

SECTION 5

DEPARTMENT BUDGETS

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SOUTHERN NEVADA WATER AUTHORITY®

FISCAL YEAR 2016-17

OPERATING AND CAPITAL BUDGET

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Fiscal Year Ending June 30, 2017

Department Budgets

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

highlights of the 2016-17 Budget Plan. The following table presents the 2014-15 actual, 2015-16 Adopted Budget and 2016-17 Budget Plan for each of the departments.

Summary of Department Expenditures

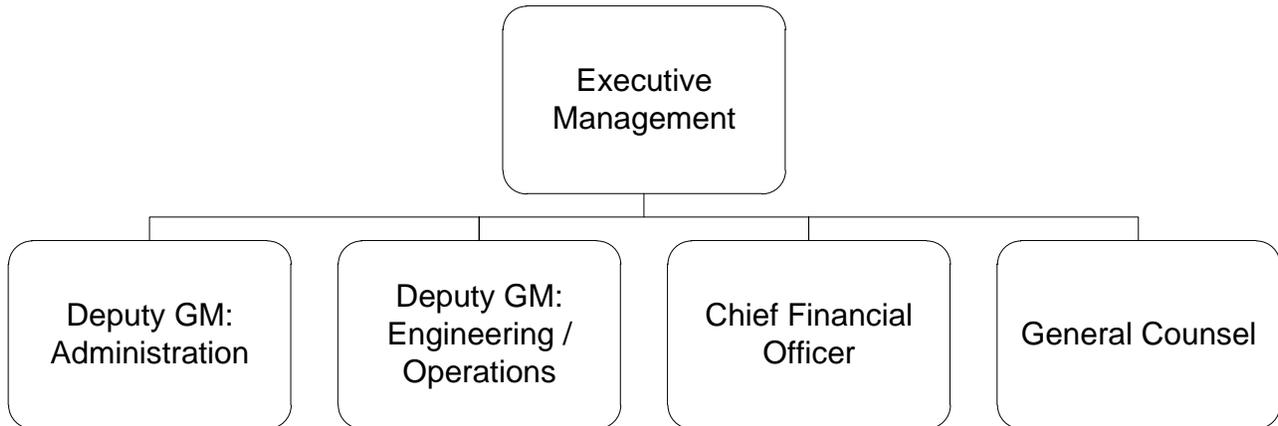
Departments	2014-15 Actual	2015-16 Budget	2016-17 Budget	Budget-to-Budget Variance
Executive Management	\$ 1,806,009	\$ 1,665,283	\$ 1,828,743	\$ 163,459
Legal Services	7,977,939	16,016,332	18,565,199	2,548,867
Finance	15,666,877	10,704,462	17,347,930	6,643,468
Energy Management	36,326,694	39,140,906	39,085,579	(55,327)
Information Technology	7,868,090	7,116,898	12,980,741	5,863,843
Human Resources	(6,721)	100,000	743,503	643,503
Public Services	7,288,104	10,593,624	11,512,260	918,636
Environmental Health Safety & Corporate Security	2,311,308	2,459,223	2,444,245	(14,978)
Customer Care & Field Services	308,314	205,473	398,859	193,386
Engineering	92,998,017	242,612,548	161,004,085	(81,608,464)
Resources & Facilities	26,143,336	48,019,401	49,070,133	1,050,732
Infrastructure Management	2,703,631	6,708,469	10,419,465	3,710,996
Operations	16,554,461	19,588,128	21,440,891	1,852,762
Water Quality & Treatment	21,831,854	23,283,337	31,145,512	7,862,176
Total Department Expenditures	\$ 239,777,913	\$ 428,214,085	\$ 377,987,144	\$ (50,226,941)
Bond Payments	\$ 167,633,716	\$ 223,751,702	\$ 271,025,463	\$ 47,273,761
Total Uses of Funds	\$ 407,411,629	\$ 651,965,787	\$ 649,012,607	\$ (2,953,180)

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EXECUTIVE MANAGEMENT

Level: 1000



Mission Statement

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

The Executive Management Team

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

General Counsel also oversee administrative and operational activities.

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

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Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 4,116	\$ 8,500	\$ 22,500
Maintenance & Repairs	21	15,000	-
Other Employee Expenses	176,564	216,200	192,150
Other Expenses	128,276	153,325	572,350
Total Operating Expenses	\$ 308,976	\$ 393,025	\$ 787,000
Capital Costs	\$ -	\$ 222,000	\$ -
Payroll Costs	\$ 1,497,033	\$ 1,050,258	\$ 1,041,743
Total Department Expenditures	\$ 1,806,009	\$ 1,665,283	\$ 1,828,743
FTE Positions	8.0	5.0	5.0

Major Activities

Over the past year, the Executive Management Team has directed a wide range of initiatives to stabilize the financial foundation of both organizations and ensure that Southern Nevada’s critical water supplies and infrastructure remain protected and reliable. These activities help to ensure that the community has access to adequate future water resources. Significant initiatives over the past year include:

- Completion of Intake No. 3 tunnel;
- An update to the Water Resource Plan to reflect changing conditions.
- Began the design and construction of a new Low Lake Level Pumping Station (L3PS), which is expected to be complete

by 2020.

- Participation in the December 2015 Special Legislative Session.
- Participated in the White House Water Summit in March 2016. The organization’s efforts to enhance the sustainability of water in the United States as part of the Colorado River Pilot System Conservation Program were highlighted. The program will be extended with additional funding as part of a collaborative initiative designed to increase Lake Mead and Lake Powell reservoir elevations for the benefit of the entire Colorado River Basin.
- Began the design and construction of infrastructure for the Garnet Valley water system.
- In conjunction with Governor Sandoval’s

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Chairmanship of the Western Governors' Association, participated in a summit of the Western Governors regarding drought. Staff also participated in the Governor's drought forum and Summit process, which facilitated a state-wide dialogue among interested stakeholders to identify best practices for drought policy, preparedness and management.

- Collaboration with Colorado River partners on conservation programs that will protect Lake Mead water elevations;
- An emphasis on asset management and enhanced service levels;
- Continued leadership and involvement in Colorado River issues and initiatives;
- Continued implementation of programs to increase efficiency and enhance the customer service experience; and
- Continued emphasis on the Springs Preserve to increase revenue through new programming and attractions.
- LVVWD won the Association of Metropolitan Water Agencies' 2015 Platinum Award for Utility Excellence, which is awarded by a panel of peer judges and based on effective utility management

Intake No. 3 Completion

In September 2015, workers removed a temporary bulkhead from the inlet to Intake No. 3. Within a week, Intake No. 3 began delivering water from the depths of the lake to customers in Southern Nevada. By drawing water from lower in Lake Mead, Intake No. 3 increases the flexibility of Southern Nevada's water treatment and delivery system, significantly enhances water quality, and

protects the community from declining lake levels.

Low Lake Level Pumping Station

Following a recommendation from the Integrated Resources Planning Advisory Committee Process, SNWA began design and construction on a new low lake level pumping station (L3PS) at Lake Mead. Because current and forecasted conditions project a high probability of lake levels continuing to decline—potentially to a depth lower than existing infrastructure has the ability to draw from—L3PS will connect to the third intake and have the capability to draw water from as low as 875 feet above sea level.

Drought Protection Charge

To fund costs associated with L3PS, SNWA implemented a fixed charge based upon customer meter size. The fixed charge, first implemented in January, is being phased-in over a three-year period.

SNWA Water Resource Plan

In September 2015, the Executive Management Team presented an updated iteration of the SNWA Water Resource Plan to the Board of Directors. The document provides a comprehensive overview of water resources and demands in Southern Nevada and discusses factors that will influence resource availability and use over the next 50 years.

The updated plan considers and addresses the relative highs and lows of future water demands, as well as supply restrictions that could occur over the long-term planning

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horizon. It also demonstrates that SNWA has sufficient permanent, temporary and future resources to meet all potential future planning scenarios.

Garnet Valley Water System

During a Special Session in December 2015, the Nevada State Legislature approved a tax package for the international car manufacturer, Faraday Future, to build an electric vehicle manufacturing facility in Garnet Valley, NV, approximately 25 miles northeast of Las Vegas. State funding for the construction of a water and wastewater system to serve the area also was included within the legislation. Production wells, treatment, storage reservoirs and a conveyance system are currently in design to serve Garnet Valley customers. This system will be funded through state bonds, built by the Southern Nevada Water Authority (SNWA) and will likely be operated by LVVWD, consistent with other outlying water systems. SNWA was prepared to provide construction water to Faraday by February 1, 2016.

The Executive Management Team is overseeing critical activities to ensure a reliable water supply to the area, such as the installation of necessary infrastructure, permitting water rights, creation of financing and billing mechanisms, implementation of a public stakeholder process and development of water rates and service rules.

Groundwater Development Project

As recommended by IRPAC, the SNWA continues to maintain the Clark, Lincoln and White Pine Counties Groundwater Development Project as part of its water

resource plan. The project will help meet the community's long-term demands and provide a water supply separate from the Colorado River. Although the project is unlikely to be needed in the short-term, the SNWA continues permitting activities, including legal review.

LVVWD Operations

Under direction of the Executive Team, the LVVWD Infrastructure Management Department implements an asset management plan. This plan allows staff to proactively monitor water system components and identify efficient, cost-effective solutions to maintain reliable water service, meet conservation goals and satisfy customer needs.

Stable operating costs, infrequent main breaks and low non-revenue water losses indicate that LVVWD infrastructure is generally in good condition. However, water infrastructure is vulnerable to corrosion, deterioration and malfunction, which if left ignored, can lead to service interruptions and costly emergency repair work. To maintain system reliability, near-term infrastructure renewal funding priorities are identified in the asset management plan and currently include the replacement of obsolete large meters, high-density polyethylene service laterals, high-failure cement pipe and at-risk steel distribution mains. By focusing on these priorities, the potential of water loss, system failure, leaks, customer inconvenience and service interruptions is significantly minimized.

One major project on the horizon is the replacement of an aging 16-inch pipeline that

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was installed on Las Vegas Boulevard in 1955. LVVWD is coordinating with two upcoming mega resorts—Alon and Resorts World—to replace parts of the pipeline in conjunction with necessary pavement improvements for the resorts. The project will install approximately 1,580 linear feet of 16-inch diameter pipe in the frontage of Resorts World and 1,400 linear feet in the frontage of Alon Resort. By coordinating with the resorts to include this work with their projects, LVVWD will save thousands of dollars in pavement restoration and eliminate additional traffic disruptions after the resorts are open. It is estimated that this work will take place in 2017.

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

2016-17 Performance Objectives

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

and environmental issues on the Colorado River.

- Continue construction progress on L3PS.
- Demonstrate national and international leadership in water research, conservation and water quality efforts.
- Coordinate efforts with stakeholders to address the needs of the Garnet Valley Water System, including infrastructure installation, water rights permitting, financing and billing mechanisms and development of water rates and service rules.
- Continue to implement the LVVWD's Major Construction Program and the SNWA's Major Construction and Capital Plan, including continued progress on the new low lake level pumping station.

2015-16 Major Accomplishments

- Updated the SNWA Water Resource Plan to include recommendations from the IRPAC process, new regional conservation efforts and the consideration of fluctuating supply and demand cycles of water resources.
- Replacement of more than 27,000 meters. The new meters provide improved reliability, increased accuracy and dramatically reduce the time it takes to read meters.
- Completion of Intake No. 3, which made its first water deliveries in 2015.
- Commenced construction on L3PS.
- Participation in the Nevada Drought Forum and Summit, which facilitated a statewide dialogue to identify best practices for drought policy, preparedness and management.

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- Worked with SNWA member agencies to evaluate opportunities for additional conservation measures.
- In September, the SNWA Board approved an agreement allowing Nevada to bank up to 150,000 acre-feet of unused water in California to temporarily supplement California's drought-stressed water supplies.
- Continued implementation of the Colorado River Conservation Pilot Program, through which 12 different proposals in the Upper and Lower Basins have been executed, totaling an estimated water savings of 37,000 acre-feet.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2016-17 Performance Objectives

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

2015-16 Major Accomplishments

- LVVWD delivered approximately 105 billion gallons of water to customers throughout its service area.
- Customer Care handled nearly 600,000 customer interactions and generated approximately 4 million bills.
- Field Services completed more than 228,000 field orders, including water-waste investigations, service start and stop requests and general maintenance work.
- Commenced construction of the Springs Preserve Streetscape exhibit and trails improvement project, which is anticipated

to be complete in the fall of 2016 and is funded primarily through the Southern Nevada Public Lands Management Act.

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

2016-17 Performance Objectives

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

2015-16 Major Accomplishments

- Las Vegas was one of only 11 U.S. cities that received a score of at least 4.5 or higher out of 5 on the American Council for an Energy Efficient Economy's 2015 City Energy Efficiency Scorecard. The scorecard examined 51 U.S. cities based on efficiency within their water systems.
- Ranked 2nd place in the 2015 Green Fleets Awards, which recognizes 100 best fleets in North America. The LVVWD has been ranked in the top 50 green fleets for eight consecutive years.
- In light of recent water quality compromises in Flint Michigan and at the Gold King Mine in Colorado, water quality

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remains a top priority. Over the past year, SNWA has applied for and received \$350,000 in water quality-related grant funding to help ensure that community water meets all state and federal standards.

- Completed solar project at River Mountains Water Treatment Facility, from which SNWA will purchase approximately 38,000 megawatts per year. SNWA's ultimate goal is to mirror the State's Renewable Portfolio Standard of receiving 25 percent of its energy from renewable resources by 2025. Currently, 18 percent of SNWA's energy portfolio is derived from renewable resources.
- The Spring Preserve's Origen and Desert Living Center buildings earned The Outstanding Building of the Year Award for the Pacific Southwest Region in the Earth category from the Building Owners and Managers Association International (BOMA) of Nevada. The award highlights energy efficiency and sustainability in buildings.
- The Moapa dace population has nearly quintupled since habitat restoration efforts began at the Warm Springs Natural Area. The population increased from 459 in 2008 to 2,248 in 2014. In 2015, that count increased by an additional 17 percent.
- Continued implementation of the Warm Springs Natural Area Stewardship Plan, which provides a framework for use and management of the property that preserves the integrity of natural resources and allows for water resource management. Second phase improvements include plans for an amphitheater, restroom, shade structure

and seating areas. Since acquisition of the property, SNWA has focused on restoration of aquatic fish habitat, control and eradication of invasive species, fire prevention and property maintenance. A public trail system is currently under construction to enable low-impact public use of the property.

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

2016-17 Performance Objectives

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

2015-16 Major Accomplishments

- LVVWD began using acoustic technology to listen for small pipeline leaks before they erupt into larger main breaks. This real-time, wireless technology allows crews to detect leaks at the onset and repair them before they develop into a potential emergency.
- Continued to contribute resources and research to the Colorado River Basin Supply and Demand Study process.
- Continued leadership in the implementation of the Las Vegas Wash Comprehensive Adaptive Management

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Plan, Las Vegas Wash Capital Improvements Plan and coordination of the Las Vegas Wash Coordination Committee. Since 2000, 19 of 21 planned weirs, 12 miles of bank protection and more than 400 acres of vegetation have been installed along a 6-mile section of the Wash. These stabilization and enhancement efforts have resulted in a 60 percent reduction in total suspended solids in the once-degraded waterway. The Wash has since been removed from the 303(d) list of impaired waters in Nevada and sediment loading into Lake Mead has been reduced.

- 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.

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

2016-17 Performance Objectives

- Plan and develop opportunities to increase the LVVWD and SNWA investments in alternative and renewable energy supplies.
- Continue to respond to current economic conditions and evaluate revenue needs and opportunities for additional efficiencies.

2015-16 Major Accomplishments

- In September 2014, the SNWA and LVVWD

began a two-year process to reduce debt service obligations by refunding approximately \$1.24 billion of existing debt. At current interest rates, it is estimated that this action will result in approximately \$150 million in cash flow savings through 2027.

- The SNWA continues to administer one of the most successful conservation programs in the country. Today, Southern Nevada consumes approximately 32 billion gallons less water than it did in 2002, despite the addition of nearly a half-million new residents. The SNWA is on track to meet its goal of 199 total system gallons per capita per day before 2035.
- The Board of Directors approved a new policy for maintaining adequate reserves of cash and investments, which will be an important tool for mitigating the risks associated with potential volatility in sources or uses of funds. A similar policy was adopted by the SNWA Board.
- The previously-mentioned water banking agreement with California will add \$45 million to SNWA's Rate Stabilization Fund to help defer or reduce the impacts of future rate increases.
- Community participation in the Water Smart Landscapes Rebate Program has greatly increased. In 2015, more than 2,000 Water Smart Landscapes projects were completed, resulting in the conversion of nearly 2.5 million square feet of ornamental turf. Since program inception, 177 million square feet of turf have been converted, saving approximately 98 billion gallons of water.
- In July 2015, the SNWA Board of Directors approved promotional periods during which the Water Smart Landscapes rebate

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would be temporarily increased from \$1.50 to up to \$2 per square foot. Since that time, the SNWA has experienced a 36 percent increase in applications.

- Last year, the LVVWD issued 5,516 water waste letters and completed 2,303 water waste investigations, resulting in \$22,360 in assessed fees.
- In Fiscal Year 2014-15, Springs Preserve overall revenue increased by approximately 18 percent, third party business events grew by 43 percent and special event attendance increased by nearly 16 percent over the previous fiscal year.
- Divine Events assumed operations of the Springs Preserve café in July 2014. Since then, fiscal year to date revenues are 33 percent higher than they were over the same time span the previous year.

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

2016-17 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.

2015-16 Major Accomplishments

- Intake No. 3 was named the 2015 Global Tunneling Project of the Year by British magazine New Civil Engineer.

- The intake project also has been named as one of six finalists for the American Society of Civil Engineers' annual award for the world's most outstanding civil engineering achievement.
- The Nevada Society of Professional Engineers honored SNWA and its engineering staff when it awarded the 2016 Project of the Year to Intake No. 3.
- In 2015, staff contacted approximately 30,000 customers regarding nearly 180 LVVWD/SNWA construction projects and system maintenance activities.
- SNWA won the Association of Metropolitan Water Agencies' 2015 Platinum Award for Utility Excellence, which is awarded by a panel of peer judges and based on effective utility management.
- R&R Partners won a total of 10 Addy awards for various SNWA campaigns.
- LVVWD received a Pinnacle Award by the Public Relations Society of America Las Vegas Valley chapter for the Water District's social media program, which was recognized as one of the best in Southern Nevada.
- The Springs Preserve social media program continued to grow its followers in the past year. The Preserve's Facebook page gained an average of 1,000 followers a month and currently has nearly 44,000 followers.
- The Springs Preserve won the Best of Show Award from the Public Relations Society of America (PRSA) Las Vegas chapter for the collateral designs and marketing of the Springs Preserve Butterfly Habitat. The Preserve also won a Pinnacle Award for the communication and marketing campaign promoting the

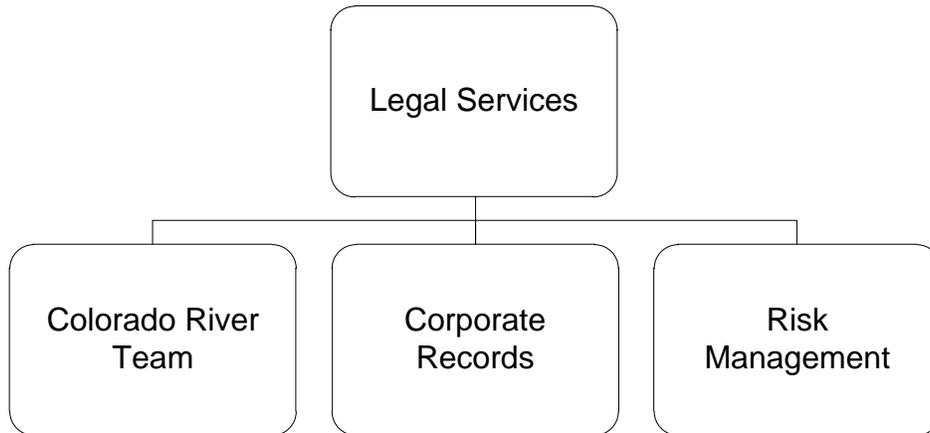
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summer camps, which experienced a 55 percent increase in early registrations and an 11 percent gross revenue increase. The PRSA Awards recognize the best public relations programs, tools and professionals in Southern Nevada, Northern Arizona and Southern Utah.

- Implemented the new ChangeYourClock.com website and introduced text message reminders for customers to change their watering clocks each season.
- Received a \$100,000 commitment from Wells Fargo to support the Springs Preserve Streetscape project.
- Since 1999, the SNWA has assisted more than 500 well users to connect to a municipal water supply, in compliance with the SNWA's financial assistance guidelines for the Groundwater Management Program as established by the Nevada Legislature. Through the Sub-meter Assistance Program, 398 sub-meters have been distributed to well owners, 210 rebates have been issued for the installation of those sub-meters, and approximately 360 wells have been plugged and abandoned.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Legal Services
Fiscal Year Ending June 30, 2017

LEGAL SERVICES
Level: 1200



Mission

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

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 has recently become more active

in resource planning with the establishment of the Colorado River Team division and continues to advise on electrical power issues. The Corporate Records division works to ensure compliance with document preservation, retention, and disposition regulations and internal policies. 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 2016-17 budget contains continuing funding to support these

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efforts and for outside counsel who perform a variety of other legal services for the organization. Funds have been retained in the budget to continue the corporate records

effort. The document management effort has reached significant milestones but project objectives remain to be accomplished.

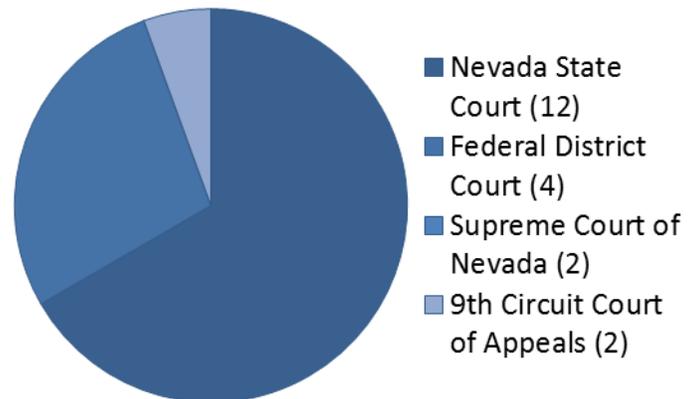
Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 2,145	\$ 9,000	\$ 28,000
Other Employee Expenses	84,342	52,000	104,000
Other Expenses	6,185,242	4,043,803	4,450,803
Total Operating Expenses	\$ 6,271,729	\$ 4,104,803	\$ 4,582,803
Capital Costs	\$ -	\$ 9,786,667	\$ 11,524,000
Payroll Costs	\$ 1,706,210	\$ 2,124,862	\$ 2,458,396
Total Department Expenditures	\$ 7,977,939	\$ 16,016,332	\$ 18,565,199
FTE Positions	9.6	11.9	13.9

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. The Colorado River Team works to protect and enhance Nevada’s Colorado River entitlement, while the Corporate Records division manages the organization’s records retention policy.

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



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Strategic Plan Objectives and Accomplishments

Deliver an Outstanding Customer Service Experience

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

Strengthen and Uphold a Culture of Service, Excellence and Accountability

Legal Services, the Colorado River Team, Corporate Records, and Risk Management have provided and will continue to provide training sessions to organization staff to develop internal capacity and strengthen the culture of excellence.

2016-17 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 assist staff with legislative issues, reviewing and drafting proposed legislation when requested.

2015-2016 Major Accomplishments

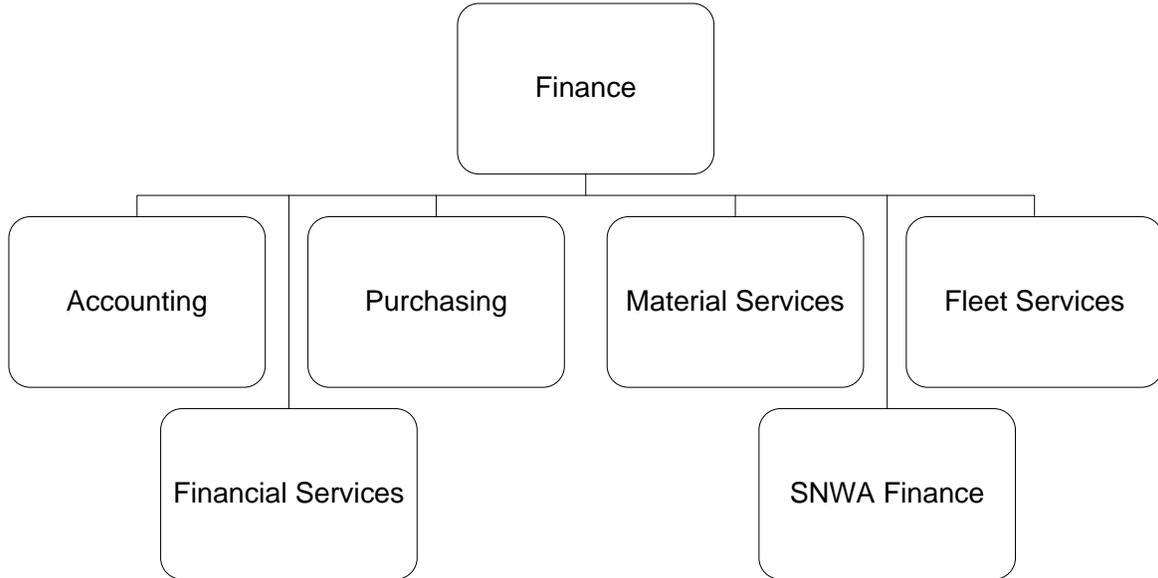
- Negotiated water and power resource positions and agreements, as well as renewable resource agreements.
- Kept construction on schedule without costly delays due to litigation and arbitration.
- Prevailed in adversarial proceedings.
- Minimized the need for any construction project condemnations.

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Southern Nevada Water Authority
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Department Budgets
Finance
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FINANCE
Level: 2100



Mission

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

Department Description

The Finance department is responsible for day-to-day accounting and 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 SNWA and a Pension Trust Fund. In the Enterprise Funds, financial activities are recorded in a manner similar to that of a

private business. The Pension Trust Fund is used to account for the investments, earnings, contributions, expenses, and projected pension benefits of the LVVWD Pension Plan. The department also coordinates the LVVWD and the SNWA budget processes in compliance with Nevada State Law. Internal accounting controls, as required under generally accepted accounting principles (GAAP), are strictly enforced in safeguarding property and in preparing financial statements.

Budget Objectives and Highlights

The 2016-17 Finance department budget contains funding to maintain the necessary functions the LVVWD and the SNWA require for its services to their customers.

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Finance
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Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 728,930	\$ 646,350	\$ 1,139,750
Maintenance & Repairs	49,901	204,300	179,800
Rental & Leases	53,902	58,450	63,850
Other Employee Expenses	39,502	54,550	81,135
Other Expenses	10,690,832	4,284,879	7,144,075
Total Operating Expenses	\$ 11,563,068	\$ 5,248,529	\$ 8,608,610
Capital Costs	\$ 52,997	\$ 951,000	\$ 4,108,000
Payroll Costs	\$ 4,050,812	\$ 4,504,934	\$ 4,631,320
Total Department Expenditures	\$ 15,666,877	\$ 10,704,462	\$ 17,347,930
FTE Positions	29.0	32.4	32.0

Department Performance

Accounting. The Accounting division is responsible for the development, maintenance and administration of the LVVWD accounting system. 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-seven (37) consecutive years. The division provides accounting and payroll services for the LVVWD, the SNWA, Big Bend Water District (BBWD), Kyle Canyon, Coyote Springs, and three rural systems that are part

of the LVVWD. The division also provides accounting services for the Las Vegas Valley Water District Retirement Plan.

Accounting functions include: ensuring financial statements and reports are accurate, complete and consistent; maintaining the general ledger, inventory, fixed asset and other system records; cash management and the accounting and reporting of investments of LVVWD funds; reconciling bank statements with thousands of disbursements; processing payroll for approximately 1,250 employees; processing accounts payable for approximately 42,000 payments annually, which earned more than \$280,000 discounts in fiscal year 2014-15 including an annual credit card rebate of \$112,000; accounting for

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the Springs Preserve; and accounts receivable, which includes federal and state agency grant accounting that require preparing and submitting reports to obtain reimbursements.

In October 2014, the LVVWD began outsourcing its mail payment processing. The Accounting division researches and resolves mail payment exceptions, records and reconciles payments received by direct debit, electronic funds transfer, credit card payments by phone, internet payments, recurring credit card transactions and payments received from over 150 satellite pay station locations throughout the Las Vegas valley.

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

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

Financial Services is responsible for preparing an annual line item operating and capital budget. This encompasses budget development, implementation and monitoring for the LVVWD, SNWA, and BBWD. Financial Services prepares variance reports

by division and division managers 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 analysis and develops water rate, connection and other fee recommendations for the LVVWD and SNWA departments, projects and programs. On an annual basis, the division conducts a survey of water rates from over 60 cities located in the western United States, closely monitors water production and consumption data, and prepares Annual Statistical Reports.

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

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Purchasing Services. The Purchasing division is responsible for all purchasing related activities for the LVVWD, the SNWA and the Springs Preserve. These activities include: market analysis; developing new, expanded or alternative sources of supply; systems contracting; formal and informal bids; personal property sales; sustainable purchasing program; and the diversity program. Negotiations of renewed contracts and other cost saving measures continue to be the division's priority. Purchase orders are issued to award contracts and reflect the work processed by the division.

Material Services. Material Services primary role is to deliver reliable customer service through material management services, material storage and retrieval. To ensure their internal customer's material needs are met, Material Services relies heavily on their supplier partnerships. Materials are received, inspected, and processed at both the LVVWD and SNWS Main distribution warehouses for final delivery to their internal customers at LVVWD, SNWS, and to eleven satellite facilities. For the period ending February 2016, the inventory assets were valued at \$17.1 million consisting of 16,257 inventory items. Material Services supplies and issues O&M inventoried materials needed to maintain the LVVWD water production and delivery system. Material Services issued a monthly average of inventory valued at \$1.5 million. The inventory issued, which was valued at \$1.5 million, is also measured in "touches" and Material Service processed a monthly average of 6,300 touches. Material Services also received and processed incoming inventoried material as well as other non-discretionary materials purchased by

LVVWD internal users. Material Services processed an average monthly value of \$3.1 million of these in-coming materials. This receiving activity, or value of \$3.1 million, is also measured in "touches" and Material Services processed a monthly average of 1,194 touches. Material Services supports sustainability through inactive inventory reduction, use of recycled paper, repurposed shipping materials, and recycled cardboard. Material Services also coordinates and manages the LVVWD investment recovery efforts through the LVVWD auction program, bid sales, and the public sales auction for various recyclable and repurposed materials. Additional services include supply chain management; O&M and/or capital project material planning and forecasting; material coordination for special projects; emergency job site deliveries; safety garment administration; coordination of semi-annual first-aid kit replenishment; Safety Data Sheet administration; courier services for organizational needs which includes lab samples; loanable tool support; FedEx and UPS shipping services.

Mail Services. Mail Services is the central depository for processing incoming and outgoing intercompany mail and United States Postal Service (USPS) mail and is located at the LVVWD Valley View campus and the Molasky Corporate Center. Core responsibilities include the administration, management, receipt, sorting, processing and timely delivery of all interoffice and incoming USPS correspondence LVVWD wide. Mail Services delivers daily to the SNWA, SNWS and Springs Preserve campuses and to all outlying remote facilities throughout the LVVWD service area. All Mail Services personnel are required annually to attend terrorism training

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conducted by the LVVWD Emergency Preparedness Coordinator. Mail Services' high profile activities include the delivery and posting of public notices; administering the LVVWD postage budget; conducting interoffice mail and desktop delivery of stationery; and special communication campaign folding projects. Mail Services consistently evaluates their work distribution and processes to add organizational value, maximize resources, gain productivity and efficiency.

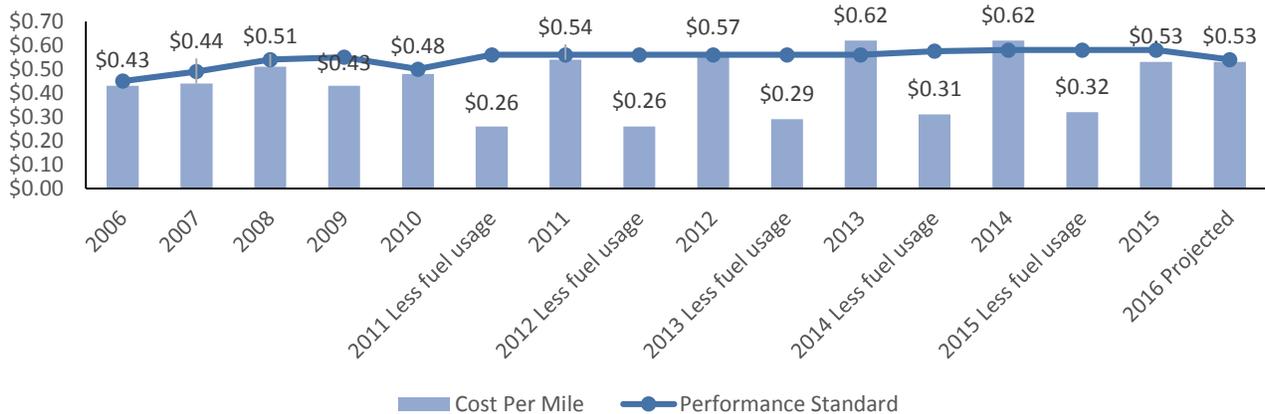
Fleet Services. The mission of the Fleet Services division is to provide safe, reliable and functional vehicles, equipment, tools, fuel, and communications equipment to LVVWD, SNWA and BBWD so they can be used to support water delivery.

Fleet Services currently maintains more than 1,500 vehicles and support equipment pieces and 1,200 pieces of communications equipment, supporting the LVVWD, SNWA, and BBWD. Services include repair, maintenance, acquisition and disposition of all

vehicles, support equipment, communications equipment and loanable tools. Fleet Services also operates six service facilities and six fueling facilities located in Las Vegas, Boulder City, Henderson and White Pine County.

For fiscal year 2016-17, the Fleet Services Division has requested 106 new and replacement vehicles and related equipment at a cost of approximately \$7,842 million. The replacements are for vehicles and equipment having reached the end of their life cycle. Best management practices suggest these vehicles be replaced to maintain serviceability, reliability, repair costs and downtime at acceptable levels. Apart from new and replacement vehicles, Fleet Services is also requesting new GPS equipment for fleet vehicles. This equipment will be used to better manage the fleet as well as reduce fuel usage and enhance safety. The chart below reflects the LVVWD average vehicle operating cost per mile compared to accepted performance standards.

**2006 - 2015 Average Vehicle Operating Cost Per Mile
Compared to Performance Standard**



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Strategic Plan Objectives and Accomplishments

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

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

2016-17 Performance Objectives

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

2015-16 Major Accomplishments

- Secured first \$520 million of funding for SNWA Low Lake Level Pumping Station and other capital infrastructure.
- Established formal policies for the LVVWD and SNWA to reserve funds for base operating expenses, debt service, capital improvements, and unforeseen events.
- Provided Emergency Response Plan logistical support in response to BBWD's boil water order by delivering 1,512

1-gallon containers of drinking water to local customers.

Strategic Plan Goal - Deliver an outstanding customer service experience.

2016-17 Performance Objectives

- Develop and Implement an electronic routing application for contract awards within General Manager's authority.
- Continue to improve and streamline day-to-day accounting practices, specialized processes, and improved financial analyses, reporting, and information sharing for the departments.
- Provide the best possible equipment choices to the departments to assist them in meeting their goals efficiently and effectively.
- Continue to include customers in the specification process of new and/or replacement vehicles and equipment.
- Minimize equipment down time through the use of technology, technician training and good parts availability.

2015-16 Major Accomplishments

- Implemented an on-line bidding system in coordination with nine other Nevada local governments.
- Provided Maintenance Engineering forecasting and material management services for the wellsite communications upgrade program. Fiscal year-to-date purchases are \$405,000 and material issues are \$391,000 consisting of 25 SKU's.
- Provided timely support to Meter Services, the Meter Repair Shop and the

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Meter Change-out Retrofit team for the meter change-out program.

- Enhanced customer service in outlying areas through the use of technology, improved parts availability and scheduling of technicians.
- Maintained Automotive Service Excellence (ASE) “Blue Seal of Service Award”.
- Maintained ASE “World Class Technician Status”, adding one supervisor and one additional technician to the World Class Standings.

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

2016-17 Performance Objectives

- Provide weights and categories for all purchase orders to assist in the computation of the company’s carbon footprint.
- Increase purchases of recycled and environmentally friendly products.
- Continue to lead and develop the alternative fuel vehicle program in support of clean air in the Las Vegas Valley.
- Recondition and reuse service bodies for light duty vehicles.
- Expand the LVVWD plug-in electric vehicle fleet.
- Expand the use of compressed natural gas as an automotive fuel.

2015-16 Major Accomplishments

- Provided 100 percent of stocking class A, B and C’s inventory items’ weight and

category profile for the Greenhouse Gases Report. This information is used to compute the company’s annual carbon footprint based on issue and purchase volume.

- Investment recovery efforts from contractor bid sales for scrap metals generated \$236,800 fiscal year-to-date (FYTD) to the Operating Fund.
- Replaced older diesel powered vehicles with flex fuel vehicles, reducing the LVVWD carbon foot print.
- Recycled and reused several service bodies and mounted equipment on light and medium duty utility vehicles, reducing the use of raw materials.
- Recycled used oil to be used as heating fuel for the fleet maintenance facility in Spring Valley.
- Selected as one of Heavy Duty Trucking Magazines "Top 50 Green Fleets".
- Selected as one of 100 Best Fleets “Top Green Fleets in North America”, placing 2nd.

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

2016-17 Performance Objectives

- Begin the implementation of improved report technology for the upgraded general ledger accounting system that better automates information for more timely and useful reports.
- Research and initiate policy changes and alternative payment methods resulting in a reduction in the number of paper customer refund payments issued.

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- Maximize the productivity of the upgraded accounting system by evaluating and implementing new functionality.
- Encourage the purchase of sustainable products by facilitating meetings with suppliers and interested departments.
- Continue to equip fleet facilities with state of the art test 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.

2015-16 Major Accomplishments

- Upgraded Oracle Financials accounting system from 11i to R12.
- Selected a financial reporting software so Finance can better serve its customers.
- Fully implemented Phases I and II for the utilization of wireless warehouse hand held devices and barcode technology for issues, item inquiry and location changes. Phase III and IV are scheduled for the 2nd and 4th quarter in 2016.
- Upgraded all LVVWD two-way radios from analog to digital technology in order to improve communications and enhance interoperability throughout the Las Vegas valley. Automated several manual payment processes to improve accuracy and efficiency.

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

2016-17 Performance Objectives

- Issue Clark County 2016B refunding bonds.
- Continue the Finance department's long-standing record of excellence in budgeting and financial reporting.
- Continue to enroll vendors and develop payment opportunities for credit card program in order to increase the credit card rebate.
- Reduce the volume of manually processed payments through customer outreach efforts in coordination with Customer Care and Field Services.
- Reduce the overall cost per mile/hour of operation for LVVWD vehicles and equipment (based on market economics).
- Continue to identify vehicles/equipment that are low usage and not cost effective.

2015-16 Major Accomplishments

- Issued the Clark County 2016A refunding bonds generating net present value savings of \$56 million.
- Issued the LVVWD 2016A & B refunding bonds generating net present value savings of \$31 million.
- Secured a State Revolving Fund loan of \$15 million for LVVWD capital infrastructure.
- Facilitated the purchase of floors 12 and 14 at the Molasky Corporate Center for an estimated savings of \$8.6 million.
- Successfully implemented procedures with the U.S. Army for billing/reimbursement of the Sloan Water System.

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- Saved \$100,000 in soft savings by managing repairable inventory versus purchasing new.
- FYTD inactive inventory efforts at LVVWD and SNWS Material Services resulting in \$179,100 inventory reduction or 201 SKU's.
- To maximize resources, improve process efficiencies, and to ensure site security, Mail Services administers desk top stationery delivery District wide.
- Recovered over \$459,372 in vehicle resale at auction.
- Replaced older diesel powered vehicles with flex fuel vehicles, saving an estimated \$240,000 in capital replacement costs.
- Reconditioned and reused several service bodies and mounted equipment on light and medium duty utility vehicles saving over \$100,000.
- Partner with other departments to create vehicle/equipment committees to better assess needs and improve end products provided.
- Continue to promote team safety initiatives.
- Maintain Fleet Certification as an "Industry Competitive Fleet Management Operation" through the Fleet Counselor Services (FCS) and the Rocky Mountain Fleet Management Associations (RMFMA).
- Maintain ASE "Blue Seal of Service Award."
- Maintain ASE "World Class Technician Status."
- Maintain I-CAR Gold Class Certification for Fleet Services paint and body operations.

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

2016-17 Performance Objectives

- Submit the LVVWD and SNWA CAFR for the year June 30, 2016, to the GFOA and receive the Certificate of Excellence in Financial Reporting.
- Receive unmodified opinion from external auditors for the LVVWD, SNWA and BBWD fiscal year 2016 audits.
- Receive the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year ended June 30, 2017.
- Collaborate with Human Resources on supplier diversity outreach efforts.

2015-16 Major Accomplishments

- Received the Certificate of Excellence in Financial Reporting from the GFOA of the United States and Canada for the thirty-seventh (37th) consecutive year for the LVVWD CAFR for the year ended June 30, 2015.
- Received the Certificate of Excellence in Financial Reporting from the GFOA for the twentieth (20th) consecutive year for the SNWA CAFR for the year ended June 30, 2015.
- Received an unmodified opinion from external auditors for the LVVWD, SNWA and BBWD fiscal year 2015 audits.
- Received the Distinguished Budget Presentation Award from the GFOA for the LVVWD and SNWA Operating and Capital Budgets for the year ended June 30, 2016.
- Material and Mail Service created a "capacity to production" metric to

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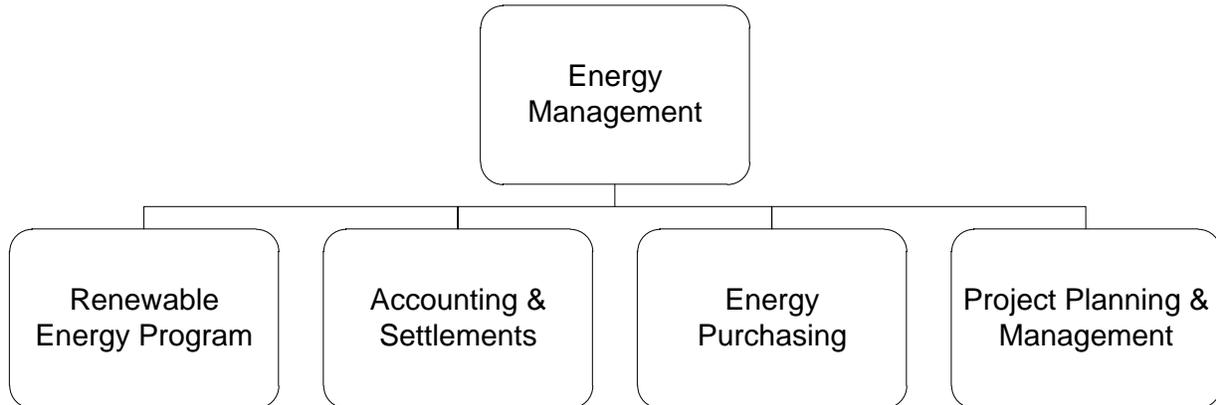
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document and monitor core activities to determine how effectively resources are being utilized compared to demand.

- LVVWD Material Services achieved 21 years and SNWS Material Services achieved 15 years without a lost time accident.
- Validated the 35 percent or \$5.9 million of Material Services' \$17 million inventory categorized as critical.
- Validated emergency preparedness inventory to ensure material standing and shelf-life quality assurance.
- Maintained Fleet Certification as an "Industry Competitive Fleet Management Operation" through the FCS and the RMFMA.
- Maintained ASE "Blue Seal of Service Award".
- Maintained ASE "World Class Technician Status".
- Achieved I-CAR Gold Class Certification for Fleet Services paint and body operations.

ENERGY MANAGEMENT

Level: 2200



Mission

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

Department Description

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

including the Las Vegas Valley Water District (LVVWD), the City of Las Vegas, the City of Henderson, the Clark County Water Reclamation District and the City of North Las Vegas.

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

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

Budget Objectives and Highlights

The fiscal year 2016-17 Energy Management department budget contains funding for all expenses associated with the procurement and management of energy resources for the SNWA’s electrical loads. Expenses for the

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

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Energy	\$ 34,853,251	\$ 37,524,906	\$ 37,708,556
Materials & Supplies	2,145	2,500	2,500
Maintenance & Repairs	2,043	-	-
Rental & Leases	252,581	267,467	-
Other Employee Expenses	10,716	8,250	8,250
Other Expenses	352	1,250	1,250
Total Operating Expenses	\$ 35,121,088	\$ 37,809,873	\$ 37,720,556
Capital Costs	\$ -	\$ 25,000	\$ -
Payroll Costs	\$ 1,205,606	\$ 1,306,033	\$ 1,365,023
Total Department Expenditures	\$ 36,326,694	\$ 39,140,906	\$ 39,085,579
FTE Positions	5.5	6.0	6.0

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Department Performance

Silver State Energy Association.

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

Expanding the energy portfolio managed by this group to include the SNWA member agencies and the members of the SSEA has brought significant economies of scale and portfolio synergies to each of the participants, including the SNWA. Furthermore, the energy portfolio has been able to be expanded in this way without increasing the size of the labor and overhead required to properly manage it. Over \$1 million per year of general overhead and operating costs are now being paid for by non-SNWA entities, costs that otherwise would be paid for by the SNWA.

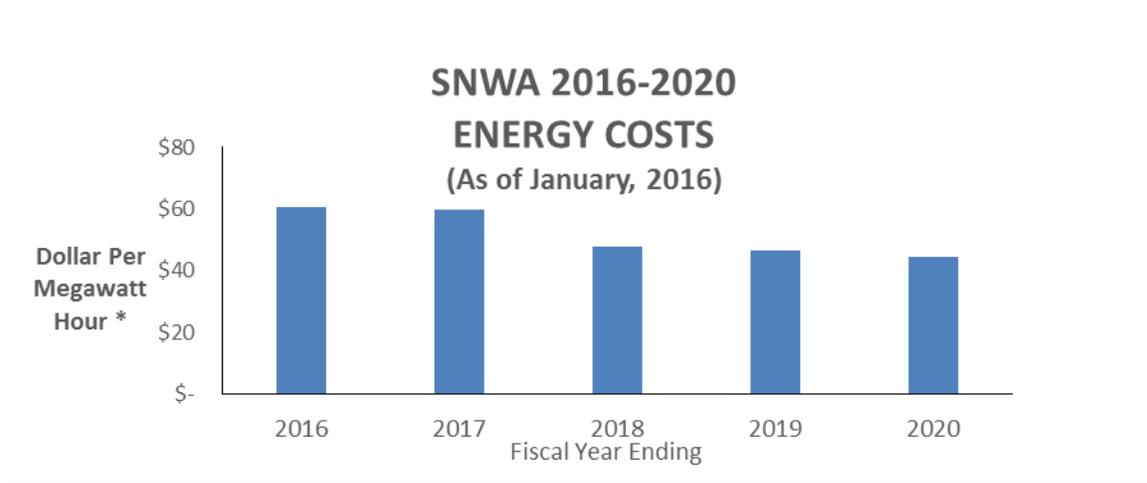
Some of the benefits the SNWA realizes by participating in the SSEA include 1) economies of scale when purchasing energy; 2) lower overhead costs; 3) lower balancing, imbalance and ancillary services costs due to the synergies of serving a single larger portfolio vs. serving the different load shapes of each individual entity; 4) federal hydropower optimization, which can only be

realized by serving the combined portfolio; 5) economies of scale, shared resources, and shared costs of project development work; and 6) additional opportunities to work cooperatively with the other public entities in the overall energy portfolio.

Energy Price Stability.

Energy Management measures its success on the basis of how well it is meeting its objective to provide energy to the SSEA members yielding stable, low and predictable prices. Consistent with the SSEA's Energy Risk Procedures the price exposure of SNWA's energy portfolio has largely been eliminated through calendar year 2020. 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 2020, changes in the market price of energy are expected to have little effect on the SNWA's expected costs during this period. The following chart shows the SNWA's actual and projected energy costs through calendar year 2020 as of the end of January 2015.

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

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

SSEA Eastern Nevada 230 kV Transmission Project.

For the past several years, the SSEA members have been working cooperatively to develop the Eastern Nevada Transmission Project (ENTP), a 230 kV transmission system that

would allow for the interconnection of SSEA members’ electrical systems with each other and with the Mead Substation. Mead is the major regional wholesale market access point in Southern Nevada. The SSEA has completed an Environmental Assessment for the ENTP and is awaiting a right-of-way grant and permits from the Bureau of Land Management.

SNWA and LVVWD Sustainability Initiatives.

The SNWA will continue to pursue economical renewable energy that will contribute to the SNWA’s and the LVVWD’s overall supply portfolio:

Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Maximize the value of existing renewable energy facilities.

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- Secure Right of Way Grants to develop the SSEA's 230 kV Eastern Nevada Transmission Project.
- Coordinate the installation of the electric power delivery system for the Lower Lake Level Pumping Station (L3PS).
- Develop new economical renewable energy supply options.

2015-16 Major Accomplishments

- Completed the installation of a 14.4 MW solar PV plant at the River Mountains Water Treatment Facility and began receiving power in December 2015.
- Defined the requirements for the installation of the electric power delivery system for Lower Lake Level Pumping Station #3.
- Coordinated the ENTP line routing with other project developers to avoid routing conflicts through the Lava Butte/Lake Las Vegas corridor, allowing the SSEA to receive a right-of-way and permits from the Bureau of Land Management.
- Developed economical options for several alternative energy project proposals.
- Negotiated an agreement to sell 25% interest in the Silverhawk Power Plant for \$77 million cash and will also realize \$5 million in annual operating savings.
- Executed new Portfolio Energy Credit (PEC) sales agreements with Barrick Gold and Switch.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2016-17 Performance Objectives

- Continue to work with the SSEA members and the SNWA member agencies to understand and meet their energy related information and reporting needs.
- Update the SSEA website to include current information of value to members and trade partners.
- Work with NV Energy to structure a Hoover D tariff that will allow the member agencies to use their Hoover allocations at NV Energy retail sites.
- Support the member agencies' efforts to determine the most optimal use of their new Hoover D allocations.

2015-16 Major Accomplishments

- Provided technical support and assistance to the energy customer member agencies in their pursuit of an allocation of Hoover Dam energy. All of the member agencies were successful in obtaining an allocation of Hoover Dam energy from the federal government.
- Evaluated the potential cost savings of moving additional LVVWD sites/meters to the Energy Supply Program and presented results to SNWA Management.
- Collaborated with the SNWA Finance department to define and implement improved energy reporting and accounting practices.
- Worked with City of Henderson to develop an automated billing report.

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- Saved SNWA and their member agencies \$11 million compared with NV Energy rates.

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

2016-17 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.
- Consolidate all of the LVVWD solar renewable systems under Energy Management and transition ongoing maintenance oversight of the facilities to CRC.
- Develop and execute a warranty and maintenance agreement with SunPower.
- Increase the efficiency of SSEA financial operations and improve financial reporting through timely book closing.
- Identify information bottlenecks preventing the timely closing of the SSEA books and request solutions.
- Migrate accounting records for the member agency books to Quickbooks and eliminate the need to maintain those records in the Revenue & Expense workbook.
- 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.
- Develop a wheeling rate for the Power Delivery Project.
- Implement a new system for the accurate and timely tracking performance of renewable energy systems and portfolio energy credits.
- Evaluate the usefulness of the information being posted to the SSEA website and modify the website accordingly.
- Implement MuniLink for PEC invoicing; thoroughly test MuniLink as a tool that can be adapted to other billing applications.
- Create a timely and accurate PEC/REC report management tool.

2015-16 Major Accomplishments

- Maintained a fixed cost energy portfolio for our customers within compliance requirements.
- Successfully completed the migration of accounting records to Quickbooks increasing both efficiency and availability of financial information.
- Completed a clean external audit, without any significant audit findings, of the SSEA's financial records after converting from Excel to QuickBooks, allowing for the regular production of improved financial reports.
- Followed through on a regulatory intervention concerning transmission and ancillary services rates resulting in the saving of \$2million.
- Developed a margin call estimation tool; created tools to further analyze market

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data available from the Bloomberg Professional System.

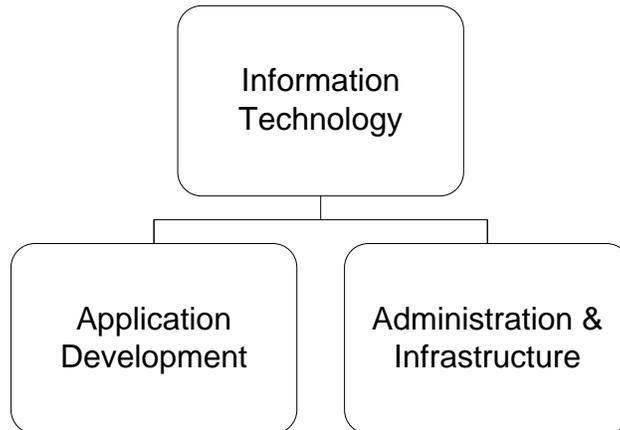
- Initiated desktop deposit to allow bank deposits electronically from our offices.
- Established and followed a book closing and review schedule.
- Utilized expanded financial staff to improve internal control points through the addition of new process reviews.
- Re-evaluated and streamlined internal credit procedures. Began the credit enabling process with several counter parties.
- Implemented the use of Pioneer's "sandbox" server to more efficiently complete annual model changes.
- Contracted with a third party billing provider to produce REC/PEC invoices.

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INFORMATION TECHNOLOGY

Level: 2300



Mission

Establish a leadership position in 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, ongoing related support, cybersecurity, and telecommunications. 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 2016-17 Information Technology department budget contains funding to continue the development and implementation of technology projects and provide daily operational support to LVVWD, SNWA, the Springs Preserve, and BBWD information technology systems.

Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Information Technology
 Fiscal Year Ending June 30, 2017

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Water	\$ -	\$ -	\$ -
Energy	-	100	-
Materials & Supplies	45,887	60,400	839,700
Maintenance & Repairs	197,842	7,000	2,619,059
Rental & Leases	2,580	149,000	366,000
Other Employee Expenses	-	21,150	46,980
Other Expenses	230,061	561,200	1,719,100
Total Operating Expenses	\$ 476,371	\$ 798,850	\$ 5,590,839
Capital Costs	\$ -	\$ 373,000	\$ 1,171,023
Payroll Costs	\$ 7,391,719	\$ 5,945,048	\$ 6,218,879
Total Department Expenditures	\$ 7,868,090	\$ 7,116,898	\$ 12,980,741
FTE Positions	42.5	34.4	34.5

Department Performance

Information Technology completed a number of projects to improve business processes, functionality, system operations, and security, while reducing expenses. Major projects during the year included the acquisition and implementation of Office 365, a three-year PC refresh program, upgrade of Oracle Financials, installation and implementation of a new Laboratory Information Management System (LIMS), implementation of metering analytics online portal, enhanced customer focused applications to provide better usability,

implementation of an Automated Outbound Dialing Interactive Voice Response (IVR) system, begin analysis for the acquisition and implementation of new hardware to support the upgrade of the LVVWD Supervisory Control and Data Acquisition (SCADA) system project and upgrades to Oracle servers and operating systems.

Information Technology Application Development. This multi-division team performs software development, upgrades and version testing, and validation of key

Southern Nevada Water Authority
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operational systems utilized throughout the organization.

Application Development will continue to prioritize the upgrade of core enterprise systems, a multi-year process initiated in fiscal year 2015. The Customer Care and Billing System upgrade will be completed with planned functional improvements in customer information, billing, payment, and meter data management areas. The organization's payment systems, including cashiering and automated payments, will be upgraded to be EMV (Europay, MasterCard, and Visa), or chip card compliant, a requirement of Payment Card Industry (PCI) Security Standards.

The implementation of a Human Capital Management system is a comprehensive effort to consolidate time and attendance, payroll, recruitment, learning management, analytics, self-service, and core human resource management systems into one integrated solution. Benefits will include elimination of several disparate systems, further reduction in manual workload of Human Resources (HR) administrative duties, and added capabilities for recruitment, performance and compensation management.

Hansen, the system supporting construction and approval of new service connections for Engineering Services and Engineering Inspection, is an aging system that will be replaced through enhancements to existing systems. This approach will eliminate outdated technology and leverage existing systems, reducing overhead and implementation costs.

A major upgrade is planned for the Fleet Management System to take advantage of many improvements to the user portal interfaces, the warranty writing, and workflow processes. This upgrade will keep us current with the software while leveraging key functionality. In addition, Application Development will provide integration services and evaluation support to Fleet Services for their implementation of a GPS/telematics system that will greatly enhance their fleet management capabilities. This system will be implemented in phases over the next several years.

An upgrade is planned for Avantis, the organization's asset management/preventative maintenance system. This upgrade will provide a reengineered user interface designed to be compliant with current technology standards. Ongoing support will continue to be provided to Operations and Water Quality staff through effective delivery of SCADA information required for compliance, metrics, and performance monitoring.

Application Development will be supporting technology review, planning, and implementation where needed in other key business areas including Call Center and IVR systems, bill payment and printing services, customer self-service payment channels, and financial management systems.

Information Technology Administration and Infrastructure. This multi-division team is comprised of the Support Services division, the Technical Services division, and the Spatial Technologies division. The Technical Services division is responsible for the application administration of critical business systems

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utilized throughout the organization. It is also responsible for the architecture and administrative support for the corporate system to include database infrastructure, server administration, enterprise storage, e-mail and mobile communication, web services, cybersecurity, network infrastructure, and the telecom group which manages wireless communications devices (cell phones, modems, and air cards) and the main telecom switch for all locations and campuses. Additionally, this division is responsible for the maintenance of the SCADA systems for LVVWD, SNWA, and BBWD. The division maintains and configures the LIMS which supports both the Water Quality and Applied Research Laboratories.

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

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

Ongoing initiatives include continued work to provide off-site disaster recovery capability, allowing continuous service and business continuity, defense against cybersecurity threats and vulnerabilities, cybersecurity awareness briefings, system

upgrades/replacements to critical infrastructure hardware reaching end of life, implementation of technology to meet required PCI standards, increasing network performance and efficient data storage capacity, ensuring high availability of applications and databases, support to mobile devices, as well as to develop and refine processes to support the infrastructure.

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.

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

Major on-going initiatives include replacement of an aged SNWA SCADA system, which is a multi-year, multi-million dollar, joint effort with SNWA. The replacement project is in progress and will continue for approximately another year. Other major initiatives include the completion of the LIMS at River Mountains Water Treatment Facility and the completion of the BBWD SCADA system.

The Spatial Technologies division is responsible for the acquisition and delivery of

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high-resolution imagery, Geographic Information System (GIS) applications and infrastructure to support GIS.

Strategic Plan Objectives and Accomplishments

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

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

2016-17 Performance Objectives

- Upgrade corporate backup infrastructure to streamline backup policies, retire outdated servers and software, provide enhanced disaster recovery options, and maintain software vendor support.
- Implement a Human Capital Management System to consolidate human resource systems, achieve further reduction in manual workload of HR administrative duties, and add new capabilities for recruitment, performance and compensation management.
- Enhance corporate data security with emerging technology to identify threats and mitigate risk.
- Upgrade the Customer Care and Billing System to provide functional improvements in customer information, billing, payment, and meter data management areas.

- Replace aging systems used to manage the construction and approval of new service connections with existing systems, in order to eliminate unsupported technology and reduce overhead and implementation costs.

2015-16 Major Accomplishments

- Implemented an Automated Outbound Dialing IVR System for Customer Care and Public Information to improve customer outreach, reduce delinquent shut-offs, and alert customers with outage notifications.
- Implemented Microsoft Office 365. Upgraded all Office suites to 2013 and implemented Office enhancements to include OneNote, OneDrive, and Skype for Business communications suite. This new cloud platform will reduce operational and capital costs while improving our mobile workforce computing and data accessibility.
- Completed the upgrade of Oracle Financials to ensure legal and regulatory continuity and maintain software vendor support.
- Upgraded backup infrastructure to streamline backup policies, retire outdated servers and software, provide enhanced disaster recovery options, and maintain software vendor support.
- Completed the upgrade of the Avantis Asset Management/Preventative Maintenance system which provided improvements to preventative maintenance forecasting, work order processing, replenishment management, and mass update capabilities.

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- Installed a campus-wide Wi-Fi network with internet access for vendors, business partner use, and for employee convenience.
- Implemented metering analytics on-line portal for Customer Care and Conservation to improve customer outreach, analyze consumption, events, trends, and improve forecasting.

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

2016-17 Performance Objectives

- Upgrade the organization’s payment systems, including cashiering and automated payments, to be EMV or chip card compliant, a requirement of PCI Security Standards.
- Continue server replacement with new hardware which will increase performance and operational stability.
- Continue to expand opportunities for new self-service programs to allow customers and businesses to interact and conduct business with LVVWD and SNWA through new technologies such as mobile devices, while enhancing the customer experience.
- Make numerous enhancements to cybersecurity which include the implementation of additional threat monitoring tools and further data separation to achieve PCI compliance 3.2.

2015-16 Major Accomplishments

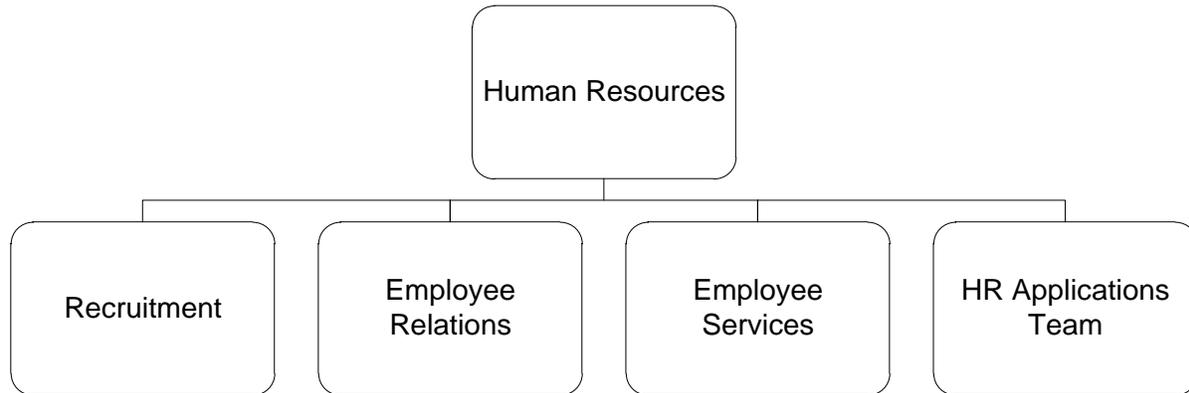
- Implemented Agile methodology throughout Information Technology utilizing both Scrum and Kanban principles

to enhance interdepartmental collaboration and improve bidirectional customer communications.

- Major improvements have been made in Software Security Development Practices, including adoption of a formal security peer code review process that includes training, use of automated security analysis software, and formal review and acceptance before production release.
- A mobile-friendly Customer Self Service Application was released providing customers a full range of services including bill payment, find payment locations, start-stop-transfer water service, find watering days, report water waste, and more.
- Met the higher standards of PCI Data Security Standard (DSS) 3.0 for payment card processing infrastructure.

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Human Resources
Fiscal Year Ending June 30, 2017

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 diversity, employee development, and productive employee relations.

Department Description

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

Southern Nevada Water Authority
 Operating and Capital Budget
 Department Budgets
 Human Resources
 Fiscal Year Ending June 30, 2017

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Other Expenses	\$ -	\$ 100,000	\$ 100,000
Total Operating Expenses	\$ -	\$ 100,000	\$ 100,000
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ (6,721)	\$ -	\$ 643,503
Total Department Expenditures	\$ (6,721)	\$ 100,000	\$ 743,503
FTE Positions	-	-	4.1

Department Performance

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

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

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

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

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

<u>Activity</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Total Hires	98	106	83	82	239
Job Notices	74	80	59	84	243
Written Exams	648	106	457	149	237
Interviews	653	693	527	420	107
Job Applications					
Accepted/Processed	3,302	1,905	3,021	2,373	5,981
Job Interest Forms	10,980	11,716	8,871	10,467	17,179
Recruitment					not
Letters Sent	4,293	6,053	8,513	5,577	available
Training Hours	5,902	9,111	9,705	8,288	2,070

Strategic Plan Objectives and Accomplishments

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

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

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

2016-17 Performance Objectives

- Implement multi-pronged training to include group and individual web based instruction, including supervisor/manager training.
- Select a vendor to replace our HR time entry and payroll systems for implementation in April 2017.

2015-16 Major Accomplishments

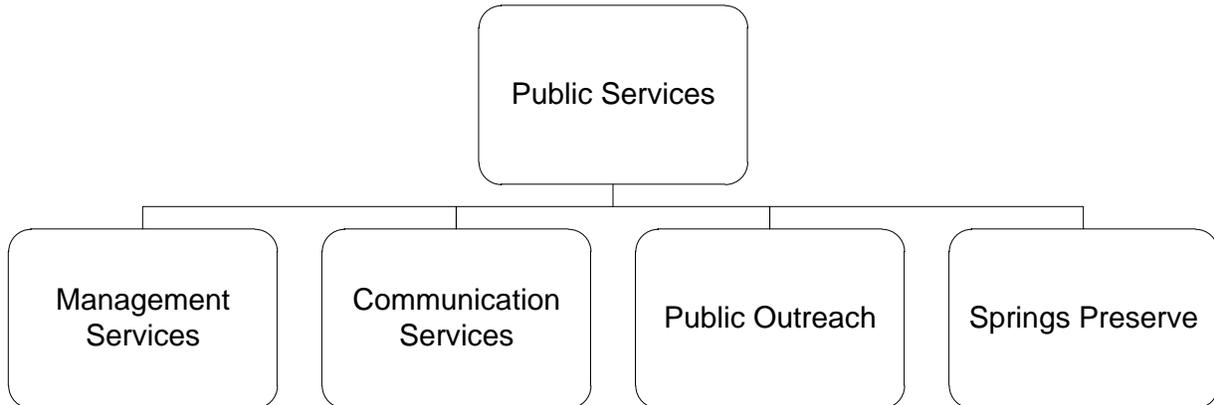
- Completed two of three Leadership Development series training for Managers and key professionals

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Public Services
Fiscal Year Ending June 30, 2017

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 provide exceptional customer service to the organization’s internal and external customers. 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.

Budget Objectives and Highlights

The 2016-17 budget remains consistent with the organization’s efforts to enhance efficiency and service to internal and external customers.

Southern Nevada Water Authority
 Operating and Capital Budget
 Department Budgets
 Public Services
 Fiscal Year Ending June 30, 2017

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 178,092	\$ 368,880	\$ 313,230
Maintenance & Repairs	78,996	182,700	178,160
Rental & Leases	9,211	29,500	25,000
Other Employee Expenses	126,471	120,544	188,532
Other Expenses	3,977,197	5,523,100	6,368,435
Total Operating Expenses	\$ 4,369,967	\$ 6,224,724	\$ 7,073,357
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 2,918,137	\$ 4,368,900	\$ 4,438,903
Total Department Expenditures	\$ 7,288,104	\$ 10,593,624	\$ 11,512,260
FTE Positions	20.7	31.9	30.1

Department Performance

In fiscal year 2015-16, the Public Services Department continued efforts to provide outstanding service and support of organizational initiatives and priorities

Management Services. Over the past fiscal year, the division supported organizational initiatives through a wide variety of activities. Its principal achievements include facilitation of the Governor’s Drought Forum and Summit processes, and support during the special legislative session in December 2015. The division also is responsible for board administration, special events, tours, meeting

monitoring, presentations and the coordination of special processes.

Communication Services. Communication Services is responsible for developing the materials that reach customers through web, social media, TV and print. Over the past fiscal year, the effectiveness of social media as a means for communication continued to grow, as did the organization’s ability to reach different types of customers. For example, the Springs Preserve’s Facebook page gained an average of 1,000 followers per month over the past year and now has nearly 44,000 followers. Additionally, the recent development of emergency communications websites, mobile websites and informational

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websites such as ChangeYourClock.com increase the organizations' ability to communicate with customers and allow customers to more easily and quickly access important information.

Public Outreach. The Media Relations and Public Outreach Division is responsible for developing and implementing public awareness and education campaigns that support and advance organizational initiatives. Outreach efforts during the past fiscal year included the coordination and implementation of signature events at the Springs Preserve; communication with tens of thousands of customers regarding water system maintenance and construction activities; and the launch of multiple public education campaigns to promote the Water Smart Landscapes Rebate Program, SNWA Summer watering restrictions, and Springs Preserve venue rentals. The division coordinated the organization's crisis communications response to a water quality emergency in Laughlin, Nevada, which resulted in the issuance of a temporary Boil Water Order for the Big Bend Water District customers. Additionally, the division coordinated well over a hundred media inquiries from a wide-variety of media outlets and news organizations throughout the past year.

Springs Preserve. Springs Preserve staff is responsible for facility operations and developing programs and events that enhance the visitor experience and build community in Southern Nevada. In fiscal year 2015-16, significant progress has been made on the streetscape exhibit; expansion of the trail system and design of the Waterworks Exhibit. The school field trip program also was

expanded to include paid, instructor-led classes, all of which nearly sold out. Increased overall revenue also have been realized as group sales continue to grow and new programs are offered.

Strategic Plan Objectives and Accomplishments

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

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

2016-17 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.

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2015-16 Major Accomplishments

- Secured more than \$2.3 million in grant funding to support water-related initiatives.
- Assisted 16 well users to connect to municipal water supply and responded to approximately 421 phone inquiries on the Groundwater Information Line.
- Secured \$15 million in low-interest loan funding from the state of Nevada to improve and rehabilitate the LVVWD water system.
- Supported efforts at the December 2015 Special Legislative Session, which resulted in the approval of a funding package for the design and construction of a new water system in Garnet Valley.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2016-17 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.

2015-16 Major Accomplishments

- Contacted approximately 30,000 customers regarding anticipated

construction projects or emergency water outages.

- Created emergency communication websites for SNWA and LVVWD that provides real-time updates to users in the event of a water emergency.
- In coordination with the Information Technology Department, launched a new mobile version of the LVVWD website, enabling users to pay bills, stop service and complete other tasks via mobile devices. More than one-third of lvvwd.com visitors are now accessing the website from mobile devices.
- Implemented a new mobile app for the Springs Preserve, featuring an events calendar and interactive map with way-finding directions.
- Planned and executed 10 signature events at the Springs Preserve, drawing a cumulative attendance of more than 58,000 people.

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

2016-17 Performance Objectives

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

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

2015-16 Major Accomplishments

- Supported SNWA participation in the Governor’s Drought Forum and Summit.
- Continued support of the Sustainability Cross-Departmental Team (CDT) to examine internal processes and develop sustainable practices within the organization.
- Coordinated the 2015 WaterSmart Innovations Conference.
- Coordinated the 2015 Colorado River Water Users Association Conference.

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

2016-17 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.

2015-16 Major Accomplishments

- In Fiscal Year 2014-15, Springs Preserve overall revenue increased by approximately 18 percent, third party business events grew by 43 percent and

special event attendance increased by nearly 16 percent over the previous fiscal year.

- Divine Events assumed operations of the Springs Preserve café in July 2014. Since then, fiscal year to date revenues are 33 percent higher than they were over the same time span the previous year.
- Many Springs Preserve special events were sold out, including Mardi Gras Vegas!, Día del Niño, the Ice Cream Festival, Grapes and Hops, Haunted Harvest and Día de los Muertos.

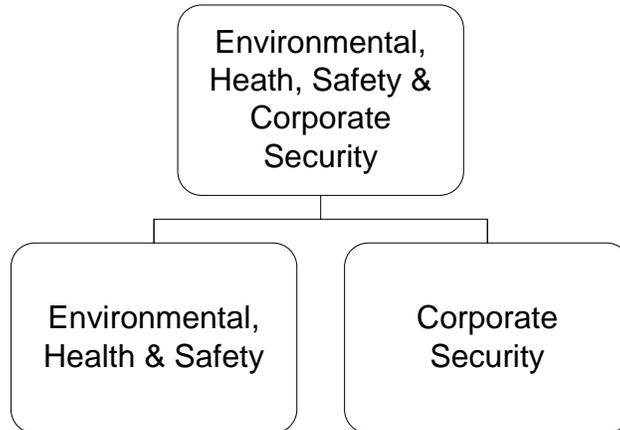
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Southern Nevada Water Authority
Operating and Capital Budget
Department Budgets
Environmental, Health, Safety & Corporate Security
Fiscal Year Ending June 30, 2017

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 a high performance Environmental, Health and Safety (EHS) culture, develop strategies and programs to eliminate or mitigate risk and cost exposure, and maintain the safety and security of our employees, facilities and customers.

Budget Objectives and Highlights

The 2016-17 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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Environmental, Health, Safety & Corporate Security
 Fiscal Year Ending June 30, 2017

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 25,651	\$ 28,000	\$ -
Other Employee Expenses	290	-	-
Other Expenses	337,252	375,000	275,000
Total Operating Expenses	\$ 363,194	\$ 403,000	\$ 275,000
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 1,948,114	\$ 2,056,223	\$ 2,169,245
Total Department Expenditures	\$ 2,311,308	\$ 2,459,223	\$ 2,444,245
FTE Positions	15.7	15.8	16.8

Department Performance

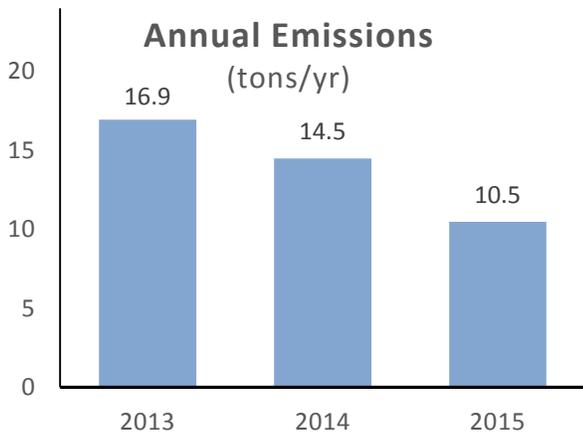
Environmental, Health and Safety Division. The EHS division provides ongoing environmental, health and safety training for all employees. The division is responsible for permitting and compliance with the Federal, State and local agency environmental regulations regarding pollution control (including air pollution, water pollution, land disturbances, implementation of chemical control and waste management) and also manages environmental permitting and

compliance reporting for operations and maintenance. Proactive development, implementation and management of environmental management systems and process safety programs are also led by this team. The division develops and publishes safety procedures ensuring compliance with Occupational Safety and Health Administration and state regulations; they employ an aggressive accident prevention program; investigates on-the-job accidents, and is developing a Fleet Safety program that encompasses vehicle and heavy equipment training, defensive driving education, and

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Environmental, Health, Safety & Corporate Security
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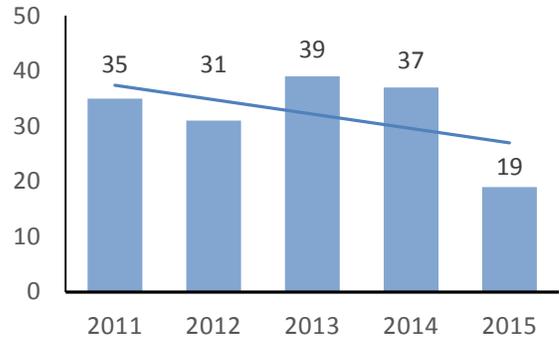
Commercial Drivers' Licenses. The division conducts monthly meetings with the EHS Steering Committee, comprised of employees from various departments and bargaining representatives. The health discipline manages the radiation safety program as well as the Asbestos & Lead Awareness and Hearing Conservation Programs for the organization. Additionally, this division manages the Workers' Compensation Program.

By using emission controls and eliminating emission sources, total air emissions in 2015 were reduced 28 percent from the previous year. Two (2) new engines were purchased that emit 30 percent less air pollutants than the engines they replaced.



Efforts over the last year have been made to achieve reductions in safety recordable injuries and serious (Category 2) at-fault vehicle accidents. The chart below represents a comparison of total recordable injuries over the past five years.

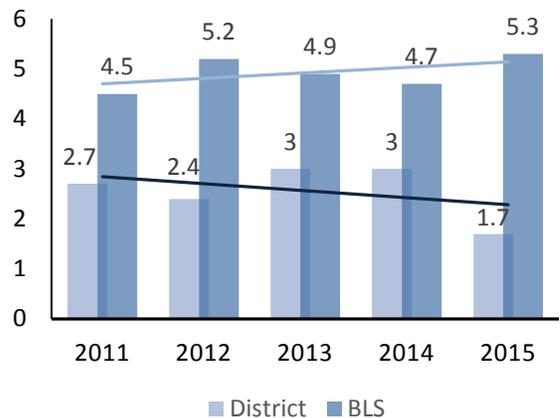
Recordable Injuries by Year



The District's injury rate is well below the Bureau of Labor Statistics (BLS) for like industries. The District's injury rate, indicated by the black trend line in the chart below, is trending in a positive direction.

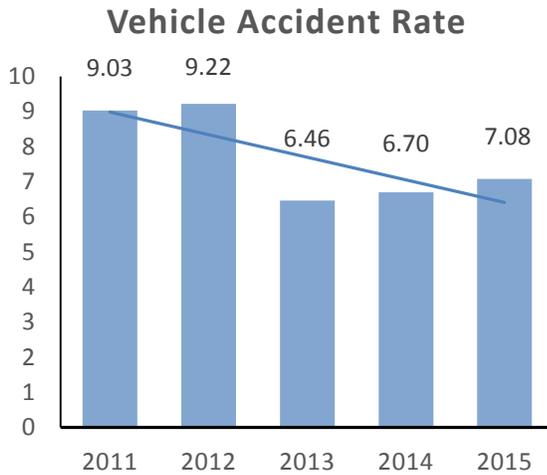
LVVWD and SNWA recycled a combined total of 1,467,088 pounds of materials in 2015. Total revenue generated was \$267,683 (bids for scrap = \$243,907 and auctions = \$23,776).

Injury Rates



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The chart below depicts the five-year vehicle accident frequency rate. A slight increase in the rate was realized in 2015. The increase can be attributed to the increase in accidents and the fact that District employees drove approximately 100,000 miles less than in 2014.



The severity of vehicle accidents experienced in 2015 was significantly less than in the 2014. This attributed to cost savings of **\$466,000**.

Corporate Security Division. The mission of the Corporate Security division is to provide security services on a system-wide basis assuring the protection of people, property, facilities, and water treatment & delivery systems. The Security division is responsible for the protection of the water supply, employees, and customers during and after business hours. Security provides fire protection equipment inspections, assists with customer parking, escorts customers and visitors to areas where they can conduct their business, provides information assistance, monitors access to restricted areas, and allows access and monitors vendors during and after business hours. They patrol and

protect all properties of the LVVWD and the SNWA by responding to intrusion alarms at outlying properties and patrol reservoir and pumping station sites. Physical security networks and systems (card access, closed-circuit television, alarms, and locking systems) are in place and monitored by security officers. The Security division staffs and operates a 24/7 security center for central response to alarms, calls for assistance, accidents, video surveillance, and communication. Security provides on scene commander services in emergency situations. The Security division has formed partnerships with Federal, State and local law enforcement authorities and partners with other utilities and infrastructures in the 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.

2016-17 Performance Objectives

- Operate the Security Center and continue to implement automated security systems to improve the protection of facilities.
- Expand the use of security system technologies to enhance efficiency. Expand the use of card activated access control.
- Review maintenance and services contracts to ensure EHS operational compliance.
- Continue to train and test the Emergency Response Plan (ERP). The LVVWD and

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Southern Nevada Water Authority (SNWA) ERPs are combined.

- Progressing on a formal cross training program for all security officers to be trained on all security locations, responsibilities and assignments.
- Continue to expand the utilization of the security surveillance system.
- Partner with Department of Homeland Security and the Southern Nevada Counter-Terrorism Center for potential threats to facilities.
- Safety and Health conducts weekend/after-hour spot audits of industrialized work activities supporting water treatment, water quality, water distribution or other activities.
- Staff will review and update the EHS Manual and all internal 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.

2015-16 Major Accomplishments

- The LVVWD played a critical role during the Mt. Charleston rain event, safely returning the water system to a serviceable condition.
- EHS conducted 42 instructor-led training courses, which included 1,679 participants and 4,346 training hours.
- Continuing support and promotion of the “See Something, Say Something” program with our workforce.
- Safety and Health conducted over 95 spot audits and participated in seven (7)

comprehensive audits

- EHS conducted 145 investigations related to recordable injuries, at-fault vehicle accidents, at-fault property damage incidents, near-misses, chemical spills and first-aid events. When needed, providing recommendations to reduce the chance of reoccurrence.
- Recordable injuries were decreased in 2015 as compared to 2014 – 37 vs. 19.
- Obtained five new environmental permits, renewed 172 environmental permits, and modified two environmental permits to meet changing permit conditions.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2016-17 Performance Objectives

- Continue preventive efforts to reduce injuries and their fiscal impact.
- Continue to explore and test new security technology and systems.
- Continue to refine security systems in support of over 100 protected sites.
- Identify additional opportunities for security service and collaboration with internal departments.
- Continue to attend and provide support to Utility and Pipeline Coordinating Group, Nevada Homeland Security, DHS Critical Infrastructure Committee, InfraGard, and NV Commission on Homeland Security.
- Provide electronic quick reference for specific knowledge of related information on the EHSCS webpage.
- Participate in local association meetings to gather information on best management practices to compliment the Safety and Health Management System; adopt and implement proven work methods.

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- EHS will participate in internal and external committees or groups to improve communication and enhance customer service in 2016-17 and seek professional training opportunities to enhance skills and knowledge.
- Conclude implementation of Hazard Communication Global Harmonized System.

company vehicle accidents.

- Continuing progress on internal cross-training to ensure all officers are able to perform at all posts.
- Collaborated with internal work groups to improve rural and local security systems.

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

2015-16 Major Accomplishments

- Provided EHS communications throughout 14 department Safety Action Teams.
- Total number of Workers' Compensation injuries were reduced by 22 in 2015 as compared to 2014.
- Updated electronic material on the Hydroweb to ensure the LVVWD supervision and employees have significant amount of useful safety and health literature, information and videos for training.
- Updated evacuation procedures and maps including all facilities and remote areas on the Hydroweb.
- Worked extensively with HR to maintain DuPont safety training material.
- Monitored health related events potentially affecting staff; provided informational fact sheets to the company.
- Aggressively pursued backflow theft and illegal water users resulting in multiple arrests and a noticeable reduction in theft.
- Increased employee awareness of potentially dangerous situations – created Active Shooter class on LMS for employees to take. Speaking at multiple Employee meetings on security issues.
- Security is the main first responder for

2016-17 Performance Objectives

- Identify non-compliance items through organization-wide collaboration.
- Ensure environmental reporting is submitted to regulatory agencies.
- EHS will focus on how changes to the environment affect customers and the need to adjust current programs to accommodate said changes.
- Identify process changes needed to increase recycling efforts by 10 percent in 2015-16.

2015-16 Major Accomplishments

- Collaborated and increased environmental awareness among all departments and divisions.
- Recycled 1,467,088 pounds of materials in 2015; generating \$267,683 in revenue.
- Reduced overall air emissions from stationary emission sources by more than 28 percent.
- Pollution prevention projects such as using the State of Nevada Pesticide Disposal program, permit modifications

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and teaching in house training classes totaled a savings of over \$105,524.

- Monitor the effectiveness of the single stream recycling program at all work stations and offices at key facilities.
- Springs Preserve EMS received its first Recertification Audit in July and was found to be in conformance with ISO 14001.
- The number of unintentional releases of regulated materials were reduced by 10 percent compared to previous years.

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

2016-17 Performance Objectives

- Ensure Environmental Management Systems continue to be implemented with ongoing improvement, incorporating sustainability goals into each activity.
- Streamline the records inventory and utilize electronic documentation capabilities and accessibility.
- Experiment with new security technologies such as the Pixcontroller motion camera system and Outlocks Knock N Lock systems.
- Continue to work with Information Technology (IT) staff to develop additional components of the Automated Safety Management System.
- Continue to review and provide EHS forms in electronic format as well as look for new opportunities to enhance current selection.
- Develop innovative solutions to security vulnerabilities; fabricated and installed ladder guards.
- Update equipment in Springs Preserve

surveillance room to utilize during major events.

- Identify pollution prevention opportunities using technology and innovation.

2015-16 Major Accomplishments

- Utilized the Security Blotter to track theft and vandalism to be proactive on illegal activities.
- Automated Safety Management System for Recordkeeping developed and implemented.
- Contributed to the Preserve's Origen Museum receiving the TOBY Award for Outstanding Building of the Year from the Building Owners and Managers Association International (BOMA).
- Assisted two departments in purchasing two new cleaner burning engines to replace aging diesel engines that reduce air emissions by more than 30 percent.
- Implemented the recycling of used safety T-Shirts at the District and glass containers at the Springs Preserve in 2015.

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

2016-17 Performance Objective

- Ensure projects are evaluated proactively using EMS to ensure environmental compliance within Clark County.
- Identify new regulations and policy changes and collaborate with other agencies.
- Examine and update all security processes, priorities, and resource utilization to improve efficiency.

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- The Environmental Team will implement one improvement in 2015-16 from the results of the 2013 environmental benchmark study.

2015-16 Major Accomplishments

- Collaborated with Clark County Storm Water Quality Management Committee to improve compliance with storm water regulations.
- Collaborated with the Sustainability CDT to develop new organization-wide sustainability goals.
- Replaced the National Pollution Discharge Elimination System (NPDES) water discharge permit issued to the Alfred Merritt Smith Water Treatment Facility with two DeMinimis Discharge Permits.
- Obtained an Annual Dust Control Permit to cover District maintenance projects throughout the year.
- Conducted multiple opacity observations on dust omitting processes to ensure compliance with permit conditions.
- Adjusted security patrols and procedures to absorb additional facilities such as Sloan and Eagle without additional costs or manpower.

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

2016-17 Performance Objectives

- Utilize the security monthly reports and blotter reporting system to measure performance objectives and track issues.
- Conduct a division monthly staff meeting to update EHS employees on all major projects and communicate status changes

and challenges.

- Conduct instructor-led EHS courses for company employees.
- Provide EHS information updates to the company through an electronic Management Advisory, Pipeline, Hydroweb, Safety Alert Messages, etc.
- Continue to provide diverse learning opportunities.
- Participate in EHS annual off-site to discuss future initiatives, evaluate and update EHS programs, policies and procedures.
- Recognize employees/teams for their unique talents and accomplishments.
- Lead environmental programs including air pollution control, water pollution control, hazardous materials, hazardous waste and Process Safety Management.
- Disseminate an EHS Trend Analysis Report.

2015-16 Major Accomplishments

- Professional development is ongoing and analysts continually look for and participate in low or no cost training opportunities.
- Over 300 employees participated in 9 educational classes during the 2015 Safety Stand Down Day.
- EHS worked with HR to improve upcoming and overdue training notification emails to improve compliance training.
- Over 500 employees participated in the EHSCS department educational booth at the annual Employee Expo.
- The annual Trend Analysis was completed highlighting major EHS accomplishments throughout 2015.
- Accommodated 36 regulatory agency inspections and received zero Notice of

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Violations or fines in 2015.

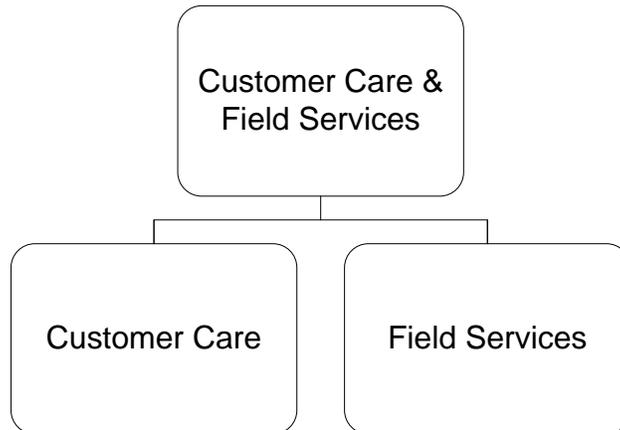
- There were zero OSHA citations issued in 2015.
- Converted Charleston Heights and Campbell Station badge access control systems to P2000. Added card reader in Springs Preserve guest services area. Adjust card reader control groups to provide better after hour access control.

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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.

ensure departmental efficiency and meet increased customer demand.

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.

Customer Care. Continuing efforts to enhance in-house collections, anticipating a budget reduction for 2016-17 in uncollectible accounts, and reengineering business processes around the meter to cash philosophy. This should improve inactive inventory management, advance lien processing, minimize field impacts and expand proactive customer notification which is expected to further reduce year-end write-offs.

Budget Objectives and Highlights

The 2016-17 budget for the Customer Care and Field Services department is consistent with the organization's efforts to reduce costs where possible while continuing to

Field Services. The 2016-17 Budget Plan contains funding for a read verification program, the continued development of an analytical application for consumption data, advanced metering infrastructure, and operational costs.

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Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 4,220	\$ 6,000	\$ 6,000
Maintenance & Repairs	-	3,500	3,500
Total Operating Expenses	\$ 4,220	\$ 9,500	\$ 9,500
Capital Costs	\$ -	\$ -	\$ -
Payroll Costs	\$ 304,094	\$ 195,973	\$ 389,359
Total Department Expenditures	\$ 308,314	\$ 205,473	\$ 398,859
FTE Positions	2.0	1.3	3.0

Department Performance

In 2015-16, the Customer Care and Field Services department continued to refine business processes and advance technology in service to the Las Vegas Valley Water District's (LVVWD) customers. The department focused efforts on maximizing the customer experience through four strategic goals: Delivering an Outstanding Customer Experience; Anticipate and Adapt to Changing Climatic Conditions while Demonstrating Stewardship for our Environment; Develop Innovative and Sustainable Solutions through Research and Technology; Strengthen and Uphold a Culture of Service, Excellence, and Accountability.

Customer Care. The Customer Care division serves as the primary point of contact for internal and external service inquiries—supporting approximately 386,000 active services. The division manages the customer care phones, web requests, correspondence inquiries, walk-in requests, payments, credit assistance with payment 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.

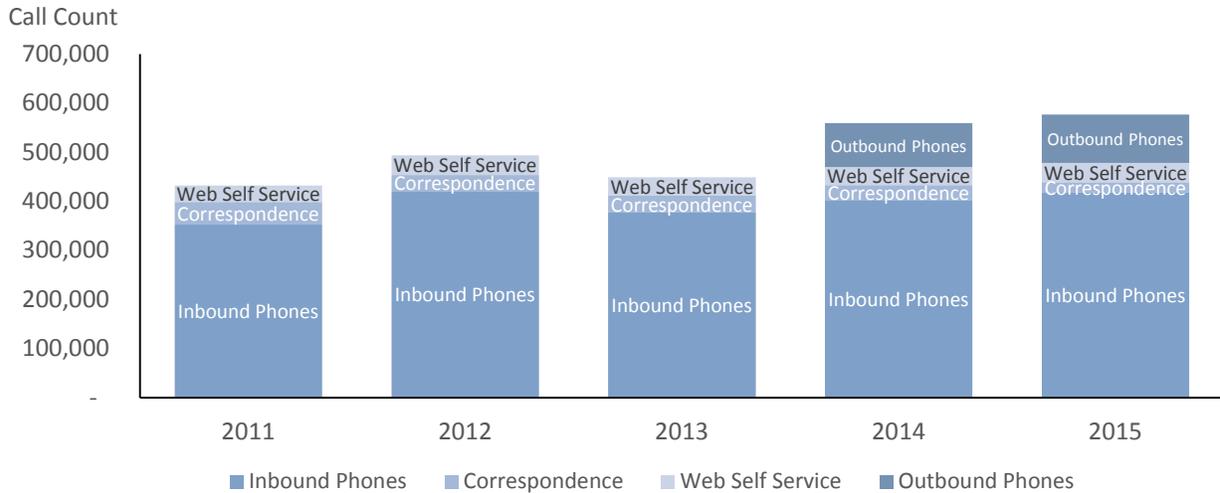
Customer care demands continue to be consistently high as the division has taken a proactive approach to customer education and service through outbound customer service calls.

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The following graph illustrates the shift in volume distribution over the past five years

as process and technical innovations advance the meter to cash philosophy.

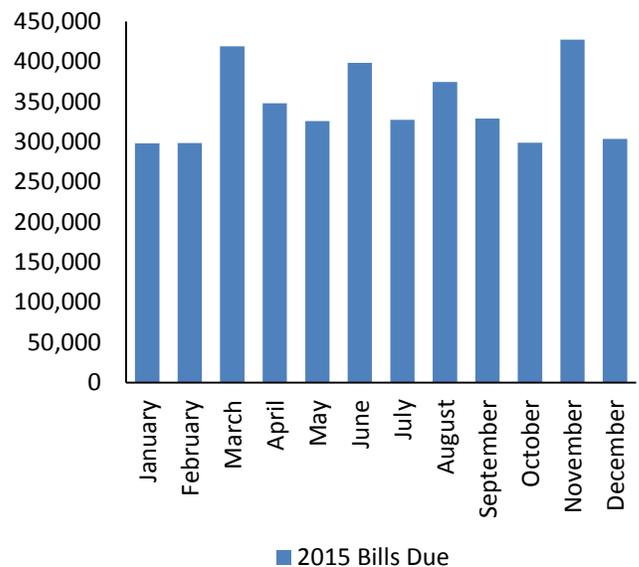
CUSTOMER CARE PHONE AND CORRESPONDENCE VOLUME



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

The following chart depicts the total number of bills generated monthly in 2015.

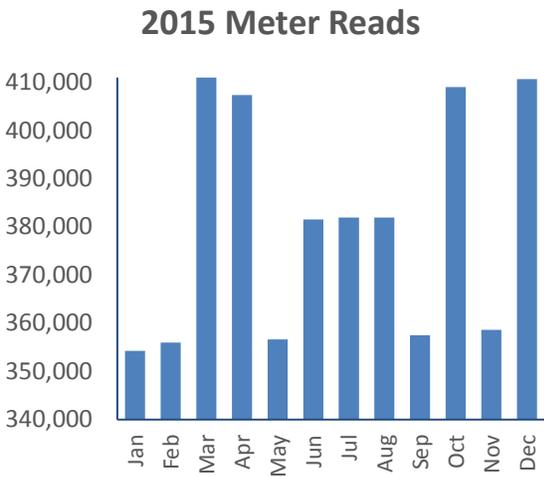
Bills Generated



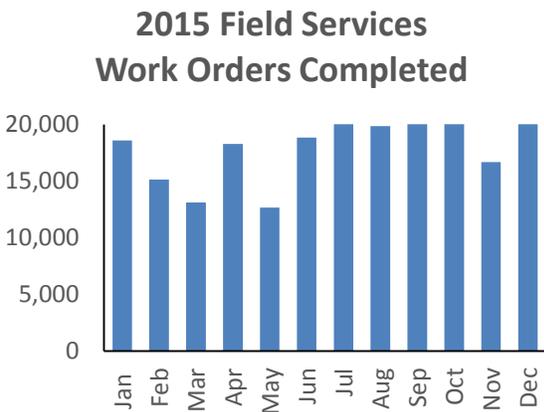
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Field Service: The Field Services division is responsible for reading and maintaining meters for approximately 386,000 services in Las Vegas, Searchlight, Blue Diamond, Kyle Canyon, Laughlin and Jean. The division also responds to leak investigations, low pressure, high consumption, water waste inquiries, billing requests, and turn ons/shut offs.

The 2015 Meter Reads chart illustrates the number of meter reads processed by Field Services in 2015.



The following chart illustrates the number of work orders processed by Field Services in 2015.



Strategic Plan Objectives and Accomplishments

Strategic Plan Goal – Deliver on Outstanding Customer Service Experience.

2016-17 Performance Objectives

- Assess customer satisfaction, establish benchmarks and determine where improvements are required.
- Continuously improve service processes and practices based on customer assessments.
- Utilize appropriate technology to simplify and improve the customer experience.
- Provide necessary training and development to ensure 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.
- Enhance our quality program for Field Services.
- Continue read verification project for all meters 2” and smaller.
- Enhance current quality systems for improved call assessment and coaching.
- Assess customer satisfaction results against overall quality outcomes for actionable improvement.
- Continue to improve customer care technologies, tools, training and implementation.
- Create a quality assessment tool for

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consistency in business processes.

2015-16 Major Accomplishments

- Achieved a 17% improvement in Service Levels over 2014.
- Achieved 22% success rate with added administrative process for resolving severe arrears through notification only.
- Outbound collection calls yield \$2.1 million cost avoidance in truck rolls.
- Improved internal resources to call center, responding to more than 27,000 calls to improve the customer experience.
- Dedicated 2,600 hours to training 140 unique topics throughout 2015 to consistently provide the best possible customer experience.
- Fully deployed business processes and training instrumental in achieving PCI DSS 3.0 compliance standards.
- Improved safety measures for securing employees in the event of an evacuation emergency.
- Assisted 2,999 customers in the field with consumption related questions.
- Invested in our field crews by up training additional staff to handle escalated accounts.
- Added additional training to staff for water waste compliance to assist in educating our customers.
-

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

2016-17 Performance Objectives

- Reduce and dispose of waste responsibly.
- Maintain proper disposal of scrap and waste products, especially lithium batteries.

2015-2016 Major Accomplishments

- Lobby payments and transactions continue to decline with successful expanded payment and self-service options, reducing lobby traffic and carbon footprint.
- Disposed of toxic waste material in compliance with OSHA regulations.
- Recycled tons of cardboard boxes through Opportunity Village, a not-for-profit organization.
- Processed 3,213 courtesy water waste letters and 2,145 formal notifications in 2015.
- Completed 4,698 water waste investigations in 2015.

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

2016-17 Performance Objectives

- Begin to collect event and more refined interval data from the meter reading system to reduce truck rolls and increase customer service.
- Develop and strengthen global partnerships to leverage resources and advance innovations in Customer Service.

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- Integrate hourly interval data into business processes.
- Explore technology solutions for revenue protection and greater collection gains.
- Enhance outreach through modernized trickle notification technology.
- Develop and strengthen global partnerships to leverage resources and advance innovations in Customer Service.
- Continue to educate customers through field meets and courtesy letters.
- 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.
- Continue weekly communication forum between workgroups to address interdepartmental challenges and business impacts.
- Share service level results across workgroups.
- Leverage the existing resources for expert training classes to employee skill development.

2015-16 Major Accomplishments

- Host and participate in education and technical venues for business advancement throughout 2015.
- Incorporated groundwater processing into call center

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

2016-17 Performance Objectives

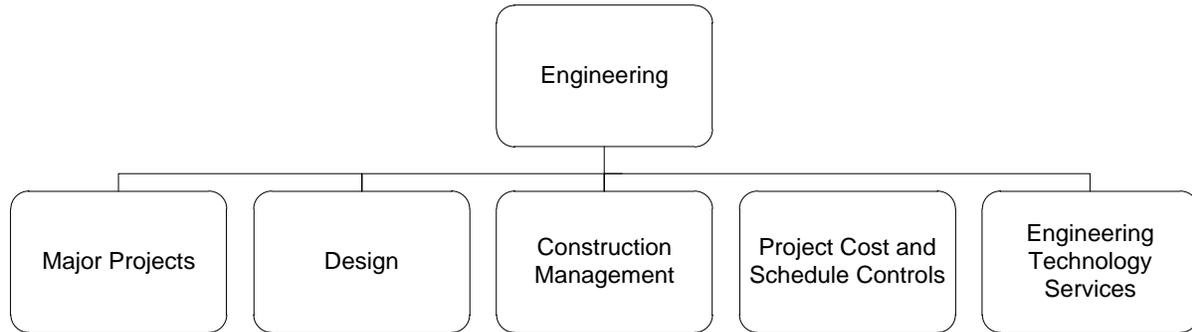
- Identify, monitor and measure key performance areas of the organization, openly sharing results and taking appropriate action.
- Provide and seek timely feedback on individual, team and departmental performance to enhance collaboration, accountability and excellence.
- Continue Read Verification Program to resolve any discrepancies from AMR to meter reads.

2015-16 Major Accomplishments

- Completed service verification project with verified reads on all services
- Initiate proactive notification process for critical arrears to mitigate revenue loss at minimal cost.

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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.

Department Description

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

The LVVWD's capital projects are currently focused on the repair, rehabilitation, and replacement of aging pipelines, reservoirs, pumping stations, and related components within the large water distribution system spread across the vast Las Vegas Valley and in nearby rural areas. In coordination with the Operations and Infrastructure Management departments, Engineering provides the design and construction services for many of the larger LVVWD projects.

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

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

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Using its project and construction management resources and technology systems, Engineering offers support services to other departments for their operating capital projects. Engineering also develops

and maintains advanced technical systems enabling the LVVWD and the SNWA to efficiently access technical data and records pertaining to water infrastructure.

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 54	\$ 7,800	\$ 64,850
Maintenance & Repairs	(96)	702,750	705,000
Other Employee Expenses	1,090	7,175	71,675
Other Expenses	5,069	5,220	350,150
Total Operating Expenses	\$ 6,117	\$ 722,945	\$ 1,191,675
Capital Costs	\$ 87,459,385	\$ 236,278,776	\$ 154,415,162
Payroll Costs	\$ 5,532,516	\$ 5,610,827	\$ 5,397,248
Total Department Expenditures	\$ 92,998,017	\$ 242,612,548	\$ 161,004,085
FTE Positions	32.3	32.9	30.3

Budget Objectives and Highlights

The 2016-17 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 significant portion of the department staff will continue to be focused on many projects directly supporting the Operations and Infrastructure Management departments in preserving the facilities needed to assure a reliable, quality water supply for water customers.

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

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Capital expenditures for the new pumping station will continue through project completion in 2020.

No Wash CIP projects were constructed in the prior fiscal year. Construction of the Historic Lateral Expansion, Tropicana and Sunrise Weirs has been on hold during discussions with the State of Nevada on collaboration of weir construction with State managed activities for remediation of perchlorate migration to the Wash.

The Engineering department will also advance various capital projects for the LVVWD by designing and managing construction of projects to replace water mains, rehabilitate valve or meter vaults, 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 projects of the LVVWD and the SNWA capital plans. Currently, there are two active major project efforts, one for Intake No. 3 and one for the Las Vegas Wash, and individual teams are dedicated to those project activities.

Design. The design team is a collection of professional engineers, surveyors, technicians, permit coordinators, right-of-way agents, 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, and consistent with generally accepted engineering standards.

Construction Management. The construction management team is comprised of engineers and inspectors who have extensive experience in construction of public works and water utilities. These team members are involved in development of the design packages to assure construction complexities are properly considered and addressed in the design before inviting contractor bids. They also coordinate with the Legal Department to assure laws, regulations, and contract provisions are properly observed.

Project Cost and Schedule Controls. A small team is organized to assist the design and construction management teams and other involved departments with cost tracking and reporting and with scheduling analysis on capital projects. This team makes use of computer-based tools which compile relevant data, both from the design and construction teams and from the Finance Department. The cost database is comprehensive and detailed in capturing actual payments to every vendor and all labor hours applied on each capital project. This team also performs a vital function in collecting projected capital project expenditures as a tool for forecasting future funding requirements.

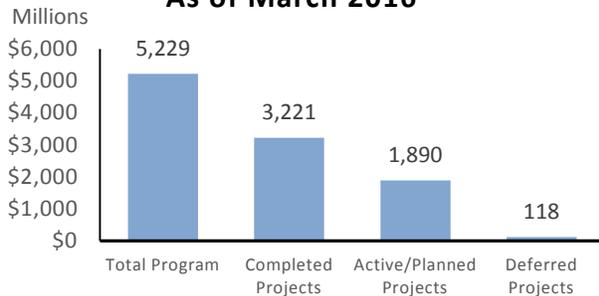
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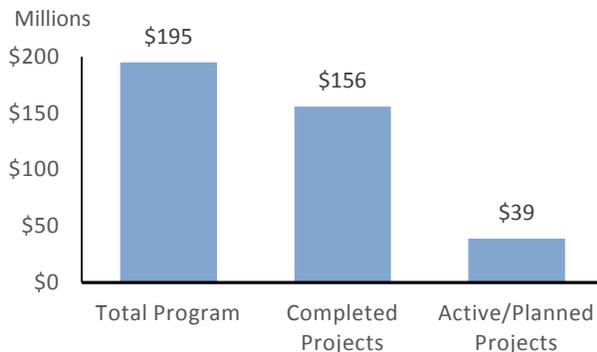
Engineering Technology Services. A team of professionals with computer-aided drafting, geospatial, data management and analysis, and computer programming skills provides computer support services to many departments in the organization. These services are vital to the efficient management of computer-based tools in the modern engineering environment of the water industry.

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 2016**

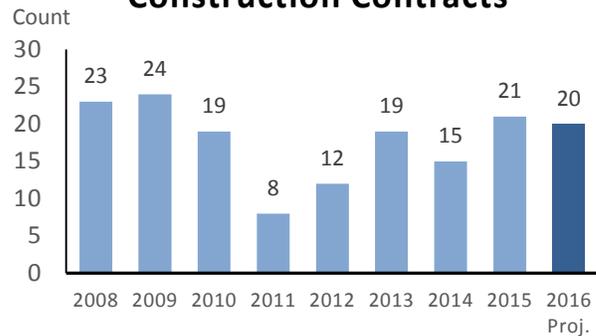


**Las Vegas Wash Capital
Improvements
As of March 2016**



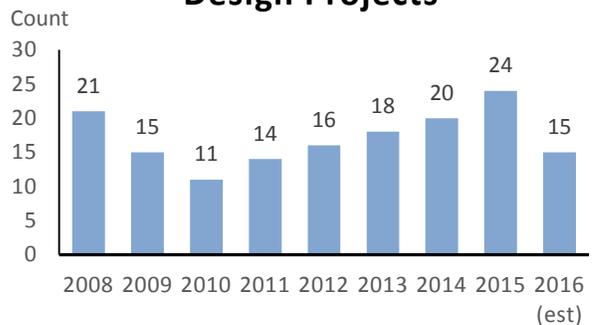
The chart below (Completed LVVWD Construction Projects) represents the number of the LVVWD construction projects completed by Engineering since 2008 and the number expected to be completed in 2016.

**Completed LVVWD
Construction Contracts**



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

**Completed LVVWD
Design Projects**



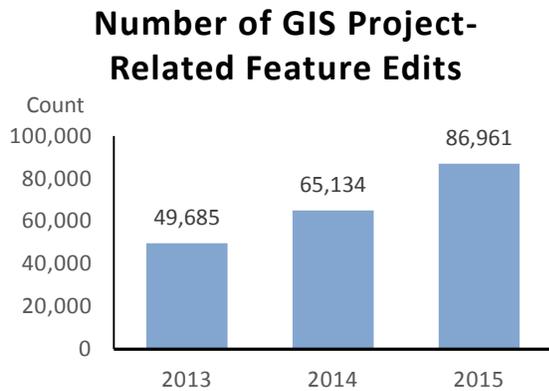
The facility databases managed by the Technology Services Division in the Engineering Department contain millions of records about various infrastructure assets such as treatment facilities, pumping stations, buildings, wells, reservoirs, pipelines, fire hydrants, valves, meters, and real property. The database information goes beyond simply

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defining the physical character of the assets. They also include dates when assets were acquired, constructed or modified, the original cost of the assets, rights-of-way provisions, pertinent warranty information, and relevant supporting documentation. Managing all of this data and keeping it current is a major ongoing effort.

The chart below shows how many thousands of features related to water facility assets constructed under capital projects for both the LVVWD and SNWA 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.



Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Complete design and construction of projects according to the budgets and

schedules identified in the capital plans.

- Accomplish design and construction of water system development in Garnet Valley conforming to approved plans.
- Provide the Infrastructure Management and Operations departments with a high level of technical services and capital project support.
- Consolidate project tracking applications and align work processes to improve staff efficiency.
- Improve methods for direct electronic capture in the field of attributes of constructed water facilities.

2015-16 Major Accomplishments

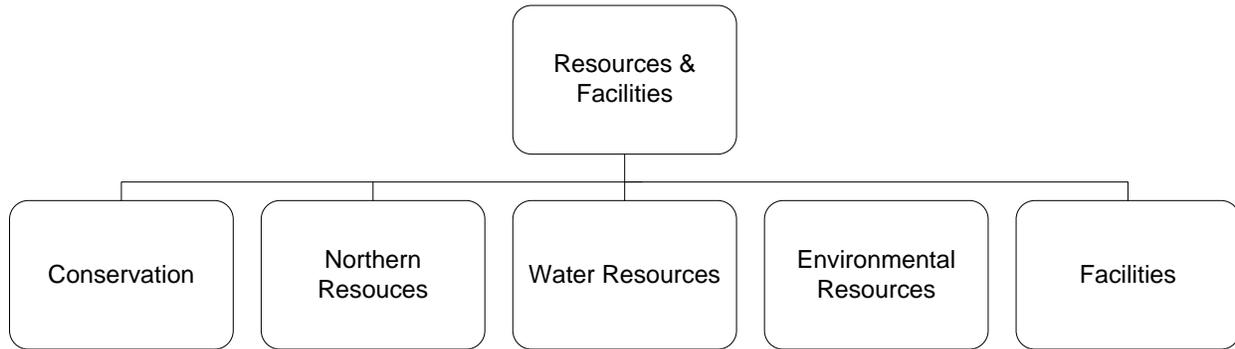
- Began water deliveries from Intake No. 3.
- Completed construction of 20 LVVWD projects valued at \$25.5 million related to improvement of the LVVWD’s facilities, including the \$12.3 million Fayle Reservoir Rehabilitation project.
- Awarded 8 LVVWD construction contracts valued at \$7.9 million related to improvement of the LVVWD’s facilities.
- Performed inspections on approximately 540 different projects, involving over 42,346 individual inspection actions.
- Implemented new enterprise-wide budgeting tools for capital projects.

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RESOURCES & FACILITIES

Level: 3600



Mission

The mission of the Resources & Facilities department is to sustainably manage the Southern Nevada Water Authority's (SNWA) water 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 through cost effective strategies supporting operations and organizational business.

Department Description

The Resources & Facilities department consists of five divisions that include the Water Resources division, Conservation 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 2016-17 Resources & Facilities department budget contains funding for a wide-range of initiatives discussed below.

Facilities. The Facilities division budget contains \$4.2 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.

Water Resources. The Water Resources division budget contains \$5.4 million to continue efforts to plan, acquire, manage and develop water resources for use by the LVVWD and the SNWA. Included in this total is \$2.6 million for developing Tributary Conservation Intentionally Created Surplus (ICS) through leases of Muddy River and Virgin River water. The division will continue hydrologic data collection, monitoring, and reporting programs to ensure regulatory compliance with the terms of the LVVWD and the SNWA-owned water-right permits and project right-of-ways. The division will also

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continue long-range resource planning and water resource management efforts necessary to ensure a reliable water supply while hydrological and climatological uncertainty exists. These activities include analyzing climate-change science and policy initiatives, and providing technical support for activities associated with Colorado River operations and decree accounting, administration of interstate banking agreements, the Colorado River Salinity Control Program, and the implementation of Minute 319 to the 1944 Water Treaty with Mexico.

Environmental Resources. The Environmental Resources division budget contains \$3.0 million in operational funding to continue environmental and biological planning, compliance and resource management activities for the SNWA. The division will continue to provide environmental support and ensure regulatory compliance for the Las Vegas Wash, Virgin and Muddy River programs, Northern Resources, 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 2016-17, the division anticipates receiving \$1.8 million in revenue from Federal grants and local contributions.

Conservation. The Conservation division budget contains \$11.3 million in operational funding to further SNWA's long-term commitment to increased water conservation. In 2015, SNWA enhanced its incentive by raising the amount paid per square foot for turf conversion to \$2 for the

first 5,000 square feet converted to strengthen program interest. The budget is designed to cover both the increased incentive and accompanying increase in customer participation.

Northern Resources. The Northern Resources division budget totals \$3.7 million, of which, approximately 18 percent is for livestock inventory purchase and capital improvements to develop, utilize and maintain primary groundwater rights. Total gross revenues are projected to exceed \$2.6 million. The Northern Resources division consists of seven individual properties that have been consolidated into one independent operating company (IOC). The consolidation and management of these ranch properties has created operational efficiency, but increased gross operating costs. Increased operating costs are attributed to building livestock populations and re-establishment of perennial crops on irrigated fields, replacing aging non-functional infrastructure, renovation of historical ranch structures and construction of additional facilities. Program diversification including water development, nutrient management, cropping structure, propagation of multiple species of livestock, water and energy application have created sustainable revenue centers supporting operations. The primary goal for this division is to integrate the management of water, land and agricultural resources such that environmental and social conflicts are minimized and the Groundwater Development (GWD) Project is maintained as a viable and sustainable alternative source of supply.

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Expenditures

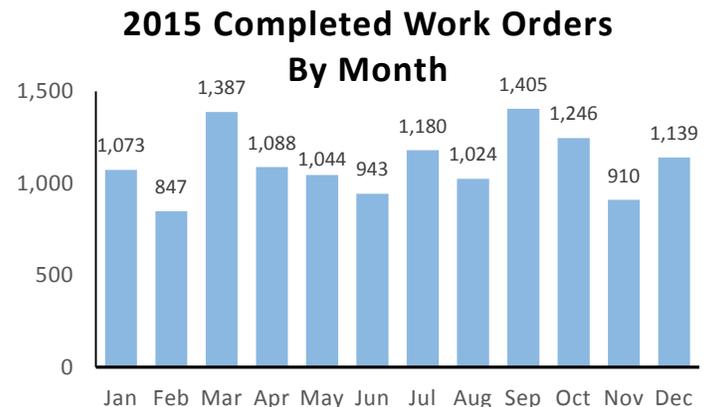
SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Water	\$ 4,271,330	\$ -	\$ -
Materials & Supplies	1,970,245	2,504,000	2,379,100
Maintenance & Repairs	1,698,679	1,696,800	1,868,800
Rental & Leases	280,764	359,154	2,071,678
Other Employee Expenses	106,274	211,700	240,150
Other Expenses	1,989,596	2,905,200	2,816,600
Total Operating Expenses	\$ 10,316,888	\$ 7,676,854	\$ 9,376,328
Capital Costs	\$ 1,350,092	\$ 25,813,279	\$ 24,716,598
Payroll Costs	\$ 14,476,356	\$ 14,529,268	\$ 14,977,207
Total Department Expenditures	\$ 26,143,336	\$ 48,019,401	\$ 49,070,133
FTE Positions	97.6	98.6	97.0

Department Performance

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

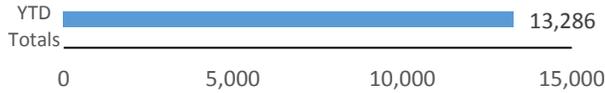
remodeling and/or retro-fit support for existing structures.

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



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2015 Completed Work Orders
Year to Date Totals



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 conducting regional water resource planning, including: climate-change assessments, integrated water resource planning, population forecasting, regional water demand analyses, and water accounting; identifying, evaluating, and developing sources of additional groundwater and surface water supplies; managing the Southern Nevada Water Bank; 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.

Environmental Resources. The Environmental Resources division is responsible for conducting environmental and biological research, monitoring and planning to ensure compliance with Federal and State environmental laws, permits, and agreements. The division assists Federal agencies in completing those regulatory processes necessary to construct and operate water resource related infrastructure, including preparing environmental compliance documents and obtaining environmental and land permits. Biological studies, monitoring and reporting are

conducted in accordance with Federal environmental regulatory requirements, state water right rulings, and interagency environmental agreements such as Stipulated Agreements. The division is also responsible for fulfilling organizational responsibilities related to the Las Vegas Wash, Las Vegas Valley Watershed and the Warm Springs Natural Area.

Conservation. The Conservation division develops and implements programs and strategies to sustain and promote water conservation. The SNWA monitors water use in terms of Net GPCD, since SNWA recycles nearly all indoor water use, either through return-flow credits or direct reuse. Net GPCD more accurately reflects the community’s use of water resources and improves comparability with other communities. The SNWA’s net GPCD was 125 gallons in 2015. This is a reduction of 37 percent, since 2002.

In addition to supporting water supply planning, the Conservation division ensures the SNWA is compliant with state and federal requirements ensuring beneficial use of water.

In 2015, the SNWA supported more than 2,000 projects comprising 4.5 million square feet of landscape conversion. These conversions produce perpetual savings of more than 248 million gallons annually. The cumulative benefit of landscape conversions completed since 2000 reduced the SNWA’s 2015 consumptive demand by more than 9.8 billion gallons, averted demand for 573,000 megawatt hours of energy, and reduced CO2 discharge by more than 280,000 metric tons. In 2015, these projects reduced power costs by approximately \$4.2 million.

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

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 \$2.6 million in projected ranch revenue for fiscal year 2016-17. Improvements in agricultural practices, livestock genetics, program diversity and husbandry have resulted in increased efficiency and effectiveness in utilizing Federal rangeland and private forage, and added alfalfa acreage to increase overall production. The strategic plan for Ranch Operations is to produce and deliver quality products and service, exhibit scientific based stewardship and, demonstrate financial and organizational efficiency. The ranch infrastructure, resource stewardship, water rights, personnel development, and financial stability are priorities integrated into the management program. Ranch operations also support cross-departmental initiatives concerning the collection of environmental and hydrologic

monitoring data and various other aspects of the GWD Project.

Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Maintain critical equipment and building systems to ensure a safe and comfortable work environment; measure equipment uptime percentage.
- Develop and implement 10 year rolling asset management plan.
- Comply with environmental permit requirements for construction and operation of weirs in Las Vegas Wash.
- Conduct research and public outreach in the Las Vegas Wash in accordance with agreements and the Las Vegas Wash Comprehensive Adaptive Management Plan (LVWCAMP).
- Develop a long term operating plan for the Las Vegas Wash assets.
- Maintain zero incidents of noncompliance with terms associated with the LVVWD and SNWA groundwater and surface-water permits.
- Maintain zero incidents of noncompliance with permits associated with the LVVWD's artificial recharge program.
- Comply with environmental permit requirements for construction and operation of new and existing Small Systems facilities.

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2015-16 Major Accomplishments

- Conducted aquatic bird, marsh bird, and invertebrate surveys along the Las Vegas Wash.
- 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 25 acres along the Las Vegas Wash, removed more than 20 acres of tamarisk, and conducted vegetation monitoring on nearly 300 acres.
- Conducted two Las Vegas Wash Green-Up events, where more than 600 volunteers planted approximately 20 acres.
- Coordinated and hosted a two-day science symposium for more than 200 high school students as part of World Wetlands Day.
- Organized meetings of the LVVWAC, LVWCC, and technical subcommittees in 2015.
- Conducted an excavation of a possible pit house structure on the Las Vegas Wash.
- Developed a draft Long Term Operating Plan on the Las Vegas Wash.
- Completed restoration of the Searchlight Water System pipeline and power line rights-of-way.
- Completed environmental compliance to support rehabilitation of the existing Rainbow well in Kyle Canyon.
- Completed all compliance monitoring and reporting for the LVVWD's groundwater rights associated with the Small Systems, and permits to recharge, store, and recover water from the Southern Nevada Water Bank.
- Published the annual monitoring report for the small system at Jean and submitted the report to Nevada Division of Water Resources (NDWR) in accordance with permit terms.
- Published the annual report of the LVVWD's groundwater production and artificial recharge in Las Vegas Valley and submitted the report to the Nevada Division of Water Resources (NDWR) and Nevada Division of Environmental Protection (NDEP) in accordance with permit terms.
- Completed hydrogeologic and geophysical data collection and analyses and identified sites for the installation of new production wells for the Garnet Valley Water System.
- Acquired temporary applications from the Nevada State Engineer that changed the point of diversion and place of use of a portion of SNWA groundwater rights in Coyote Spring Valley to existing wells in Garnet Valley where they will be used to supply demands in the Apex Industrial Park.
- Completed an investigation of elevated concentrations of regulated chemical constituents in the Las Vegas Valley groundwater, and devised mitigation measures to lower the concentration of these constituents in LVVWD production wells.
- Filed over 30 water-right proofs and extensions, and acquired 5 certificates from the Nevada State Engineer to maintain and perfect LVVWD and SNWA groundwater and surface-water rights.
- Coordinate and accompanied AIG, Lexington and Hartford representatives on the Insurance Carrier inspections.
- Completed Operating Capital projects; 5S010 – Roof replacement on six (6) SNWA Pump Stations (Hacienda, 2A, 2B, 2C, 7B

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and IPS-1); 5S011 – Waterproofing and caulking seven (7) SNWA Pump Stations; 5S008 HVAC Replacements at both SNWA Water Treatment Facilities.

Strategic Plan Goal – Deliver an Outstanding Customer Service Experience.

2016-17 Performance Objectives

- Maintain 90 percent or greater client satisfaction rating for delivery of the Water Smart landscapes program.
- Achieve an 80 percent or greater satisfaction rating for facilities-related customer interactions.

2015-16 Major Accomplishments

- Maintained a conservation customer feedback rating of 4.6 out of 5. Customer service satisfaction exceeded 90 percent.
- Provided over 2,000 customers with rebates for participation in conservation programs including conversion of over four million square feet of turf grass to water efficient landscaping.
- Implemented programming in accordance with the approved 2014-2018 Conservation Plan.
- G0792 – Completed the LVVWD SCADA Room Upgrade.
- G0791 – Completed the LVVWD Fleet Building HVAC Upgrade.
- 54102 – Completed Audio/Video Upgrades to the Molasky 7th Floor Board Room and all three (3) Mead Conference Rooms (V.V.).
- Facilitated major internal events including: all Divisional holiday parties,

Safety Stand-Down Day, Celebrating You week, etc.

- 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.

2016-17 Performance Objectives

- Sustain the SNWA’s right-of-way grant for the Groundwater Development Project (GDP).
- Conduct monitoring and submit annual hydrologic and biological data and reports to the Nevada State Engineer as required by water-right permits.
- Complete actions as required under the SNWA / Department of Interior Stipulated Agreements.
- Sustainably manage the Great Basin Ranches such that annual gross revenue covers at least 100 percent of direct costs, measured as a five-year running average.
- Develop and certificate 100 percent of ranch water rights.
- Maintain Great Basin Ranch assets, including property, facilities, water rights, and grazing allotments in accordance with annual work plans.
- Inspect 100 percent of ranch irrigation, stock, and domestic wells at least annually, and maintain at least 90 percent of the wells at full operational capacity.
- Ensure zero incidents of noncompliance with permits and interagency agreements for continued use and development of groundwater in Coyote Spring, Hidden and

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- Garnet valleys and Virgin and Muddy Rivers surface water.
- Ensure 100 percent compliance with agreements to maintain the Muddy River and Virgin rivers lease programs.
 - Submit documentation annually as necessary to obtain Intentionally Created Surplus credits or other beneficial use of Muddy and Virgin River water rights and leases.
 - Provide comments within comment period deadlines for all proposed environmental rules, policies, and projects which may affect the SNWA's resources.
 - Complete environmental compliance for Silver State Energy Association Eastern Nevada Transmission Project.
 - Complete environmental compliance for projects initiated by other divisions and departments.
 - Collaborate on all major local and regional climate change initiatives relevant to the SNWA.
 - Review and update, as necessary, the SNWA Resource Plan and Water Budget annually.
 - Ensure 100 percent 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.
 - Implementation of aggressive conservation measures and programs to ensure long-term water conservation and sustainable use of water, including a continued commitment to long-term reductions in Net GPCD.
 - Make progress towards achieving the goals of the Recovery Plan for rare aquatic species on the Muddy River (Moapa dace).

- Provide public access at the Warm Springs Natural Area in accordance with the Southern Nevada Public Land Management Plan funding agreement.
- Mow fields at least once annually, and trim palms and maintain fire breaks annually as needed at the Warm Springs Natural Area in accordance with the Fire Management Plan.
- Communicate sustainability goals and progress to the organization.

2015-16 Major Accomplishments

- Achieved 2015 Net GPCD of 125 gallons.
- Provided rebates from conservation programs saving the community over 379 million gallons per year.
- Hosted approximately 1,000 attendees from 40 U.S. states at the 9th Annual WaterSmart Innovations Conference and Expo.
- Recipient of the Irrigation Association National Water and Energy Conservation Award.
- Supported legal defense of the Groundwater Development Project rights-of-way.
- Completed evaluations of Spring Valley Biological Monitoring Plan, in coordination with Biological Working Group as required under the Spring Valley Stipulated Agreement.
- Monitored more than 300 ground photography fixed monitoring locations across the SNWA's grazing allotments to document our use of the rangeland, drought conditions, and general range health.
- Conducted native fish surveys on the Virgin and Muddy Rivers.

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- Finalized a Safe Harbor Agreement to place Pahrump poolfish at the Springs Preserve.
- Conducted desert tortoise, migratory bird, and sensitive species surveys, and responded to 8 calls for dangerous animals at various SNWA/LVVWD facilities.
- Reviewed 125 draft policies, regulations, and projects potentially relevant to the SNWA and the LVVWD, and submitted 17 formal comments letters.
- Completed a cultural resources Programmatic Agreement, final Environmental Assessment and Biological Opinion for the Eastern Nevada Transmission Project.
- Initiated restoration of the South Fork of the Muddy River on WSNA to improve habitat for the Moapa dace.
- Moapa dace counts were generally stable, with 2,182 counted in August 2015 and 1,859 counted in February 2016.
- Completed signs and kiosks for the second phase of public access at the WSNA, and obtained \$875,000 in grant funding.
- Treated 56 acres on the WSNA for weeds, and grew over 10,000 native plants at the greenhouse for restoration planning at Warm Springs and the Las Vegas Wash.
- Trimmed palm trees, maintained fire breaks, and replaced fencing to preserve defensible space around structures and Moapa dace streams.
- Maintained and improved Great Basin Ranch properties through building renovations at the Robison ranches, Harbecke and Bastian; improving calving areas, shipping facilities, feedlot facilities enhancement to support livestock program; fencing and pond projects on several deeded sites; clearing all ranches of waste and other hazards.
- Supported better range ecology by controlling livestock distribution, forage utilization and protection of riparian areas with installation of diversion/drift fence between Scotty Meadows and South Spring Valley and replacing Pine Creek collection pond fence; assisting with mitigation of Sage Grouse issued by removal of cross fencing at Meadow Creek and McCoy Ranches.
- Completed installation and brought online four new irrigation systems at Huntsman/Phillips.
- Completed the re-habilitation of four wells at the Phillips ranch.
- Established and harvested marketable crop under these systems.
- Re-fenced the development area and perimeter fence along CR894, approximately 3 miles of fence line.
- Complete renovation of the Phillips house bringing it up to DOL standards.
- Produced 10,775 ton of marketable forage products.
- The ranch produced 652,126 pounds of beef and added 417 beef replacement females to the inventory.
- The ranch produced 151,650 pounds of lambs and added 1,200 replacement sheep to the inventory.
- Completed re-habilitation of the Bastain well.
- Installed new septic and leach field at the Bastain ranch.
- Planted trees, installed irrigation and a perimeter fence around the Bastain property.
- Built a radio tower used to support better staff communication.

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- Installed steel siding and a roof on the old Harbecke house.
- Built an employee appreciation area including a bar-b-que pit.
- Started construction of a hay storage building used to store export quality forage.
- Built spill containment around diesel pump.
- Installed new HVAC unit at Harbecke.
- Built ranch roads around new pivot systems at Huntsman.
- Participated with Environmental Resources team completing reclamation at four well sites.
- Placed approximately 50 percent of permitted AUMs in non-use for conservation and preservation of range resources.
- Installed a new vehicle lift in Fleet Services to better accommodate ranch equipment and create a safe work area.
- Audited SVA administration and reorganized management to comply with DOL regulation.
- Completed all compliance monitoring and reporting for the SNWA's groundwater and surface-water rights associated with the Northern Resources Ranch properties, Groundwater Development Project, Coyote Spring, Hidden and Garnet valleys and the Virgin and Muddy Rivers.
- Published a new SNWA Water Resources Plan and the 2015 SNWA Water Budget.
- Banked 75,000 af of Nevada's Extraordinary Conservation credits and approximately 75,000 af of Nevada's unused Colorado River apportionment in California.
- Performed monthly monitoring of the Colorado River Basin water-supply conditions and the SNWA's water use, and summarized data to convey drought impacts to Southern Nevada.
- Created and delivered approximately 29,300 acre feet of Tributary Conservation ICS from the Muddy and Virgin Rivers to Lake Mead.
- 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.
- Implemented a maintenance and repair plan to optimize efficiencies of irrigation wells and the development of water rights associated with the Northern Resources Ranch properties.
- Completed a study to characterize the water quality and extent of the shallow groundwater system in Las Vegas Valley in support of an inter-local agreement with the Clark County Water Reclamation District.
- Completed a comprehensive District-wide Lighting Project (interior and exterior) replacing or retrofitting over 1,000 fixtures. This resulted in reducing the annual electrical consumption by more than one Megawatt.
- Participated in the annual holiday drive, recycling over 2,500 Christmas trees.
- Supported and implemented the installation of the company-wide single-stream recycling program.
- Facilitated the Sustainability CDT, which met more than six times to coordinate the organization's sustainability goals.

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Strategic Plan Goal – Ensure Organizational Efficiency and Manage Financial Resources to Provide Maximum Customer Value.
2016-17 Performance Objectives

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

2015-16 Major Accomplishments

- Increased beef and sheep herd numbers substantially to provide future revenue growth.
- Completed Renovation's (Phase A & B) for Information Technology upgrading nineteen (19) work areas and seven (7) offices using in-house labor.
- Used in-house labor to renovate the Valley View Human Resources – North work area (formerly the Employee Development Division).
- Supported the Customer Care Lobby Station PCI Compliance upgrades.
- Renovated four (4) offices in the Executive and Legal areas of the West Administration Building.
- 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.
- Completed a price-elasticity study of water rates to inform the LVVWD Rates and Rules Citizens Advisory Committee.

Strategic Plan Goal – Strengthen and Uphold a Culture of Service, Excellence and Accountability.
2016-17 Performance Objectives

- Department staff completes 90 percent of mandatory Knowledge Reservoir training on schedule.
- Department average annual incident rate exhibits a downward trend, based on a five-year average.
- Ensure 90 percent of Facilities preventive maintenance work is completed by the due date.
- Ensure 98 percent or greater, fire and life safety inspections or tests are completed by the due date.
- Perform quarterly reviews of Strategic Plan and Tactics and KPIs will be updated at least quarterly.

2015-16 Major Accomplishments

- Renovations for safer operation of El Tejon Ranch irrigation lift station; replacement of hazardous irrigation electrical CT stand at Shoshone.
- The Facilities division comprised of a team of custodians reliably maintains an orderly, clean and compliant environment at all sites.
- Facilitated over 5,000 meeting room set-ups over the past 12-months.
- Completed 13,286 Work Tasks over the past 12-months.

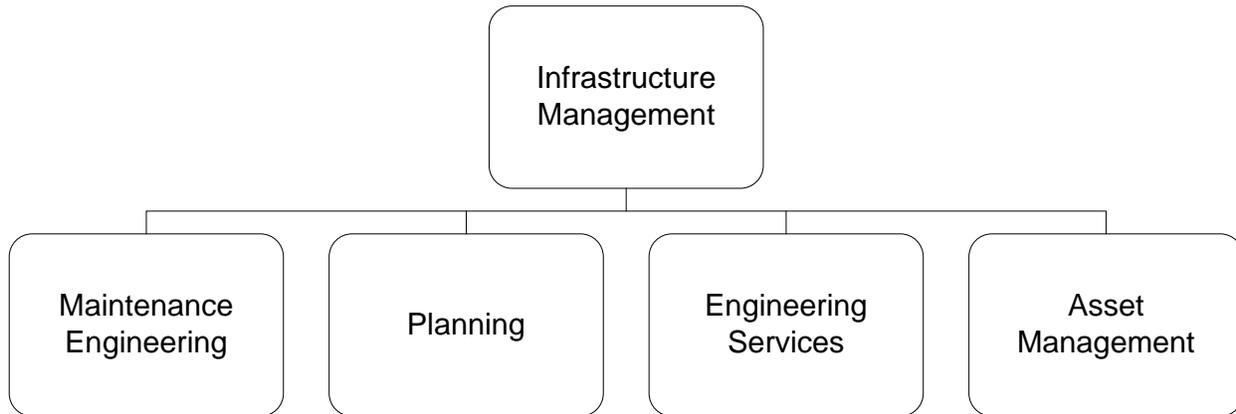
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INFRASTRUCTURE MANAGEMENT

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 and Planning Divisions review water plan submittals for proposed development to ensure they meet the LVVWD's construction standards, and provide adequate pressures and fireflow. 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 Departments (WQ&T). The Asset Management Division tests for leaks on large diameter pipelines, provides inspection support, develops future cost projections, and maintains the LVVWD and the SNWA cathodic protection systems. All of these efforts are directly in support of the Department's mission.

Budget Objectives and Highlights

The 2016-17 Budget contains a comprehensive view of Infrastructure Management's efforts to maintain costs at current levels. Infrastructure Management's total operating expense budget between the LVVWD and the SNWA increased \$560,000 from budget year 2015-16 to 2016-17. Reorganizing Departments and Divisions, adding SCADA employees, and having an accurate previous fiscal year's budget are contributing factors to the expense increase. The Department will continue to focus efforts into maintaining cathodic protection, SCADA, and the 4-1-1 developer review process.

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Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Materials & Supplies	\$ 42,692	\$ 85,800	\$ 74,000
Maintenance & Repairs	1,000	265,000	425,000
Other Employee Expenses	4,146	20,750	17,750
Other Expenses	40,961	426,700	626,700
Total Operating Expenses	\$ 88,800	\$ 798,250	\$ 1,143,450
Capital Costs	\$ -	\$ 2,852,900	\$ 5,601,000
Payroll Costs	\$ 2,614,831	\$ 3,057,319	\$ 3,675,015
Total Department Expenditures	\$ 2,703,631	\$ 6,708,469	\$ 10,419,465
FTE Positions	13.7	16.0	19.2

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, security system design and equipment procurement, water quality projects, electrical coordination study analysis, motor control center and switchgear upgrades, well rehabilitation and maintenance, 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 the LVVWD, Big Bend Water District (BBWD), Alfred Merritt Smith Water Treatment Facility (AMSWTF), River Mountains Water Treatment Facility (RMWTF), and rural systems operated by LVVWD.

The Division is currently managing over 250 projects between the LVVWD and the SNWA, with a budget of more than \$10 million. Major projects include the SCADA upgrade at the SNWA, Automation Controller upgrades at the SNWA and the LVVWD, VFD replacements at WRC, Fayle Pump Station MOV replacements,

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cathodic protection system installations at North Lateral, South Lateral, and Gibson Lateral, chemical system area upgrade, chiller pipe replacement at AMSWTF, Airport West Basin floor wall joint replacements, and the offloading island modifications at RMWTF.

Planning. The Planning Division provides research, analysis, modeling, and forecasting to support a number of activities at both the LVVWD and the SNWA. The Division provides long-term forecasts, water use analyses, and conservation analyses to the SNWA as inputs into regional water resource planning, as well as water resource demand projections, population distributions, and water demand distributions for the LVVWD, small systems, and the recycled water distribution systems. 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 a well-calibrated hydraulic model of the distribution system which is utilized for engineering analysis and decision support.

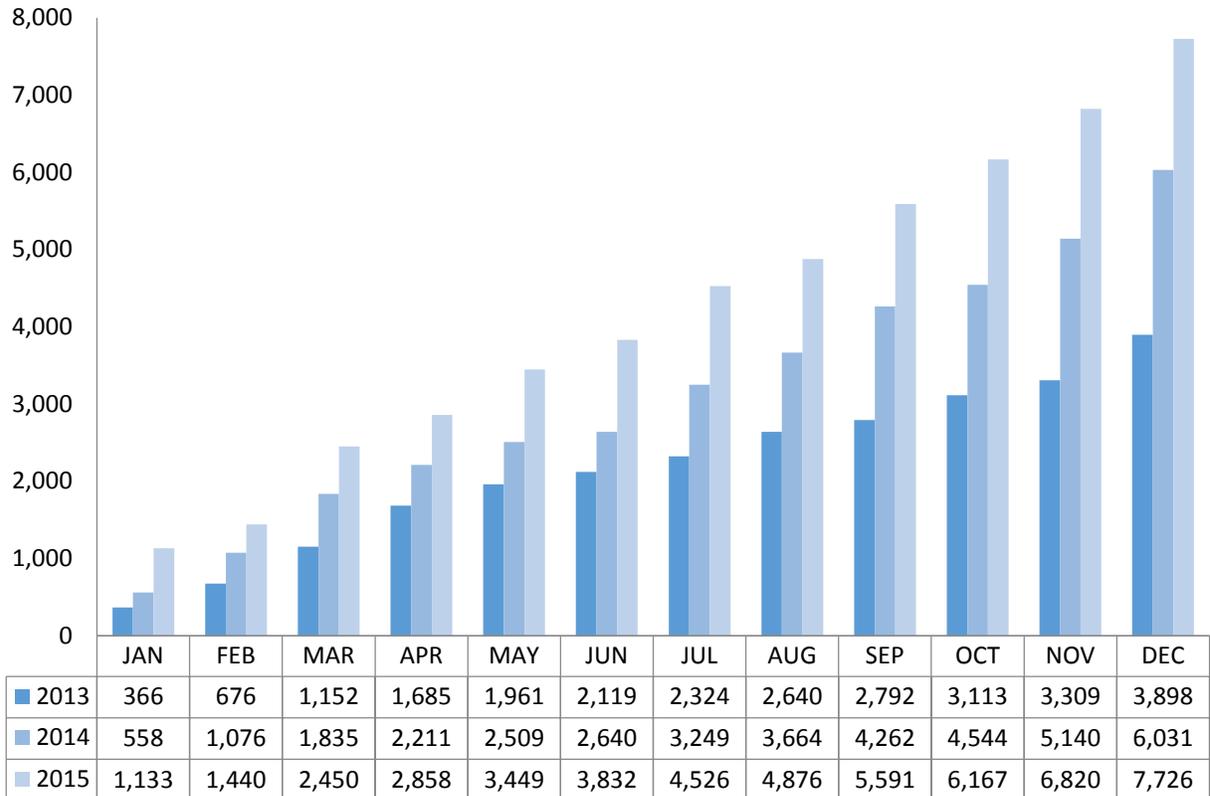
The Division locates, sizes, and schedules new pumping stations, reservoirs, wells, and major pipelines. In coordination with the Operations Department, the Division develops operating and emergency strategies to improve water quality and reduce energy consumption. The Division collaborates with the Engineering Services Division in the review of pressure and fire flow availability for new developments

and writes cost sharing agreements for the design and construction of major water facilities. The Division collaborates with the WQ&T and Operations Departments to address water quality compliance issues, to research and develop alternative technologies applicable to the LVVWD water distribution system, and to plan for capital improvements and required monitoring for regulatory compliance. The Division also performs planning for artificial recharge, small systems, recycled water distribution systems, and out-of-valley transmission systems.

Engineering Services. The Engineering Services Division is responsible for reviewing plans for additions and modifications to the systems of the LVVWD and the SNWA, initiated by developers, utilities, and public entities. Engineering Services approves the water plans for these system additions, and ensures system additions meet the LVVWD's requirements for reliability and maintainability, calculates fees, processes agreements, commits water resources to new developments, and ensures water facility construction is per the LVVWD's standards. The Division also coordinates with other public works construction to minimize both the LVVWD costs and inconvenience to the public. Engineering Services is also responsible for the evaluation and testing of products for use in the water distribution system and is in charge of the LVVWD Approved Products List. The following chart represents the LVVWD's cumulative data representing new service points.

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New Service Points
2013-2015 Cumulative New Service Points Received

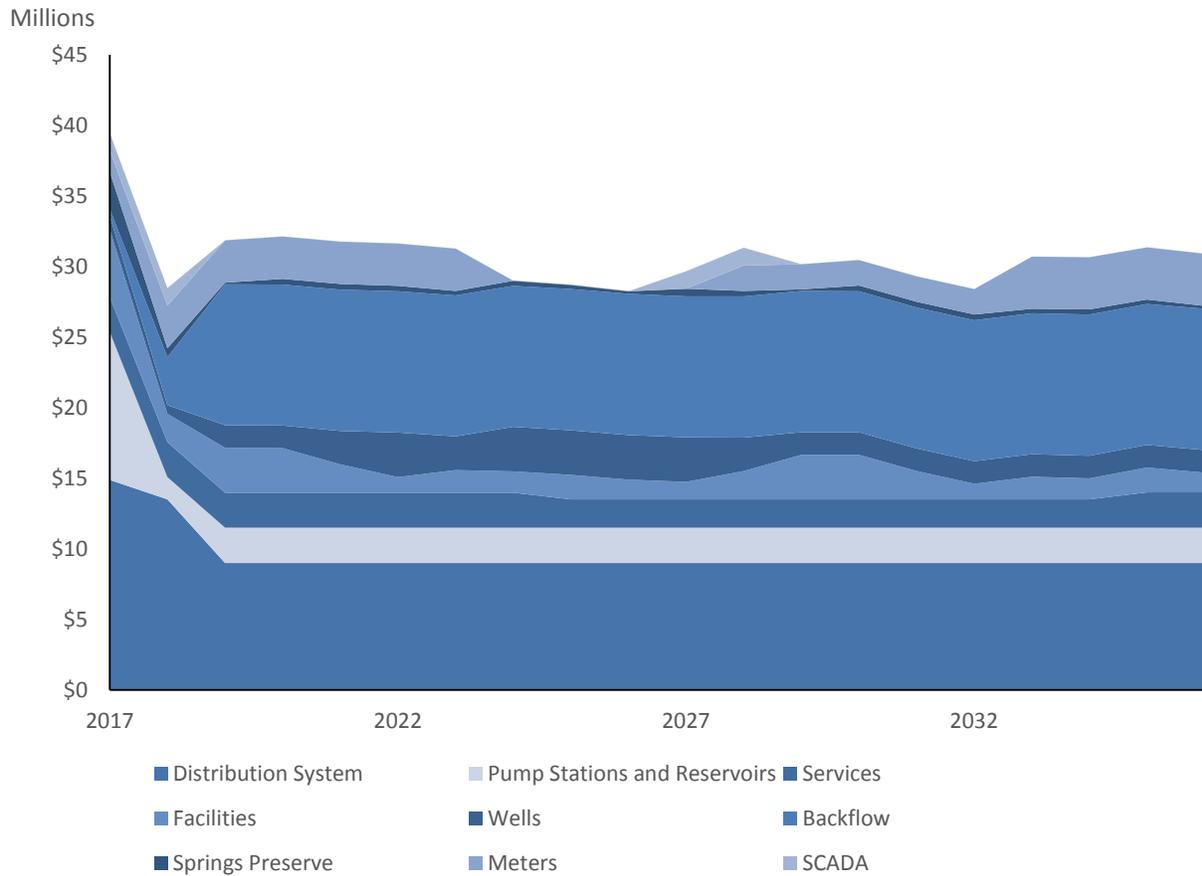


Asset Management. The Asset Management Division assesses infrastructure conditions and forecasts short and long-term capital renewal needs to meet service level expectations. The Division is responsible for managing the corrosion control program for the LVVWD, SNWA, and associated small systems. The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

stations and 17 impressed current rectifiers for the LVVWD, as well as 1,025 CP test stations and 73 impressed current rectifiers for the SNWA. The Division also maintains CP system components, installs new anodes and test stations, and performs corrosion assessments. The following chart represents the LVVWD’s estimated annual infrastructure renewal needs for all infrastructure including pipelines, service laterals, valves, vaults, wells, pump stations, and reservoirs.

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Estimated Annual Infrastructure Renewal Needs



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

Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Replace obsolete site automation equipment with current technology utilizing industry standard protocol.

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- Maintain a capital improvements program for the LVVWD and small systems, and monitor and review development to support future growth.
- Monitor and evaluate water quality in the distribution system, and recommend improvements in response to changing water quality and regulatory conditions.
- Provide stewardship of the chemical processes used at all water treatment facilities.

2015-16 Major Accomplishments

- PLC controller upgrades completed; twenty-one controller upgrades for SNWA and twenty-one controller upgrades at the LVVWD.
- Designed and installed new electrical equipment including: Well 83 and 84 motor control centers, Well 45 5KV switchgear, Charleston Blvd 5KV main switchgear and motor control center, BPS2 soft starter, and the transformer replacements at Carlton Square and Montessori.
- Prepared the LVVWD Three Year Operating Plan strategy for SNWA and prepared the LVVWD Summer 2015 Well Plan.
- Monitored development and increase in system demands and made recommendations for operational changes to minimize the costs for new capital infrastructure.
- Performed hydraulic criticality analysis and provided recommendations to minimize costs for water main rehabilitation projects.

Strategic Plan Goal – Deliver an outstanding customer service experience.

2016-17 Performance Objectives

- Reduce the length of time to review 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%.
- Utilize pdf images of civil plans to allow waterworks distributors to submit shop drawing submittals for product submittals.
- Collaborate with the City and County Building Departments to establish plan review criteria for existing developments requiring backflow retrofit and meter upsizing.
- Continue to work with other agencies to include water facility upgrades and replacements in road improvement projects.

2015-16 Major Accomplishments

- Approved 7,726 new water service connections.
- Reviewed 1,650 sets of developer and public works plans for the LVVWD and the SNWA, including brand new submittals, re-submittals, and revisions.
- Reviewed and approved 271 hydraulic grade line requests, 199 water network analyses, and 412 sets of

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development plans.

- Reduced the length of time to review water plan submittals, network analyses, and hydraulic grade line requests through expansion of the digital submittal system and process improvements.

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

2016-17 Performance Objectives

- Perform a detailed update of master planning areas and associated facilities needed to serve developed and vacant acreages.
- Continue to utilize in-house resources to inspect infrastructure and only utilize outside resources for specialized testing the technicians and engineers are not experts in conducting. This includes, corrosion control technicians utilizing remote submarines to inspect smaller tanks instead of hiring divers.
- Continue to utilize the latest condition assessment technologies to determine the true condition and expected remaining life of the infrastructure.
- Create a demand model of the largest two percent of LVVWD's customers and estimate the price elasticity of demand for use by the Finance Department in future revenue requirement studies.
- Maintain a well-calibrated hydraulic model of the distribution system for effective decision support.

2015-16 Major Accomplishments

- Completed 166 projects with a capital budget of \$6.0 million, including the leveraging of SRF funds to facilitate automation equipment upgrades and THM mitigation installations.
- Incorporated the LVVWD facility replacements and improvements into City, County, and Nevada Department of Transportation projects, reducing future costs and minimizing the public's impact due to construction.
- Completed the Las Vegas Boulevard Master Plan, including identification of existing facilities in need of rehabilitation, replacement, or relocation, and requirements for new facilities. This work also included identifying pavement projects planned by other agencies for the purpose of initiating coordination of work in the interest of saving money and reducing traffic disruptions.
- Developed a database used to calculate the non-consumption based bills for each LVVWD customer.
- Revised and updated the system to estimate water requirements for new development.

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

project close out and minimize paper copies.

2016-17 Performance Objectives

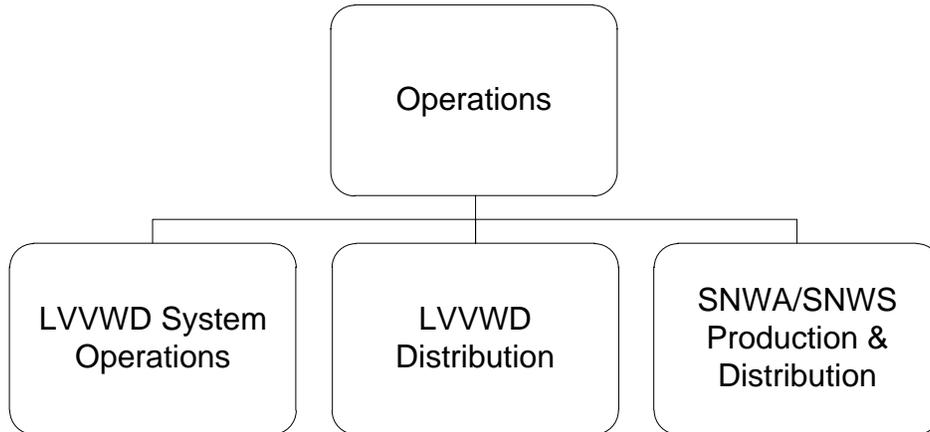
- Merge the individual Division capital plans into one comprehensive cost loaded capital plan.
- Provide updated cost curves and risk assessments for the LVVWD and the SNWA pipelines.
- Conduct UDACS (Uniform Design and Construction Standards) training sessions for engineering firms, addressing each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

2015-16 Major Accomplishments

- Worked with waterworks distributors and the Approved Products Committee to identify products to be supplied locally and reduce the overall number of products requiring repair parts to be stocked by LVVWD. Easement submittal and review process is now digital and done through the web.
- Processed 951 record drawing requests for developer and public works projects for the facilities.
- Met with SCADA operators on a weekly basis to ensure that problems and concerns are dealt with quickly, and software and operating philosophy changes are understood.
- Implemented a digital signature process for site drawings to expedite

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OPERATIONS
Level: 4100



Mission

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

Department Description

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

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

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

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

Budget Objectives and Highlights

In October 2014, the SNWA/Southern Nevada Water System (SNWS) and LVVWD Operations department’s divisions and functions were merged into a single

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

Operations' divisions are responsible for the day-to-day and long term operations of a complex network of pumping stations, reservoirs, rate of flow control stations (ROFCS), sodium hypochlorite facilities, and ground water wells necessary to meet water delivery demands. Wholesale customers of the SNWA include LVVWD, City of Henderson, City of North Las Vegas, Boulder City, Nellis Air Force Base, and the Park Service. Retail customers of the LVVWD receiving water from Lake Mead include residents of unincorporated Clark County and the City of Las Vegas. The department also operates small ground water systems for the communities of Blue Diamond, Jean, Mt. Charleston, Searchlight, the Sloan Army Reserve Center, and the Moapa Water Treatment Plant.

Equipment and Project Budget.

The Operations department combined equipment and project budget reflects the new items to establish improved maintenance practices, replacement of existing equipment items no longer supportable by the manufacturer, and capital projects the divisions manage. The total request is \$222,200 for the fiscal year 2016-17 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 2016-17 Budget Plan are shown on the following table.

Operations' fiscal year 2016-17 overall budget totals \$68,671,934 between the LVVWD and the SNWA.

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Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Water	\$ 223,435	\$ 250,000	\$ 250,000
Energy	144,461	-	200,000
Materials & Supplies	1,616,185	1,254,700	2,054,000
Maintenance & Repairs	39,023	280,000	280,000
Rental & Leases	182,961	175,000	175,000
Other Employee Expenses	33,616	74,300	78,150
Other Expenses	256,593	821,350	222,600
Total Operating Expenses	\$ 2,496,275	\$ 2,855,350	\$ 3,259,750
 Capital Costs	 \$ 5,022,357	 \$ 8,765,617	 \$ 9,553,000
 Payroll Costs	 \$ 9,035,828	 \$ 7,967,161	 \$ 8,628,141
 Total Department Expenditures	 \$ 16,554,461	 \$ 19,588,128	 \$ 21,440,891
 FTE Positions	 63.6	 56.7	 57.4

Department Performance

SNWA Maintenance. The division is responsible for the repair and maintenance of the production facilities and distribution system. The division ensures the system, facilities and equipment are maintained at a level to fulfill the SNWA's contracted water delivery commitments. This is a large, complex system consisting of 31 pumping plants, 36 metering sites called rate-of-flow control stations (ROFCS), 163 miles of large diameter pipeline, and over 60 regulating tanks, reservoirs and surge towers.

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

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

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

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

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

The Communications Systems section is responsible for the SNWS communication systems including fiber optics, SONET, T-1 multiplexing, as well as the installation and maintenance of the equipment associated with these systems. This section is also responsible for supporting field devices in the SNWS SCADA system. These responsibilities include the construction of remote terminal units, and installation, maintenance and repair services for the SCADA network hardware equipment. Communications Systems work closely with contractors to ensure the communication needs of SNWS are not disrupted during new construction. The section repairs all of the SNWS fiber optic and

telemetry cables, and manages the SNWS fiber optic and telemetry cable infrastructure.

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

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the Colorado River Commission (CRC). In cooperation with the Water Quality and Treatment department, these sections also maintain all process control monitoring equipment with close tolerance of prescribed limits, ensuring the accuracy and reliability of the high quality water the SNWS delivers to its customers.

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.

The Raw Water Mechanical section is responsible for the raw water facilities including re-staging, repair, refurbishment, and maintenance issues with pumps, motors, and valves associated with Intake Pumping Stations 1 and 2, Booster Pumping Stations 1A and 2, and the Boulder City Raw Pump Station.

LVVWD Distribution. The Distribution division (Distribution) is responsible for maintaining 6,532 miles of pipeline and laterals, 120,953 valves, 387,559 service laterals, 38,033 fire hydrants, and appurtenances comprising the LVVWD's distribution system. In fiscal year 2014-15, Distribution crews completed 8,337 work orders consisting of repairs to pipelines, and repairing and replacing valves and fire hydrants; additionally, replaced 2,099 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 56,350 of these services have been replaced, leaving 23,750 in unreliable service. Distribution also assists other departments, such as Asset Management, by installing cathodic test stations, and Inspections with valve corrections and water quality.

Distribution continues the preventative maintenance valve program which locates, operates, and maintains valves within the distribution system. Distribution located and exercised 9,732 valves in fiscal year 2014-15, keeping them in good working order and improving Distribution staff's ability to quickly perform main shutdowns in case of a leak or large emergency. This has helped Distribution staff lower the average time to shut down a leaking water main in an emergency and reduce non-revenue water losses.

The Backflow Prevention section administers the LVVWD's Backflow Prevention Program. This is a service protection program involving annual testing and repair of all backflow assemblies in the LVVWD distribution system. An active backflow program ensures contaminated water cannot enter the potable water system if a backflow, backpressure or backsiphonage condition exists. The backflow technicians are certified by the California/Nevada section of the American Water Works Association (AWWA). They are currently managing approximately 28,000 backflow prevention devices.

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

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

The Field Booster Pump/Valve Repair section maintains, repairs, and installs mechanical equipment found at major pumping stations, select small system sites, and recycled water valve vaults.

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

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 plans for a Small Systems team.

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 SNWA bills its customers.

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

The SNWS SCADA Operations section provides around-the-clock monitoring and control of wholesale water transmission and distribution system equipment using the SCADA computer system. Daily tasks include coordinating water and power orders from 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.

Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Return LVVWD’s Faye Reservoir and Pumping Station to service after a \$20 million overhaul.
- Continue to collaborate with Infrastructure Management to complete SNWS PAC and LVVWD DNP3 programmable logic controller upgrades.
- Activate and incorporate two new small systems into the system for both operations and maintenance.
- Identify best operational and maintenance practices of various divisions and implement them as the standard practice

2015–16 Major Accomplishments

- LVVWD Operations completed initial training on using the hydraulic model in creating daily water pumping plans. This allowed for the transfer of resources to Operations.
- ROFC 6 Forebay was rehabilitated and has set the standard for several similarly constructed, critical Forebay’s to be rehabilitated in the coming years.
- Continued interaction of Engineering on the Low Lake Level Pumping Station has resulted in support for the ongoing construction efforts and initiation of the purchase of major components such as pumps, valves, large diameter, and other appurtenances and equipment items needed for the station.
- Survived a 10% retirement rate with proactive interaction and support from

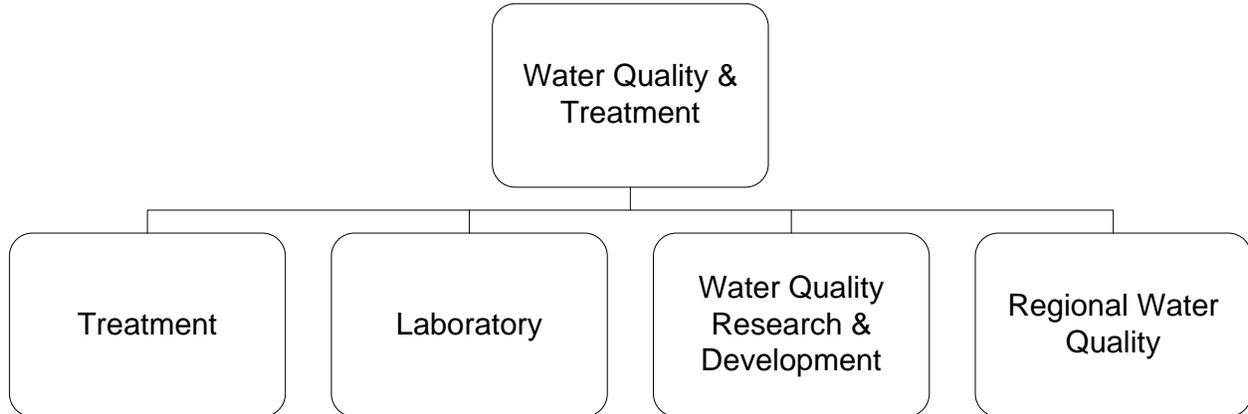
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Human Resources to fill all vacancies with highly qualified internal and external candidates. Bottom line, our mission of delivering water was not adversely impacted.

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 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, 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

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Control and Data Acquisition System (SCADA), 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 optimizing treatment while minimizing cost.

Expenditures

SNWA Uses	Actual 2014-15	Budget 2015-16	Budget 2016-17
Energy	\$ 74,012	\$ 100,000	\$ 100,000
Materials & Supplies	4,160,186	4,162,500	4,534,100
Maintenance & Repairs	864,195	1,011,000	1,086,000
Other Employee Expenses	425,535	455,845	642,162
Other Expenses	632,479	1,278,128	1,120,310
Total Operating Expenses	\$ 6,156,407	\$ 7,007,473	\$ 7,482,572
Capital Costs	\$ 1,704,960	\$ 2,307,982	\$ 8,166,612
Payroll Costs	\$ 13,970,487	\$ 13,967,882	\$ 15,496,328
Total Department Expenditures	\$ 21,831,854	\$ 23,283,337	\$ 31,145,512
FTE Positions	86.8	87.3	89.3

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 and testing. The sections within the laboratory include Chemistry, Microbiology, Monitoring, and Laboratory Services. The analytical capabilities of the

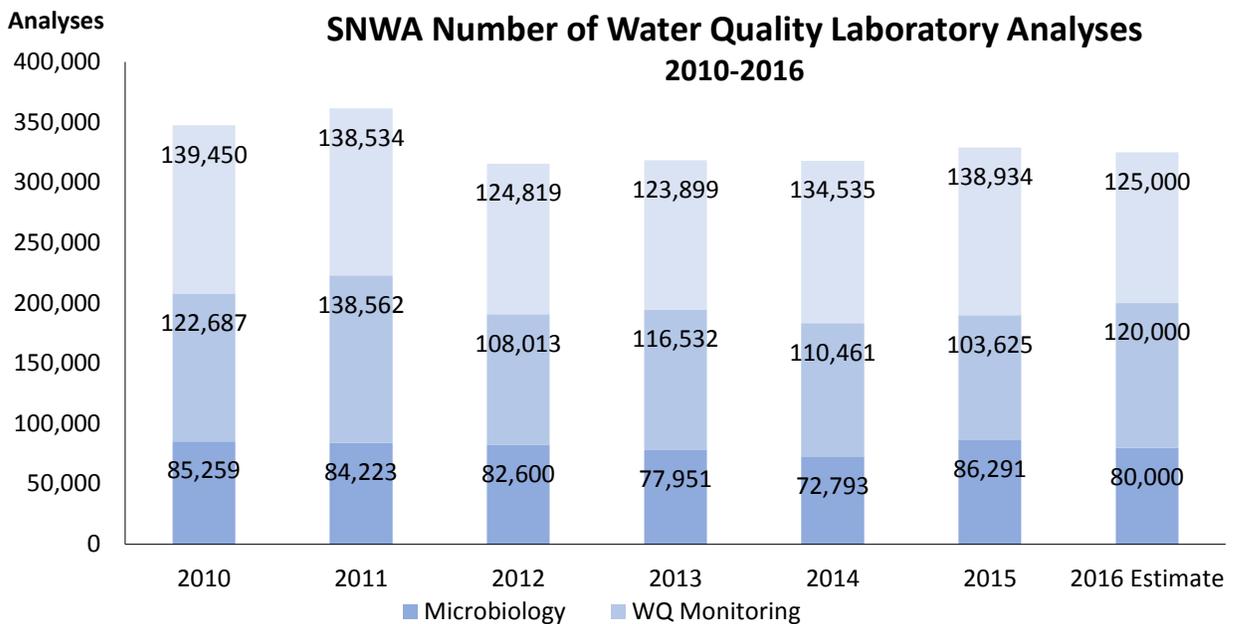
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laboratory cover a broad spectrum including: trace organic, trace inorganic, macro constituent, physical, wet-chemical, bacteriological, virological, protozoan, amoebas, and limnological analyses.

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 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 Southern Nevada Water Authority purveyors. The Monitoring, Chemistry and Microbiology sections subsequently perform a

variety of analyses on these samples. In addition, the Laboratory completed all the 2015 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 33,500 samples were collected and 328,850 analyses performed in 2015. The chart below presents the total number of laboratory analyses through calendar years 2009-2015 (2016 estimate).



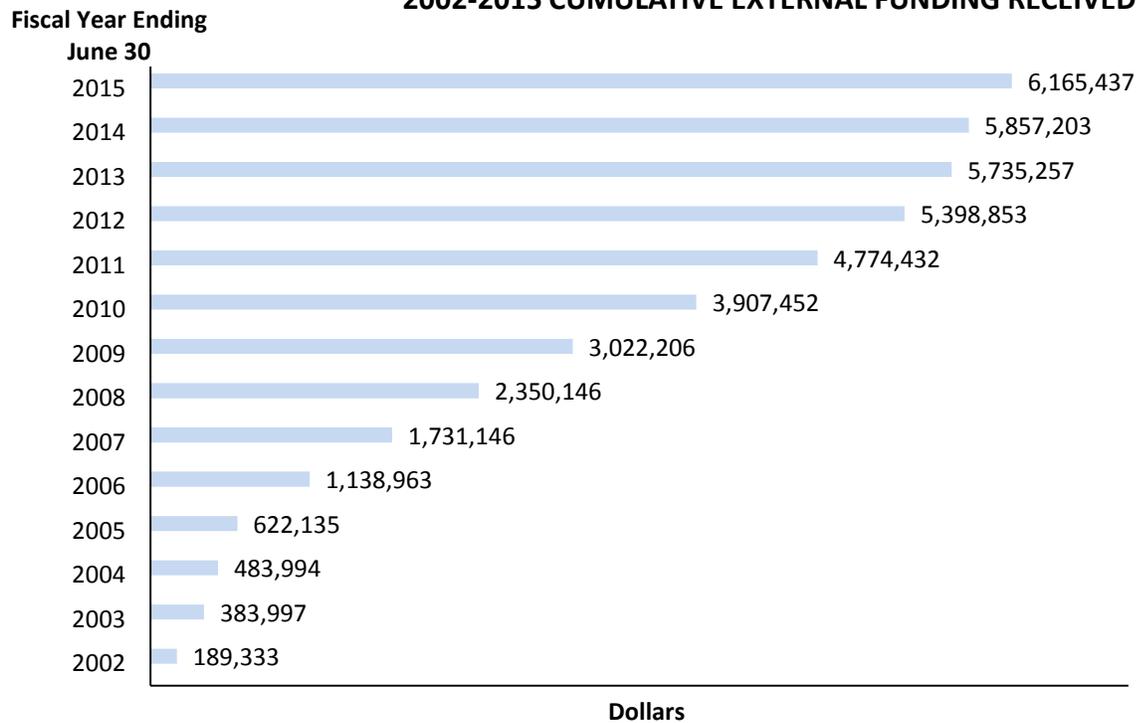
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Water Quality Research and Development.

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 United States 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 - 2015.

SNWA WATER QUALITY RESEARCH & DEVELOPMENT
2002-2015 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.

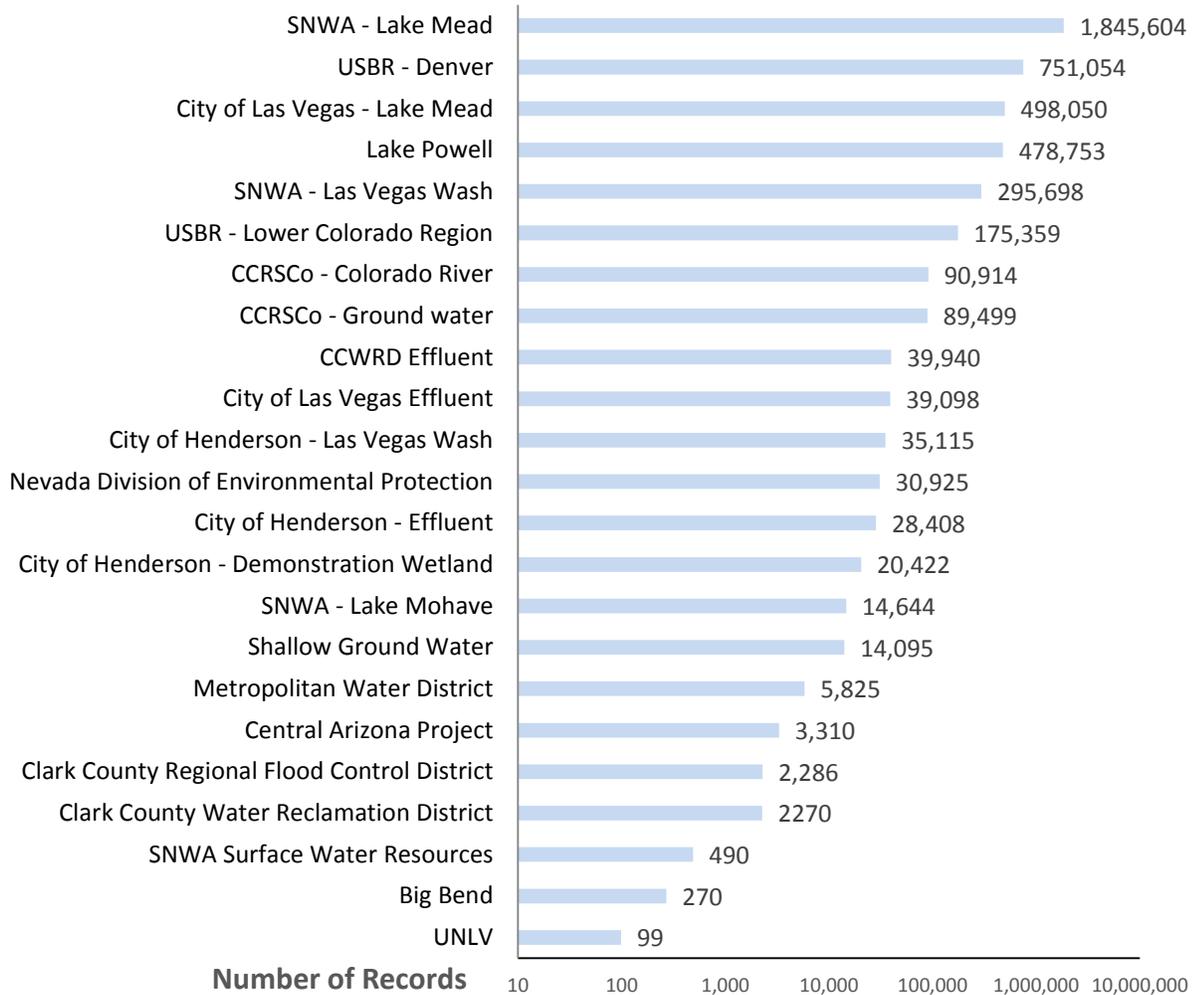
In 2015-16, the Regional Water Quality division received a second grant for the amount of \$100,000 from the Clark County Water Reclamation District to finalize the development of a shallow groundwater database, conduct monitoring of the shallow groundwater, to assess data gaps, and to make recommendations for future monitoring. The division has also completed a WaterSmart grant funded project to assess the impact of nutrients released from sediments on the water quality in Lake Mead with low dissolved oxygen conditions using the three dimensional model developed by Flow Science, Inc.

The division actively seeks out new sources of data for the Database. Water quality information can be found in the Colorado River from Lake Powell to the international

border with Mexico, which makes the Database a truly regional database. There are currently 4,441,366 records in the Database. The chart below is a summary of the data that has been uploaded by each agency into the Database.

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



Strategic Plan Objectives and Accomplishments

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

2016-17 Performance Objectives

- Begin major maintenance and replacement of a portion of the sodium hypochlorite generation and storage system at RMWTF.
- Begin rehabilitation and modification construction of the filters at AMSWTF.
- Complete the rehabilitation of the fluoride system at the AMSWTF.
- Expand investigations of Las Vegas Wash to study the impact of storm events on

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sediment and nutrient loading to the Las Vegas Bay.

- Work with Purchasing to replace instruments that are reaching obsolescence in order to maintain or improve upon our performance at delivering legally defensible data.

2015-16 Major Accomplishments

- Completed a comprehensive comparative study of options for the RMWTF sodium hypochlorite generation system, and began rehabilitation of the filters at AMSWTF.
- Modified treatment process to bring Intake 3 on-line.
- Completed groundwater sampling, data collection and collation, and worked with groundwater staff from the Water Resources division to prepare a Las Vegas Valley Shallow Groundwater Study.
- Continuous commitment in implementation of the ChemWare Horizon Laboratory Information Management System (LIMS) in its final production stage. Ensuring the team has sufficient and proper exposure to seamlessly transition from the Sapphire LIMS to the Horizon LIMS, by increasing the frequency of side-by-side testing and gaining a deeper understanding of the new system.
- Completed all SDWA monitoring requirements for the SNWA, LVVWD, North Las Vegas, Henderson, Boulder City, Nellis Air Force Base, Coyote Spring Valley – Moapa, Big Bend Water District (BBWD), Blue Diamond, Kyle Canyon, Jean, Searchlight, and Kapex.

Strategic Plan Goal – Deliver an outstanding customer service experience

2016-17 Performance Objectives

- Re-aligned the information within the Avantis Maintenance Management System to better address our maintenance efforts.
- Continue support of various ongoing research projects by providing quality data in a timely manner, including extensive lake and sources monitoring, complex storage/distribution system THM monitoring, as well as ad-hoc water quality monitoring requests.
- Provide outstanding customer service to external customers via water quality investigations by responding to water quality complaints in a timely manner, teaching customers about water quality and what to look for, and leaving them feeling that their concerns matter and that we want to help them resolve their problem.
- Expand on-line ordering forms to capture all of our customers' container/preservative / media requirements.

2015-16 Major Accomplishments

- All emergency lab supply requests fulfilled within one working day.
- Water Quality Monitoring Plans submitted for all member agencies.
- Unregulated Contaminant Monitoring Rule 3 (UCMR3) monitoring completed for Henderson, North Las Vegas, and Boulder City.

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

2016-17 Performance Objectives

- The Laboratory will continue to support the Algae Monitoring Plan by providing source water monitoring. In addition, the lab will work to improve the algal toxin screening process by automation of the algal toxin screening process and increase the number of toxins to include cylindrospermopsin.

2015-16 Major Accomplishments

- Complete performance evaluation of the first two filters at AMSWTF.

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

2016-17 Performance Objectives

- Begin treatment optimization efforts with R&D personnel for AMSWTF, RMWTF, and BBWD.
- Pursue external research funding regarding the treatment of cyanotoxins.
- Develop methodology for the analysis of total Microcystins in water by conversion to 3-methoxy-2methyl-4phenylbutyric acid followed by LC-MS/MS.
- Complete on-going externally funded projects by the Bureau of Reclamation, Water Research Foundation (Projects 4494, 4591, 4559, 4560, and 4536), Water Environment Foundation (Project U2R13), and the EPA.

2015-16 Major Accomplishments

- Continued support of various on-going research projects, including extensive lake and sources monitoring, complex storage/distribution system TTHM monitoring, as well as ad-hoc water quality monitoring requests.
- Initiated research on blending requirements for water from direct potable reuse treatment facilities, simultaneous removal of multiple chemical contaminants using Biofiltration, GAC control of regulated and emerging DBPs of health concern, and major sources of nitrosamine precursors from raw waters and distribution systems.
- The Laboratory division collaborated with the R&D division to determine efficiency of different treatment techniques for pathogenic free living amoeba species inactivation.
- Worked with IT and other staff to develop and test workflows during the development of the new Horizon LIMS system, and provided training and guidance on this development work to other areas within the Laboratory and R&D division.

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

2016-17 Performance Objectives

- Expand scheduling/sampling to include construction inspection sampling for the Member Agencies.

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- Complete the Water Quality and Treatment KPI Dashboard.

2015-16 Major Accomplishments

- Acquired \$806,056 of external funding for water quality research.
- Worked in partnership with LVVWD Operations division to successfully transfer water quality sampling responsibilities for the small water systems (Blue Diamond, Jean, Kyle Canyon, and Searchlight). Water Quality Monitoring was familiar with the well locations, so the focus was locating the proper sampling taps for collecting samples for the Total Coliform Rule. This allowed LVVWD Operations to focus on other assignments among their division and keep the water quality monitoring consistent with the Laboratory.

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

2016-17 Performance Objectives

- Update standard operating procedures for the Treatment division.
- Coordinate and complete all required lead and copper sampling for LVVWD.

2015-16 Major Accomplishments

- Fully support our member purveyors in addressing water quality issues and events.

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