



Strategic Water Supply

Water and Natural Resources Committee
November 26, 2024

Secretary James C. Kenney, NMED
State Engineer Liz Anderson, OSE
General Counsel and Acting Deputy Secretary Ben Shelton, EMNRD



Overview

- 50-Year Water Action Plan
- Interim Engagement
- Draft Legislation
- Next Steps



Water Security in New Mexico

NEW MEXICO'S WATER FUTURE:

Scientists predict over the next 50 years...



New Mexico will have approximately 25% less water available in rivers and aquifers



New Mexico will be hotter and drier



Historical weather patterns, including precipitation, will change significantly



There will be more significant weather events, such as fires, flooding and drought



Without action, New Mexico will not have enough water to meet our needs

Within the next 50 years New Mexico will have a shortage of **750,000 acre feet of water**

Conservation, protection of existing water resources and development of new water resources will be required to meet this shortfall



New Mexico must identify new sources of water to reduce the strain on our potable water resources.



Governor's 50-year Water Action Plan

Water Conservation

- Develop a public education campaign.
- Incentivize agricultural water conservation.
- Reduce leaks in infrastructure and increase municipal conservation.
- Improve water storage and delivery systems.

New Water Supplies

- *Establish strategic water supply to spur investments in desalination and wastewater treatment.*
- Adopt policies to expand potable and non-potable water reuse.
- Improve groundwater mapping and monitoring.

Water and Watershed Protection

- Cleanup contaminated groundwater sites.
- Protect surface water by controlling pollution through a discharge permitting program.
- Modernize wastewater treatment plants and stormwater infrastructure.
- Protect and restore watersheds.



New Water Supply Action: Strategic Water Supply

Establish a strategic water supply to spur investments in desalination and wastewater treatment

Water Sources

- Reservoirs and groundwater supplies are not recharging at a sufficient rate to ensure future water security.
- Potentially over 2 billion acre-feet of brackish water under NM.
- ~ 250,000 acre-feet produced water generated per year in NM.

Strategic Water Supply Program Elements

- For public sector brackish water desalination projects, fund targeted studies, planning/design, and/or construction phase.
- Use Advanced Market or Purchase Commitments (AMCs or APCs) to ensure treated brackish/produced water is available to targeted end users at a competitive price. AMCs and APCs provide guarantees and reduce risk for water treatment market entrants.

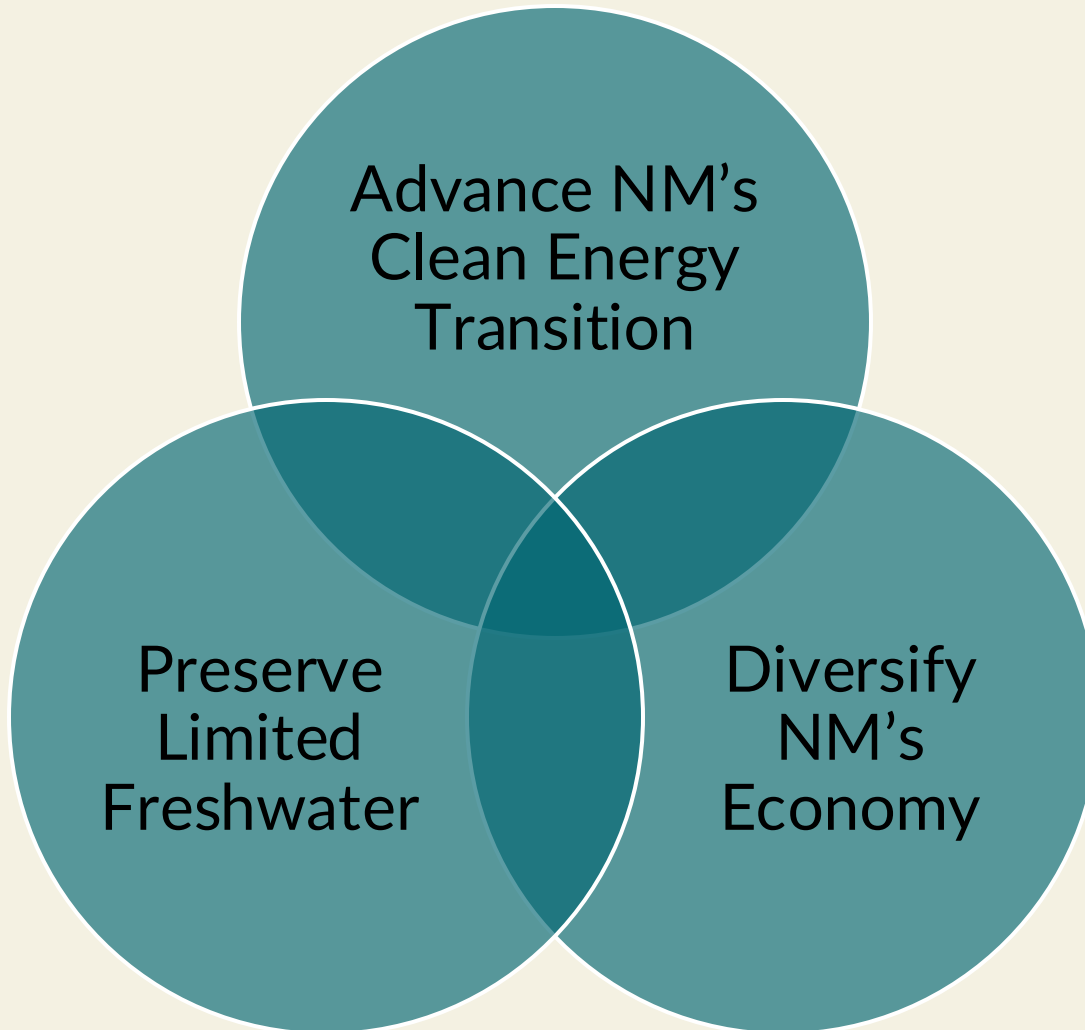
Milestones

- By 2028, 100,000 acre-feet of new water for clean energy production, storage and manufacturing, etc.
- By 2035, 50,000 acre-feet of treated brackish water for purposes above plus aquifer recharge and surface water augmentation.





Policy Drivers for the Strategic Water Supply



“These nonrenewable additional sources of water will greatly bolster water security by addressing near and long-term needs without increasing demand on the State’s diminishing freshwater resources.”
-50 Year Water Action Plan



Interim Activities

 Ongoing research and scientific studies into brackish and produced water treatment and use; Evaluation of 51 responses to NMED SWS Request for Information (closed 3/31/24).

 NMED presented produced water reuse rules to the WQCC and is awaiting a final decision.

 *Strategic Water Supply: State of the Science Symposium* held at New Mexico State University on June 27.

 Feasibility Study completed to analyze technical and economic viability and inform legislation and funding request; NMED evaluated 17 public responses.

 NMED, OSE, and Governor's Office presented to multiple interim committees.

 Developed draft legislation based on research/feasibility study, public events, stakeholder engagement, and discussions with legislators.



Feasibility Study Findings

Produced Water

- New Mexico generated over 2 billion barrels of produced water in 2023.
- There are ongoing efforts to better characterize its chemistry, address data gaps, and develop scalable treatment strategies.

Brackish Water

- Long timelines for desalination projects
- Strong potential near Santa Fe, Santa Teresa, and ABQ.
- These saline aquifers could serve as alternative water supplies, though localized characterization is needed to determine treatment requirements.

End Uses

- Constraints on end uses due to the lack of state discharge standards.
- Potential end uses include green hydrogen production, data centers, advanced manufacturing (e.g., solar panels, electric vehicles, and semiconductors, pumped hydro energy storage, and cement or concrete production.

Treatment

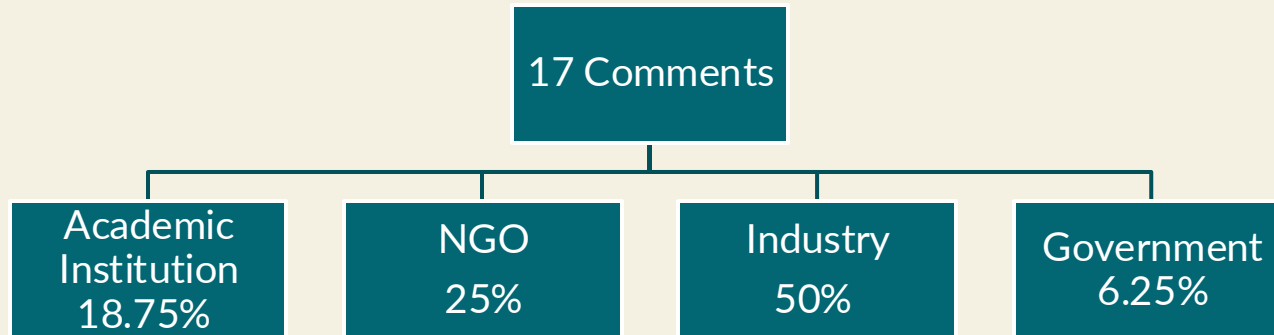
- Cost-effective treatment technology exists to meet industry needs and existing environmental standards.
- Treatment is energy intensive; implementation should align with decarbonization goals.
- Challenges include the variability in water impurities and end uses.

Economics

- PW projects estimated between \$13-\$191 M in the San Juan and between \$38-\$667 M in the Permian.
 - Brackish water projects are estimated to cost between \$3-\$107 M.
- Cost Factors:
- Location & transportation costs
 - Water quality
 - Workforce



SWS Feasibility Study Comments



Key Themes

Feedback Requested

Economic

Technical

Legal

Other

- Long-term scenarios for water supply, recharge rates, and demand.
- Opportunities to conduct pilot projects.
- Produced water treatment technology feasibility.
- Concerns about using public funds for oil and gas operations.
- Design-Build-Finance-Operate (DBFO) method for SWS projects.
- Concerns about environmental contamination.
- Investment concerns due to produced water supply decline starting in 2030.
- New potential end uses to review and consider.



Proposed Legislation



One Time GF Appropriations

- \$75 M for Water Projects into the Strategic Water Supply Fund.
- \$29 M for Aquifer Mapping to NM Tech.
- \$4 M for Brackish and Produced Water Research at NMSU.



Establish New Fee on Produced Water Generated in NM

- \$0.05/barrel fee.
- Excludes recycled or reused produced water.
- Generate ~\$68 M/yr in revenue for the strategic water supply fund.



Strategic Water Supply Fund

- For use by NMED, EMNRD, or OSE for grants, contracts, and administration.
- Eligible projects include pilot and industrial scale for treated brackish and produced water subject to applicable regulations.



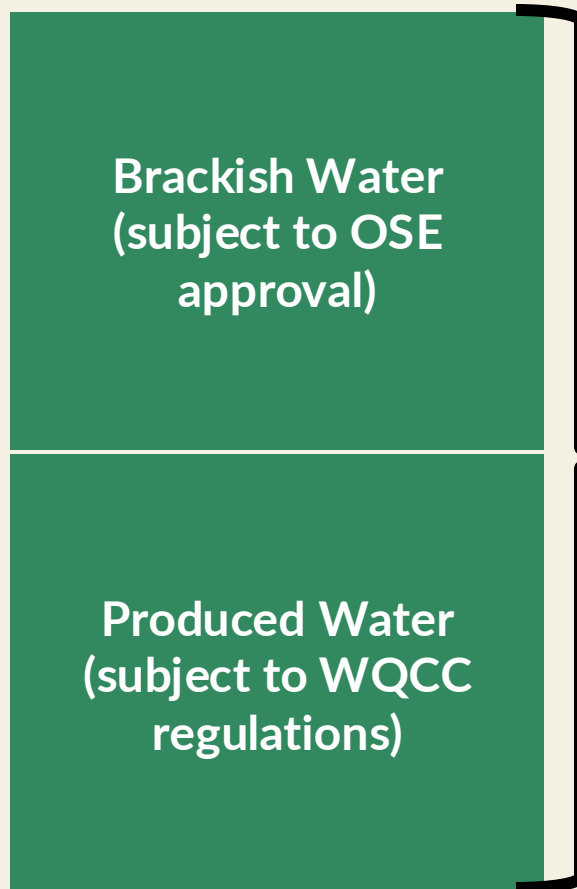
Proposed Program Structure

Strategic Water Supply Fund

General Fund
\$75M for grants
to advance water
projects



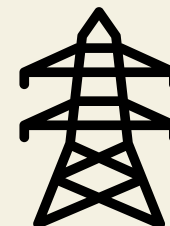
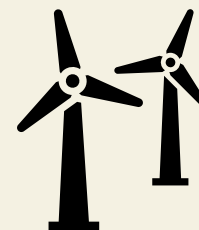
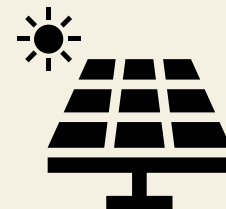
Produced Water
Disposal Fee
~\$68M/YR
for contracts with
treatment facilities



EMNRD

OSE

NMED





Next Steps

Stakeholder Engagement

Outreach to industry on fee impacts.

Engagement with NGOs/advocates on the policy, guardrails, mechanics, etc.

Legislation

Interagency outreach on legislation

Bill drafted by late November.

Continue to review with interested legislators.

Research and Rulemaking

WQCC rulemaking decision

Evaluating produced water components, treatment technology, and brackish water supplies

End users (clean energy, data centers, cement production, advanced manufacturing)



Thank you

