



# IRPAC 2020

10.30.2019



SOUTHERN NEVADA WATER AUTHORITY™



## PUBLIC COMMENT

*PLEASE LIMIT YOUR COMMENTS TO 3 MINUTES*

Item #2

# WELCOME & INTRODUCTIONS

Item #3

# COMMITTEE PROCESS OVERVIEW

## ADVISORY COMMITTEE SCOPE

- Understand existing water supplies and facilities.
- Assess future supply and facility needs.
- Recommend preferred long-term planning and strategy.
- Understand the role of conservation in sustaining this community.
- Develop thorough understanding of existing financial situation.
- Recommend a long-term funding strategy.

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## OPEN MEETING LAW

Nevada's Open Meeting Laws ensure decisions affecting the public are made through transparent, public processes.

- All committee work conducted in meetings open to the public.
- Agendas available at least three days in advance of the meeting; materials provided to the public when committee members receive it.
- Public comment taken at the beginning and end of each meeting.
- No hidden votes.
- Quorum required for decisions/recommendations.
- No "walking" quorums.

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## CONSENSUS-BASED RECOMMENDATIONS

- An opinion or position reached by a group as a whole.
- Focuses on discussion and considers input of all participants.
- Cooperatively seeks mutually-beneficial solutions.
- Recommendation may not necessarily be your first choice.
- Focus on achieving consensus, not unanimity.

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## YOUR COMMITMENT

- Attend and participate in all meetings.
- Be prepared to discuss the issues on the agenda, as well as information distributed by staff in advance of meetings.
- Be willing to explore goals, constraints and multiple options.
- Listen attentively and with an open mind.
- Respect the ideas and perspectives of others. Give everyone a chance to speak. Avoid side discussions. Don't interrupt.
- Maintain focus on the topic currently under discussion. Avoid repeating issues that have already been raised or recorded.
- Achieve consensus.
- When needed, take a break.

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## SNWA'S COMMITMENT

- Begin meetings on time.
- Provide information in a timely manner.
- Be available to answer questions or for further discussion.
- Provide committee members with reasonable notice of meeting date and accurate description of discussion topics.
- Respect the opinions of the committee members.

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## 2019-2020 MEETING SCHEDULE

- Wednesday, November 20, 2019
- Wednesday, December 18, 2019
- Wednesday, January 8, 2020
- Wednesday, January 29, 2020
- Wednesday, February 12, 2020
- Wednesday, March 4, 2020
- Wednesday, March 11, 2020 *if needed*
- SNWA facilities tour (*winter 2020*)

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## MISSED MEETINGS

- Alternates not permitted.
- Materials and updates will be provided to members following meetings.
- Staff is available for individual briefings.

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Item #4

## REVIEW OF PRIOR COMMITTEES

## WHY USE ADVISORY COMMITTEES?

- Allows the public an opportunity to influence decisions that affect them.
- Generates input from a wide spectrum of stakeholder interests.
- Allows transparency in decision-making.
- Weighs the risk/benefits/cost to alternatives.

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## SNWA ADVISORY COMMITTEES

SNWA has a history of seeking public input through citizens advisory committees to evaluate major organizational initiatives.

<u>Decade</u>	<u>Issue</u>
1990s	Facilities, Resources & Water Quality
2000s	Drought & Conservation
2010s	Drought, Facilities & Economic Recession Impacts

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## 1994: INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE

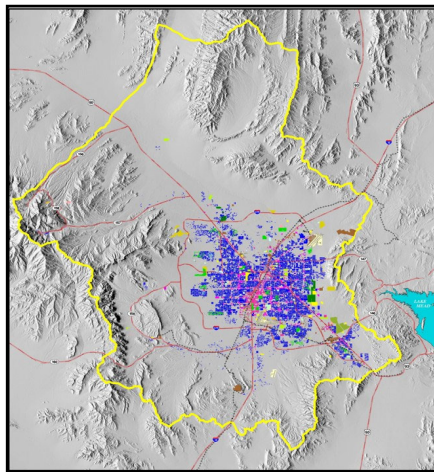
ISSUES: Facilities, Water Quality and Water Resources

1990s: SNWA's facilities were unable to meet demand projections and Nevada was projected to exceed its Colorado River allocation.

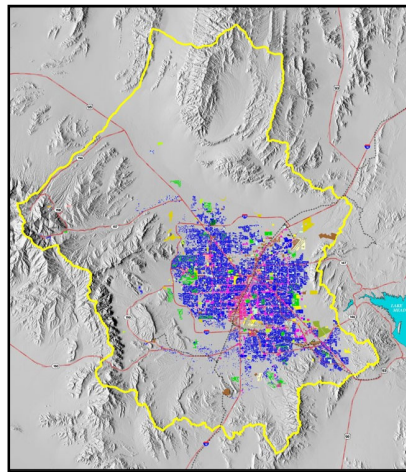
SNWA convened its first advisory committee to evaluate and make recommendations on how to invest in facilities and resources to meet future demands.

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During the 1990s, Southern Nevada's population exploded.



Land Use, 1990 (Approx. 750,000 residents)



Land Use, 2000 (Approx. 1,370,000 residents)

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## 1994 IRPAC RECOMMENDATIONS

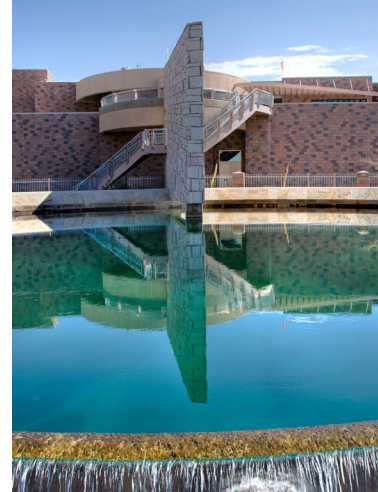
Expand the existing Southern Nevada Water System to capacity as soon as possible.

1999: SNWS capacity increased from 400 MGD to 600 MGD.

Build a new treatment and transmission facility immediately, large enough to be reliable and provide backup in the event of a catastrophic event.

2002: River Mountains Water Treatment Facility becomes operational and provides an additional 150 MGD of regional treatment capacity.

2006: Regional capacity reaches 900 MGD.



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## 1994 IRPAC RECOMMENDATIONS

Implement a phased and expandable water facilities program.

1995: SNWA Board approved a phased Capital Improvements Program (CIP) to build “just in time” facilities

\$2.1 billion CIP

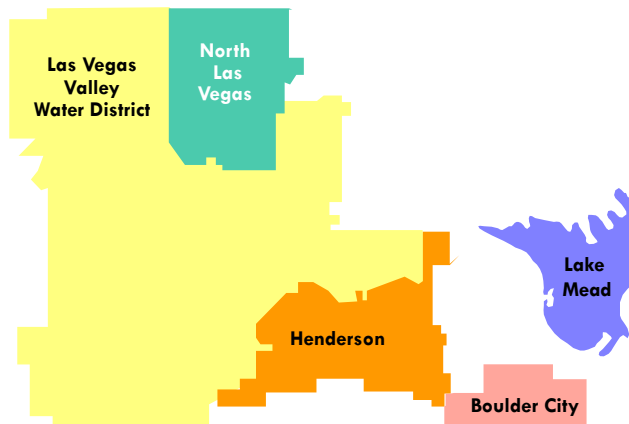
More than doubled the total capacity of the community water system (900 MGD)

Completed on time and on budget



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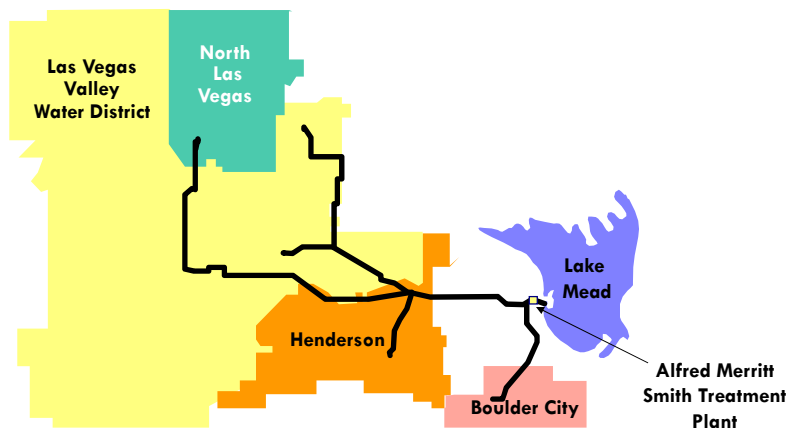
## Regional Water System Expansion



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## Regional Water System Expansion

— 1995 Facilities



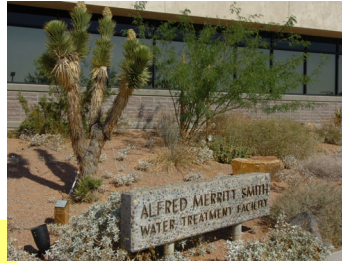
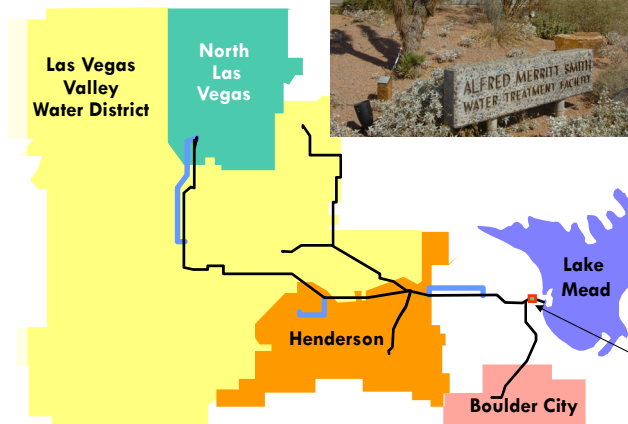
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## Regional Water System Expansion

— 1995 Facilities  
— 1997 Facilities

### 1997 Facility Improvements:

- AMS Water Treatment Plant upgraded
- West Lateral Transmission lines upgraded
- New pumping station



Alfred Merritt Smith Treatment Plant With 200 MGD expansion

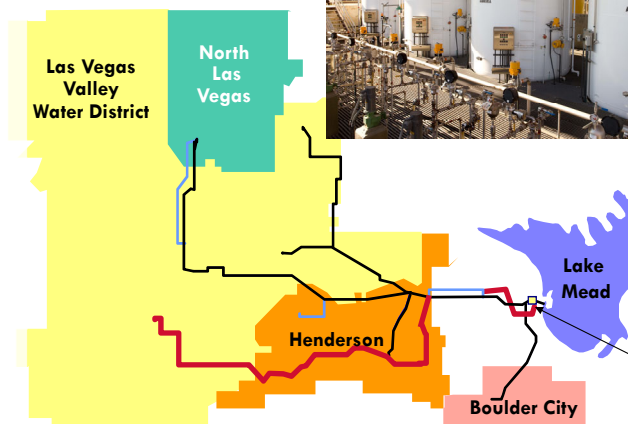
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## Regional Water System Expansion

— 1995 Facilities  
— 1997 Facilities  
— 1999 Facilities

### 1999 Facility Improvements:

- New South Valley Lateral
- Two pumping stations
- Two reservoirs
- Upgraded AMS Water Treatment Plant (600 MGD)



Alfred Merritt Smith Treatment Plant

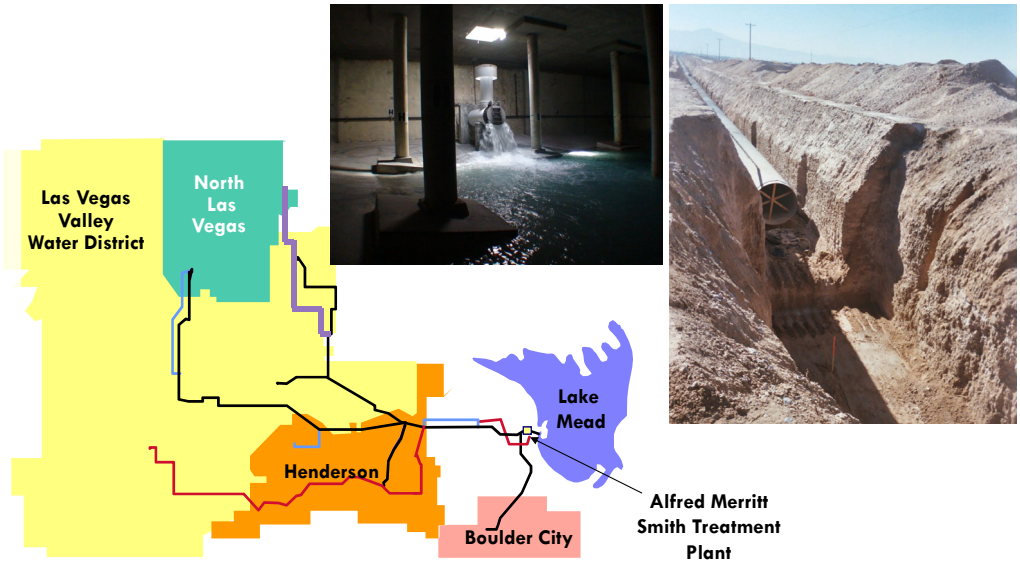
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## Regional Water System Expansion

- 1995 Facilities
- 1997 Facilities
- 1999 Facilities
- 2000 Facilities

### 2000 Facility Improvements:

- East Valley Lateral
- Two new pumping stations
- One new reservoir



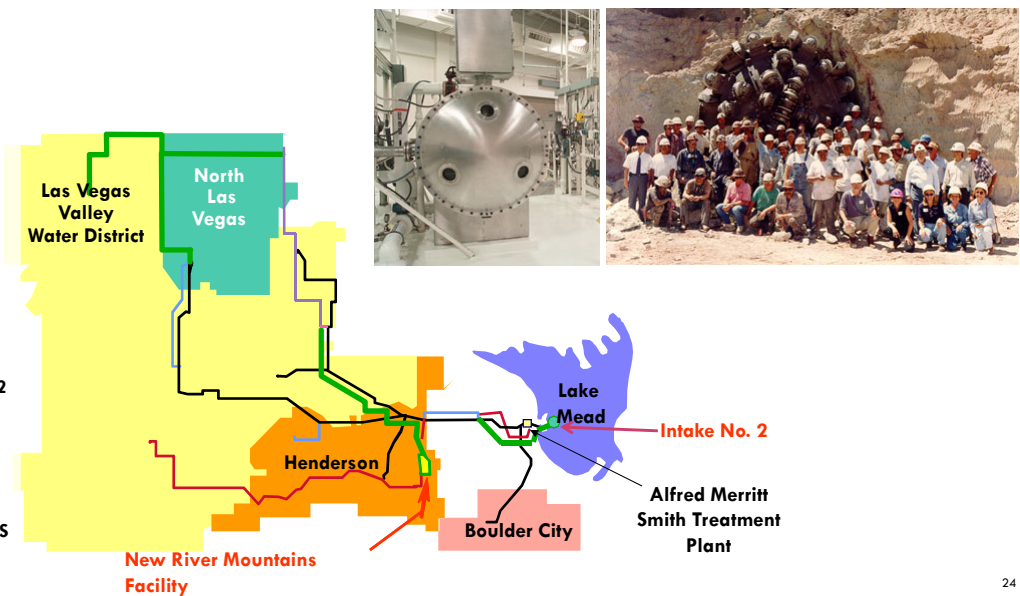
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## Regional Water System Expansion

- 1995 Facilities
- 1997 Facilities
- 1999 Facilities
- 2000 Facilities
- 2002+ Facilities

### 2002+ Facility Improvements:

- River Mountains Treatment Facility online with ozone
- Lake Mead Intake No. 2
- North Valley Lateral
- Power investments
- Numerous pumping stations, rate-of-flow stations, reservoirs
- Ozone Addition to AMS Water Treatment Plant



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## 1994 IRPAC RECOMMENDATIONS, CONT.

Seek permanent, long-term water supplies. Develop a water resource plan to meet future water demands.

1996: SNWA developed its Water Resource Plan. The plan is reviewed annually and includes a 50-year planning horizon.

Study different approaches to financing and rate setting, including sales tax as a funding source.

1999: Quarter Cent sales tax goes into effect to support water and wastewater projects in Clark County

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## 1994 IRPAC RECOMMENDATIONS, CONT.

Place top priority on Colorado River water resources.

1997: SNWA began purchasing Muddy and Virgin River water

2001: BOR's Interim Surplus Guidelines finalized. The guidelines allow SNWA to use additional Colorado River supplies when available

2004: Finalized agreement for Arizona Water Bank

2007: Interim Guidelines finalized

2019: Drought Contingency Plan finalized



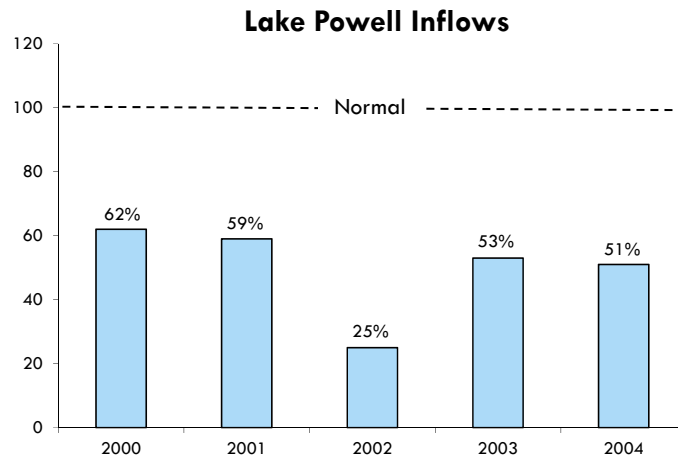
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## 2004: INTEGRATED WATER PLANNING ADVISORY COMMITTEE

### ISSUES: Water Resources and Conservation

2000: The Colorado River Basin began to experience what would quickly become the worst drought in the basin's recorded history.

2004: Another advisory committee was appointed to explore resource options to protect the community from worsening drought conditions.



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## 2004 IWPAC RECOMMENDATIONS, CONT.

Pursue more aggressive promotion of water conservation through methods such as the reduction of turf.

The SNWA's Water Smart Landscape program has removed more than 190 million square feet of turf, resulting in a savings of nearly 130 billion gallons of water.

Decrease total water demand from 167 GPCD to 152 GPCD by 2010, and to 149 GPCD by 2035.

After meeting its previous goal ahead of schedule, the SNWA Board in 2009 adopted a new conservation goal of 116 GPCD by 2035.

The SNWA is on schedule to meet its goal, with a current GPCD of 124.



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## 2004 IWPAC RECOMMENDATIONS, CONT.

Work with Colorado River Basin States and the Bureau of Reclamation to implement augmentation credits for non-Colorado resources.

SNWA revised its return-flow credit methodology to include in-state groundwater.

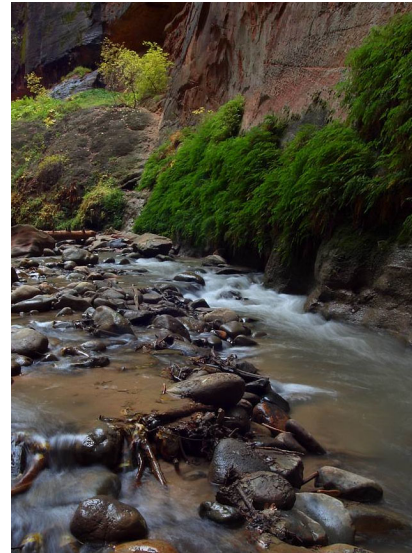
Continue to pursue ocean desalination as a long-term resource.

SNWA participated in a Basin Study to evaluate future basin demands and possible solutions including desalination.

SNWA has funded pilot studies in Yuma, Arizona and Rosarito, Mexico.

Pursue delivery of pre-Compact Muddy and Virgin River rights.

SNWA currently owns or leases 50,000 acre-feet per year of water rights on both rivers.



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## 2004 IWPAC RECOMMENDATIONS, CONT.

Utilize the Southern Nevada Water Bank and California Water Bank as “bridge resources” to meet supply deficiencies.

Banked significant resources in Southern Nevada and California.

Amended the Arizona Water Banking agreement to guarantee 1.25 MAF of banked water in Arizona.

Nevada has banked more than 330,000 acre-feet of water in California.



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## 2004 IWPAC RECOMMENDATIONS, CONT.

When available, utilize surplus and interim surplus Colorado River water.

The SNWA can utilize up to 300,000 AF of its combined System Efficiency ICS, Extraordinary Conservation ICS, Binational ICS and may access Drought Contingency Plan (DCP) ICS during a declared shortage when Lake Mead is above 1,025 feet.

Pursue an extension of the quarter-cent sales tax.

In September 2019, the Clark County Commission voted to remove the sunset clause on the sales tax.

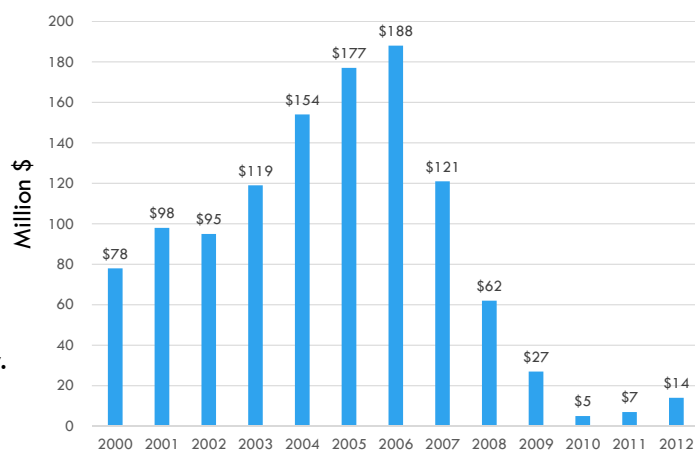
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## 2012: INTEGRATED RESOURCES PLANNING ADVISORY COMMITTEE ISSUES: Funding

2008-11 The community was in the midst of an economic recession, during which connection charge revenues hit an all-time low, significantly affecting the SNWA's ability to make debt service payments on capital projects.

2012 An advisory committee was convened to recommend a funding formula to fund capital and ensure the organization's long-term financial stability.

SNWA Connection Charge Revenue



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## 2012-13 IRPAC RECOMMENDATIONS

Maintain existing Infrastructure Charges adopted by SNWA Board, and formalize the 50% credit to the Fire Line Infrastructure charge.

The Service Rules were updated to permanently reduce the Fire Line Infrastructure charges.

Permanently cap the Fire Line Infrastructure rate at 2013 dollar amounts.

Fire Line Infrastructure rates have not been discussed at any further CACs, nor will they be discussed at this one.

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## 2012-13 IRPAC RECOMMENDATIONS

Allocate Connection Charge revenues in excess of the 2014 budget to exclusively fund either early payment or pre-refunding of existing debt or one-time capital expenditures, or reduce water rates.

If funds in excess of the target fund balance remain in the New Expansion Debt Service fund, use excess funds exclusively to: (1) Redeem outstanding bonds (2) Acquire capital assets that would otherwise need to be funded with bond funds (3) Moderate impacts of rate increases or (4) Reduce water rates.

In FY 2015-16, SNWA was able to fund \$30 million in Low Lake Level Pumping Station (L3PS) projects using cash.

In November 2019, SNWA will pay \$35.5 million to defease Clark County Bond Bank 2009 bonds.

Did not sell \$100 million of L3PS bonds in 2018-19.

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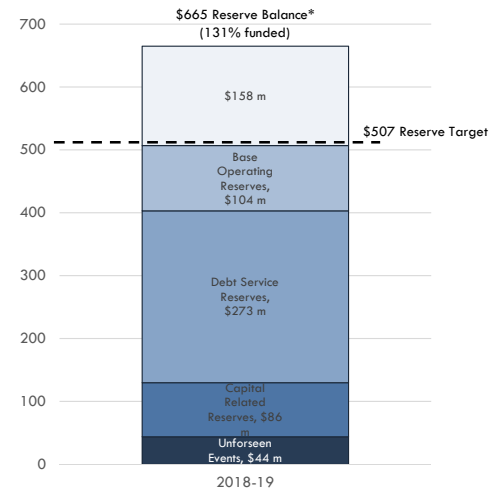
## SNWA RESERVE POLICY

### Reserve Policy Components

Component	Description
1. Base Operating Reserve	180 Days O&M Expenses
2. Debt Service Reserve	One Year of Maximum Annual Debt Service
3. Capital Related Reserve	Average of One Year Future Capital Spending
4. Unforeseen Events Reserve	1% of Depreciable Assets

\*On November 1, the Reserve Balance will be reduced by \$35 million to defease the Clark County Bond Bank 2009 bonds, as approved by SNWA Board and in line with IRPAC recommendations

### Reserve Projection



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## SNWA RESERVE POLICY

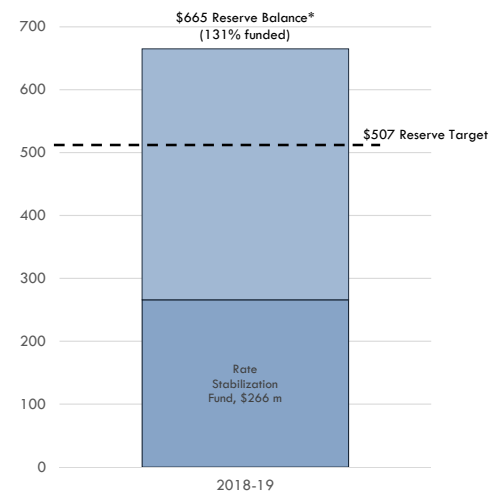
### Rate Stabilization Fund

IRPAC recommended allocating connection charge revenues in excess of the 2014 base year (\$16.1 million) exclusively to pay the following:

- Early payment or pre-refunding of existing debt or one-time capital expenditures, whichever is most financially efficient, and
- Water rate reductions.

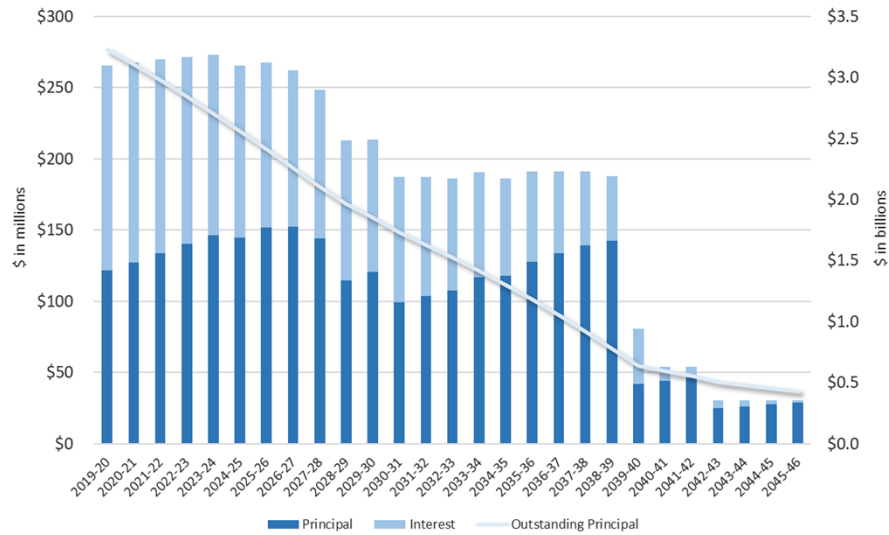
As of FY 2018-19, there is \$266 million in the Rate Stabilization Fund.

### Reserve Projection



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## SNWA DEBT PROJECTIONS



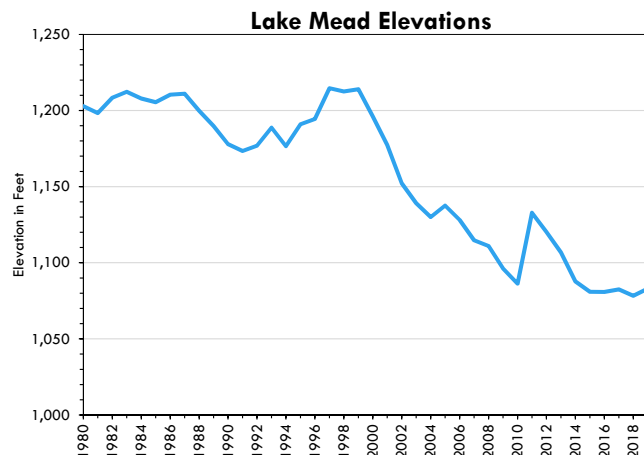
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## 2014: INTEGRATED RESOURCES PLANNING ADVISORY COMMITTEE

ISSUES: Drought, Infrastructure, Funding

2014: Lake Mead's water levels were among the lowest since the reservoir was filled.

Declining elevations threatened the ability of SNWA's existing facilities to access the community water supply.



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## 2014 IRPAC RECOMMENDATIONS

Begin design and construction of a new low lake level water pumping station as soon as possible.

Construction began on the L3PS in 2015 and is scheduled for completion in spring 2020, on time and under budget.

Generate funding needed for L3PS through fixed charges based on meter size.

Consistent with the recommendations made by the committee, the SNWA Infrastructure Charge was increased and has funded L3PS. No additional revenues were needed.

Continue to partner with Colorado River Basin States to undertake system conservation projects to protect Lake Mead elevations.

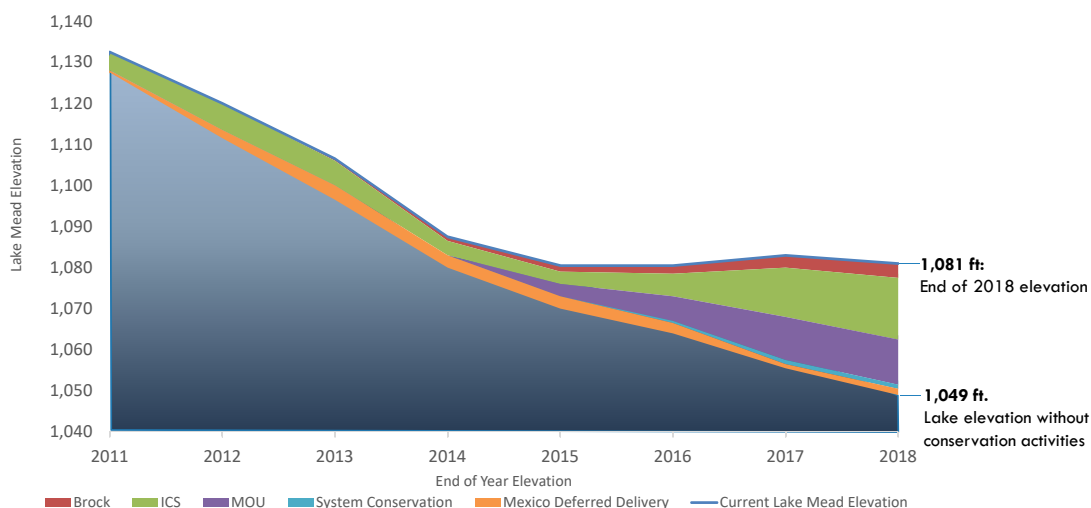
SNWA has continued to help fund 80 System Conservation Projects throughout the Basin.



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## 2014 IRPAC RECOMMENDATIONS

Investments in conservation have slowed Lake Mead's decline.



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## 2016: LVVWD RATES & RULES ADVISORY COMMITTEE

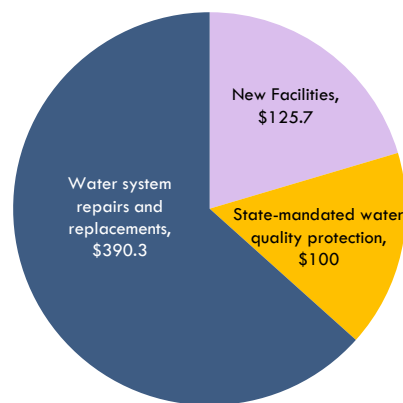
ISSUES: Infrastructure, Asset Management, Water Quality, Funding

Early 2010s: The LVVWD service area was recovering from an economic recession:

- Significant asset management activities that were previously deferred were needed
- New infrastructure was needed to support new areas of the system
- An aggressive backflow program was needed to comply with state standards

2016: LVVWD Rates and Rules Advisory Committee convened to make recommendations on how the LVVWD can maintain its level of service

### 10-Year Capital Plan (\$616 million)



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## 2016 LVVWD RATES & RULES CAC RECOMMENDATIONS

Maintain existing Backflow Service Charge rates and implement the Backflow Service Charge to customers who require the device.

Turning on the charge to fund the program has allowed the LVVWD to complete 13% of the 10-year-retrofit program, with another 600 retrofits planned for this year.

Dedicate connection charge revenue in excess of \$5 million to achieving the reserve target.

LVVWD Reserves are currently fully funded.

Use advisory committees as needed to evaluate rate changes and funding strategies.

2019 SNWA Advisory Committee established.



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## 2016 LVVWD RATES & RULES CAC RECOMMENDATIONS

Phase in a 30% increase to the LVVWD Facility Connection Charge and implement an indexed rate thereafter.

Increase the water rates and Service Charge annually in accordance with the Consumer Price Index (CPI).

The following projects are either in the design or construction phase:

- 4 reservoirs: Summerlin, Cougar, Rome & Centennial
- 2 pumping stations: Rome, Centennial
- Transmission mains
- Upgrade all SCADA systems to include the same hardware and software



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## ADVISORY COMMITTEES



In summary, past committees have evaluated a range of issues:

- Facilities
- Water Policy
- Water Quality
- Funding
- Conservation
- Environmental Protection

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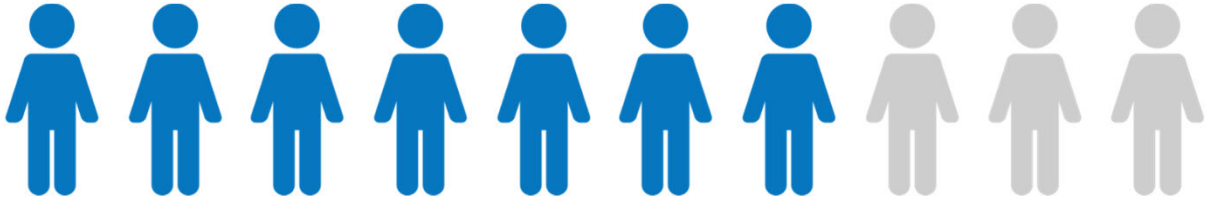
Item #5

## SNWA BACKGROUND

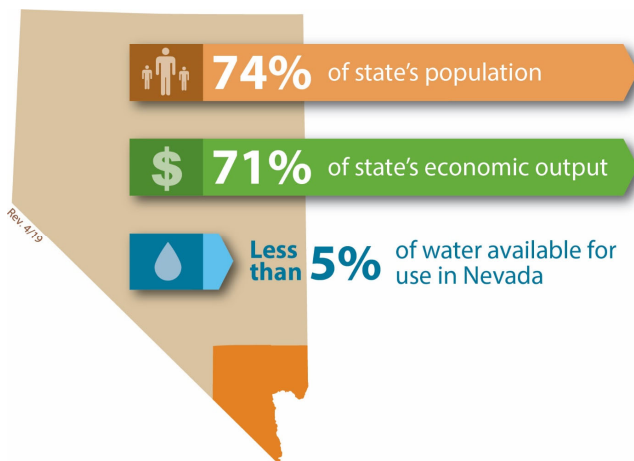


Our mission is to provide world-class water service in a sustainable, adaptive, and responsible manner to our customers through reliable, cost-effective systems.

Seven of every 10 Nevadans rely on the SNWA to supply water to homes and businesses.



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## SOUTHERN NEVADA

Big impact on economy,  
*little* impact on state  
water resources.

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# RESPONSIBILITIES



**WATER SUPPLY  
PLANNING**  
Developing and  
managing regional  
water supplies



**INFRASTRUCTURE**  
Building and operating  
major facilities



**CONSERVATION**  
Incentives, Programs,  
Regulation and Pricing



**WATER QUALITY**  
Maintaining and  
protecting water  
quality



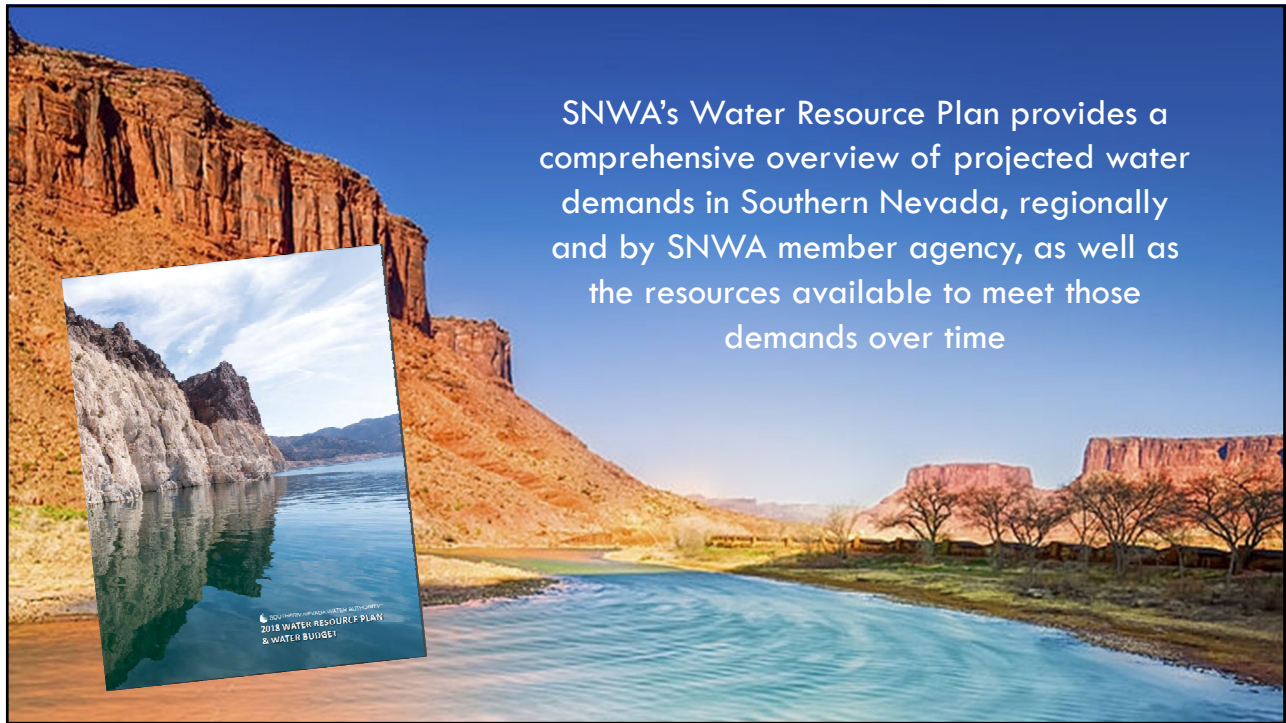
**STEWARDSHIP**  
Protecting  
environmental resources

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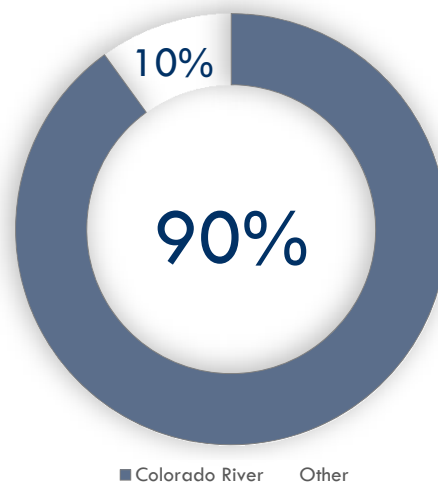


## WATER SUPPLY PLANNING

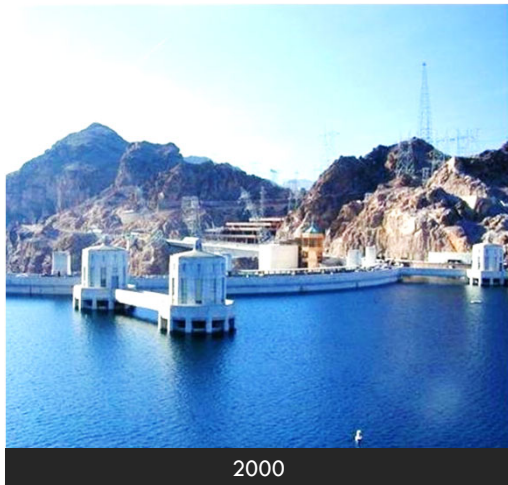
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Southern Nevada is nearly fully reliant on the Colorado River to meet the community's water demands.

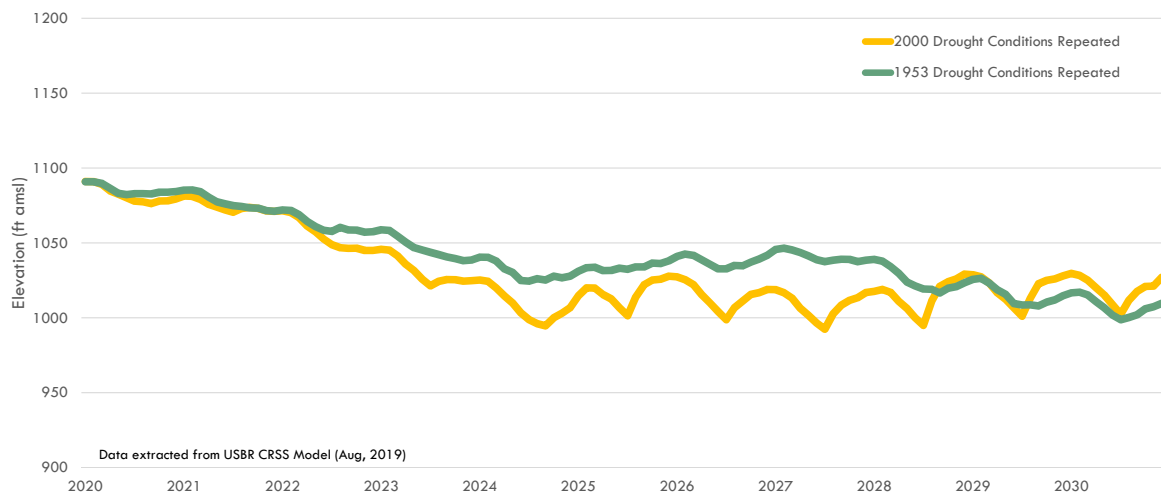


Since 2000, the Colorado River has been experiencing severe drought conditions, affecting Lake Mead's water levels.



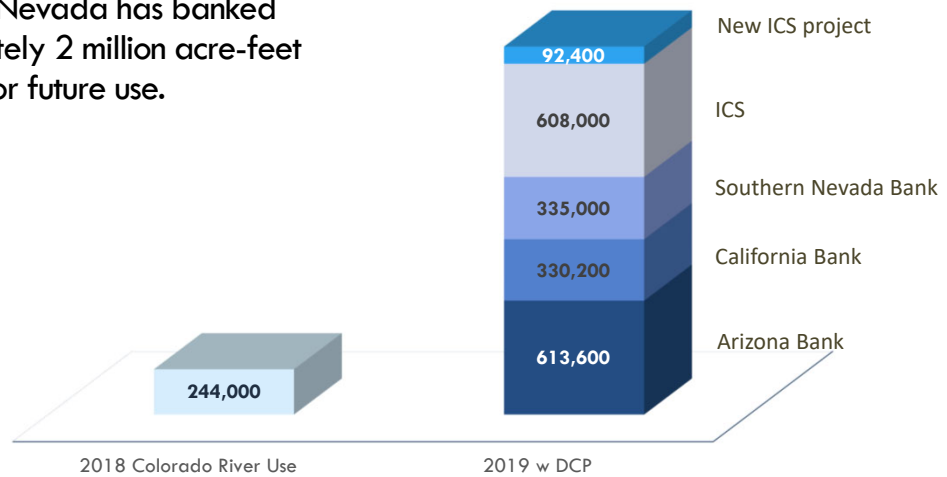
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Modeled with previous drought inputs, projections show Lake Mead water levels will decline.



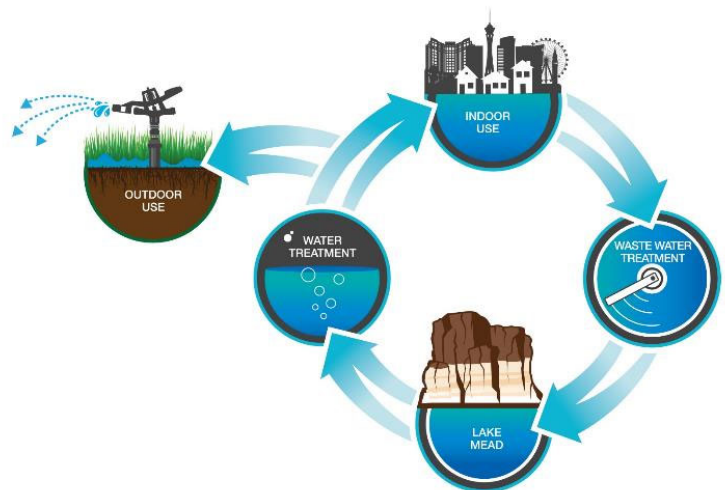
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Southern Nevada has banked approximately 2 million acre-feet for future use.



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Southern Nevada recycles 99% of water used indoors, thereby extending the availability of its resources.



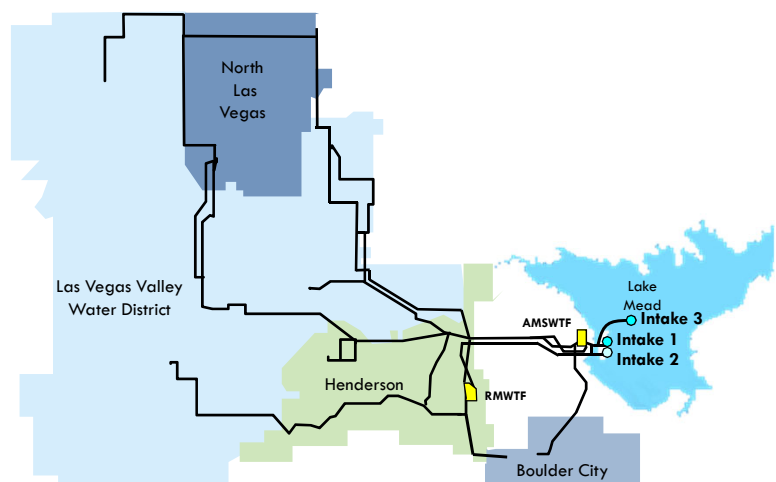
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## INFRASTRUCTURE

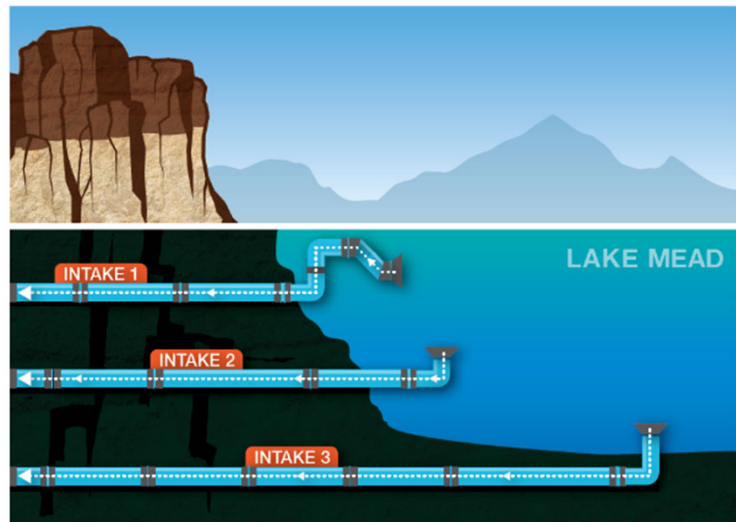
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- 448,000 acre-feet delivered in 2018
- Two drinking water treatment facilities (Total Capacity: 900 MGD)
- Three drinking water intakes
- A water quality laboratory and research center
- Pumping stations and major reservoirs
- Transmission laterals



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In 2005, planning was initiated to protect and improve Southern Nevada's infrastructure amid declining lake levels.

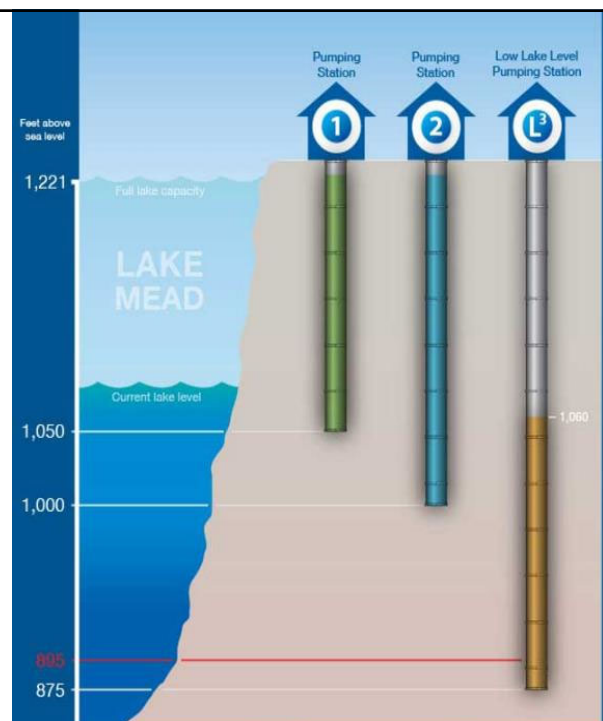


Lake Mead Intake Profile

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Low Lake Level Pumping Station is under construction near Lake Mead.

When completed, the pump station will ensure water deliveries down to 875 feet.







CONSERVATION

Southern Nevada's conservation program promotes the efficient use of water resources and relies on four key tenets:



#### **REGULATIONS**

Development codes, watering restrictions and other local ordinances help keep the use of water efficient.



#### **PROGRAMS**

Incentive programs offer rebates for water-saving technologies and practices, such as car washes, landscape removal and pool covers.



#### **PRICING**

Local purveyors establish water rates that send conservation signals, but remain competitive among similarly-sized western cities.



#### **EDUCATION**

Tools such as the Speakers Bureau program, Youth Advisory Council, websites, publications, social media and public access TV show help reinforce messaging

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Despite population gains, water use has declined since 2002.

#### **Southern Nevada POPULATION**



#### **Per Capita WATER USE**



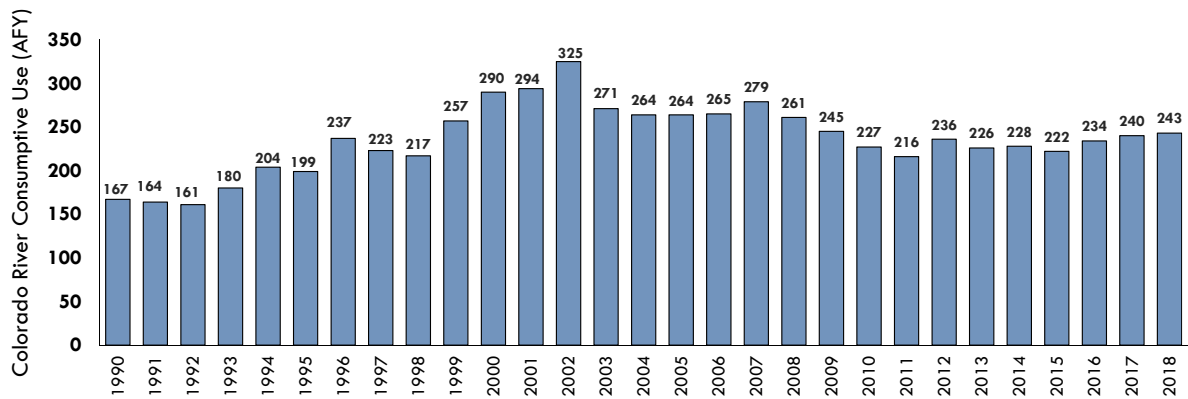
#### **Colorado River Water CONSUMPTION**



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Progress towards SNWA Conservation Goal requires renewed effort.



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## WATER QUALITY

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The SNWA operates two advanced treatment facilities and one state-of-the-art water quality laboratory

Each year, the SNWA laboratory staff:

- Collects more than 33,000 water samples
- Conducts more than 333,000 analyses
- Tests for more than 140 regulated and unregulated contaminants
- Ensures that Southern Nevada's water meets or surpasses federal Safe Drinking Water Act standards



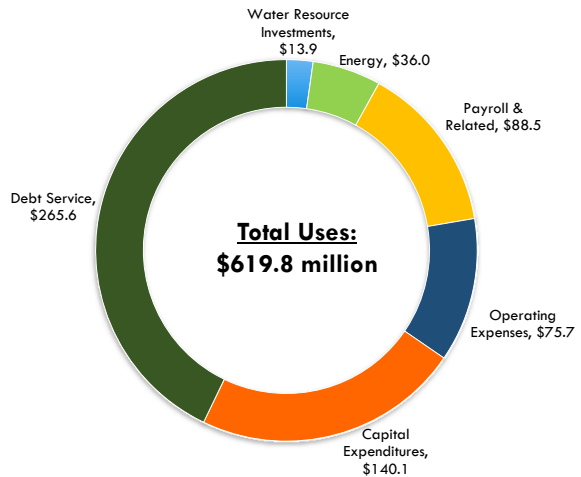
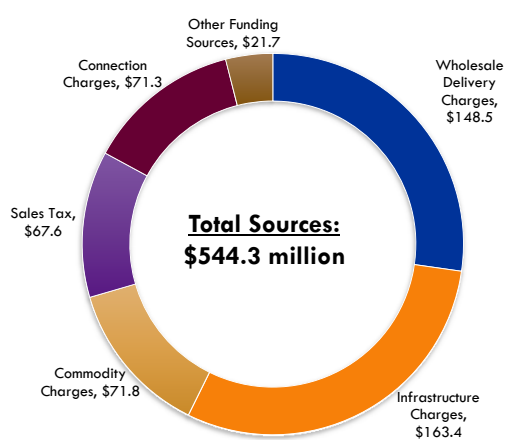
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## FUNDING OVERVIEW

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## 2019-20 SOURCES AND USES SUMMARY



Amounts in million dollars. Totals are rounded.

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## DEBT ISSUANCE

In FY 2015-16, SNWA issued \$520 million in debt

\$490 million for L3PS

\$30 million for other MCCP Projects

- WSL Program rebates
- Treatment plant improvements
- SCADA system improvements



## SNWA CURRENT EFFORTS



- Complete L3PS on time and under budget
- Maintain conservation progress
- Continue working with Colorado River Basin partners to protect Lake Mead water levels
- Implement the Drought Contingency Plan
- Maintain credit worthiness

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## MEETING LONG-TERM COMMUNITY DEMANDS



- New, major infrastructure is needed to provide capacity, redundancy and reliability valley-wide
- Maintaining water recycling levels requires new infrastructure
- Pursue resource opportunities on the Colorado River
- Renewable energy resources are needed to achieve the state-mandated Renewable Energy Portfolio Standard
- Progress towards the community's conservation goal must be maintained or surpassed

**These efforts will be included in an amendment to the Major Construction and Capital Plan (MCCP).**

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## MEETING LONG-TERM COMMUNITY DEMANDS

Throughout this process, the committee will:



- Understand SNWA's responsibility and role in maintaining a reliable water supply for this community.
- Recommend projects for inclusion within the MCCP amendment, weighing the risk, cost and benefit.
- Consider how the community can maintain progress toward its conservation goal and make recommendations for improvement.
- Recommend a funding strategy.

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