SOUTHERN NEVADA WATER AUTHORITY®

Water Resource Planning in Southern Nevada

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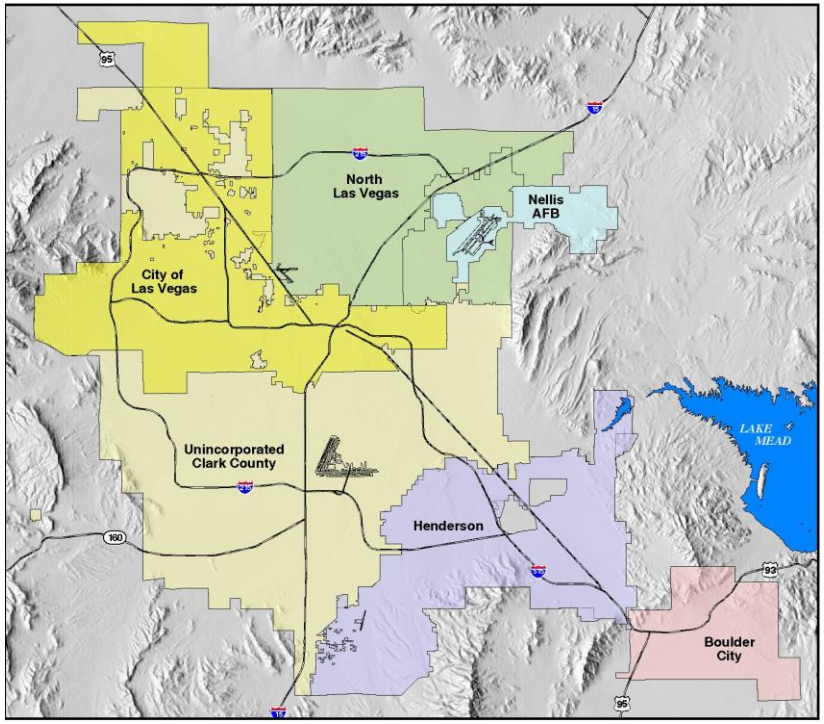
August 14, 2014

Southern Nevada Water Authority

The SNWA is a cooperative agency formed in 1991.

SNWA's mission is to manage the region's water resources and develop solutions that will ensure adequate future water supplies for the Las Vegas Valley.



Member Agencies

- Big Bend Water District
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

What We Do:

Regional water supply planning

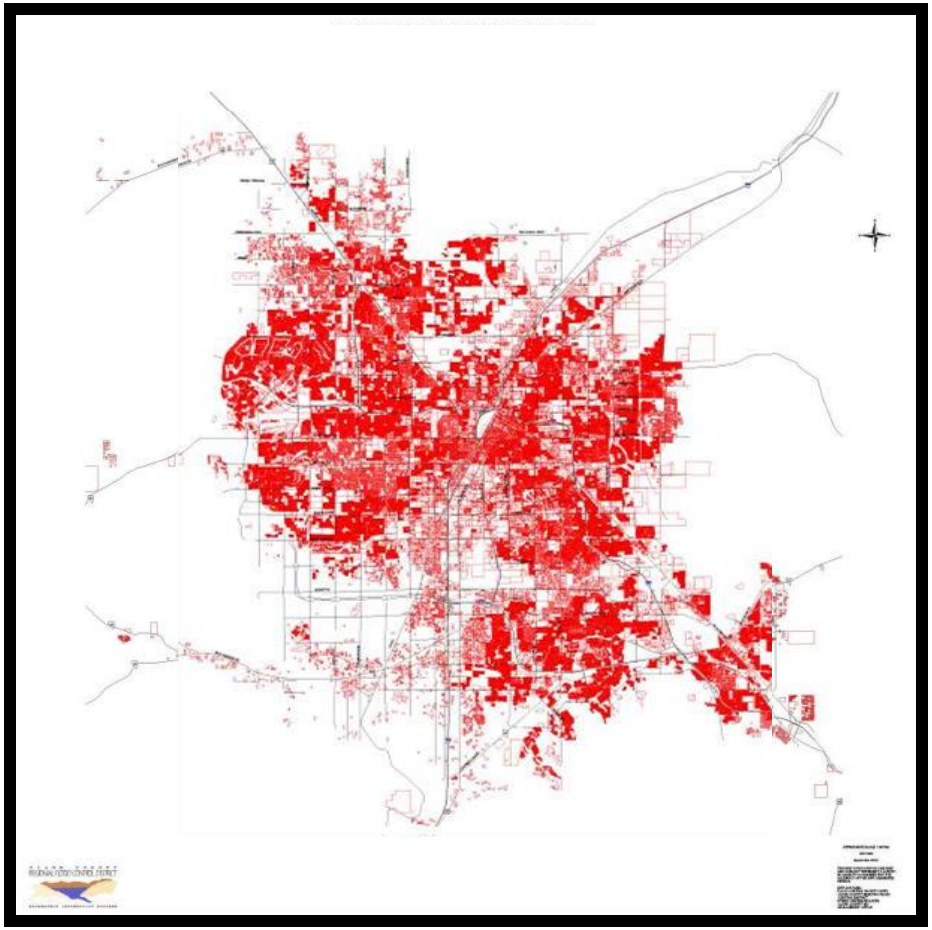
Conservation programming

Water Quality

Facility construction

Operate Major Regional Facilities

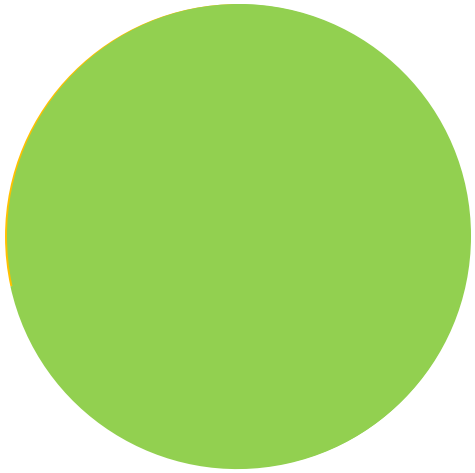
Clark County Population Growth



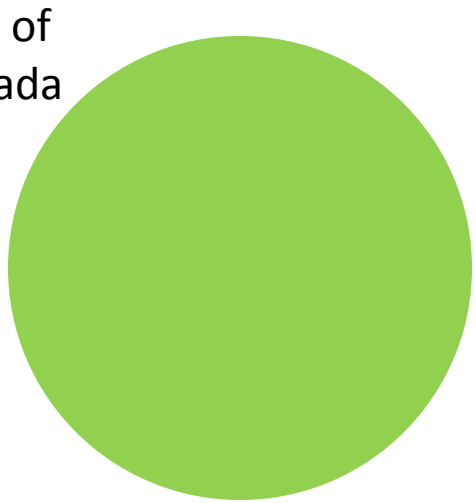
Population

1950	–	48,000
1960	–	127,000
1970	–	273,000
1980	–	463,000
1990	–	800,000
2000	–	1,400,000
2010	–	2,000,000
2020 +	–	?

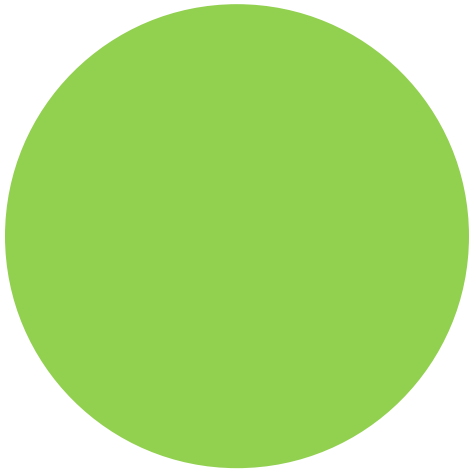
Nevada Statistics



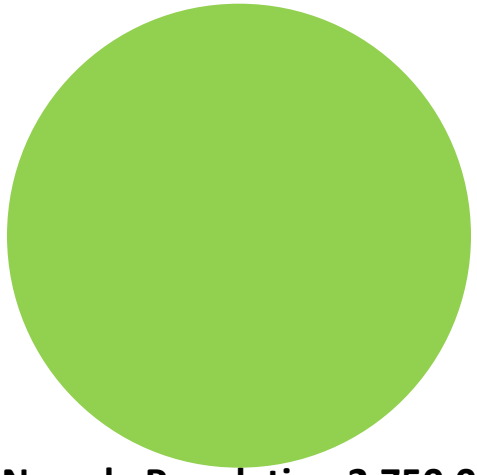
Nevada Gross Domestic Product $133.6 Billions



Nevada Taxable Gaming Revenue $10.2 Billion



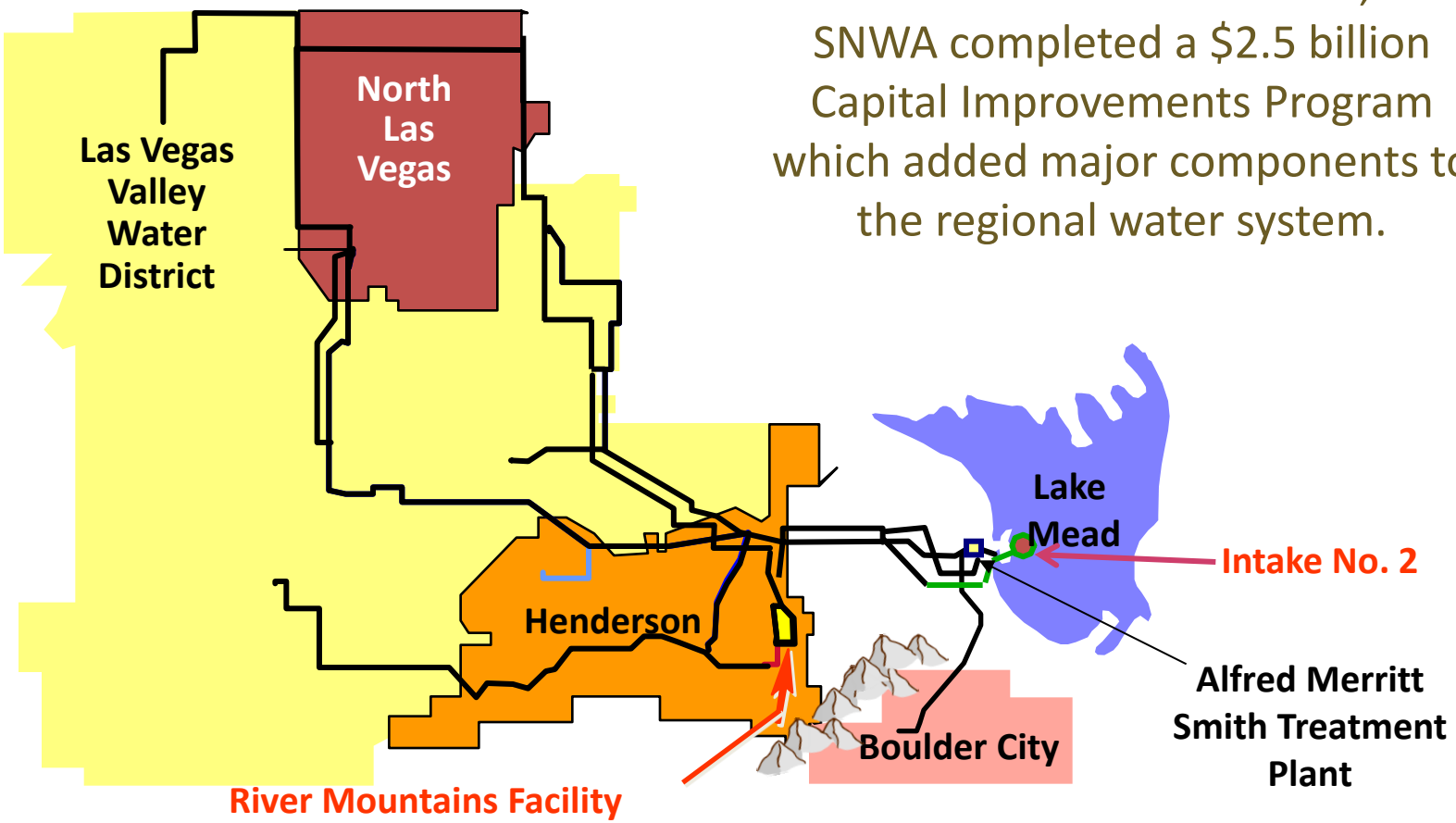
Nevada Total Employment 1,142,700



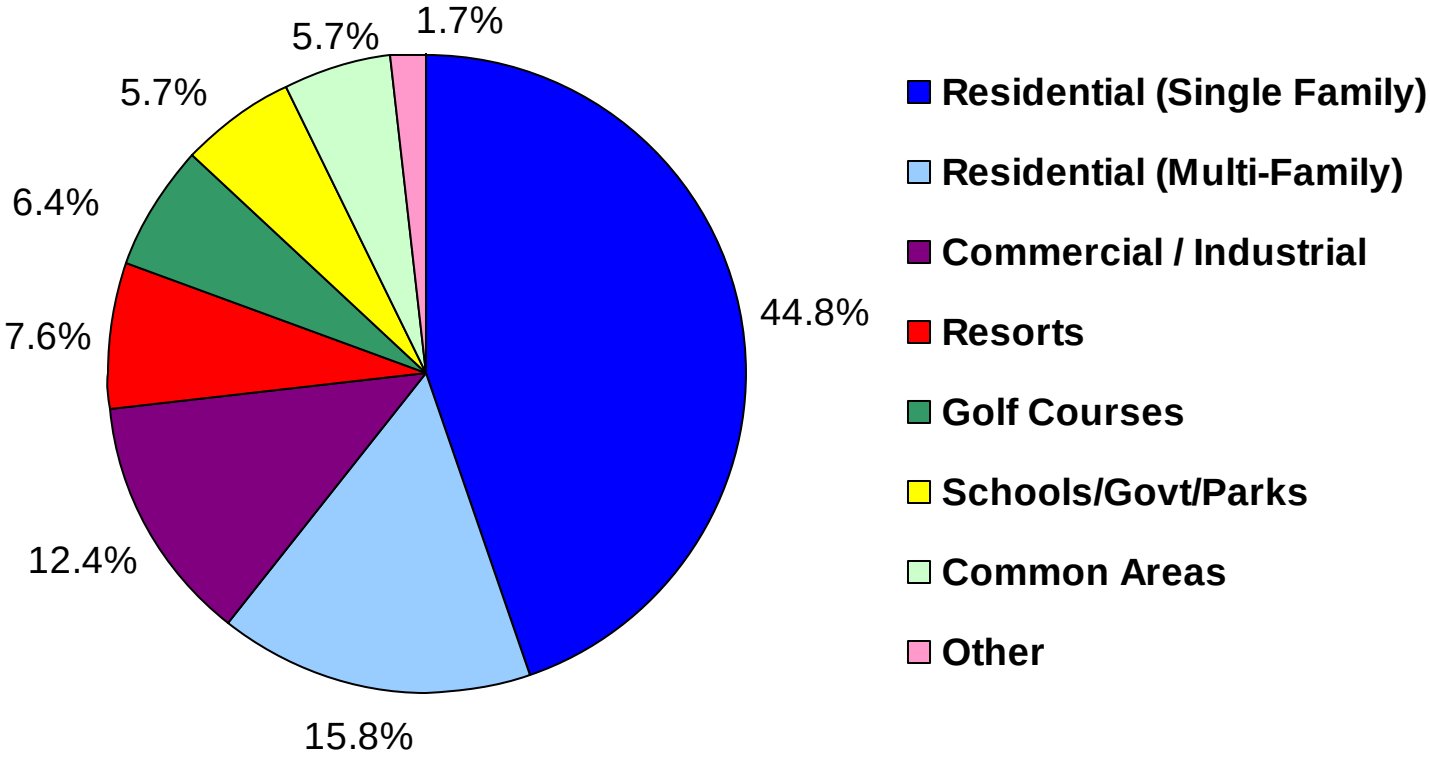
Nevada Population 2,750,000

Regional Water System

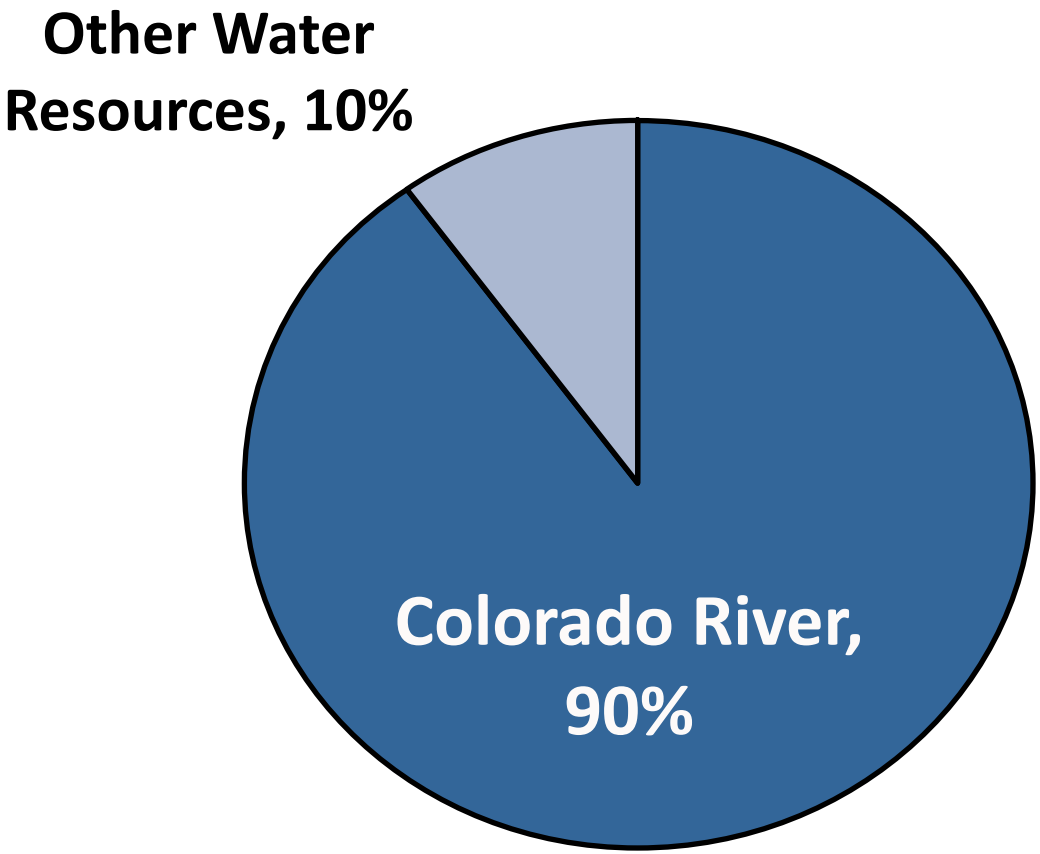
Between 1995 and 2008, SNWA completed a $2.5 billion Capital Improvements Program which added major components to the regional water system.



Southern Nevada Metered Water Use

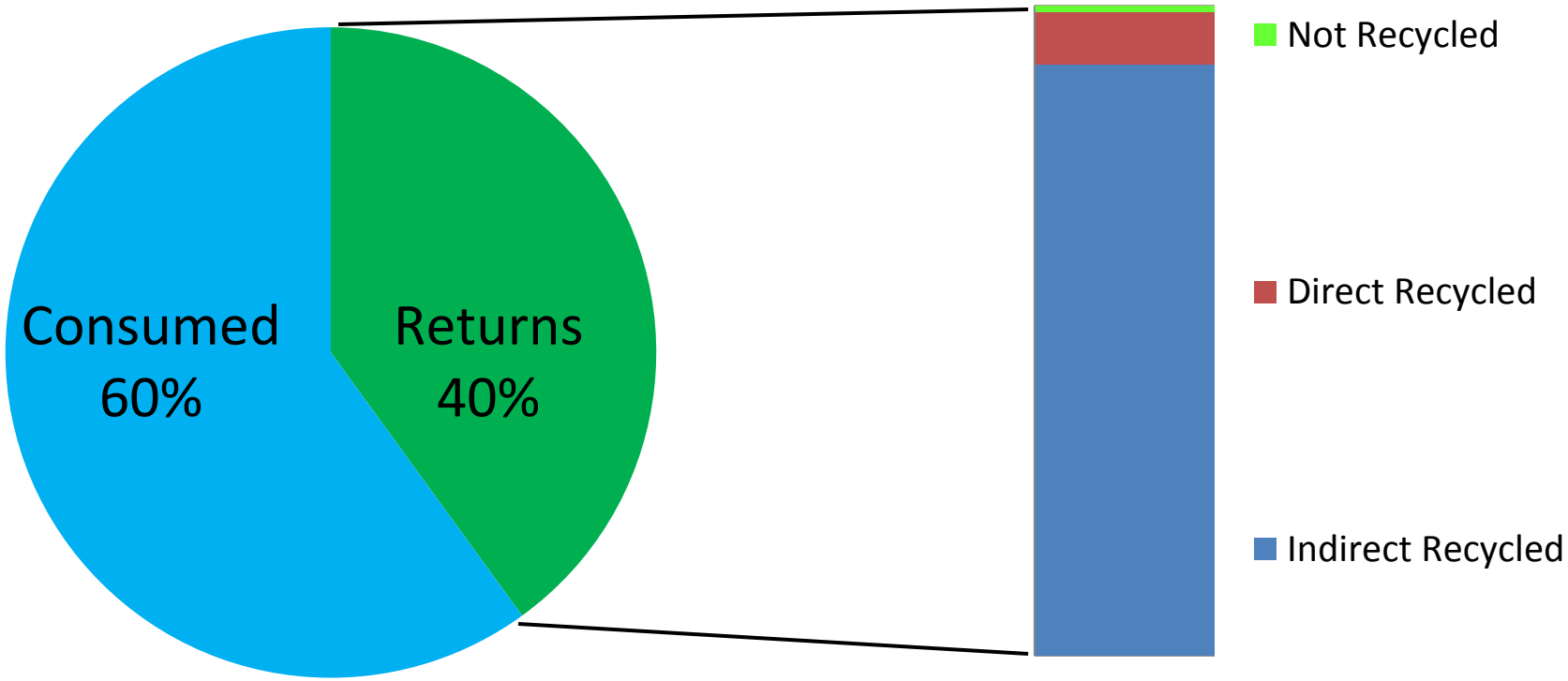


Southern Nevada's Water Resources



Nevada receives 90 percent of its water supply from the Colorado River.

Water Reuse in Southern Nevada



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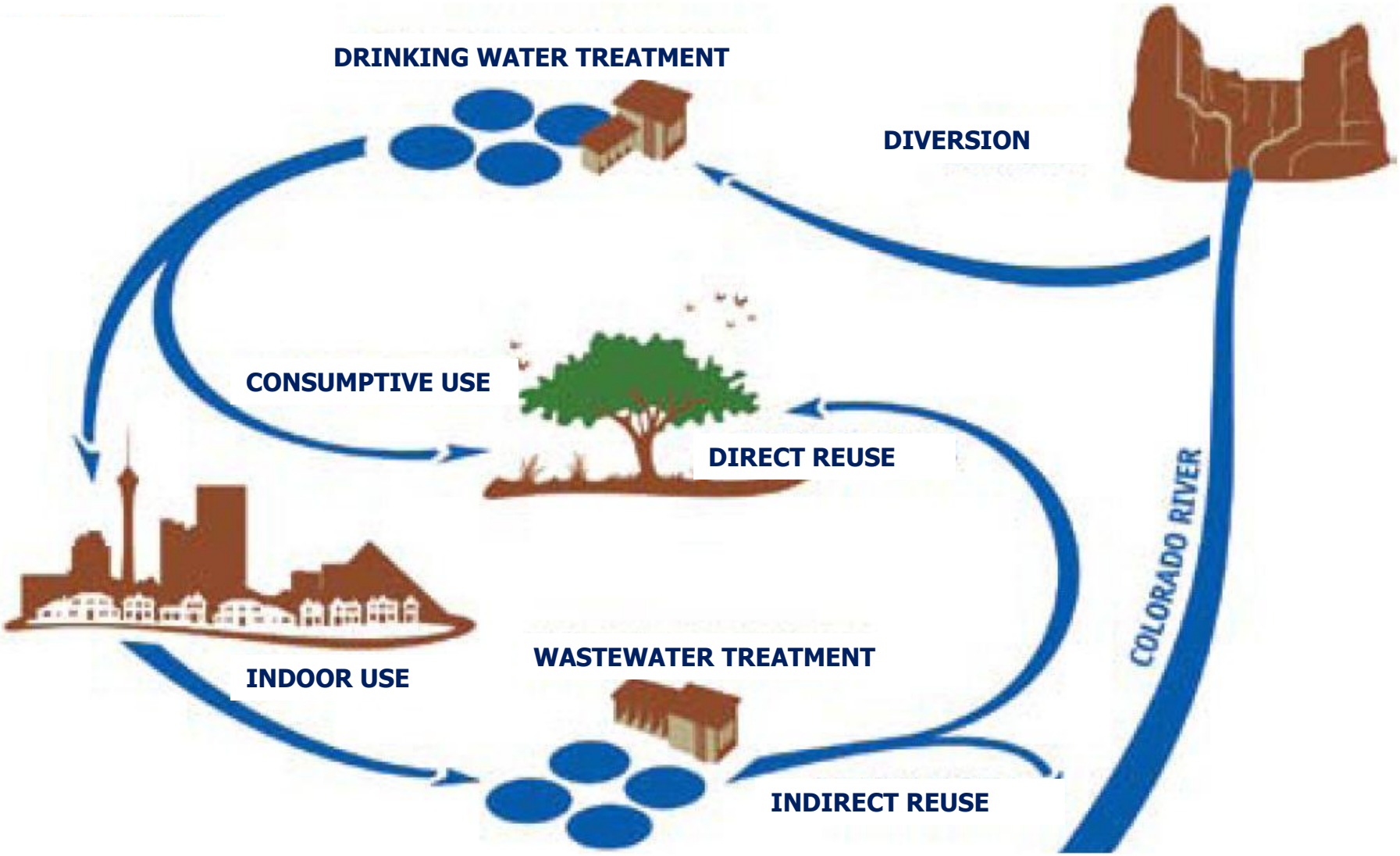

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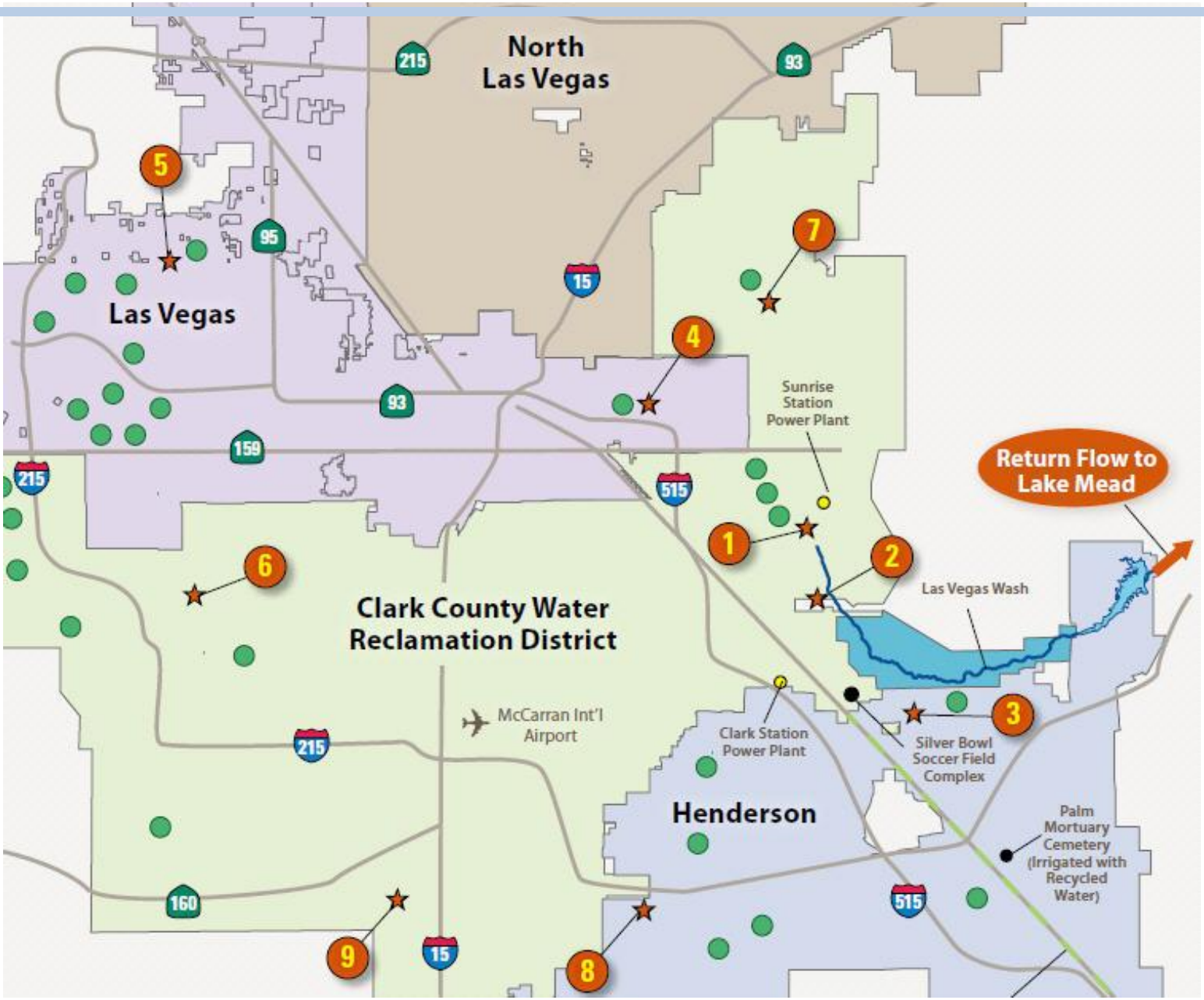
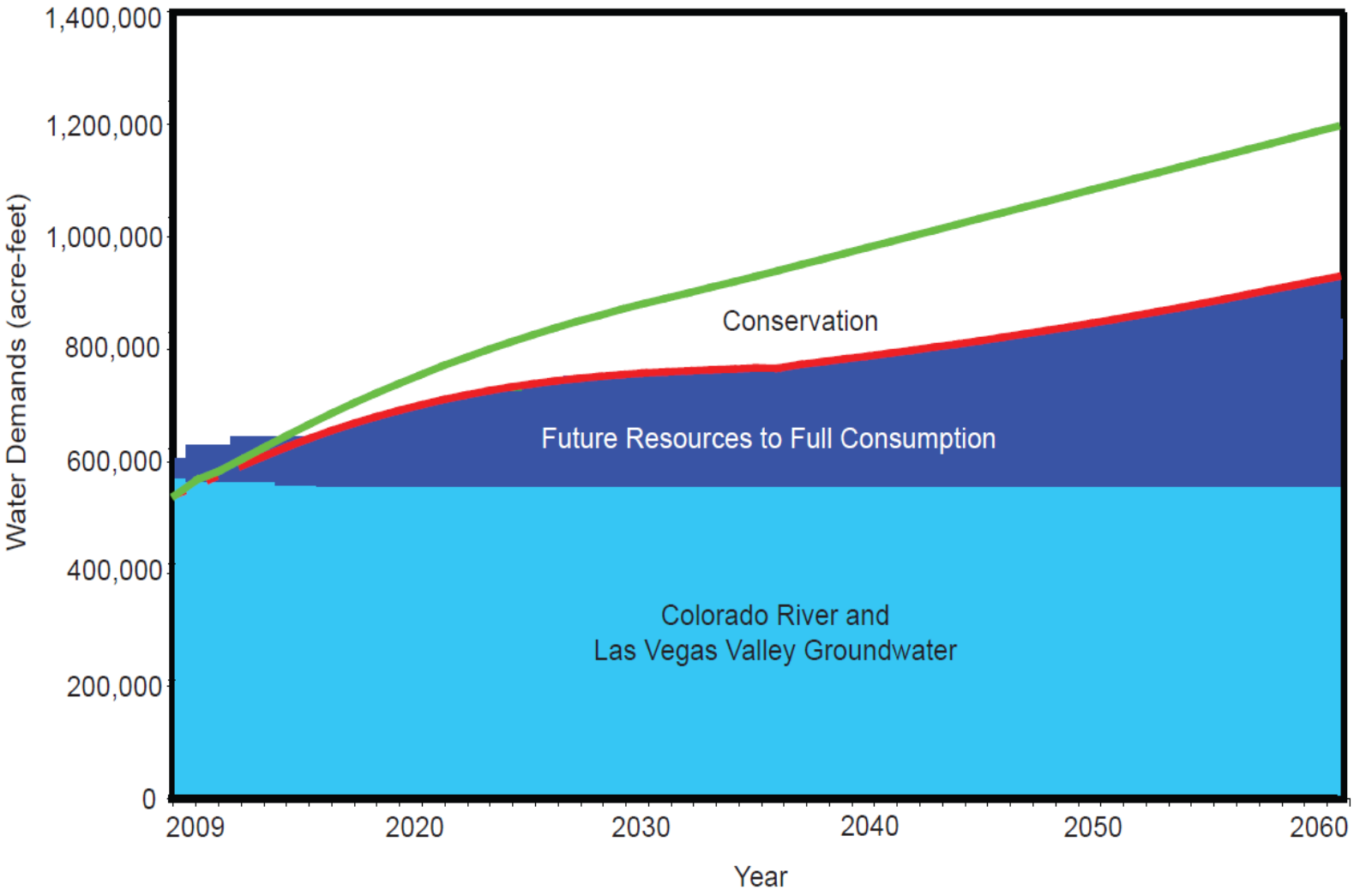
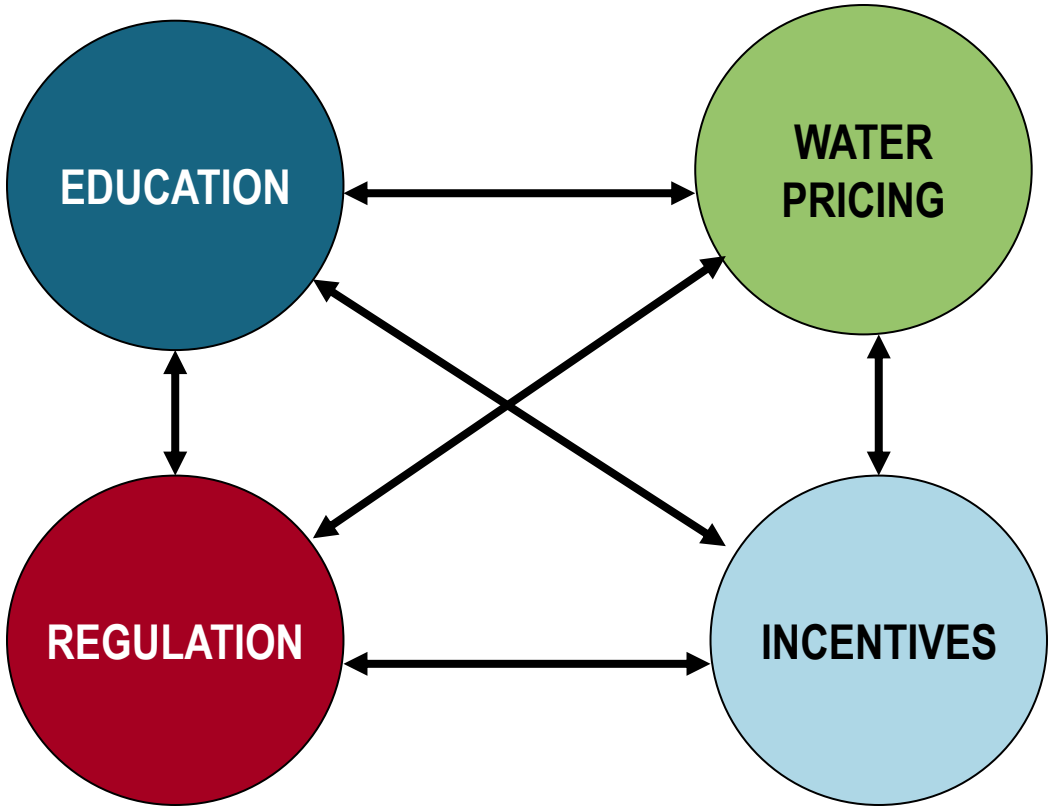


SNWA Water Resource Plan



Conservation



SNWA and its member agencies utilize a variety of tools to promote conservation and reduce overall water use

Conservation – Water Smart Landscapes

Southern Nevada has embraced a culture of efficient watering practices.

- **$190 million spent to date on landscape rebates**
- **168 million square feet of turf converted to water efficient landscaping**
- **More than 9 billion gallons of water saved annually**
- **Nearly 69 billion cumulative gallons of water saved**

Conservation – Development Codes

Land Development Codes

- **No turf in residential front yards**
- **Turf limited to 50% in back yard**
- **Multi-family properties turf limited to 50% of landscapable area**
- **No turf installations in new commercial properties**

Conservation - Watering Restrictions

Golf Course Water Budgets

- Budgets were developed based on the size of each course
- Significant financial penalties assessed if budgets are exceeded

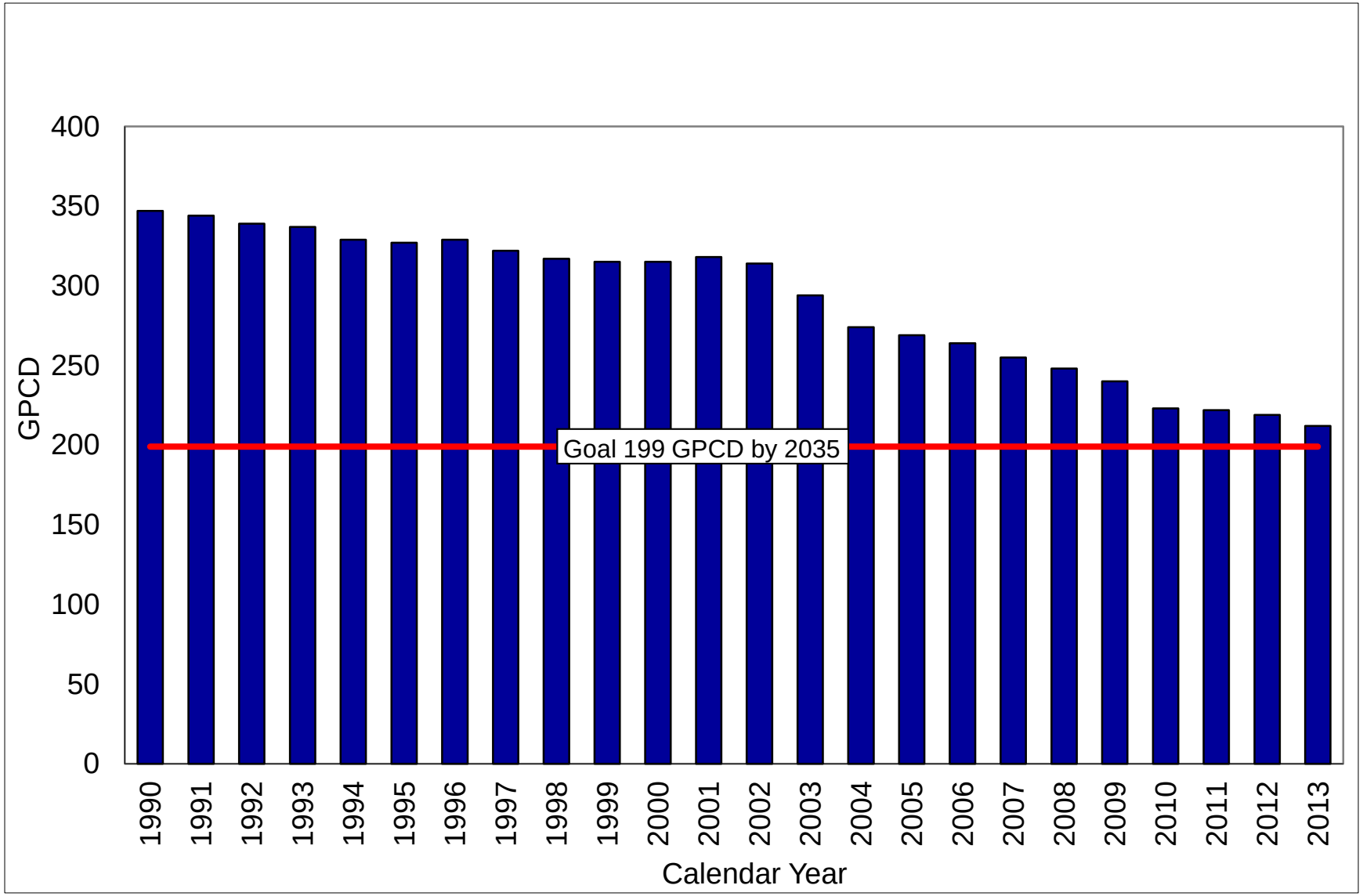
Watering Restrictions

- Summer watering restricted to cooler parts of the day to avoid evaporation
- One-day-per-week watering in cooler months
- Assigned watering days
- Automatic shutoff on nozzles

Conservation - Water Smart Innovations

- The SNWA hosts the annual WaterSmart Innovations Conference and Exposition held in Las Vegas each year. It is the largest urban-water efficiency conference in the world.
- Since inception in 2008, approximately 6,400 attendees from 45 states and 27 foreign nations have participated in the conference.
- It provides entrepreneurs with connections to some of the most innovative water agencies and market partners in the world.
- Each year, new water-efficient technologies are introduced at the conference and research results are shared with the conservation community.

SNWA Total System GPCD 1990 to 2013



Banked Resources

Las Vegas Valley

- Began in 1987
- In state bridge resource
- Banking/recovery long-term commitment
- Groundwater Management Program

Arizona

- 601,000 af banked
- Currently pay-as-you-go program
- Recoverable during CR shortage

California

- 162,000 af banked since 2004 to 2013
- Recoverable during CR shortage

Maximizing Colorado River Supplies

- Brock Reservoir (Drop 2)
- Minute 319 – International Boundary and Water Commission
- Yuma Desalting Plant

Diversification

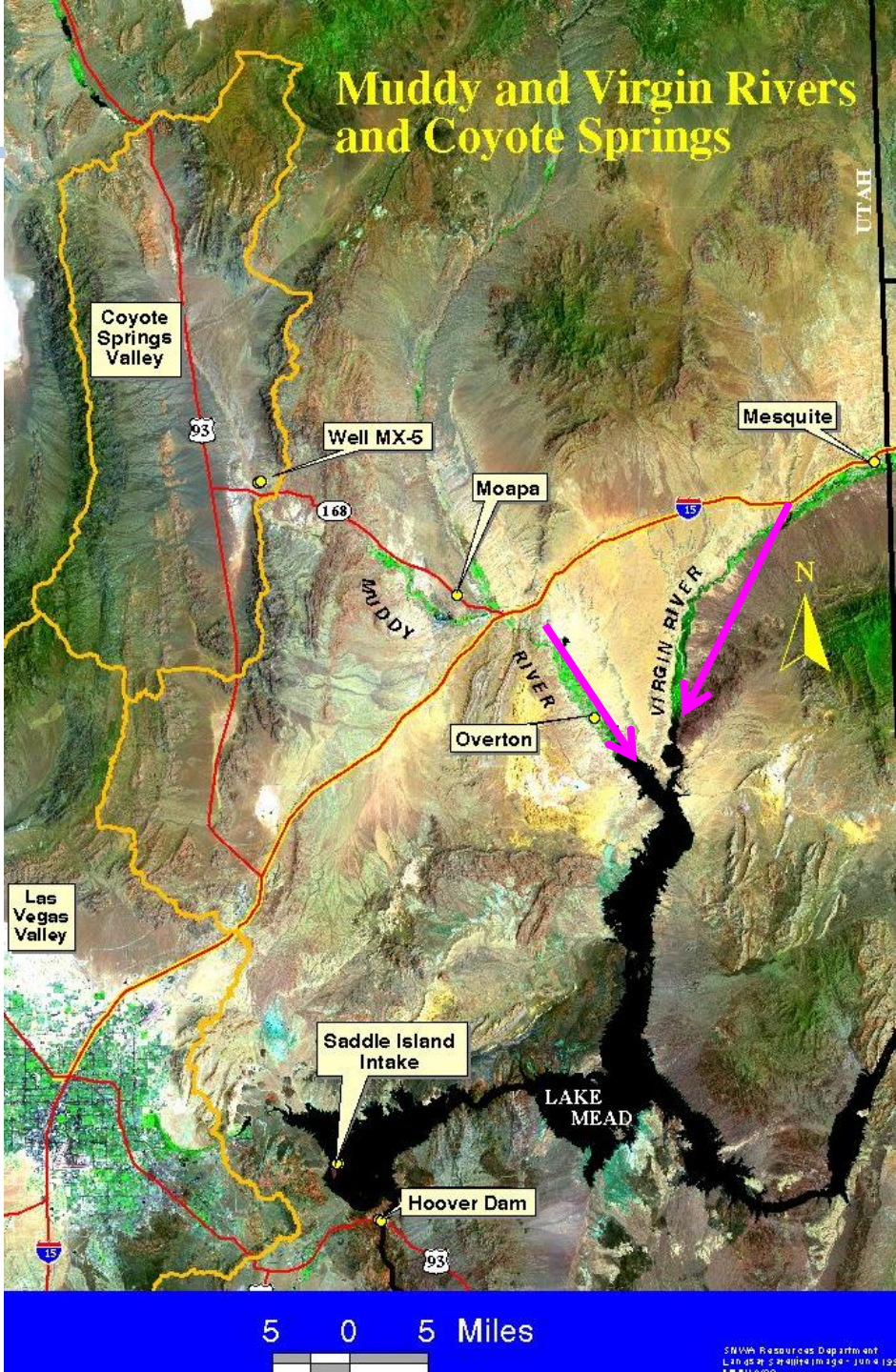
First Importation of water since Colorado River water

Tributary Conservation:

- Muddy and Virgin Rivers
- Acquisition and retirement of pre-1929 agricultural rights
- Conveyance of water to Lake Mead for Colorado River credits

Imported Groundwater:

- Coyote Spring Valley
- Facilities convey groundwater to Lake Mead for Colorado River credits
- Began in 2010



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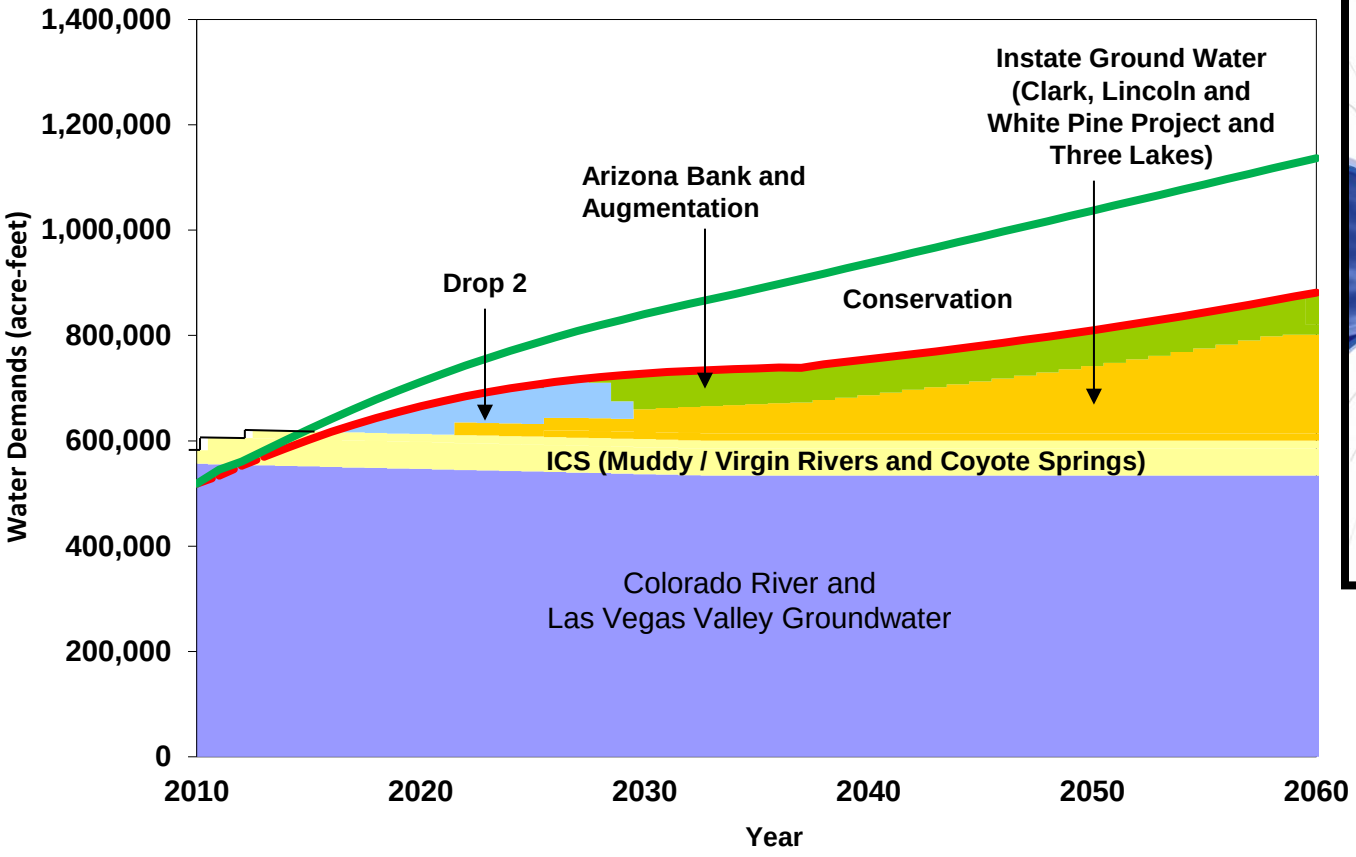

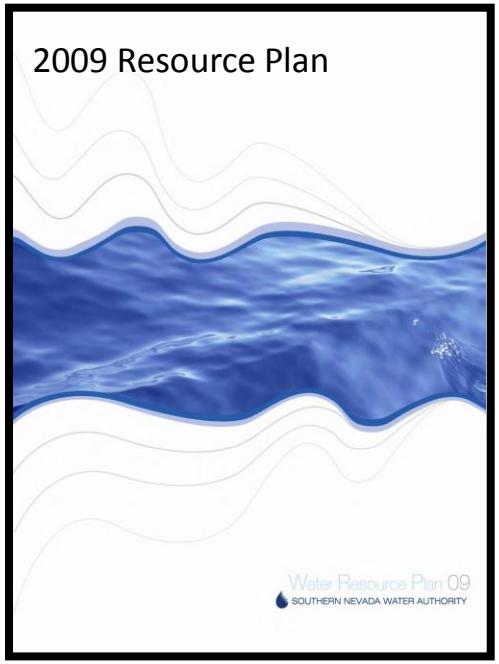

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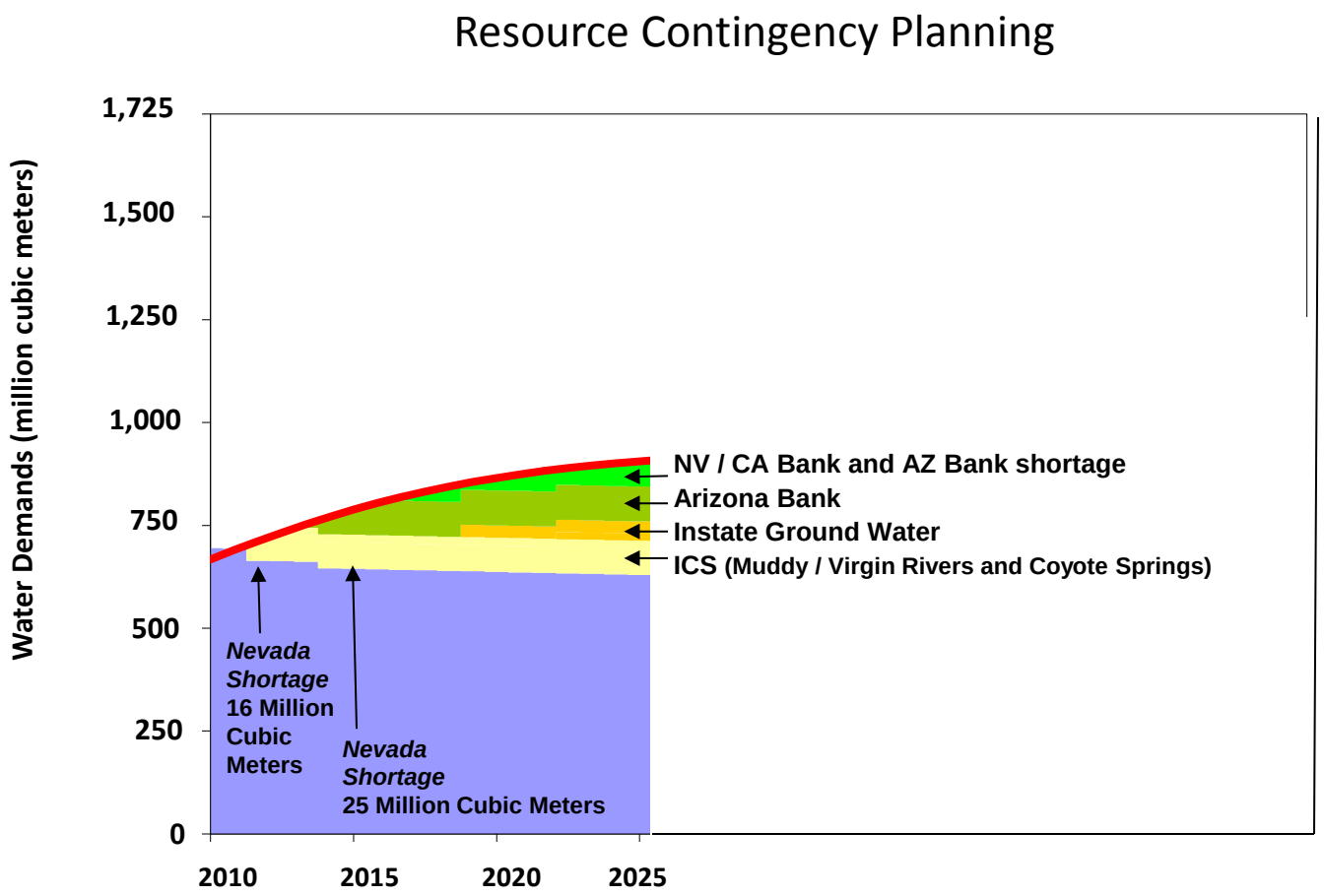
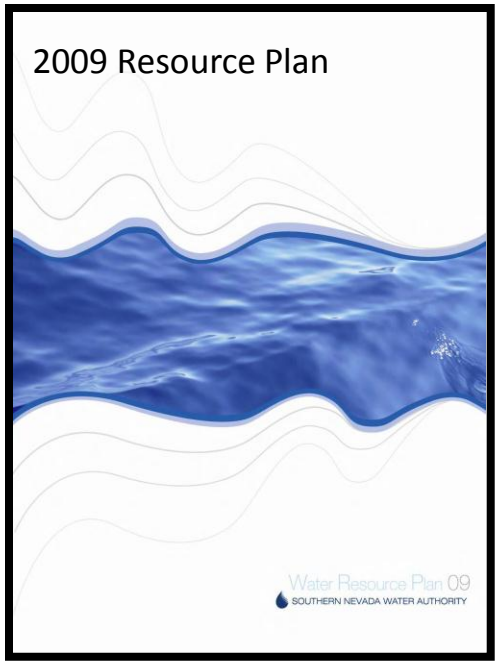




Long-term Reliability

Despite achievements in conservation and water resources, additional infrastructure and resources are needed to provide a long-term, reliable water supply for Southern Nevada.

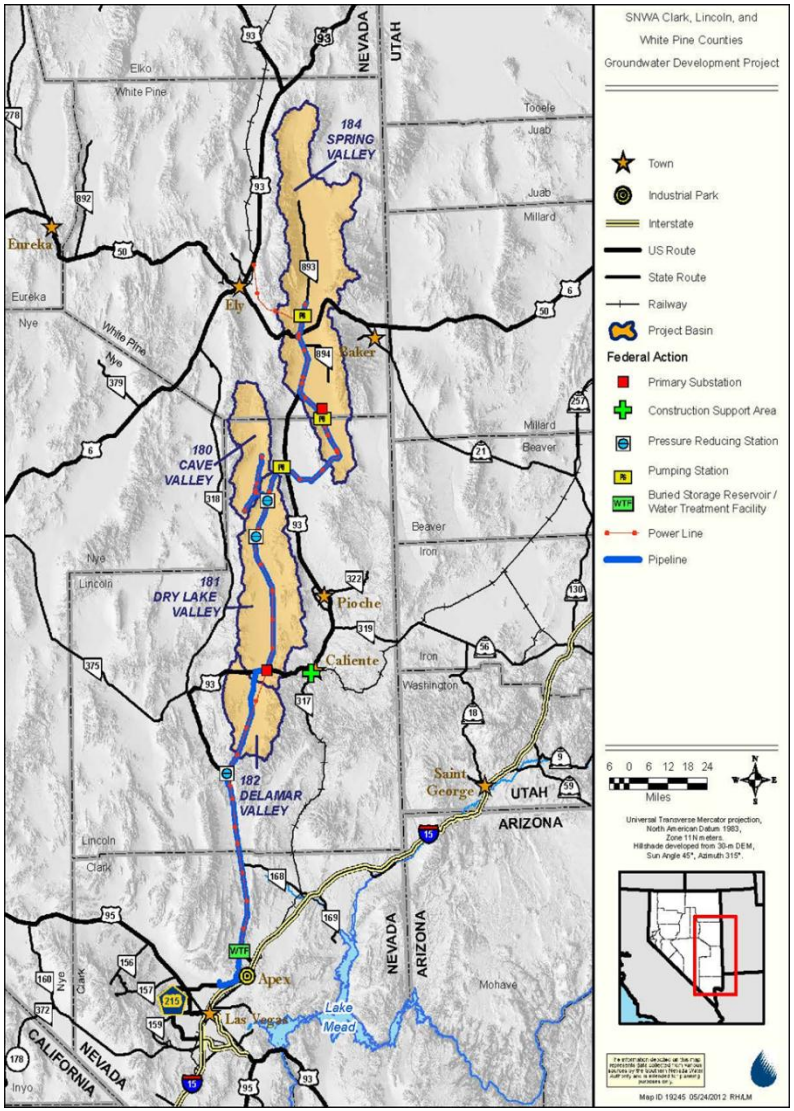
In-State Groundwater Resources

New, permanent resources are needed to meet demands and protect the community from extreme drought and climate change.

In-State Groundwater Resources

In 2012, the Nevada State Engineer granted nearly 84,000 acre-feet per year of permitted groundwater rights from four groundwater basins located in eastern Nevada.

Groundwater Development



- 120,000 afy of groundwater from 5 basins
- 8-year public environmental analysis process
- 500 environmental measures, including over 35 separate environmental plans
- Additional data collection and environmental analysis will be required

Summary

- **Additional conservation is necessary to reduce demands.**
- **A diversified water resource portfolio is essential to provide a reliable water supply for Southern Nevada.**
- **Additional, non-Colorado River water resources must be pursued to protect Southern Nevada from drought.**
- **The future of water development requires that our actions are responsible to the environment and that we consider the long-term sustainability of all our resources.**