

# Update for the Green River Basin Advisory Group

March 23, 2004

Pinedale, Wyoming

*by*

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Wyoming State Engineer's Office



**Fireworks exploding over Hoover Dam on June 17, 2002 during the Bureau of Reclamation's Centennial Celebration.**



# An Update on Colorado River Programs and Issues

- March 5, 2004 Seven-Basin State Meeting
  - Update on Nevada Water Resources Development Program and Water Conservation Activities
- Colorado River Basin Salinity Control Program
- Upper Colorado River Endangered Fish Recovery Program
- Upcoming Events And Miscellaneous - FYI

# Nevada In-State Resources

## Groundwater and Surface Water

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- Program management, \$8 million for services of Parsons Infrastructure and Technology Group
- Summer 2004
  - Timeline for environmental and facility planning
  - Initial cost estimates

# A Plan for Action



SOUTHERN NEVADA  
WATER AUTHORITY

## **Concepts for Development of Additional In-State Water Resources**

February 2004

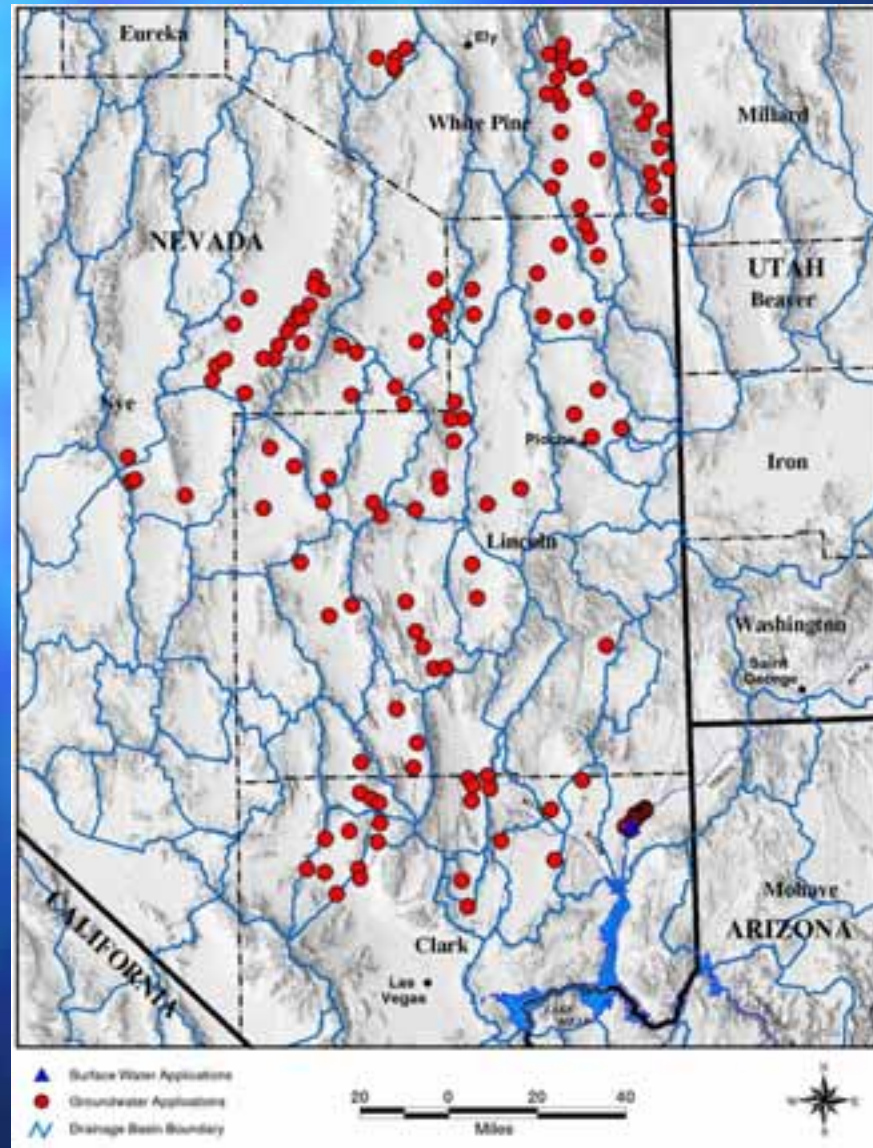
Document Approved  
by SNWA Board  
2/26/2004



# Concepts Document

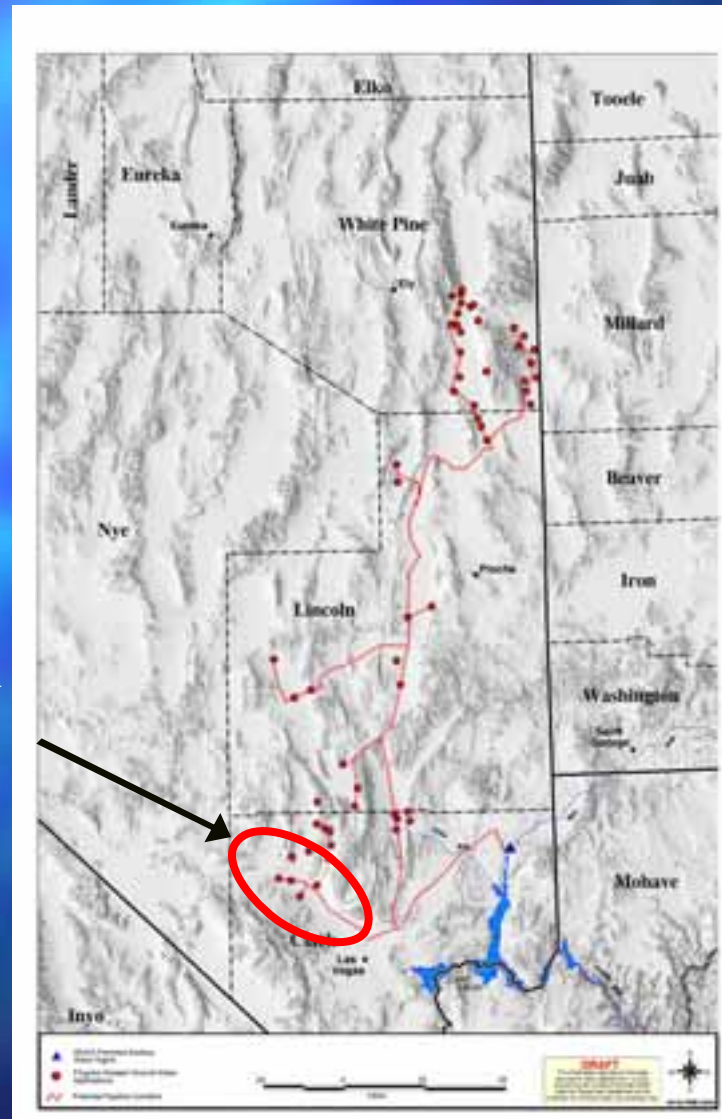
- Identifies three distinct projects
  - Three Lakes Valley Groundwater
  - Virgin and Muddy Rivers Surface Water
  - Clark, Lincoln and White Pine Counties Groundwater
- Key project development activities include:
  - Securing environmental approvals/acceptance
  - Hydrologic analyses and securing water rights
  - Defining the facilities
  - Developing cost estimates and financial plan(s)
  - Completing rights of way and property acquisitions
  - Designing the facilities
  - Construction

# Groundwater Applications



# Three Lakes Valley Groundwater

Three Lakes Valley  
groundwater  
development





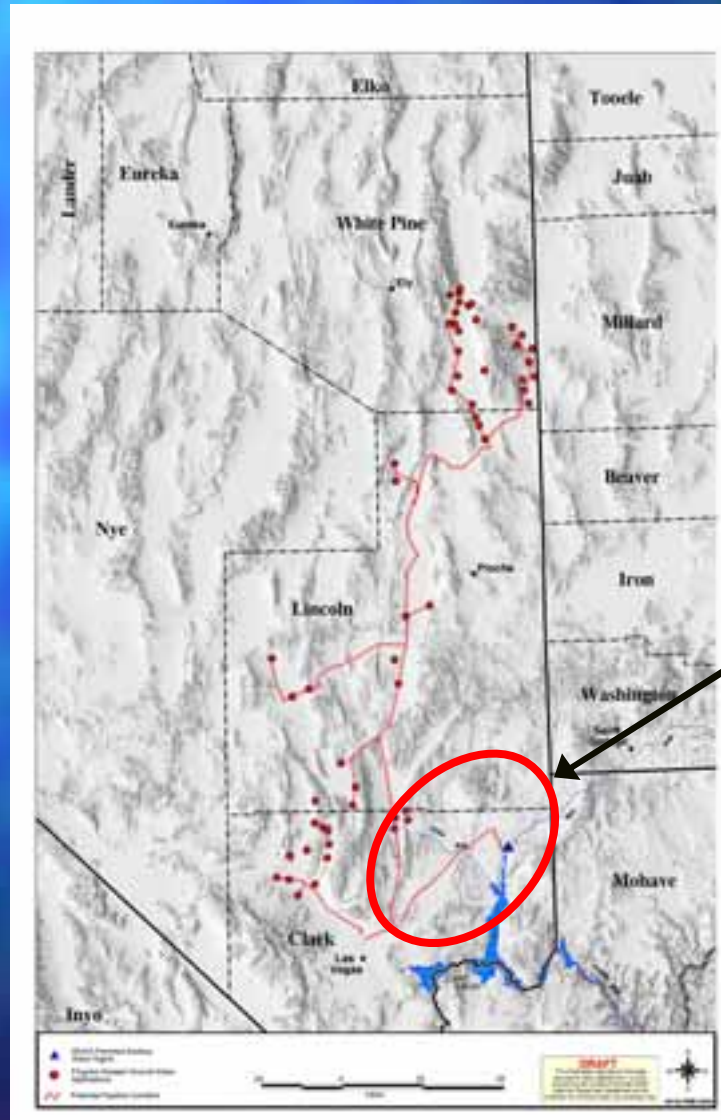
# Three Lakes Valley Groundwater

- Request for State Engineer Action May 2003
- Hearing scheduled for March 2004
- Negotiating with CH2M Hill for engineering design
- Currently preparing Bureau of Land Management applications for right of way





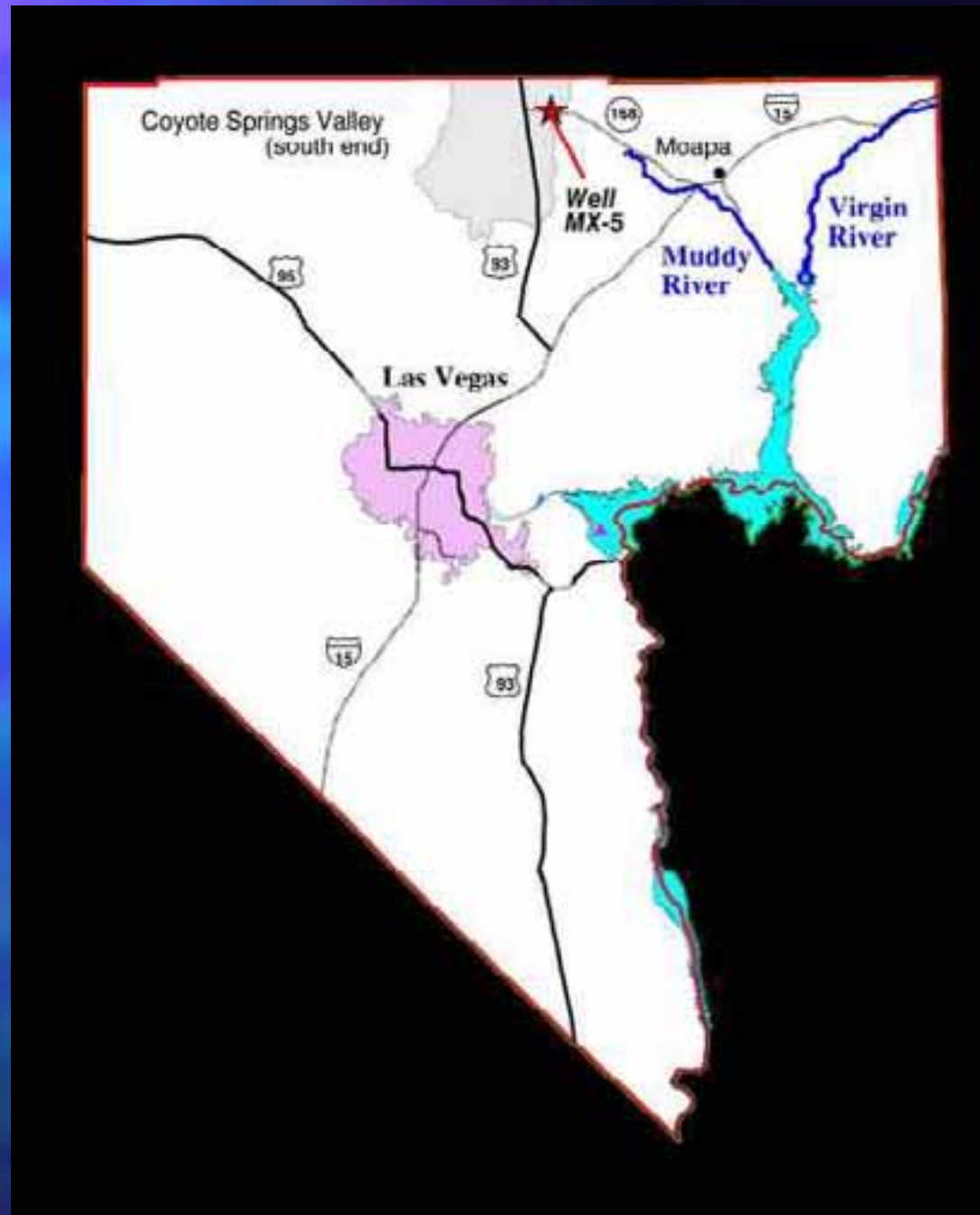
# Virgin and Muddy Rivers Surface Water Development



Virgin/Muddy  
rivers  
surface water  
development

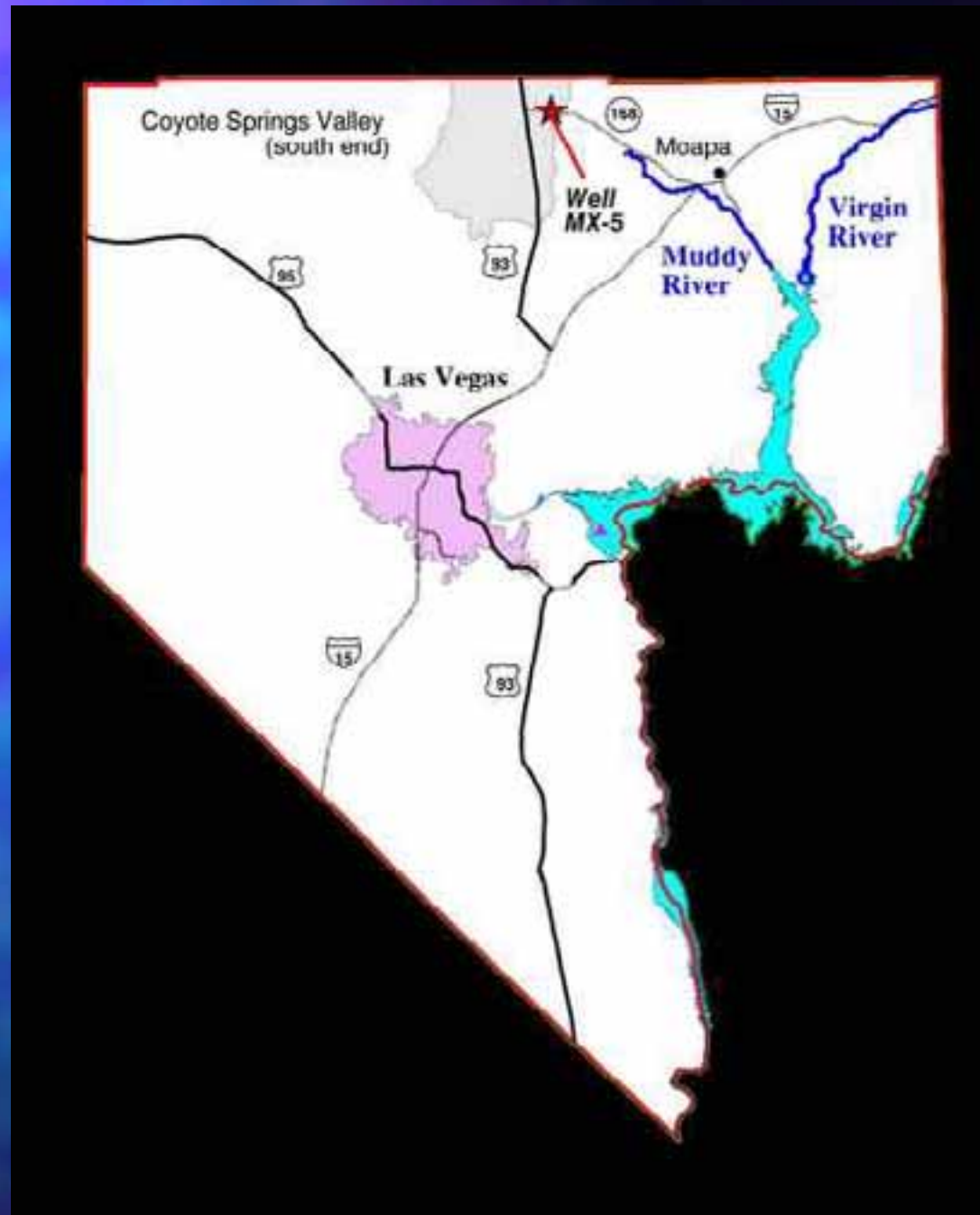
# Muddy River

- Expended \$21 million to acquire water rights
- Acquiring rights to ~8,000 acre-feet/year
- Conducting environmental activities



# Virgin River

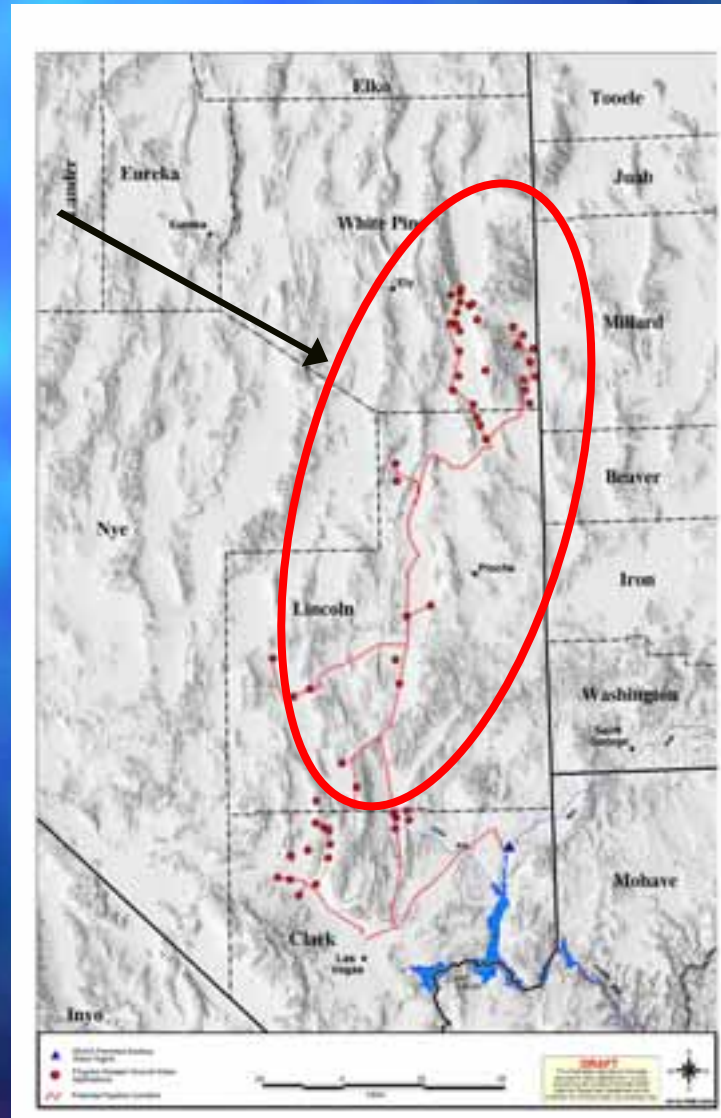
- Permit granted by State Engineer for 113,000 acre-feet/year
- Environmental expenditures of about \$1,500,000 since 1994
- Virgin Valley Water District working with the Bureau of Reclamation to evaluate Ranney Collection Wells for diversion





# Clark, Lincoln and White Pine Counties Groundwater Development

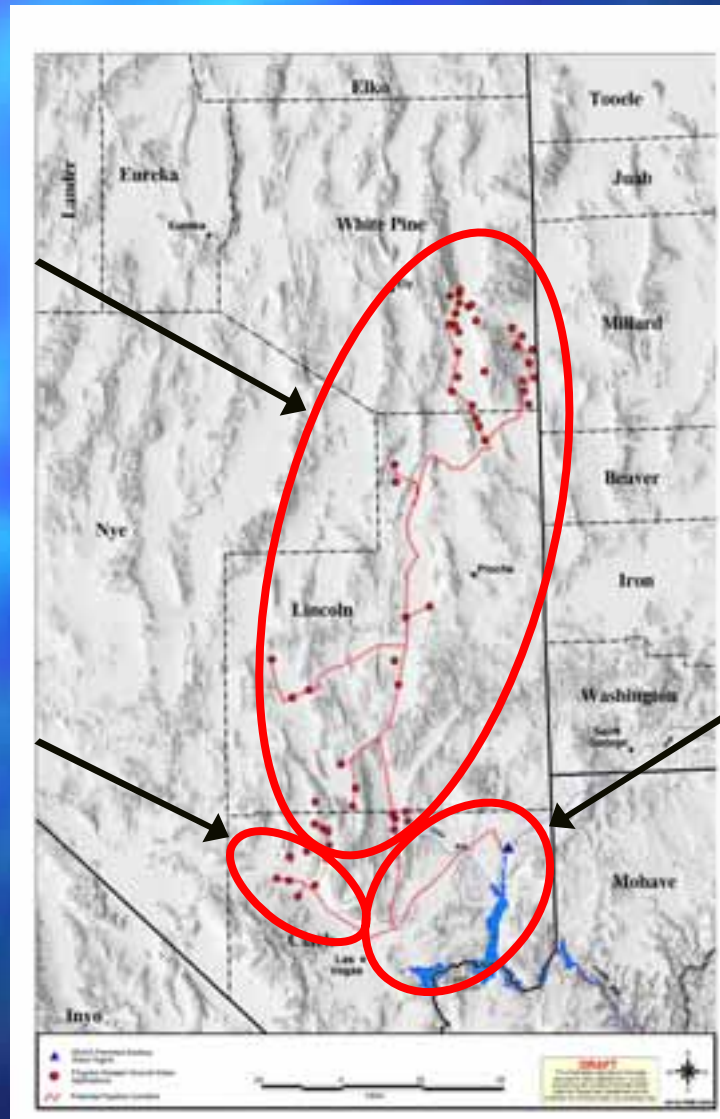
Clark, Lincoln, and  
White Pine  
counties  
groundwater  
development



# Summary of Conceptual Plan

Clark, Lincoln, and  
White Pine counties  
groundwater  
development

Three Lakes Valley  
groundwater  
development

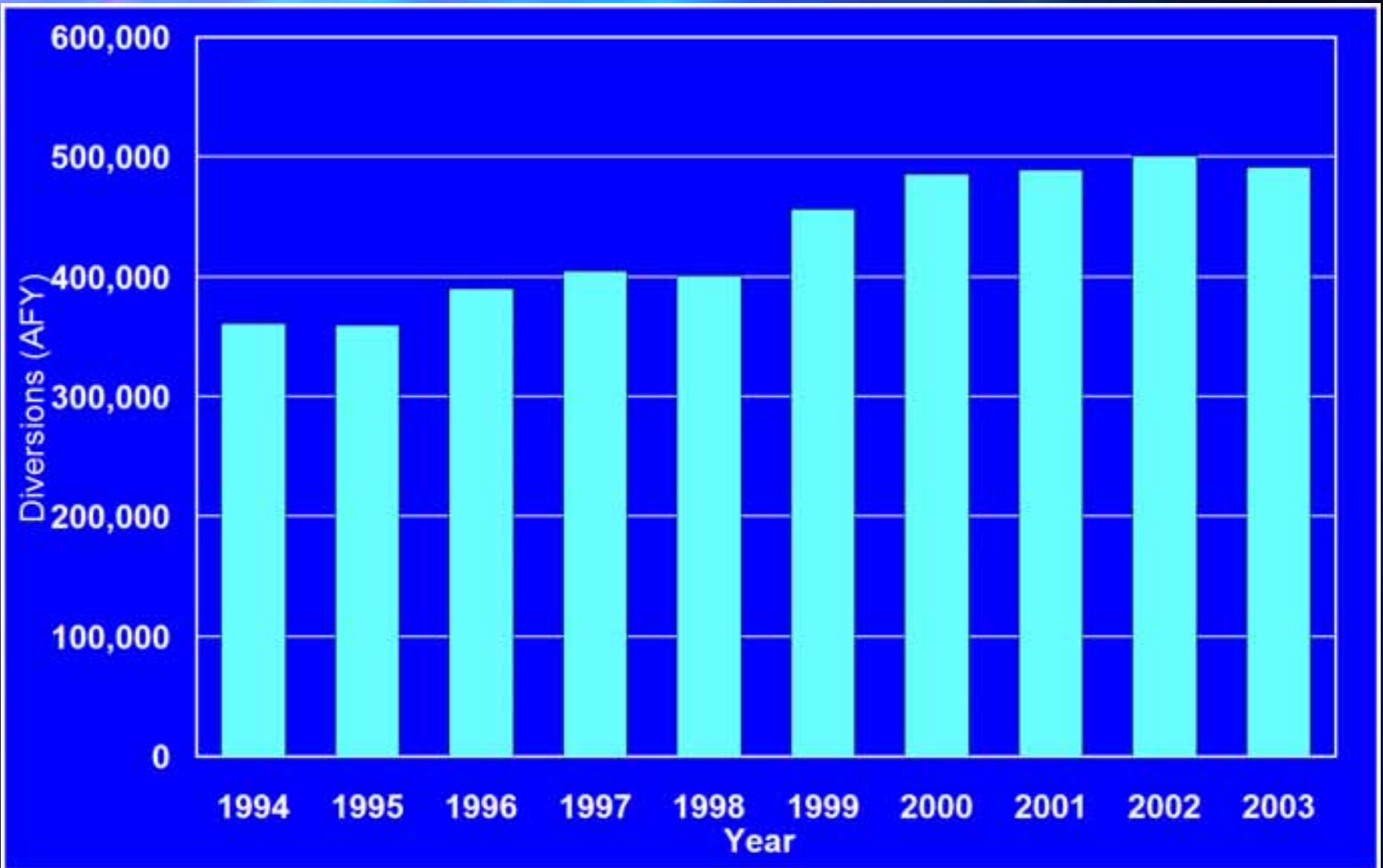


Virgin/Muddy rivers  
surface water  
development

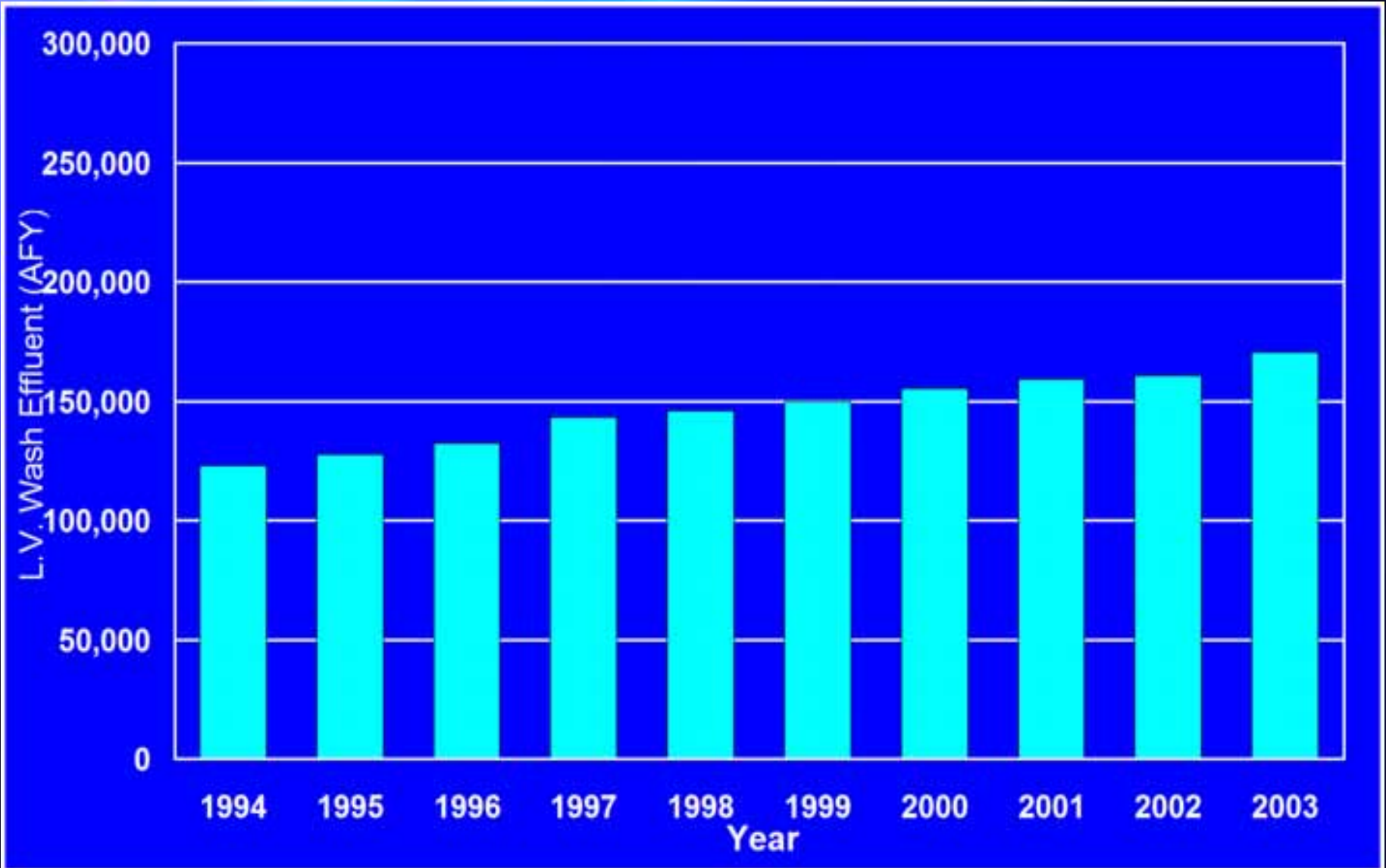




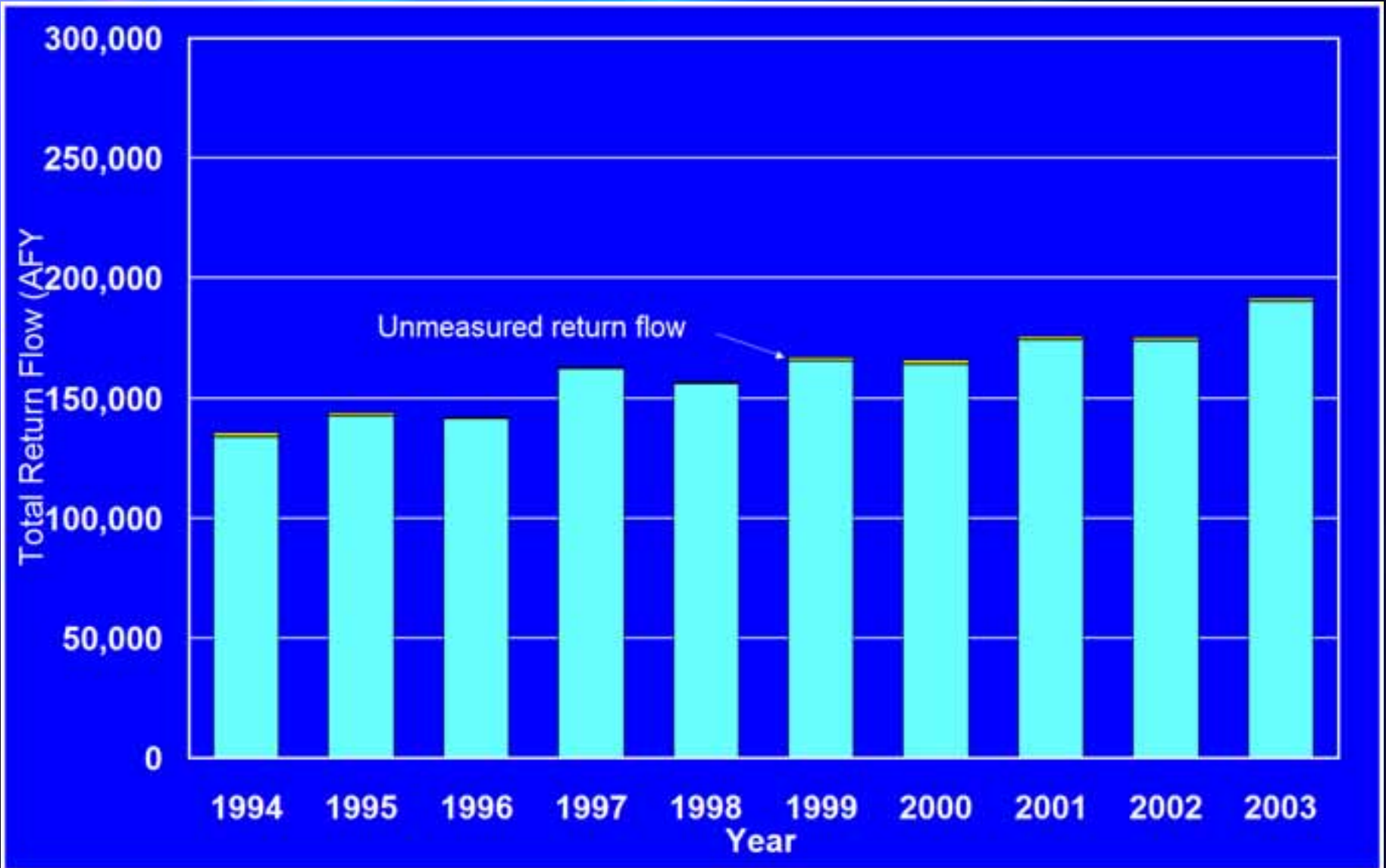
# Nevada Colorado River Diversions



# Las Vegas Wash Effluent Discharges

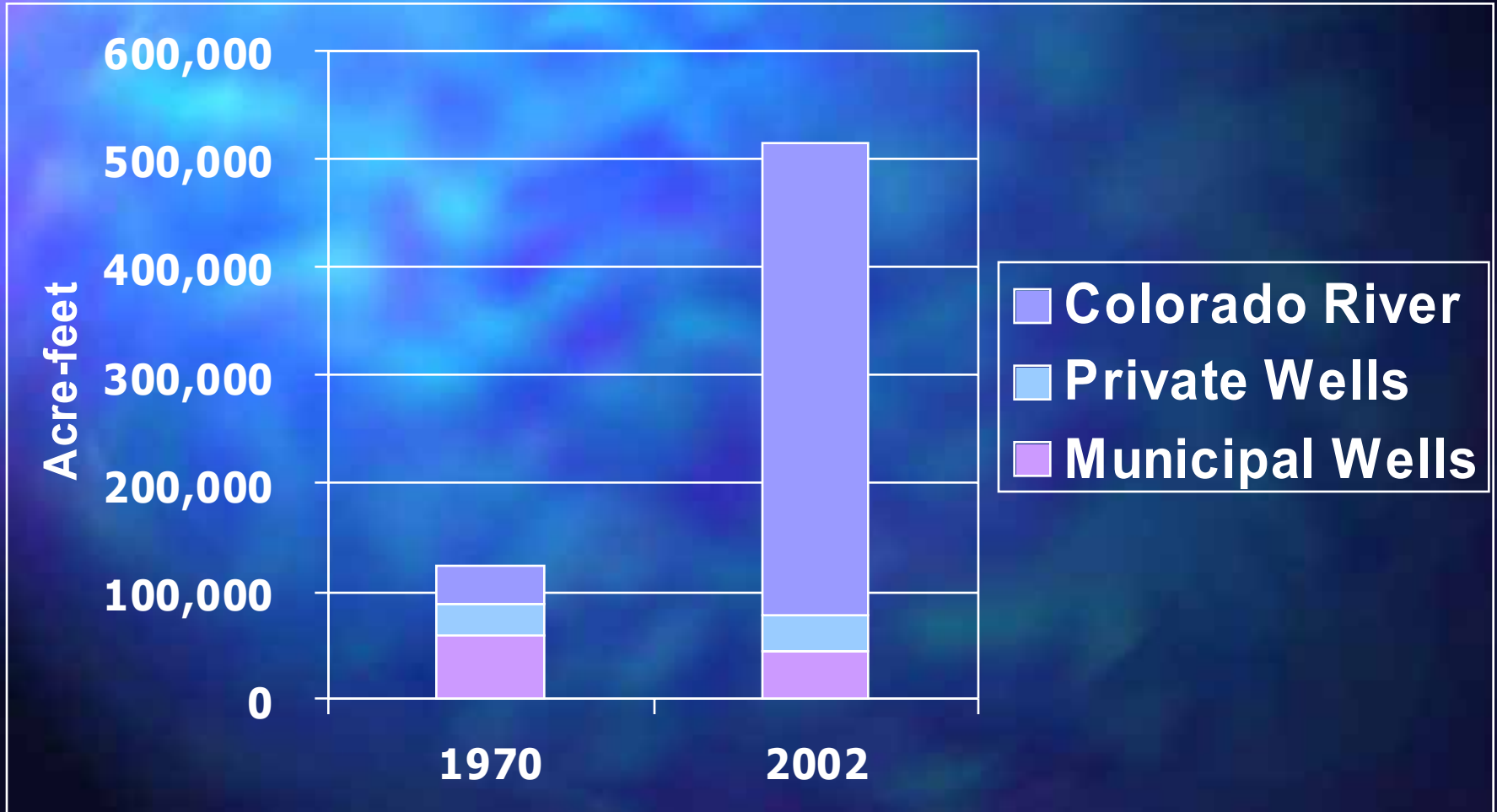


# Nevada Return Flow Credits





# Las Vegas Valley Water Use by Source 1970 and 2002



# Las Vegas Valley Groundwater

- Large municipal groundwater use has declined from over 60,000 afy to about 45,000 afy since the early 1970's
- Other groundwater use is roughly 30,000 afy, most not connected to a wastewater system
  - Seven of ten small wells are on septic and use 7,000 afy
  - Nearly 14,000 afy of other groundwater is pumped annually for golf course, industrial, and similar uses
  - Many municipal customers are on septic

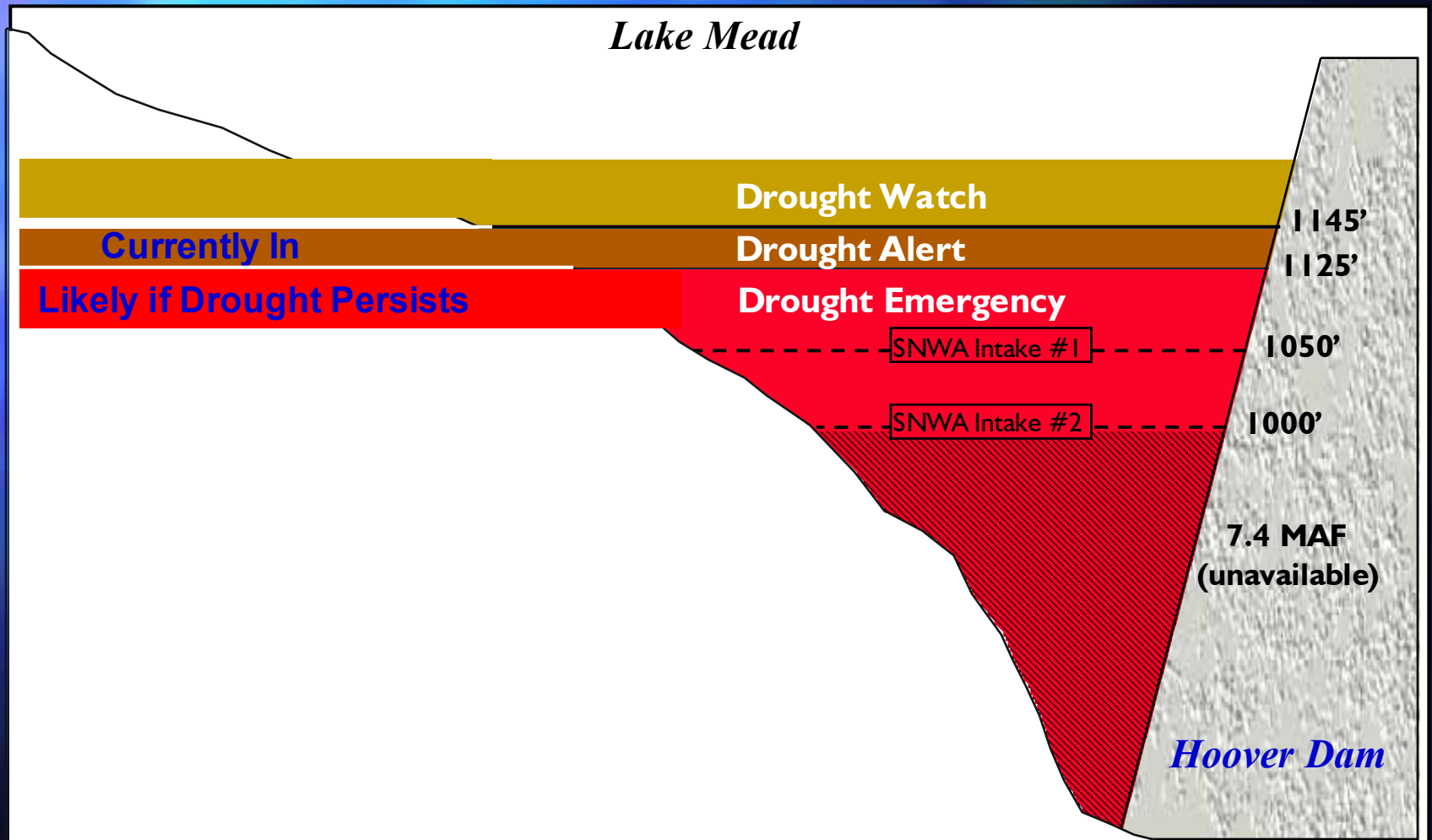
# Southern Nevada Water Authority Drought Plan

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- Drought Plan purpose
  - Response to reduction in interim surplus
  - Preserve banked water



# Drought Plan Stages



# Drought Plan Key Elements

## Major Demand Reduction Tools

- Restricted seasonal watering schedules
- Temporary landscape development restrictions
- Golf course water budget
- Water Smart landscapes
- Conservation plans/goals for parks, schools, and government facilities
- Increased water rates

# Water Smart Landscapes Rebate



## ■ Funding

- FY 2001-2002 \$1.4 million
- FY 2002-2003 \$2.6 million
- FY 2003-2004 \$22 million
- FY 2004-2005 \$32 million

## ■ Available to Homes and Businesses

- \$1.00 per square foot for first 50,000 square feet.  
\$0.50 per square foot thereafter.

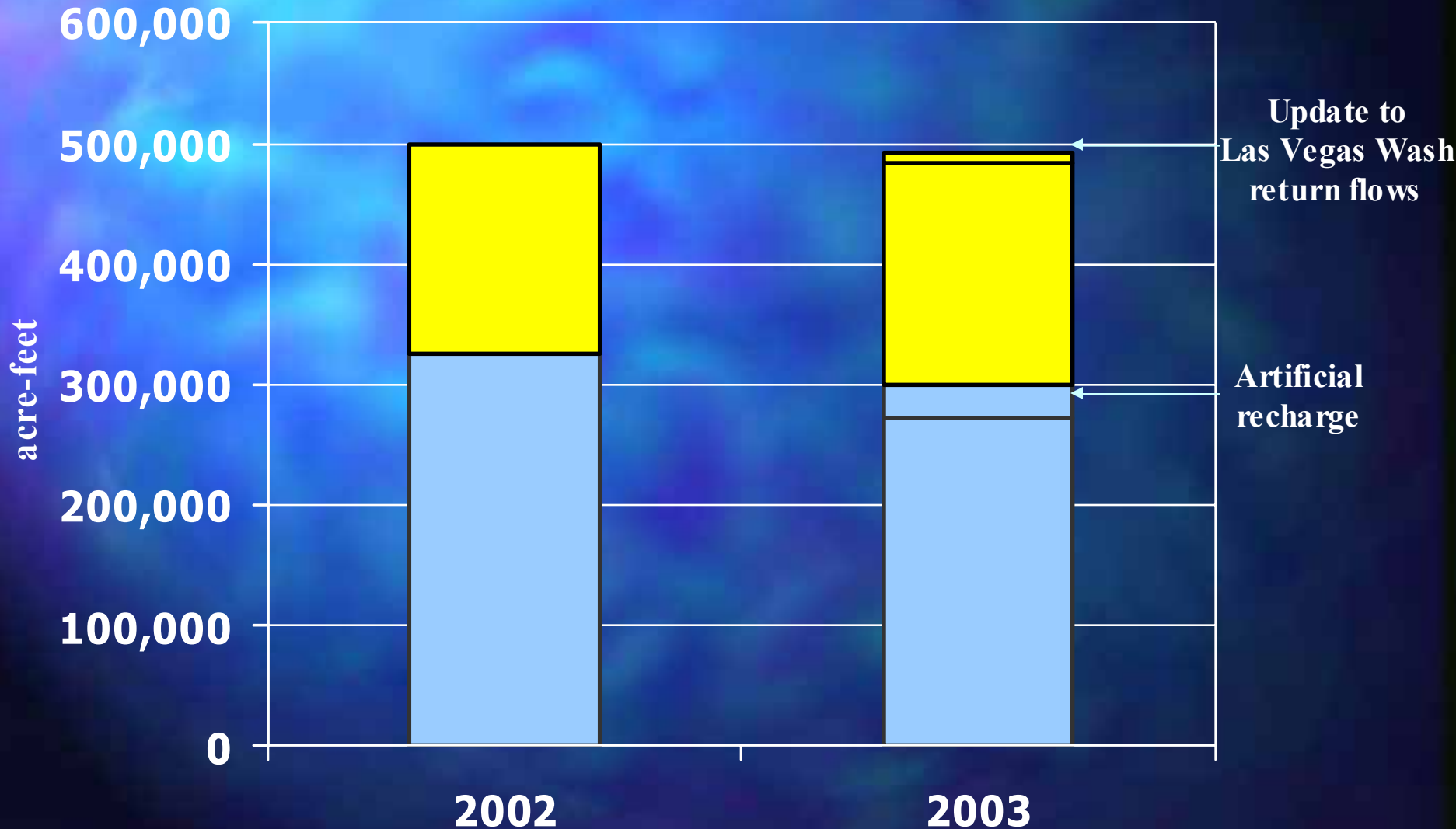


# Landscape Development Restrictions in Drought Alert

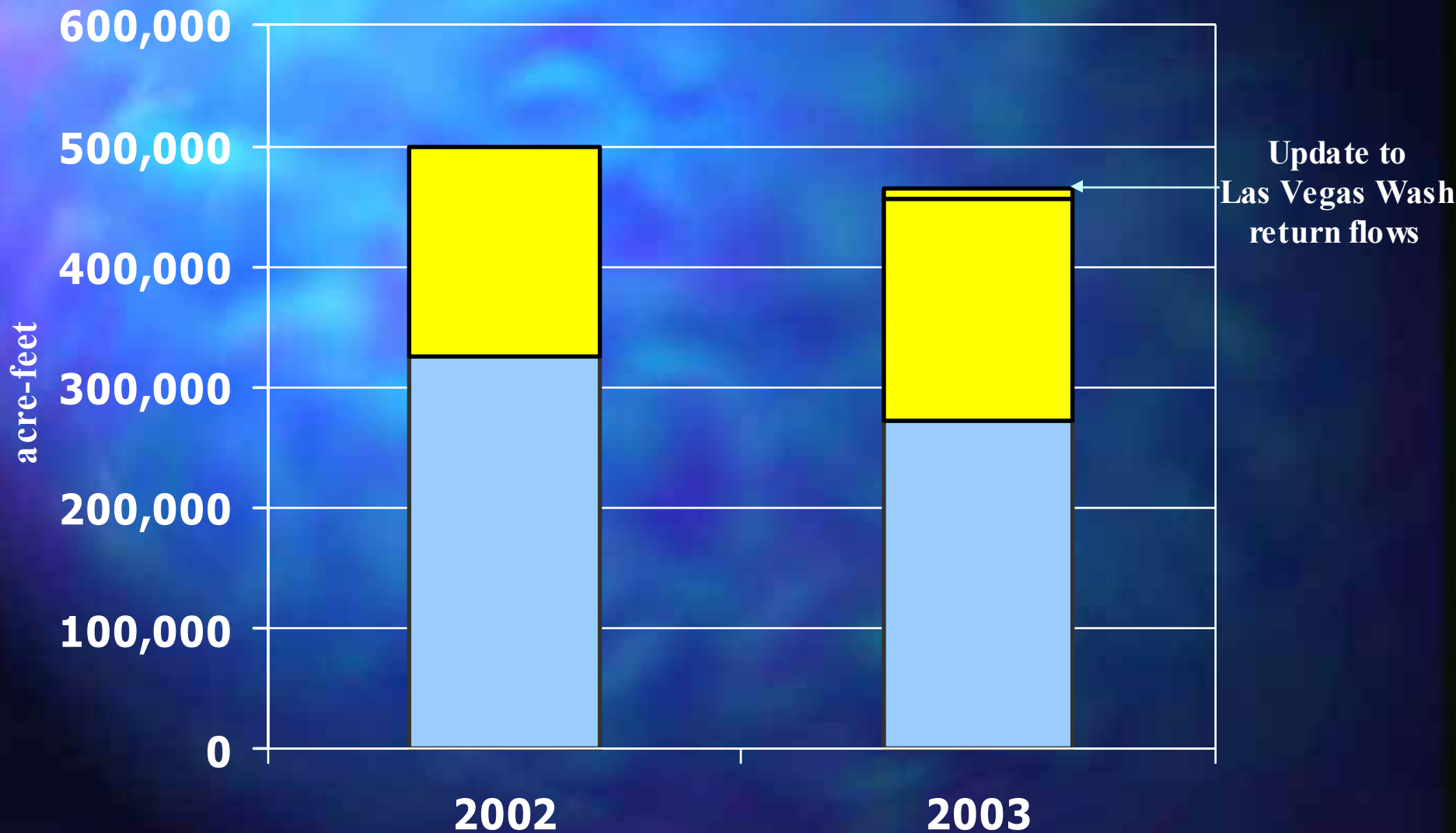
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- No new turf in residential front yards and a 50% restriction on allowable turf in backyards
- Multi-family residences allowed new turf up to 50 percent of non-drought limit
- Turf prohibited in new commercial and non-residential properties

# Nevada Colorado River Water Use 2002 and 2003 (with recharge)



# Nevada Colorado River Water Use 2002 and 2003 (without recharge)



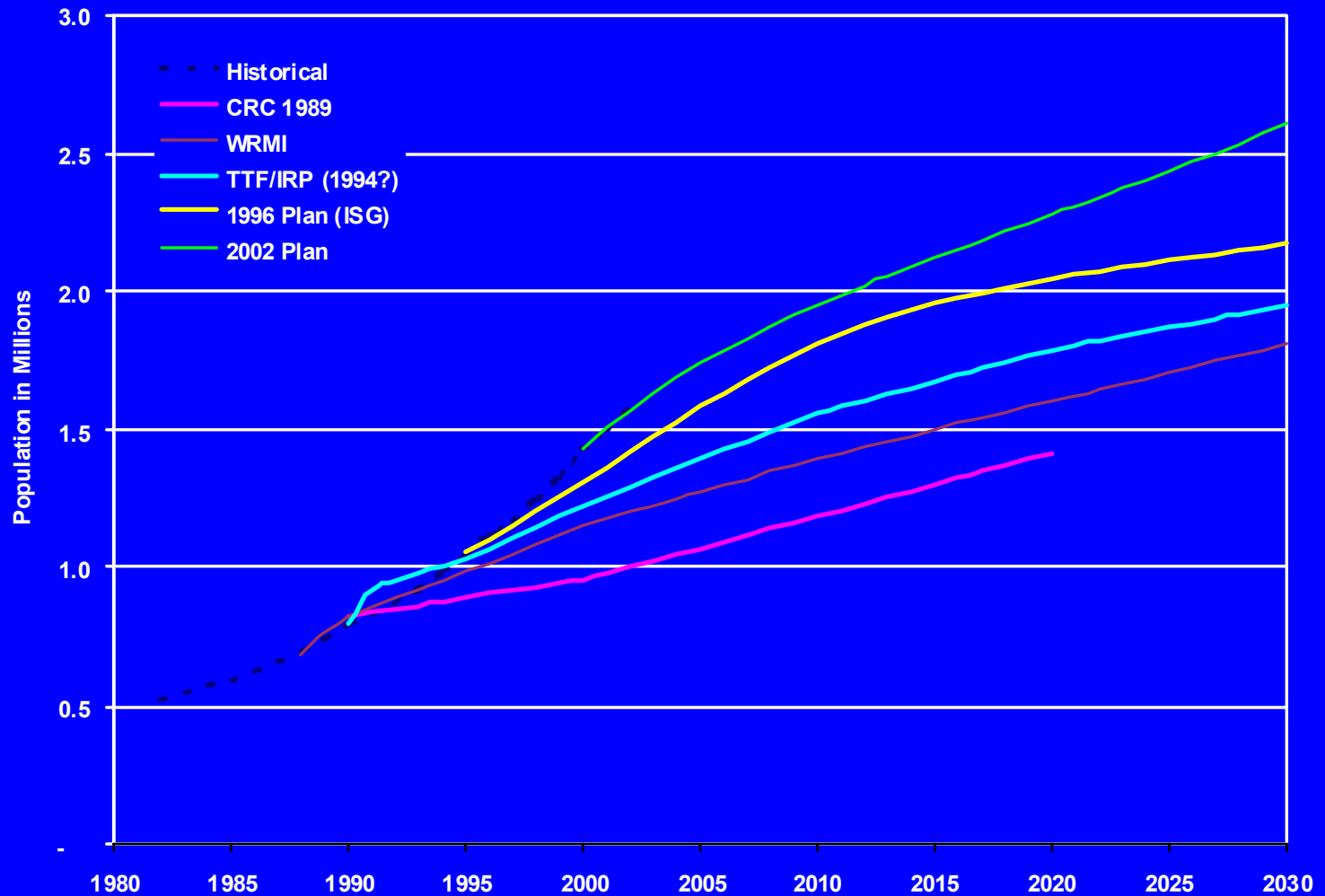
# Southern Nevada Water Resources

- Groundwater
- Colorado River water
- Water conservation
- Reclaimed/reuse of highly treated effluent

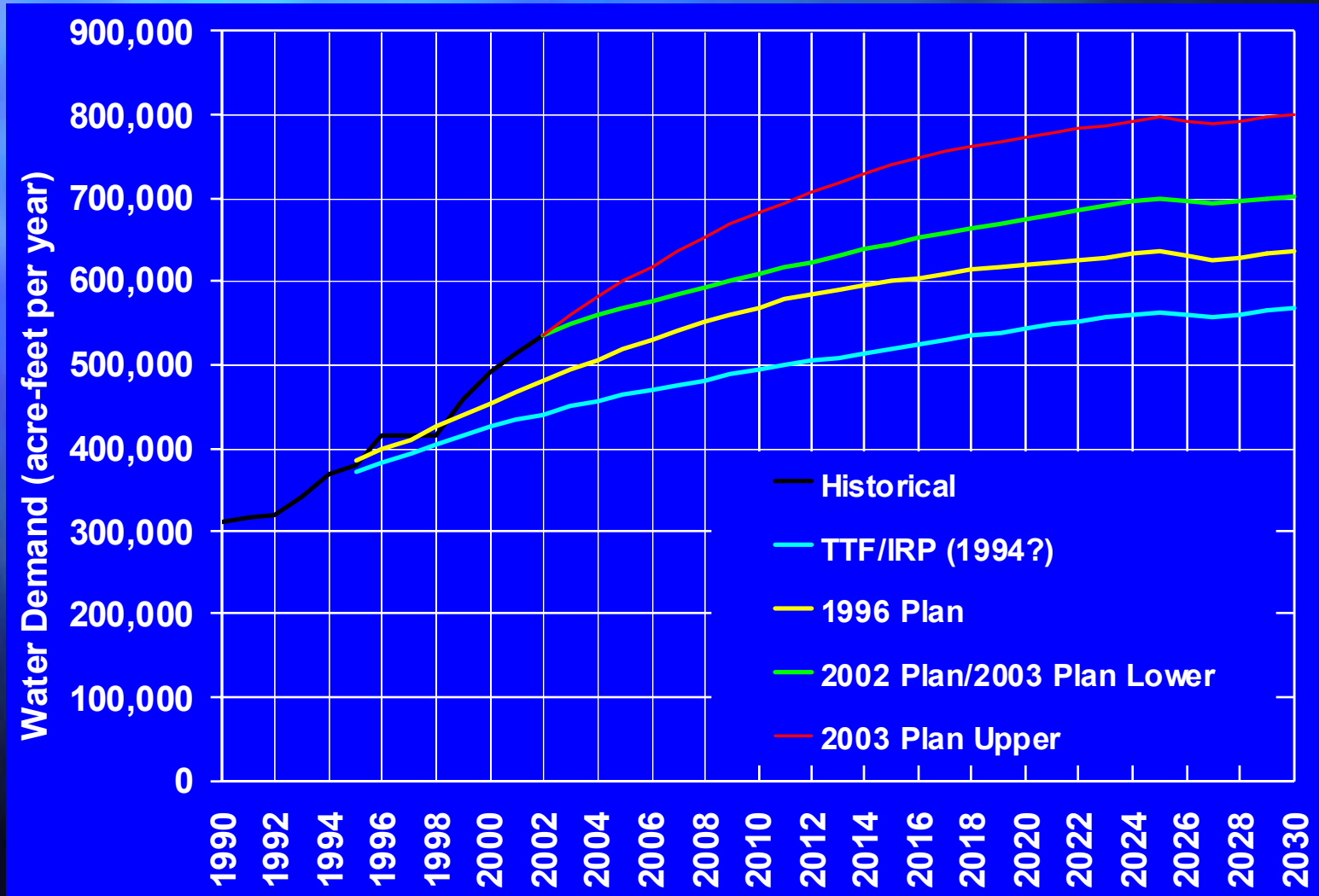




# Comparison of Population Forecasts



# Comparison of SNWA Water Demand Forecasts



# Summary Water Demands and Water Resources

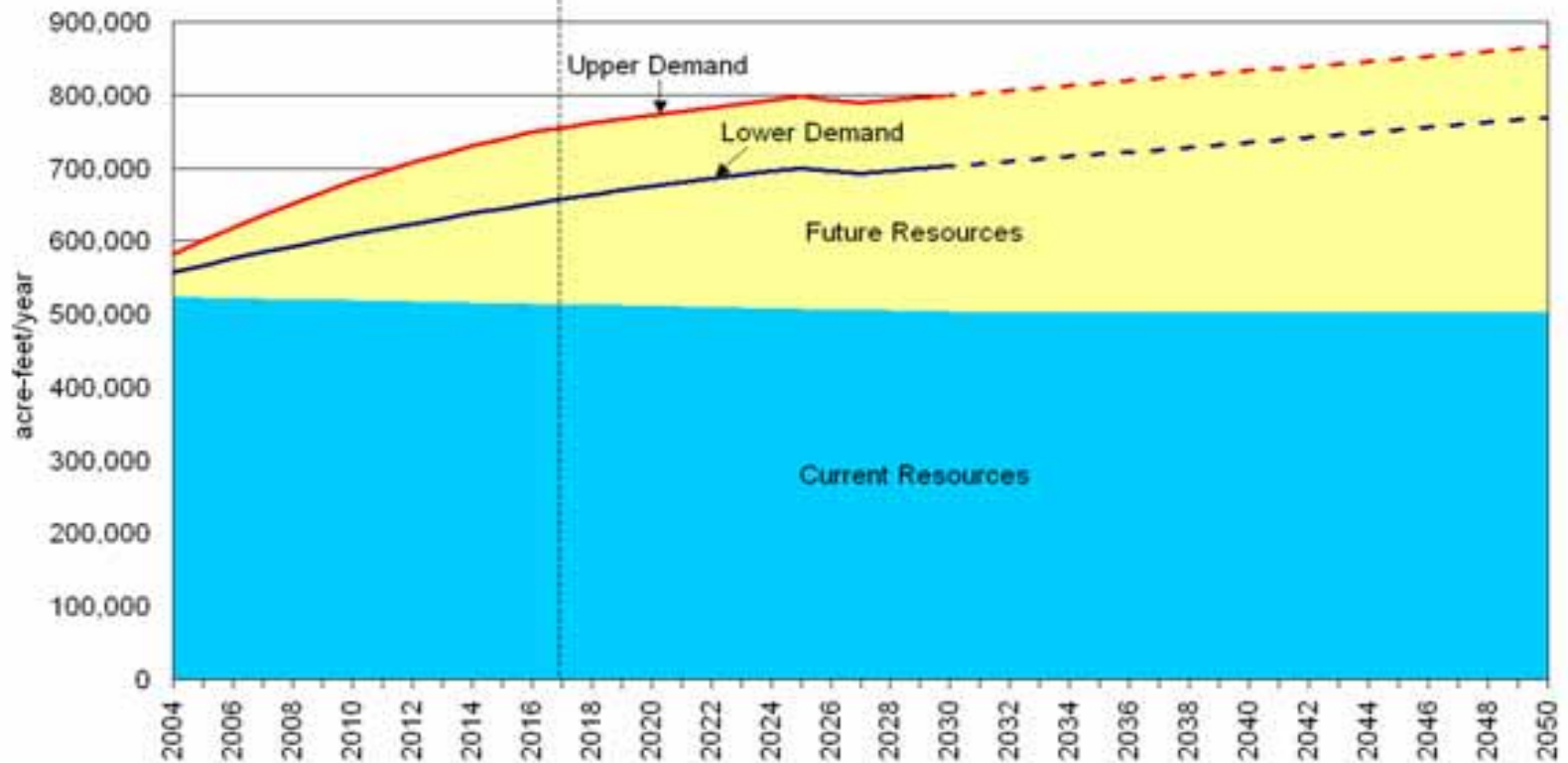
## Future Resources

2004 - 2016 - Interim Surplus

- Drought Response
- Bank Recovery (Arizona & Nevada)
- In-State Resources

2017 to 2050 - Bank Recovery (Arizona & Nevada)

- In-State Resources
- Transfers and Exchanges



# Summary

- Development of In-State Water Resources
  - Integrated Water Planning Process
- Comparison of Nevada Colorado River Water Use 2002 and 2003
  - Return Flow Credits
  - Climate
  - Drought Response
- 2004 Water Resources Plan



# Colorado River Basin Salinity Control Program

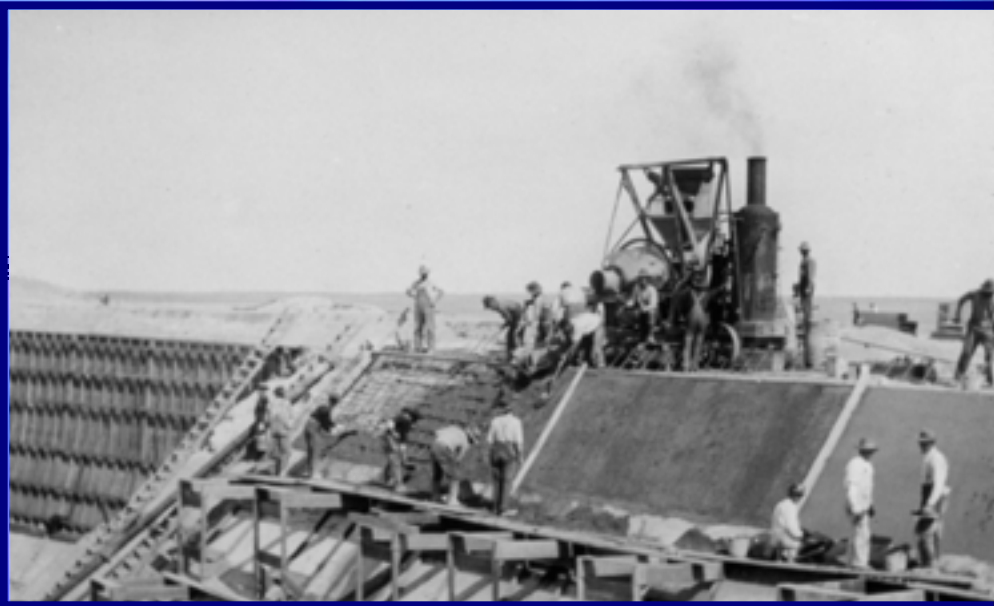
- The Forum will meet in Rock Springs on June 3<sup>rd</sup> at the Holiday Inn.
- A tour of the Rock Springs/Farson/Pinedale area will occur on Wednesday, June 2<sup>nd</sup>.
- The next Work Group meeting will be April 21-23<sup>rd</sup> in Salt Lake City, Utah
  - Will begin working on its 2005 triennial review (Section 202(d) of the Clean Water Act requires an every three-year review of water quality standards) report

# Upper Colorado River Endangered Fish Recovery Program – Update:

- Non-native fish management policy adopted by the Implementation Committee in February 2004
  - Set forth a clear policy that is understood and supported “up and down the chain” within each office of the Colorado Division of Wildlife and the Utah Division of Wildlife Resources.
  - Non-native fish management is critical element of the Recovery Program; it is not just the big, bad federal government that is engaged in non-native fish management efforts throughout the Basin in Colorado and Utah, but rather, a coordinated, essential effort fully supported by all of the Program’s participants.

# Upcoming Events – FYI

- Colorado River Basin Salinity Control Forum meeting in Rock Springs, WY in early June, 2004



Thanks and  
may I answer  
any  
questions?

