Technical
Customer Advisory Committee

AGENDA

Members

Elias Archuleta	Donald T. Lopez
Mark Begay	Anjali Mulchandani
John Fleck	Jill Peterson
Brian Freeman	Mario Nuño-Whelan
Kerry J. Howe	

Public participation for this meeting will be via WebEx video conference. To request login information for this meeting or to submit public comment, contact Jordan Salas at jsalas@abcwua.org or 505-289-3100. Requests for login information and public comment must be submitted before 2:00 PM the date of the meeting.

Thursday, September 4, 2025	**4:00 PM**	**1441 Mission Ave NE Conference Room 204**

1. Call to Order
2. Approval of Agenda
3. Approval of August 7, 2025, Action Summary
4. Public Comment
5. Water Modeling
6. Source Water Protection
7. Water Report
8. Other Business
9. Adjournment

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Water Utility Authority Office, Suite 5012, Albuquerque/Bernalillo County Government Center, phone 289-3100, as soon as possible prior to the meeting date.

Water Model Program

Overview

Presented by ABCWUA Model Manager
Kelli Berman

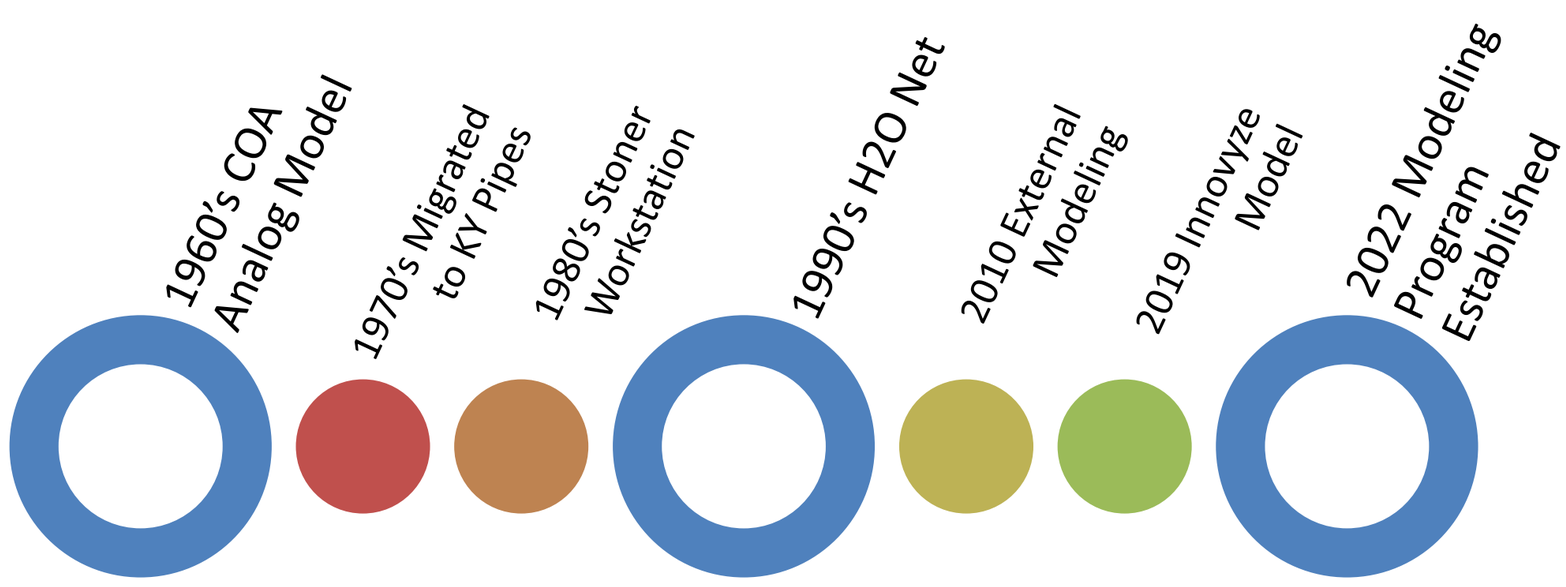
Agenda

- Model History
- Internal Projects
- External Projects
- Future Modeling Program Goals

The Purpose of the Modeling Group: Provide a centralized model and assist with developing design constraints and standard operating procedures to help users in providing consistent modeling results

Systems Modeled: Water, Reuse, Sewer

Model History

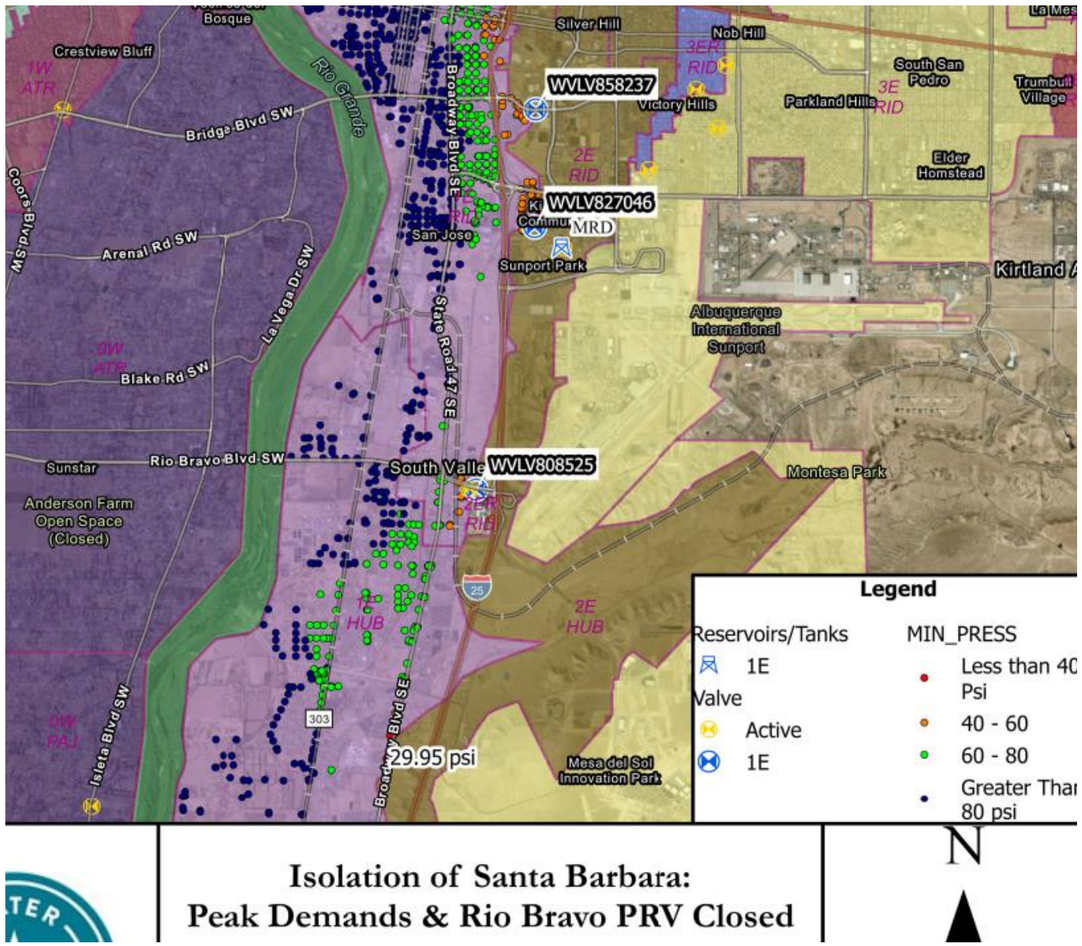


- Until 2022 ABCWUA modelers were hired for other positions. Modeling was an aspect of their job not their sole priority.
- In 2010 the Water Authority initiated the Integrated Infrastructure Plan, the project involved updating the water model.
- Model Manager was hired in the Summer of 2022.
- Received the model in the Fall of 2022 and migrated over to InfoWater Pro.
- The model was validated to Scada data for a 24-hr period, based on 2019 demands.
- In 2024 the modeling team grew allowing for internal in-depth studies.
- Currently working on updating the model with 2023 demands and validating to SCADA for a 7-day period.

Supporting the Water Authority

- Distribution
  - Fire Flow Analysis/Pressure Inquiries
  - Construction Conditions
  - Small Pipeline Replacement
  - Field Fire Flows

- Groundwater
  - Construction Conditions
  - Operation vs. Design Conditions (Calibration)



Supporting the Water Authority

- Utility Development
  - Training on how to us the Model
    - Fire Flow Analysis
    - Pressure Inquiries
  - Support for Large Developments/Large Users
- Centralized Engineering
  - Bringing Modeling In House
    - Owner Verification of Consultants' Model Interpretations
    - Prioritizing of current and future projects
    - Confirmation of criticality of pipe replacements and repairs
    - Verification of water pipe segments that can be removed or abandoned.

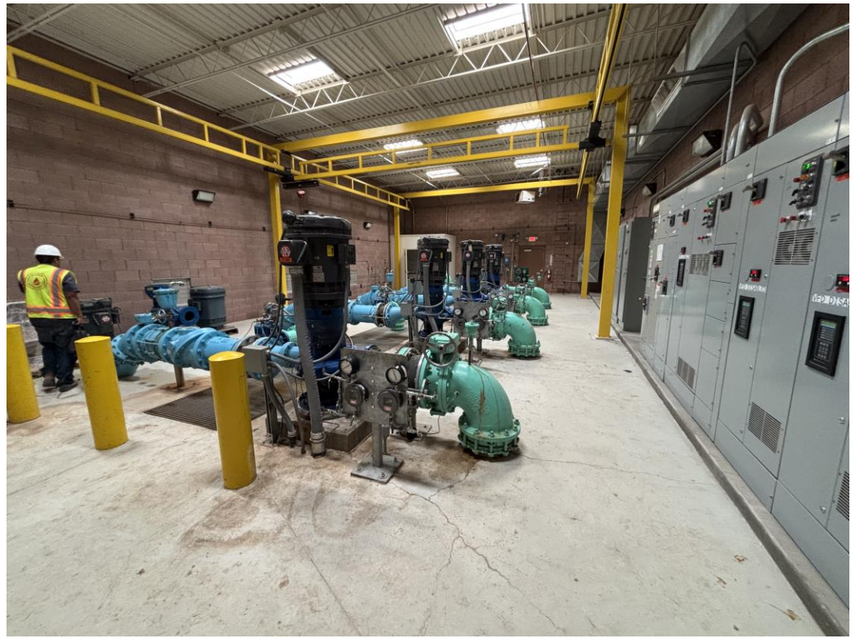
Internal Projects

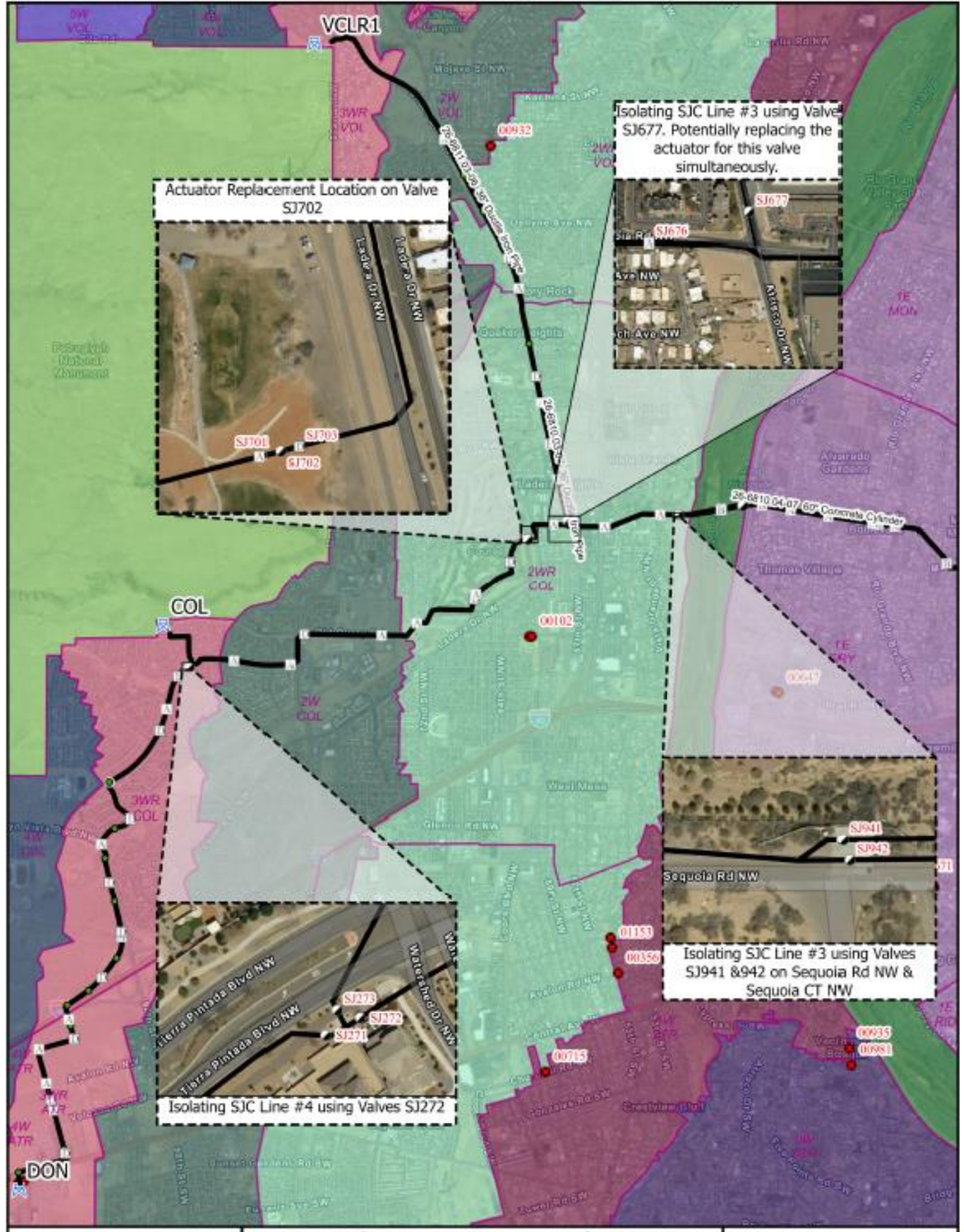
- Charles Wells Reservoir was taken offline for several months. The Water model EPS was used to identify potential impacts.

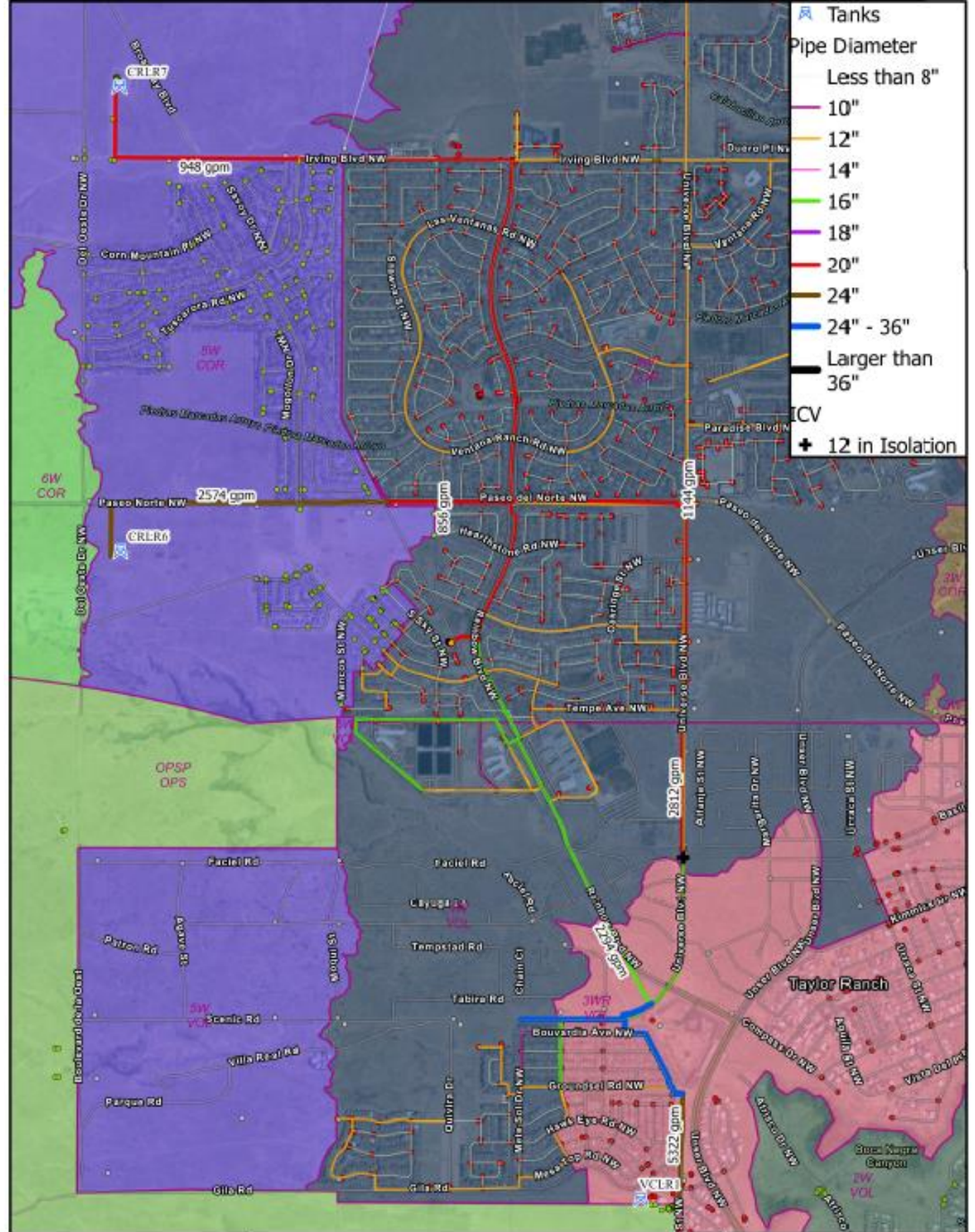
- An in-depth study was completed for the Hubble Springs Trunk to help identify infrastructure limitations
  - Established the maximum flow through the University Transmission and identified bottlenecks
  - A PRV was found to be open and being a main supply the 2ER zone. Resulted in a revised setting to only open during fire flow conditions.

- Working on a 4ER project to identify PRVs that can be abandoned or need replacement.

- Volcano Cliffs Reservoir isolation - identify several valves that were closed through model and field investigations







SJC Ladera Actuator Replacement

Project Description: Remove and replace the existing actuator with owner supplied actuator and other minor rehabilitation. The Ladera Vault is located on the Ladera Golf Course, Valve SJ702, with a total depth of 15.35 feet. Access into the vault is through 36-inch manway.

0 0.25 0.5 1 Miles

N

2025

Transmission lines From VCL to CRL Trunk

Test 1: Flow through Existing TL on rainbow and Paseo.
Q = 4,500 gpm, DP 134 psi
Test 2: Flow through Existing TL and New 20" TL on Universe & Paseo. Q = 5,550 gpm, DP 126 psi
Test 3: Flow through new 20" 20 TL. Q = 5,460 gpm, DP of 127 psi

Note: Flow for Model Test 3 is displayed. 12" on Universe was isolated at Rosa Parks and Universe for all tests

0 0.25 0.5 Miles

N

2025

Legend

3E_Pipes

Pipe Diameter

- 8" or Less
- 10"
- 12"
- 14"
- 16"
- 18"
- 20-24"
- 24" - 36"
- Greater than 36"

3E FRY

4ER FRY

5E FRY

3ER RID

3E RID

2E RID

BURR1

RIDR1

00143
00142
00193
00451
00194
San Pedro Dr SE

Closing Valve 194 & 193. Valve 451 to be replaced

00831
00849
00841
00844
00843
Central Ave SE
00842
00848

849 Does not Work. 24" Isolation will take place on new valve on Chico Rd NE. Valve 844,831 and 841 will need to be

00412
00410
00462
00463

Butterfly Valve 410 is operable and will be used to isolate RID Reservoir on Trumbull and Tennessee

00143
00144
00192

Shut Valve 192 Gate With Bypass on Valverde Dr.

00101
00103
00497
00104
00493
00495
00494
00496
Blvd SE

Close valve 497, 104, & 101.
495 & 493 are broken open. Note 2: Lists the valves needed for 18" isolation south of Trumbull along Louisiana

00188
00182
00181
00183
00184
Ave SE

Closing valves 183 181 & 182. Valve 184 to be replaced. Note 3 Lists the valves that need to be closed to the west and note 4 lists the valves to be closed to the North

WATER AUTHORITY

2025

Burton to Ridgecrest Transmission Line Isolation:
Burton Dead Head Trial

Note:

1. Valves on 42" to be replaced: 495, 496, 184, & 451. Other valve replacements 494(20"), 493(20"), & 103(24")

2. Isolating 18" on Louisiana South of Trumbull will require valves [542, 201, 592, 994, 1093, 751, 1145, and 851] to be closed

3. Isolating 24" along Trumbull up to Grove St SE will require closing the following valves: 497 (16"), 101, 104, 151, 152, 162, 163, 164, 165, 173, 175, 131, 181, *182, and 183.*

4. 24" north of Trumbull along Grove street up to Chico Rd SE will require valves [33, 893, 841, 843, 844, 792 & new valve on Chico] to be closed

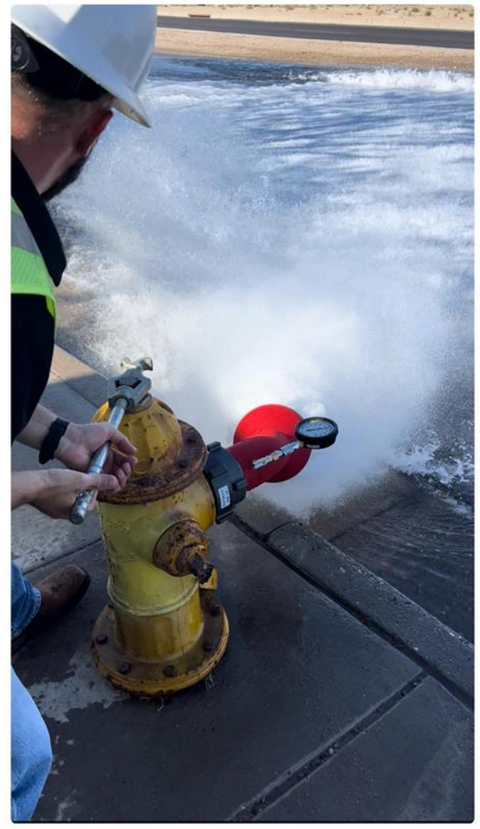
5. Inline valves on the 42" line are to be closed at 192 and 410. Additionally, valves 194 and 193 must be closed on the San Pedro and Trumbull

0 2,000 4,000 Feet

N

External Projects

- Model Sharing – ABCWUA does not share the model
- Problems – If a customer is not getting the anticipated hydrant flow or pressure, we will help distribution/utility development with investigating.
- Example: New Fire Academy on Atrisco Vista and Central
    - Model was predicting higher pressures and Available Fire Flows than the Fire Academy was experiencing.
    - Model matched field with lower PRV setting
    - field division surveyed elevations and found that the As-built documents contained incorrect Elevations, causing to incorrect PRV settings
- Review – Modeling will be done to confirm design and support projects as needed.



6W Atrisco Trunk Overview

Note:

1. The PRV setting was originally at 50 psi, and the fire department was experiencing static pressures of 39 psi at Hydrant 332.
2. The setting was moved to 55 psi, and the fire department started experiencing pressure of 44 psi at Hydrant 332
3. The Setting is now set at 60 psi, and they should start to experience pressures of 49 psi at hydrant 332
4. The Model has predicted they should be experiencing an 8 psi drop from the PRV setting. Field measurements indicate 11 psi drop. A hydrant design flow of approximately 2,000 gpm at Hydrant 332

2025

0 200 400 800 Feet

N

Future Modeling Goals

- Currently the model is being updated with 2023 demands and validated to SCADA for a 7-day period
- Working with Utility Development on developing a Standard Operating Procedure on creating hydrant curves for Fire Suppression Inquiries
- Growing to include more programs and users
- Expand design constraints on fire flow analysis specifically for dead ends and users with high fire flows (greater than 3,000 gpm)

Questions, Comments, Discussion

Source Water Protection Update

Kelsey Bicknell
Environmental Manager

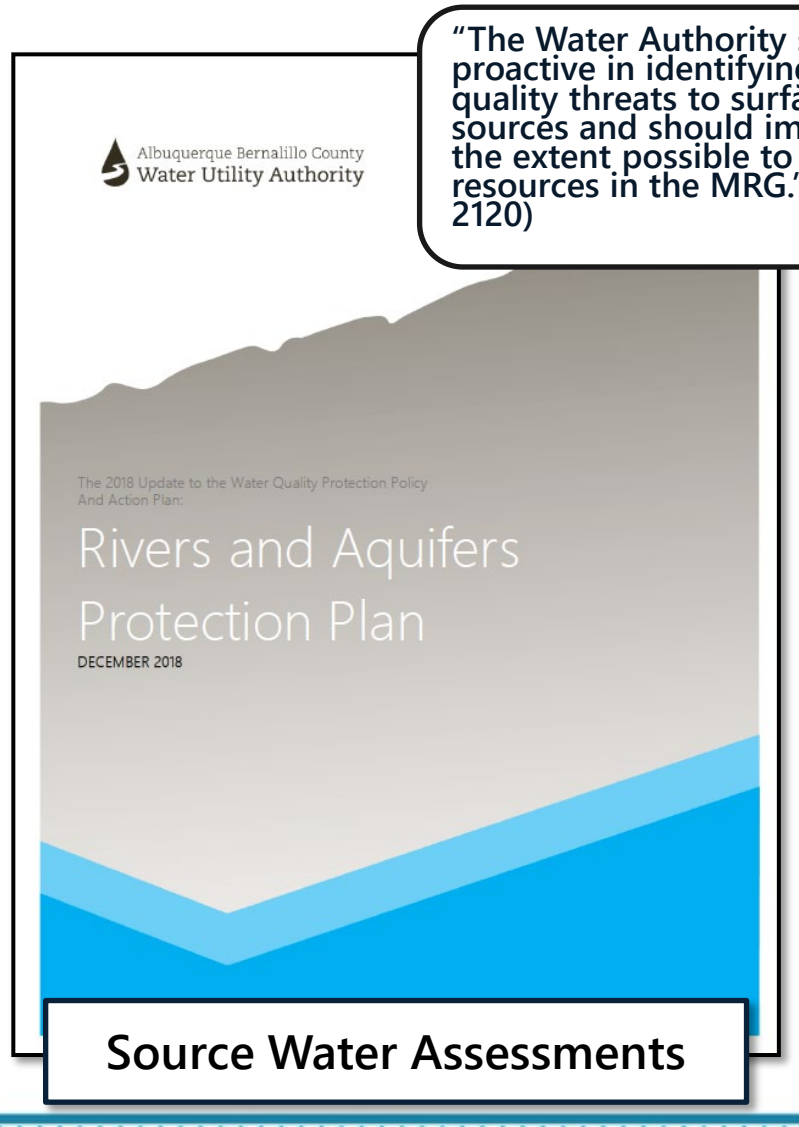
September 4, 2025

Technical Customer Advisory Committee

What is "Source Water"?

- Source water is water from rivers, lakes, etc. (surface water) or underground aquifers (groundwater) that is used to supply drinking water
- Source water protection refers to the policies and actions taken to protect water sources from contamination.

Source Water Protection Program



"The Water Authority should continue to be proactive in identifying potential water quality threats to surface and groundwater sources and should implement programs to the extent possible to protect water resources in the MRG." (Policy H, Water 2120)

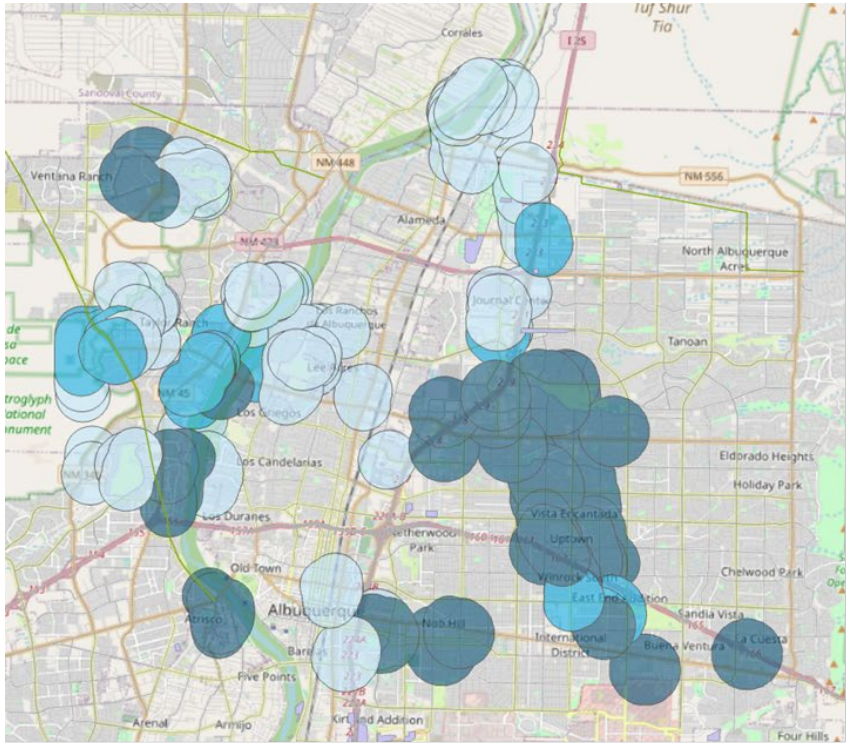
Source Water Assessments

Protection Measures and Actions Identified

- Continue existing program, including participation in Rio Grande Water Fund
- Promote best practices
- Advocate for rapid action to prevent or cleanup contamination
- Enhance agency coordination and communication

Source Water Assessments

1. Delineate Source Water Protection Areas (SWPAs)
2. Conduct an inventory of potential sources of contamination (PSOCs)
3. Determine susceptibility of water supply to contamination
   - *Vulnerability*
     - Assessment of threats in protection area
   - *Sensitivity*
     - Assessment of contamination mitigation based on infrastructure



Minimum Travel Time

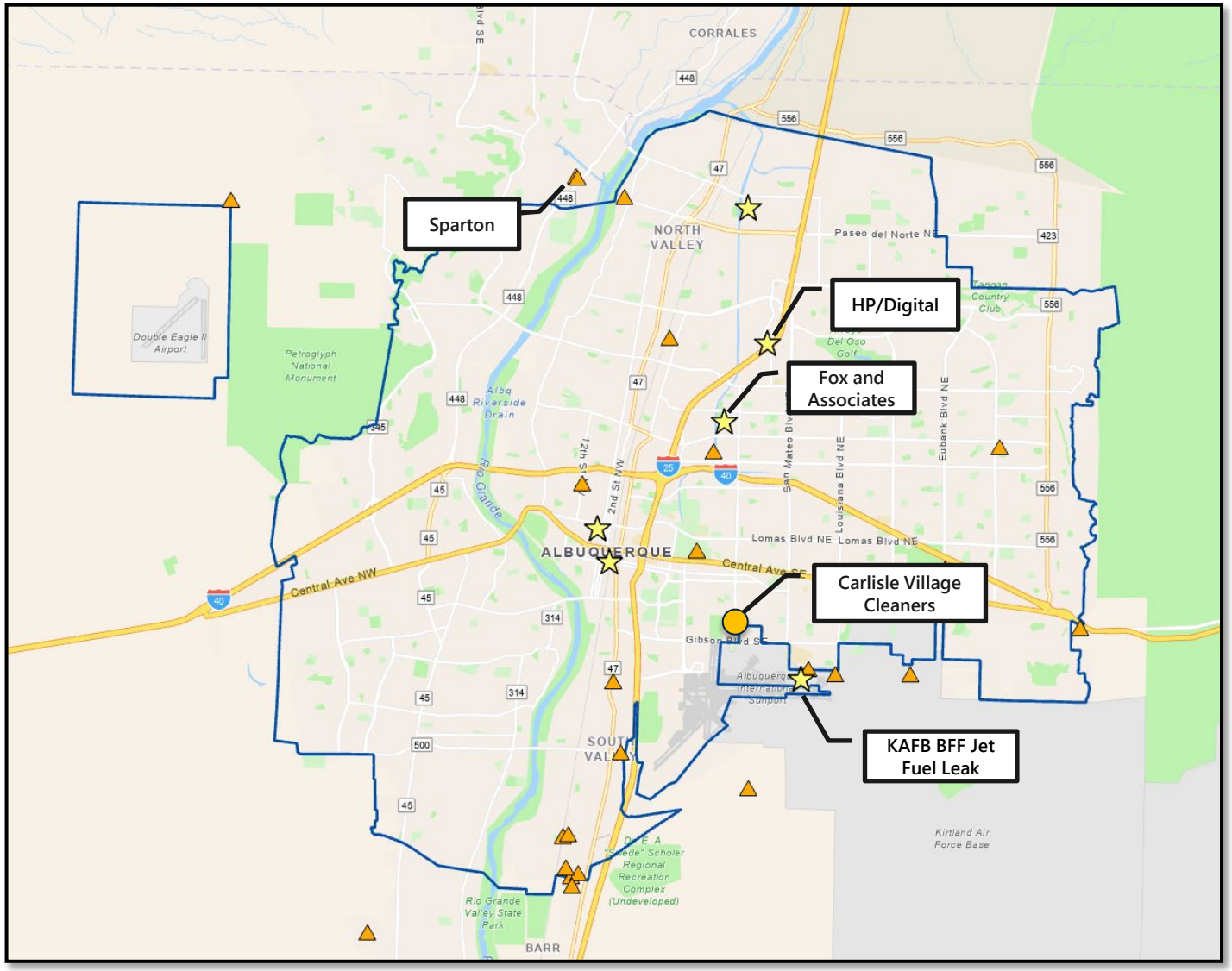
A — Less than 5 years

B — 5 to 10 years

C — 10 to 25 years

½ mile

Priority Groundwater Sites



Known groundwater contamination sites (GWQB, HWB, EPA Superfund)

Priority: Intersect a source water protection area

WATER UTILITY AUTHORITY
ALBUQUERQUE BERNALILLO COUNTY

KAFB Bulk Fuels Facility Jet Fuel Leak

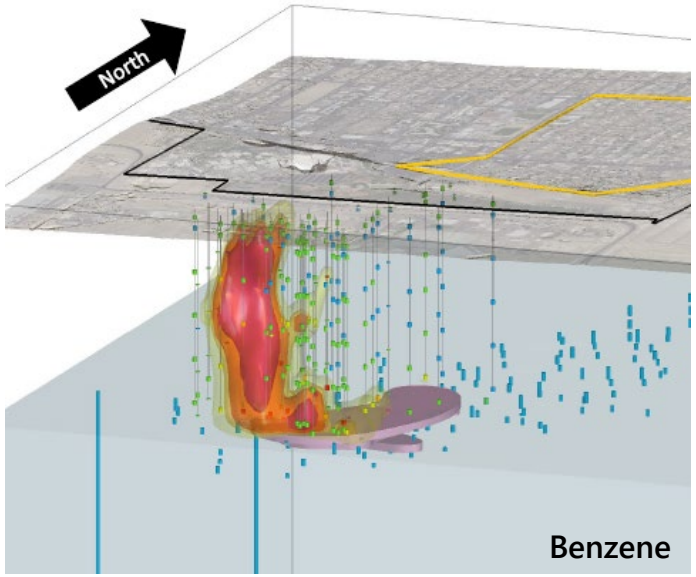
Regulator: New Mexico Environment Department Hazardous Waste Bureau
Contaminants of Concern: ethylene dibromide (EDB), BTEX compounds, av gas and jet fuel
Discovery: 1999

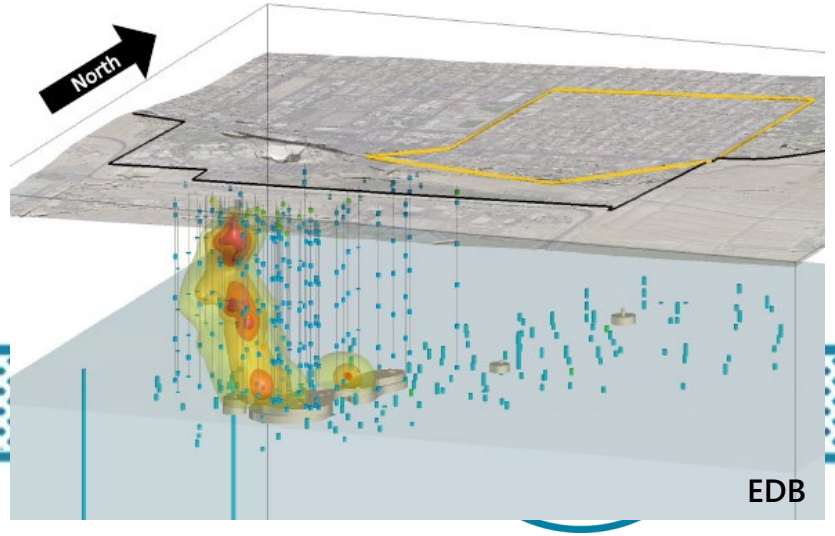
Air Force has submitted Phase II RCRA Facility Investigation Report (RFI)

- Present conceptual model (CSM) of nature and extent of contamination
- Critical step to transition site to remedy evaluation (CME)

Water Authority concerns:

- CSM lacks necessary detail
  - Fuel migration to groundwater
  - Influence of water table rise/fluctuations
- Continued exclusion from meetings/discussions with Air Force



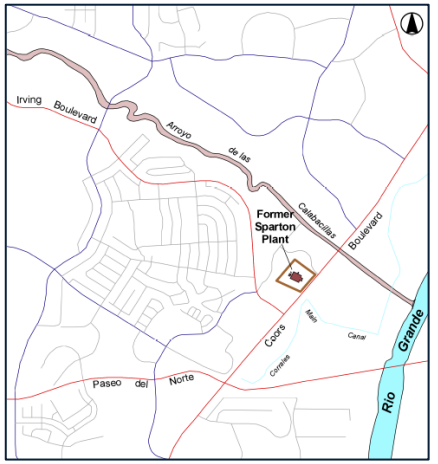


KAFB Bulk Fuels Facility Jet Fuel Leak

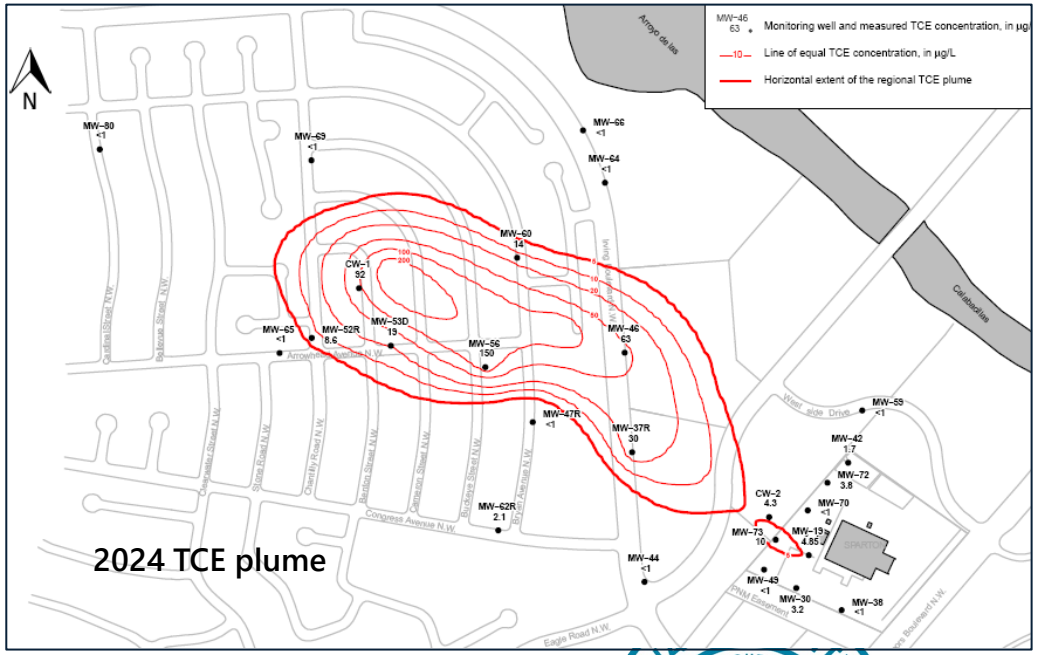
- Water Authority has submitted comment to NMED on Phase II RFI – expecting NMED to issue a Request for Information from Air Force for missing details.
- Water Protection Advisory Board recently advised the Water Authority to establish contingency measures to protect drinking water supply
  - Water Authority is seeking to extend a Contingency Plan Agreement from 2013 with the Air Force

Sparton

Regulator: New Mexico Environment Department Hazardous Waste Bureau, EPA
Contaminants of Concern: trichloroethene (TCE); 1,1,1-trichloroethane (TCA); 1,1-dichloroethane (DCE); chromium; 1,4-dioxane
Discovery: 1980's



- Former electronics parts manufacturing – electroplating materials and solvents
- Onsite disposal – concrete sump and lined surface impoundment
  - Management of former waste area – Post Closure Care Permit
- Soil and groundwater contamination investigation and cleanup dictated by a Consent Decree
  - Two extraction wells: on-site (est. 2002) and off-site (est. 1998). Treatment using air-stripping and disposal to infiltration gallery or on-site evaporation pond
  - Soil vapor extraction: operated intermittently between 1998 and 2001

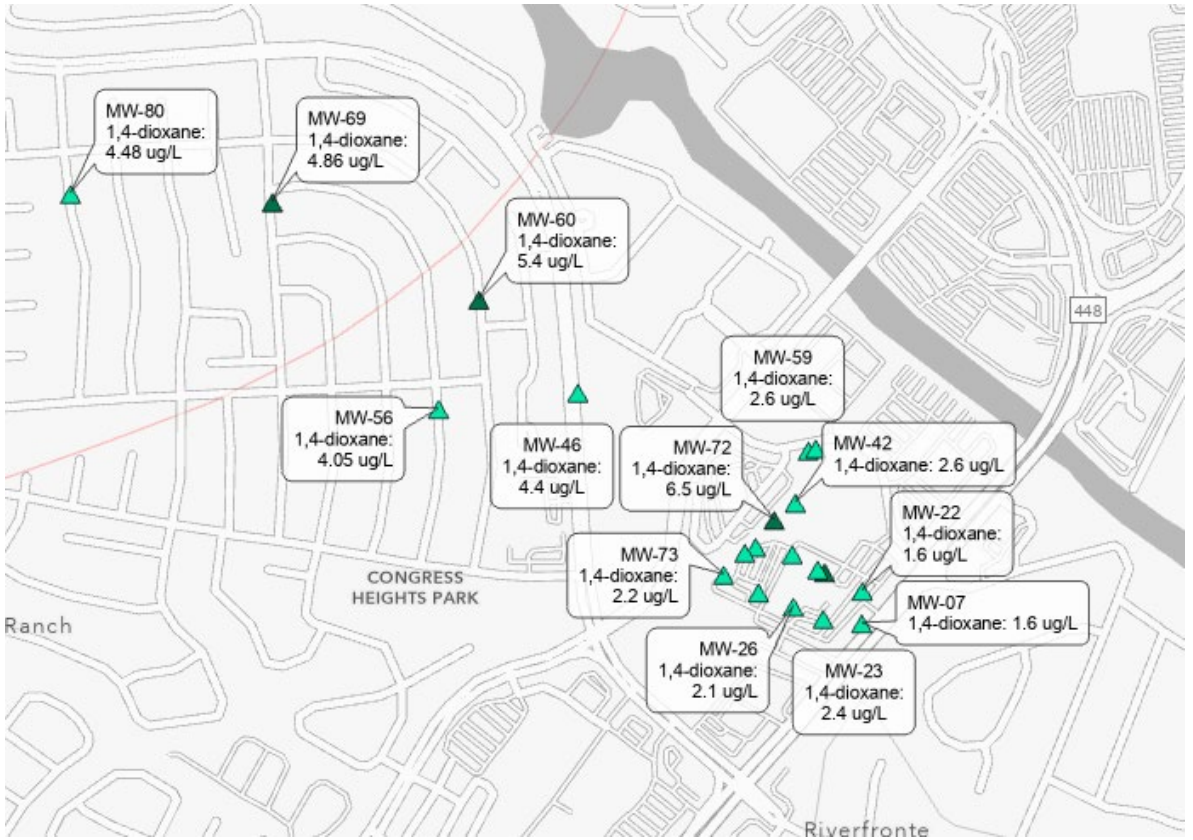


Sparton

- NMED negotiating with Sparton on Post Closure Care Permit renewal
- Sparton proposing to turn off on-site extraction well, monitor for changes quarterly for three years

Water Authority concerns:

- 1,4-dioxane plume in groundwater is unbounded
- Remedial technology doesn't treat 1,-4-dioxane and is actively reintroducing it to groundwater



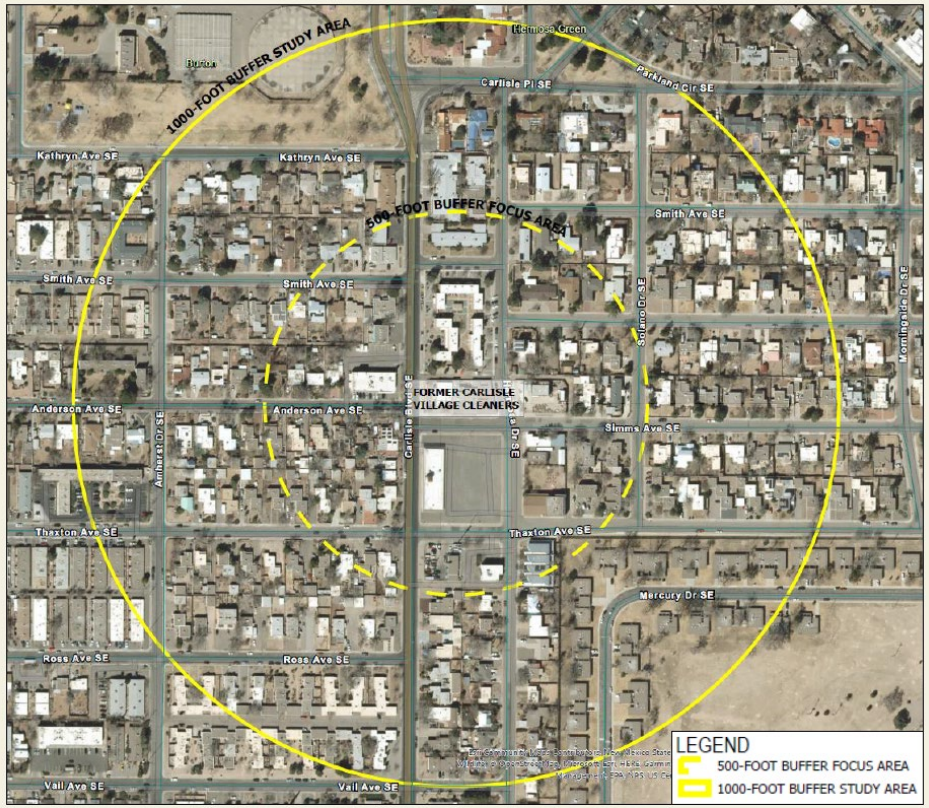
Carlisle Village Cleaners Superfund Site

Regulator: EPA; NMED Superfund Oversight Section
Contaminants of Concern: tetrachloroethene (PCE), TCE
Discovery: 2022

- Listed on National Priorities List July 2025
- Former dry cleaner facility (multiple dry cleaners)
- Substantial PCE soil vapor plume
- EPA Emergency Action: Mitigate vapor impacts (short term)
- Superfund/NMED Action: Investigate extent of contamination

Water Authority concerns:

- Unknown impact to groundwater
- Unknown extent of contamination



Fox and Associates

Regulator: NMED Groundwater Quality Bureau
Contaminants of Concern: TCA, DCE
Discovery: 1997

- Persistent groundwater contamination from improper disposal of TCA
- Soil vapor extraction system operated 2008-2012 – concentrations in groundwater have increased since it
- "Abatement" using monitored natural attenuation (MNA) – watch and wait

Fox and Associates

- Responsible party has signaled that it will petition the Water Quality Control Commission for alternative abatement standards
  - Alternative cleanup level for DCE: 284 µg/L (MCL is 7 µg/L)
  - Establish a groundwater use prohibition in abatement area

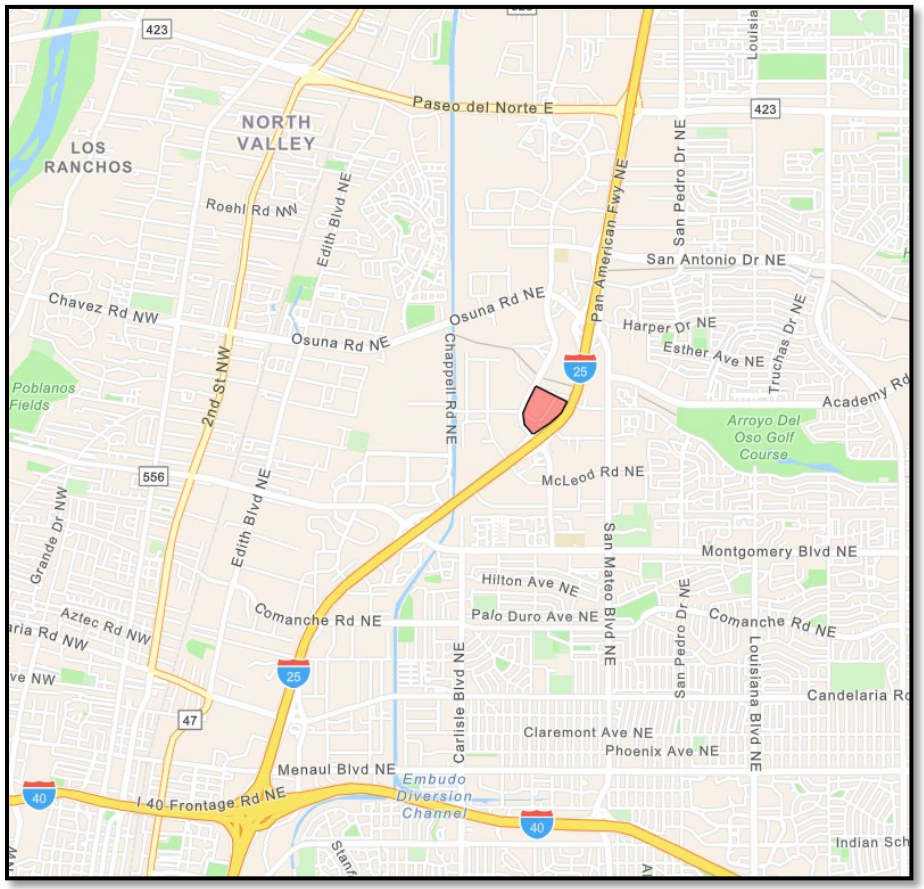
Water Authority concerns:

- Plume extent is not defined to the east or to the north – insufficient monitoring well network
- 1,4-dioxane may be present (common co-contaminant with TCA) – still needs to be confirmed with appropriate analytical method
- Stable/increasing concentrations suggest lingering source

HP/Digital

Regulator: NMED Groundwater Quality Bureau
Contaminants of Concern: 1,4-dioxane, PCE, TCA, DCE
Discovery: 1990

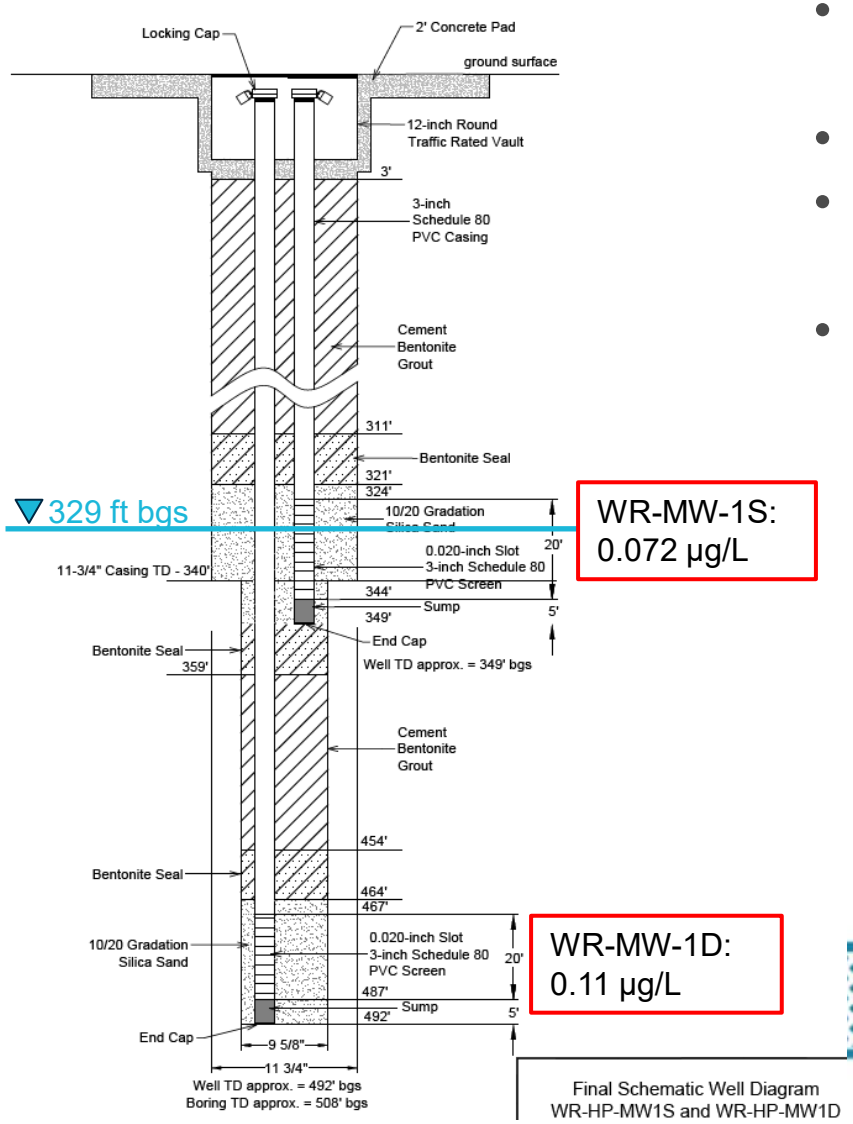
- 1970-2000: Former electrical parts manufacturing and assembly facility
- Chlorinated solvents entered subsurface through leaks in chemical storage and disposal areas
- Pump and treat system using air stripping for chlorinated solvents reintroduced 1,4-dioxane into aquifer



Water Authority concerns:

- 1,4-dioxane plume is not fully characterized
- Close proximity to supply wells
- Need for treatment of both on-site and off-site 1,4-dioxane contamination

HP/Digital

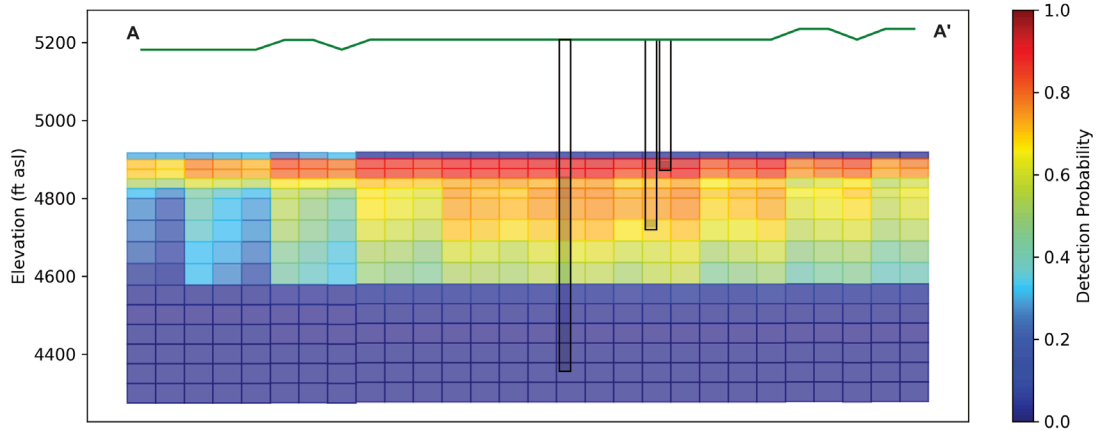


WR-MW-1S:
0.072 µg/L

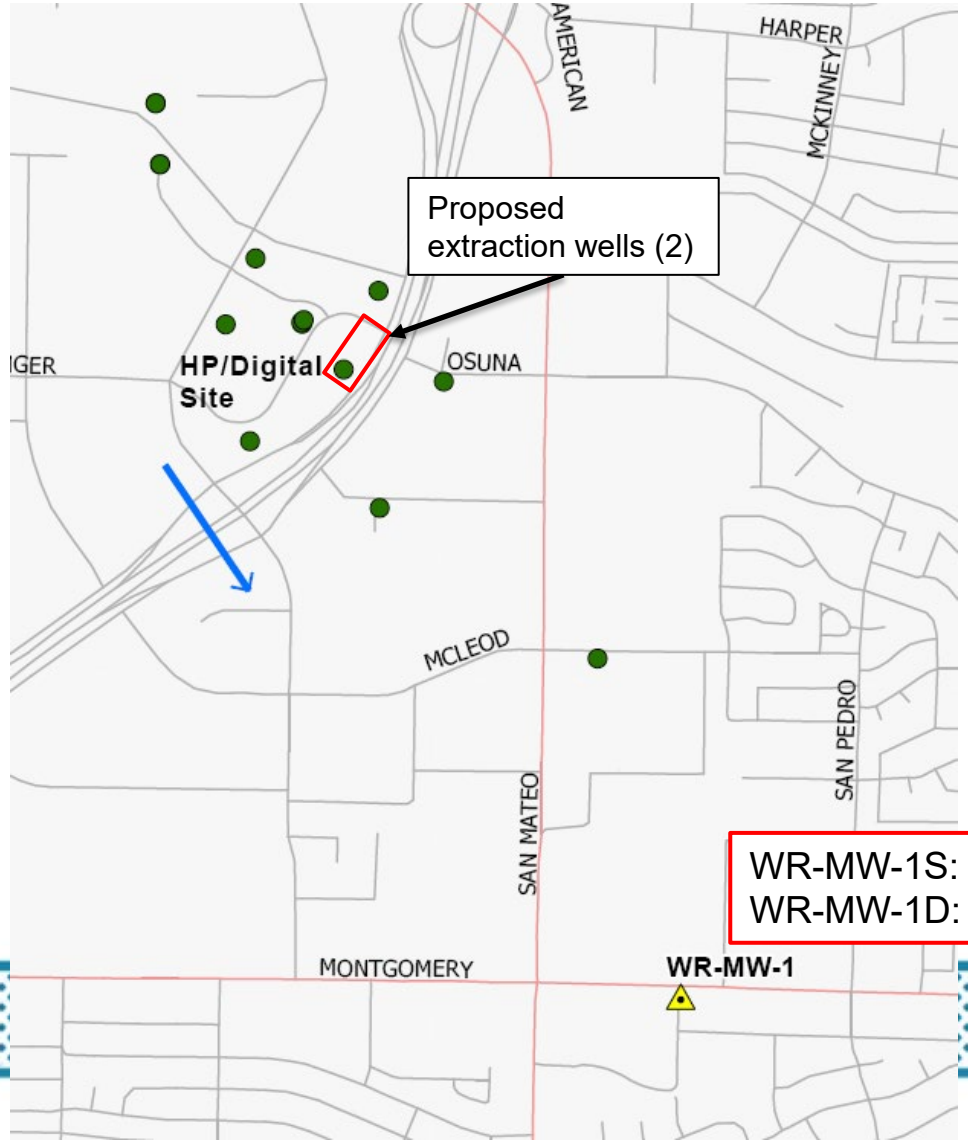
WR-MW-1D:
0.11 µg/L

Final Schematic Well Diagram
WR-HP-MW1S and WR-HP-MW1D

- Water Authority installed WR-HP-MW1S and MW1D to monitor supply well source water
- Wells were completed and sampled in Spring 2025
- Design based on the results of probabilistic groundwater modeling
- <u>WR-HP-MW1D is the only monitoring well screened below the water table off-site</u>



HP/Digital

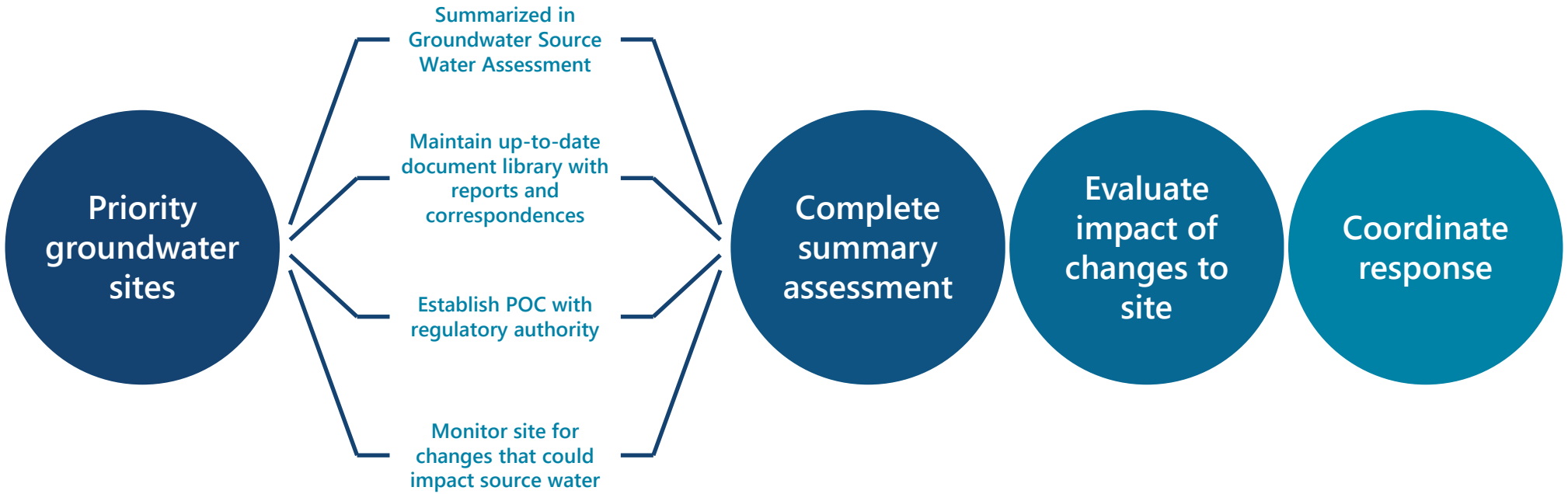


May 2025

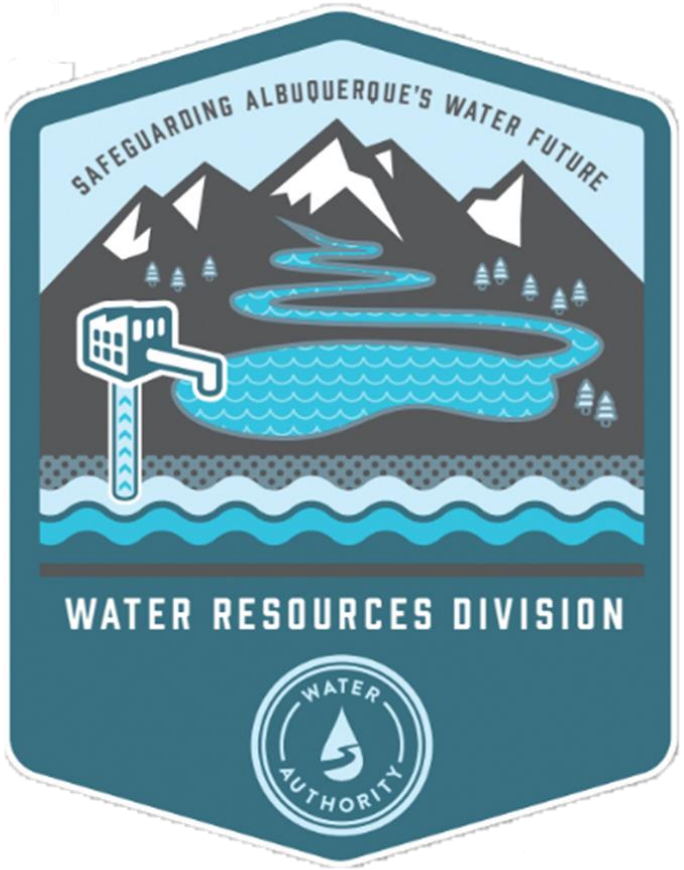
- Confirmed detection of 1,4-dioxane over 1 mile downgradient of Site
- Higher concentration at depth (~150 ft below water table)
- Only on-site treatment proposed – will not impact offsite plume
- Water Authority has submitted three technical memos since August 2024 detailing concerns Water Protection Advisory Board submitted letter to NMED calling for more action at the Site

NMED and Responsible Party unwilling to establish off-site treatment or additional deep offsite monitoring wells

Summary


Priority groundwater sites
Summarized in Groundwater Source Water Assessment
Maintain up-to-date document library with reports and correspondences
Establish POC with regulatory authority
Monitor site for changes that could impact source water
Complete summary assessment
Evaluate impact of changes to site
Coordinate response

Questions?

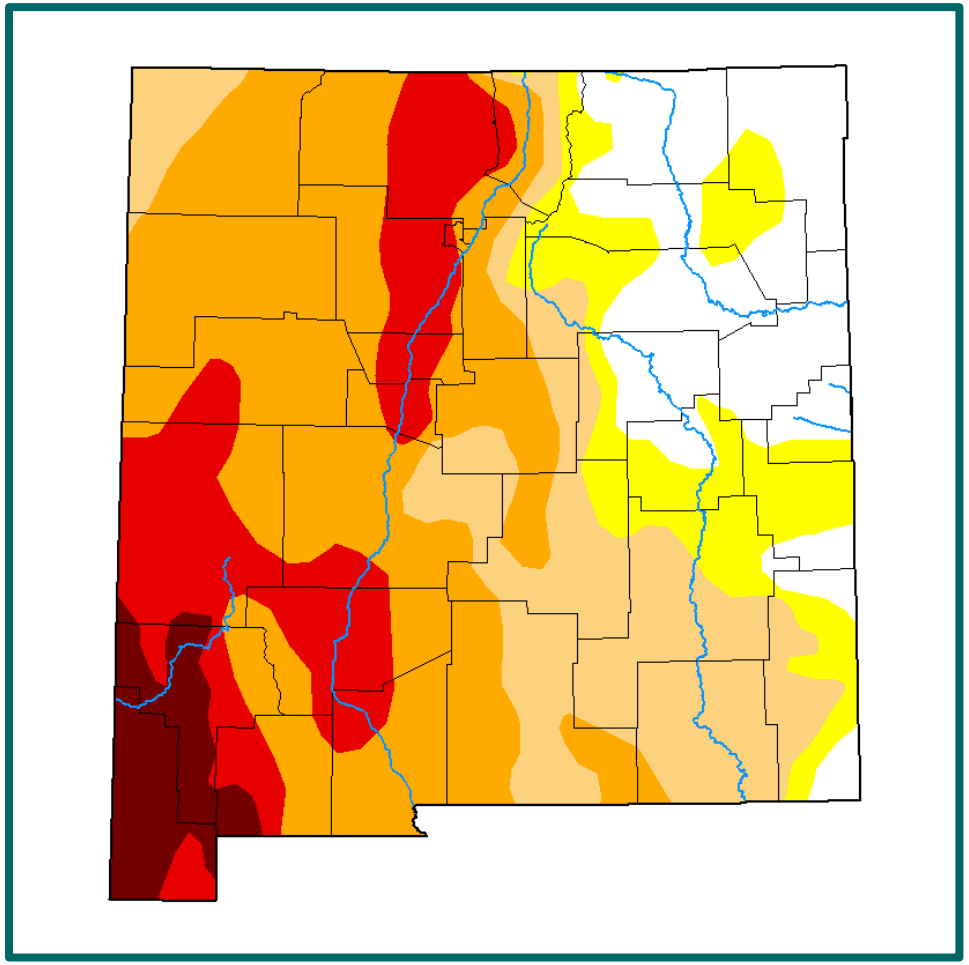


Water Resources Division

Water Report and Water 2120 Update

Mark Kelly, PE
Water Resources Manager

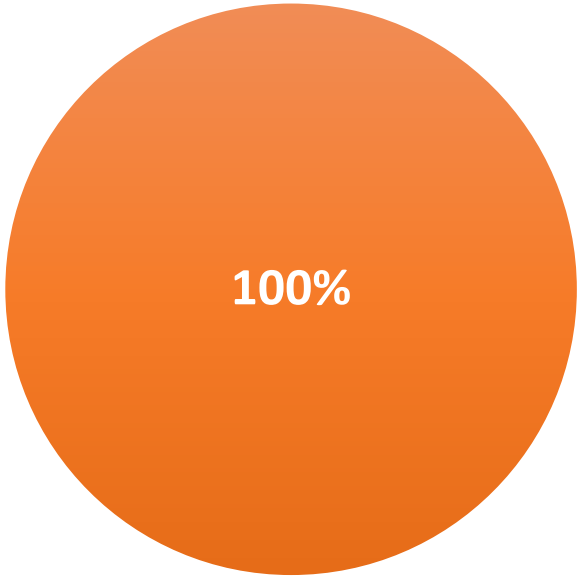
SUPPLY METRICS SNAPSHOT



D0 D1 D2 D3 D4

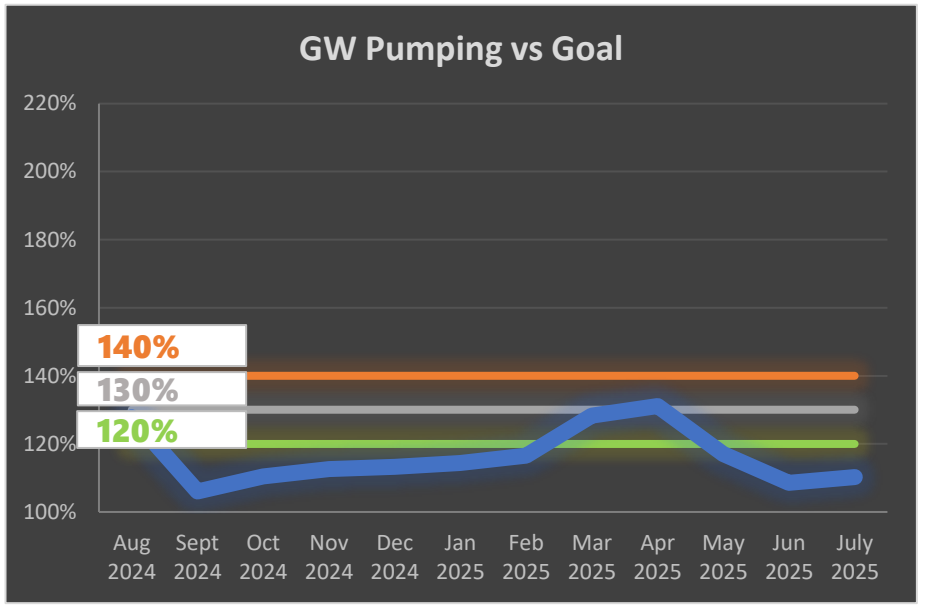
Water Authority Drought Stage: Drought Advisory

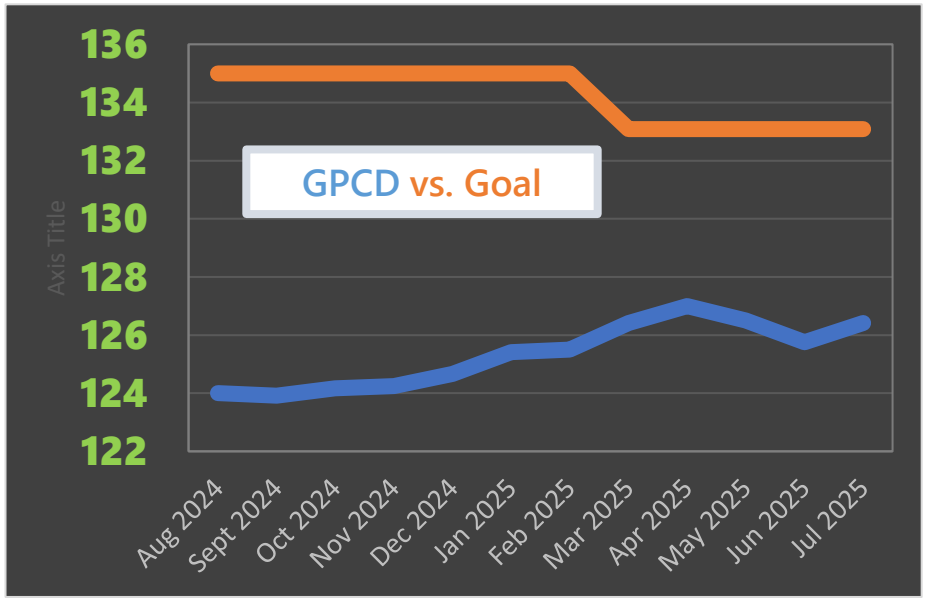
September 2025
(July Supply Data)



Groundwater Production

Surface Water Production





Drought Stages

Groundwater Production / GPCD	DSCI ≥ 300	Less than 120% of the Annual GW Production Goal	Between 120% and 130% of GW Production Goal	Between 130% and 140% of GW Production Goal	More than 140% of the GW Production Goal
0 to < 2 GPCD over the goal	Stage 0	Stage 0	Stage 0	Stage 0	Stage 1
2-4 GPCD over the goal	Stage 0	Stage 0	Stage 1	Stage 1	Stage 2
4-6 GPCD over the goal	Stage 0	Stage 0	Stage 1	Stage 2	Stage 3
> 6 GPCD over the goal	Stage 0	Stage 1	Stage 2	Stage 3	Stage 3

Drought Stages

Groundwater Production / GPCD	DSCI ≥ 300	Less than 120% of the Annual GW Production Goal	Between 120% and 130% of GW Production Goal	Between 130% and 140% of GW Production Goal	More than 140% of the GW Production Goal
0 to < 2 GPCD over the goal	Drought Advisory	Drought Advisory	Drought Advisory	Drought Advisory	Drought Watch
2-4 GPCD over the goal	Drought Advisory	Drought Advisory	Drought Watch	Drought Watch	Drought Warning
4-6 GPCD over the goal	Drought Advisory	Drought Advisory	Drought Watch	Drought Warning	Drought Emergency
> 6 GPCD over the goal	Drought Advisory	Drought Watch	Drought Warning	Drought Emergency	Drought Emergency

Drought Stages

Table 5. Drought Stages and Demand-Based Measures

KEY ■ Educational ● Prescriptive ▲ Monitoring ★ Regulatory

STAGE 0 - DROUGHT ADVISORY

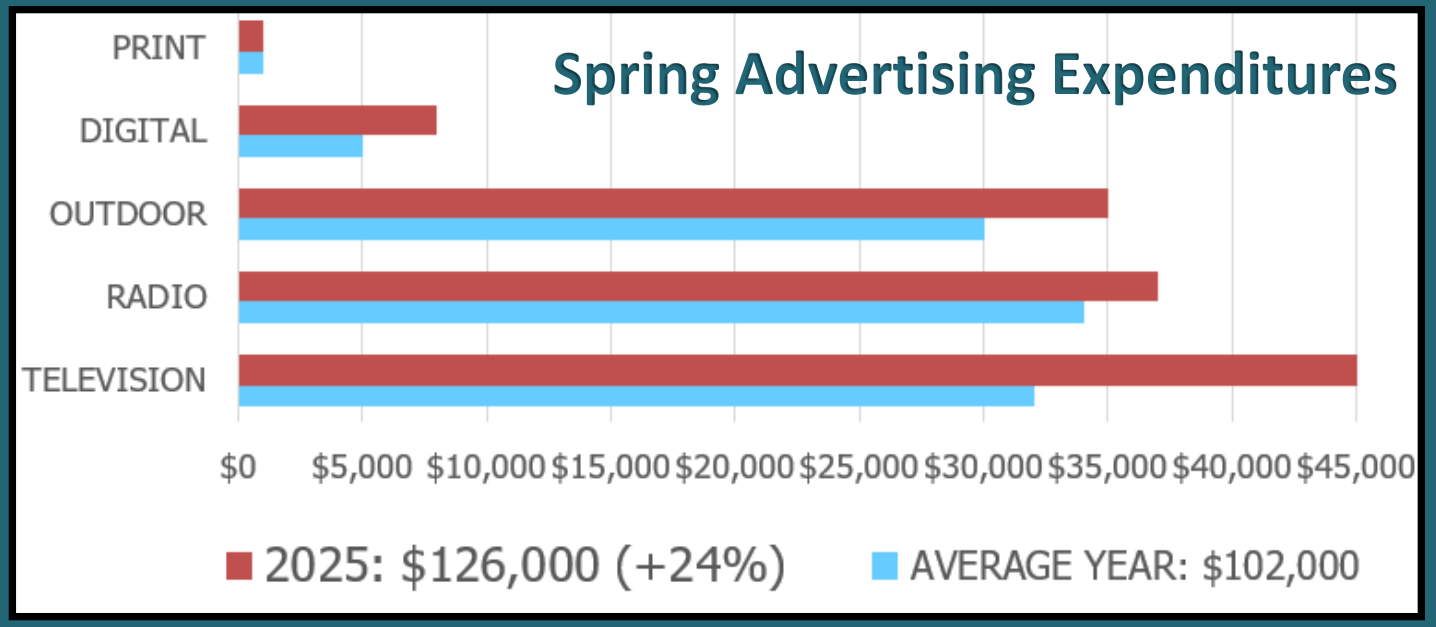
- ■ Increase public education: Offer Drought Smart $20 rebate classes
- ● Develop conservation guidelines using up-to-date consumption data
- ■ Develop Public Drought Campaign
- ▲ Monitor regional drought conditions, and track annual supply and demand triggers

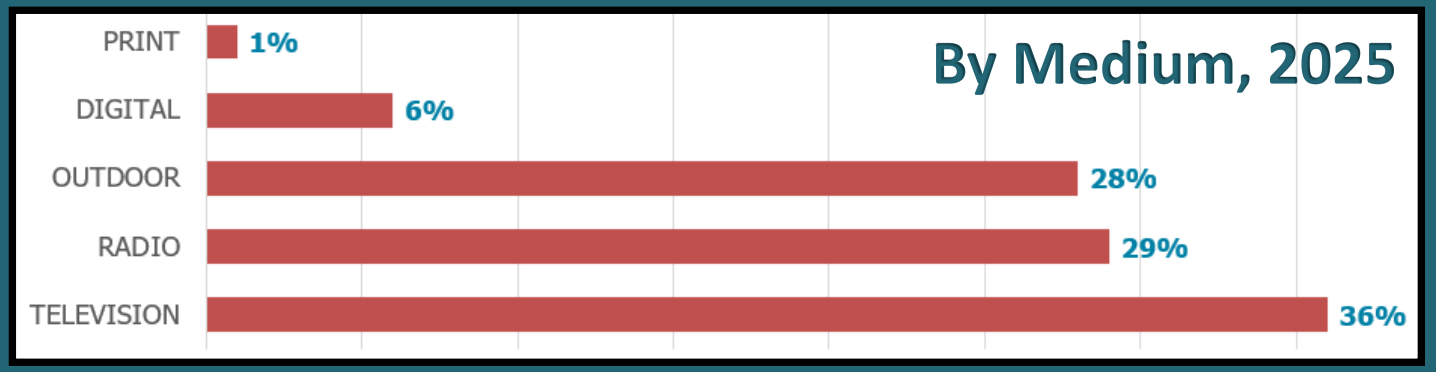
STAGE 1 - DROUGHT WATCH

- ★ Enact Water Waste Compliance Drought Measure: Double Fees for wasting water - Malfunctions should be fixed within 48 hours (about 2 days)
- ■ Implement the Drought Awareness Campaign
- ● Coordination of the Drought Agency Group -1. synchronize public education and public support for vulnerable populations and 2. work with public agency partners-initiate water use audits and optimize water efficiency plans
- ● Send targeted information to customers exceeding conservation guidelines; water audits offered
- ● Expand leak alert program using AMI reports

‘Drought Advisory’ Water Conservation Measures:

- Increasing public outreach including duration, quantity, frequency, reach, and budget
- Promotional materials that include drought enhancements and focus on drought reminders
- Increase public outreach that emphasizes education and voluntary conservation
- Offer ‘Drought Classes’ for $20 rebate to customers



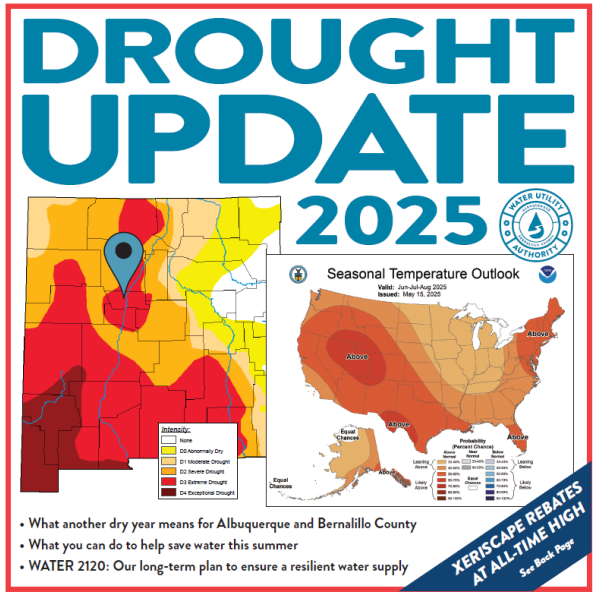


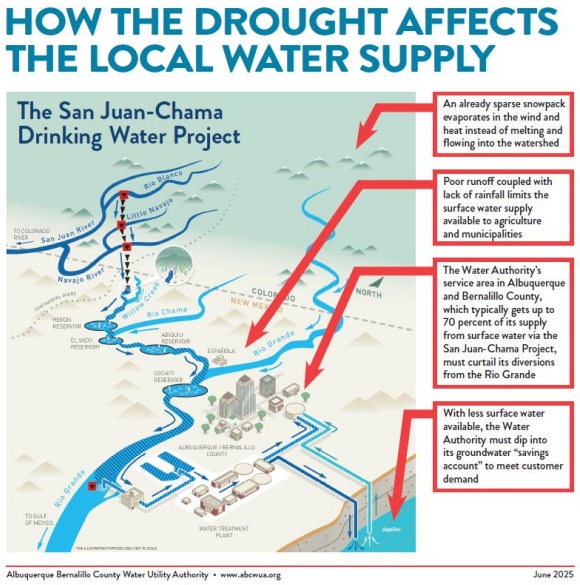
Governor's Executive Order on Drought

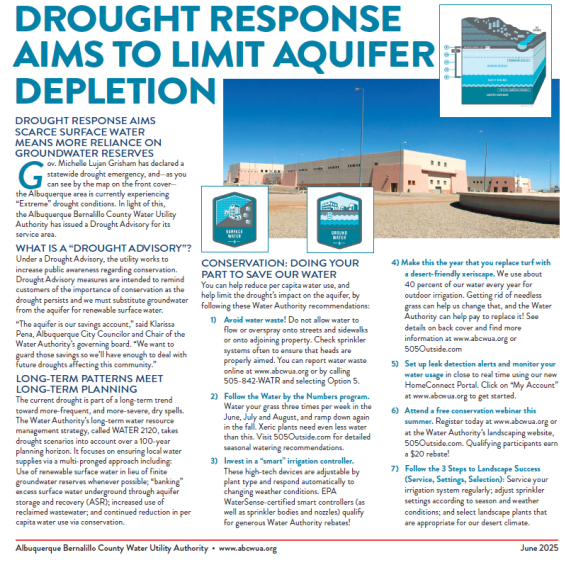
5/22/25

Additional Efforts Include:

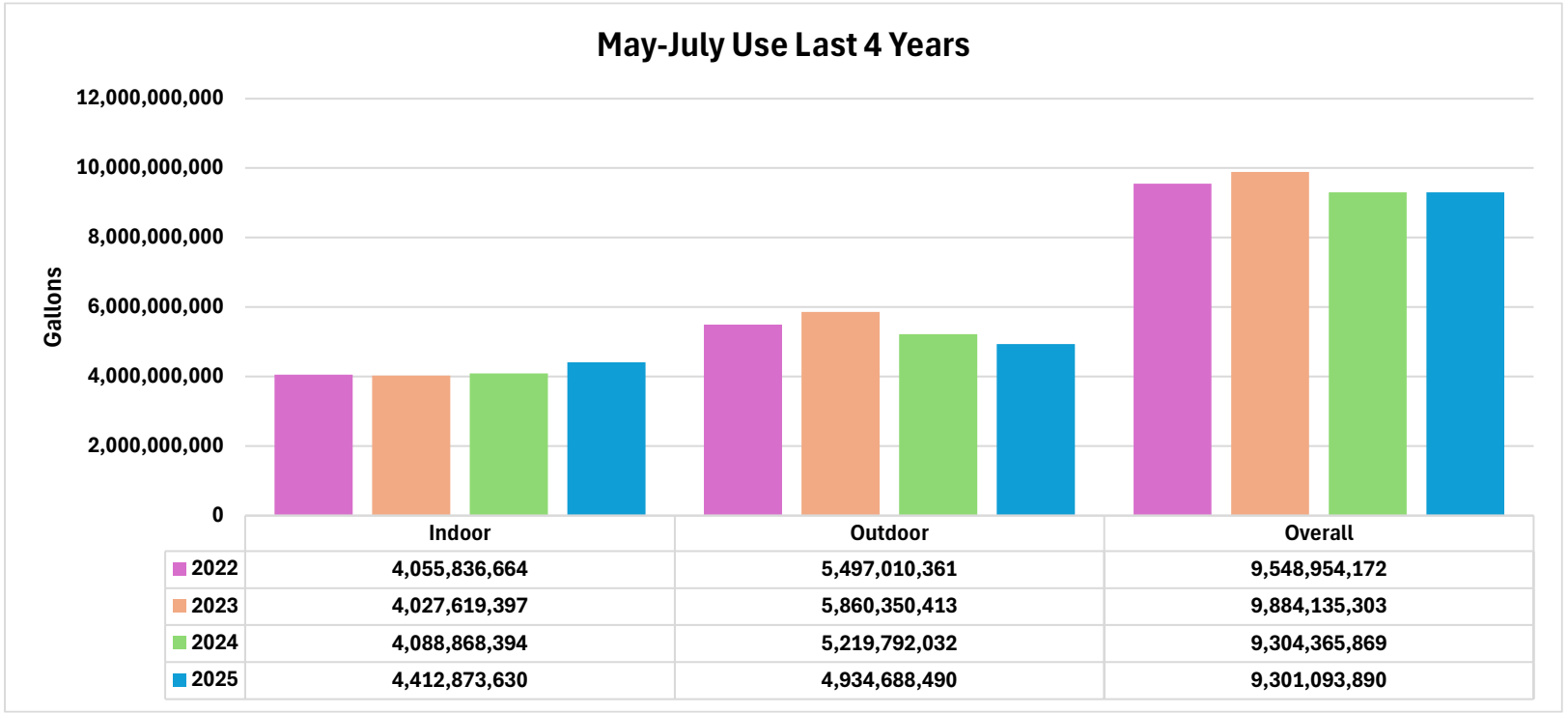
- **Albuquerque Journal Drought Insert**
- **Increasing number of letters sent per month to the highest residential water users**
- **Targeted letters to commercial customers exceeding Tier 3 usage for at least 3 seasons**





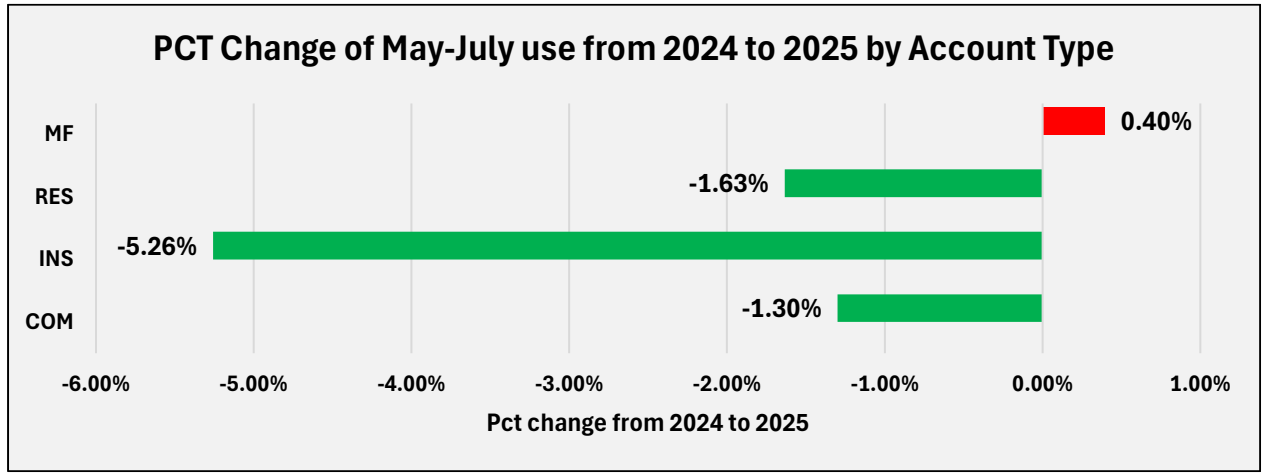


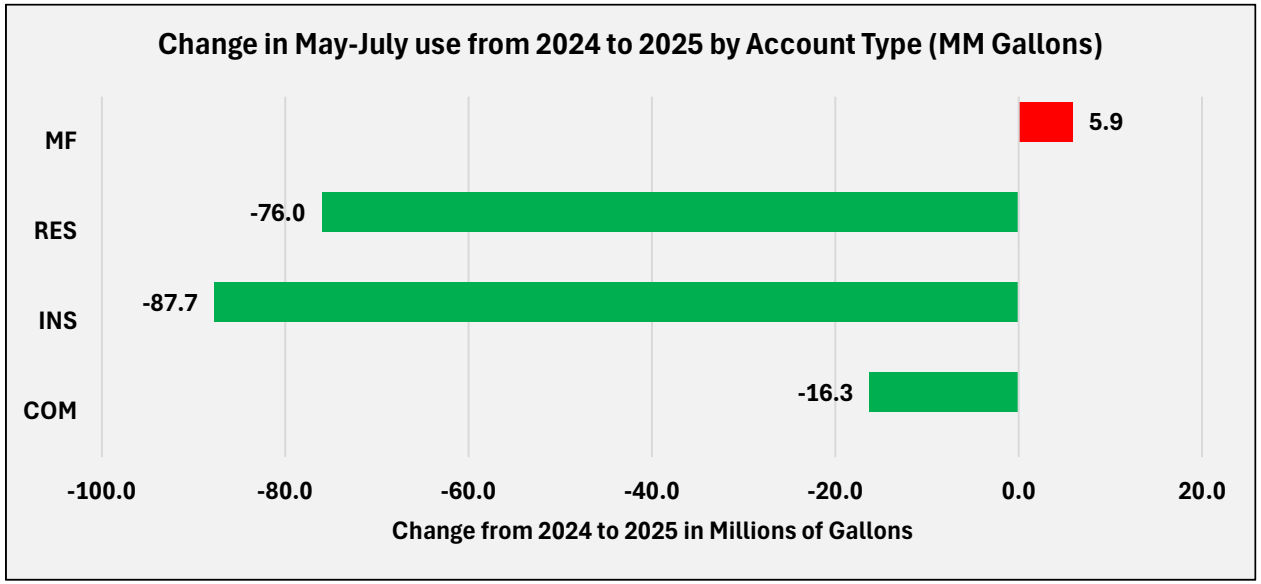
Water Use is flat overall from 2024, with a 5.5% reduction in outdoor use offset by an 8% increase in indoor use.



	Indoor	Outdoor	Overall
2022	4,055,836,664	5,497,010,361	9,548,954,172
2023	4,027,619,397	5,860,350,413	9,884,135,303
2024	4,088,868,394	5,219,792,032	9,304,365,869
2025	4,412,873,630	4,934,688,490	9,301,093,890

Change from 2024 to 2025	
Indoor Change	7.92%
Outdoor Change	-5.46%
Overall Change	-0.04%


PCT Change of May-July use from 2024 to 2025 by Account Type
MF
RES
INS
COM
0.40%
-1.63%
-5.26%
-1.30%
-6.00%
-5.00%
-4.00%
-3.00%
-2.00%
-1.00%
0.00%
1.00%
Pct change from 2024 to 2025


Change in May-July use from 2024 to 2025 by Account Type (MM Gallons)
MF
RES
INS
COM
5.9
-76.0
-87.7
-16.3
-100.0
-80.0
-60.0
-40.0
-20.0
0.0
20.0
Change from 2024 to 2025 in Millions of Gallons

Questions?