

Presentation on Nevada Water Resources

December 8, 2010

Overview

- **SNWA Water Resource Plan evolution between 2004 and 2010**
- **Colorado River water supply conditions**
- **Cooperative efforts to manage resources and minimize the shared risk of shortage**
- **Opportunity to toll certain provisions of the banking agreement for an interim period to minimize shortage risk**

Water Resource Plan Purpose

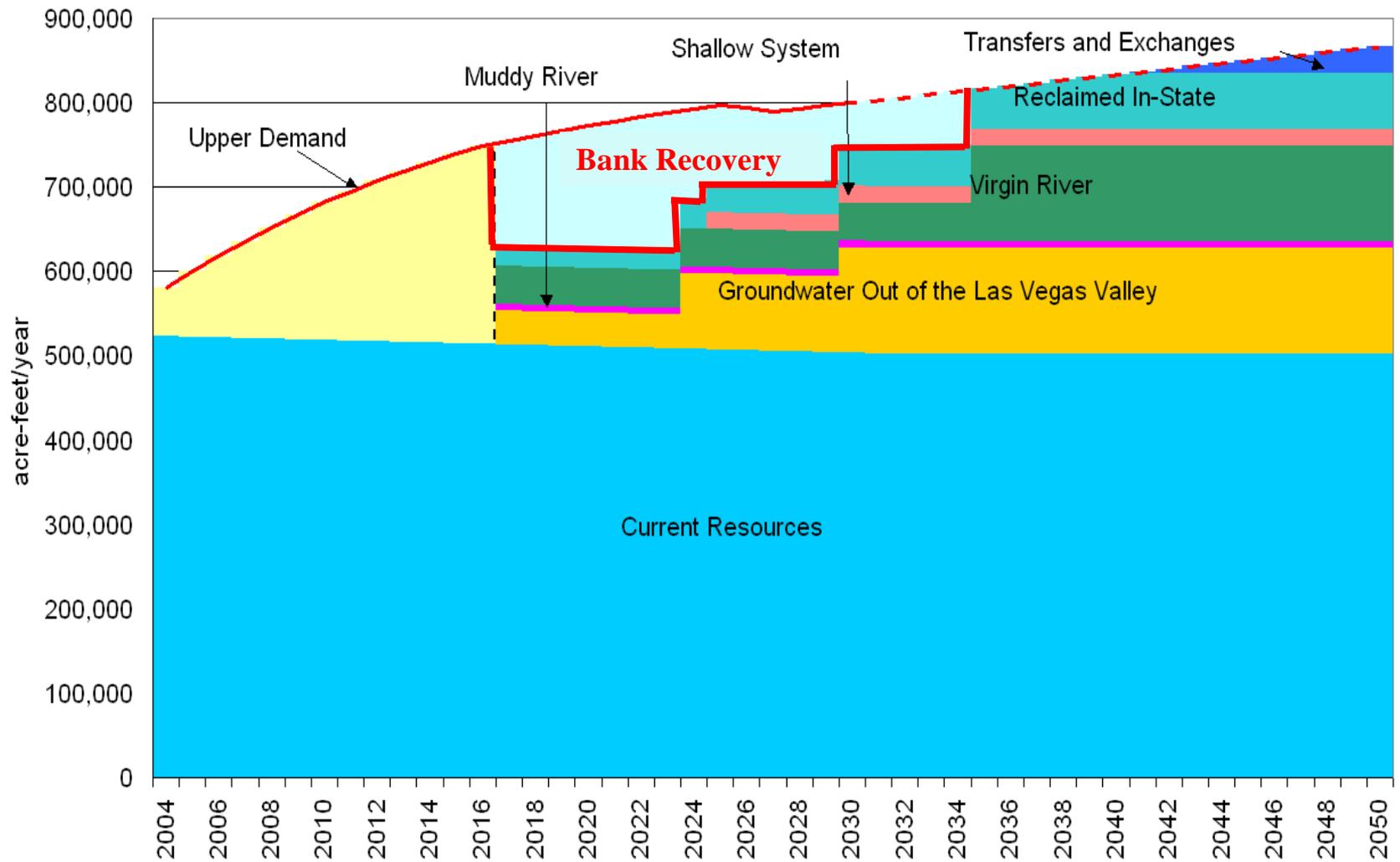
Show projected water demands and how the Authority intends to meet those demands

- **Demand projections**
- **Current water resources**
- **Future resources**

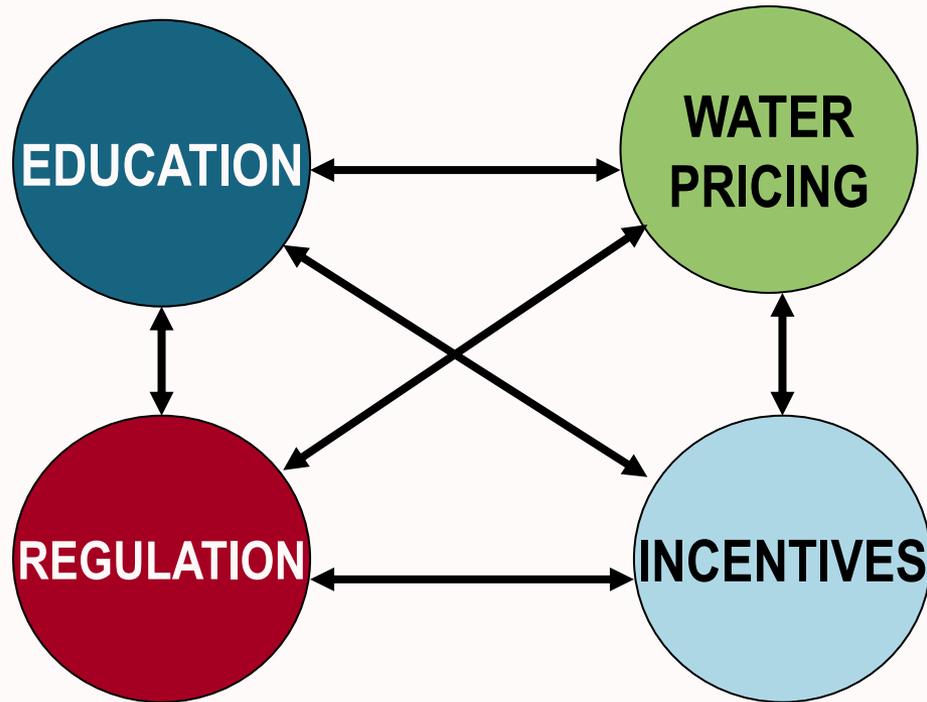
Review annually, revise as needed

2004 Water Resource Plan

(Virgin River to 113,000 AF – Late)



Water Conservation

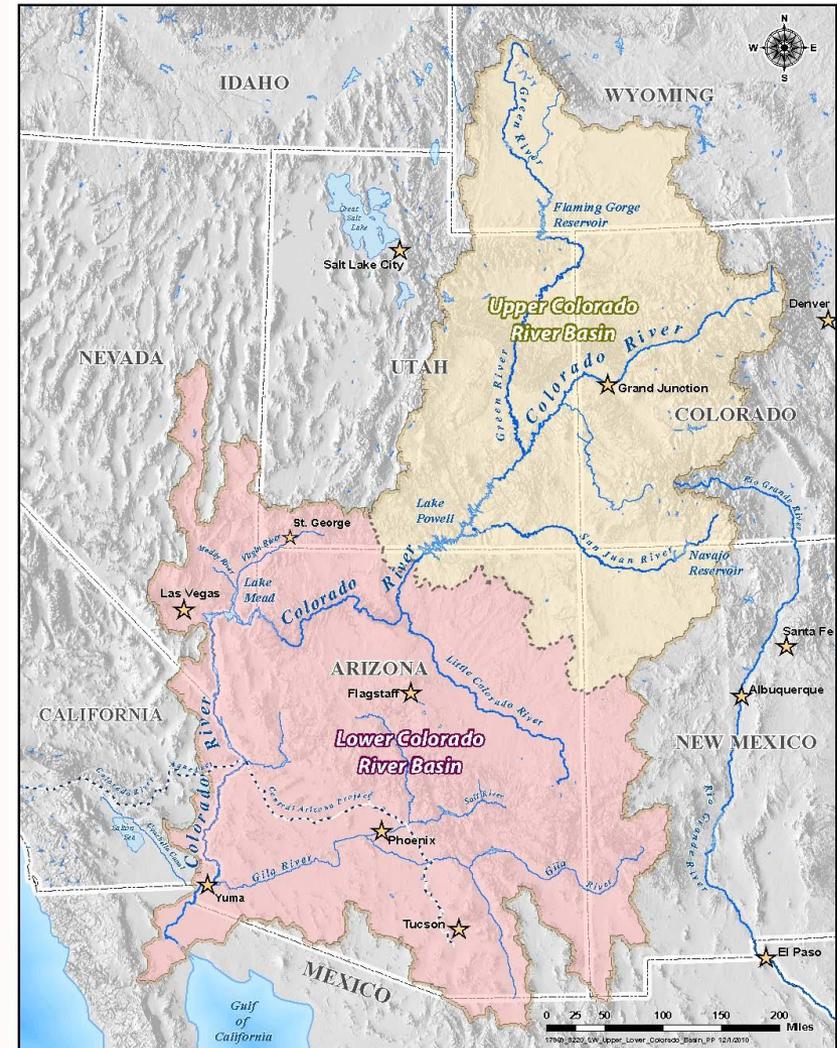


SNWA and its member agencies utilize a variety of tools to promote conservation and reduce overall water use

Colorado River Interim Guidelines

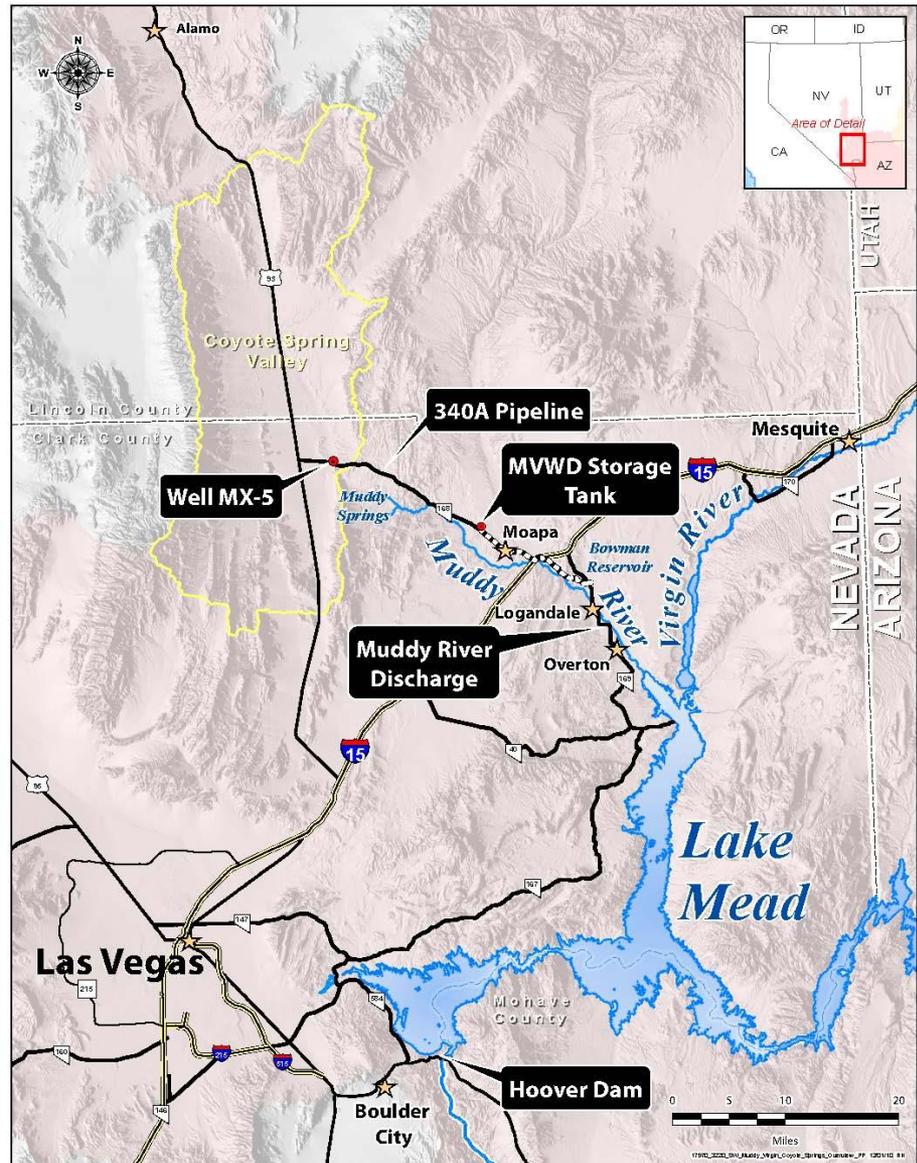
Adopted in 2007, water management provisions include:

- **Amendment of the Interim Surplus Guidelines**
- **Coordinated operation of Lakes Powell and Mead**
- **Establishment of shortage criteria**
- **Creation and release of Intentionally Created Surplus**



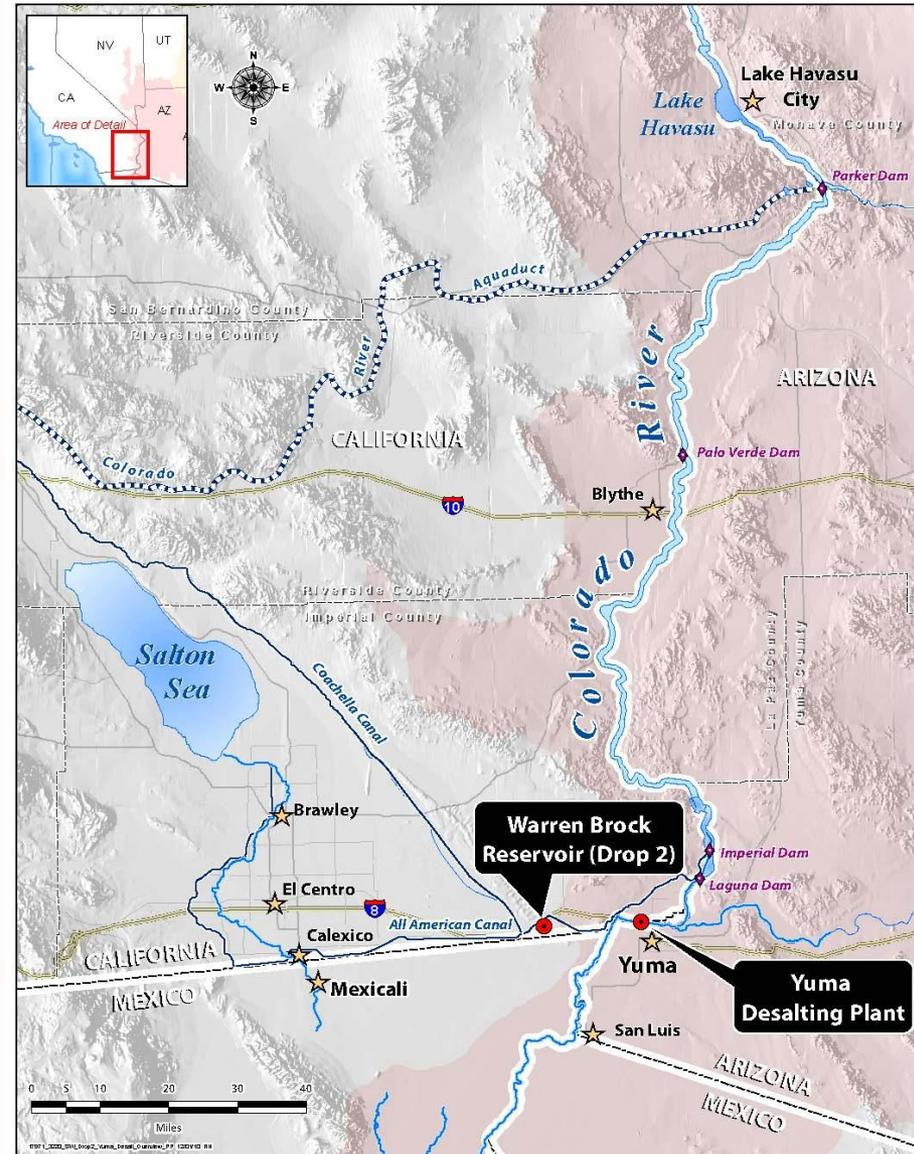
Intentionally Created Surplus

- **Tributary Conservation**
 - Muddy and Virgin Rivers pre-1929 agricultural rights
- **Imported Groundwater**
 - Coyote Spring Valley



Intentionally Created Surplus

- **System Efficiency projects in partnership with MWD and CAP**
 - **Warren H. Brock Reservoir (Drop 2)**
 - **Yuma Desalting Plant**



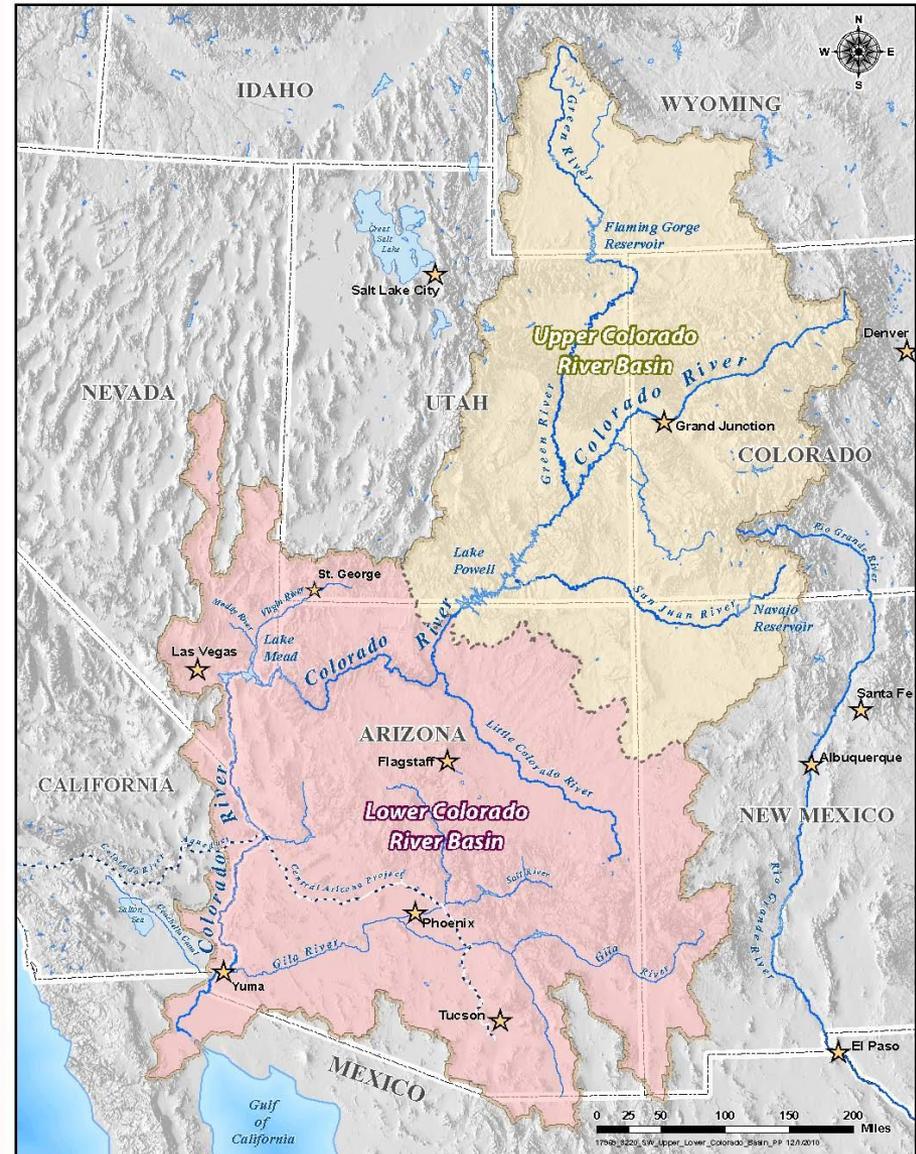
Banked Resources

Southern Nevada Bank

- Began in 1987
- Storage exceeds 300,000 acre-feet

California

- Initial agreement 2004, recent amendment 2009
- Storage of unused Colorado River water
- Storage 70,000 acre-feet



Banked Resources

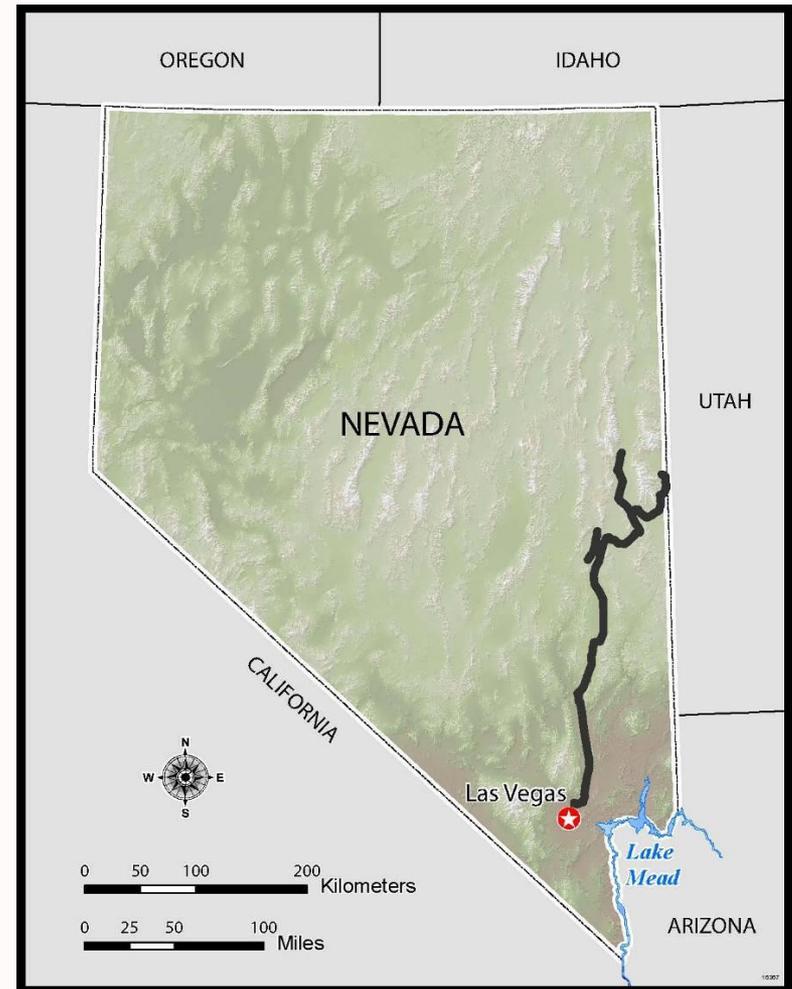
Interstate Banking in Arizona

- **2001 Agreement for Interstate Water Banking**
 - AWBA agreed to use best efforts to bank for SNWA
- **2005 Amended Agreement**
 - Defined SNWA payment schedule
 - AWBA guaranteed a storage volume for SNWA
- **2009 Second Amended Agreement**
 - Provides more flexibility given changing conditions

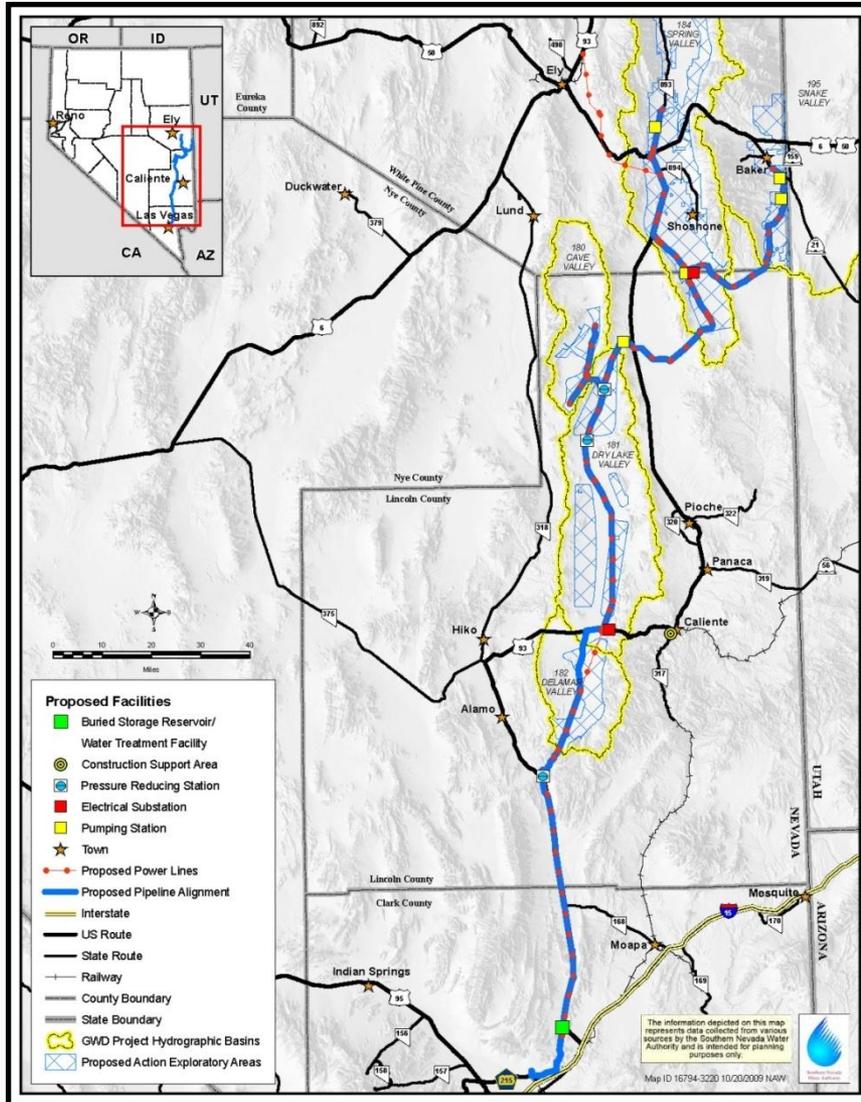
SNWA does not anticipate recovery prior to 2018

Clark, Lincoln, and White Pine Counties Groundwater Development Project

- Nevada water rights are a public resource permitted by the Nevada State Engineer
- Permitted rights are obtained by application
- Permitted amounts may not exceed the perennial yield or safe yield of the basin



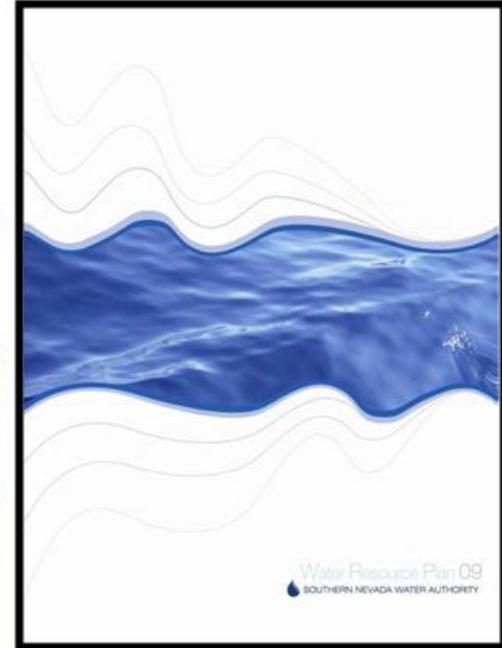
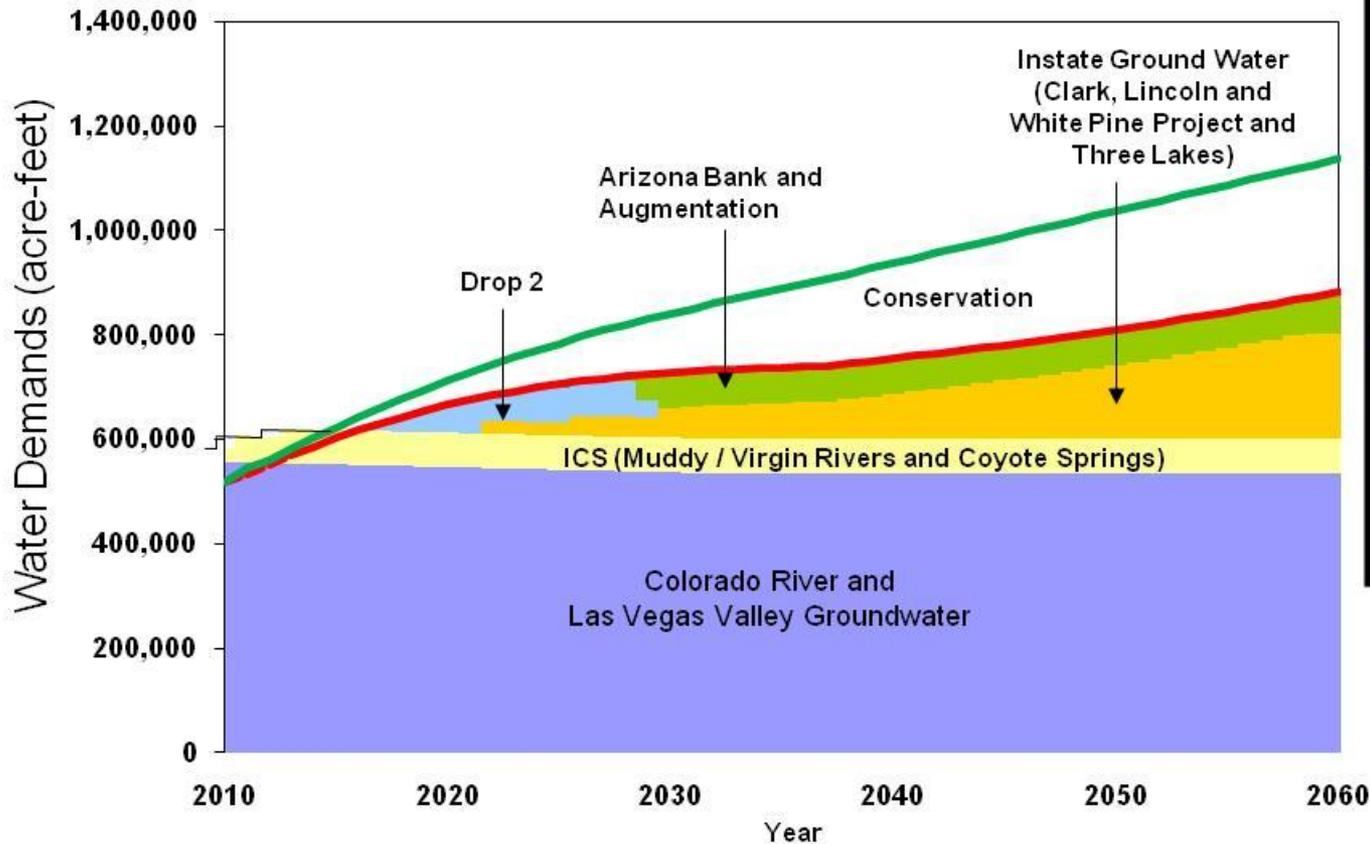
Clark, Lincoln, and White Pine Counties Groundwater Development Project



- Water rights hearing scheduled for fall of 2011 with a ruling expected in spring 2012
- Environmental Impact Statement draft spring 2011 and record of decision anticipated in early 2012

Current Water Resource Plan

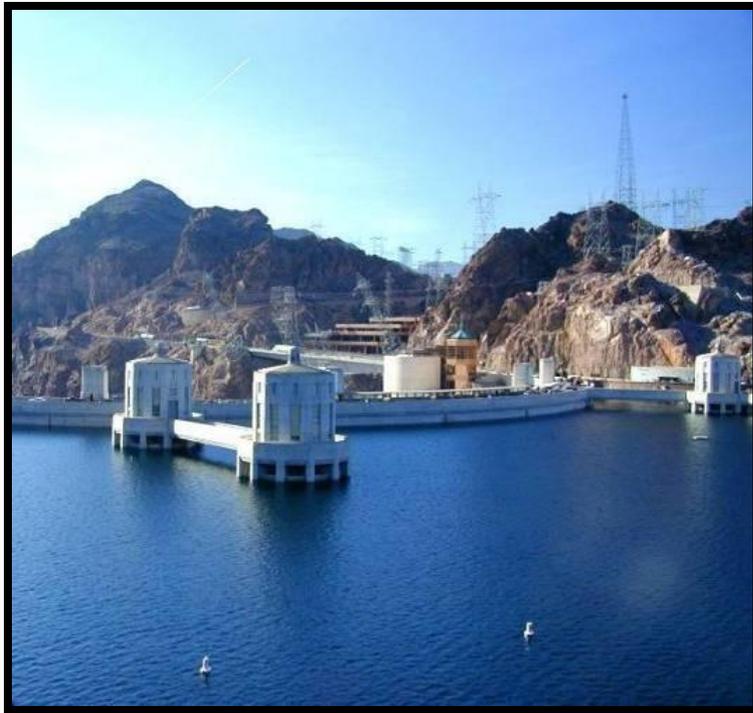
(Under Normal Colorado River Conditions)



**Small changes in Lake Mead storage may make
a critical difference**

Colorado River Conditions

Severe drought affecting the Colorado River Basin



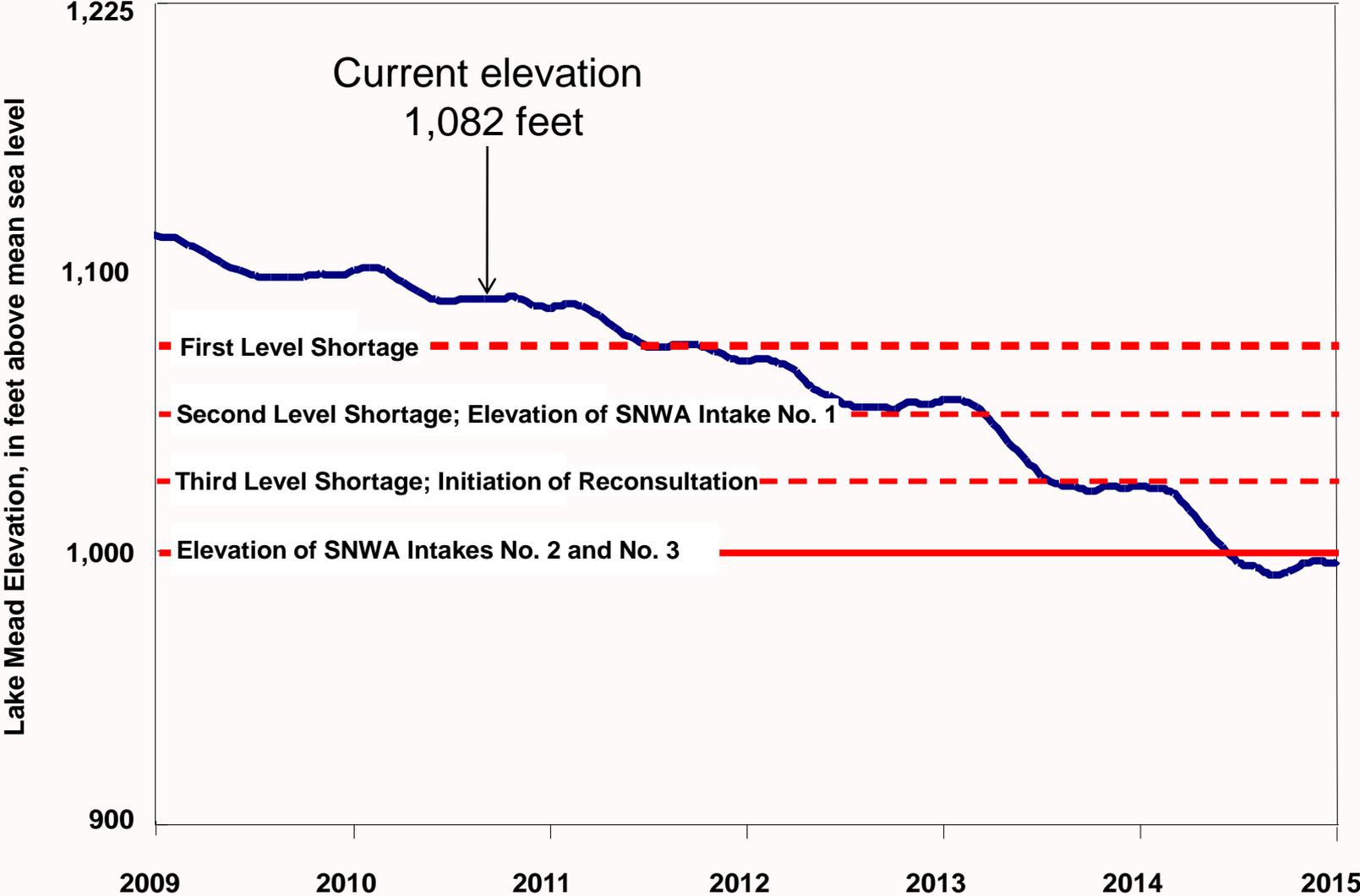
Lake Mead, 2000



Lake Mead, 2009

Colorado River Conditions

Impacts to Lake Mead Intakes with six year period of 65 percent average runoff



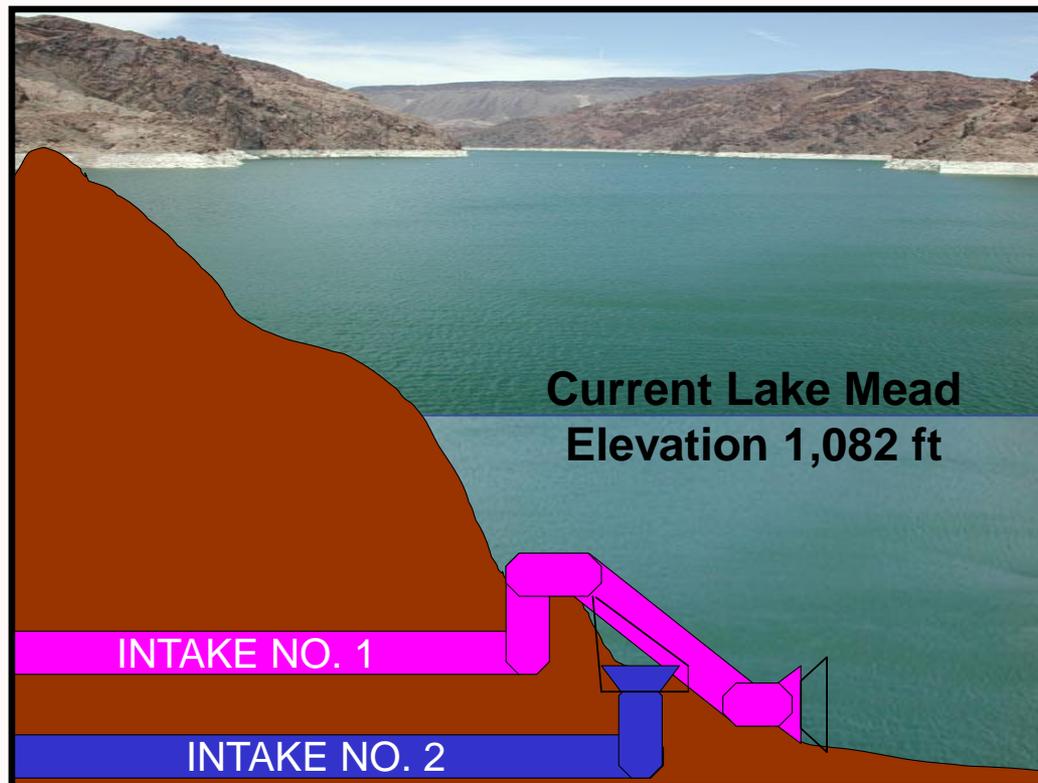
Current Water Resource Plan

Severe Shortage Plan

Lake Mead Elevation	Goal	Action
1,075 to 1,025 ft.	Preserve lead time for new facility development.	<p>Construct Clark, Lincoln and White Pine Counties Groundwater Development Project.</p> <p>Examine demand-management needs over and above existing conservation goals/annual targets.</p>
1,025 to 1,000 ft.	Preserve Lake Mead elevation of 1,000 ft.	<p>Reconsult with the Secretary of the Interior and Basin States on additional Colorado River shortage management strategies.</p> <p>Implement additional demand-management measures through mandatory policies to offset further Colorado River Basin supply shortages.</p> <p>Examine potential for temporary infrastructure to extend the operational capabilities of SNWA's intakes in Lake Mead.</p>
Below 1,000 ft.	Preserve water supply for health and safety uses.	<p>Maximize use of available groundwater supplies (Southern Nevada Groundwater Bank and in-state resources).</p> <p>Significantly limit non-essential uses.</p>

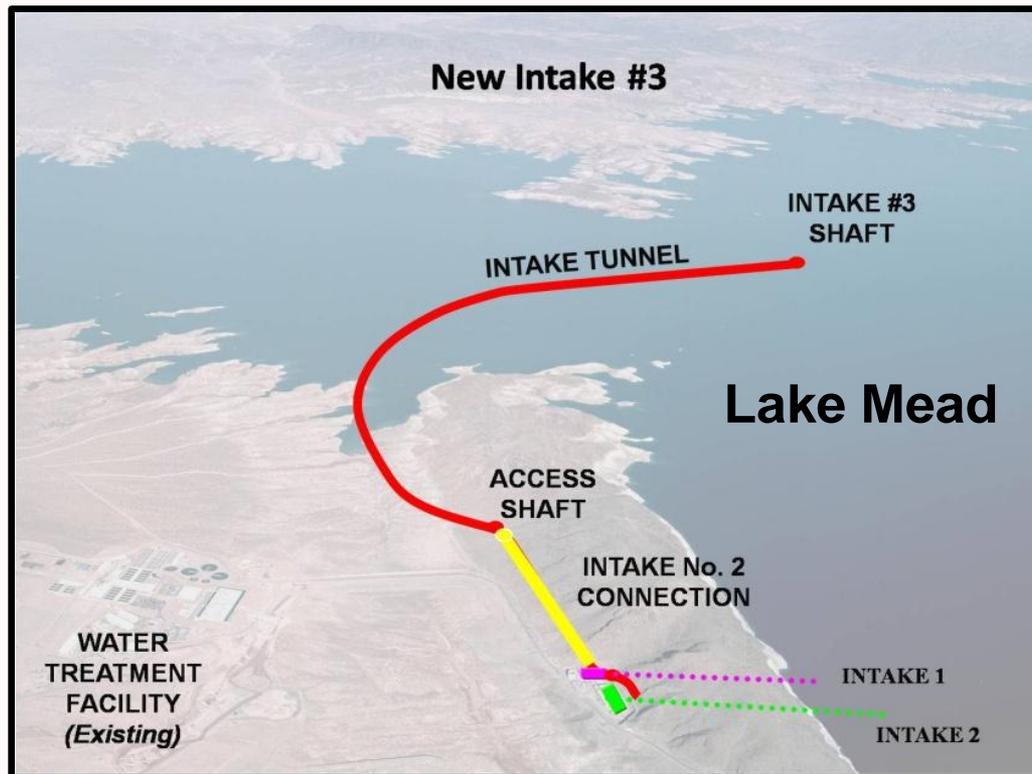
SNWA Intakes

- Lake Mead drinking water intakes at fixed elevations
- Loss of Intake #1 at Lake Mead below elevation 1,050 feet



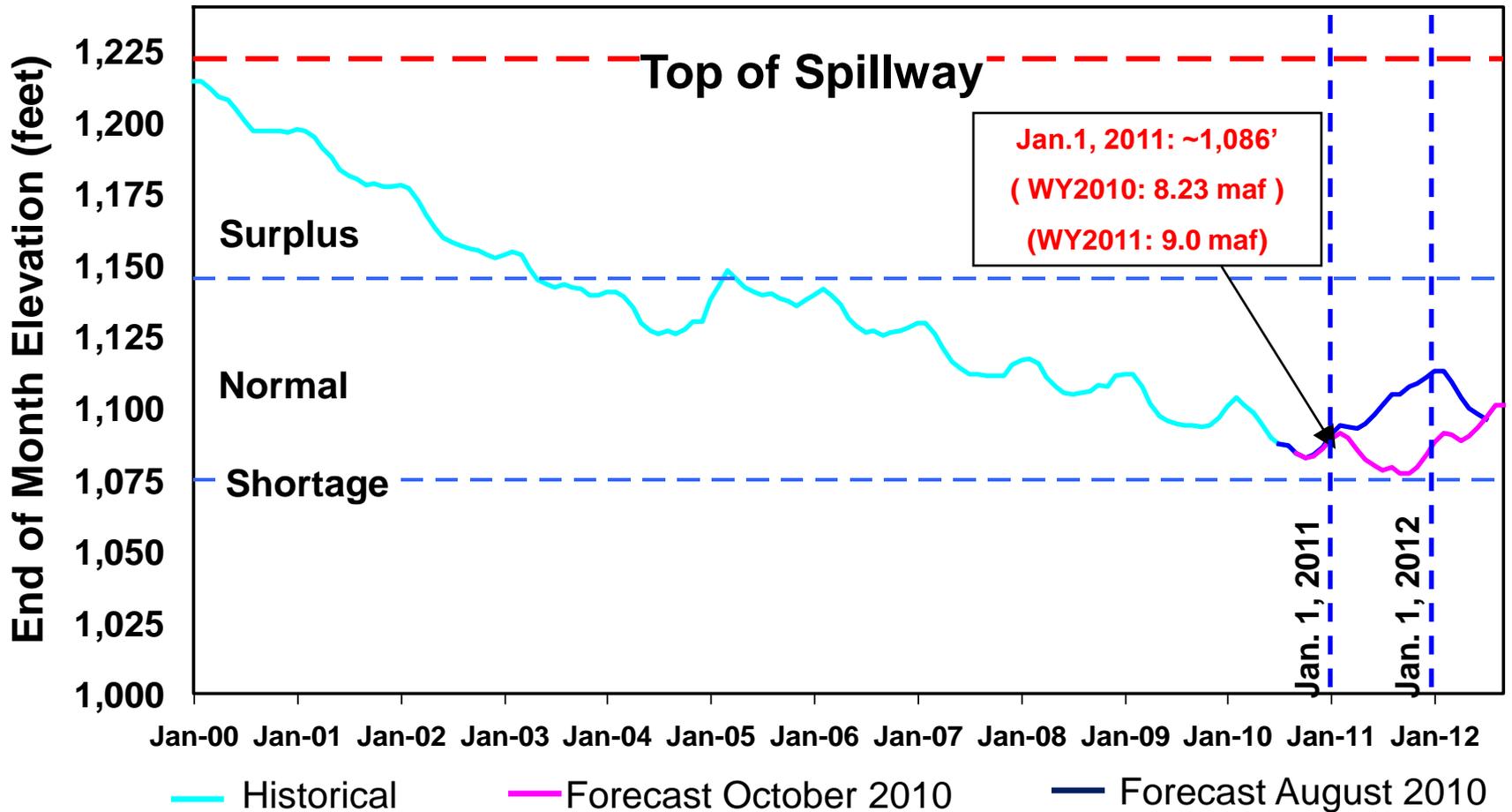
SNWA Third Intake

- New intake to preserve capacity at 1,000 feet and to help maintain water quality
- Estimated completion in 2014



Lake Mead Elevations

(Historical and Forecasted)



Cooperative Water Management

SNWA and MWD Letter to Bureau of Reclamation November 2010

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
and SOUTHERN NEVADA WATER AUTHORITY

November 8, 2010

Ms. Lorri Lee
Regional Director
Bureau of Reclamation
Lower Colorado Region
PO Box 1000
Boulder, Colorado

Dear Ms. Lee:

On behalf of the Metropolitan Water District of Southern California and Southern Nevada, we are pleased to inform you that the water available for use within the Colorado River Basin is in the greater than average range and the water to be allocated to this area is expected to be in short supply.

Over the past several years, the entitlement to water in the Colorado River Basin has included Desalination and other efforts to provide water to the 100,000 people living in the Lake Mead Basin.

While these efforts have preserved and enhanced water supplies within the Lower Basin, we believe that additional measures to conserve water supplies and protect against shortages are necessary and available. At this time it appears that not all the water apportioned for use within Nevada will be consumed this year. If that is the case, Nevada's water would be available for release to another state pursuant to Article II(B)(6) of the Consolidated Decree. The availability of any unused water is still dependent upon a number of factors, including decisions by our agencies regarding interstate water banking programs and mutual Intentionally Created Unused Apportionment (ICUA) arrangements.

Ms. Lorri Lee
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November 8, 2010

If, in fact, any unused water becomes available this year, MWD and SNWA urge you not to reallocate the water to another entitlement holder but rather to leave the water in Lake Mead for the overall benefit of the Colorado River system and the millions of people who are reliant upon the system.

As you are aware, the *Lower Colorado Region Policy for Apportioned but Unused Water* provides that during an operating year:

In making the determination that unused water is available and will be

“We believe that the clear balance of these factors, particularly the storage conditions in Lakes Mead and Powell and the likelihood of future determinations of a Shortage Condition, weighs heavily in favor of retaining any unused water in Lake Mead this year for the overall benefit of the river system.”

of Southern California

cc: George Caan, Director – Colorado River Commission of Nevada
Larry Dozier, Deputy General Manager – Central Arizona Project
John Entsminger, Assistant General Manager – Strategic Initiatives, Southern Nevada Water Authority
Herb Guenther, Director – Arizona Department of Water Resources
William Hasencamp, Resource Manager – Metropolitan Water District of Southern California
William Rinne – Director – Surface Water Resources Department, Southern Nevada Water Authority
Gerald R. Zimmerman, Executive Director – Colorado River Board of California

Cooperative Water Management

CAP Letter to Bureau of Reclamation November 2010



P.O. Box 43020 • Phoenix, AZ 85080-3020
23836 N. 7th Street • Phoenix, AZ 85024
623-869-2333 • www.cap-az.com

November 17, 2010

Ms. Lorri Lee, Regional Director
Bureau of Reclamation
Lower Colorado Region
PO Box 61470
Boulder City, Nevada 89006

Dear Ms. Lee:

The low level of Lake Mead is much discussed. As the lower Colorado River Basin contractor whose water supply is most significantly reduced by a Shortage declaration, the CAP encourages you to take any reasonable action you can to help keep the level of Lake Mead from falling even lower. It is the responsibility of each of us water users to use our Colorado River allocation wisely as we prepare for the possibility of shortage. It is possible that, as a result of good water management, changed economic conditions, and localized good hydrologic conditions, some unused Colorado River water might be available this year or next year. Should this condition arise, we urge you to hold that water in Lake Mead and not distribute it to others pursuant to Article II(B)(6) of the Consolidated Decree.

You recently received a joint letter from the Metropolitan Water District of Southern California and the Southern Nevada Water Authority expressing a similar request. As noted in that letter, the recently adopted Lower Colorado Region Policy for Apportioned but Unused Water provides that the Secretary consider storage conditions, projected inflows, and the likelihood of a future Shortage Condition in determining the disposition of any unused water. Clearly, current conditions would heavily favor retaining unused water in Lake Mead.

We add our voice to that of the other two major water user entities who manage the lower priority use in California and Nevada to urge you to retain any unused Colorado River water in Lake Mead in 2011 and 2012.

Thank you for your consideration of this matter.

Sincerely,

David V. Modeer
General Manager

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Ms. Lorri Lee
November 17, 2010
Page 2

cc: George Caan, Director, Colorado River Commission of Nevada
John Entsminger, Assistant General Manager – Strategic Initiatives, Southern Nevada Water Authority
Herb Guenther, Director, Arizona Department of Water Resources
William Hasencamp, Resource Manager, Metropolitan Water District of Southern California
Jeffrey Kightlinger, General Manager, Metropolitan Water District of Southern California
Patricia Mulroy, General Manager, Southern Nevada Water Authority
William Rinne, Director, Surface Water Resources Department, Southern Nevada Water Authority
Gerald R. Zimmerman, Executive Director, Colorado River Board of California

Actions Benefiting Lake Mead Storage and Water Supply Conditions

- **Nevada storing Intentionally Created Surplus in Lake Mead**
- **System efficiency projects**
 - **Warren H. Brock Reservoir (Drop 2) constructed with long-term operation beginning in 2011**
 - **Yuma Desalting Plant pilot project in 2010 and 2011**
- **Potential for retaining unused Colorado River water in Lake Mead**

Summary

- **In light of Colorado River hydrologic conditions and the risk of shortage to Arizona and Nevada, we recommend deferring additional interstate water banking in Arizona through the end of 2014.**



SOUTHERN NEVADA WATER AUTHORITY

