



SCIENCE THAT MATTERS NOW.®

THE NEVADA WATER INITIATIVE & OPENET

A Briefing from the Desert Research Institute – July 2026

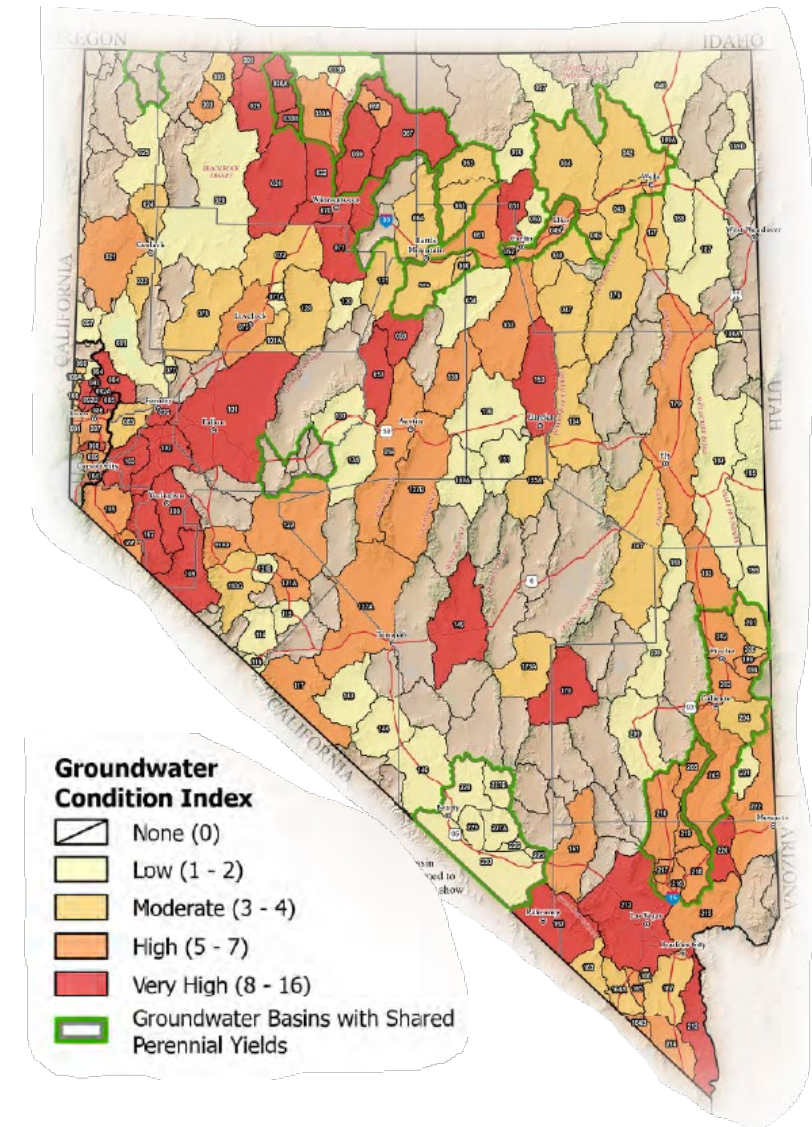


WATER SECURITY IN NEVADA

WHY NOW

- Nevada is the most water-limited state in the nation — and among the fastest growing: housing, data centers, critical minerals
- Water availability decisions still rest on estimates made 50–70 years ago
- More than half of Nevada's 256 basins are over-appropriated — a recipe for conflict and litigation
- Outdated numbers slow permitting and cloud investment decisions
- Modern science can update the numbers statewide — efficiently, without new bureaucracy

Reliable water data is permitting certainty — the foundation of Nevada's growth.





Nevada Water Initiative

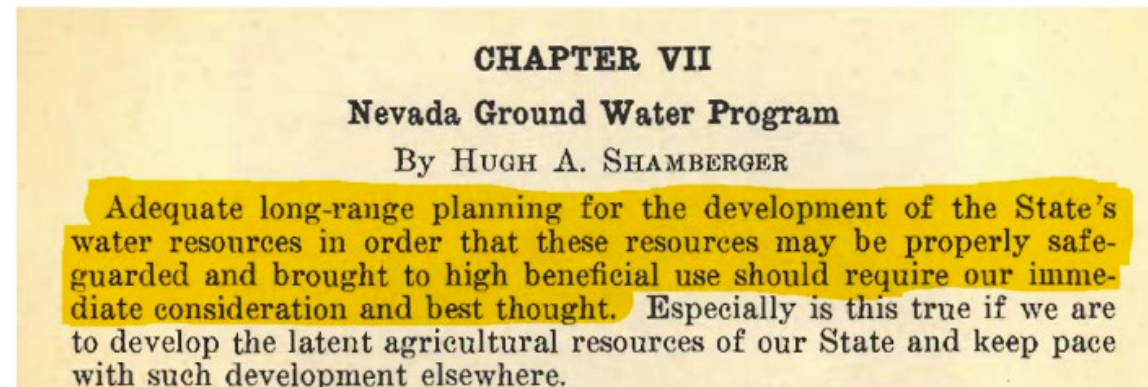
A PROVEN MODEL

THE NEVADA GROUNDWATER PROGRAM, 1945 - 1974

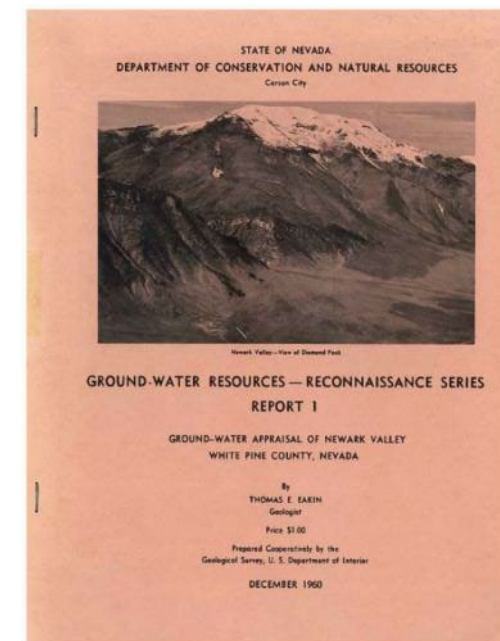
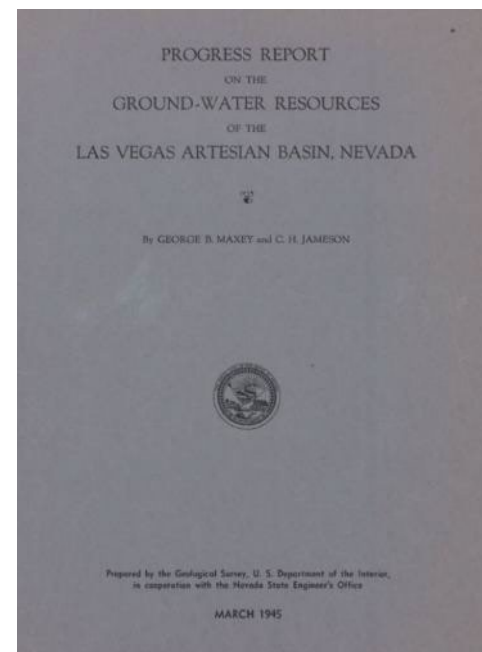
- Launched by the Legislature in 1945 to document water availability across Nevada's 256 groundwater basins
- Foundational to DRI's beginning in 1959 with George Maxey's work and the Nevada Center for Water Resources Research in 1962
- Produced the reports still used for water rights decisions today
- Sustained by recurring investment of ~\$4M per biennium (in today's dollars) from 1945-1957; program ran to 1974

The Nevada Water Initiative is the modern successor to this program.

Per NRS 533.024(c), NDWR is charged with considering the "best available science" in water resource management decisions.



(SE Biennial Report 1944-1946, 1946)



NEVADA DIVISION OF
WATER RESOURCES





Nevada Water Initiative

PROJECT ACTIVITIES

- DRI is providing data for systematic statewide updates for
 - Agricultural Consumptive Use Inventory and Database
 - Groundwater Discharge Area and Water Use Database
 - Meteorological and Hydrologic Monitoring
 - Recharge and Water Availability
- *This information is fundamental for ensuring adequate water supplies and economic prosperity.*

<https://water.nv.gov/programs/nevada-water-initiative>



Railroad Valley



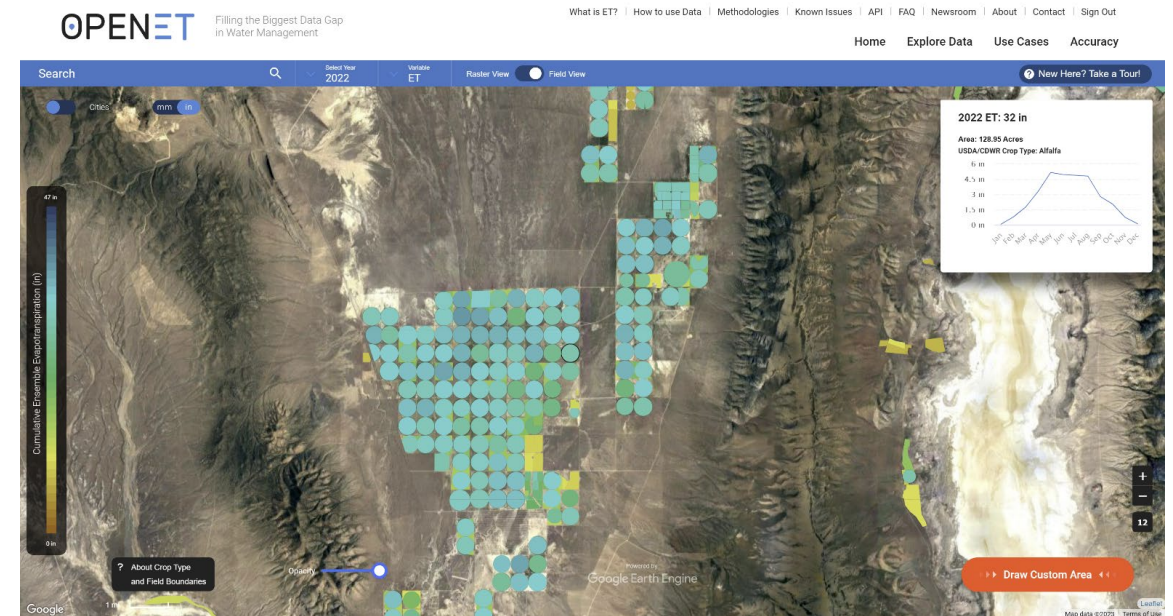
Nevada Water Initiative

OPENET: MEASURED FROM SPACE

- Built by NASA, USGS, DRI, and partners — public and free at openetdata.org
- Covers every field in the West: 30-meter detail, monthly, with history back to 1991
- Measures the water actually consumed by crops — not paper estimates
- On croplands, satellite estimates fall within ~13% of ground measurements
- No meters on every well, no staff on anyone's property

Independent numbers everyone can see — the end of dueling data.

OpenET is protecting water rights holders, not watching them



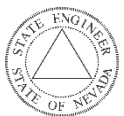
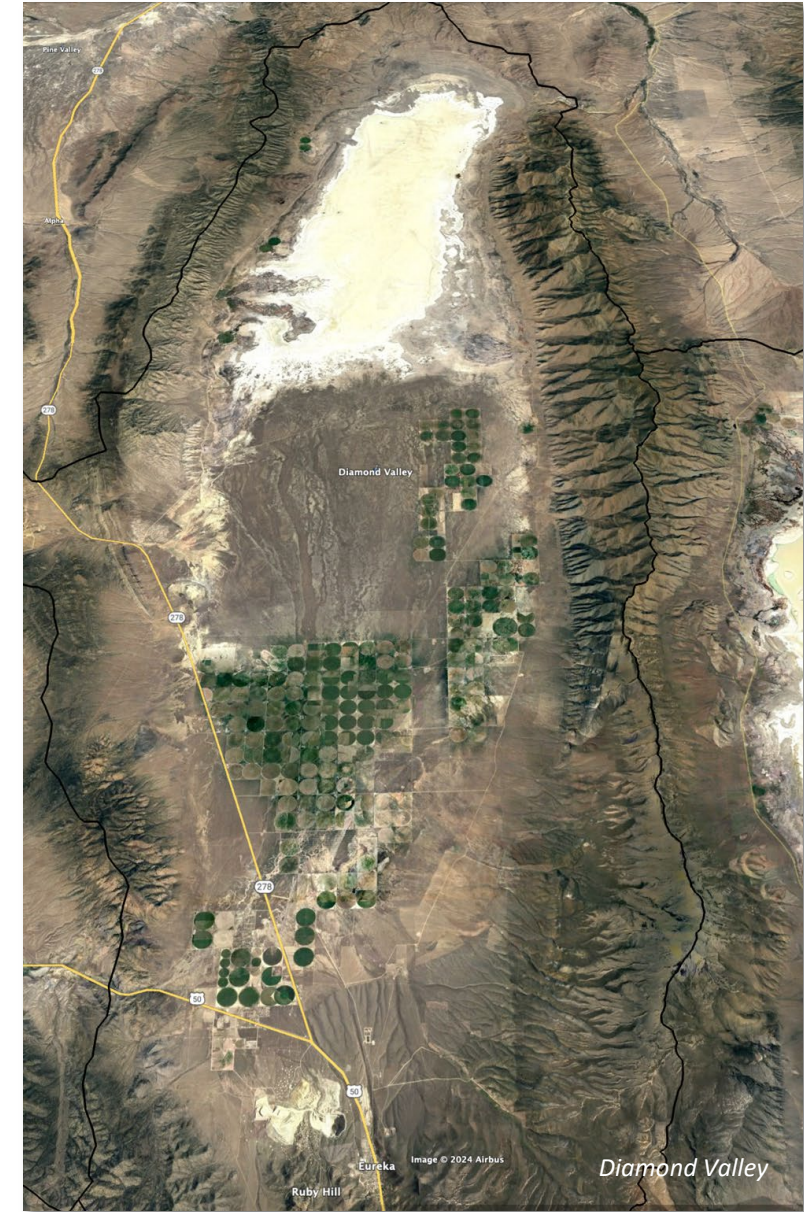
[OPENETDATA.ORG](https://openetdata.org)

NEVADA'S VOLUNTARY RETIREMENT PROGRAM

AB 104 & SB 36

- Nevada's Voluntary Water Rights Retirement Program is a locally driven alternative to curtailment — praised by agriculture and conservation alike
- A voluntary market only works with credible numbers: how much water exists, and where is retirement most beneficial?
- NWI delivers the updated water budgets; OpenET provides independent, field-level measurement of actual use
- Fair valuations protect water rights holders — and the taxpayer dollar behind every buyback

NWI is how Nevada targets voluntary retirements that deliver the most water security per dollar.



NEVADA DIVISION OF
WATER RESOURCES





Nevada Water Initiative

PROGRESS & WHAT'S NEXT

- Delivered: statewide datasets for water use, natural groundwater use, and recharge
- Water budget studies wrapping up in the Humboldt River and Railroad Valley flow systems
- Phase 2: Carson Desert (Fallon) — growth constrained by outdated water availability data, no additional GW appropriated since 1995
- Phase 2: South-Central Marshes (Tonopah) — critical minerals and energy potential, 14 hydrographic basins, poor water budgets
- Next: White River Flow System – Muddy River Springs and the Super-Basin, Tool is needed to predict changes to Spring outflow to support water right decisions (not currently funded)

Updated science unlocks responsible development and streamlines permitting.



Railroad Valley



Nevada Water Initiative

FROM INITIATIVE TO PROGRAM

INVESTMENT & LONG-TERM NEED

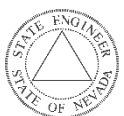
- Current funding: \$6.4M state ARPA + \$3.2M DRI & USGS match — ending late 2026
- Federal earmarks are moving; recurring state support keeps Nevada — not Washington — in control of its water program and captures the match
- Recurring funding retains Nevada's expert team, protects the investment already made, and enables long-range planning

Nevada led the nation on water science once. This is the opportunity to do it again.

THE ASK

~\$4M per biennium
over five biennia — \$20M

*The same level of investment that built Nevada's water science
the first time (1945-1957)*



NEVADA DIVISION OF
WATER RESOURCES



THANK YOU



RESEARCHING THE HUMAN IMPACT ON
THE ENVIRONMENT
AND THE ENVIRONMENT'S IMPACT ON
HUMANS

Kip Allander
Chief of Hydrology
NDWR

Justin Huntington
Research Professor
DRI

Todd Caldwell
Associate Research Professor
DRI