,000
LVVWD 2012A	Sep-12	39,310,000	39,310,000
SRF Collateral Loan #1	Dec-14	19,929,329	19,452,114
LVVWD 2015A	Jun-15	172,430,000	136,085,000
LVVWD 2016B	Apr-16	108,220,000	101,910,000
LVVWD 2016D	Jul-16	125,650,000	117,840,000
SRF Collateral Loan #2	Sep-16	15,000,000	15,000,000
SRF Collateral Loan #3	May-17	15,000,000	15,000,000
LVVWD 2017A	Mar-17	130,105,000	129,510,000
LVVWD 2018A	Jun-18	100,000,000	100,000,000
			<u>\$ 831,342,114</u>

SOURCE: Las Vegas Valley Water District

Existing, Authorized and Proposed General Obligation Indebtedness Supported by the SNWA Pledged Revenues ("SNWA Water Bonds").

The LVVWD has issued general obligation bonds for the SNWA. The LVVWD's SNWA revenue backed bonds constitute direct and general obligations of the LVVWD, and the full faith and credit of the LVVWD is pledged to the payment of principal and interest due thereon. The LVVWD's SNWA water bonds are payable from property taxes on all taxable property within the LVVWD service area, subject to Nevada constitutional and

statutory limitations on the aggregate amount of property taxes. The SNWA Bonds are additionally secured by certain pledged revenues (the "SNWA Pledged Revenues") as set forth in NRS 350.13 (4). The SNWA Pledged Revenues currently consist of fees and charges for water imposed by the SNWA upon its wholesale water customers (the LVVWD, Henderson, North Las Vegas, and Boulder City). Under the SNWA Revenue Act, the SNWA is required to maintain its fees and charges for water at a level sufficient to allow it to meet its obligations to the LVVWD to pay the LVVWD's SNWA Revenue Backed Bonds.

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Nevada statutes provide that no act concerning the LVVWD's SNWA Revenue Backed Bonds or their security may be repealed, amended, or modified in such a manner as to impair adversely the Bonds or their security until all of the Bonds have been discharged in full or provision for their payment and redemption has been fully made.

The payment of the LVVWD's SNWA Revenue Backed Bonds is not secured by an encumbrance, mortgage or other pledge of property of the SNWA (other than the SNWA Pledged Revenues) and no property shall be liable to be forfeited or taken in payment of the LVVWD's SNWA revenue backed bonds, provided the payment of the Bonds is secured by the proceeds of general (property) taxes and the SNWA Pledged Revenues, which are pledged for the payment of the Bonds. Furthermore, section 350.606 of the Bond Act

provides no recourse shall be had for the payment of the principal of, interest on, or any prior redemption premiums due in connection with municipal securities such as the LVVWD's SNWA revenue backed bonds, or for any claim based thereon or otherwise upon the resolution authorizing their issuance, against any individual trustee, officer, employee or other agent of the LVVWD, past, present or future, either directly or indirectly by virtue of any statute or rule of law.

The LVVWD has never levied a property tax to pay the LVVWD's SNWA revenue backed bonds because SNWA Pledged Revenues have always been sufficient to pay debt service on all of the LVVWD's bonds and obligations secured by such revenues.

The following table sets forth the LVVWD's bonds issued for the SNWA as of June 30, 2018.

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EXISTING GENERAL OBLIGATION INDEBTEDNESS
SUPPORTED BY SNWA PLEDGED REVENUES
Las Vegas Valley Water District, Nevada
As of June 30, 2018

Description	Issued	Original Amount	Outstanding
<u>OUTSTANDING</u>			
SNWA Tax-Exempt Commercial Paper	Mar-04	\$ 400,000,000	\$ 400,000,000
SNWA 2009A BAB	Aug-09	90,000,000	90,000,000
SNWA 2009B	Aug-09	10,000,000	425,000
SNWA 2009D	Dec-09	71,965,000	37,440,000
SNWA 2011A	May-11	58,110,000	44,795,000
SNWA 2011B	Oct-11	129,650,000	101,180,000
SNWA 2011C	Oct-11	267,815,000	210,205,000
SNWA 2012B	Jul-12	360,000,000	332,210,000
SNWA 2015 Refunding	Jan-15	332,405,000	332,405,000
SNWA 2015B	Jun-15	177,635,000	155,795,000
SNWA 2015C	Jun-15	42,125,000	36,755,000
SNWA 2016A	Apr-16	497,785,000	481,210,000
SNWA 2017B Refunding	Mar-17	22,115,000	22,115,000
			<u>\$ 2,244,535,000</u>

SOURCE: Las Vegas Valley Water District

Debt Service Requirements. See Appendix for a table that shows the debt service to maturity for the LVVWD's SNWA revenue backed bonds.

Property Tax Rate Impact. Principal and interest on the LVVWD's SNWA revenue backed bonds is payable from the SNWA Pledged Revenues. There will be no direct impact on the property tax rate as long as pledged revenues are sufficient to pay debt service on the outstanding bonds.

Debt Capacity

Response to NRS 350.013 1(c):

(2) A discussion of its capacity to incur authorized and proposed future general obligation debt without exceeding the applicable debt limit.

The LVVWD does not have a specific debt limit dollar amount threshold. The LVVWD has no power to incur debt in excess of express authorization granted by the Nevada Legislature in Chapter 167, Statutes of Nevada 1947, as amended. The LVVWD's ability to issue debt is a function of its capital needs and revenues generated from LVVWD facilities.

Debt Comparison (per capita and assessed valuation)

Response to NRS 350.013 1(c):

(3) A discussion of its general obligation debt that is payable from property taxes per capita as compared with such debt of other municipalities in the state.

(4) A discussion of its general obligation debt that is payable from property taxes as a percentage of assessed valuation of all taxable property within the boundaries of the municipality.

Currently, the LVVWD does not have any outstanding bonds payable directly from property taxes. The existing LVVWD Water Bonds and SNWA Water Bonds are payable from pledged water revenues.

Policy Statement for Sale of Debt

Response to NRS 350.013 1(c):

(5) Policy regarding the manner in which the municipality expects to sell its debt.

There are two ways bonds can be sold: competitive (public) or negotiated sale. NRS 350.105 to 350.195 sets forth the circumstances under which a local government will sell its bonds at a competitive or negotiated sale. The LVVWD will follow the statutory requirements in determining the method of sale for its bonds. The Government Finance Officers Association also urges “competitive sales should be used to market debt whenever feasible.”

Competitive and negotiated sales provide for one or more pricings, depending upon market conditions or other factors. Either method can provide for changing sale dates, issue size, maturity amounts, term, bond features, etc. The timing of any sale is generally related to the requirements of the Nevada Open Meeting Law.

Competitive Sale.

In a competitive sale, all underwriter(s) are invited to submit a proposal to purchase an issue of bonds. The bonds are awarded to the underwriter(s) presenting the best bid according to stipulated criteria set forth in the notice of sale. The best bid is determined based on the lowest overall interest rate.

Negotiated Sale.

In a negotiated sale, an exclusive arrangement is made between the issuer and an underwriter or underwriting syndicate. At the end of successful negotiations, the issue is awarded to the underwriter.

A negotiated underwriting may be considered based upon one or more of the following criteria:

- Extremely large issue size.
- Complex financing structure (i.e. new security feature, variable rate financings, new derivatives, and certain revenue issues, etc.) which provides a desirable benefit to the LVVWD.
- Difficulty in marketing due to credit rating or lack of bids.

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- Private placement, or sale to a municipality, to the state, or a federal agency.
- Other factors which lead the LVVWD to conclude that competitive sale would not be effective, including market conditions.

It is the policy of the LVVWD to provide minority owned business enterprises, women owned business enterprises and all other business enterprises an equal opportunity to participate in the performance of all LVVWD contracts. At competitive sale, bidders are requested to assist the LVVWD in implementing this policy by taking all reasonable steps to ensure all available business enterprises, including minority and women business enterprises, have an equal opportunity to participate in the LVVWD contracts.

Underwriter Selection for Negotiated Sale.

- The Chief Financial Officer will establish a list of pre-qualified underwriters when a negotiated sale is anticipated. The list will be based, in part, on the firms who have submitted bids for LVVWD or County competitive issues over the prior five years. In addition, the list may contain firms that have participated in other financings in Nevada (in competitive bids or negotiated sales), demonstrated ability and interest in LVVWD financings, or have submitted financing ideas and concepts for LVVWD's consideration over the past five years.

- The Chief Financial Officer will distribute, or request that LVVWD's Financial Advisors distribute on behalf of LVVWD, a Request for Proposal (RFP) to underwriting firms on the list. The RFP will include, at a minimum, information regarding the firm's qualifications, staffing and personnel assigned to LVVWD, fees (including takedown and management fee - if any), debt structuring, marketing, expected yield, and credit strategies. Before selecting a firm or firms, the Chief Financial Officer may, but is not required, conduct interviews of firms who submit responses to the RFP.
- The selection of underwriter(s) will be based on the overall quality of the response, qualifications of the firm, demonstrated success in pricing bonds, understanding of LVVWD's objectives, qualifications of the banking and underwriting team to be assigned to LVVWD, fees, applicability of the marketing and credit strategy, and relevance and quality of structuring proposals.
- The Chief Financial Officer 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 Chief Financial Officer will determine the length of time that the selected firms will serve as the syndicate for LVVWD. Such a selection can be for a single transaction or multiple transactions, but the syndicate will be reviewed and

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a new RFP will be issued at intervals not greater than every five years.

Syndicate Policies.

- The Chief Financial Officer 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 Chief Financial Officer will also determine the maximum amount to be designated to single firm (typically 50 percent, but this can be higher or lower, depending upon the size of the syndicate and the par amount of the transaction.) In addition, the Chief Financial Officer will determine the appropriate allocation of liabilities and equivalent share of compensation for group net orders.
- Prior to the sale of the bonds, the senior book running manager will submit a Syndicate Policy Memo to the Chief Financial Officer for approval. At a minimum, the Syndicate Policy Memo will include:
 - Average Takedown and takedown by maturity.
 - Details of Underwriter expenses, including the cost of Underwriter's Counsel.
 - Designation rules.
 - Liabilities.
 - Order priority (unless otherwise agreed by the Chief Financial Officer, 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 Chief Financial Officer) will include orders placed by individuals, bank trust departments, financial advisors and money managers acting on behalf of individuals with a maximum of \$1 million per account.
- Assignment of SDC Credit.
- The Syndicate Policy Memo may include other relevant information (e.g., management fee or other fees, description of the sale timeline, etc.).

Selling Group.

The Chief Financial Officer 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 Chief Financial Officer and the LVVWD's Financial Advisors will review allotments to ensure the senior manager distributes bonds in a balanced and rational manner.

Operation Costs and Revenue Sources for Projects in Capital Improvement Plan

Response to NRS 350.013 1(c):

(7) A discussion of its operational costs and revenue sources, for the ensuing 5 fiscal years, associated with each project included in its plan for capital improvement submitted pursuant to paragraph (c), if those costs and revenues are expected to affect the tax rate.

As illustrated in the Net Pledged Revenues table in the Appendix of this document, operational costs are funded with water revenues. It is the LVVWD's intent to finance future operational costs with water revenues and will therefore have no effect on property taxes. New capital improvement projects will allow the LVVWD to expand the service area, thereby expanding the revenue base. New capital improvement projects will be funded with water revenues or bonds payable from water revenues.

Miscellaneous Items

Refundings.

A refunding is generally the underwriting of a new bond issue whose proceeds are used to redeem an outstanding issue. Key definitions are described as follows:

- **Advance Refunding** - A method of providing for payment of debt service on a bond until the first call date or designated call date from available funds. Advance refundings are done by

issuing a new bond or using available funds and investing the proceeds in an escrow account in a portfolio of U.S. government securities structured to provide enough cash flow to pay all debt service on the refunded bonds.

- **Current Refunding** - The duration of the escrow is 90 days or less.
- **Gross Savings** - Difference between debt service on refunded bonds less debt service on refunding bonds less any contribution from LVVWD's reserves or debt service fund.
- **Present Value Savings** - Present value of gross savings discounted at the refunding bond arbitrage yield to the closing date plus accrued interest less any contribution from LVVWD's reserves or debt service fund.

Prior to beginning a refunding bond issue the LVVWD will review an estimate of the savings achievable from the refunding. The LVVWD may also review a pro forma schedule estimating the savings assuming that the refunding is done at various points in the future.

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The LVVWD will generally consider refunding outstanding bonds if one or more of the following conditions exist:

- For advance refundings, present value savings are estimated to be at least 5 percent of the par amount of the refunded or refunding bonds (whichever is greater) when initially presented to the Board and escrow efficiency is at least 60 percent.
- Escrow efficiency is defined as net present value savings divided by the sum of net present value savings and negative arbitrage in the escrow.
- For current refundings, present value savings are at least 3 percent of the par amount of refunded or refunding bonds.
- The bonds to be refunded have restrictive or outdated covenants.
- Restructuring debt is deemed to be desirable.

The LVVWD may pursue a refunding not meeting the above criteria if:

- Present value savings exceed the costs of issuing the bonds and the date of the option to call is 3 years or less.

Debt Structure.

Maturity Structures. The term of the LVVWD debt issues will not extend beyond the useful life of the project or equipment financed. As appropriate, debt issued by the LVVWD should be structured to provide for level debt service. Deferring the repayment of principal should generally be avoided except in

instances where it will take a period of time before project or other revenues of the LVVWD are sufficient to pay debt service, or where the deferral of principal allows the LVVWD to achieve combined level debt service on all outstanding bonds.

Bond Insurance. The purchase of bond insurance may be considered as part of the structure of a bond issue. A bond insurance policy may be purchased by either an issuer or by an underwriter for either an entire issue or specific maturities to guarantee the payment of principal and interest. While this security provides a higher credit rating and thus a lower borrowing cost for an issuer, such cost savings must be measured against the premium required for such insurance. The decision to purchase insurance directly versus bidder's option is based on:

- Market volatility.
- Current investor demand for insured bonds.
- Level of insurance premiums.
- Ability of the LVVWD to purchase bond insurance from bond proceeds.

Bond insurance can be purchased directly by the LVVWD prior to the bond sale (direct purchase) or at the underwriter's option and expense (bidder's option).

When insurance is purchased directly by the LVVWD, the present value of the estimated debt service savings from insurance should be greater than the insurance premium. The bond insurance company will usually be chosen based on an estimate of the greatest net present value insurance benefit (present

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value of debt service savings less insurance premium).

Fixed and Variable Rate Debt

The LVVWD may issue fixed rate debt or variable rate debt, including (but not limited to) Commercial Paper, Variable Rate Demand Obligations, Index Bonds, or Extendible Commercial Paper.

- Fixed rate debt includes bonds that are issued 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 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, the LVVWD will not issue more than 25 percent of its debt in the form of variable rate debt. The Chief Financial Officer, in consultation with the General Counsel and LVVWD's Financial Advisors, will determine the appropriate form of variable rate debt, subject to the approval of the Board.

Financing Sources. The LVVWD will evaluate available State and County bond financing programs before choosing the financing source. The LVVWD will consider utilizing a State or County program if bonds can be sold by the State or County in a manner meeting the LVVWD's timing needs and if it is determined by the Chief Financial Officer that such program is the most cost-effective financing vehicle, and such determination is approved by the Board.

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CHIEF FINANCIAL OFFICER INFORMATION

NRS 350.013 Subsection 1(e)

A statement containing the name, title, mailing address and telephone number of the chief financial officer of the municipality.

NAME: Brian Thomas
TITLE: Chief Financial Officer
ADDRESS: 1001 South Valley View Boulevard
Las Vegas, NV 89153
TELEPHONE: (702) 822-8810

Appendix

Debt Service and Pledged Revenue Tables

1. Five Year Schedule of Debt Service Requirements
2. Combined Outstanding Debt Service Schedule
3. Net Pledged Revenues
4. Existing and Proposed Debt Service
5. Existing Debt Service by Company

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Five Year Schedule of Debt Service Requirements
As of June 30, 2018

Type of Debt	Fiscal Year				
	2018-19	2019-20	2020-21	2021-22	2022-23
G/O Revenue/LVVWD ¹	\$ 70,601,752	\$ 71,261,025	\$ 72,492,072	\$ 72,624,138	\$ 72,741,554
G/O Revenue/SNWA ²	564,600,082	155,933,159	158,040,717	158,455,338	158,715,535
Total ³	<u>\$635,201,834</u>	<u>\$227,194,184</u>	<u>\$230,532,789</u>	<u>\$231,079,476</u>	<u>\$231,457,089</u>

¹ This is debt service on \$831,342,114 existing outstanding principal balance of LVVWD debt secured by LVVWD water system revenues and assumes the issuance of \$100 million in new money debt in fiscal year 2017-18

² This is debt service on \$2,244,535,000 outstanding principal balance of LVVWD debt secured by SNWA pledged revenues in accordance with interlocal agreements.

³ Fiscal year 2018-19 debt service includes \$400,000,000 of tax-exempt commercial paper notes. LVVWD expects to pay the SNWA only the interest due on those notes when they mature and roll the principal into new commercial paper notes.

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Combined Schedule of Debt Service Requirements
As of June 30, 2018

Fiscal Year	Principal	Interest	Total
2019	\$ 497,642,209	\$ 137,559,625	\$ 635,201,834
2020	102,407,160	124,787,024	227,194,184
2021	110,400,215	120,132,574	230,532,789
2022	116,015,861	115,063,614	231,079,476
2023	121,917,068	109,540,021	231,457,089
2024	127,716,079	103,701,740	231,417,819
2025	124,484,153	97,558,594	222,042,747
2026	130,698,558	91,373,435	222,071,993
2027	130,914,577	85,005,069	215,919,646
2028	90,922,504	79,072,464	169,994,968
2029	82,092,649	75,045,595	157,138,244
2030	85,135,336	71,196,428	156,331,764
2031	78,145,905	67,192,647	145,338,552
2032	98,444,710	63,527,553	161,972,263
2033	108,057,125	58,842,979	166,900,104
2034	113,298,539	53,720,405	167,018,944
2035	118,042,394	48,383,220	166,425,614
2036	122,977,943	42,859,005	165,836,948
2037	109,637,323	37,073,926	146,711,249
2038	137,800,571	31,764,238	169,564,809
2039	164,888,228	24,489,476	189,377,705
2040	63,685,639	15,093,622	78,779,261
2041	48,618,296	11,845,383	60,463,679
2042	50,991,719	9,474,110	60,465,829
2043	29,871,453	6,986,976	36,858,429
2044	31,368,070	5,490,359	36,858,429
2045	32,942,173	3,918,757	36,860,929
2046	34,589,392	2,268,287	36,857,679
2047	5,935,392	535,287	6,470,679
2048	6,235,872	234,808	6,470,679
Totals	<u>\$ 3,075,877,114</u>	<u>\$ 1,693,737,220</u>	<u>\$ 4,769,614,334</u>

Secured by:

LVVWD Water

Revenues	\$ 831,342,114	\$ 432,406,944	\$ 1,263,749,058
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SNWA Pledged

Revenues	\$ 2,244,535,000	\$ 1,261,330,276	\$ 3,505,865,276
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Net Pledged Revenues
For the Fiscal Years Ended June 30

Fiscal Year	2014-15	2015-16	2016-17	Budgeted 2017-18	Budgeted 2018-19
Revenues					
Operating Income	\$ 337,790,425	\$ 339,986,389	\$ 354,828,141	\$ 364,119,955	\$ 388,292,528
Facilities Connection Charges	17,657,015	13,239,500	12,241,154	15,620,696	15,457,665
Investment Income ¹	1,265,650	2,577,164	1,312,388	2,652,683	3,331,271
Total Revenues	356,713,090	355,803,053	368,381,683	382,393,334	407,081,464
Operating Expenses	245,997,419	243,312,822	250,732,749	269,136,510	295,865,590
Net Pledged Revenues	110,715,671	112,490,231	117,648,933	113,256,823	111,215,874
Annual Debt Service ²	63,164,124	58,809,008	62,150,502	65,376,847	70,601,752
Net Pledged Revenues After Debt Service	<u>\$ 47,551,547</u>	<u>\$ 53,681,223</u>	<u>\$ 55,498,431</u>	<u>\$ 47,879,976</u>	<u>\$ 40,614,122</u>
Debt Coverage Ratio	1.75	1.91	1.89	1.73	1.58

¹ Includes realized investment earnings on unrestricted assets only. Does not include unrealized gains or losses.

² LVVWD has issued debt for SNWA that is supported by a pledge of SNWA revenues. Debt service reported here is only for debt directly supported by LVVWD operating revenues. It does not include debt issued for SNWA and supported by SNWA pledged revenues.

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Existing and Proposed Debt Service

As of June 30, 2018

Existing Debt ¹				Proposed Debt \$50 Million SRF Program ²			
Fiscal Year	Principal	Interest	Total	Fiscal Year	Principal	Interest	Total
2019	\$ 30,833,000	\$ 31,417,916	\$ 62,250,916	2019	\$ 960,146	\$ 920,011	\$ 1,880,157
2020	32,348,000	30,012,482	62,360,482	2020	1,364,714	1,065,151	2,429,864
2021	33,923,000	28,537,348	62,460,348	2021	2,503,568	1,057,477	3,561,045
2022	35,643,000	26,949,414	62,592,414	2022	2,561,005	1,000,040	3,561,045
2023	37,423,000	25,286,830	62,709,830	2023	2,619,789	941,256	3,561,045
2024	39,145,000	23,535,238	62,680,238	2024	2,679,953	881,092	3,561,045
2025	41,125,000	21,695,788	62,820,788	2025	2,741,529	819,516	3,561,045
2026	43,160,000	19,818,200	62,978,200	2026	2,804,552	756,494	3,561,045
2027	36,235,000	17,772,813	54,007,813	2027	2,869,055	691,990	3,561,045
2028	29,495,000	16,077,656	45,572,656	2028	2,935,075	625,971	3,561,045
2029	30,980,000	14,723,957	45,703,957	2029	3,002,647	558,399	3,561,045
2030	32,535,000	13,302,477	45,837,477	2030	3,071,809	489,237	3,561,045
2031	34,170,000	11,808,477	45,978,477	2031	3,142,598	418,447	3,561,045
2032	35,890,000	10,237,288	46,127,288	2032	3,215,055	345,990	3,561,045
2033	28,630,000	8,585,129	37,215,129	2033	3,289,218	271,827	3,561,045
2034	29,995,000	7,381,240	37,376,240	2034	3,365,129	195,916	3,561,045
2035	31,440,000	6,117,377	37,557,377	2035	2,715,862	118,215	2,834,078
2036	32,940,000	4,792,104	37,732,104	2036	2,040,283	66,827	2,107,110
2037	15,770,000	3,400,794	19,170,794	2037	1,570,125	23,751	1,593,876
2038	16,495,000	2,678,020	19,173,020	2038	-	-	-
2039	16,390,000	1,921,185	18,311,185	2039	-	-	-
2040	17,325,000	987,231	18,312,231	2040	-	-	-
2041	-	-	-	2041	-	-	-
2042	-	-	-	2042	-	-	-
2043	-	-	-	2043	-	-	-
2044	-	-	-	2044	-	-	-
2045	-	-	-	2045	-	-	-
2046	-	-	-	2046	-	-	-
2047	-	-	-	2047	-	-	-
2048	-	-	-	2048	-	-	-
Totals	\$ 681,890,000	\$ 327,038,961	\$ 1,008,928,961	Totals	\$ 49,452,114	\$ 11,247,607	\$ 60,699,721

Planned \$100 Million Debt Issuance ³				Existing & Proposed Combined			
Fiscal Year	Principal	Interest	Total	Fiscal Year	Principal	Interest	Total
2019	\$ 1,489,063	\$ 4,981,617	\$ 6,470,679	2019	\$ 33,282,209	\$ 37,319,543	\$ 70,601,752
2020	1,564,446	4,906,233	6,470,679	2020	35,277,160	35,983,865	71,261,025
2021	1,643,647	4,827,033	6,470,679	2021	38,070,215	34,421,857	72,492,072
2022	1,726,856	4,743,823	6,470,679	2022	39,930,861	32,693,277	72,624,138
2023	1,814,278	4,656,401	6,470,679	2023	41,857,068	30,884,486	72,741,554
2024	1,906,126	4,564,553	6,470,679	2024	43,731,079	28,980,883	72,711,962
2025	2,002,624	4,468,055	6,470,679	2025	45,869,153	26,983,359	72,852,512
2026	2,104,007	4,366,673	6,470,679	2026	48,068,558	24,941,366	73,009,925
2027	2,210,522	4,260,157	6,470,679	2027	41,314,577	22,724,960	64,039,537
2028	2,322,430	4,148,250	6,470,679	2028	34,752,504	20,851,877	55,604,381
2029	2,440,003	4,030,677	6,470,679	2029	36,422,649	19,313,032	55,735,682
2030	2,563,528	3,907,151	6,470,679	2030	38,170,336	17,698,865	55,869,202
2031	2,693,306	3,777,373	6,470,679	2031	40,005,905	16,004,297	56,010,202
2032	2,829,655	3,641,024	6,470,679	2032	41,934,710	14,224,303	56,159,013
2033	2,972,906	3,497,773	6,470,679	2033	34,892,125	12,354,729	47,246,854
2034	3,123,410	3,347,270	6,470,679	2034	36,483,539	10,924,425	47,407,964
2035	3,281,532	3,189,147	6,470,679	2035	37,437,394	9,424,740	46,862,134
2036	3,447,660	3,023,019	6,470,679	2036	38,427,943	7,881,950	46,309,893
2037	3,622,198	2,848,482	6,470,679	2037	20,962,323	6,273,026	27,235,349
2038	3,805,571	2,665,108	6,470,679	2038	20,300,571	5,343,128	25,643,699
2039	3,998,228	2,472,451	6,470,679	2039	20,388,228	4,393,636	24,781,865
2040	4,200,639	2,270,041	6,470,679	2040	21,525,639	3,257,272	24,782,911
2041	4,413,296	2,057,383	6,470,679	2041	4,413,296	2,057,383	6,470,679
2042	4,636,719	1,833,960	6,470,679	2042	4,636,719	1,833,960	6,470,679
2043	4,871,453	1,599,226	6,470,679	2043	4,871,453	1,599,226	6,470,679
2044	5,118,070	1,352,609	6,470,679	2044	5,118,070	1,352,609	6,470,679
2045	5,377,173	1,093,507	6,470,679	2045	5,377,173	1,093,507	6,470,679
2046	5,649,392	821,287	6,470,679	2046	5,649,392	821,287	6,470,679
2047	5,935,392	535,287	6,470,679	2047	5,935,392	535,287	6,470,679
2048	6,235,872	234,808	6,470,679	2048	6,235,872	234,808	6,470,679
Totals	\$ 100,000,000	\$ 94,120,375	\$ 194,120,375	Totals	\$ 831,342,114	\$ 432,406,944	\$ 1,263,749,058

¹ Excluding debt issued on behalf of SNWA

² State Revolving Fund Loans. Maximum of \$50 million to be drawn in three loans of \$20, \$15, and \$15 million.

³ Planned \$100 million debt issuance in June 2018

**Las Vegas Valley Water District
Operating and Capital Budget
Debt Management Policy
Fiscal Year Ending June 30, 2019**

Existing Debt Service by Company

As of June 30, 2018

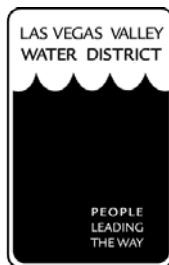
Supported by LVVWD Pledged Revenues				Supported by SNWA Pledged Revenues			
Fiscal Year	Principal	Interest	Total	Fiscal Year	Principal	Interest	Total
2019	\$ 33,282,209	\$ 37,319,543	\$ 70,601,752	2019	\$ 464,360,000	\$ 100,240,082	\$ 564,600,082
2020	35,277,160	35,983,865	71,261,025	2020	67,130,000	88,803,159	155,933,159
2021	38,070,215	34,421,857	72,492,072	2021	72,330,000	85,710,717	158,040,717
2022	39,930,861	32,693,277	72,624,138	2022	76,085,000	82,370,338	158,455,338
2023	41,857,068	30,884,486	72,741,554	2023	80,060,000	78,655,535	158,715,535
2024	43,731,079	28,980,883	72,711,962	2024	83,985,000	74,720,857	158,705,857
2025	45,869,153	26,983,359	72,852,512	2025	78,615,000	70,575,235	149,190,235
2026	48,068,558	24,941,366	73,009,925	2026	82,630,000	66,432,068	149,062,068
2027	41,314,577	22,724,960	64,039,537	2027	89,600,000	62,280,109	151,880,109
2028	34,752,504	20,851,877	55,604,381	2028	56,170,000	58,220,588	114,390,588
2029	36,422,649	19,313,032	55,735,682	2029	45,670,000	55,732,563	101,402,563
2030	38,170,336	17,698,865	55,869,202	2030	46,965,000	53,497,563	100,462,563
2031	40,005,905	16,004,297	56,010,202	2031	38,140,000	51,188,350	89,328,350
2032	41,934,710	14,224,303	56,159,013	2032	56,510,000	49,303,250	105,813,250
2033	34,892,125	12,354,729	47,246,854	2033	73,165,000	46,488,250	119,653,250
2034	36,483,539	10,924,425	47,407,964	2034	76,815,000	42,795,980	119,610,980
2035	37,437,394	9,424,740	46,862,134	2035	80,605,000	38,958,480	119,563,480
2036	38,427,943	7,881,950	46,309,893	2036	84,550,000	34,977,055	119,527,055
2037	20,962,323	6,273,026	27,235,349	2037	88,675,000	30,800,900	119,475,900
2038	20,300,571	5,343,128	25,643,699	2038	117,500,000	26,421,110	143,921,110
2039	20,388,228	4,393,636	24,781,865	2039	144,500,000	20,095,840	164,595,840
2040	21,525,639	3,257,272	24,782,911	2040	42,160,000	11,836,350	53,996,350
2041	4,413,296	2,057,383	6,470,679	2041	44,205,000	9,788,000	53,993,000
2042	4,636,719	1,833,960	6,470,679	2042	46,355,000	7,640,150	53,995,150
2043	4,871,453	1,599,226	6,470,679	2043	25,000,000	5,387,750	30,387,750
2044	5,118,070	1,352,609	6,470,679	2044	26,250,000	4,137,750	30,387,750
2045	5,377,173	1,093,507	6,470,679	2045	27,565,000	2,825,250	30,390,250
2046	5,649,392	821,287	6,470,679	2046	28,940,000	1,447,000	30,387,000
2047	5,935,392	535,287	6,470,679	2047	-	-	-
2048	6,235,872	234,808	6,470,679	2048	-	-	-
Totals	\$ 831,342,114	\$ 432,406,944	\$ 1,263,749,058	Totals	\$ 2,244,535,000	\$ 1,261,330,276	\$ 3,505,865,276

LVVWD & SNWA Combined Debt Service			
Fiscal Year	Principal	Interest	Total
2019	\$ 497,642,209	\$ 137,559,625	\$ 635,201,834
2020	102,407,160	124,787,024	227,194,184
2021	110,400,215	120,132,574	230,532,789
2022	116,015,861	115,063,614	231,079,476
2023	121,917,068	109,540,021	231,457,089
2024	127,716,079	103,701,740	231,417,819
2025	124,484,153	97,558,594	222,042,747
2026	130,698,558	91,373,435	222,071,993
2027	130,914,577	85,005,069	215,919,646
2028	90,922,504	79,072,464	169,994,968
2029	82,092,649	75,045,595	157,138,244
2030	85,135,336	71,196,428	156,331,764
2031	78,145,905	67,192,647	145,338,552
2032	98,444,710	63,527,553	161,972,263
2033	108,057,125	58,842,979	166,900,104
2034	113,298,539	53,720,405	167,018,944
2035	118,042,394	48,383,220	166,425,614
2036	122,977,943	42,859,005	165,836,948
2037	109,637,323	37,073,926	146,711,249
2038	137,800,571	31,764,238	169,564,809
2039	164,888,228	24,489,476	189,377,705
2040	63,685,639	15,093,622	78,779,261
2041	48,618,296	11,845,383	60,463,679
2042	50,991,719	9,474,110	60,465,829
2043	29,871,453	6,986,976	36,858,429
2044	31,368,070	5,490,359	36,858,429
2045	32,942,173	3,918,757	36,860,929
2046	34,589,392	2,268,287	36,857,679
2047	5,935,392	535,287	6,470,679
2048	6,235,872	234,808	6,470,679
Totals	\$ 3,075,877,114	\$ 1,693,737,220	\$ 4,769,614,334

SECTION 8

STATISTICAL INFORMATION

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LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

**Las Vegas Valley Water District
Statistical Summary**

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**Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information**

Fiscal Year Ending June 30, 2019

**Demographic Statistics
Clark County, Nevada
Five Calendar Years**

Calendar Year	Clark County Population ⁽¹⁾	Per Capita Income ⁽²⁾	Clark County Personal Income (In Million \$) ⁽²⁾	Median Household Income ⁽³⁾
2017	2,248,390	N/A	N/A	N/A
2016	2,205,207	42,284	91,150	52,629
2015	2,147,641	41,915	88,412	51,575
2014	2,102,238	39,860	82,306	52,070
2013	2,062,253	38,028	77,011	52,873

Calendar Year	LVVWD Service Area Population	School Enrollment ⁽⁴⁾	Total Labor Force ⁽⁵⁾	Unemployment Rate ⁽⁶⁾
2017	1,502,604	322,436	N/A	N/A
2016	1,475,458	322,122	1,048,043	5.8%
2015	1,436,617	320,339	1,039,435	6.9%
2014	1,405,583	318,592	1,019,945	8.0%
2013	1,379,760	314,643	1,005,025	9.6%

Sources:

(1) Clark County Comprehensive Planning Department.

(2) U.S. Bureau of Economic Analysis as reported for the Las Vegas-Paradise MSA (which is comprised of Clark County).

(3) U.S. Census Bureau, American Community Survey.

(4) Clark County School District, Average Daily Membership. Based on school Year.

(5) The Department of Employment, Training & Rehabilitation.

(6) Bureau of Labor Statistics (annual averages).

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

Top Ten Employers⁽¹⁾
Clark County, Nevada
Calendar Year 2017

Employer Trade name	Employees ⁽²⁾	Ranking	% of Total Labor Force ⁽³⁾
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%
Caesars 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	1,043,127		

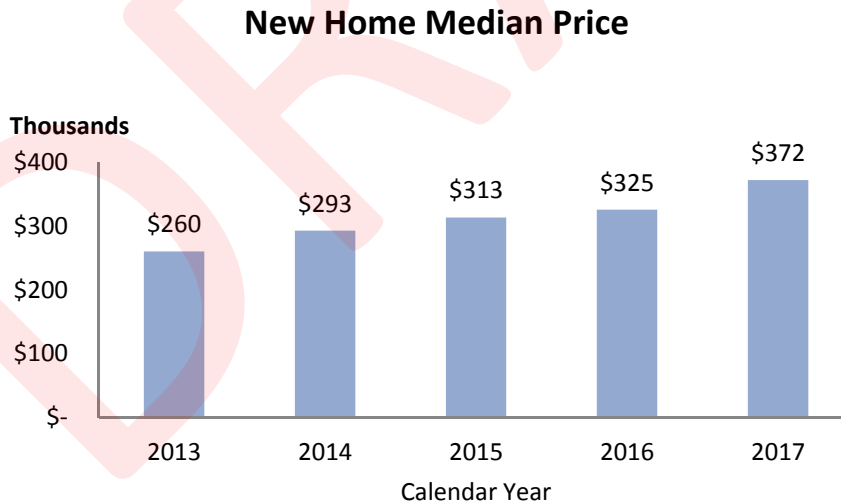
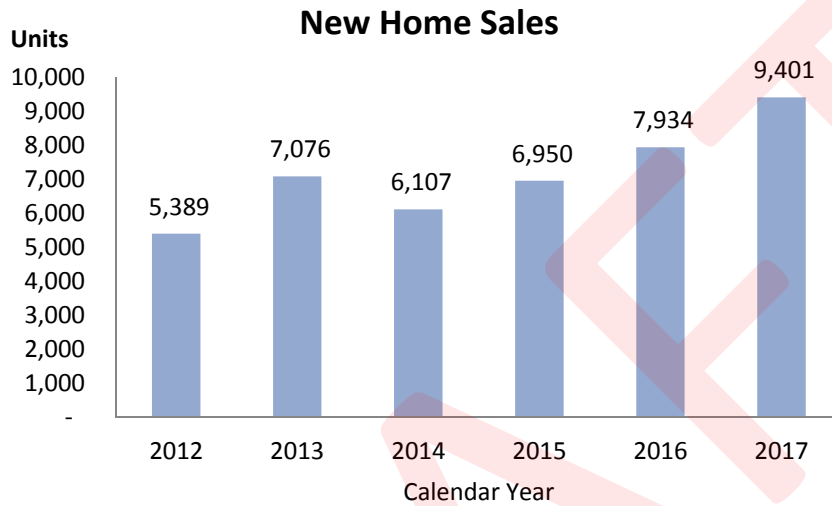
Sources:

(1) Nevada Workforce Informer, Nevada Employer Directory, GASB 44 report as of June, 2016. 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.

(3) US Census Bureau and Las Vegas Global Economic Alliance (LVGEA).

Residential Real Estate Clark County, Nevada



**Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information**
Fiscal Year Ending June 30, 2019

**Secured Tax Roll
Clark County, Nevada
2017 - 18**

<u>Taxpayer</u>	<u>Taxable Assessed</u>	<u>Taxable Appraised</u>
1. MGM Resorts International	\$ 3,102,542,941	\$ 8,864,408,403
2. NV Energy	1,767,589,380	5,050,255,371
3. Caesar's Entertainment Corp.	1,462,469,206	4,178,483,446
4. Wynn Resorts Limited	779,066,017	2,225,902,906
5. Las Vegas Sands Corporation	739,466,396	2,112,761,131
6. Station Casinos Incorporated	553,650,967	1,581,859,906
7. Howard Hughes Corporation	438,926,452	1,254,075,577
8. Boyd Gaming Corporation	431,579,097	1,233,083,134
9. Nevada Property 1 LLC	253,324,527	723,784,363
10. Picerne Real Estate Group	244,734,848	699,242,423
	<u>\$ 9,773,349,831</u>	<u>\$ 27,923,856,660</u>

SOURCE: Clark County Assessor's Report Dated April 1, 2017

**Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information**

Fiscal Year Ending June 30, 2019

2012 - 2017 Temperature and Rainfall

Average Maximum and Minimum Daily Temperature
in Degrees Fahrenheit and Monthly Rainfall in Inches

Month	2012			2013			2014		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	61	40	0.0	56	36	0.4	64	42	0.0
February	63	44	0.1	62	41	0.0	68	46	0.3
March	72	49	0.2	75	54	0.2	74	52	0.0
April	81	58	0.0	82	58	0.0	81	59	0.0
May	92	69	0.0	89	67	0.0	90	67	0.0
June	101	77	0.0	104	79	0.0	101	77	0.0
July	103	80	0.2	105	84	0.3	105	83	0.2
August	103	82	2.3	100	79	0.3	99	78	0.4
September	97	74	1.2	91	71	0.4	96	74	0.6
October	83	61	0.9	78	56	0.0	86	63	0.0
November	71	50	0.0	67	48	1.4	70	49	0.0
December	57	41	0.5	57	38	0.1	58	44	0.3
Average Annual Temperature/ Total Rainfall	81.9	60.5	5.3	80.5	59.1	3.0	82.6	61.3	1.8

Month	2015			2016			2017		
	Temperature			Temperature			Temperature		
	Max.	Min.	Rainfall	Max.	Min.	Rainfall	Max.	Min.	Rainfall
January	62	44	0.9	57	40	0.5	57	42	0.9
February	71	49	0.5	70	46	0.1	65	49	0.6
March	78	56	0.3	75	53	0.0	77	54	0.0
April	80	58	0.3	79	58	2.3	81	59	0.0
May	85	64	0.2	86	65	0.0	89	66	0.1
June	104	80	0.0	105	81	0.5	105	79	0.0
July	101	80	0.2	107	84	0.2	107	85	0.1
August	104	82	0.7	102	80	0.2	103	81	0.2
September	98	76	0.0	93	71	0.0	92	72	0.5
October	84	65	1.2	84	64	0.2	84	60	0.0
November	64	45	0.0	71	51	0.0	73	53	0.0
December	56	38	0.0	57	40	0.8	63	42	0.0
Average Annual Temperature/ Total Rainfall	82.2	61.3	4.3	82.1	61.0	4.77	82.9	61.7	2.4

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

2012 - 2017 Average Monthly Consumption Per Active Service By Month Thousands of Gallons

Month	2013	2014	2015	2016	2017	Average
January	14.0	13.9	13.3	14.8	13.6	13.9
February	13.7	15.0	14.2	13.5	12.3	13.7
March	17.9	18.1	17.6	19.3	17.1	18.0
April	22.5	22.3	22.8	22.2	22.7	22.5
May	26.9	26.3	25.8	21.7	25.6	25.3
June	34.7	33.8	29.5	30.7	33.0	32.3
July	34.8	35.2	34.3	33.6	34.0	34.4
August	33.3	34.7	31.6	33.1	34.7	33.5
September	28.5	27.2	28.1	29.7	29.6	28.6
October	24.9	21.2	23.5	25.5	24.1	23.8
November	18.1	20.5	20.6	17.3	19.5	19.2
December	15.7	13.1	14.2	14.5	15.3	14.6
Total for Year	285.0	281.3	275.5	275.9	281.5	279.8
Average Month	23.8	23.4	23.0	23.0	23.5	23.3
Maximum Month	34.8	35.2	34.3	33.6	34.7	34.4
Minimum Month	13.7	13.1	13.3	13.5	12.3	13.7

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

2012 - 2017 Average Annual Water Billed Per Active Service By Class of Service
Thousands of Gallons

Class of Service	2013	2014	2015	2016	2017
Residential - single service	139	137	133	131	131
Residential - duplex/tri&fourplex	244	242	242	240	240
Apts. Condos, & townhomes	3,477	3,505	3,475	3,587	3,587
Residential, other	3,771	1,336	6,535	3,990	3,990
Hotels	39,248	41,179	39,408	40,893	40,893
Motels	4,050	4,172	4,716	4,797	4,797
Community facilities	1,952	1,948	1,828	1,922	1,922
Schools	2,497	2,166	2,503	2,510	2,510
Fireline	83	104	107	119	119
Irrigation	2,301	2,313	2,114	2,117	2,117
Commercial/business	999	1,042	991	1,021	1,021
Recreational	2,692	2,784	3,139	2,983	2,983
Industrial	938	987	997	1,033	1,033
Construction water	252	253	299	310	310
Other	1,959	2,368	2,261	1,723	1,723
TOTAL ALL CLASSES	64,602	64,535	68,748	67,375	67,375

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

2012 - 2017 Percent of Total Water Billed by Class or Service

Class of Service	2012	2013	2014	2015	2016	2017
Residential - Single Service	44.6%	44.6%	44.6%	44.1%	43.5%	43.3%
Residential - Duplex/Triplex/Fourp	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%
Apts. Condos, & Townhomes	14.5%	14.7%	14.4%	14.8%	15.0%	15.1%
Residential, Other	1.0%	1.0%	1.9%	1.7%	1.0%	1.0%
Subtotal (Residential)	60.9%	61.0%	61.6%	61.3%	60.2%	60.0%
Hotels	9.3%	9.2%	9.0%	9.1%	9.4%	9.0%
Motels	1.1%	1.1%	1.0%	1.2%	1.2%	1.1%
Community Facilities	1.8%	1.9%	1.8%	1.9%	1.9%	2.1%
Schools	1.7%	1.6%	1.6%	1.6%	1.6%	1.7%
Fireline	0.4%	0.4%	0.5%	0.5%	0.6%	0.5%
Irrigation	14.2%	14.0%	13.8%	13.3%	13.4%	14.0%
Commercial/Business	8.1%	8.1%	8.0%	8.1%	8.3%	8.2%
Recreational	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Industrial	1.1%	1.2%	1.2%	1.2%	1.3%	1.3%
Construction Water	0.9%	0.7%	0.9%	1.0%	1.4%	1.5%
Other	0.5%	0.6%	0.6%	0.5%	0.6%	0.6%
Subtotal (Non-Residential)	39.1%	39.0%	38.4%	38.7%	39.8%	40.0%
TOTAL	100%	100%	100%	100%	100%	100%

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

2012 - 2017 Average Consumption and Monthly Revenue from Water Sales
Per Active Account (kgal - million)

<u>Month</u>	<u>2012</u>		<u>2013</u>		<u>2014</u>	
	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>
January	13.8	\$51.5	14.0	\$65.0	13.9	\$65.5
February	15.6	56.0	13.7	61.8	15.0	67.7
March	17.8	63.2	17.9	76.9	18.1	79.1
April	22.1	81.0	22.5	91.2	22.3	92.2
May	27.2	121.4	26.9	106.0	26.3	106.7
June	36.0	150.5	34.7	143.5	33.8	142.0
July	34.8	137.5	35.2	134.9	34.3	132.5
August	33.3	137.3	34.7	140.1	31.6	129.8
September	28.5	115.6	27.2	110.5	28.1	116.0
October	24.9	98.0	21.2	87.2	23.5	96.7
November	18.1	76.9	20.5	85.4	20.6	86.5
December	15.7	69.5	13.1	60.5	14.2	65.5
Monthly Average	24.0	\$96.5	23.5	\$96.9	23.5	\$98.3

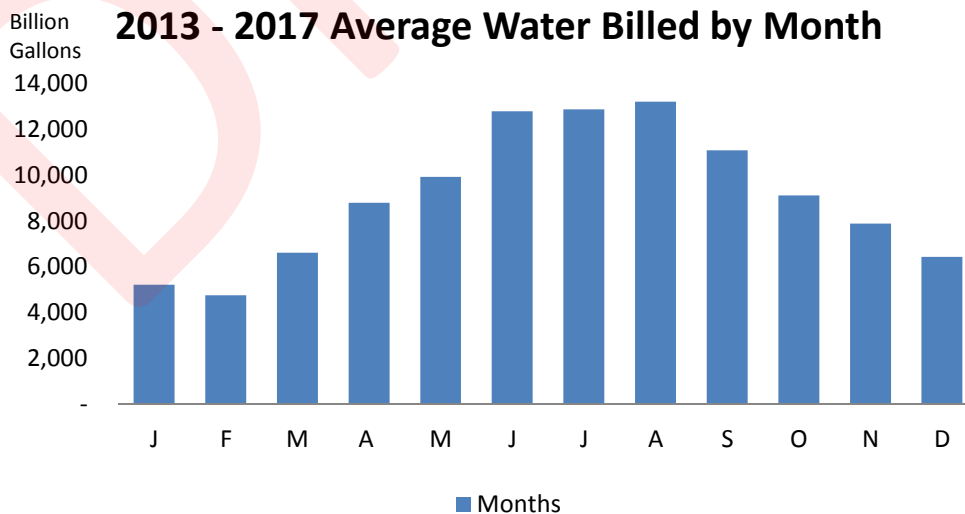
<u>Month</u>	<u>2015</u>		<u>2016</u>		<u>2017</u>	
	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>	<u>Avg. Use</u>	<u>Avg. Revenue</u>
January	13.3	\$65.0	15.1	\$72.3	13.4	\$73.1
February	14.2	64.6	13.8	72.4	13.5	71.0
March	17.6	79.4	19.7	89.7	17.4	88.7
April	22.8	95.6	22.7	98.4	21.4	105.6
May	25.8	106.7	22.1	97.7	24.0	118.8
June	29.5	131.7	31.3	140.8	30.7	150.8
July	33.6	127.3	34.7	135.4	32.7	145.3
August	33.1	137.1	35.5	149.4	32.1	154.5
September	29.7	123.8	30.2	128.3	27.4	133.3
October	25.5	105.5	24.6	105.8	22.6	110.8
November	17.3	77.4	19.9	89.7	18.6	97.3
December	14.5	68.0	15.6	75.7	13.7	85.0
Monthly Average	23.1	\$98.5	23.8	\$104.6	22.3	\$111.2

Las Vegas Valley Water District
Operating and Capital Budget
Statistical Information
Fiscal Year Ending June 30, 2019

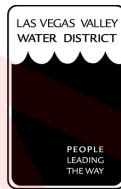
2012 - 2017 Water Billed by Month
(Millions of Gallons)

Month	2013	2014	2015	2016	2017
January	5,000	5,063	4,928	5,577	5,205
February	4,887	5,475	5,275	5,107	4,749
March	6,426	6,605	6,546	7,302	6,602
April	8,071	8,159	8,487	8,448	8,786
May	9,654	9,632	9,618	8,231	9,927
June	12,487	12,405	10,988	11,681	12,783
July	12,703	12,612	12,534	12,956	12,873
August	12,529	11,660	12,373	13,272	13,214
September	9,842	10,374	11,138	11,319	11,079
October	7,690	8,689	9,594	9,242	9,105
November	7,442	7,608	6,495	7,486	7,880
December	4,776	5,253	5,475	5,881	6,425
Total	101,507	103,535	103,451	106,502	108,628

2013 - 2017 Average Water Billed by Month



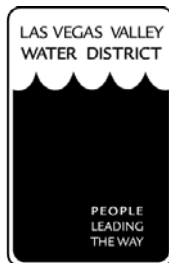
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SECTION 9

FINANCIAL POLICIES

Financial Policy.....	9-2
Reserve Policy	9-5



LAS VEGAS VALLEY WATER DISTRICT

FISCAL YEAR 2018-19

OPERATING AND CAPITAL BUDGET

Financial Policy

The Las Vegas Valley Water District (LVVWD) conducts a process to update and improve its operating policies and procedures on an ongoing basis. The attached financial policies represent a portion of the approved operating policies of the LVVWD.

DRAFT

LAS VEGAS VALLEY WATER DISTRICT DEPARTMENT POLICY	SUBJECT: FINANCIAL POLICY	NUMBER: 1
	APPROVED BY: <i>Lina Neilson</i>	ISSUE: 1
ISSUING DEPARTMENT: FINANCE	DIRECTOR OF FINANCE June 1, 2015	PAGE: 1 OF 3

I. PURPOSE

The purpose of this policy is to establish guidelines for the planning and monitoring of financial activities in a responsible manner.

II. SCOPE

This policy applies to the Las Vegas Valley Water District (LVVWD) and other entities for which the LVVWD has fiduciary responsibility i.e., Southern Nevada Water Authority (SNWA).

III. FINANCIAL PLANNING

A. BALANCED BUDGET – Under normal circumstances, the organization shall strive to prepare and adhere to a balanced operating budget, meaning sources of funds are greater than or equal to the uses of funds.

B. LONG-TERM PLANNING – A long-term, entity-wide Strategic Plan shall be adopted and maintained to guide the decisions of the organization. Preparation of operating and capital budgets, as well as other financial planning activities, shall consider their long-term financial implications and reflect the Strategic Plan. Also, the organization shall strive to obtain the highest credit ratings.

C. ASSET INVENTORY – The organization shall maintain an inventory of major capital assets and periodically assess the condition of those assets to plan for ongoing financial commitments necessary to ensure services in support of the Strategic Plan.

IV. REVENUE

- A. REVENUE DIVERSIFICATION – To the extent reasonable, revenues shall be diversified in order to improve the ability to handle fluctuations in individual sources.
- B. FEES AND CHARGES – Fees and charges are set to cover the cost of the services provided. For example:
- Water Rates pay for current water system operation and maintenance.
 - Connection Fees pay for water system infrastructure expansion to support population growth.
 - Fees pay for the annual inspection and maintenance of system facilities.
 - Fees pay for any additional administrative or operating cost burden generated by certain customer activities.
 - Deposits assure customer payment of financial obligations.
- C. USE OF ONE-TIME REVENUES – One-time revenues shall generally be matched to one-time expenditures. Ongoing financial commitments shall not be dependent upon anticipated one-time revenues.
- D. USE OF UNPREDICTABLE REVENUES – Ongoing programs or expenditure commitments shall not be dependent upon revenues that cannot be reasonably predicted. Reasonable prediction involves the use of historical data, projected data, and prudent judgment.

V. EXPENDITURES

- A. DEBT CAPACITY – The organization has no fixed aggregate monetary debt limit. The ability to issue debt is governed by state law allowing for the pledge of revenues and the assessment of ad valorem taxes with the requirement that the Board of Directors establish reasonable rates and charges for the products and services provided. The assessment of ad valorem taxes shall be avoided and emphasis shall be placed on the reliance of revenues to pay debt obligations.

- B. DEBT ISSUANCE AND MANAGEMENT – Debt shall be issued by either negotiated or competitive sale in accordance with Nevada law. Competitive sale awards shall be made to the underwriter(s) presenting bids resulting in the lowest interest rate. Negotiated sales may be utilized and underwriters will be selected in accordance with specific criteria specified in the Debt Management Policy. The Debt term shall not exceed the useful life of the project or equipment being financed and bond insurance may be utilized.
- C. RESERVES – The organization shall maintain sufficient reserves to protect against the need to reduce service levels or raise rates and fees due to temporary revenue shortfalls or unpredicted one-time expenditures. ‘Sufficient reserve’ is defined as 180 days of operating expenditures. A reserve study shall be conducted at least once every five years to determine if 180 days remains sufficient.
- D. OPERATING/CAPITAL EXPENDITURE ACCOUNTABILITY – Actual expenditures shall be periodically compared to the budget. Each department Director shall be primarily responsible for keeping their actual expenditures from exceeding their budget. Department Directors shall provide timely notification to the Director of Finance when it appears that their actual expenditures for the fiscal year will exceed their budget. Also, the Director of Finance shall monitor the actual expenditures of the entire organization and provide timely notification to the General Manager when it appears that the actual expenditures for the fiscal year may exceed the Board approved budget.

LAS VEGAS VALLEY WATER DISTRICT BOARD POLICY	SUBJECT: LAS VEGAS VALLEY WATER DISTRICT RESERVE POLICY	NUMBER: 11
	APPROVED BY: BOARD OF DIRECTORS	ISSUE: 1
ISSUING DEPARTMENT: FINANCE	January 5, 2016	PAGE: 1 OF 2

Purpose

The purpose is to establish a policy for maintaining adequate reserves of cash and investments. Maintaining adequate and prudent cash reserves is an important tool in mitigating the risks of significant and unexpected decreases in sources of funds and/or increases in the uses of funds. The benefits include stable services and fees. This policy applies to all unrestricted cash and investments of the Las Vegas Valley Water District (LVVWD).

Authority

The Government Finance Officers Association (GFOA) recommends local governments adopt a target amount of working capital to maintain in each of their enterprise funds. Because the purposes, customers, and other characteristics of enterprise funds can vary widely, the GFOA recommends that governments develop a target amount of reserves that best fits local conditions for each fund. The following are some of the key considerations for the LVVWD's reserve policy:

1. Volatility in Sources of Funds – Some of the LVVWD's sources of funds have experienced significant volatility; for example, connection charges and sales tax, in periods where the local economy suffers.
2. Likelihood of Successful Rate Increases – Although the LVVWD has enjoyed tremendous support from its Board of Directors and the community, it is possible that these conditions could change in the future, thus impacting the LVVWD's ability to adjust rates to meet increasing costs.
3. Asset Age and Condition – As the infrastructure ages, maintenance and replacement costs will increase. Also, there is the possibility of unexpected failures that can be quite expensive. Such failures could result from age-related causes, terrorism, or natural disasters.

4. Control Over Expenses – Although most of the LVVWD's expenses are predictable, there remains the possibility of large, unexpected expenditures; for example, litigation, natural disasters, increases in water, energy and chemical costs.

Reserve Components

The following four components identified for the LVVWD's reserves listed by funding priority:

1. Base Operating Reserve – Adequate reserves to fund 180 days of operating and maintenance expenses. This will help insulate the LVVWD and its customers from volatility in operating revenues and expenses, as well as from other casual factors that could interrupt cash flow or impose unforeseen costs.
2. Debt Service Reserve – Adequate reserves to fund one year of the maximum annual debt service. For both credit rating considerations and prudent financial practices, the LVVWD should strive to achieve this level of reserves to ensure access to lower cost capital in future years, help mitigate the impact of disruptions in the credit markets on operations, and provide assurances to investors that the LVVWD has the financial resources necessary to make its ongoing debt service payments.
3. Capital Related Reserve – Adequate reserves to fund a one year average of future capital needs. As a method to determine future capital needs, a capital improvement plan may be used. This reserve will fluctuate over time as projects change. This level of capital reserve will enable the LVVWD to better react to capital needs as they may arise and to properly address the timing of infrastructure improvements relative to system needs. This reserve will also enable the LVVWD to continue with uninterrupted critical capital improvements during times of difficulty within the capital markets.
4. Unforeseen Events Reserve – Adequate reserves to fund one percent of assets subject to depreciation. This is to mitigate one-time, unforeseen infrastructure or major capital equipment failures and other significant non-recurring impacts to operating revenues and expenses.

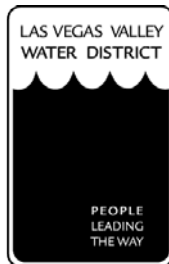
Reporting

The General Manager shall notify the Board of Directors of the status of reserves at least annually and more often as significant changes occur.

SECTION 10

GLOSSARY

Glossary.....	10-1
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LAS VEGAS VALLEY WATER DISTRICT
FISCAL YEAR 2018-19
OPERATING AND CAPITAL BUDGET

**Las Vegas Valley Water District
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Fiscal Year Ending June 30, 2019

Accrual Basis Accounting. An accounting method that measures the performance and position of a company by recognizing revenue or expense events regardless of when cash transactions occur.

Acre-Foot (AF). A water measurement equating to 325,851 gallons or 43,560 cubic feet. An acre foot will supply the annual water needs of approximately 2 single family homes in the LVVWD's service area.

Alfred Merritt Smith Water Treatment Facility (AMSWTF). Built in 1971, the Alfred Merritt Smith Water Treatment Facility currently treats most of the Las Vegas Valley's drinking water. The facility can treat up to 600 million gallons a day (MGD).

American Water Works Association (AWWA). A 50,000-member nonprofit dedicated to science, technology, education and the managing and treating of water.

Amortization. Amortization is paying off a debt with a fixed repayment schedule in incremental installments over a given period.

Automated Mapping / Facilities Management. (AM/FM) The term AM/FM/GIS mostly refers to Geographic Information Software (GIS) that allows utility users to digitize, manage and analyze their utility network data. This data is stored in an underlying GIS database which also maintains the associations between the graphical entities and the attributes.

Automatic Vehicle Locator. (AVL) An automatic vehicle locator (AVL) is a device

that makes use of a Global Positioning System (GPS) to enable a business or agency to remotely track the location of its vehicle fleet by using the Internet.

Balanced Budget. A budget where sources of funds are equal to uses of funds. The LVVWD is not required to issue a balanced budget.

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 agreed upon 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 financial plan over a given, usually one year.

Budget Calendar. The schedule of key dates or milestones the LVVWD follows in the preparation and adoption of the budget.

Budgetary Control. The management or control of a governmental unit or enterprise in accordance with an approved budget to keep expenditures within limitations of available appropriations and available revenues.

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Budget Document. The official written document prepared by the LVVWD and approved by the LVVWD's Board of Directors.

Budget Message. A general discussion of the proposed budget included as a part of the budget document. The budget message explains principal budget issues with the background of the financial experience in recent years.

Budgeted Positions. A position that has been authorized (created by action of the LVVWD Board of Directors) and may be specifically funded through the budget process.

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 Budget. Used to evaluate potential investments or expenditures for specific projects or purposes. Fixed assets to be acquired during a fiscal year, with a value of over \$10,000 and an estimated life of over three years.

Capital Expenditure. Funds used by a company to acquire, upgrade, and maintain fixed assets during a fiscal year, generally with a value of over \$10,000 and an estimated useful life of three or more years.

Capital Improvement Plan (CIP). A multi-year plan, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan.

Capitalized Expenses. An accounting method used to delay the recognition of expenses by recording the expense as a long-term asset. 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.

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).

Computer Maintenance Management System. (CMMS)

Computerized Work Order Maintenance Management System. (CWOMMS)

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Colorado River Commission (CRC). The CRC is an executive agency of the State of Nevada responsible for acquiring and managing Nevada's share of water and hydropower resources from the Colorado River.

Conservation. The act of reducing demands for water in the most efficient manner. Encompassing policies, strategies and activities to manage water as a sustainable resource and protect the environment while meeting current and future demands. The LVVWD achieves the benefits of conservation through education of the end user, promoting water efficient hardware, and pricing signals.

Construction Expenditures. Generally, expenses that are spent on third party vendors who build, supervise, or provide materials used in the construction of capital assets.

Debt Issuance Proceeds. Principal amount or face value of debt issues. These proceeds are used to pay for major construction expenditures incurred by the LVVWD.

Debt Service Payments. Funds used for the repayment of annual principal and interest charges on debt the LVVWD has issued.

Department. A basic organizational unit of the LVVWD that is functionally unique in its delivery of services.

Depreciation. A reduction in the value of a physical asset with the passage of time.

Disbursements. Funds actually expended.

Division. Organizational component of a department.

Endangered Species Act (ESA). Signed into law by President Richard Nixon on December 28, 1973, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development un-tempered by adequate concern and conservation."

Ending Balance. Cash and cash equivalent balances at the ending of an accounting period. For budget years this amount is an estimate. For actual years this amount is the actual amount of cash either in demand deposits or investments.

Energy. Collective name for electricity and natural gas purchases used to treat and distribute water throughout the LVVWD's service area as well as power office buildings and other ancillary locations.

Engineering Department Management System. (EDMS)

Engineering Project Management. (EPM)

Engineering Project Scheduling and Management System. (ESPM)

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

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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 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 acquiring an asset, service or settling a loss.

Fiscal Year (FY). For the Las Vegas Valley Water District, the 12-month period begins with July 1, and ends with June 30 of the designated fiscal year; e.g. FY 2018-19 ends on June 30, 2019.

Fringe Benefits. Various types of non-wage compensation provided to employees in addition to their normal wages or salaries.

Full-Time Equivalent (FTE). The number of positions that equate to a 40-hour work week for 52 weeks, or one full year. For example, two part-time positions, each working 20 hours per week, equals one FTE.

Fund. A fiscal and accounting tool with a self-balancing set of accounts to record revenue and expenditures.

Fund Balance. Also known as beginning balance and ending balance. This represents the estimated cash balance in a specific fund at the beginning or ending of an accounting period.

Fund Equity. The excess of an entity's assets over its liabilities.

General Obligation Debt. Bonds where the full faith and credit of the issuer is pledged to the repayment of the bonds.

Generally Accepted Accounting Principles (GAAP). A body of accounting and financial reporting standards set by the Governmental Accounting Standards Board (GASB) for state and local governments, and by the Financial Accounting Standards Board (FASB) for private sector organizations.

Geographical Information Systems. (GIS) Geographical Information System is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

Global Positioning System. (GPS) The Global Positioning System is a space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites

Government Finance Officers Association. (GFOA). A professional association of 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).

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Governmental Funds. The General Fund, Special Revenue Funds, Debt Service Funds, and Capital Projects Funds.

Grant. A contribution by a government or other organization to support a particular function. Grants may be classified as categorical or block, depending upon the amount of discretion allowed the grantee.

Great Recession. A global economic decline which began after the middle of the 2000 decade 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.

Intergovernmental Revenue. Revenue received from other governments in the 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 LVVWD 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.

Laboratory Information Management System. (LIMS) A laboratory information management system is a software-based laboratory and information management system with features that support a modern laboratory's operations.

Las Vegas Metropolitan Statistical Area. (MSA) Las Vegas metropolitan area, is in the southern part of the U.S. state of Nevada, coextensive since 2003 with Clark County, Nevada. A central part of the metropolitan area is the Las Vegas Valley, a 600 sq. mi (1,600 km²) basin that includes the metropolitan area's largest city, Las Vegas

Las Vegas Valley Groundwater Management Program (LVVGMP). In 1997, the Nevada Legislature directed the Southern Nevada Water Authority (SNWA) to develop the Las Vegas Valley Groundwater Management Program to protect and manage the valley's primary groundwater supply. The program protects

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the local groundwater basin from over-drafting and potential sources of contamination.

Las Vegas Valley Water District (LVVWD).

The major water retailer in southern Nevada. The LVVWD is the operating agent of the Southern Nevada Water Authority although the two companies are autonomous and produce financial records and statements independent of each other.

Las Vegas Wash Comprehensive Adaptive Management Plan. (LVWCAMP)

Line Item. Unique identification number and title for an expenditure category; represents the most detailed level of budgeting and recording expenditures.

Lower Colorado River Multi-Species Conservation Program (LCRMSCP).

Maintenance Improvement Team. (MIT)

Major Construction and Program (MCP). A schedule of approved capital projects, their estimated costs, and funding sources.

Megawatt Hour (MWh). A unit of power equal to one million watt hours. Energy in watt hours is the multiplication of power in watts and time in hours.

Million-Gallon per Day (MGD). A unit of flow measurement. MGD is a standard measurement in the water utility industry.

Mission. A description of the basic purpose and responsibility of the budget unit.

Mobile Data Dispatch System and Mobile Data Terminals. (MDT)

Mobile Workforce Management System. (MWFMS)

Mobile Workforce Management Team. (MWM)

Modified Accrual Accounting. A basis of accounting in which expenditures are accrued when liability is incurred, but revenues are recognized only when they are measurable and available as net current assets. This method of accounting is statutorily required in Nevada.

National Environmental Policy Act (NEPA).

A United States environmental law that established a U.S. national policy promoting the enhancement of the environment.

Net Position. Financial liabilities minus cash and cash equivalents. Net position was formerly known as fund equity until the application of GASB 65.

Nevada Revised Statutes (NRS). The current codified laws of the State of 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.

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Operating Expenses. This classification contains expenses such as professional services, rental expenses, research and studies, etc. that are projected to be spent in the course of operations. On a GAAP prepared financial statement, these costs will appear on the Statement of Revenues, Expenses and Changes in Net Position.

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.

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) 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 Funds. Enterprise Funds and Pension Funds.

Rate-of-Flow Control Systems. (ROFCS) Flow control in a hydraulic system is to regulate speed. The device control the speed of an actuator by regulating the flow rate.

Recharge. Lake water injected directly into the aquifer by wells to store it for future use.

Reclaimed Water Distributions. (RWDS) This is wastewater that has been treated to specific standards.

Revenues. Funds received from various sources and treated as income to LVVWD to finance expenditures.

Revenue Bonds. Bonds where pledges are made to dedicate specific revenue sources to repay the bonds.

Rights-of-Way. (ROW) A right of way is a type of easement granted or reserved over the land for transportation purposes, this can be for a highway, public footpath, rail transport, canal, as well as electrical transmission lines, oil and gas pipelines.

Risk Management. An organized attempt to protect organization's assets against accidental loss in the most economical method.

River Mountains Treatment Plant (RMTP). Facility treats up to 300 million gallons of water per day. The facility provides additional reliability and capacity to Southern Nevada's municipal water treatment and distribution capabilities. It

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began delivering treated water in October 2002.

Safe Drinking Water Act (SDWA). Act is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the Environmental Protection Agency (EPA) is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards.

Salaries & Wages. A budget category that includes LVVWD employee salaries including overtime, longevity pay, and benefits.

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.

Supervisory Control and Data Acquisition (SCADA). Water operations control systems

Southern Nevada Water Authority (SNWA). Was formed in 1991 to manage Southern Nevada's water needs on a regional basis. The Authority comprises seven member agencies including the city of Henderson, city of Las Vegas, city of North Las Vegas, Big Bend Water District (Laughlin), the Clark County Water Reclamation District and the Las Vegas Valley Water District. SNWA provides wholesale water treatment and delivery for the greater Las Vegas Valley and is responsible for acquiring and managing long-term water resources for Southern Nevada.

Southern Nevada Water System (SNWS). Refers to the system of distribution facilities that delivers raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water providers.

Special Assessments. Fees that are charged to property owners in certain geographical areas for improvements. A fee is levied only to those property owners that receive direct benefit.

Streamlined Reliability Centered Maintenance. (SRCM) A systematic evaluation of plant equipment and maintenance requirements.

Tax Exempt Commercial Paper Program. (TECP) Tax-exempt commercial paper is short-term debt for which the interest payments are tax-exempt at the federal, state or local level.

Uniform Design and Construction Standards. (UDACS) The Uniform Design and Construction Standards For Potable Water Distribution Systems represent the minimum design and construction criteria for water distribution systems within the participating Agency's jurisdiction.

Water Quality Process Improvement Team. (WQPIT)

Wholesale Delivery Charge (WDC). The per acre-foot charge that SNWA charges purveyor members for the treatment and delivery of treated, potable water.