



NONFUNCTIONAL TURF REMOVAL ADVISORY COMMITTEE

AUGUST 18, 2021 - MEETING 1



SOUTHERN NEVADA WATER AUTHORITY™

PUBLIC COMMENT

PLEASE LIMIT YOUR COMMENTS TO 3 MINUTES

ITEM 1

APPROVE AGENDA

ITEM 2

WELCOME & INTRODUCTIONS

2021 NONFUNCTIONAL TURF REMOVAL ADVISORY COMMITTEE (NTRAC) APPOINTEES

Mauricia Baca

Environmental Organization

Larry Fossan

Common-interest Community

Scott Black

Local Government

Dale Hahn

Golf Course

Stephanie Bressler

Multifamily Housing

David Strickland

Industrial/Commercial

Thomas Burns

Business

Brian Walsh

Common-interest Community

Tena Cameron

Office Park

ITEM 3

OPEN MEETING LAW OVERVIEW

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

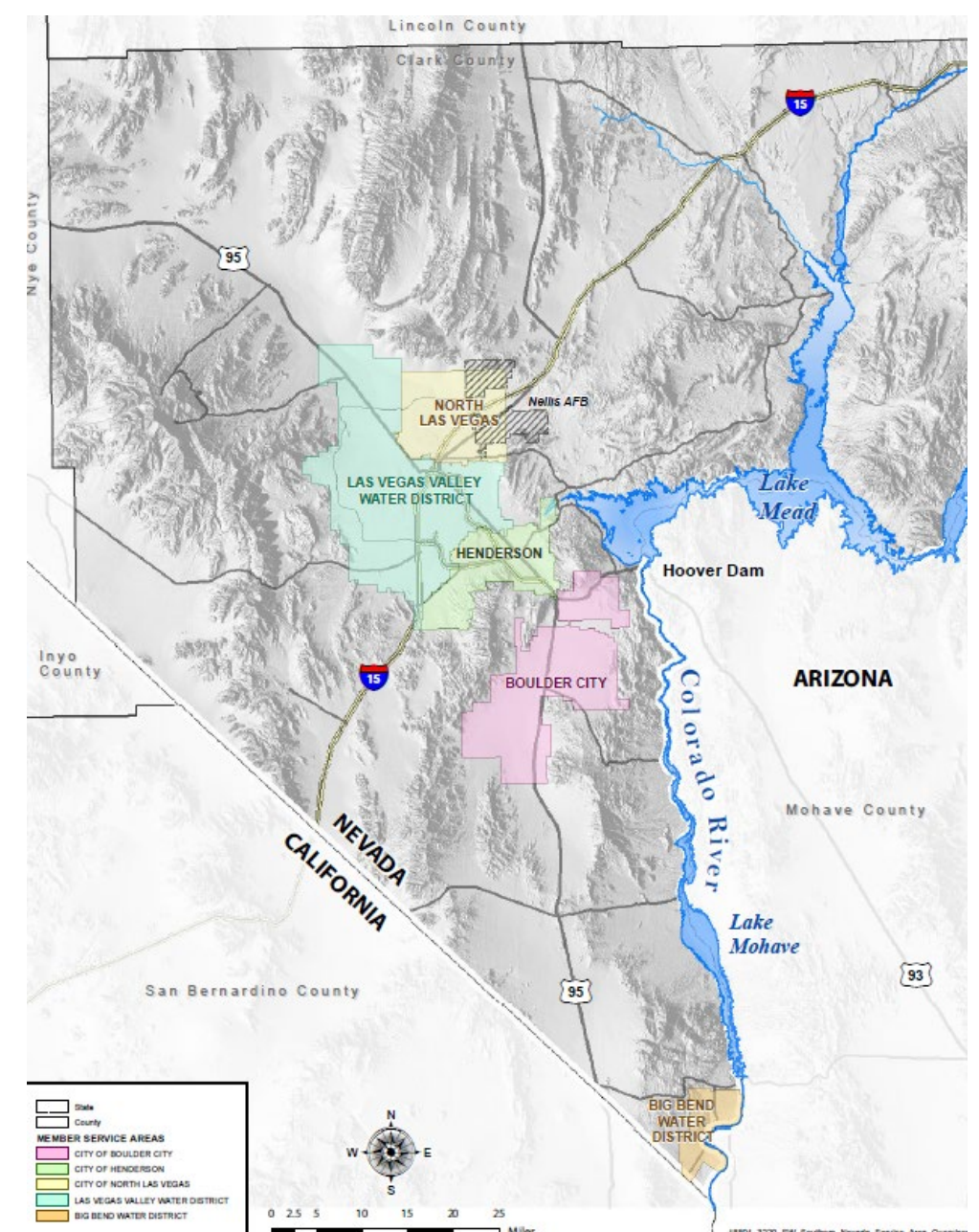
ITEM 4

SNWA BACKGROUND & COLORADO RIVER OVERVIEW

ABOUT SNWA

The Southern Nevada Water Authority is a regional entity whose members include Southern Nevada's water and wastewater agencies.

- Big Bend Water District (Laughlin, NV)
- 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



RESPONSIBILITIES



CONSERVATION

Incentives, Programs,
Regulation and Pricing



WATER SUPPLY PLANNING

Developing and
managing regional water
supplies



WATER QUALITY

Maintaining and
protecting water quality



INFRASTRUCTURE

Building and operating
major facilities



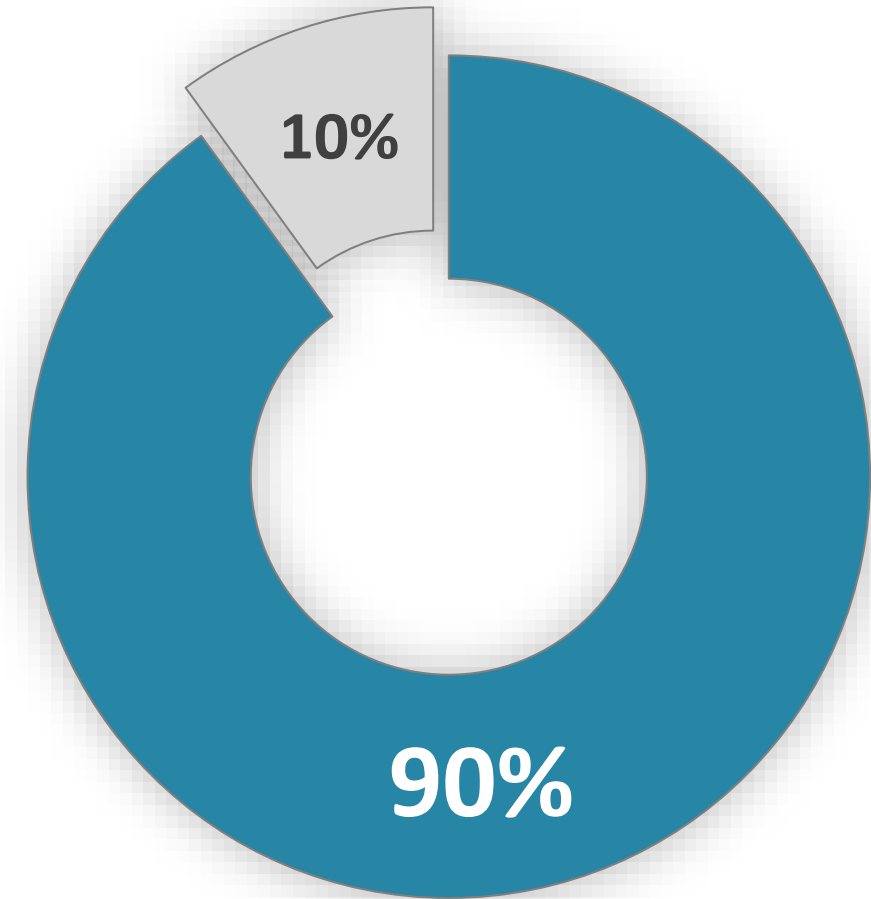
STEWARDSHIP

Protecting
environmental resources



WATER RESOURCES

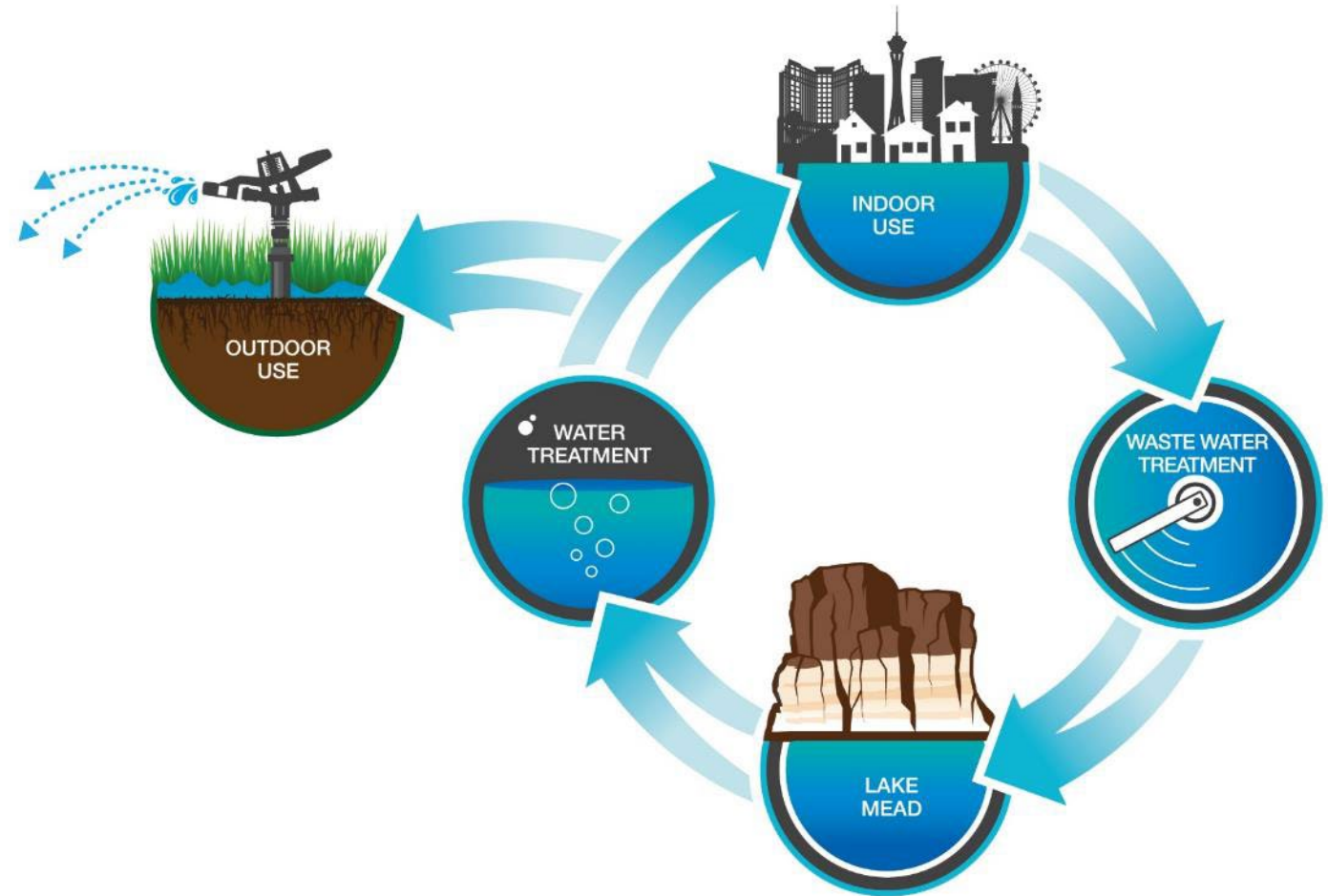
Southern Nevada is nearly fully reliant on the Colorado River to meet the community's water demands.



■ Colorado River ■ Other

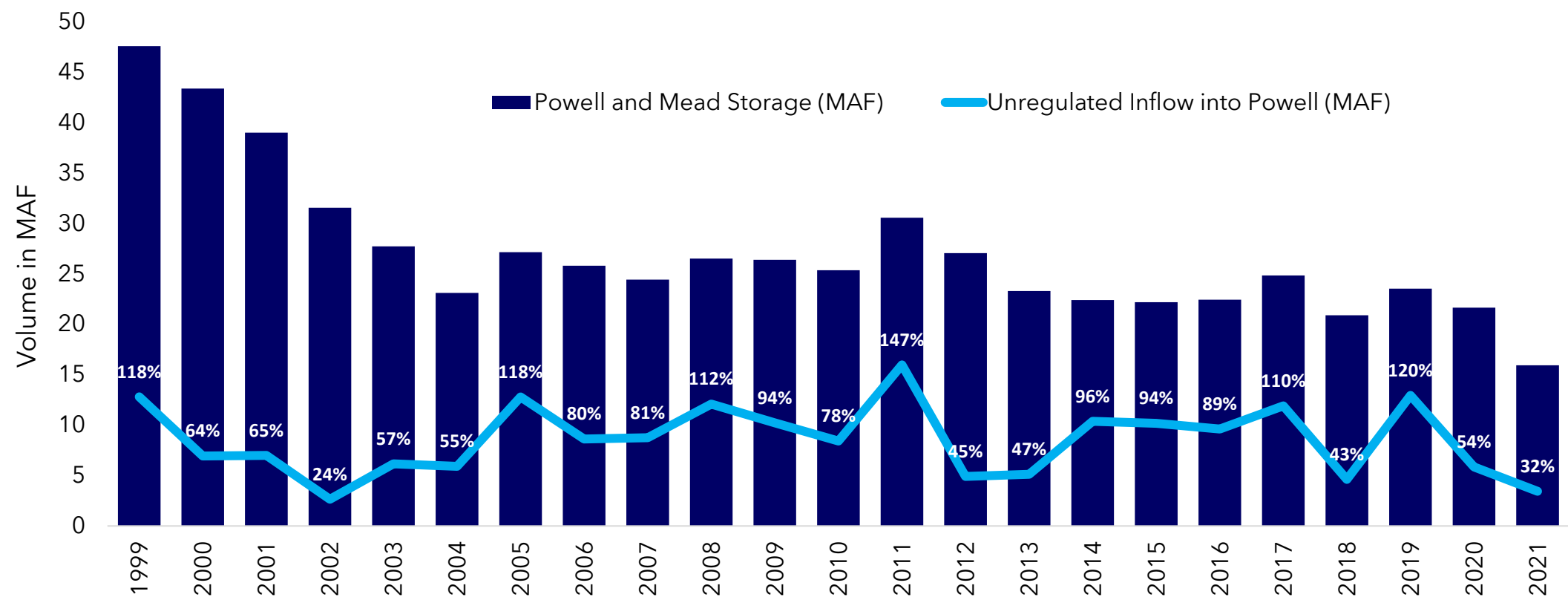
RETURN FLOWS

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



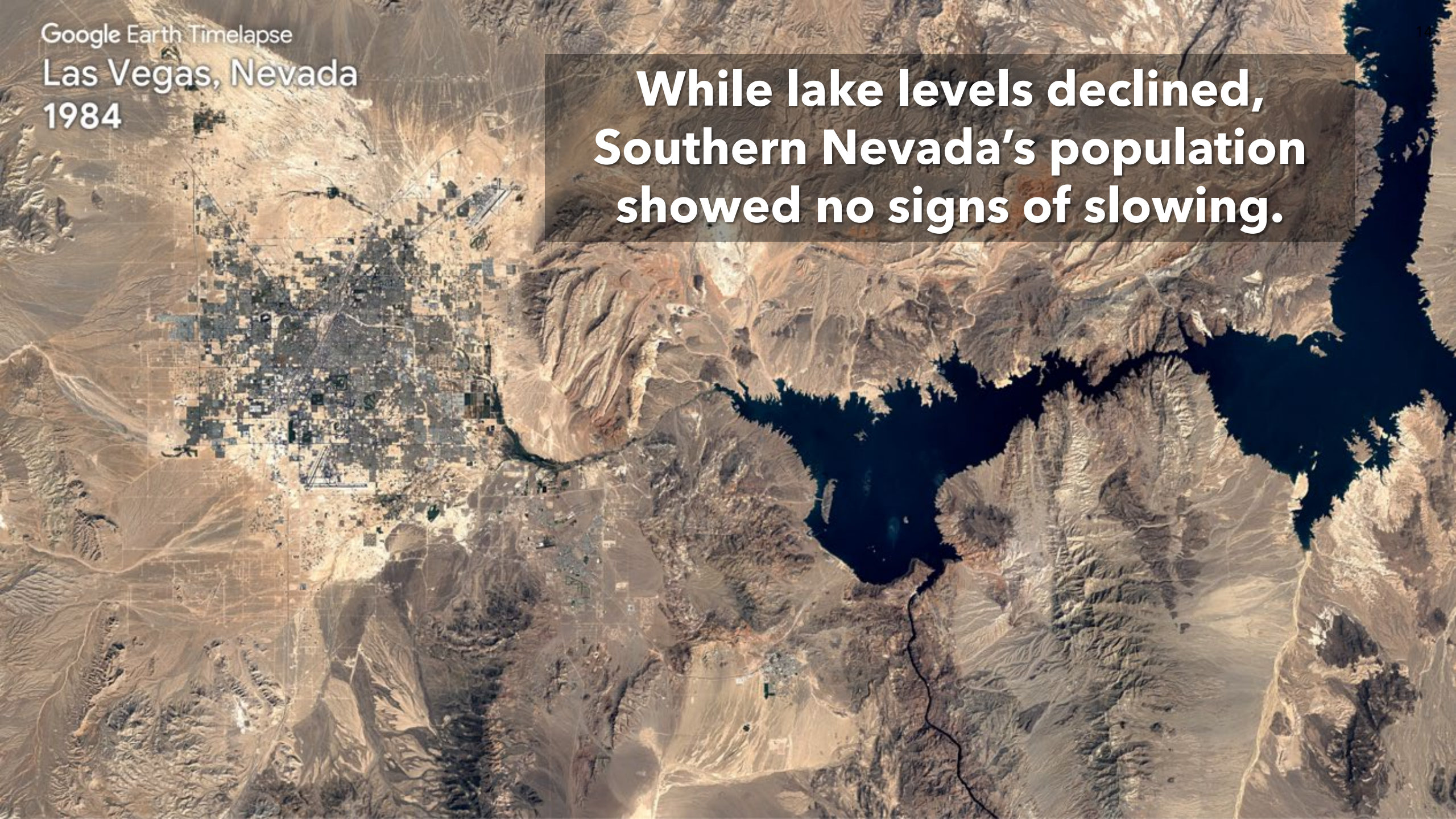
DROUGHT

Beginning in the early 2000s, significantly decreased inflows have led to declines in Lake Powell and Lake Mead elevations.



Google Earth Timelapse
Las Vegas, Nevada
1984

**While lake levels declined,
Southern Nevada's population
showed no signs of slowing.**



**After five years of drought, reservoir storage was reduced by nearly 50 percent.
Reservoir storage has continued to significantly decline.**

1999



95%

2004



46%

2021



32%

CURRENT CLIMATE CONDITIONS

SEVEN BASIN STATES DROUGHT MONITOR

Drought Impact Types:

~ Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

Yellow D0 Abnormally Dry

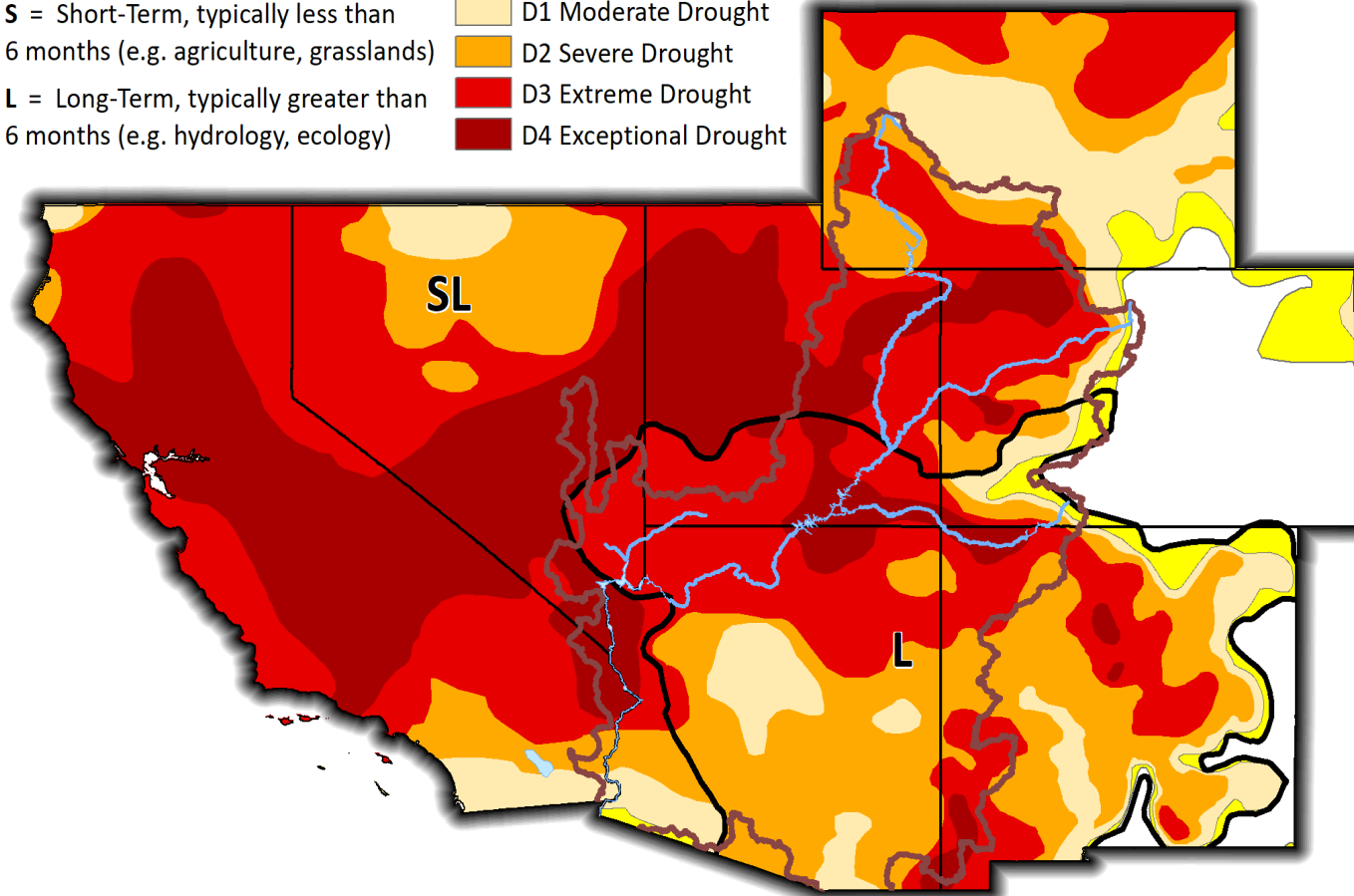
Light Orange D1 Moderate Drought

Orange D2 Severe Drought

Red D3 Extreme Drought

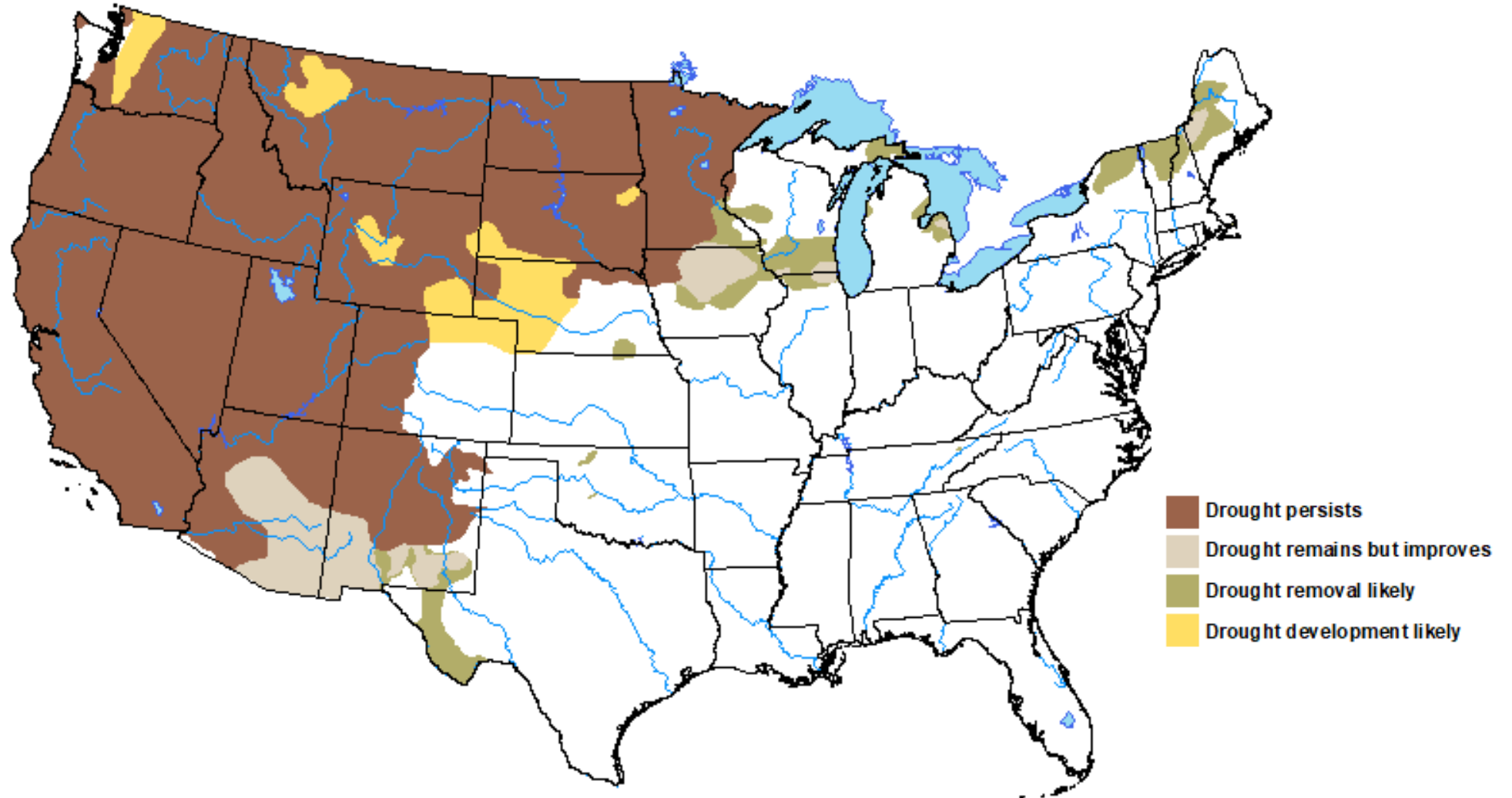
Dark Red D4 Exceptional Drought

August 10, 2021



CURRENT CLIMATE CONDITIONS

U.S. SEASONAL DROUGHT OUTLOOK



CURRENT CLIMATE CONDITIONS

UPPER BASIN SNOW CONDITIONS

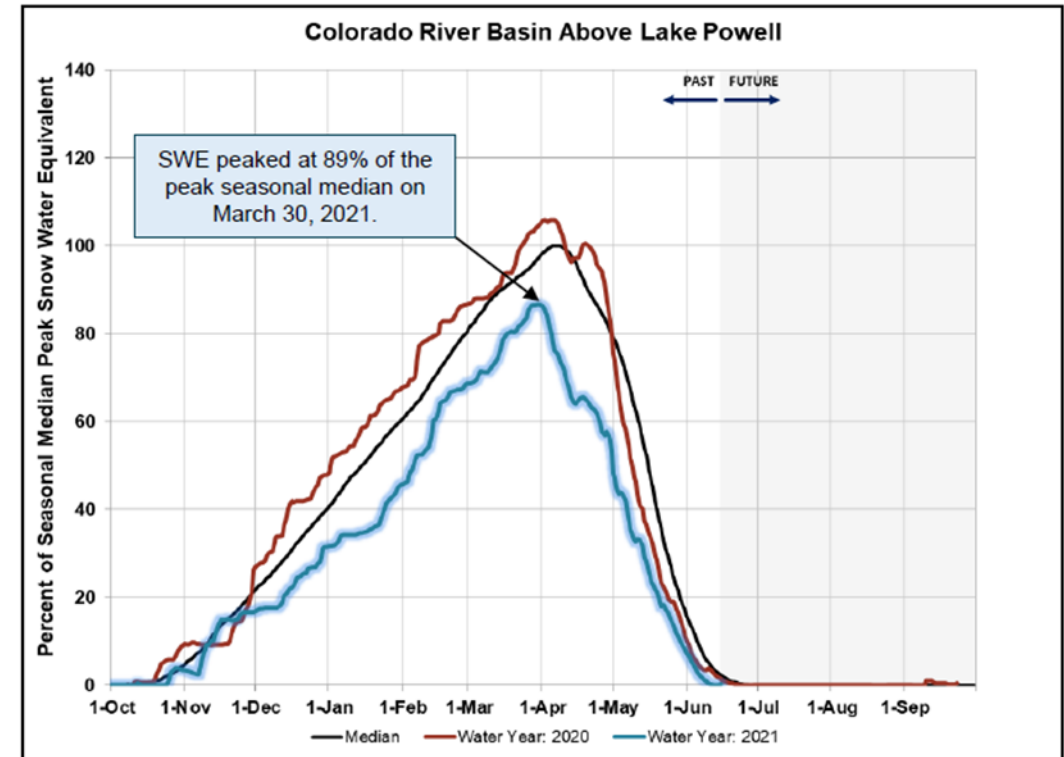
Water Supply

- Precipitation to date: 80% of average
- Snowpack peak: 89% of seasonal median

Forecasted Inflow to Lake Powell

- Forecasted WY 2021: 32% of average
 - Forecasted Apr-Jul: 26% of average
- (As of August 2, 2021)

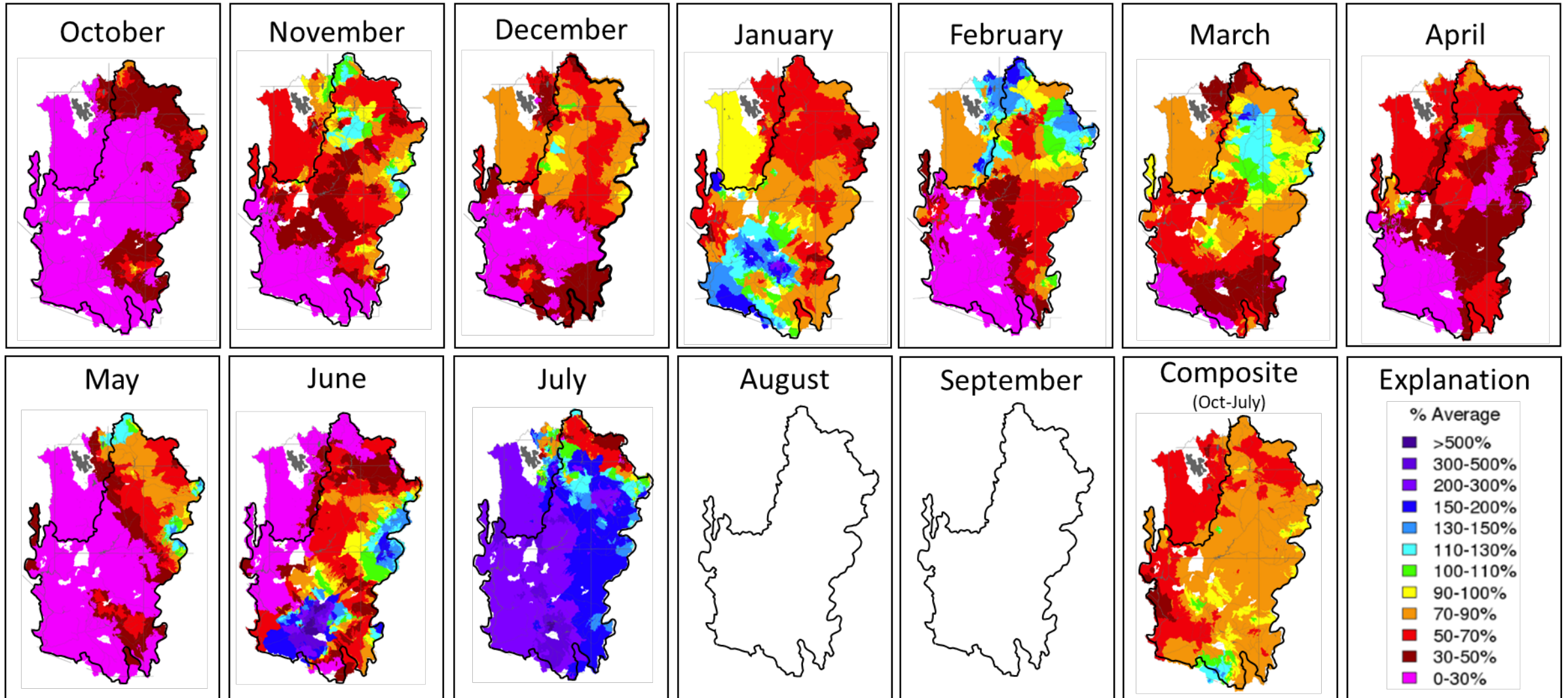
Upper Colorado River Basin



Time-series chart taken from USBR update on Reclamation Operations and Basin Hydrology (June 15, 2021)

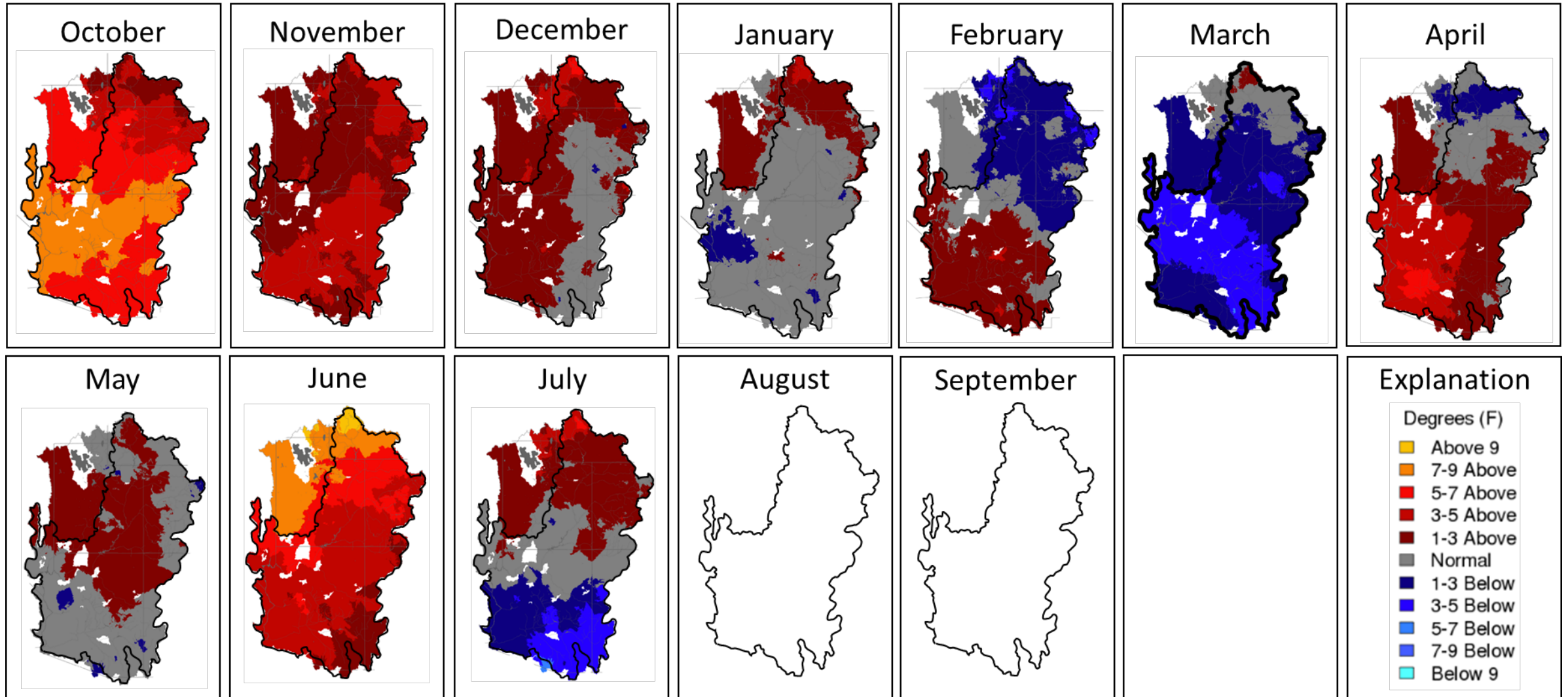
CURRENT CLIMATE CONDITIONS

MONTHLY PRECIPITATION: WATER YEAR 2021



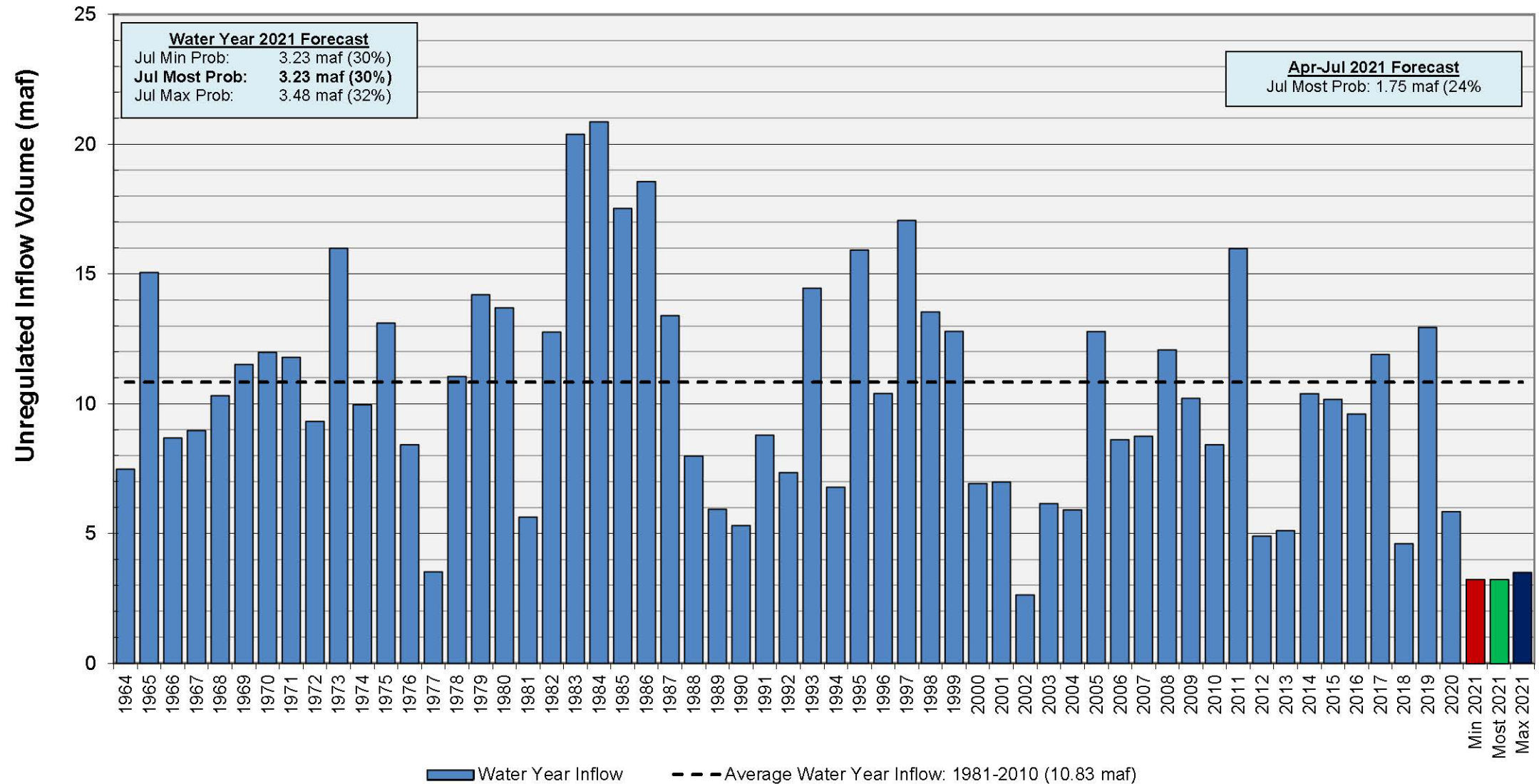
CURRENT CLIMATE CONDITIONS

MAX TEMPERATURE: WATER YEAR 2021

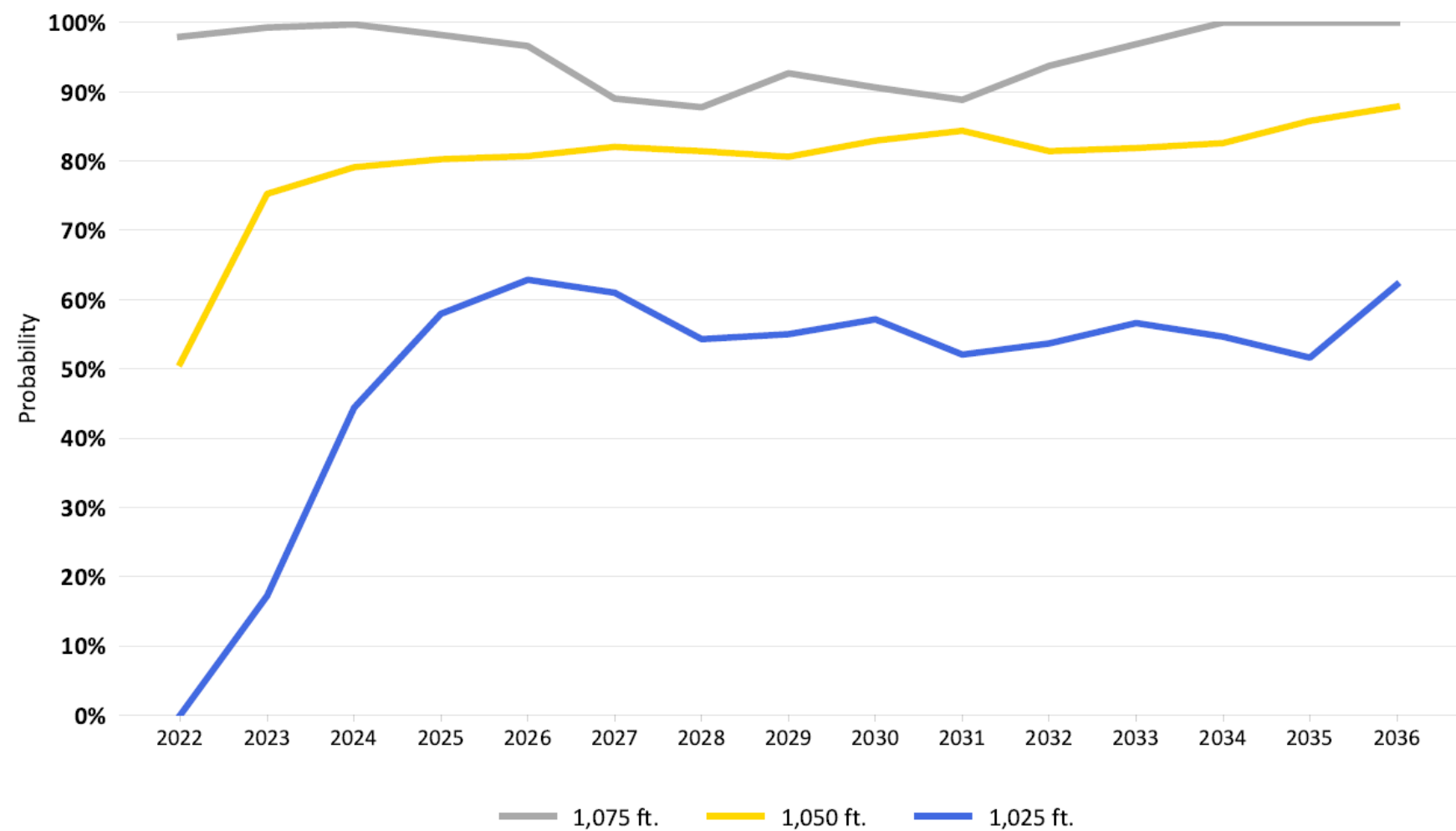


LAKE POWELL WATER YEAR: UNREGULATED INFLOW

WY 2021; FORECAST AS OF JULY 1



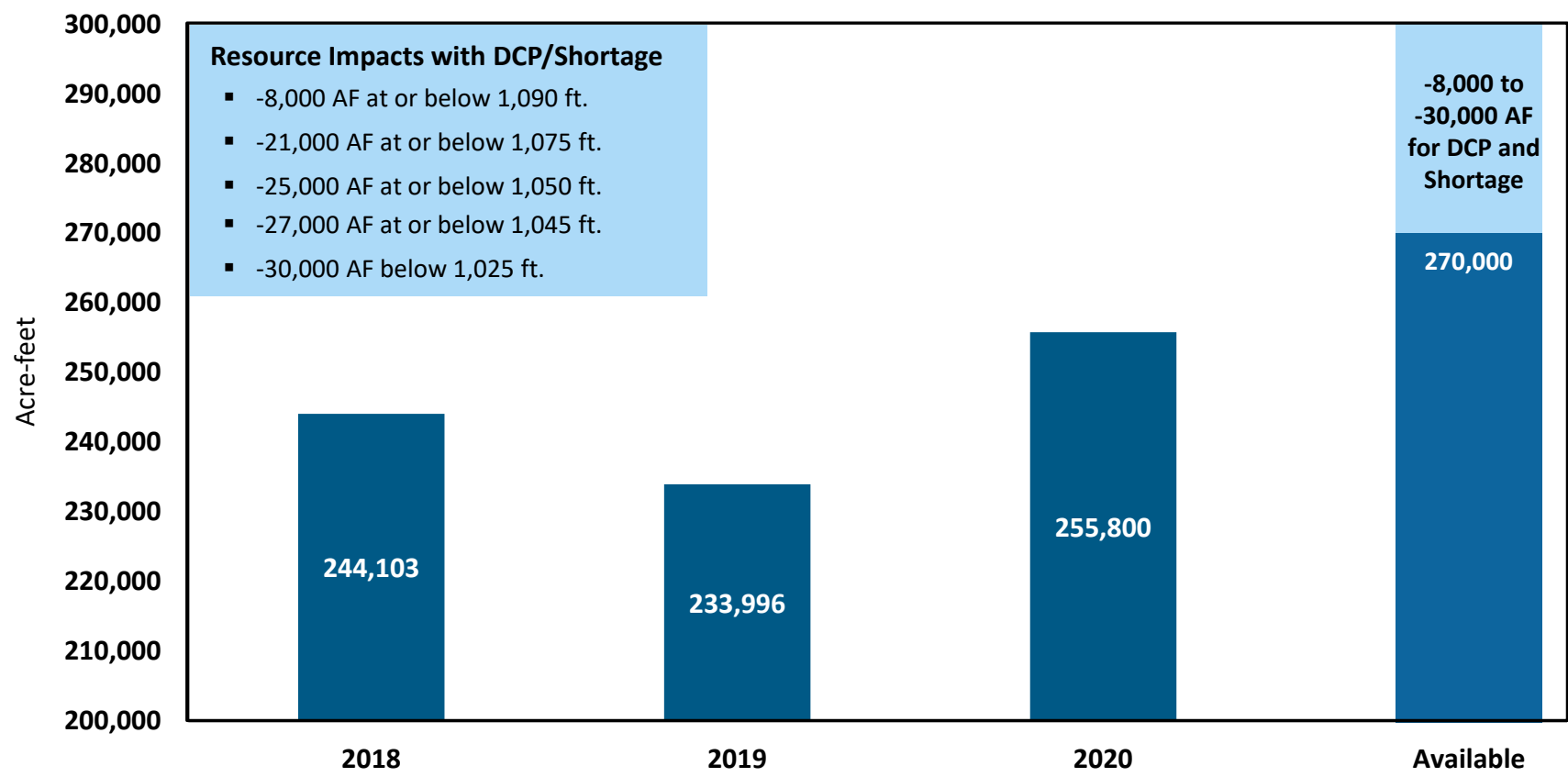
LAKE MEAD ELEVATION PROBABILITIES



Probabilities are derived from the June 2021 release of CRSS using hydrology for the period 1988-2019.

NEVADA COLORADO RIVER CONSUMPTIVE USE

Consumptive use is up significantly for 2020.
The current trajectory is not sustainable.



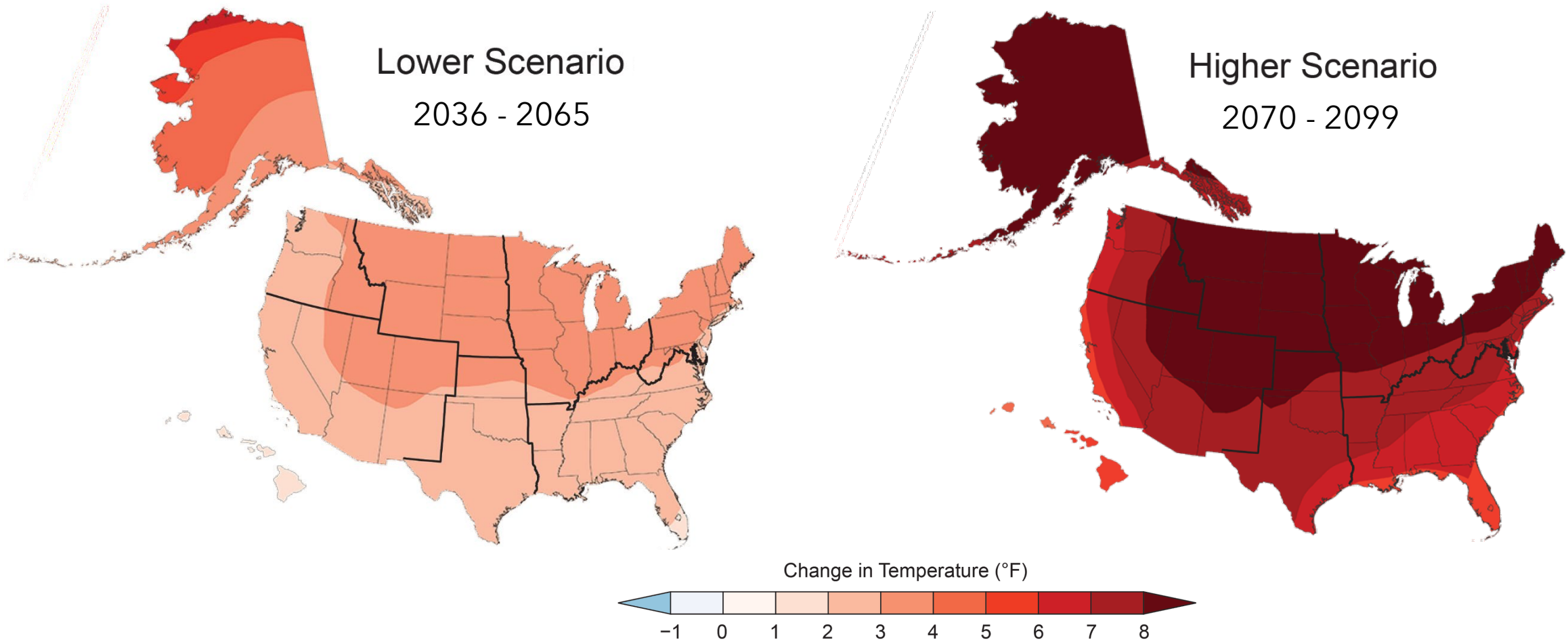
CLIMATE CHANGE

Rising temperatures create challenges by reducing reservoir levels (supply) and increasing water treatment operation needs (water quality).



CLIMATE CHANGE

The National Climate Assessment projects that the Colorado River Basin could warm between 3°F - 8°F by the end of the century.



CLIMATE CHANGE

Locally, projections indicate that Clark County will warm between 5°F - 10°F by the end of the century increasing outdoor water demands.



ITEM 5

CONSERVATION INITIATIVES

DROUGHT - 2000s

Drought response required four major activities for the SNWA:

- Reducing demands/water conservation
- Colorado River negotiations
- Securing alternate supplies
- Addressing infrastructure needs



DROUGHT - 2000s

In 2002, the SNWA initiated a drought planning process.

The process resulted in a comprehensive plan to reduce water demands, which led to interim and permanent changes to how the community uses water.



DROUGHT RESPONSE

Landscape development codes were enacted.

- Turf prohibited in front yards
- Turf limited to 50 percent of backyards
- Turf prohibited in commercial/industrial applications
- Turf prohibited in streetscapes



DROUGHT RESPONSE

Golf courses were put on water budgets.

- Subject to water budgets based on irrigated acreage
- Assessed surcharges if over watered
- Golf courses are one of the largest sector participants in the Water Smart Landscaping Program



DROUGHT RESPONSE

Mandatory watering schedules put into effect.

Winter: 1 day

Spring & Fall: 3 days

Summer: 6 days

...And never on Sunday



YOUR MANDATORY
WATERING SCHEDULE

 SPRING MAR 01 – APR 30 3 DAYS A WEEK No M T W T F S NEVER ON SUNDAY	 SUMMER MAY 01 – AUG 31 6 DAYS A WEEK OR LESS No watering from 11am-7pm NEVER ON SUNDAY
 FALL SEP 01 – OCT 31 3 DAYS A WEEK No M T W T F S NEVER ON SUNDAY	 WINTER NOV 01 – FEB 29 1 DAY A WEEK No M T W T F S NEVER ON SUNDAY

Circle your assigned day(s) above.

 Keep this **NEAR** your **WATERING CLOCK** 

DROUGHT RESPONSE

Water waste enforcement helps remind individuals to conserve water.

- Enforced by municipalities
- Assessed increasing fees on water bills



WATER SMART LANDSCAPES

WATER SMART HERO.
— SAVE THE WATER. SAVE THE WORLD. —

\$3/SQ.FT. WATER SMART LANDSCAPE REBATE

PLANT MASTER

CHECK IN
at snwa.com

DIG IN
take 1 year to complete your conversion

CASH IN
your rebate check!

sign up at snwa.com

SOUTHERN NEVADA WATER AUTHORITY™

Each square foot of water-efficient plants, trees, and shrubs uses 55 gallons less per year than a square foot of grass.

SMART IRRIGATION CONTROLLERS

Smart irrigation clocks automatically adjust watering schedules according to the weather and many provide convenient access via mobile applications.

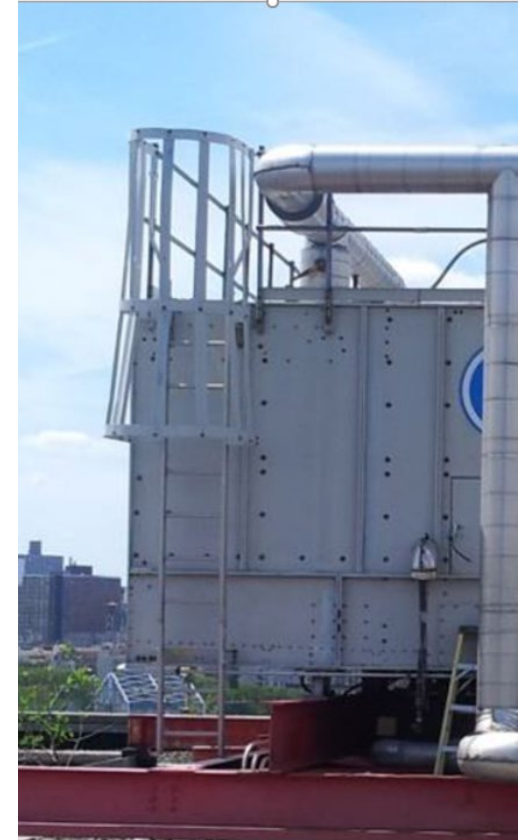
SNWA's rebate program offers 50 percent off the purchase price or up to \$100, whichever is less.



EVAPORATIVE COOLING

RECENT PROGRESS

- Participating in a study for the Alliance for Water Efficiency to investigate how to identify water-cooled facilities in urban areas, best practices for estimating use, water savings associated with upgrades and alternate technologies.
- Provided an incentive to CCSD under the WET program to refurbish 62 cooling towers; partnering with CCSD to monitor water savings and results.
- Developing plans for direct outreach to non-SFR customers with evaporative cooling systems for potential upgrades under the WET program.



WATER EFFICIENT TECHNOLOGIES PROGRAM

The Water Efficient Technologies (WET) program offers financial incentives to commercial and multifamily property owners who install water-efficient devices and technologies.

Pre-approved technologies available:

- Converting sports field from grass to artificial turf
- Retrofitting standard cooling towers to drift elimination technologies

Custom technologies also available.

REBATES

CONSUMPTIVE USE

\$45 per 1,000 gallons conserved annually (or up to 50% of purchase price)

NON-CONSUMPTIVE USE

\$15 per 1,000 gallons conserved annually (or up to 50% of purchase price)



CONSERVATION RESULTS

Southern Nevada has made considerable progress since 2002, but work remains.

Southern Nevada
POPULATION



UP
52%

Per Capita
WATER USE



DOWN
47%

Colorado River Water
CONSUMPTION

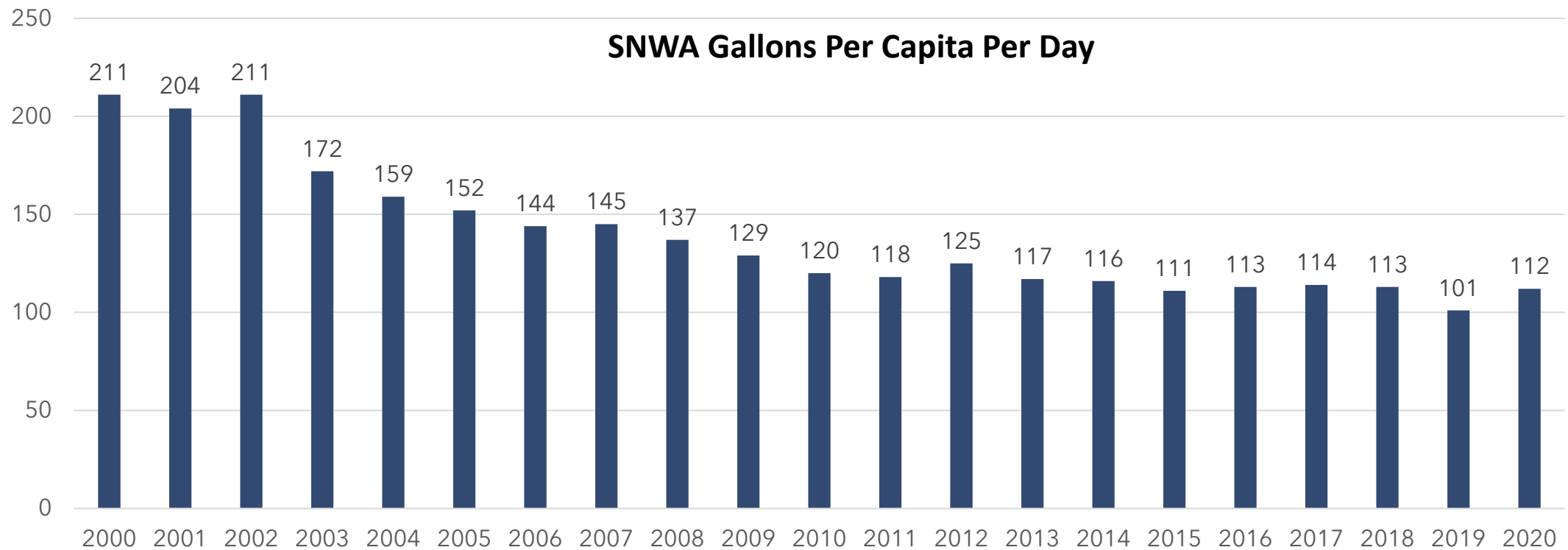


DOWN
23%



COLORADO RIVER WATER USE

Conservation progress has stalled.

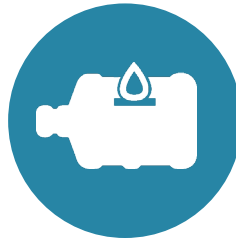


The onset of drought also led the SNWA to take additional actions.



INFRASTRUCTURE

Constructing major facilities and asset management



WATER BANKING

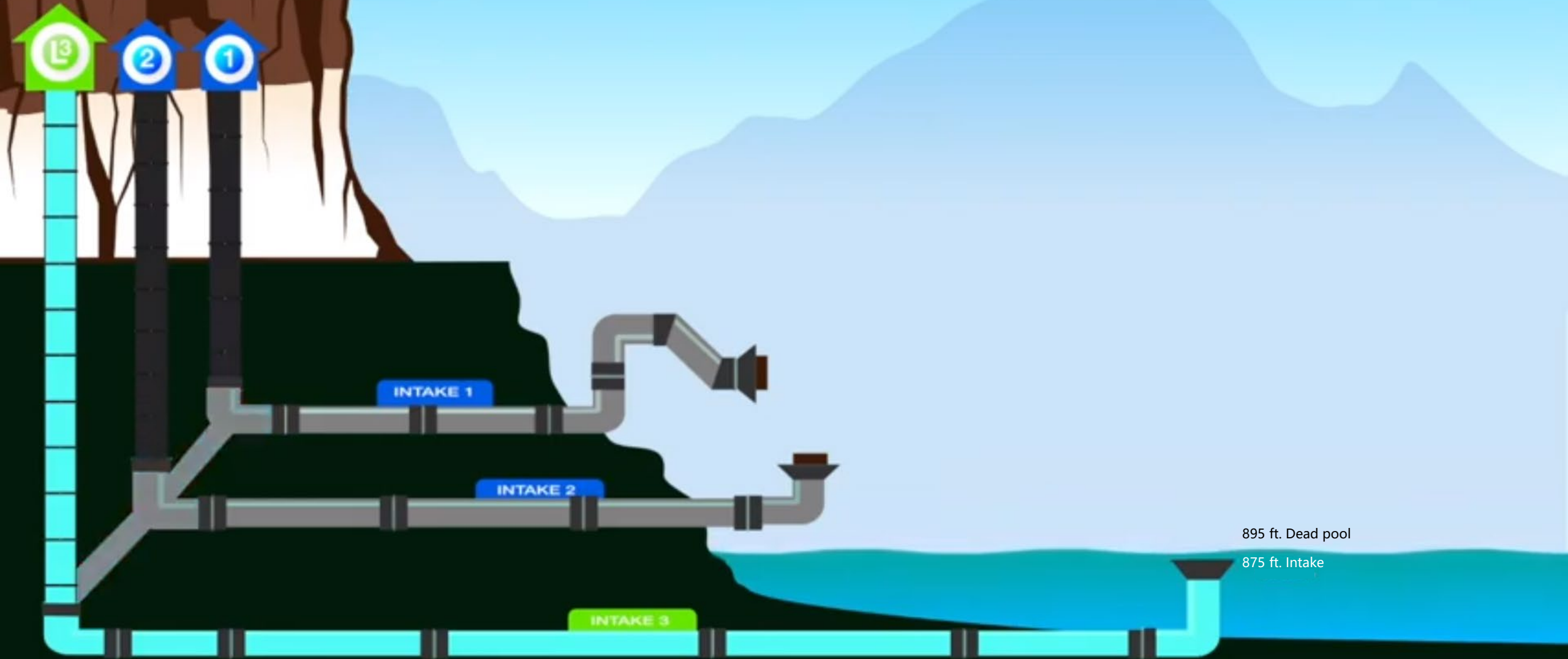
Storing water supplies for the future



RESOURCE PLANNING

Working with partners & developing comprehensive plans to manage supplies

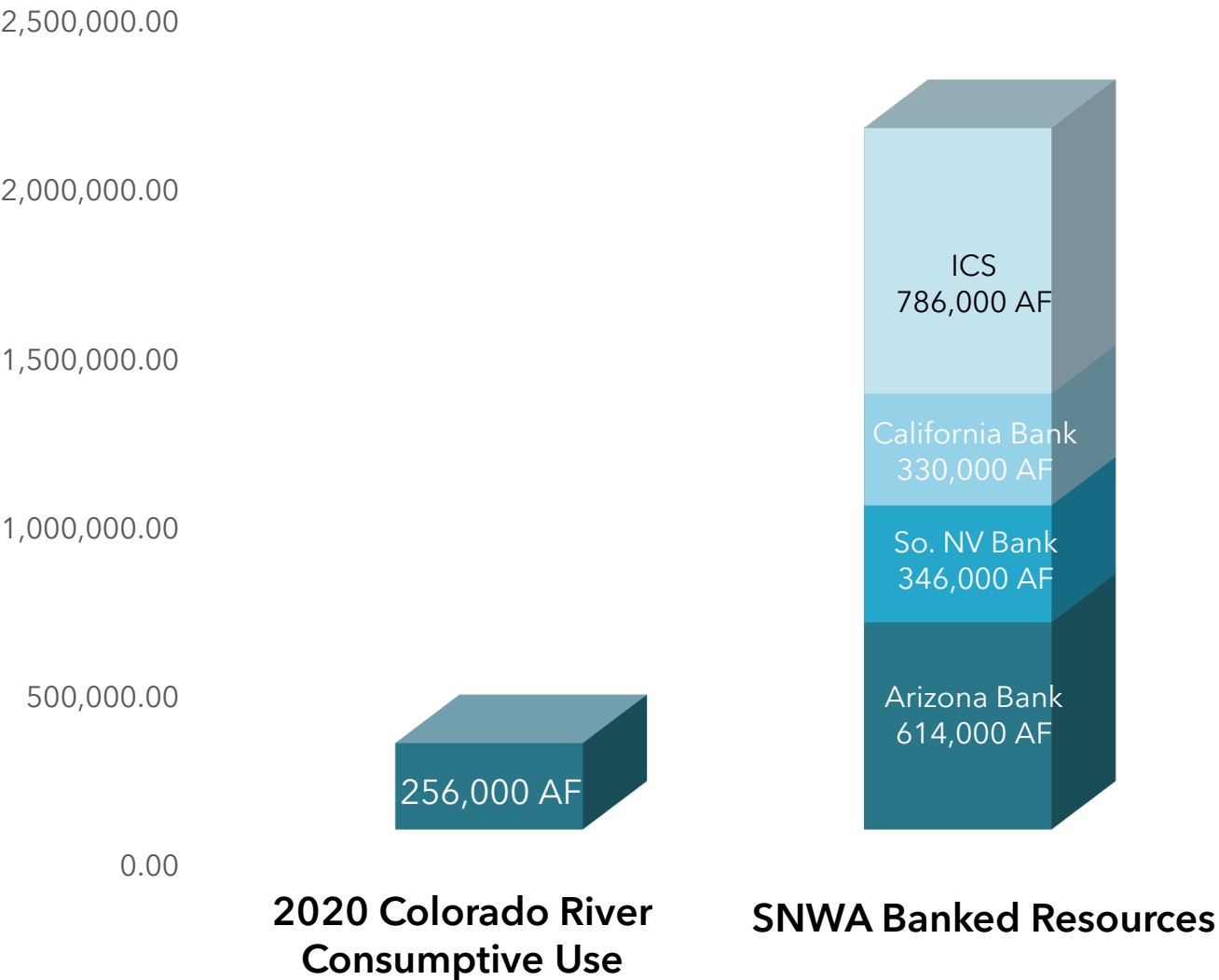
THIRD INTAKE + PUMPING STATION



WATER BANKING

Southern Nevada has stored 2.1 million acre-feet of water.

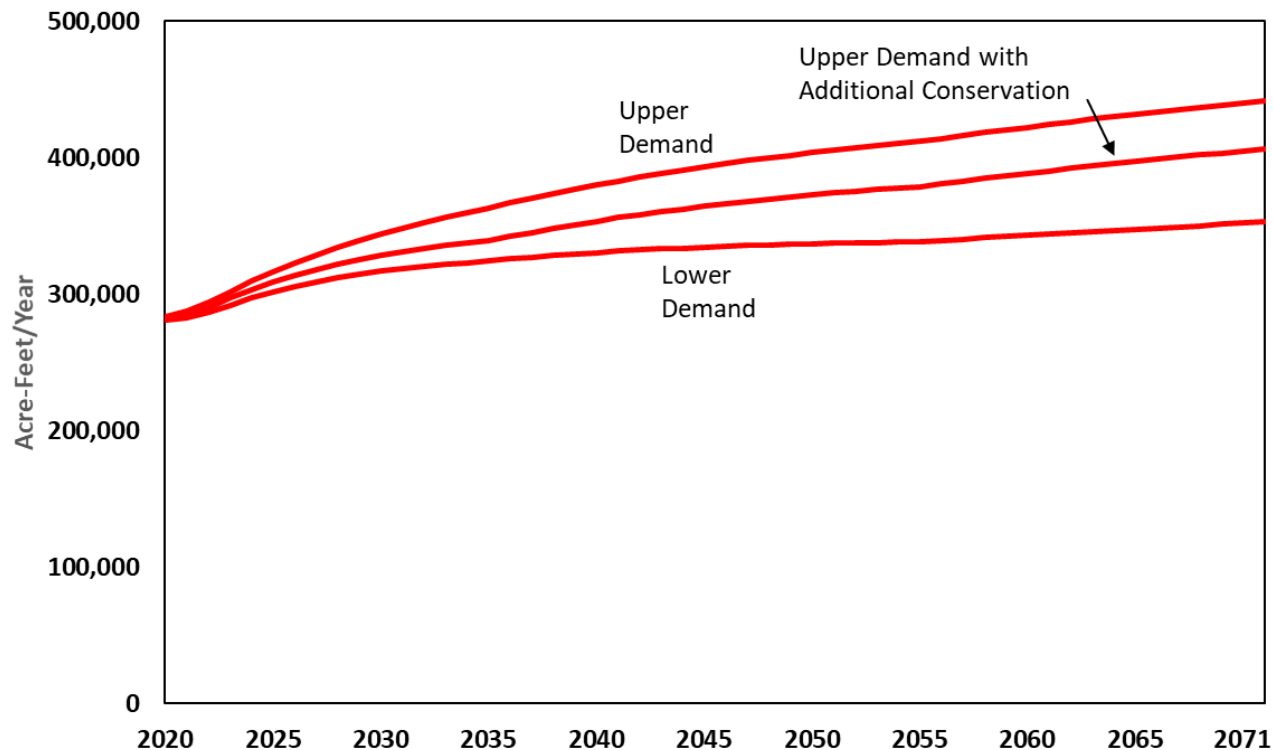
This is more than eight times Nevada’s 2020 consumptive Colorado River water use.



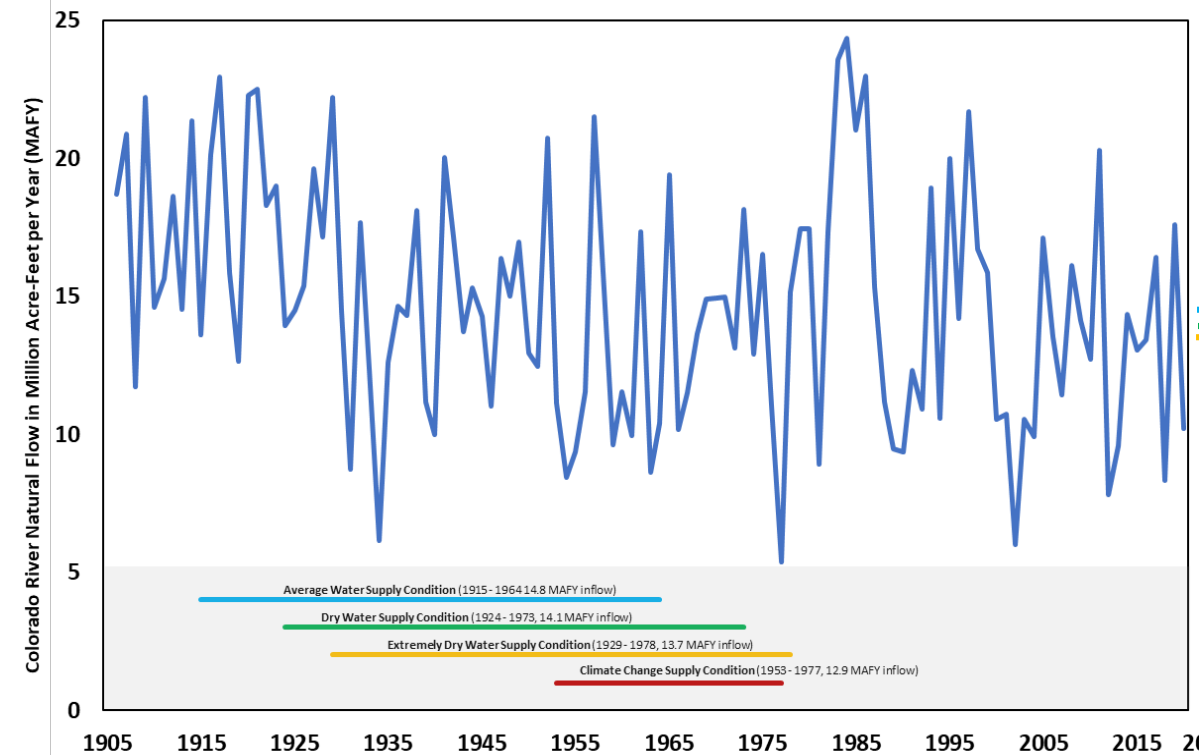
RESOURCE PLANNING

The SNWA's Water Resource Plan considers demand and hydrology under a multitude of scenarios over a 50-year planning horizon.

Projected Demands



Hydrology Scenarios



WATER USE

Warming climates add additional challenges in reducing water use.

Climate Change & Aging System

Increasing consumptive water demands due to warmer temperatures, drier soils lower precipitation, and increased system loss due to aging infrastructure.



A central black circle contains the text "105 GPCD Conservation Goal". A large red arrow points upwards from the bottom left towards the circle. A large purple arrow points downwards from the top right towards the circle.

105 GPCD
Conservation
Goal

Adaptive Management

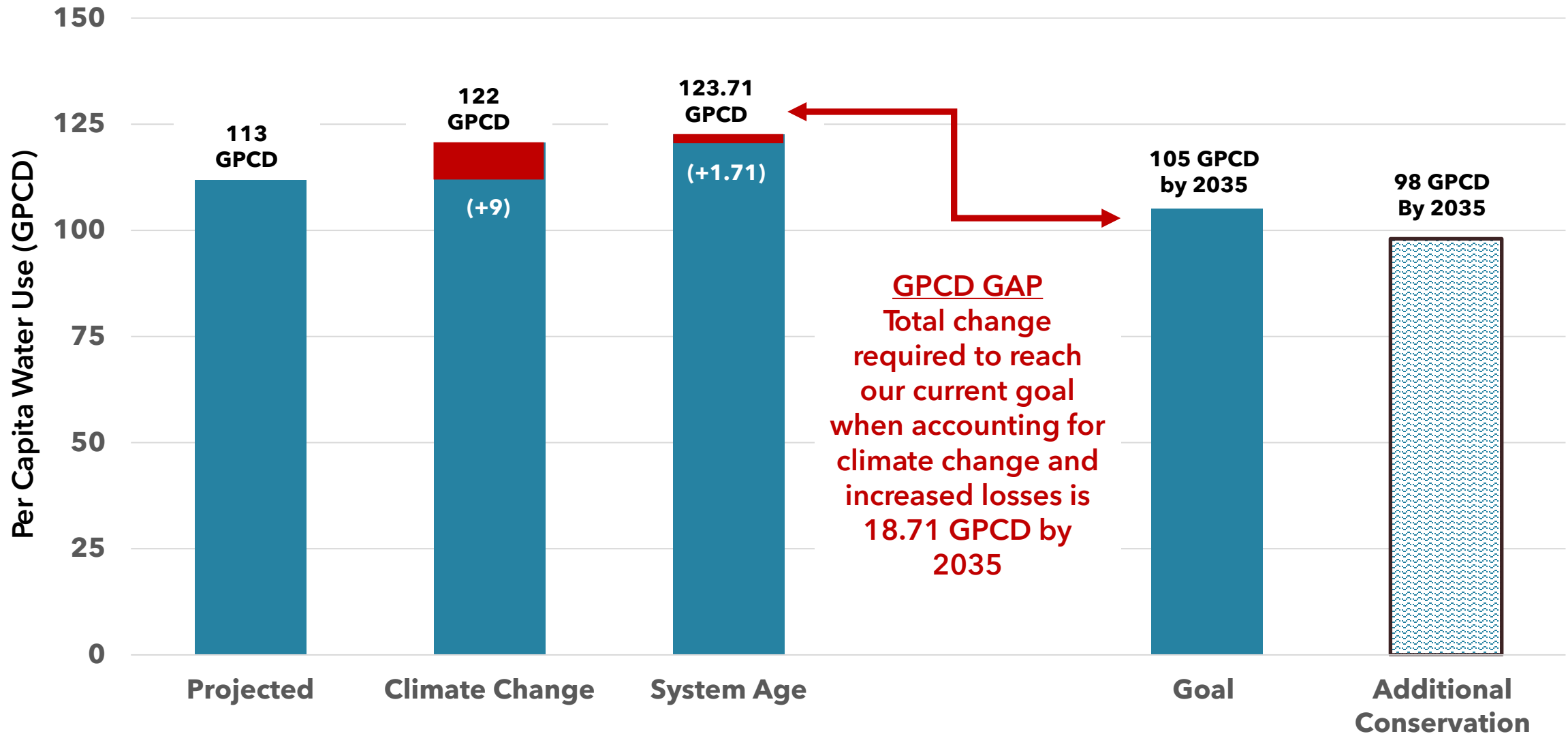
Significant additional effort will be required to reduce consumptive water use to meet our conservation goal and maximize the availability of water supplies.

RECOMMENDATIONS

Last fall, the SNWA Board of Directors approved recommendations from an advisory committee on conservation-related initiatives to further drive down water use in Southern Nevada.

- **Reduce existing nonfunctional turf**
- Limit future installations of cool season turf in public spaces
- Implement smart controller technology to automate landscape compliance
- Implement advanced metering infrastructure
- Reduce losses from evaporative cooling
- Adopt a large water users policy

CONSERVATION GOAL CHALLENGES



NONFUNCTIONAL TURF

Unused turf is wasted water

(72 gallons per square foot used each year; 55 gallons wasted)

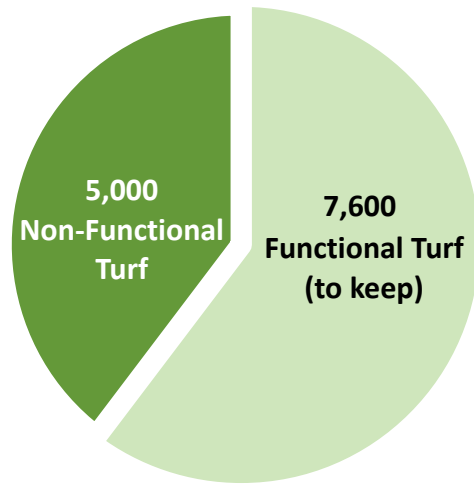
- Medians
- Roundabouts
- Streetscapes
- Neighborhood entries
- Front yards
- Unused back yards

Nonfunctional turf is aesthetic only and has no recreational value.

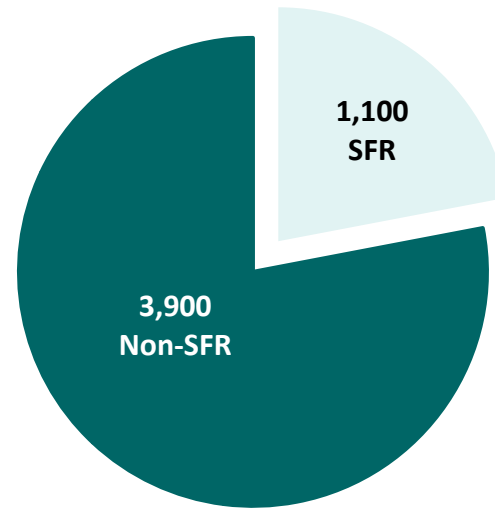


NONFUNCTIONAL TURF

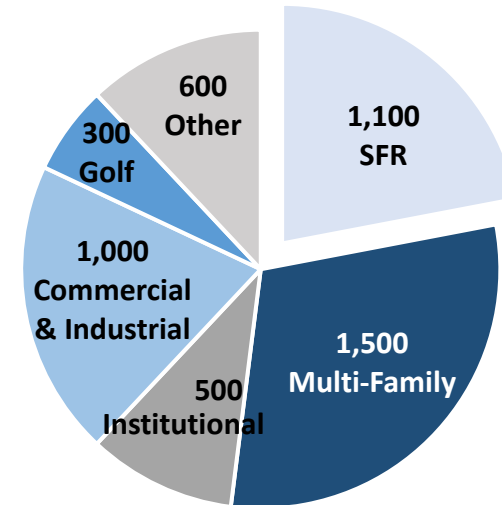
Most of the remaining non-functional turf is in the non-SFR sector.



Current Turf Totals



By Sector



By Customer Class

Turf totals in acres

NONFUNCTIONAL TURF

AB 356 passed during the 81st Legislative Session prohibits our community's water supplies from watering existing unused grass by 2027.

Single family residential homes excluded.

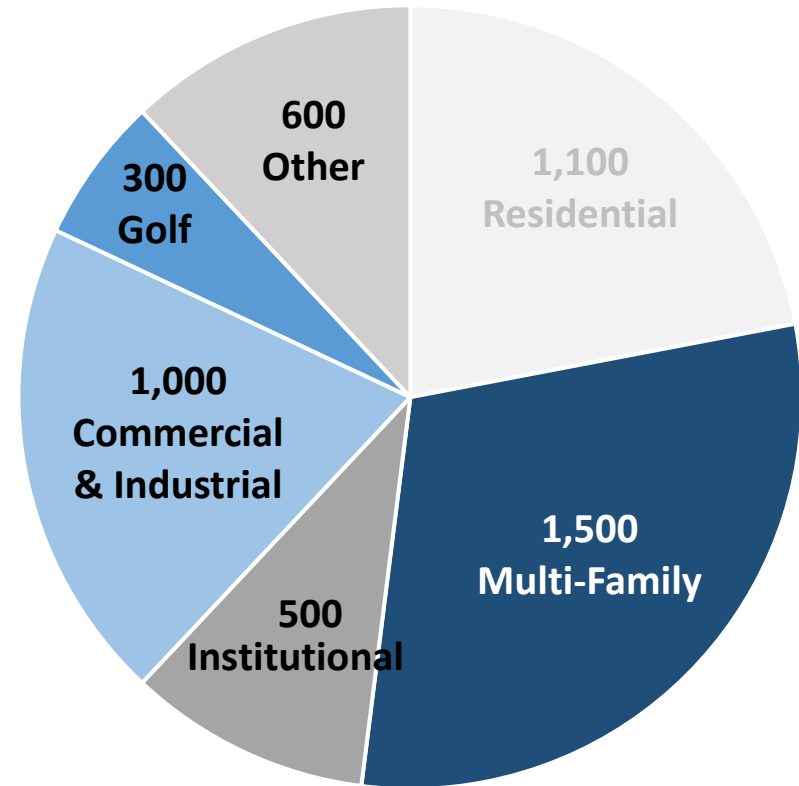
NONFUNCTIONAL TURF:

3,900 acres (170 million sq. ft)

POTENTIAL WATER SAVINGS:

9.5 billion gallons (29,150 acre-feet)

Nonfunctional Turf Eligible
for Removal (Acres)



ASSEMBLY BILL 356

- On June 4, 2021, Governor Sisolak signed Assembly Bill 356
- AB 356 directs SNWA Board of Directors to develop a plan for the removal of nonfunctional turf in the Las Vegas Valley
- To support development of the plan, the legislation also created the Nonfunctional Turf Removal Advisory Committee (NTRAC) to be appointed by the Board
- NTRAC must be comprised of nine voting members, representing office parks, businesses, industrial or commercial businesses, golf courses, two common-interest communities, multifamily housing facilities, environmental organizations, and local governments

NTRAC

During the next four to five months, the Nonfunctional Turf Removal Advisory Committee (NTRAC) will meet to:

- Understand the importance and impact of water conservation programs on water resources
- Discuss, define and identify nonfunctional turf
- Discuss waiver/exemption process
- Develop recommendations for the SNWA Board of Directors

ITEM 6

COMMITTEE PROCESS OVERVIEW

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

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

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

MISSED MEETINGS

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

MEETING SCHEDULE

- Wednesday, August 18
- Wednesday, September 22
- Wednesday, October 27
- Wednesday, November 17
- Wednesday, December 8 – *if needed*
- *January: SNWA Board considers committee recommendations*

The background of the slide is an abstract composition of overlapping, wavy, organic shapes in various shades of green and yellow. The colors transition from a pale yellow at the top to a vibrant green in the middle, and finally to a darker teal at the bottom. The shapes are layered, creating a sense of depth and movement.

QUESTIONS?

PUBLIC COMMENT

PLEASE LIMIT YOUR COMMENTS TO 3 MINUTES



SOUTHERN NEVADA WATER AUTHORITY™