

AGENDA

Members

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

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, October 2, 2025

4:00 PM

1441 Mission Ave NE Conference Room 204

- 1. Call to Order
- 2. Approval of Agenda
- 3. Approval of September 4, 2025, Action Summary
- 4. Public Comment
- 5. Conservation Dashboards
- 6. Lead and Copper Update
- 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.

Lead and Copper Update: Presentation to the Technical Customer Advisory Committee (TCAC)

October 2, 2025

Johanna Malouff
Chief Engineer
Field Operations-Water Distribution

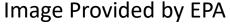
Jeff Pompeo Program Manager Water Quality Thomas Hopkins
Principal Engineer
Centralized
Engineering



Agenda

- Service Line Inventory Update
- Schools and Child Care Lead Sampling Update
- Corrosion Control
 Study





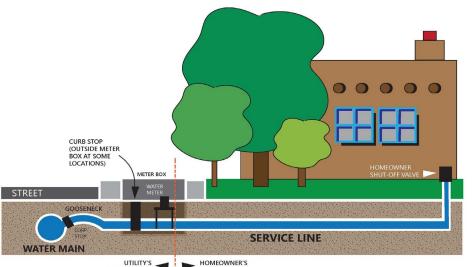


Service Line Inventory

- Water Authority was gathering inventory data at meter boxes during routine operations
- CDM Smith, Inc. was contracted to prepare the replacement plan and complete a review of inventory in July 2024
- Probabilistic Modeling/Statistical Analysis was an approved inventory method identified by NMED



Photo from Albuquerque Journal Article





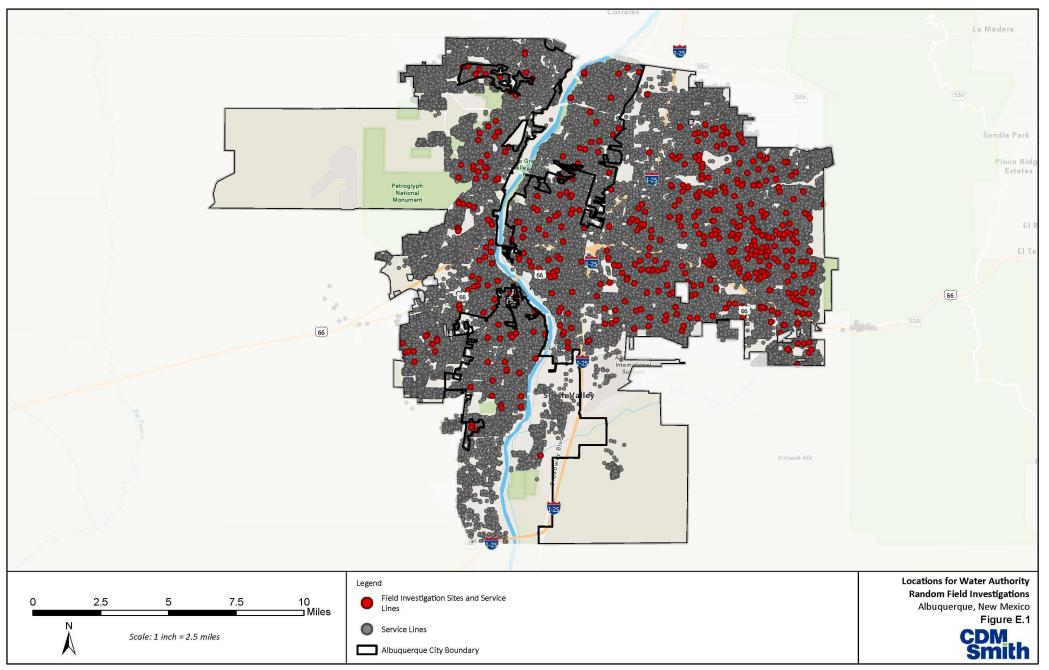
Probabilistic Modeling and Statistical Analysis

- Step 1: Preliminary Material Identification
- Step 2: Service Line Information Defining Strata
- Step 3: Randomization and Selection Process
- Step 4: Field Verification

Table E.1 Summary of Selected Field Verification Sites in Each Strata

Construction Year	Water Quality Distribution Zone																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Unknown	2	1	6	3	2	3	2	2	1	1	0	3	4	5	1	1	1
Pre 1920	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1920 - 1929	2	0	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0
1930 - 1939	2	0	0	3	1	1	0	0	0	0	0	0	0	2	0	0	0
1940 - 1949	2	1	5	3	4	6	2	0	2	1	0	0	1	7	0	0	0
1950 - 1969	3	2	17	5	4	9	27	30	5	8	8	43	6	20	3	0	3
1970 - 1988	1	1	9	6	2	1	1	31	4	1	9	58	28	20	13	21	8







Map Provided by CDM Smith

Analysis of Verification Results

- 469 meter box inspections of buildings with known construction years
- 38 meter box inspections of buildings with unknown construction years



The Water Authority can use the field investigations to predict with 95% confidence that the rest of the service lines of an unknown material type in the system are non-lead material

Table E.3 Materials of Service Lines Sampled during Field Investigations

Material Status	Public-side Services	Private-side Services
Lead	0	0
Copper	444	256
Galvanized Requiring Replacement	0	0
Galvanized	3	45
Plastic	59	204
Unknown – Unlikely Lead	1	2
Total	507	507



Master Meter Survey

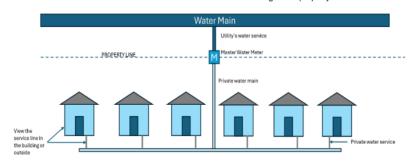
Water Service Line Material Survey for Master Meters

Complete this form for each individual service lines behind the master property water meter (see attached diagram for explanation). For example, a multi-family complex would submit one form for each building associated with the account. Similarly, for a commercial complex, a form would be used for each tenant water service line. Submitting multiple forms allows for tracking water line replacements where materials may differ from building-to-building.

Based on the appearance, testing, or existing records, please select the appropriate material of your water service line. For more information about how to identify your service lines or how to obtain free lead sampling, please visit identifying Service Line Material and Your Drinking Water - Lead & Copper - Albuquerque Bernalillo County Water Utility Authority and review the attached flier.

Please rest assured that your personal contact information (i.e. phone number and email) will only be used for follow-up clarifications and will not be shared or used publicly.

Individual water service lines to each building on the property



Material information is needed from the water main and water service behind the meter A "master meter" can be defined as a meter that serves multiple buildings with private service lines to each building

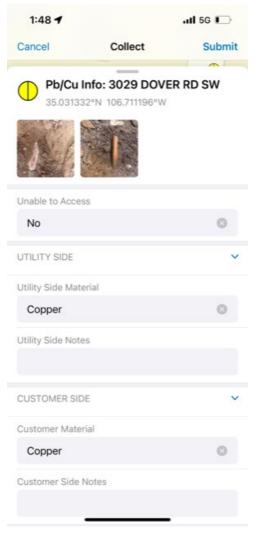






Large Meter Pit at 401 Alvarado SE

Continued Efforts





- Meter Box Inspections for Central Engineering/CIP Projects including water line replacements or relocations
- Meter Box Inspections for locations where the customer requests a voluntary lead test
- If a lead service line is found, probabilistic modeling will need to be revisited



Outreach and Education

- Sent two letters to school principals and childcare administrators
- Annual Education
- Facilities scheduled for testing



PO Box 568 Albuquerque, NM 87103 www.abcwua.org

August 1, 2025

Chair Klarissa Peña City of Albuquerque Councilor, District 3

Vice Chair
Barbara Baca
County of Bernalillo
Commissioner, District 1

Frank A. Baca County of Bernalillo Commissioner, District 2 TO: Administrators of schools and childcare facilities served by the Water Authority

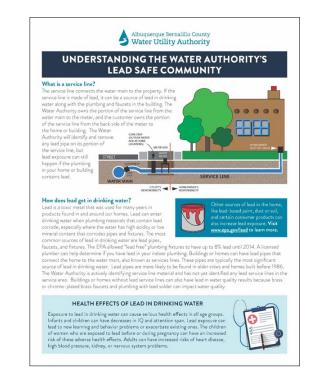
FROM: Albuquerque Bernalillo County Water Utility Authority, Compliance Division

SUBJECT: Water Authority to begin lead testing in drinking water at schools and childcare centers to meet EPA requirements in 2025



Annual Education

- How the Testing Program Will Work
- Revised EPA Regulation to "Get the Lead Out"
- The Water Authority's plan for testing drinking water
- Laboratory results and follow up actions
 - 3Ts for Reducing Lead in Drinking Water
- If lead is detected in the water, what do we do?





Facilities Scheduled for Testing

Lead testing scheduled

- Action required
- Why is lead testing important
- How to Sample (institutions)
- How will the water testing work

Lead Sampling Instructions

- Sample location requirements
- Prioritizing drinking water taps
- How to Sample (institutions)
- Big **DO NOTS**

Schools are required to sample 5 locations:

- 2 Unfiltered Drinking Water Fountains
- 1 Kitchen Faucet
- 1 Nurse's Office Faucet
- Or a second kitchen sink
- Or a classroom sink (used for consumption)

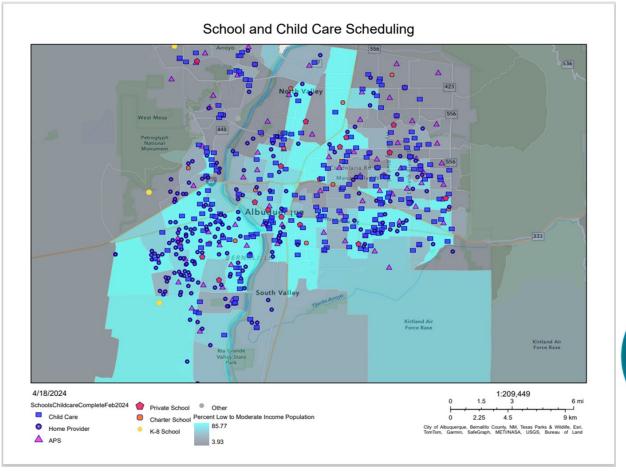
Childcare Centers are required to sample 2 locations:

- 1 Unfiltered Drinking Water Fountain
- ① 1 Kitchen Faucet
- Or 1 Classroom Faucet (used for consumption)



Scheduling Facilities

164 facilities were selected out of 628 total schools and childcare centers identified in the ABCWUA service area





Facilities Sampled

 We reached out to 26% of the total schools and childcare centers from Late April to the end of September 2025



- Successfully sampled all 84 APS elementary schools built before 2014
- There are 38 remaining private and charter elementary schools to be sampled over the next 3 years
- Sampled 36 childcare facilities out of the 82 that we had on our schedule for this year



Lessons Learned

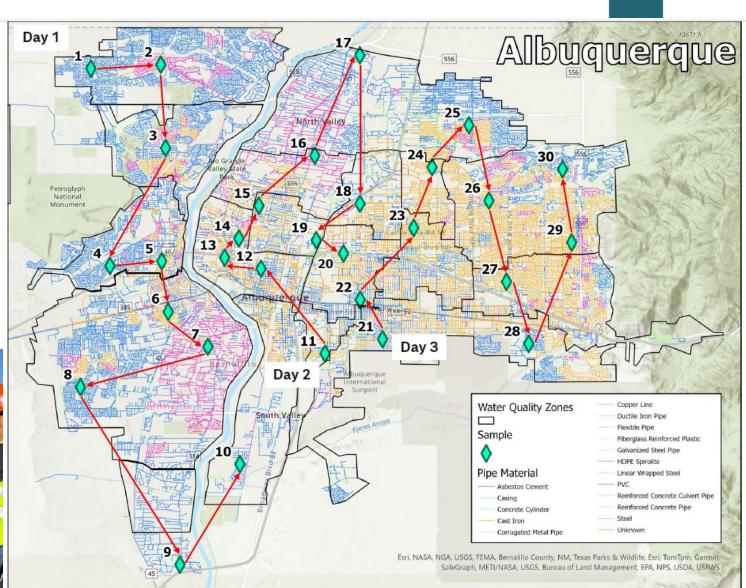
- In May when we started outreach to schedule sampling at childcare centers, we emailed them sample plans to fill out themselves and we got very little response
- In June we switched to calling the facilities to set up a time to schedule, being able to talk to and answer their questions was much more effective in getting childcares to participate
- APS updated classroom faucet fixtures and installed filters at all drinking water outlets with results above 10ppb
- The data collected shows results are below the reporting limit of 0.5ppb at almost all filtered water fountains sampled



Distribution System Corrosion Control Study Sampling

- Conducted with CDM Smith, Inc. in April 2025
- 30 Hydrants sampled throughout the distribution system
- A variety of pipe materials were samples across all zones and trunks





Study Objectives

- Collect water samples and pipe scale from the distribution system
- Characterize and define the spatial extent of pipe scale
- Geochemically model for impacts on WQ, particularly LCR compliance
- Predict the effects of common corrosion control strategies
- Determine effect of SeaQuest addition

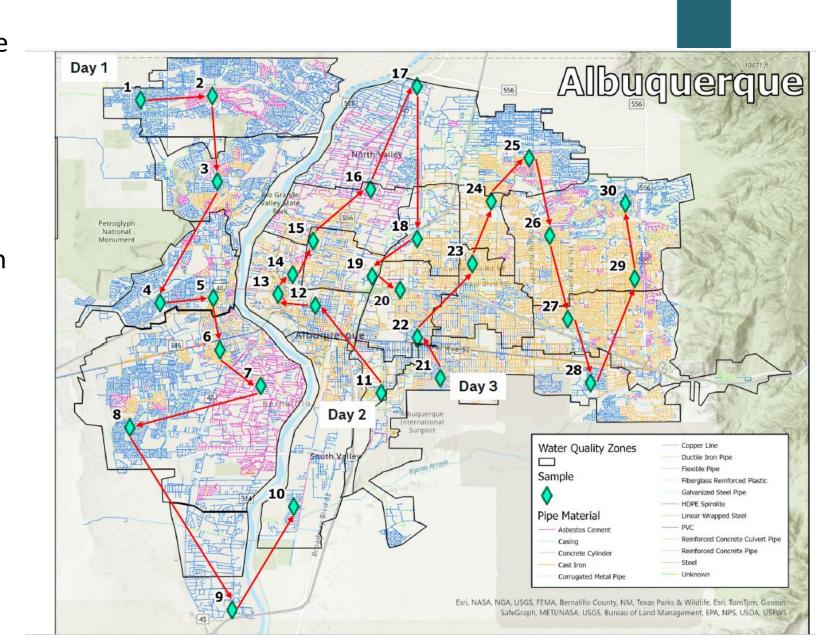


Image Provided by CDM Smith

Study Methodology

- Historic WQ data analyzed.
- Low Flow (about 30 gpm)
 - Water in the main
 - pH, Temp., ORP, TDS, turbidity, color, free Cl
- High Flow (300 500 gpm)
 - Goal to dislodge pipe scale
 - Orthophosphate, Fe, Al, Mn, alkalinity, Hardness. Ca prec.
- Five turbid samples analyzed for trace metals. Pb, Cu, As, Th, others
- SWTP, College, and Charles well water samples



Table 2.2 Water System Pipes by Material

Pipe Material	Percentage (%)				
Polyvinyl chloride (PVC)	45.6				
Cast Iron (CI)	30.4				
Asbestos Cement (AC)	11.4				
Concrete Cylinder (CCYL)	6.4				
Ductile Iron (DI)	4.5				
Steel	1.1				
Other	0.5				
Unknown	0.1				
Total	100%				



Table Provided by CDM Smith

Preliminary Results

- No significant water quality concerns (Hurray!)
- pH, Alkalinity, hardness, Cl-SO4 ratio generally similar between surface and groundwater.
- An orthophosphate residual was detected in all samples.
- Surface water was determined to have a higher ORP.

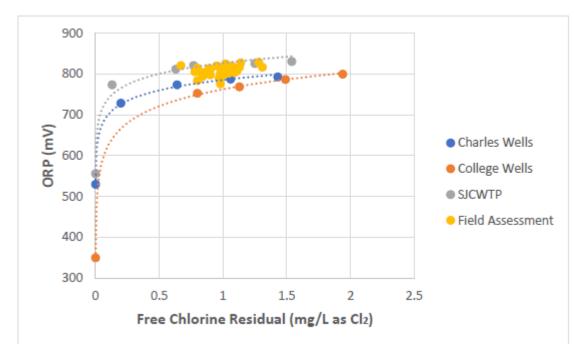


Table 3.2 Summary of Water Quality When SJCWTP is Online and Offline

Parameter	Units	Groundwater Only Average Value (10 th – 90 th Percentile)	Surface Water and Groundwater Blend Average Value (10 th – 90 th Percentile)	
рН	S.U.	7.9 (7.5-8.5)	7.6 (7.3-7.9)	
Temperature	°C	24 (22-27)	16 (8-24)	
Alkalinity, Total	mg/L as CaCO₃	124 (111-141)	105 (80-125)	
Hardness, Total	mg/L as CaCO₃	120 (84-150)	150 (118-174)	
Calcium	mg/L as Ca	39 (26-50)	50 (39-59)	
Magnesium	mg/L as Mg	5.2 (3.7-7.4)	5.8 (4.5-7.0)	
Chloride	mg/L as Cl	23 (14-35)	33 (39-59)	
Sulfate	mg/L as SO ₄	54 (37-67)	73 (57-89)	
Free Chlorine Residual	mg/L as Cl ₂	0.82 (0.61-1.10)	0.89 (0.62-1.20)	
Orthophosphate	mg/L as PO ₄	<0.15 (<0.15-0.33)	0.44	
	Calculated Water Qua	lity Indices		
Aggressive Index (AI)	-	11.9	11.7	
Langelier Saturation Index (LSI)4	-	0.35	-0.03	
Larson's Ratio	-	0.72	1.17	
Calcium Carbonate Precipitation Potential (CCPP) ⁴	mg/L as CaCO₃	6.81	-0.55	
Chloride-to-Sulfate Mass Ratio (CSMR)	-	0.43	0.45	
Buffer Intensity	mM/pH	0.179	0.300	

Notes:

- 1 BDL = below detection limit. Detection limits for each analysis were not available as of this report
- 2 From water samples collected on August 12, 2024
- 3 Monthly samples from January to December 2023
- 4 No data as of this report. Target is 0.4 mg/L from discussion with Water Authority staff.
- 5 Based on the precipitation and solubility of calcium carbonate (Calcite, CaCO₃)

Provided by CDM Smith

Preliminary Results

- Significant manganese and moderate iron scale detected in parts of the system. Likely stable MnO₂. May cause colored water incidents if disturbed.
- Mn scale adsorbs metals such as Pb and As
- Benefits of pH adjustment or orthophosphate addition unclear
- Results still being considered

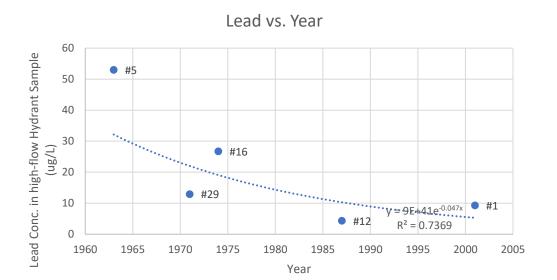
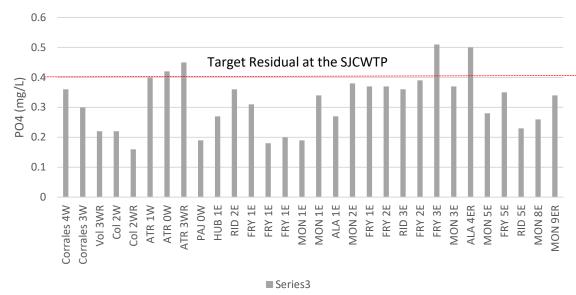


Table 4.3 Summary of High Velocity Sample Data Across All Sample Locations

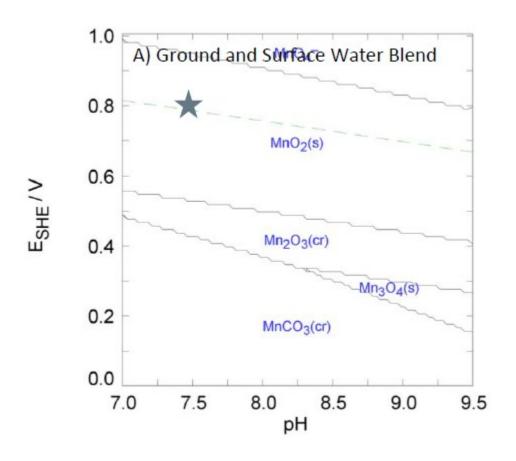
Parameter	Unit	Min	Max	Median	Average	Scaling/Accumulation
Total Iron	mg/L	0.0	3.1	0.6	0.8	Moderate
Total Manganese	mg/L	0.0	2.4	0.3	0.7	Significant
Apparent Color	Co-Pt	0.0	243	54	85	Moderate
Turbidity	NTU	0.3	49	13	19	Moderate
Calcium Carbonate Precipitation	mg/L as CaCO ₃	0.0	11	1.0	3.0	Minimal
Total Aluminum	mg/L	0.0	0.1	0.0	0.0	Minimal

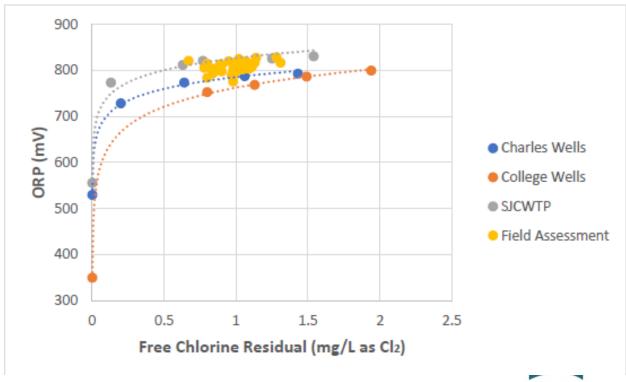
Table Provided by CDM Smith

April 2025 Hydrant Testing - orthophosphate by trunk and pressure zone



ORP and Mn Speciation





Provided by CDM Smith

- At measured ORP and pH Mn appears stable as Mn⁺⁴O₂.
- Chlorine residual would need to decrease below 0.2 mg/L to shift toward Mn⁺³₂O₃
- Chlorine and pH would need to increase unrealistically to shift to Mn⁺⁷O₄ (aq)
- Conclusion: MnO₂ scale is chemically stable in distribution piping.



Questions? Thank You!





This garden was created to inspire

This garden was interest in the use

of water-saving materials, vegetation and techniques in Albuquerque's residential landscapes. It features several different types of irrigation methods and a variety of mulch and plant types—all locally available and selected with our arid climate in mind.

POINTS OF INTEREST

- Rainwater Harvesting Swale
- **Roof Drainage Capture**
- High Mesa Garden
- Patio Garden
- Color Garden
- **Turf Demonstration Area**
- Cactus Succulent Garden
- **Screening Berm**



IRRIGATION SYSTEM COMPONENTS

Irrigation systems come in many different configurations and levels of complexity. Drip irrigation is recommended in many cases because of its efficiency in delivering water to exactly the spot where it's needed.

The Water Authority recommends that you consult an irrigation professional for assistance in designing a system that best meets your landscape's needs.





DRIP EMITTERS

come in different sizes, shapes, and flow ranges depending on plant needs, and are often installed in groups around larger shrubs and trees.



CONTROLLERS

setting adjustment, soil-

multiple watering zones.

STANDARD

VALVES are used

for bubbler and spray

irrigation systems.

These valves open

and close to control

the duration of

irrigation cycles.

provide automation to help

simplify the watering process;

moisture sensors, and timers for

features may include remote

BUBBLERS

are not as precise as drip emitters but are less prone to plugging and can apply water much more quickly.



SPRAY HEADS

DRIP VALVES

function like standard

valves but also provide

filtration to keep drip

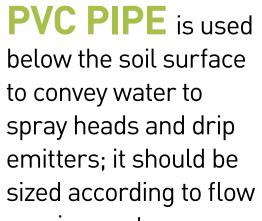
irrigation components

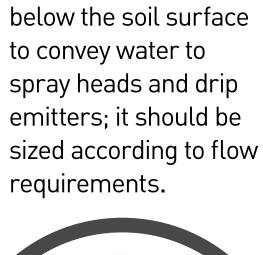
from getting plugged

periodic cleaning.

with sediment. Require

are used to irrigate grouped plantings or turf. Spray irrigation is recommended only for use in the evening and early morning to minimize losses to wind and evaporation.







FLEXIBLE TUBING

can be used above or below the soil surface to distribute water to drip emitters. Also available with built- in emitters.



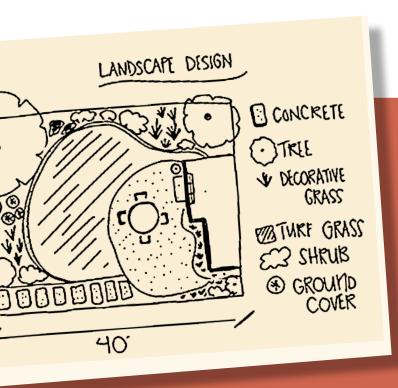
ROTOR HEADS

are used to irrigate large expanses of turf; they can apply a large volume of water in a relatively short time.





PLANTING STRATEGIES



Start with a plan.
Consider your goals

and priorities and design your landscape accordingly. For example, you may want shade in certain areas, or to screen certain views,

or to protect a patio from the wind. Some forethought and a rough sketch are all you need to start.

PLANT WITH MAINTENANCE IN MIND

Select plants that match the level of maintenance you are willing and able to do. Native plants generally require the least water and maintenance (e.g., pruning, fertilization, and pest control).

PUT THE RIGHT PLANT IN THE RIGHT LOCATION

Proper placement is critical to plant health. Consider requirements for sunlight, irrigation,

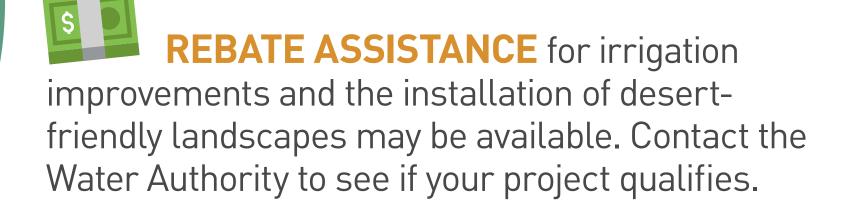
and soil conditions when selecting plants, and remember to allow enough space for their size at maturity.

INCLUDE A VARIETY OF PLANT SPECIES

Including lots of different plant types will create layers of interest and texture while providing homes for birds and pollinators.

CONSIDER WATER REQUIREMENTS

Group together plants with similar water needs. This makes it easier to provide the right amount of water for different plants. Plants that have similar water requirements also tend to look better together.





KNOW YOUR ECCOZONE

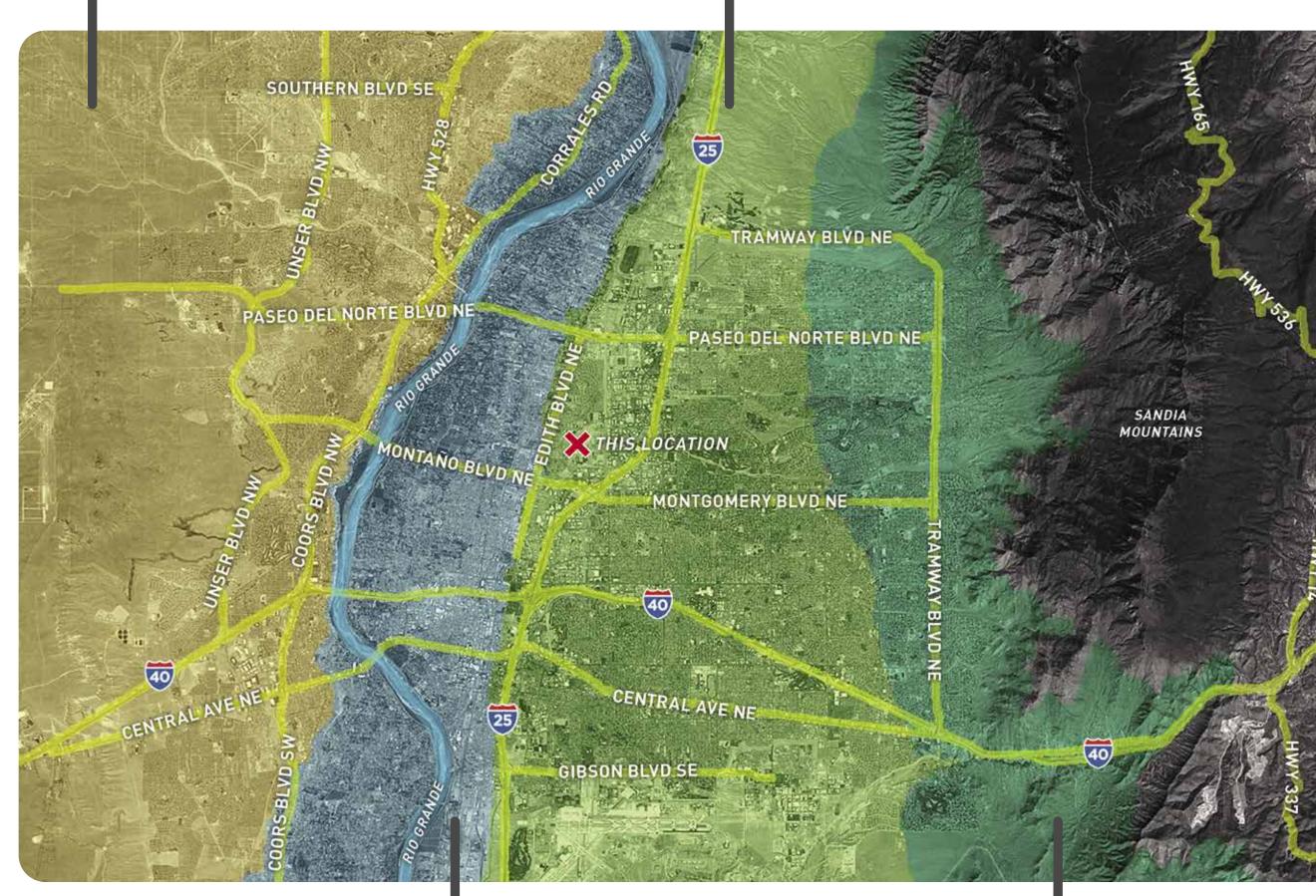
Albuquerque and Bernalillo County encompass several distinct ecozones. These vary according to elevation, soil type, temperature ranges, wind patterns, and rainfall amounts.

may not thrive in another, so always consider your ecozone when planning your landscape.

What grows well in one part of town

WATER PC THORIT THE WEST MESA ECOZONE is a grassland/ shrubland where native vegetation includes sand sage, broom dalea, fourwing saltbush, and alkali sacaton grass. The West Mesa generally has more wind than the East Mesa.

THE EAST MESA ECOZONE is primarily grassland. Native vegetation consists of blue grama grass, purple three-awn grass, and soapweed yucca. Desert willows and Apache plume may grow along arroyos.



THE VALLEY ECOZONE is

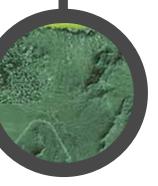
the only ecozone where large shade

trees such as cottonwoods grow naturally. Additional native vegetation includes coyote willow, New Mexico olive, false indigo, and seepwillow.

THE FOOTHILLS ECOZONE receives

the most rainfall and snowfall of the four

ecozones, and also has the coldest temperatures. Native vegetation includes piñon pine, shrub live oak, mountain mahogany, beargrass, and chamisa.



NATIVE & ADAPTED PLANTS

This desert-friendly garden, or "xeriscape," features plants that thrive in our region's dry climate, including native species and adapted, non-native species that are well-suited to grow here.



TREES provide shade, privacy, and protection from the wind. There are dozens of native and well-adapted species.



SHRUBS come in a variety of heights, colors, and shapes, and form the backbone of most landscapes.



PLANTS can provide three seasons of color when you choose varieties that flower at different times of the year.



VINES provide shade and screening in places where planting a tree isn't practical.



• ORNAMENTAL GRASSES add texture, contrast and year-round interest to any landscape.



 DESERT ACCENTS such as yuccas, cacti, and agaves can provide wonderful contrast and structure in a landscape.



NEED MORE IDEAS?

Consult the Water Authority about recommended species.



TURF IN A XERIC LANDSCAPE



demands, turf is not a desertfriendly landscaping option. That's why large grass lawns are not recommended in Albuquerque and Bernalillo County.

When used wisely, however, small areas of turf can still have a place in the residential landscape, providing a cooling effect and a place for children and pets to play. Research the different varieties of turf and select the one that best suits your needs.

TO MINIMIZE WATER WASTE, REMEMBER TO ADJUST YOUR TURF WATERING SCHEDULE

ACCORDING TO
WEATHER
CONDITIONS
AND THE
TIME OF
YEAR.



HOW MUCH WATER DO PLANTS NEED?

Watering requirements vary greatly and depend on plant species, weather conditions, soil type, and exposure to wind and heat. Native plants generally require the least water.

SHRUBS

The amount of water required for shrubs varies greatly with the species of shrub and where it's located within your landscape. A good baseline for shrubs is to provide:

1 gallon of water per irrigation cycle for native shrubs and plants smaller than 18 inches in height or diameter.

3 gallons of water per cycle for shrubs less than 3 feet in height or diameter.

5 gallons of water per cycle for shrubs larger than 5 feet in height or diameter.

TREES

Native trees may require little or no supplemental irrigation, but many adapted species require regular watering. A rule of thumb is to provide 10 gallons of water per inch of trunk width, once or twice per month depending on the weather. For example, a tree with a trunk that's eight inches wide would need roughly 80 gallons of water at each watering.



Check with a landscape professional or the Water Authority for WATERING RECOMMENDATIONS specific to your landscape.





POLLINATOR HABITAT Pollinators are critical

to ecosystem health and agriculture, but many species are threatened by habitat loss and the widespread use of toxic chemicals.

YOU CAN HELP!

Protect these beneficial creatures by using pollinator-friendly plants in your landscape, providing safe water sources, and minimizing your use of chemical weed killers and pesticides.

FOOD SOURCES

Grasses and flowering plants provide pollen, nectar, and food for pollinators and their larvae. The best habitats feature variations in plant height, density, and flowering times.

SHELTER

Open soil, leaf litter, and hollow plant stalks provide opportunities for pollinator nesting.

WATER

Damp soil or a shallow dish filled with small rocks and water help pollinators stay hydrated.







Check with the Water Authority for more RAINWATER COLLECTION TIPS!





MULCH

covers the soil to minimize evaporation, slow erosion, and provide visual interest. • WOOD MULCH (shredded or chipped wood) reduces weeds, adds organic matter to soils, helps retain moisture, and insulates plant roots when properly installed.

PECAN SHELLS add

organic material to soils,
but break down more quickly
than wood mulch and need to be
replenished more frequently. They should
only be used in areas that are not exposed
to wind or flowing water as they can easily float
or blow away. Be ready for flocks of birds who will
come to pick bits of pecans out of the shells! Install
at a depth of three to four inches.

GRAVEL MULCH comes in many sizes and colors. It can help stabilize shallow slopes and minor drainage flows. Gravel mulch helps retain moisture but is not as effective as wood or pecan shell mulches. Install at a minimum depth of three inches.

CRUSHER FINES are small stone fragments that compact tightly.

They are ideal for relatively flat surfaces but should not be used on slopes or in drainage areas.

COBBLE MULCH

is by far the
best for stabilizing
slopes and drainage
areas. It also retains the
most heat and should only
be used where needed.





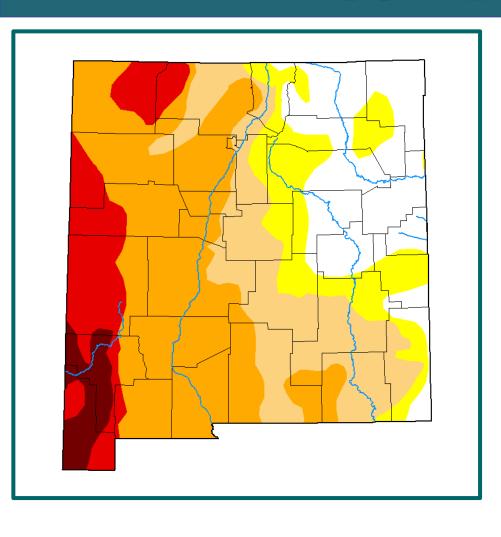


Water Resources Division

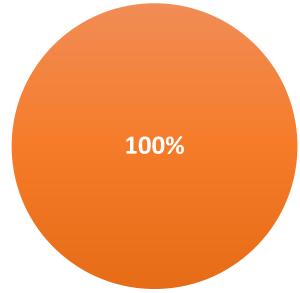
Water Report

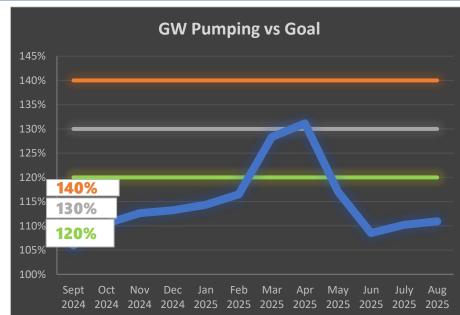
Mark Kelly, PE Water Resources Manager

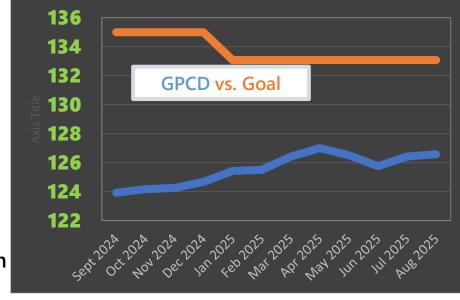
SUPPLY METRICS SNAPSHOT &



October 2025
(August Supply Data)









Water Authority Drought Stage: None



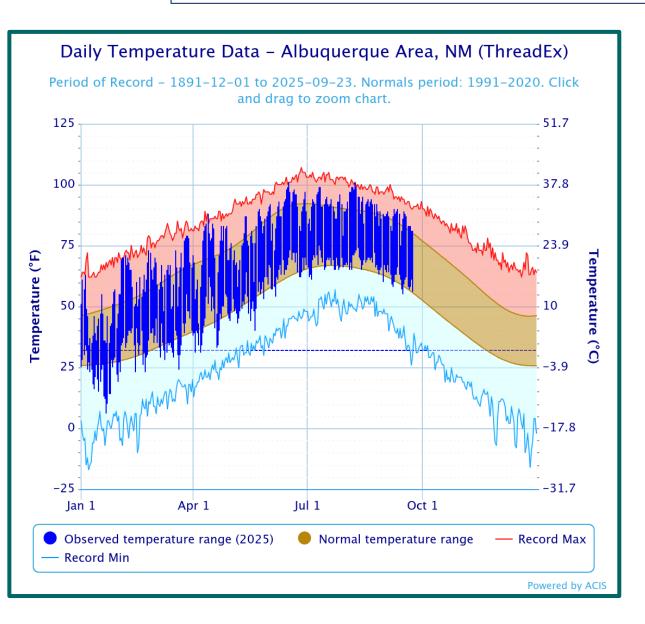
Groundwater Production

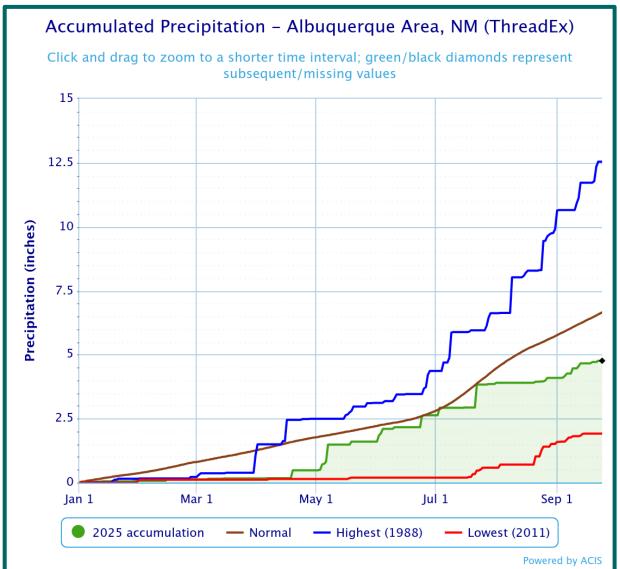


Drought Stages

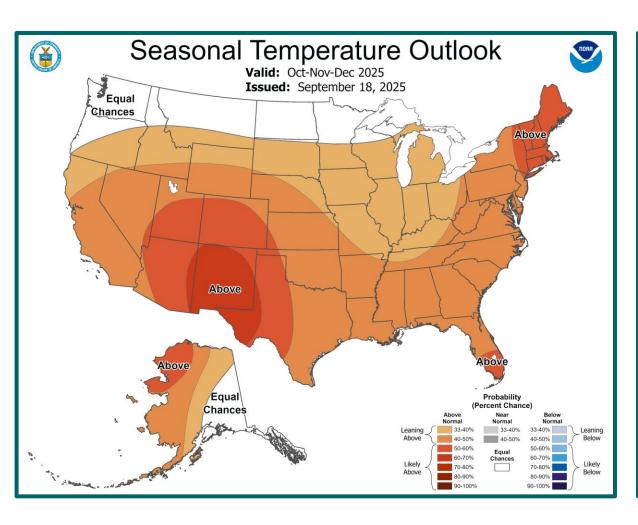
Groundwater Production / GPCD	DSCI≥300	Less than 120% of the Annual GW Production Goal	Between 120% and 130% of GW Production Goal	Between 130% and 140% of GW Production Goal	More than 140% of the GW Production Goal
0 to < 2 GPCD	Drought	Drought	Drought	Drought	Drought
over the goal	Advisory	Advisory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

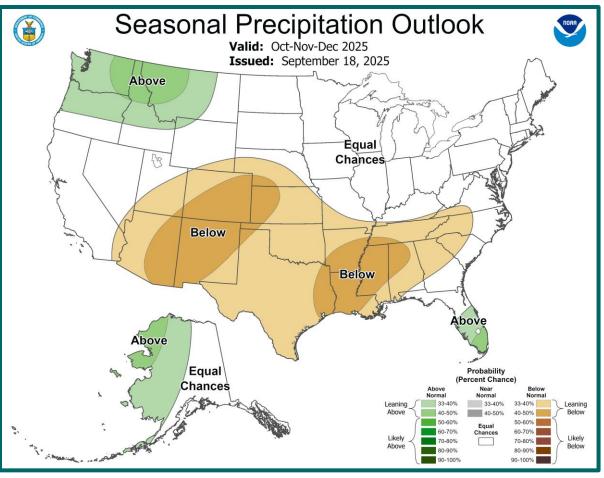
Temperature and Precipitation





Seasonal Outlook

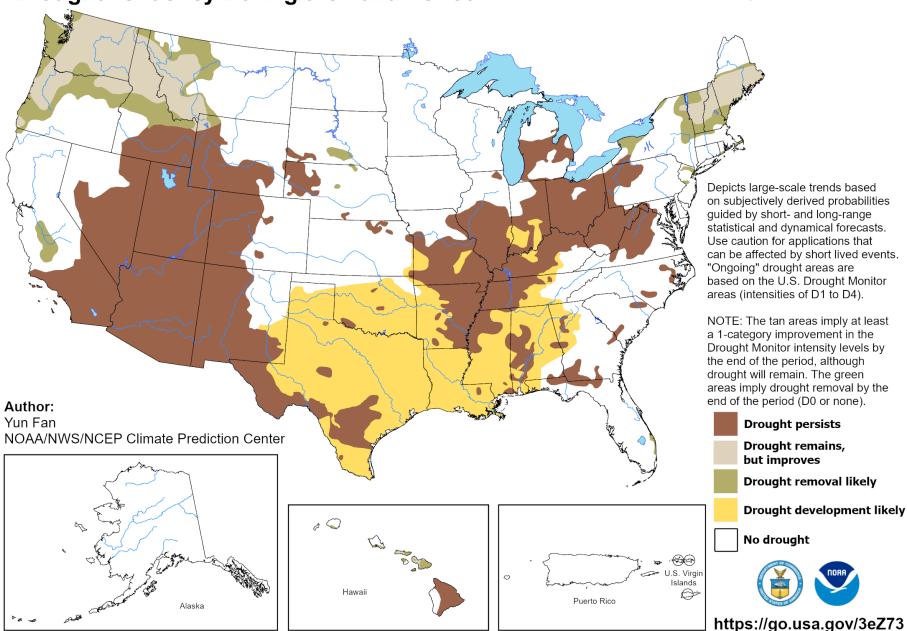




U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for September 18 - December 31, 2025 Released September 18, 2025





Demo Garden Signage





Questions?