



WATER 2120

**SECURING
OUR WATER
FUTURE**

Water 2120 Update

Mark Kelly, PE
Water Resources Division Manager
Albuquerque Bernalillo County Water Utility Authority

August 23, 2023





The Water Authority:

- ~ 210,000 customer accounts
- ~ 670,000 people served
- ~ 650 employees
- Serving ~ 30 billion gallons of drinking water
- Treating ~ 18.5 billion gallons of wastewater
- Reusing ~ 1 billion gallons of reclaimed water each year



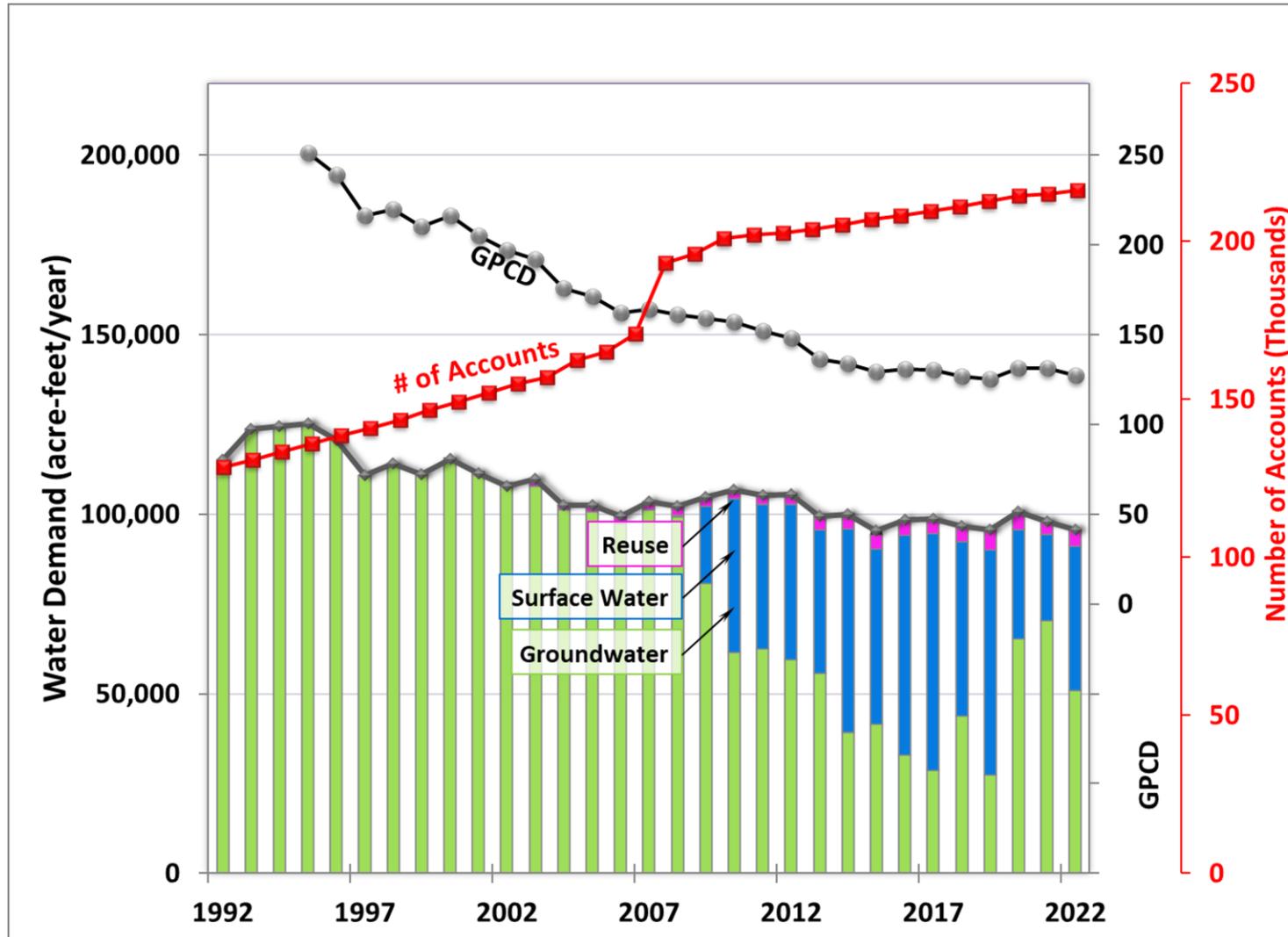
WHERE OUR WATER COMES FROM



Current Supply Portfolio

- Surface Water
 - San Juan-Chama Project
 - Vested and acquired native rights
- Groundwater
 - Over 60 wells active in service area
- Reclaimed Water
 - 18.5 billion gallons per year
- Reuse/non-potable Water
 - Irrigation of green spaces in Albuquerque
- Aquifer Storage and Recovery
 - Surface recharge and injection

Demand and Supply Trends





Water 2120



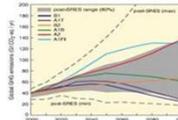
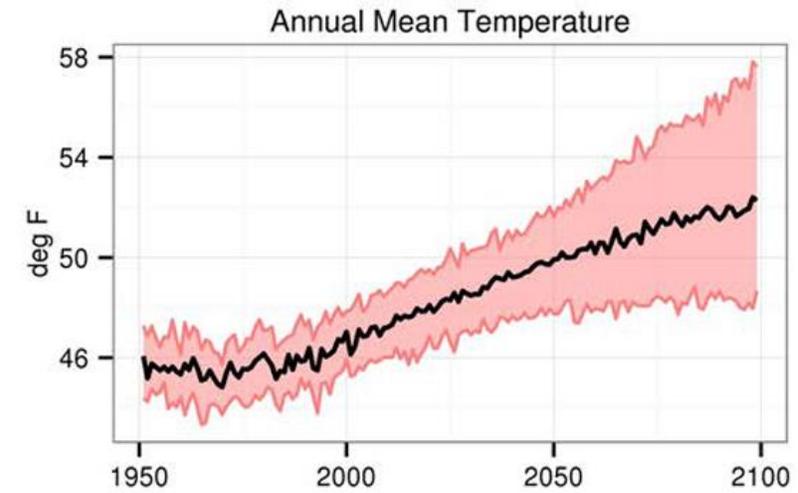
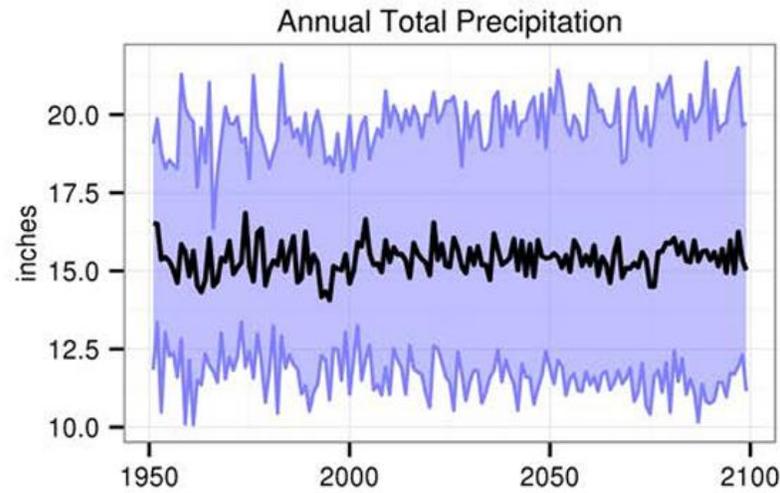
Deliverables



- Updated demand / supply data based on climate change projections
- A groundwater management approach
- Possible supply alternatives / enhancements
- Ranked water resource portfolios
- Public and advisory board input and responses
- Policies

Climate Change and Supply Availability

- Integration of climate change risk analysis in Water 2120
- Predicted spring runoff peaks happening earlier in the year
- Decline in median Snow Water Equivalent (SWE) into the future → reduced snowpack



Emission Scenarios
(3 scenarios: A2, A1b, B1)



General Circulation Models
16 GCMs

Bias Correction & Spatial Downscaling

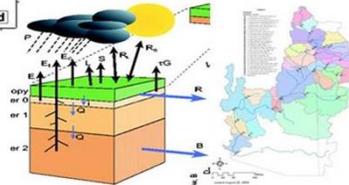
(112 downscaled projections)



Downscaled

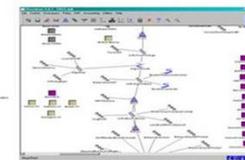
Hydrologic Modeling

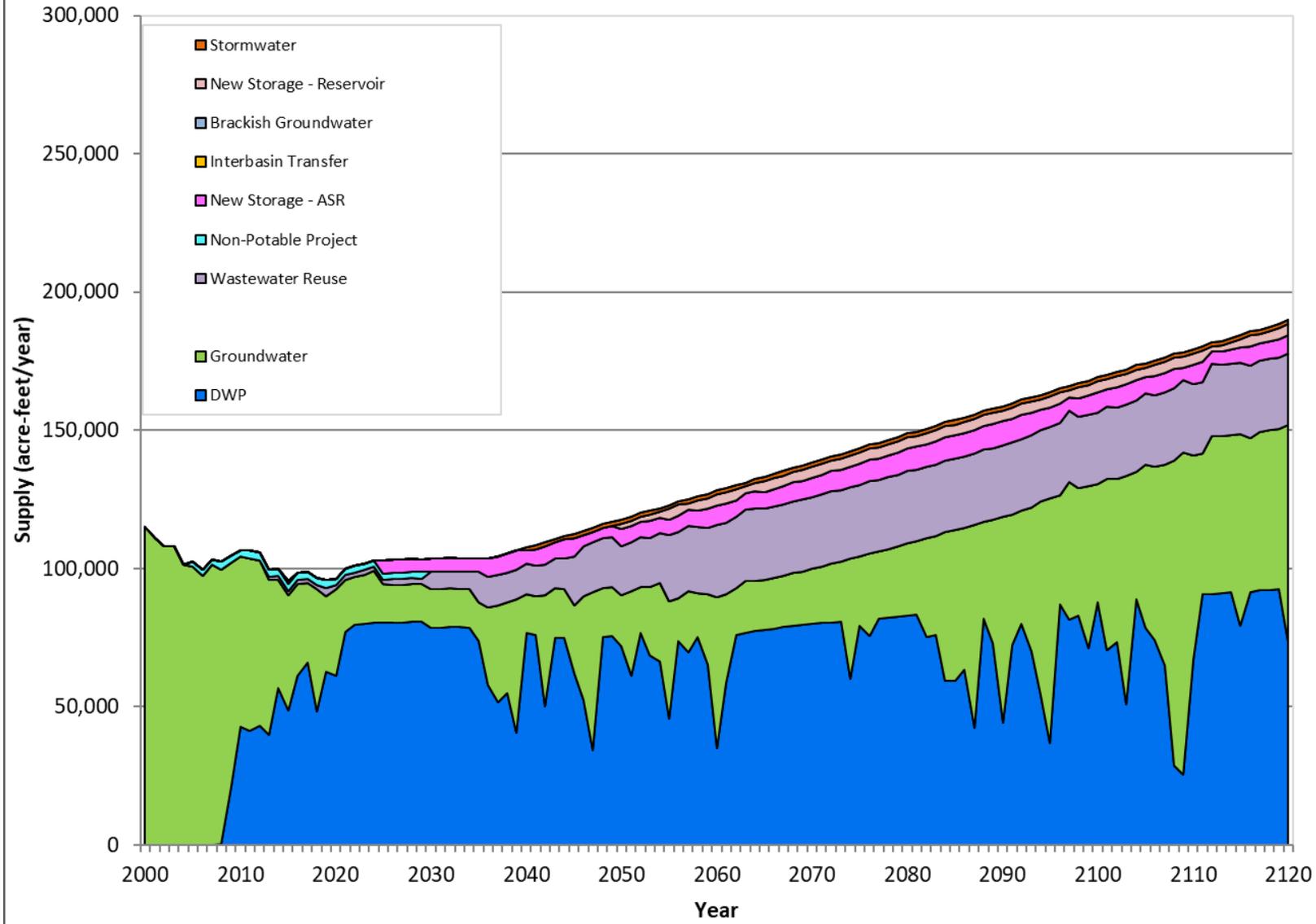
(112 downscaled projections)



Systems Modeling

(112 sequences)

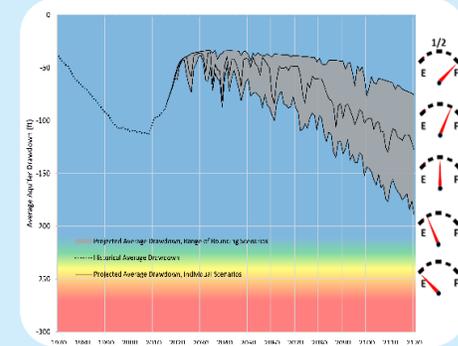




Predicting Demand and Supply



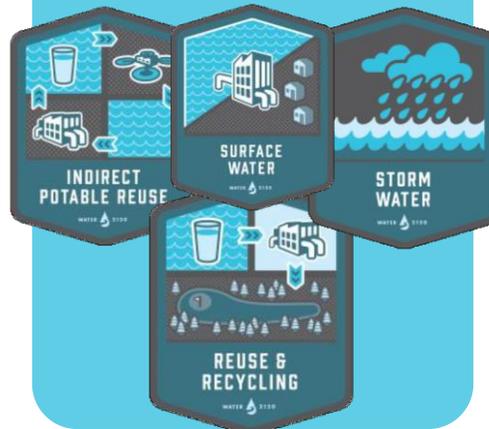
Water 2120: Securing Albuquerque's Water Future



Conserve



Diversify



Store

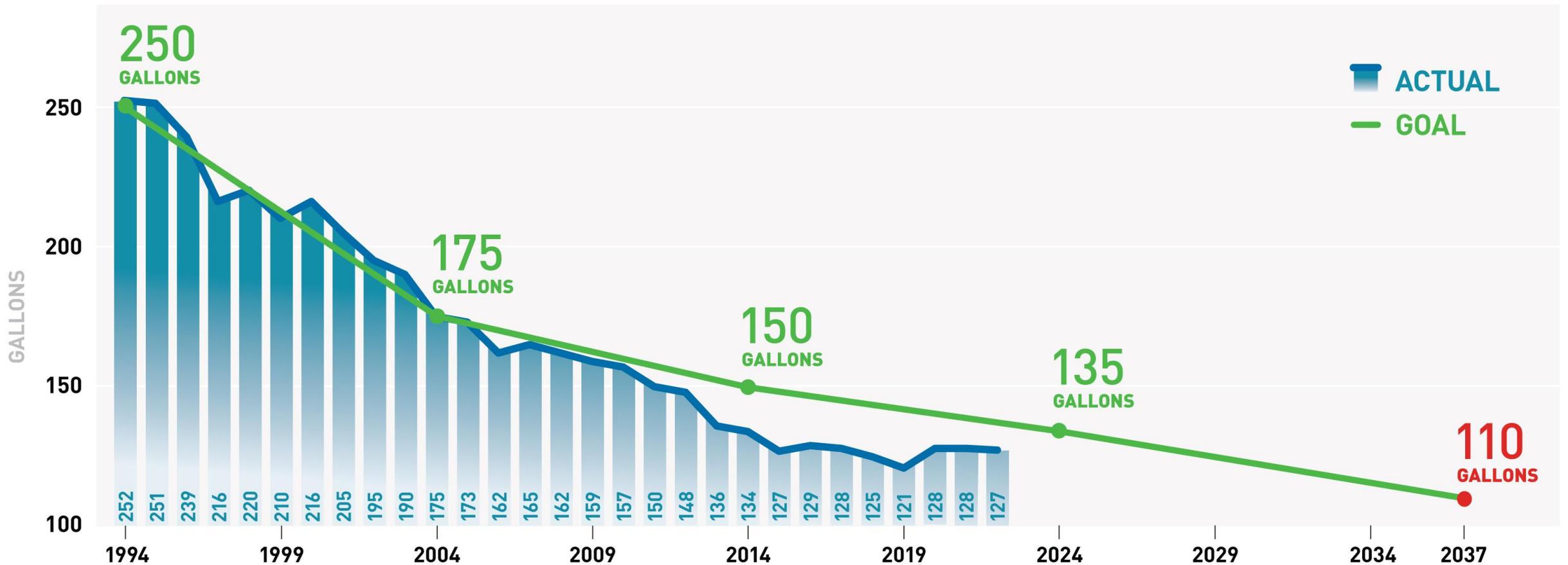


Manage



Water Conservation

Gallons Per Capita Per Day, 1994-2037



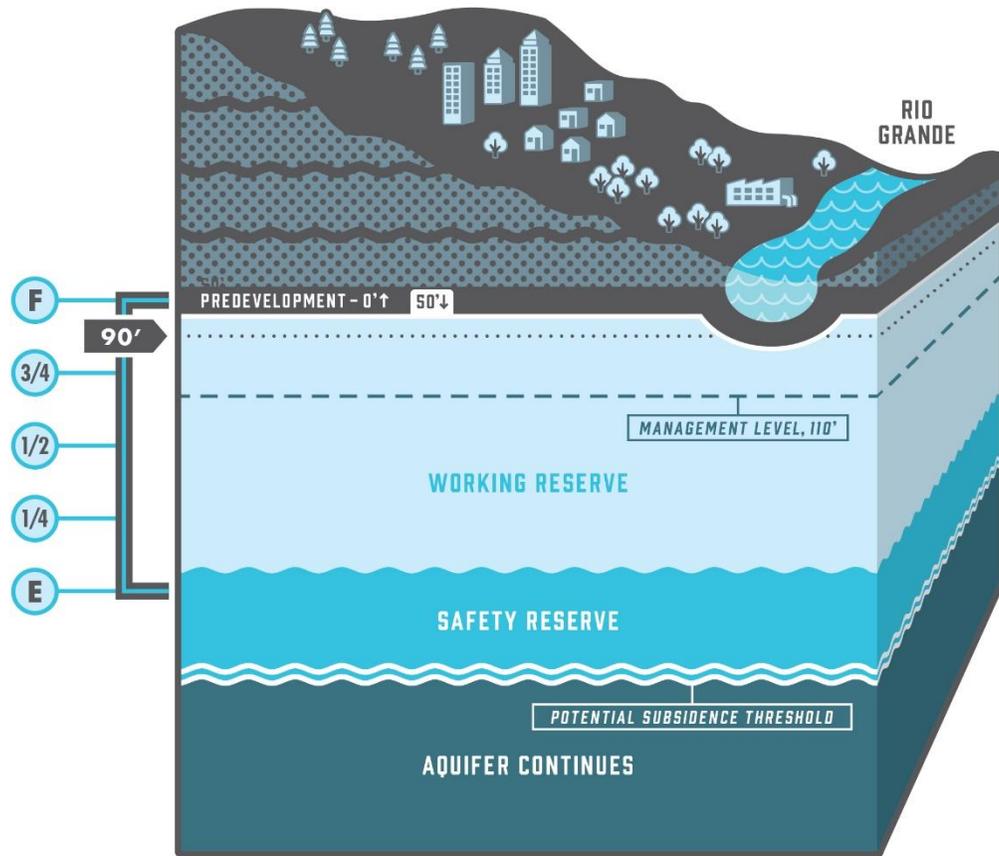
Groundwater Management Levels

Relative to pre-development (the elevation of groundwater before affected by pumping):

1. Working reserve 50 – 250 ft drawdown
2. Safety reserve 250 – 300 ft drawdown
3. 110 ft is target for average well drawdown

Below 300 feet = potential for aquifer compaction

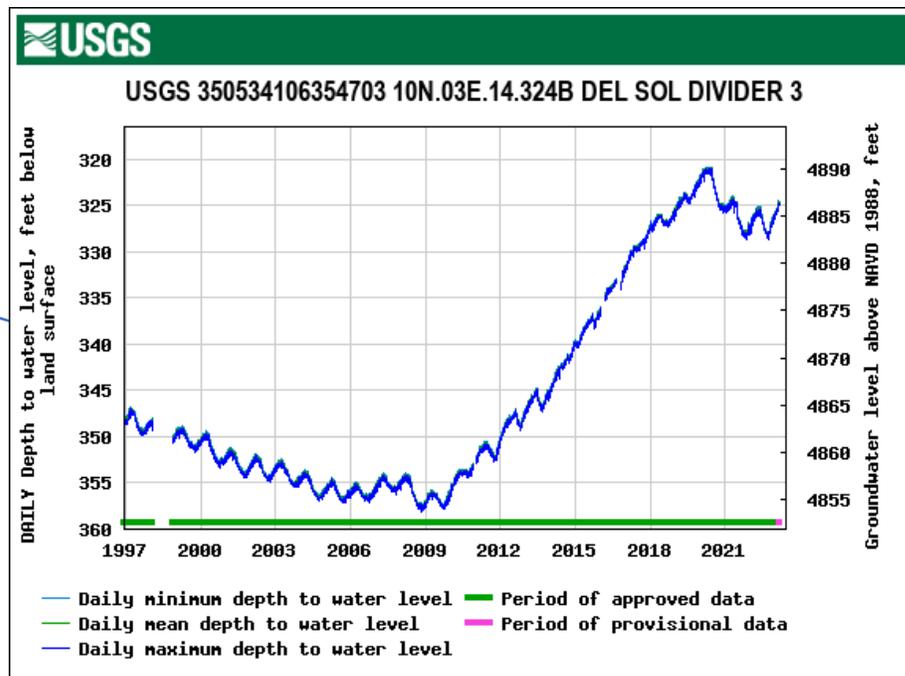
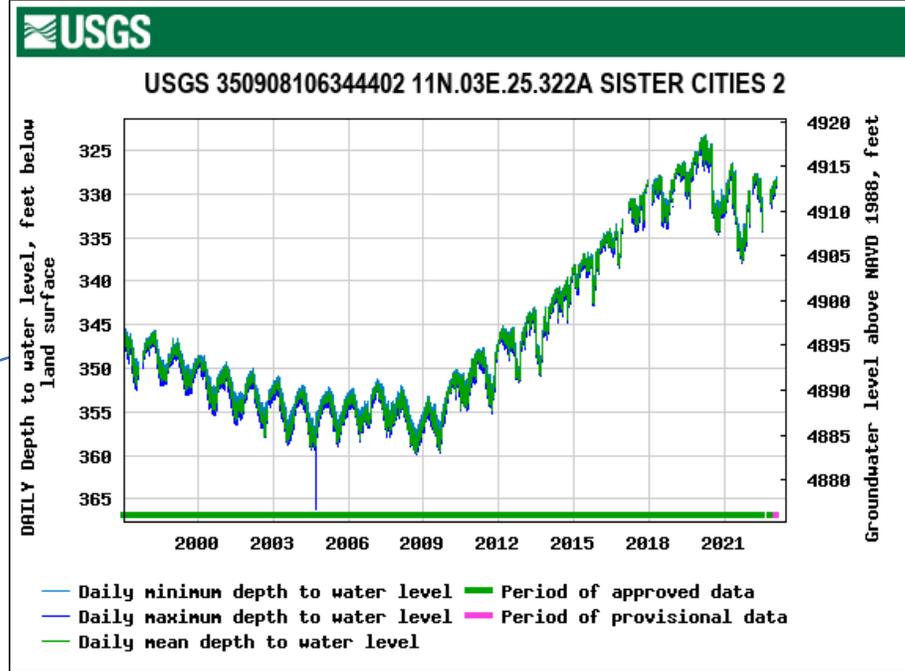
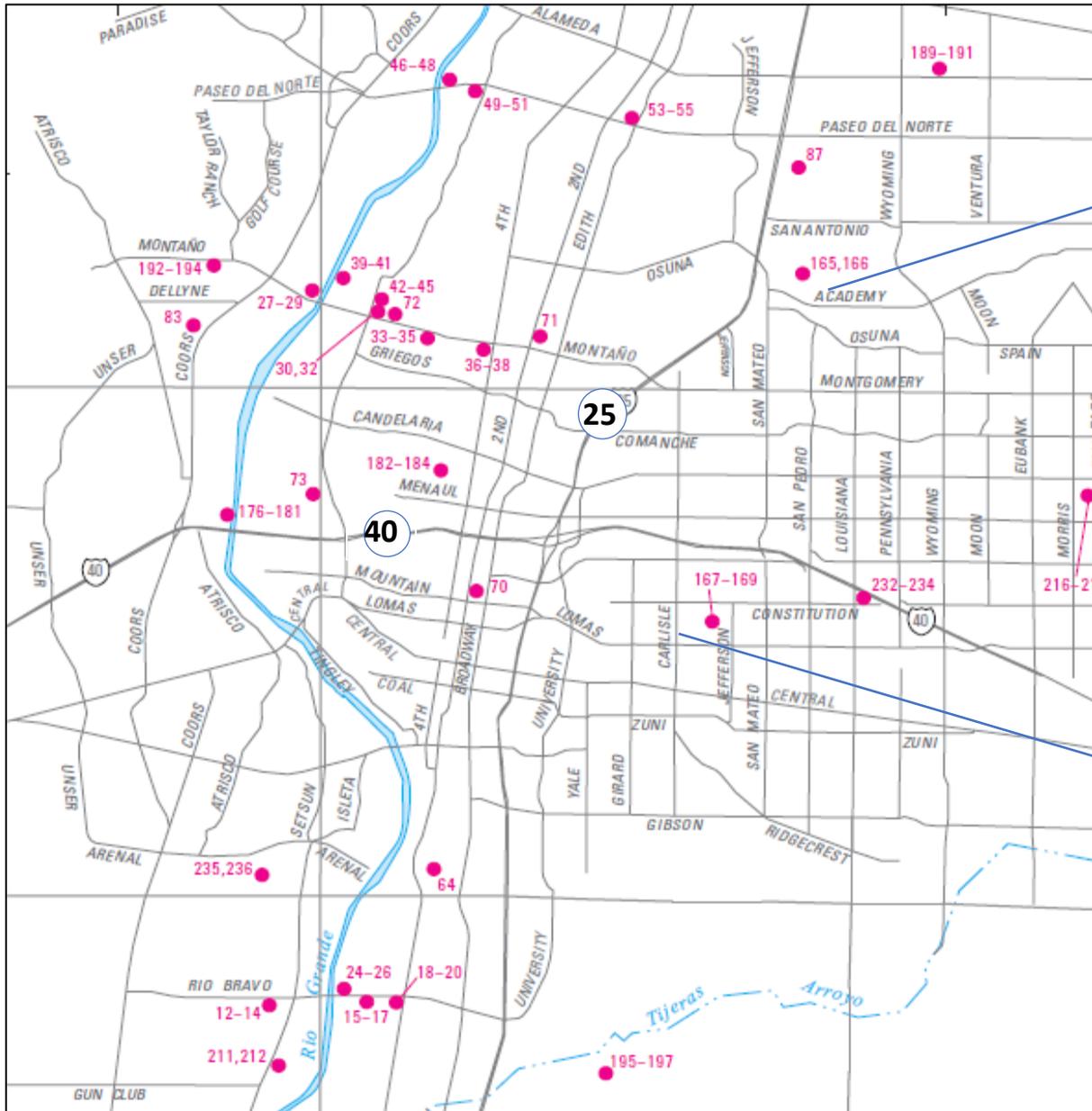
“Fuel gauge” is water level relative to 250 ft



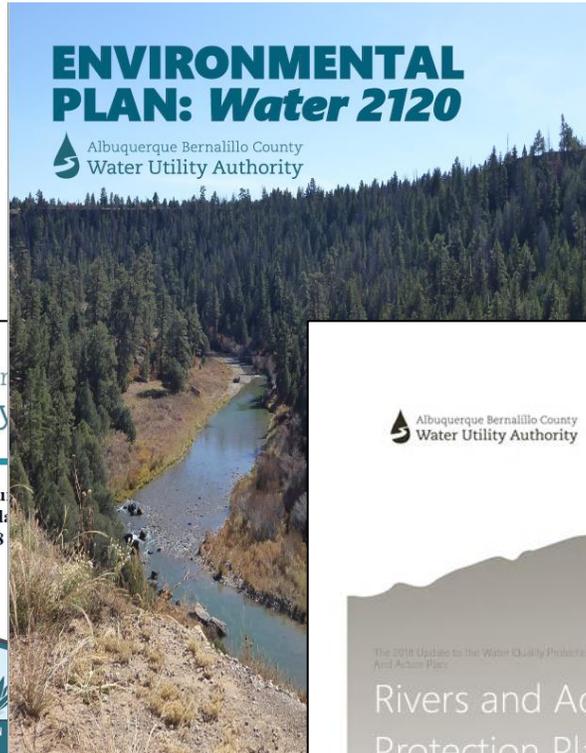
Graph not to scale



Rising Aquifer

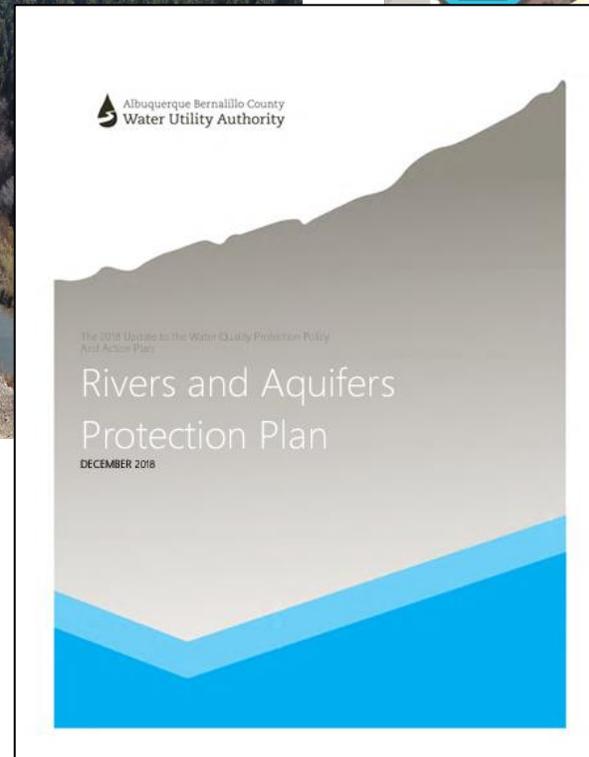
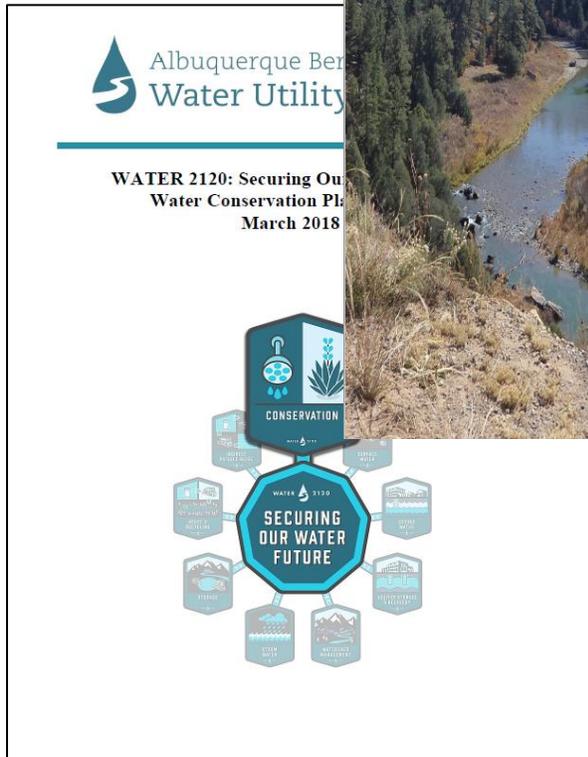


Water 2120 Implementation Plans

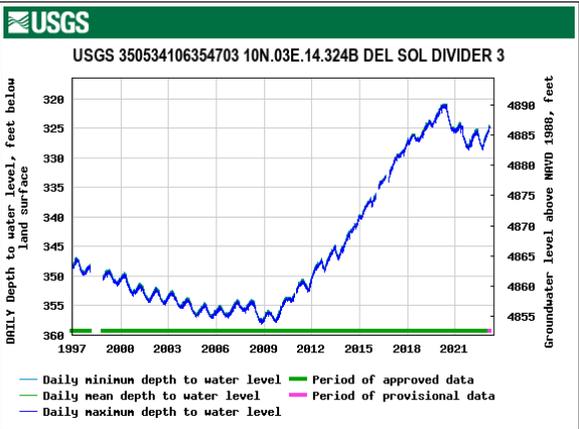


Albuquerque Bernalillo County Water Utility Authority
Governing Board
Chair: Commissioner Eric C. Olivas
Vice Chair: Councilor Tammy Eibelkorn
Councilor Pat Davis
Commissioner Barbara Baca
Councilor Trudy E. Jones
Mayor Timothy M. Keller
Commissioner Adriann Barboa
Ex-officio member Gilbert Benavides

Table of Contents



Water 2120 Policies



Water Resources Drought Management Plan

(Latest update April 2023)

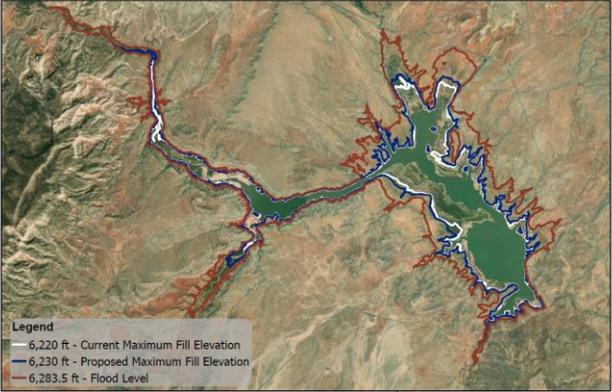


Albuquerque Bernalillo County Water Utility Authority
 Governing Board
 Chair: Commissioner Eric C. Olivas
 Vice Chair: Councilor Tammy Eschbacher
 Councilor Pat Davis
 Commissioner Barbara Baca
 Councilor Trudy E. Jones
 Mayor Timothy M. Keller
 Commissioner Adriana Barboza
 Ex-officio member Gilbert Benavides

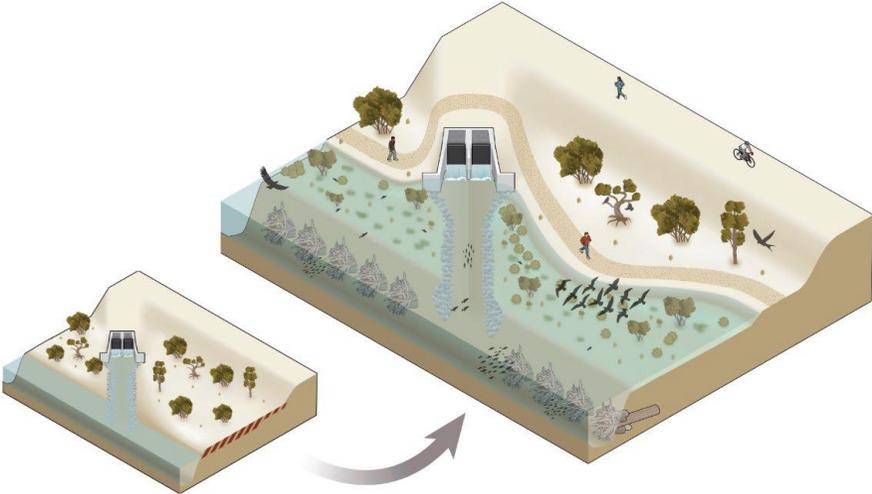
Table of Contents

C. Establish and Maintain a Groundwater Reserve

D. Update and Maintain the Water Conservation Strategy



Albuquerque Bernalillo County Water Utility Authority
 Abiquiu Reservoir Current and Proposed Maximum Fill Elevations



I. Protect and Enhance Storage of Native and San Juan-Chama Water

J. Protect Valued Environmental and Cultural Resources



Questions?