

New Mexico Private Wells Water Quality and Drought Information and Resources

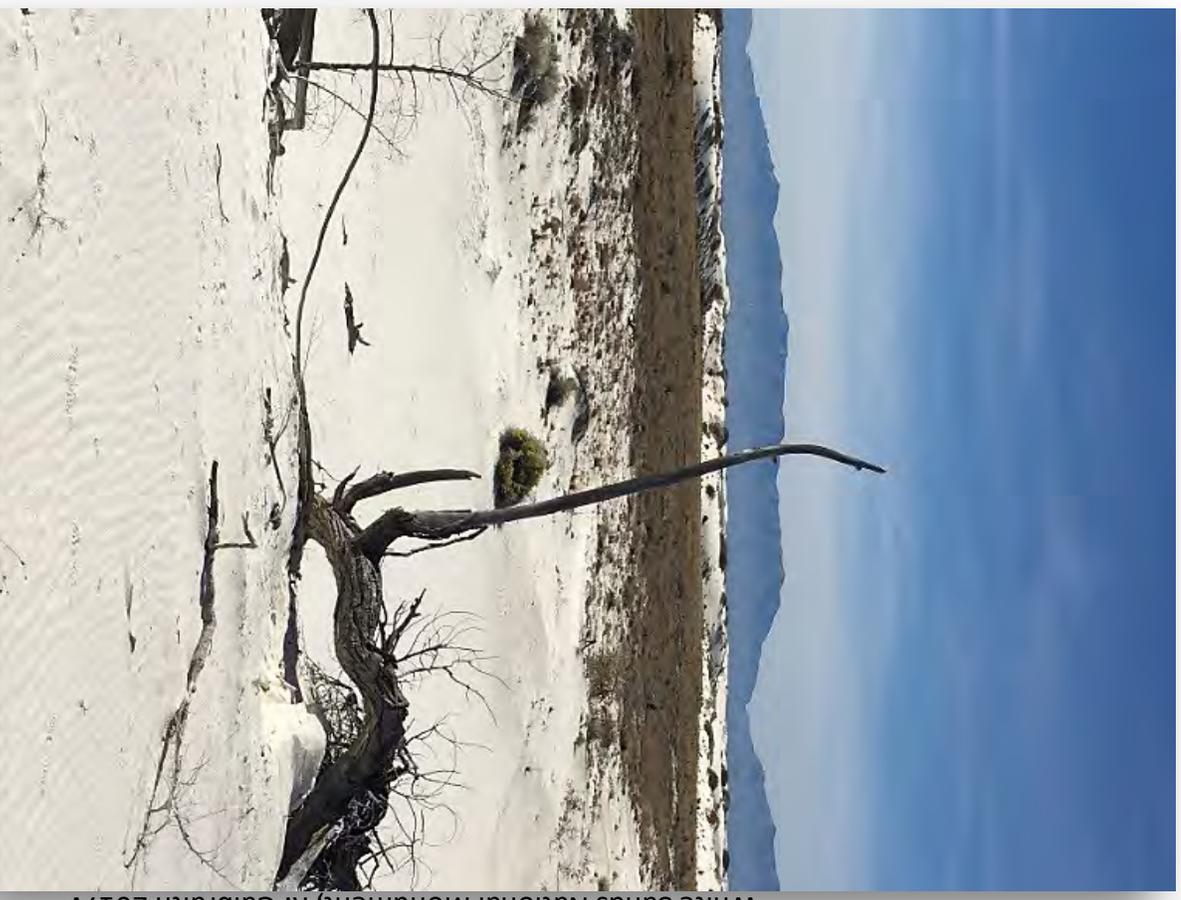
New Mexico Department of Health Private Wells Program



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Environmental Health Epidemiology Bureau (EHEB)

Southwest Drought and Human Health Workshop, Feb 26-27 2020

3/2/2020



White Sands National Monument, R. Galbraith 2017.



About the Private
Wells Program
and New Mexico Well Owners

Private Wells in New Mexico

Importance

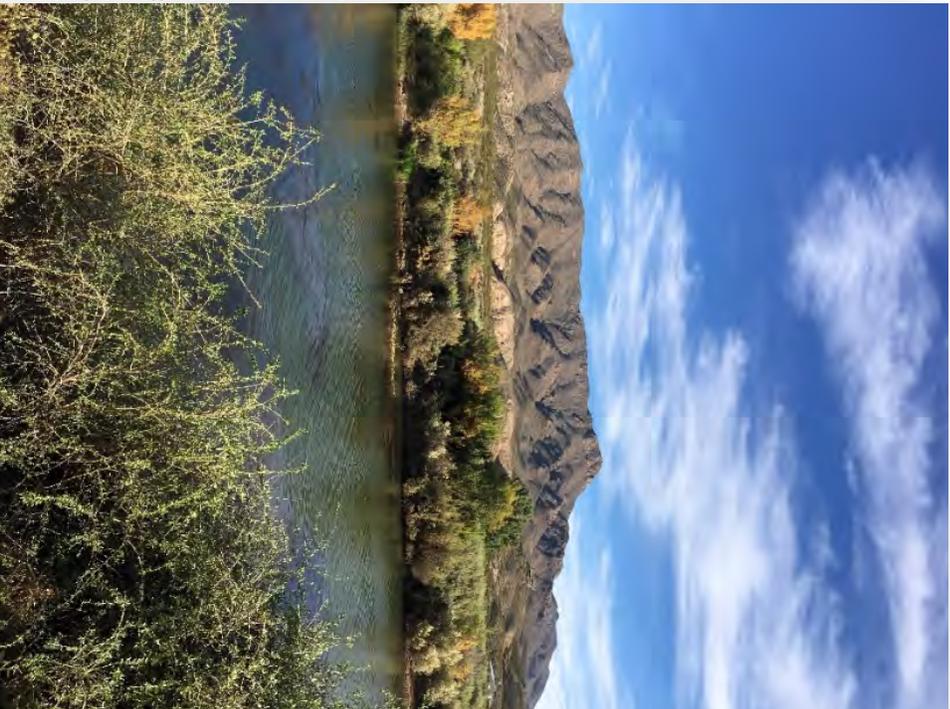
- Land area: 121, 298 square miles with about 250 square miles of surface water.
- 20% of New Mexicans rely on **unregulated drinking water sources.**
- For many people this is the only option for a water source.

Government-defined and policies

- Serves fewer than 25 people or less than 15 households.
- **Water quality not regulated.**



New Mexico Private Well Owners



T or C, NM, R. Galbraith 2017.

All 33 counties

Mountains, desert, bosque

Urban, rural, bedroom communities

Range of cultural and economic
backgrounds

Inherited well over generations

New resident of NM- never owned a well
before

Range in perceptions, norms, and attitudes
associated with water quality from wells.

New Mexico Private Wells Program

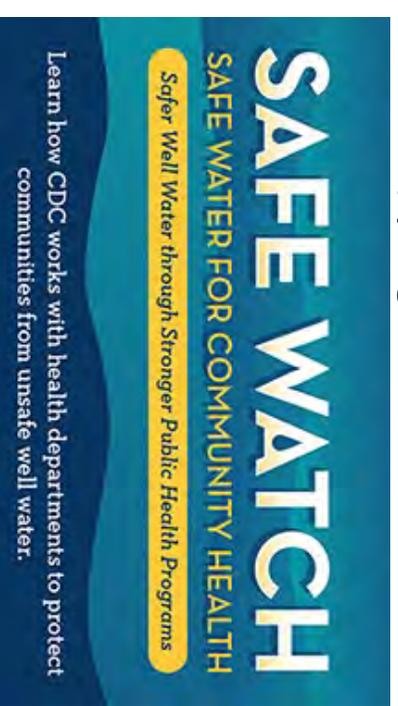
Private Well Epidemiology, Health Education, Water Fairs, Well IDs

Try Our Drinking Water Quality Toolkit at

<https://nmtracking.org/water>



- Goal: Empower New Mexicans to have access to safe drinking water.
- Helps residents reduce harmful exposures from wells and other private drinking water systems.
- One of 19 programs in the US, under the Center's for Disease Control and Prevention (CDC) Safe Water for Community Health (Safe WATCH) program.



<https://www.cdc.gov/nceh/ehs/safe-watch/index.html>

- New Mexico Department of Health Epidemiology and Response Division Environmental Health Epidemiology Bureau

New Mexico Private Wells Program- Activities

- Making the connection between drinking water and health.
- Bringing together water quality and health partners.
- Helping well owners be the best protectors of their water supply!





Information for the Well Owner to Take Action



Private Well Basics

Well Ownership Quick Tips

Private Well Ownership

Well owners are responsible for:

- **Learning about and maintaining private well water quality.**
 - Testing for constituents of concern. Learn more at:
https://nmtracking.org/environment/water/private_wells/Testing.html
- **If needed, improving the quality of the water with treatment.**
Learn more at:
https://nmtracking.org/environment/water/private_wells/Treatment.html
- **Well maintenance and record keeping.**
 - Take the **free online private well class** to learn the basics of well ownership and maintenance.
<http://privatewellclass.org/>
 - NM Office of the State Engineer is your statewide source of information about permitting and records.
Learn more at: <https://www.ose.state.nm.us/>
- **Protecting their water source** through:
 - Testing and (if needed) treating private well drinking water.
 - Well maintenance.
 - Septic system maintenance.
 - Practicing water conservation and keeping potential contamination sources at a safe distance.



New Mexico Environmental Public Health Tracking Program

New Mexico Private Wells Program

New Mexico Department of Health/ Environmental Health Epidemiology Bureau

Information for the Well Owner

A partnership with

New Mexico

Environmental Public

Health Tracking

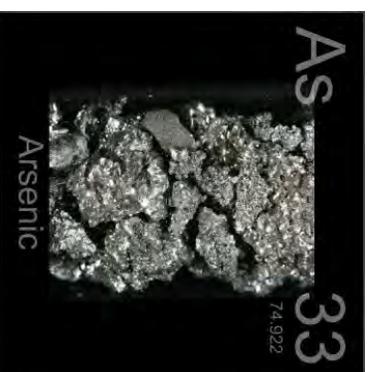
<https://nmtracking.org>



- General Well Information and Resources
 - Well Ownership
 - Maintenance/Record Keeping
 - Buying/Selling a Home With a Well
 - Septic Systems and Wells
 - Well Identification Tags
 - **Wells and Drought and Disasters**
- Testing and Treatment
 - Testing Events
 - Health Information
 - **Data**
 - **Private Wells Constituent Maps**



Private Well Water Quality in NM



Some Common Constituents in NM Groundwater (Well Water)

Water quality can be influenced by:

- Natural sources, like bedrock.
- Man-made sources, like chemicals, agricultural run-off, or plumbing fixtures.
- Natural disasters, like flooding and drought.

Common constituents in groundwater in New Mexico may include:

- arsenic, uranium, fluoride, manganese, selenium, nitrate, sulfate, and bacteria.

Learn more:

<https://nmtracking.org/environment/ExposureA-Z.html>

Accessing Private Well Water Quality Data

The screenshot shows the website <https://nmtracking.org/environment/water/PrivateWells.html>. The page features a navigation menu with links for About, Health, Environment, Newsroom, Data Portal, and Communities. A secondary menu includes links for Home, Environment, and Water. The main content area is titled "Private Wells Water Quality" and includes a "Well Ownership" section with a list of responsibilities for well owners. Below this, there are sections for "Learn About Private Wells Water Quality", "Well Owner Tips", "Well Water Testing, Treatment and Well Owner Resources", and "Explore Data". A green arrow points to the "Explore Data" section, which contains links for "Private Wells Arsenic Data", "Private Wells Fluoride Data", and "Private Wells Nitrate Data".

NEW MEXICO Environmental Public Health Tracking + EPHT

Home • Environment • Water

About Health Environment Newsroom Data Portal Communities

- Environment
- Introduction
- Air Quality
- Water Quality
- Climate & Weather
- Food Consumption
- Biomonitoring
- Environmental Exposure A-Z

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Private Wells Water Quality

Well Ownership

Well owners are the best protection of their water supply. The water quality of a private well is unregulated. Well owners are responsible for:

- Well maintenance
 - Protecting their water source
 - Learn about [water well resources](#).
 - Testing and when applicable, treating their water.
 - Learn about [private wells testing](#).
 - Learn about [private well water treatment](#).
 - Knowing the history and maintaining records of their well.
 - Learn how you can easily access records for your private well with a well ID.

Learn About Private Wells Water Quality

Well Owner Tips

Well Water Testing, Treatment and Well Owner Resources

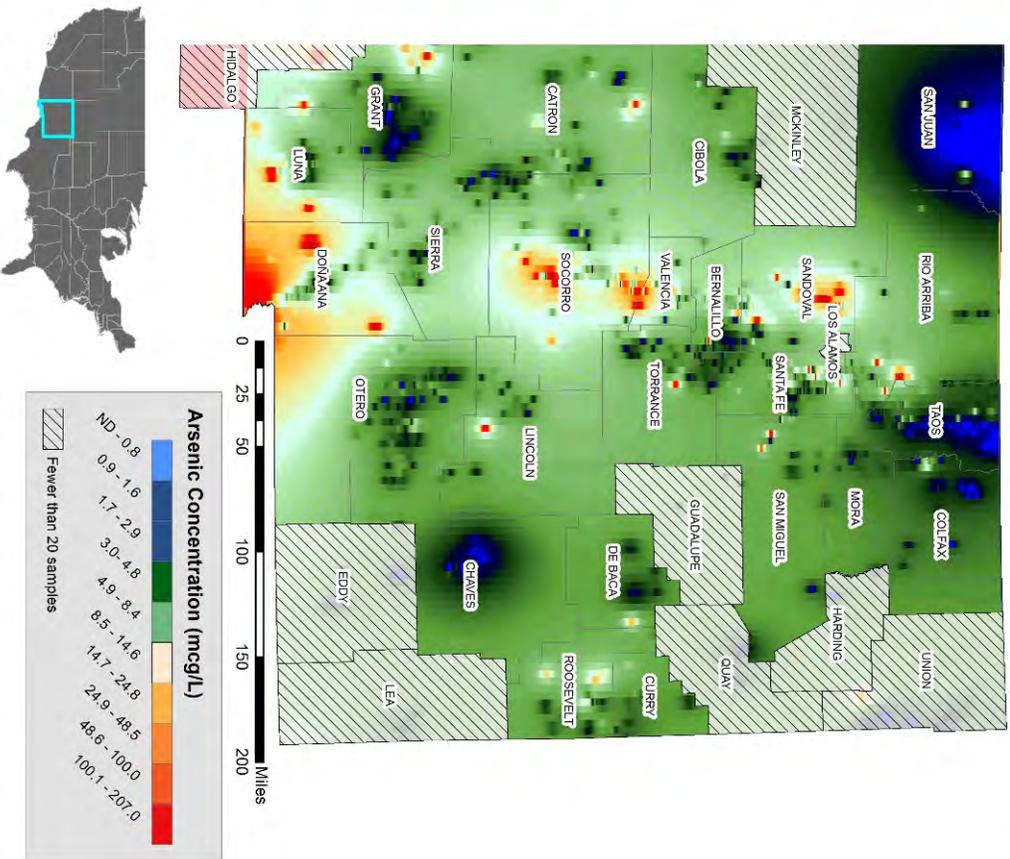
Explore Data

- [Private Wells Arsenic Data](#)
- [Private Wells Fluoride Data](#)
- [Private Wells Nitrate Data](#)

Arsenic Distribution in New Mexico Private Wells

Wells Sampled November 1973 – October 2018

Interpolated* Groundwater Arsenic Concentrations (mcg/L) from Private Wells Data



Data Sources: NMED Water Fairs, NMBGMR, USEPA, USGS NWS, NMDOH biomonitoring, Bernalillo County, Santa Fe County
 *Interpolated Using QGIS 3.4.3 inverse distance weighted.

Last Updated: 1/16/2019

<https://nmtracking.org/environment/water/PrivateWells.html> "Explore Data"

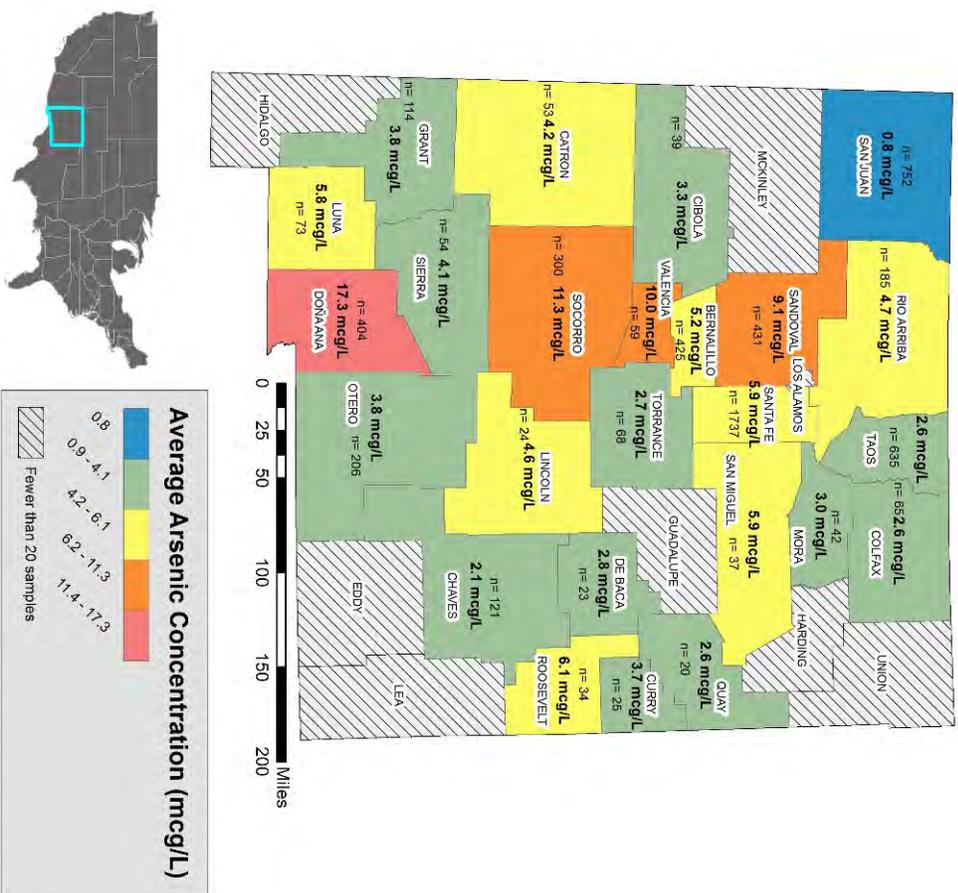
3/2/2020

Arsenic Distribution in New Mexico Private Wells

Wells Sampled November 1973 – October 2018

Average Arsenic Concentration (mcg/L) by County

*"n" is number of samples per county.



Data Sources: NMED Water Fairs, NMBGMR, USEPA, USGS NWS, NMDOH biomonitoring, Bernalillo County, Santa Fe County
 Last Updated: 1/24/2019

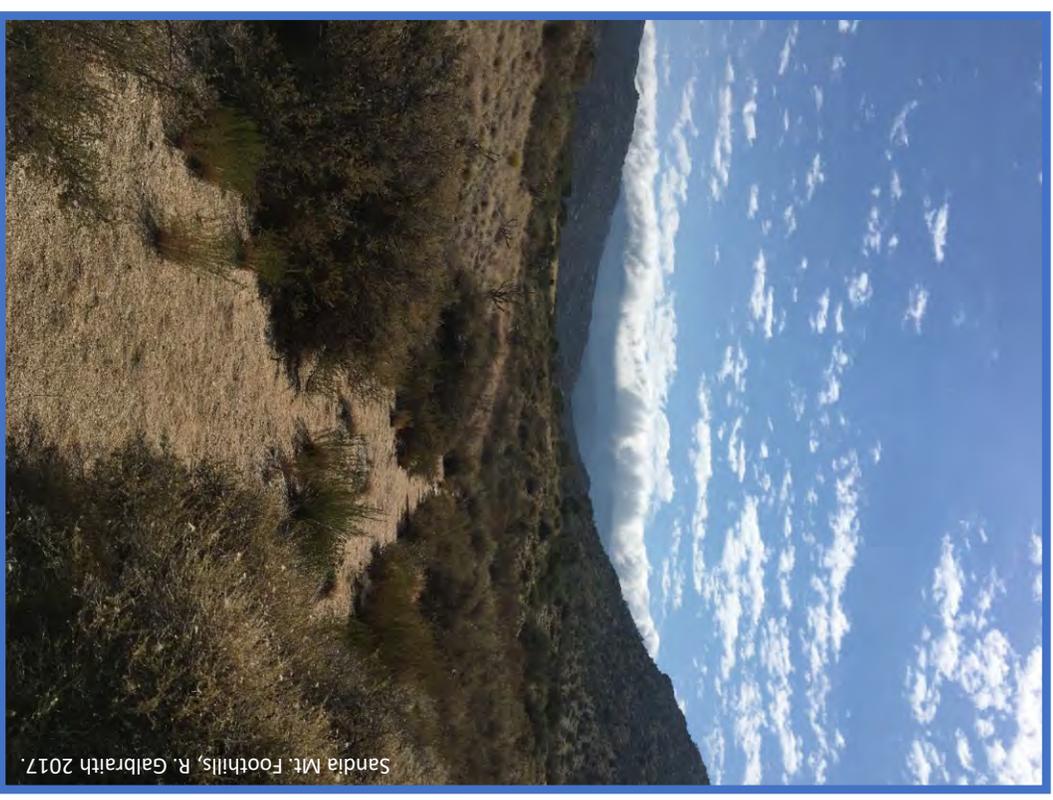
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Preparing Well Owners for Drought

Private Wells and Drought

- Community water systems have drought plans and management strategies.
- **Private well owners do not have these resources or infrastructure.**
- Wells whose depth to water is near the water table are at increased risk of running dry during droughts.
- During a drought, groundwater may contain higher levels of groundwater constituents, which may degrade water quality.



<https://nmtracking.org/environment/climate/WellsDroughtsDisasters.html>
<https://nmtracking.org/environment/climate/Drought.html>

Drought

Wells and Drought Preparation Quick Tips

Private Wells in a Drought Prone Area

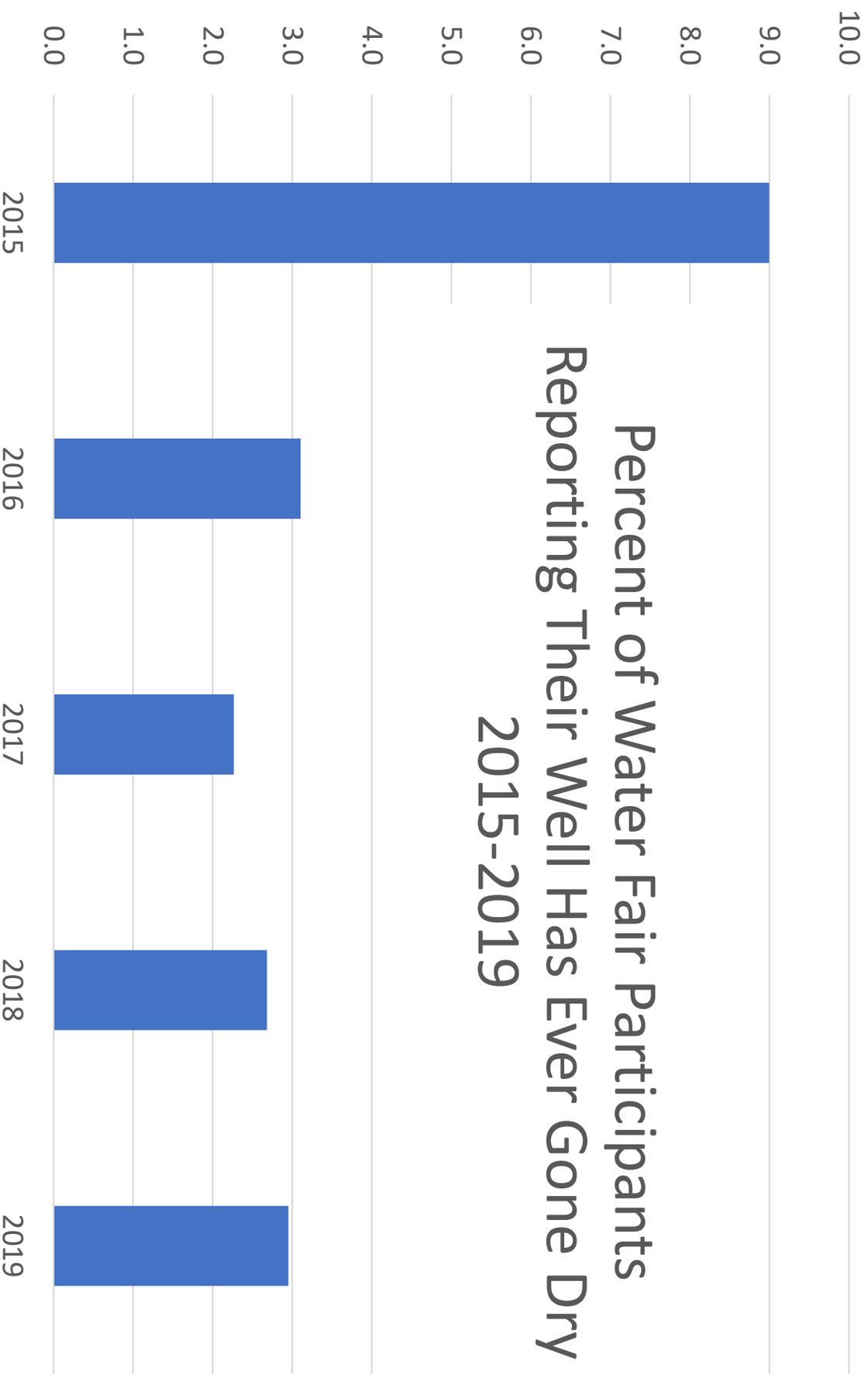
- Maintaining your private well will help it withstand the stress of drought.
 - Be familiar with and document (photograph) well components should they need replacement.
- Drought can affect water quality by increasing the concentration groundwater constituents (chemicals) and changing how groundwater and surface water interact.
 - **The best way to determine if any changes in water quality have occurred is to test your well water regularly.** Learn more at: https://nmtracking.org/environment/water/private_wells/Testing.html
- Practice water conservation. Some suggestions include:
 - Check for and repair leaking plumbing fixtures.
 - Install water saving plumbing fixtures.
 - Install drip irrigation, water-saving landscaping
- Learn more about drought at: <https://nmtracking.org/environment/climate/Drought.html>

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Are NM Well Owners Experiencing Water Outages?



Funding Disclaimer (CDC)

Funding for this presentation was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Thank you!



Drinking Water Quality Toolkit

<https://nmtracking.org/water>

Private Wells

Community Water Systems

**NEW MEXICO
Environmental
Public Health
Tracking EPHHT**

**Visit Our
Drinking
Water Toolkit
to Learn More**

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