



Albuquerque Bernalillo County  
Water Utility Authority

# ***WRRI – Water Supply-Demand Evaluation***

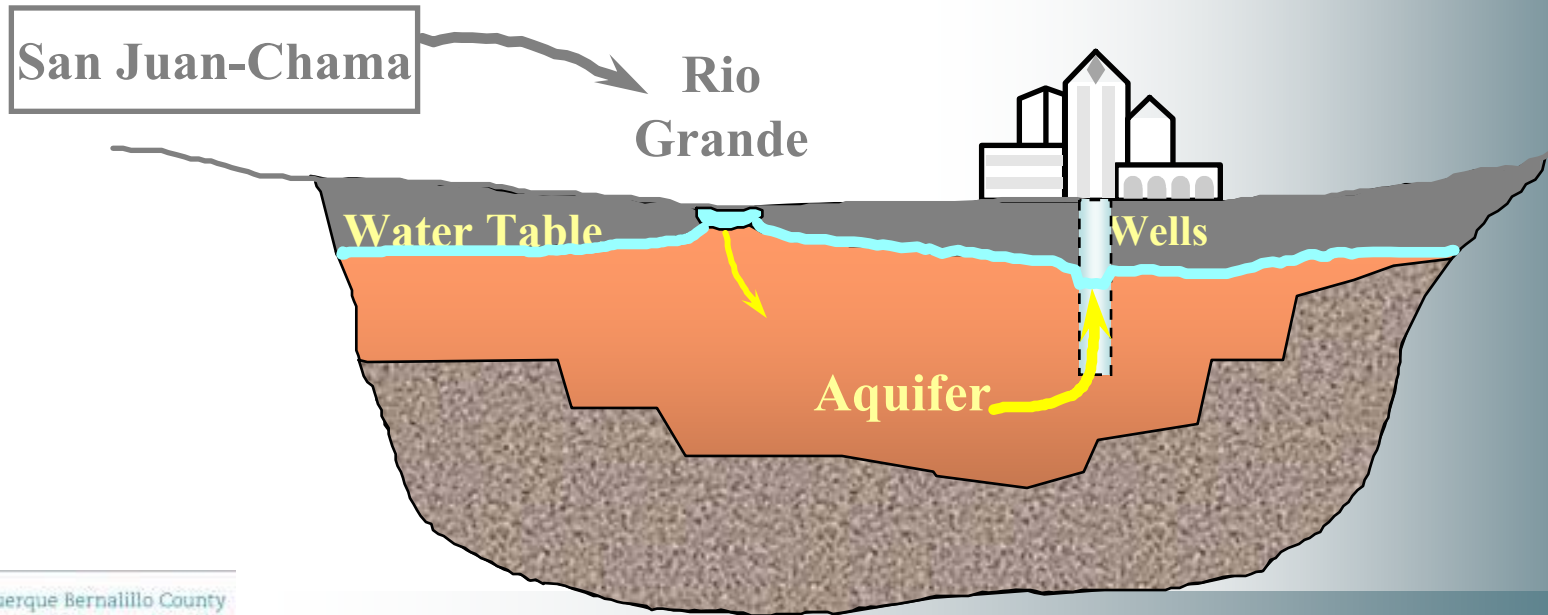
Presented by:

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*Manager, Water Resources, Engineering, and Planning  
Albuquerque Bernalillo County Water Utility Authority*

*October 21, 2008*

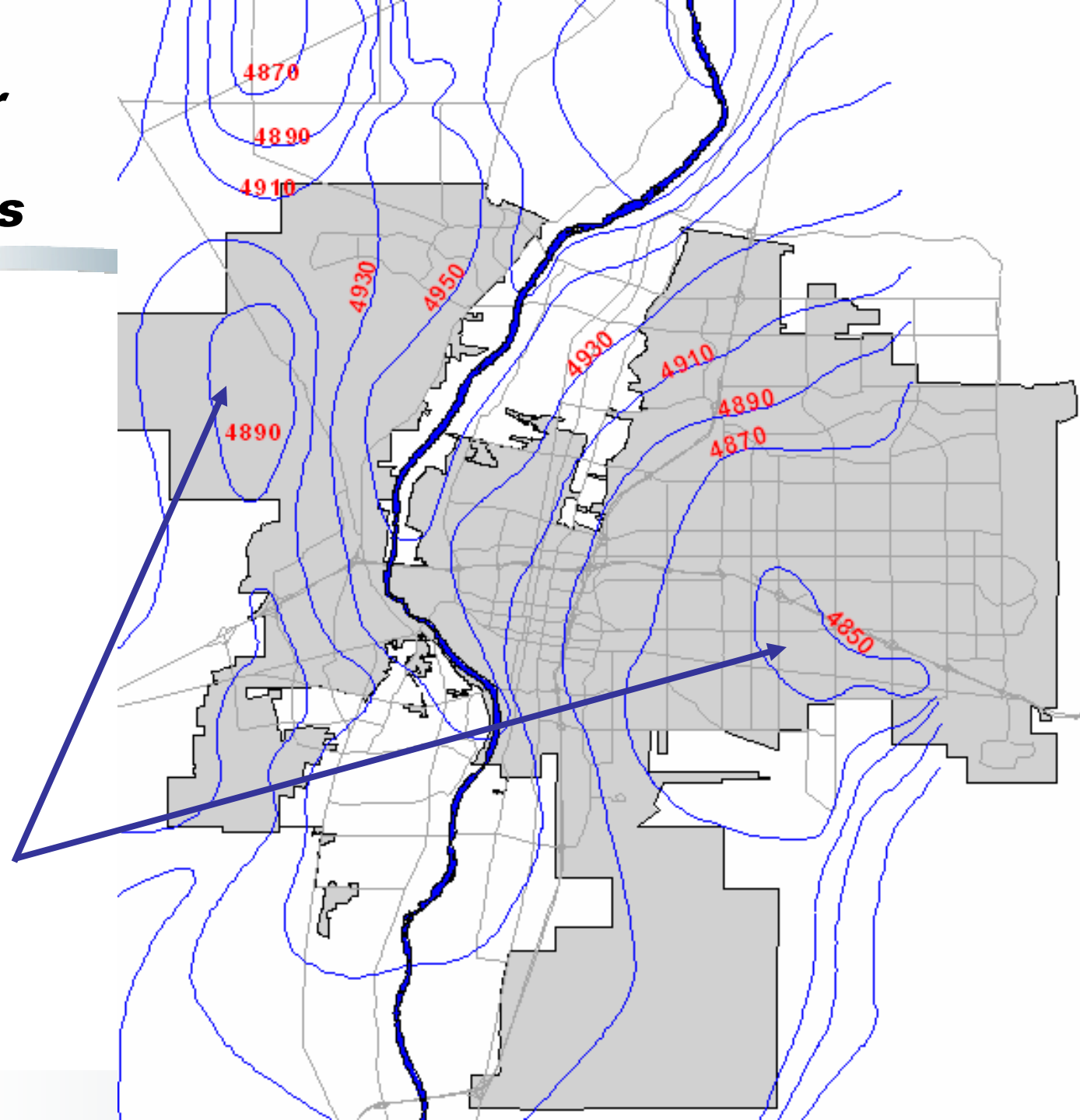
# ***Problems with the 1960s Plan***

- The Rio Grande does not re-supply the aquifer
- The aquifer is smaller than thought



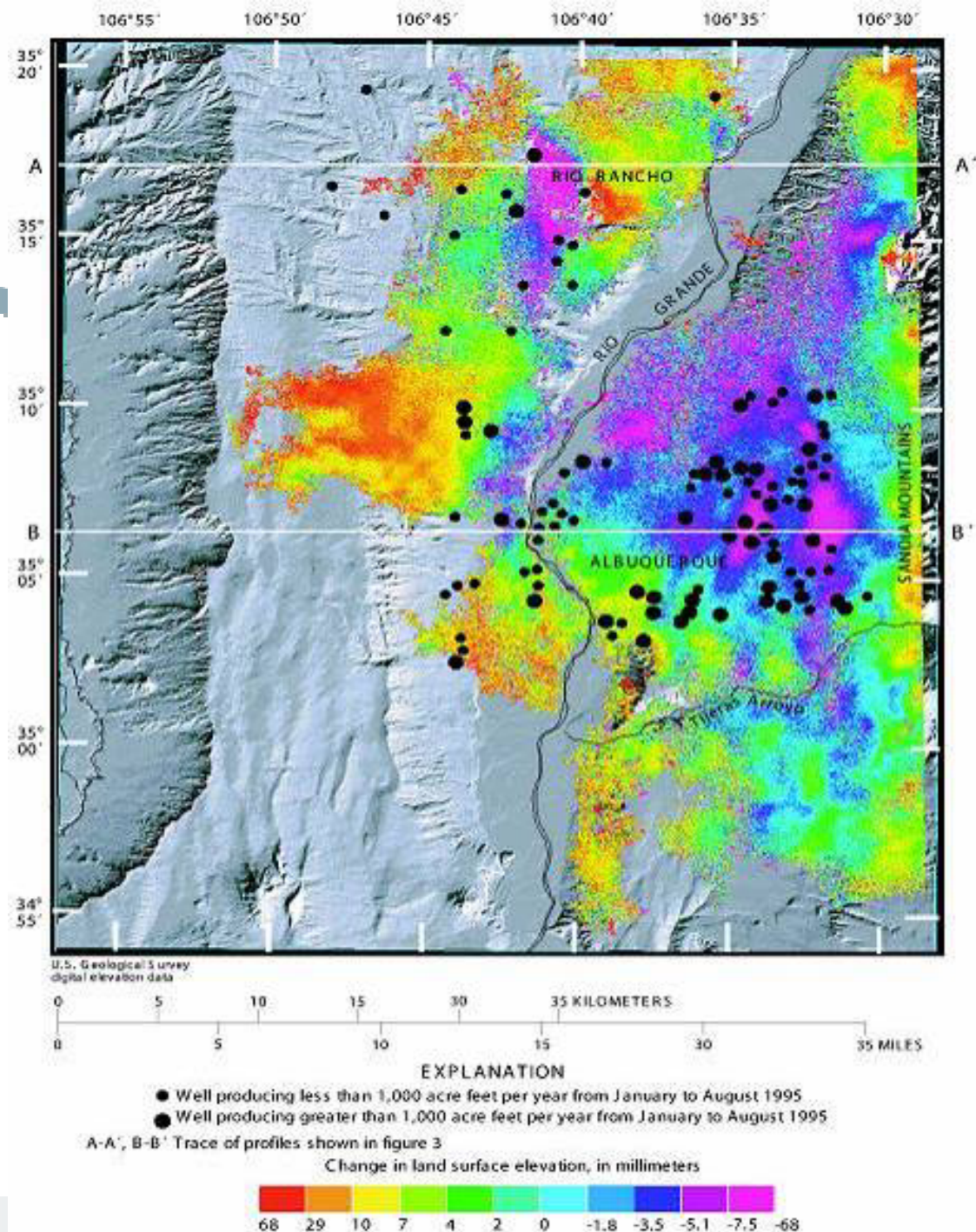
# **Albuquerque Ground-Water Levels Show Huge Declines**

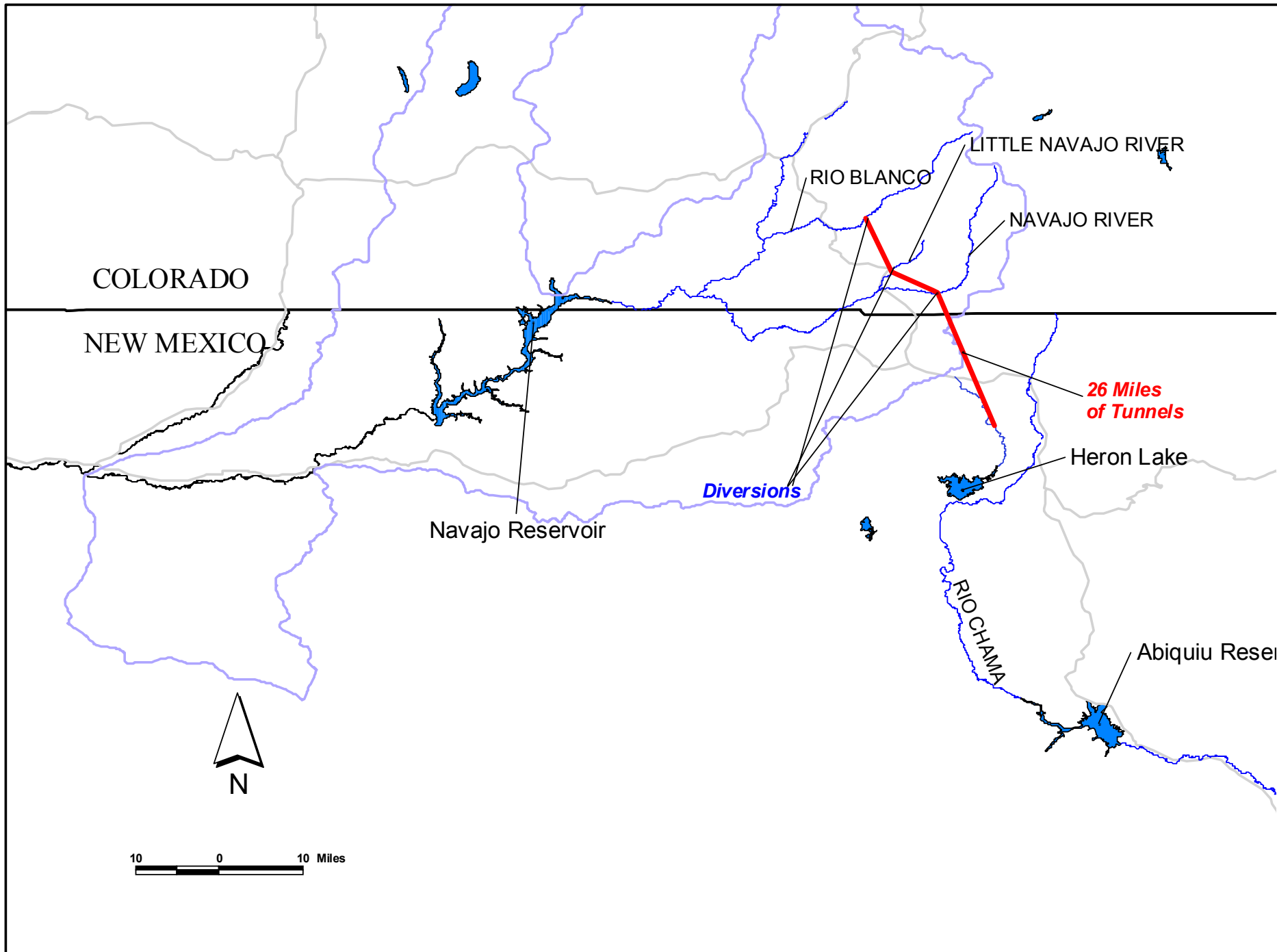
**Pumping Cone of  
Depression in 2002**



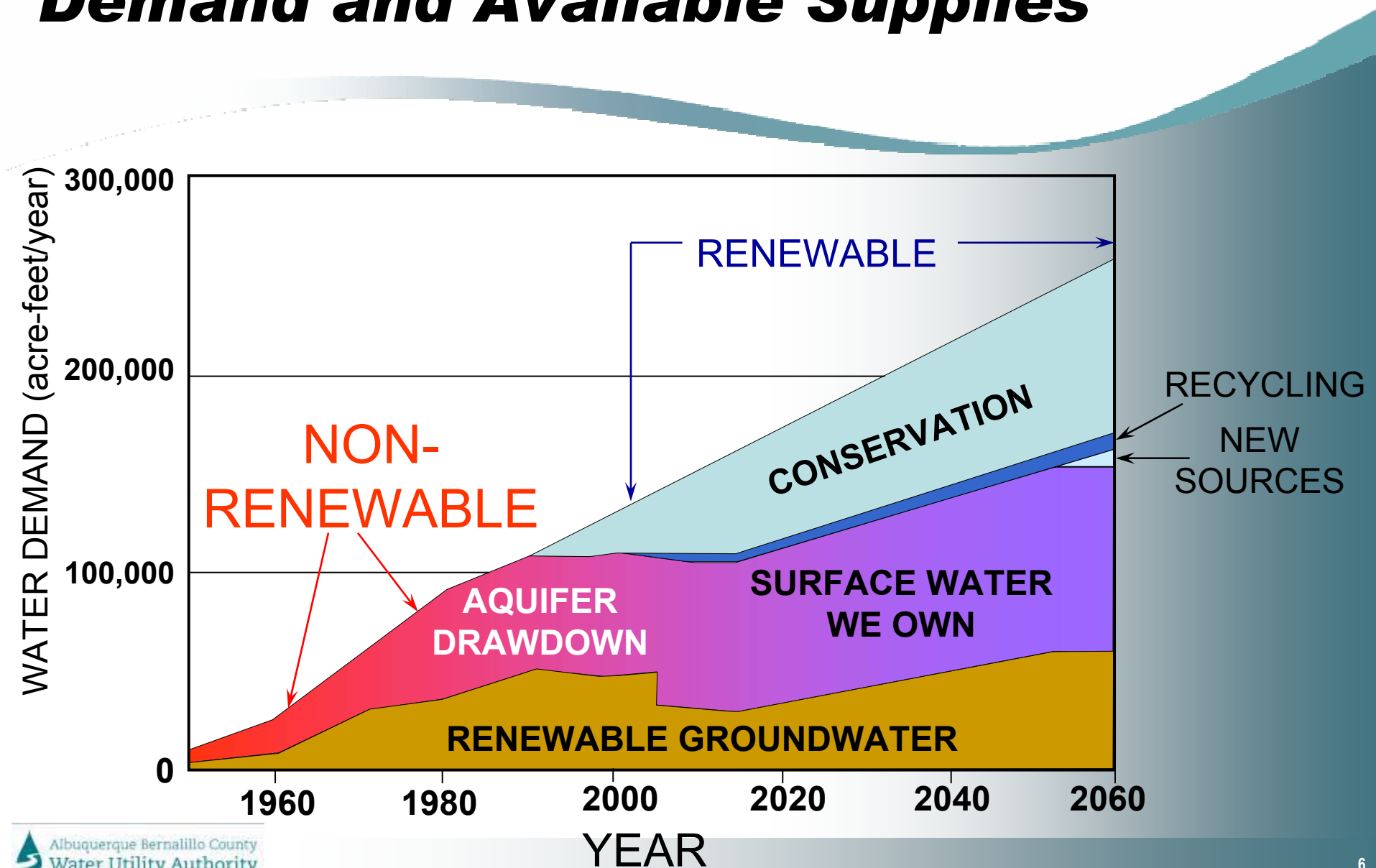


# USGS – Land Surface Subsidence Estimate





# Albuquerque's Projected Water Demand and Available Supplies

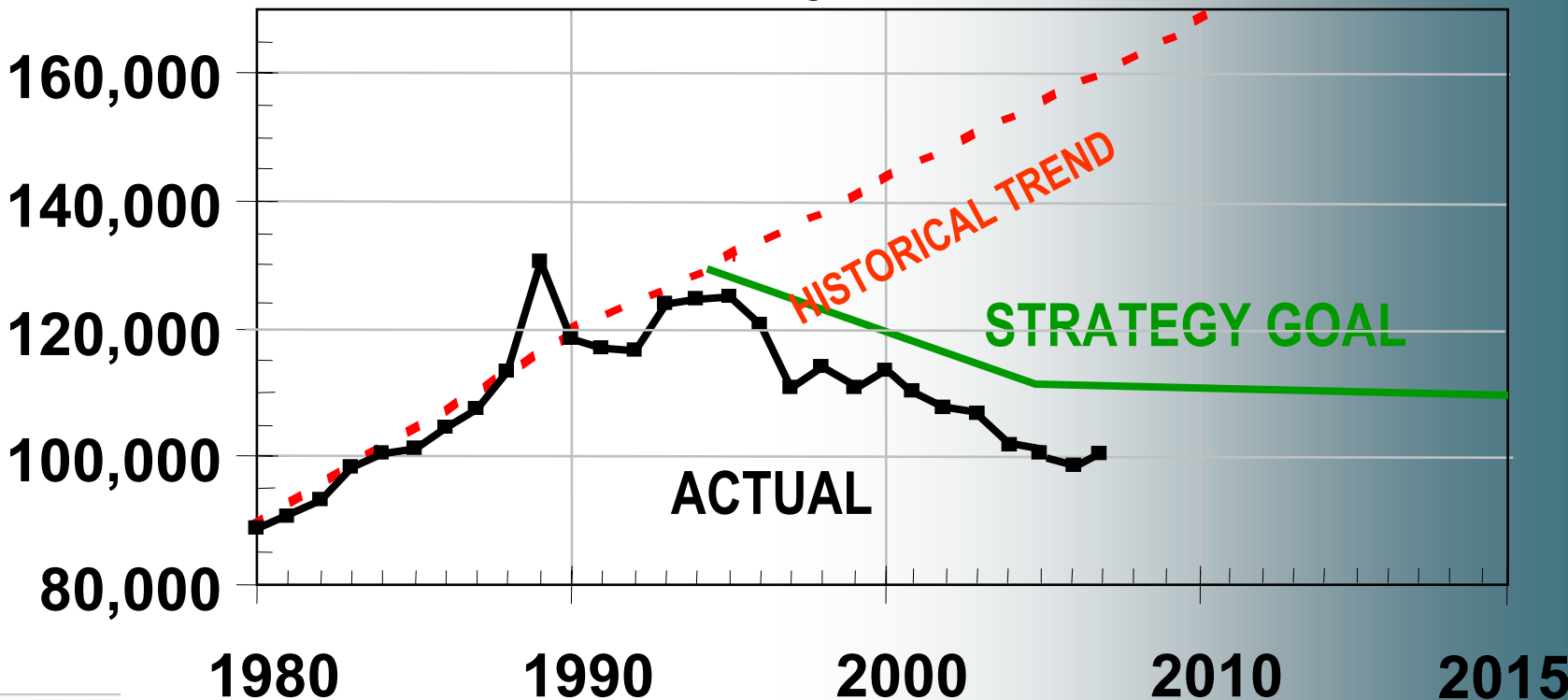


# **WRMS – Conservation - 40% Reduction**







Water Demand (acre-feet/year)

## Conservation Program Status



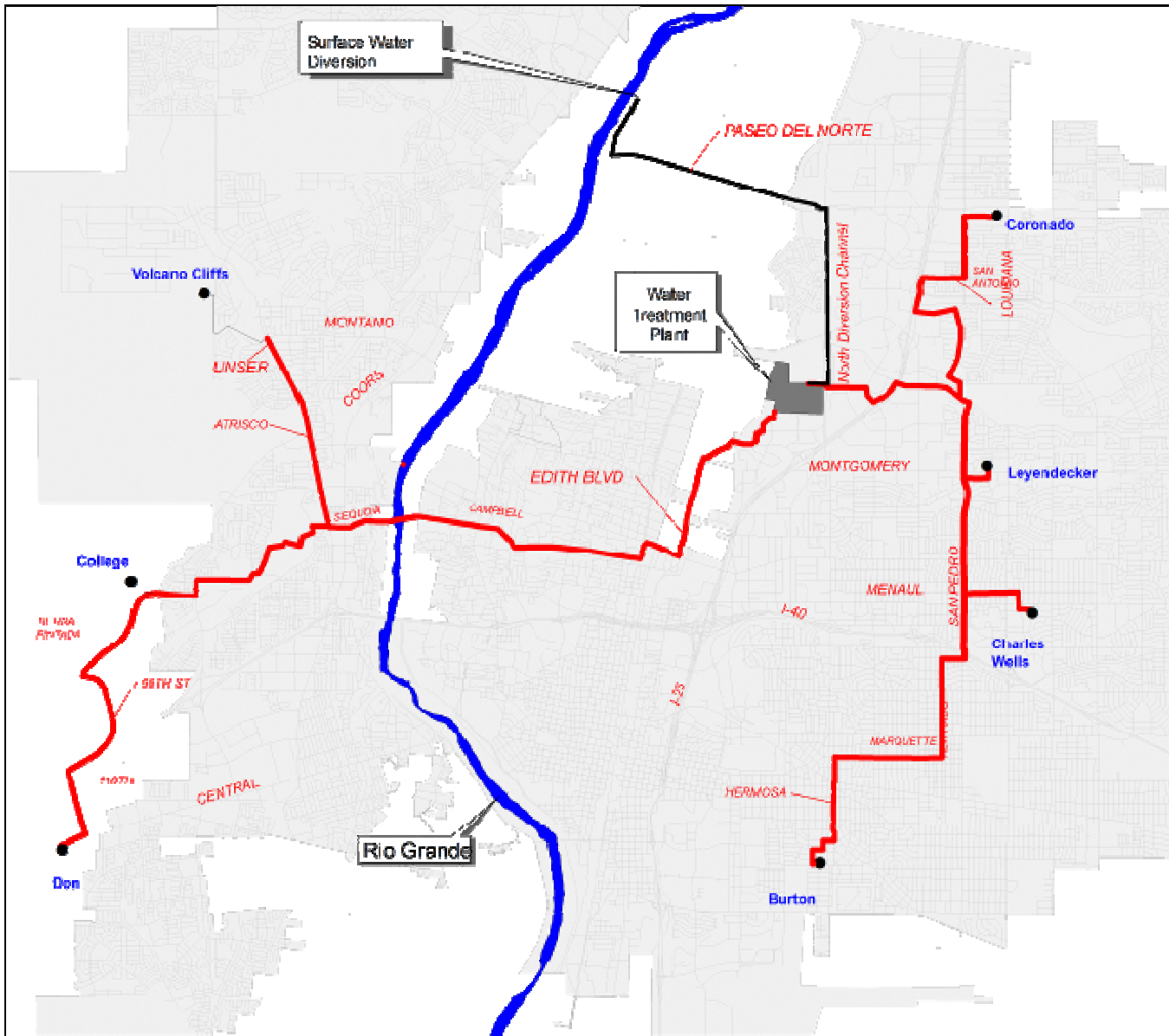
# Proposed Surface Water Distribution System

## Legend

-  Raw Water Pipeline
-  Existing Line
-  New Transmission Line
-  Existing Reservoir



0.9 0.45 0 0.9 1.8 2.7 Miles





# ***Diversion Dam Construction***



# ***Diversion Dam***



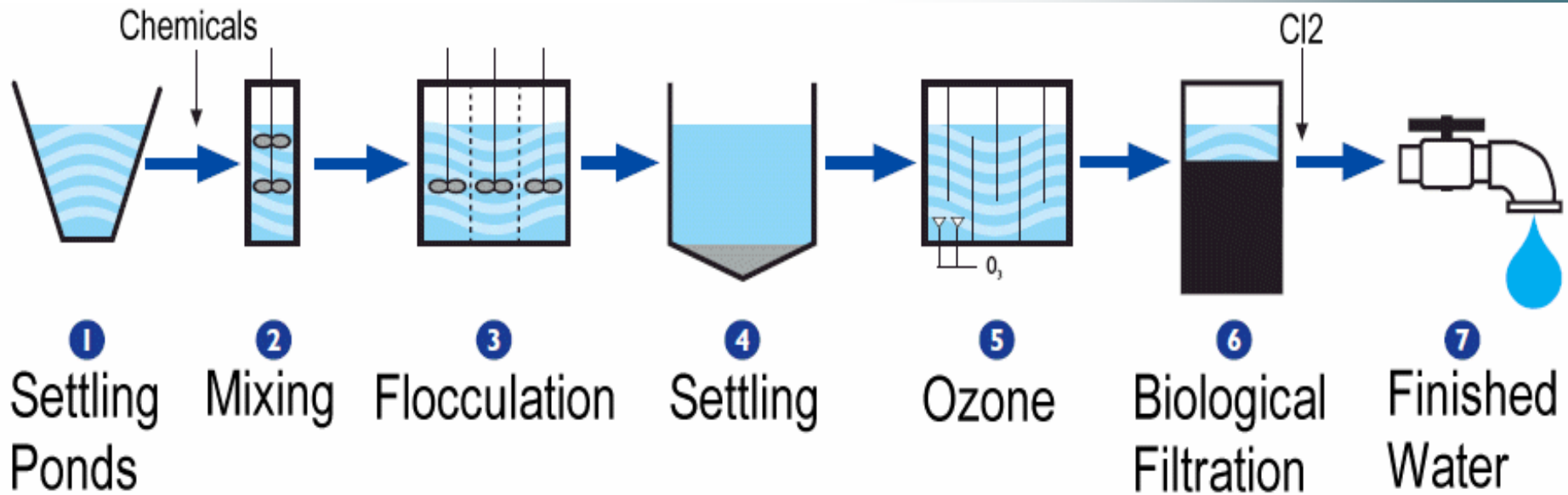


# ***Finished Diversion Dam***





# Water Treatment Process

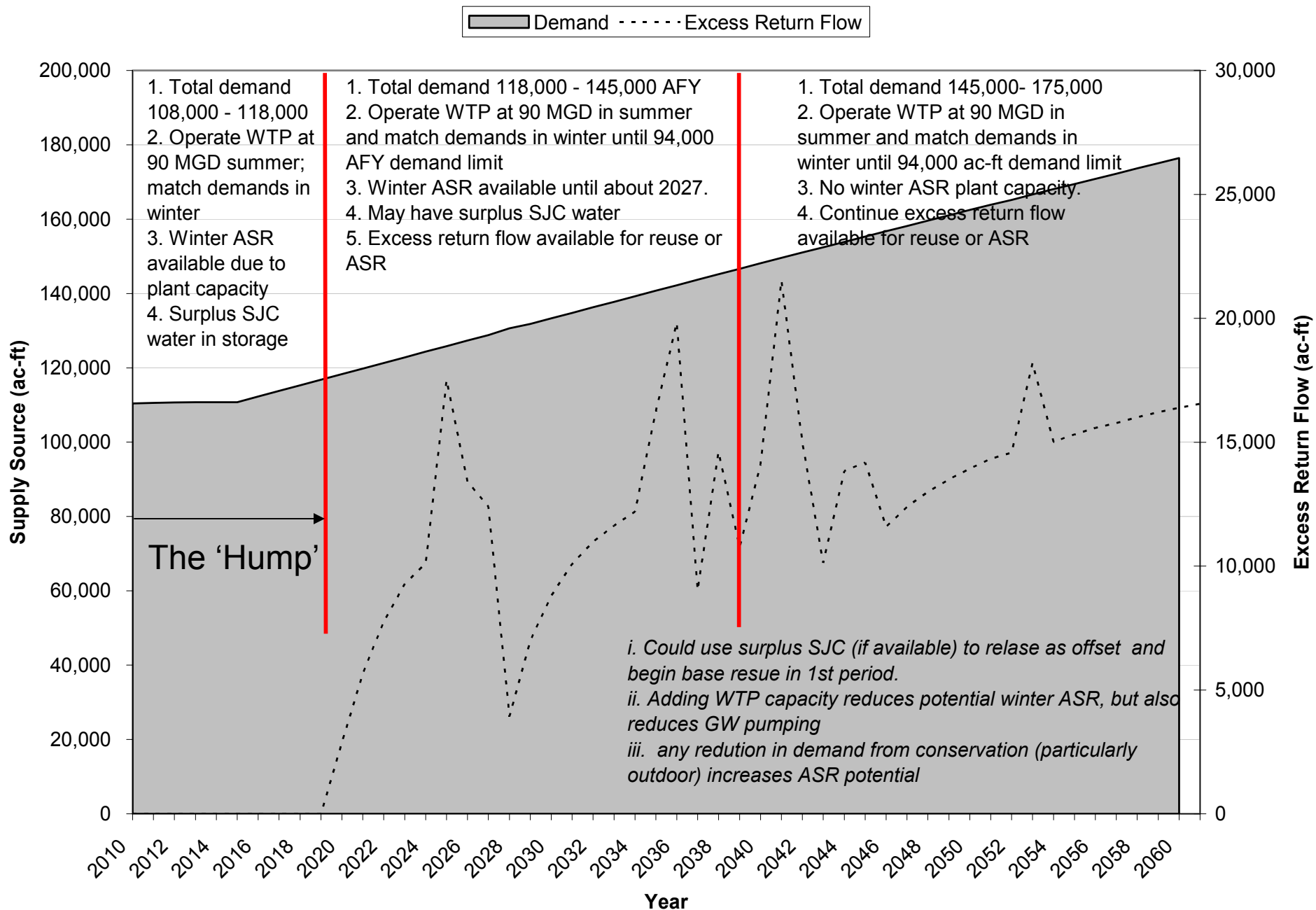




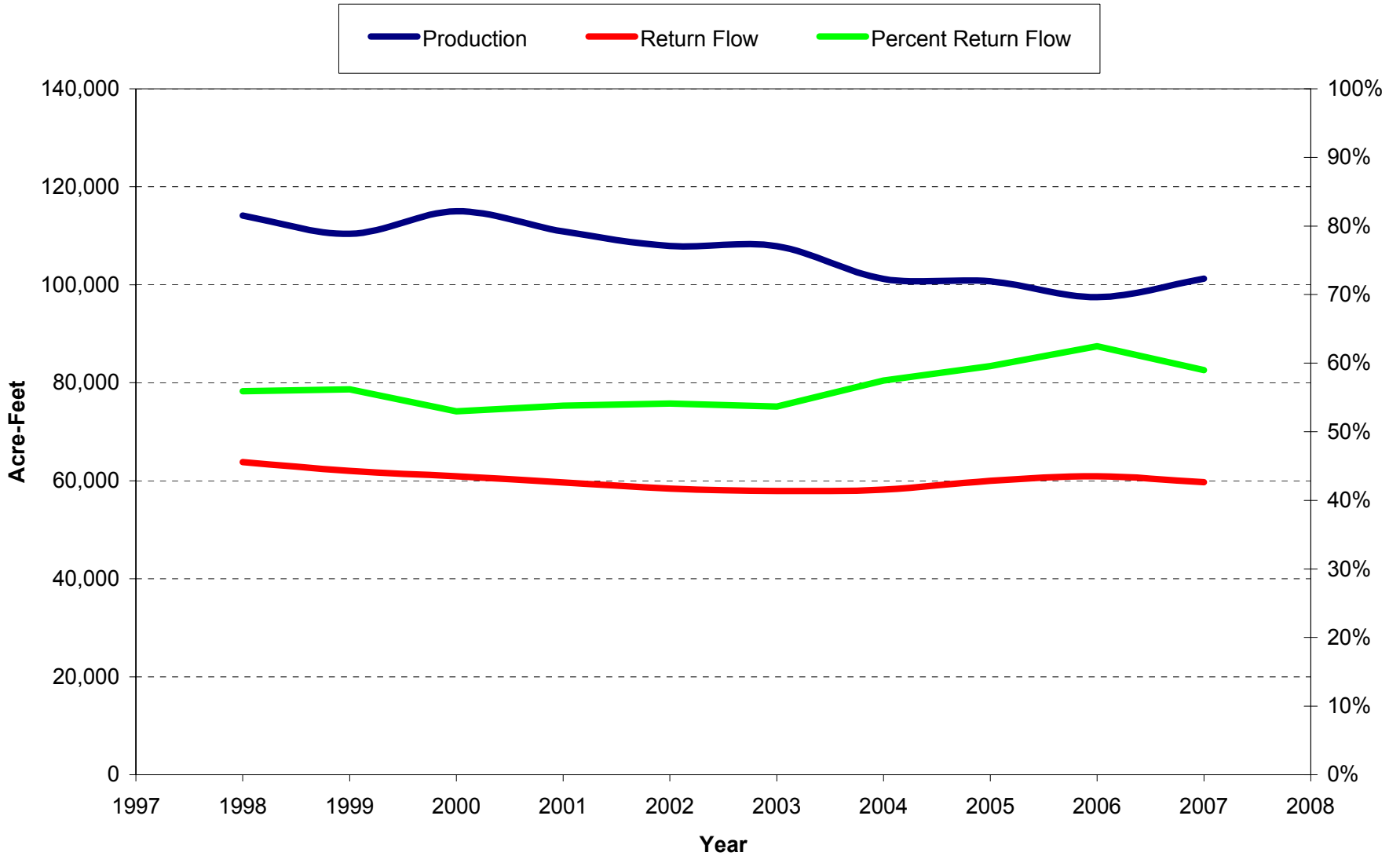


# ***Transition to San Juan-Chama DWP – December 2008***

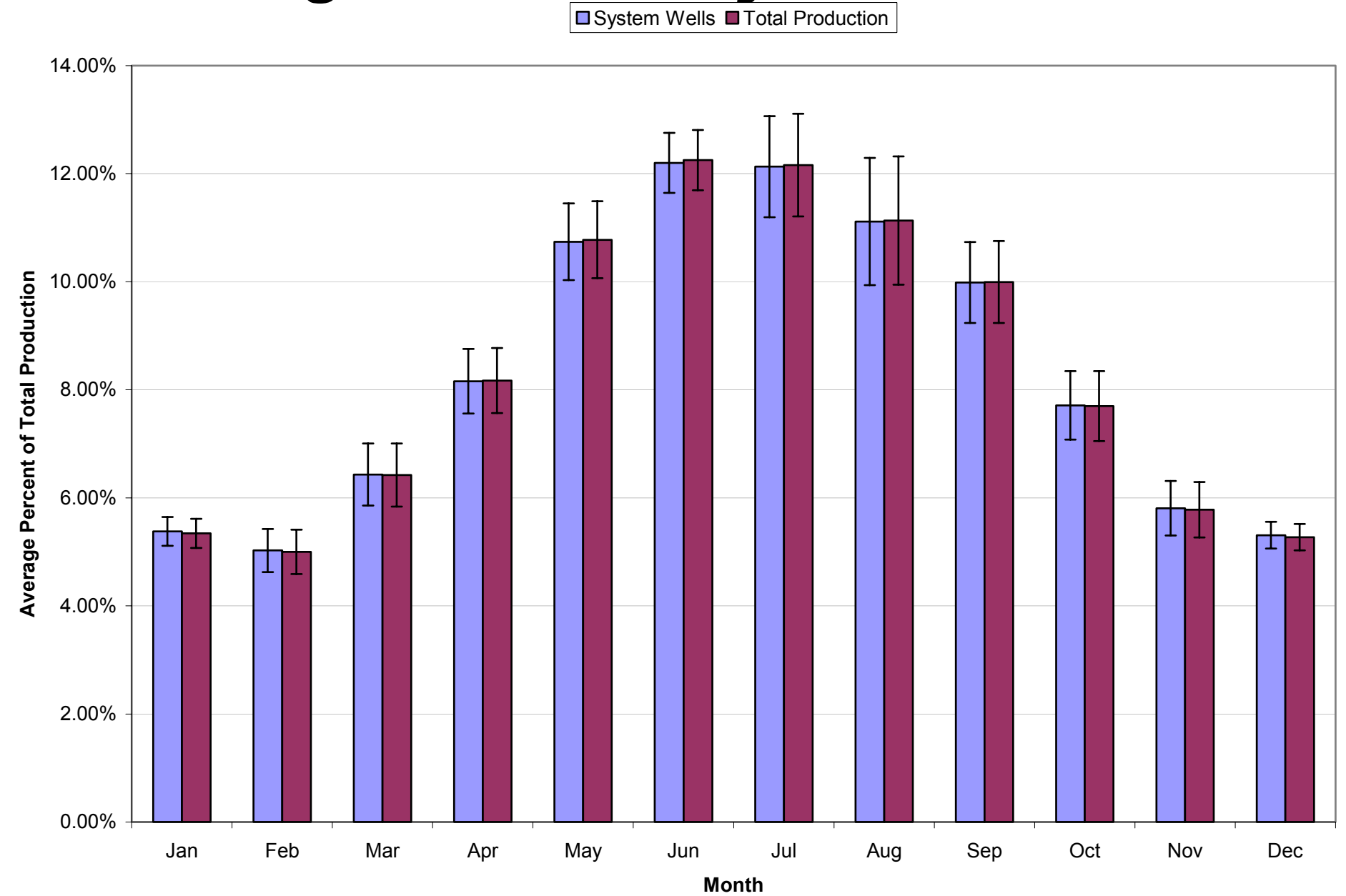
- 25% of demand for 1<sup>st</sup> year
- 50% of demand for 1<sup>st</sup>/2<sup>nd</sup> year
- Full transition in 2<sup>nd</sup>/3<sup>rd</sup> year
- flexibility – will change mix depending on customer and water system reaction



## ABCWUA Water Production and Return Flow



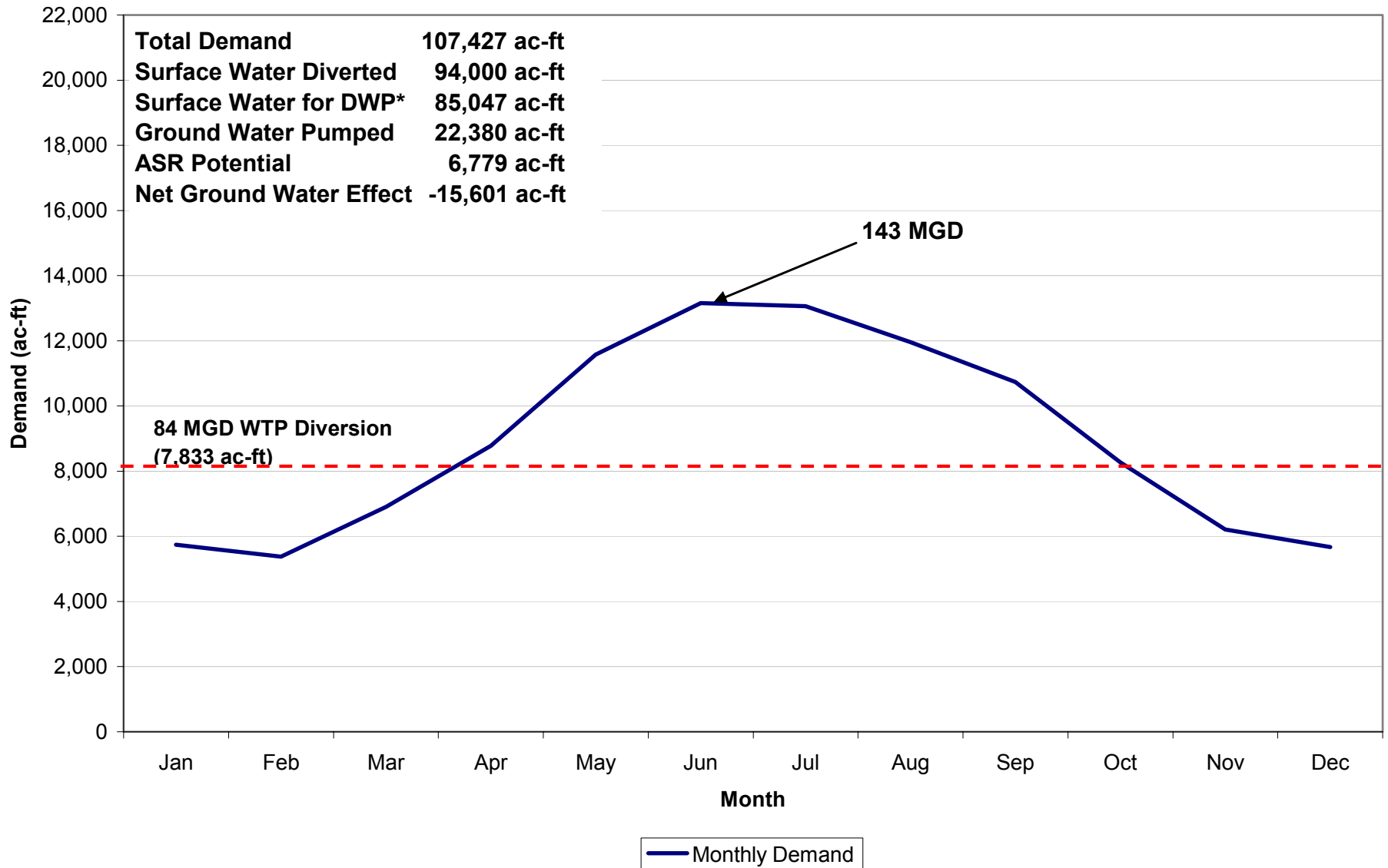
# Percentage Demand by Month





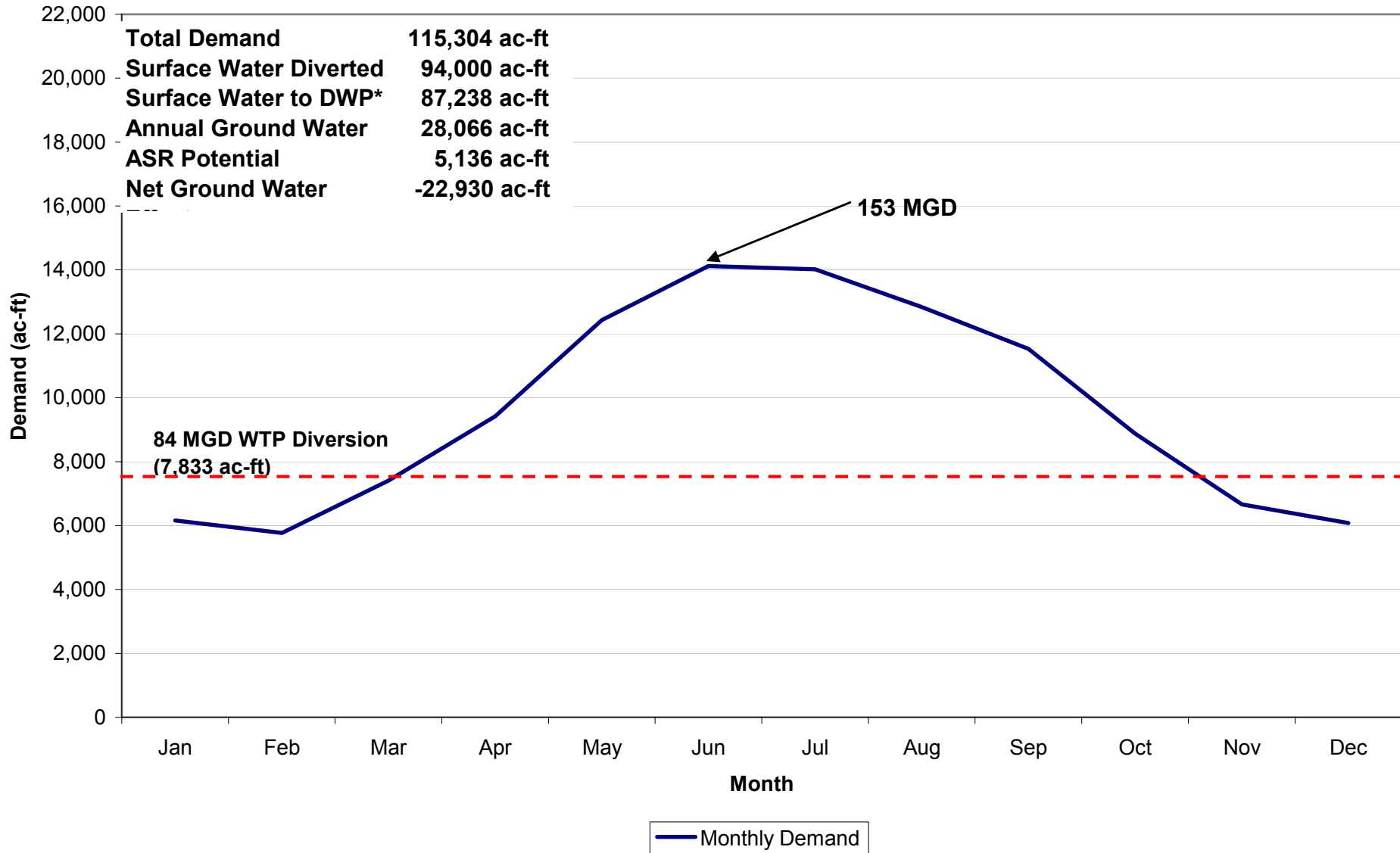
2010

**Total Demand**                    **107,427 ac-ft**  
**Surface Water Diverted**    **94,000 ac-ft**  
**Surface Water for DWP\***   **85,047 ac-ft**  
**Ground Water Pumped**     **22,380 ac-ft**  
**ASR Potential**                **6,779 ac-ft**  
**Net Ground Water Effect**   **-15,601 ac-ft**

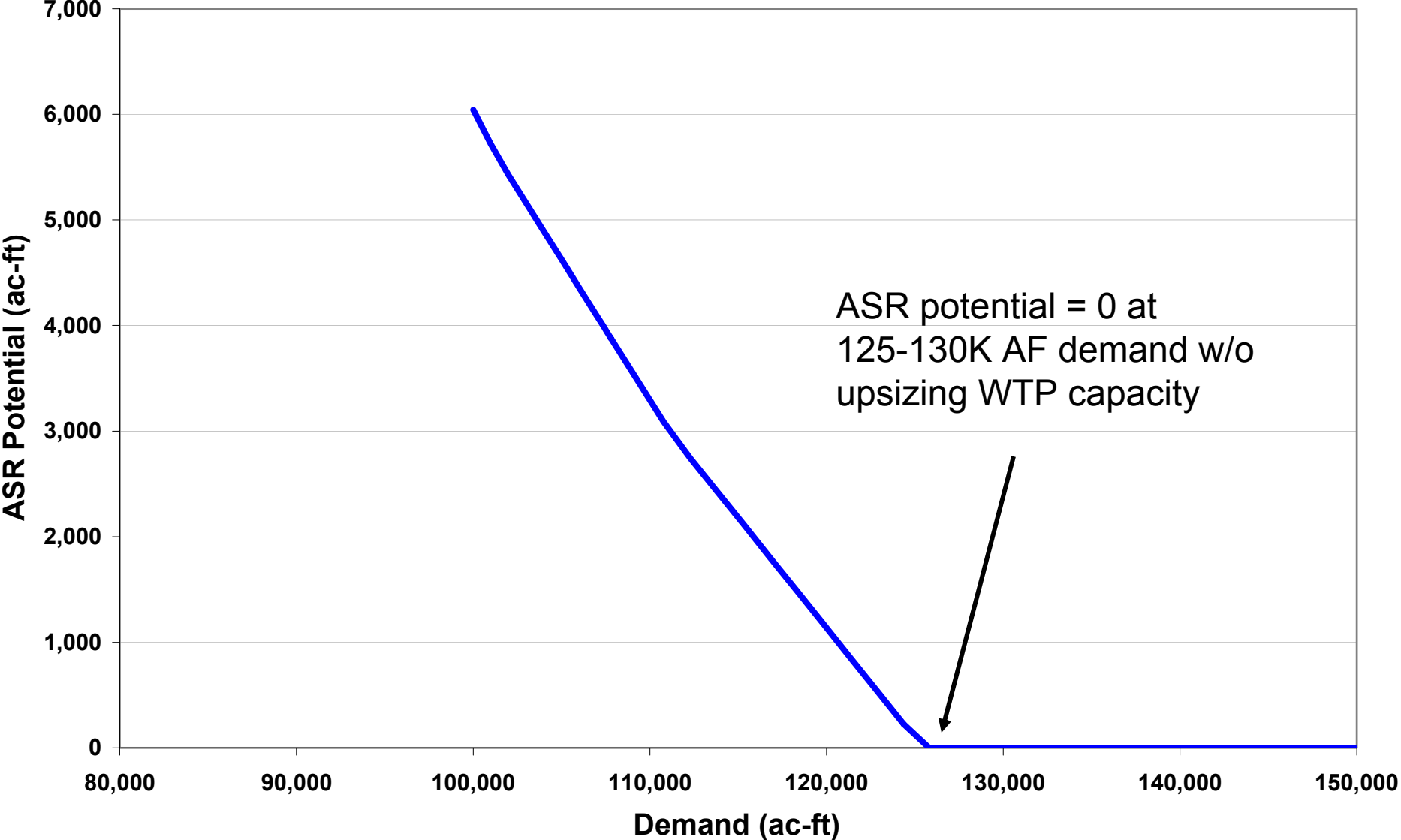


2020

<b>Total Demand</b>	<b>115,304 ac-ft</b>
<b>Surface Water Diverted</b>	<b>94,000 ac-ft</b>
<b>Surface Water to DWP*</b>	<b>87,238 ac-ft</b>
<b>Annual Ground Water</b>	<b>28,066 ac-ft</b>
<b>ASR Potential</b>	<b>5,136 ac-ft</b>
<b>Net Ground Water</b>	<b>-22,930 ac-ft</b>

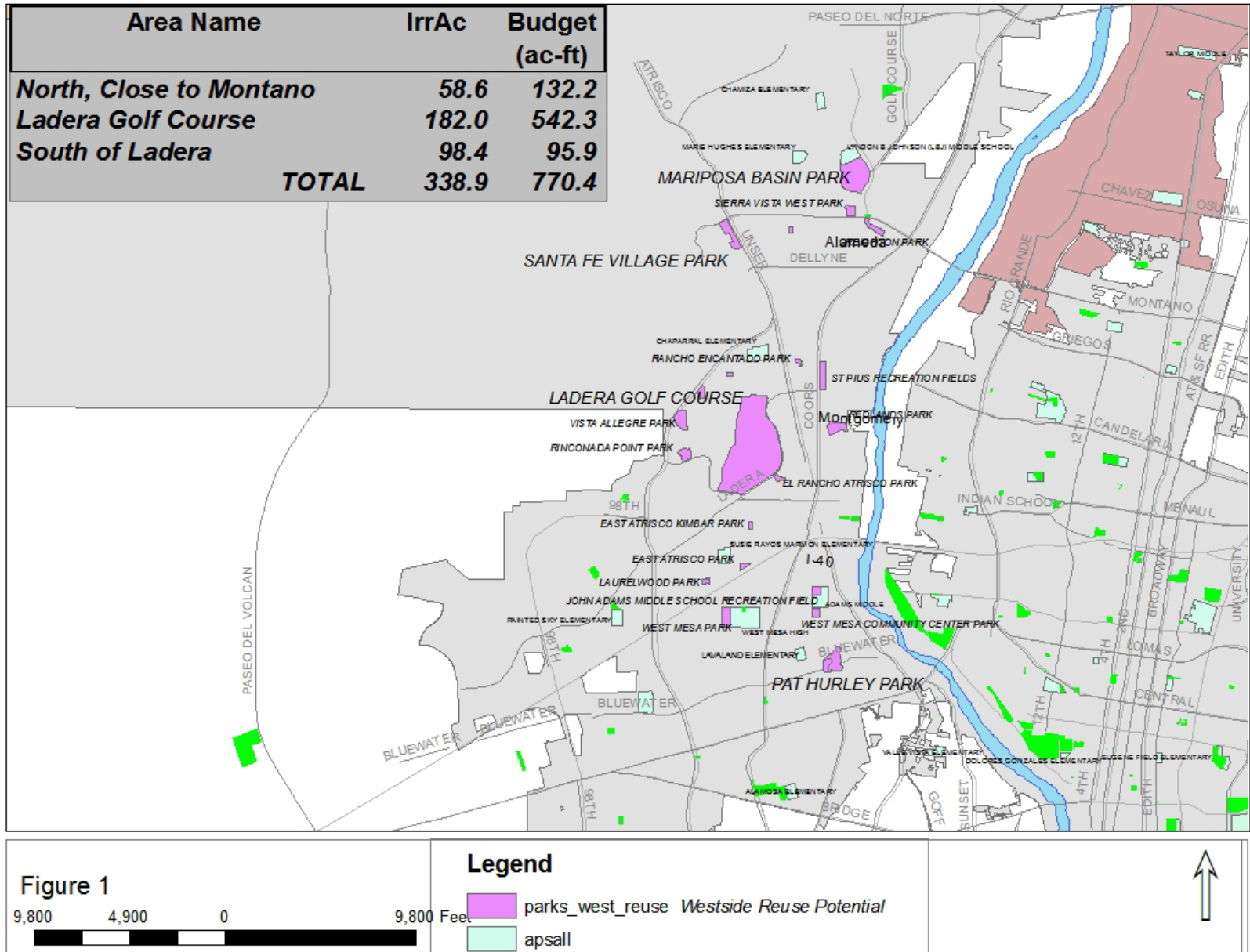


# ASR Potential vs. Demand





# Westside Reuse Potential





# Future Water Supply

## ● Reuse

- *Southside Reuse Project*
- *Mesa del Sol*
- *Others?*

## ● ASR

- *Pilot project in Bear Canyon Arroyo*
- *Retrofitting wells for dual use*
- *Banking water today for use tomorrow*

## ● Desalination

- *Aquifer Characterization – quantity and quality of sources*
  - *sources in the Middle Rio Grande*
  - *sources outside of the Middle Rio Grande*
- *Review of Desalination Technologies and Projects*
  - *available membrane technology*
  - *existing and planned projects*
  - *ongoing research*

