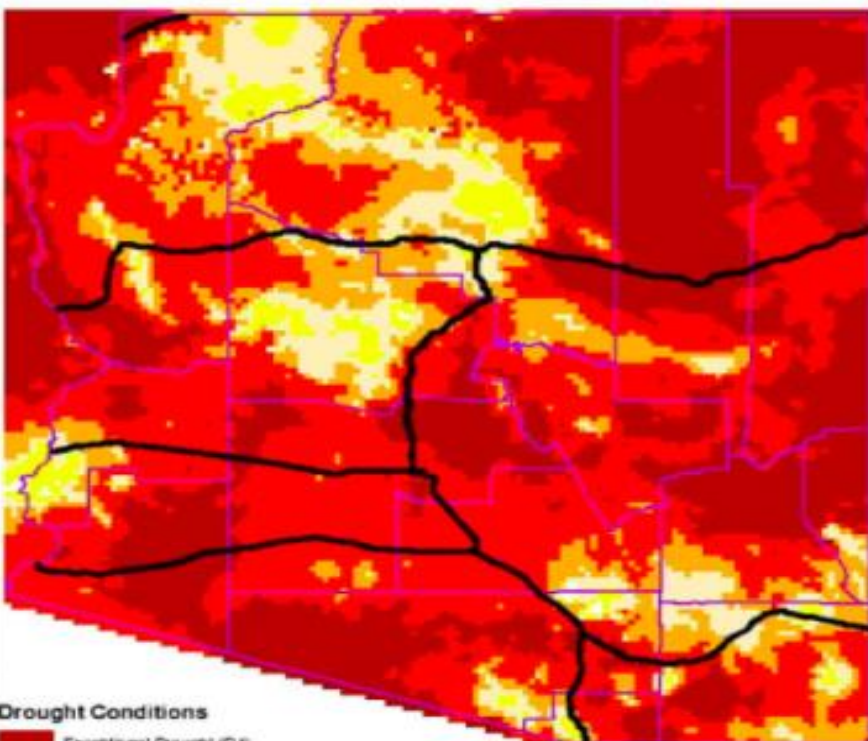




No Fracking AZ

## July - September Long Term Drought 2018



(C)2018 Arizona State Climate Office



Arizona's drought should be taken into consideration when it comes to plans for future water use.

## **FRACKING = WATER CONSUMPTION**

**Nationwide over 300,000 wells are fracked.**

Fracking operations use over 2 billion gallons of water per day.

Fracked counties in TX report 25% increase in water consumption.

Fracking operations in North Dakota caused a 12% increase in water consumption statewide.

- \* If fracking is to continue in our state,  
we estimate a 15% increase in  
Arizona's water use.**

## FRACKING PERMANENTLY REMOVES WATER OUT OF THE WATER CYCLE

The quantity of water used for fracking is between 10,000 gallons and 16 million per frack depending on the style of operation.

One well can be fracked up to 30 times.



# POTENTIAL OIL

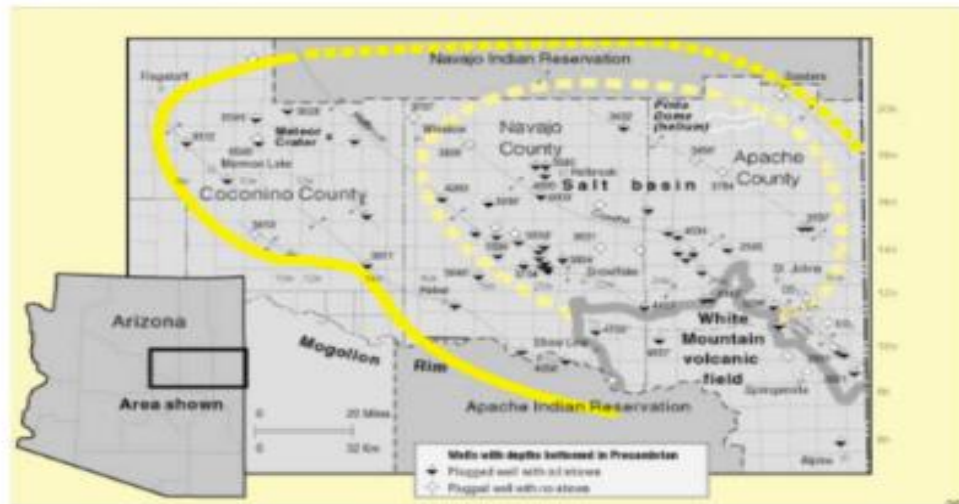
*Data from Blackstone prospectus.*



# THE HOLBROOK BASIN AND THE COCONINO AQUIFER

The Holbrook Basin, which is directly over the Coconino Aquifer, is being called the

**"Saudi Arabia  
of Helium."**



The Coconino Aquifer supplies  
water to most of northern Arizona.

# Ebby County NM – 440 yd



# Ebby County NM – 880 yd



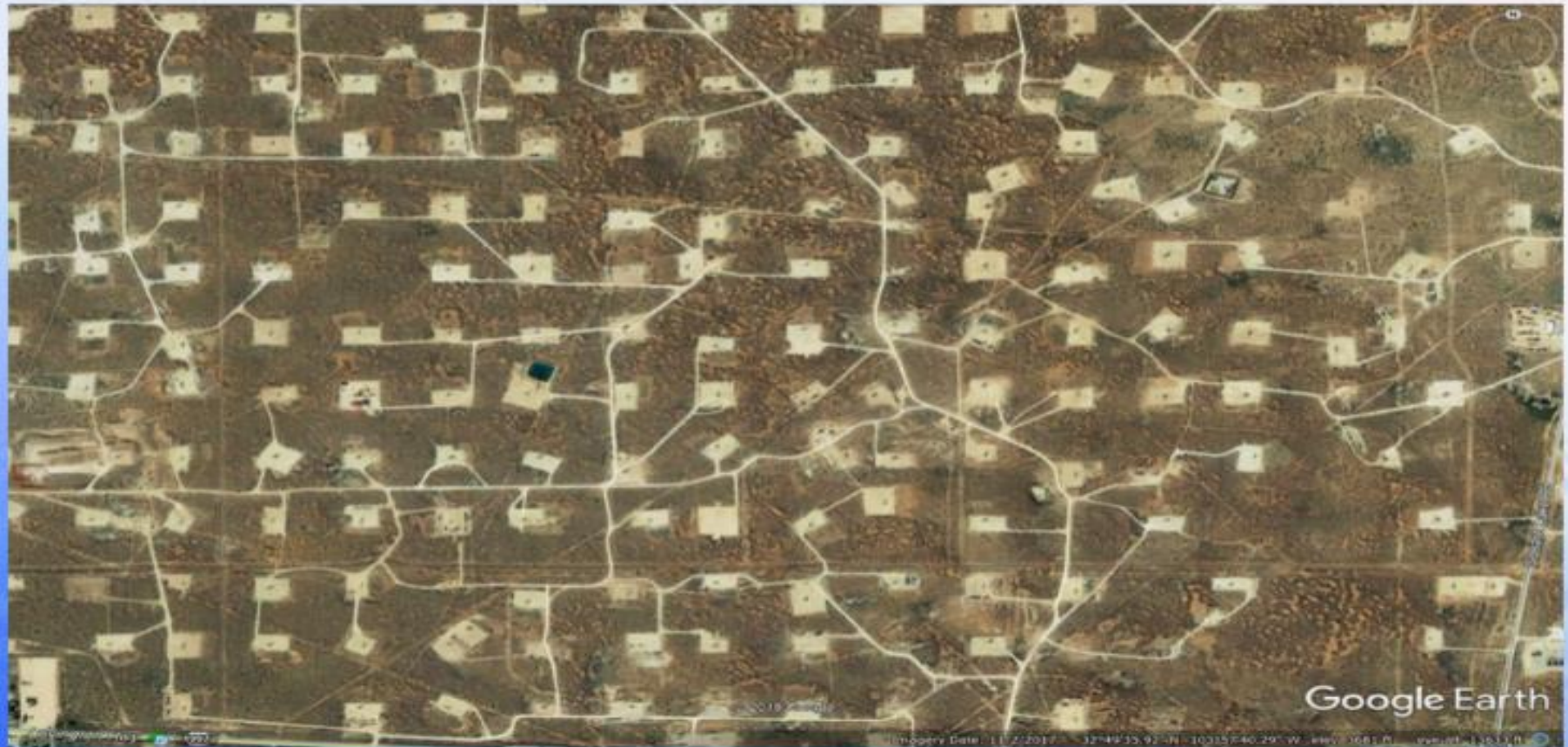
# Ebby County NM – 1 mile



# Ebby County NM – 2 miles



# Ebby County NM – 2 miles



# Ebby County NM – 4 miles



# Holbrook Basin in 4 years?



In the words of Dr. Kevin Gibson, PhD, who is a Mining Engineer on our team,

**“THERE IS NO SUCH THING  
AS SAFE MINING.”**

He worked in Saudi Arabia for the largest mining company in the world for 20 years.

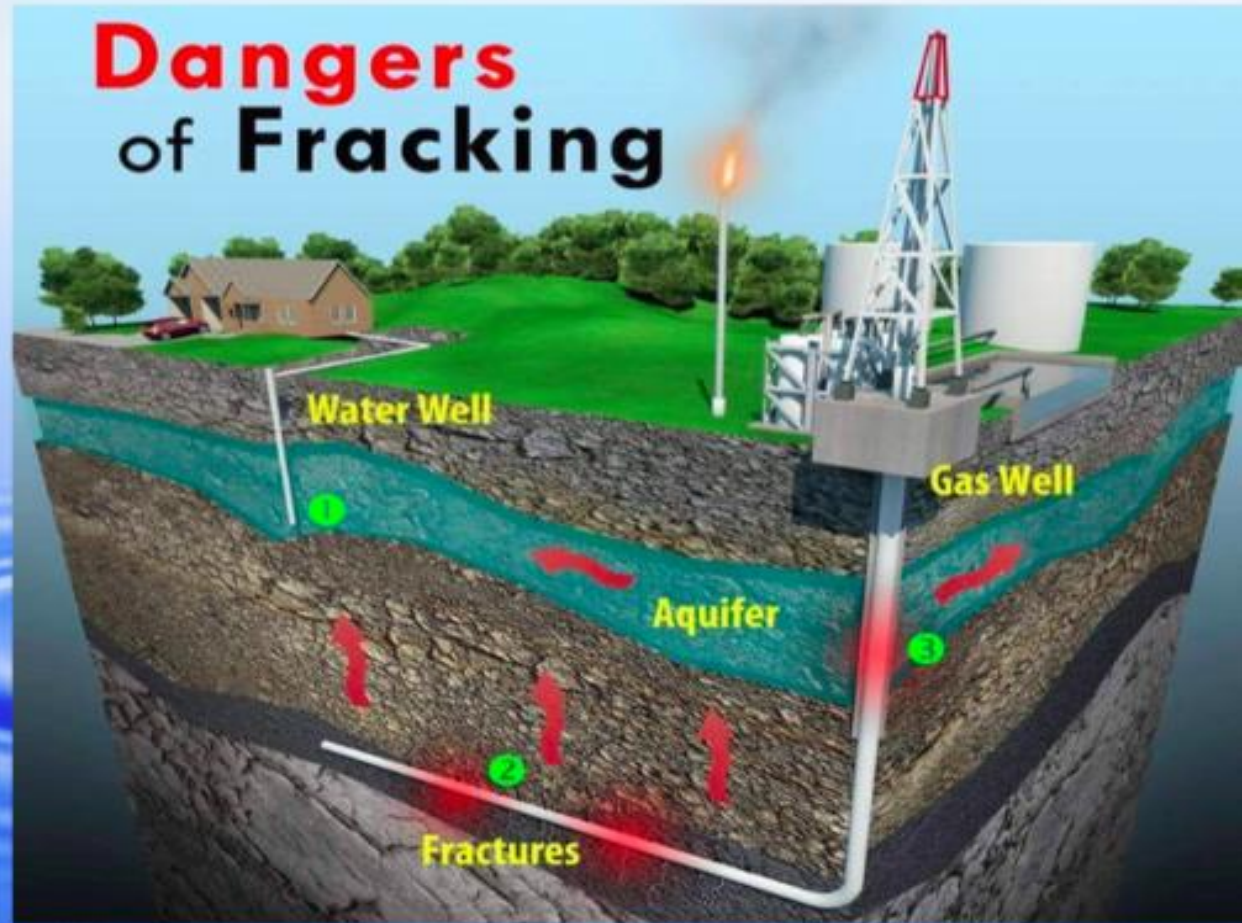
# What Goes Wrong

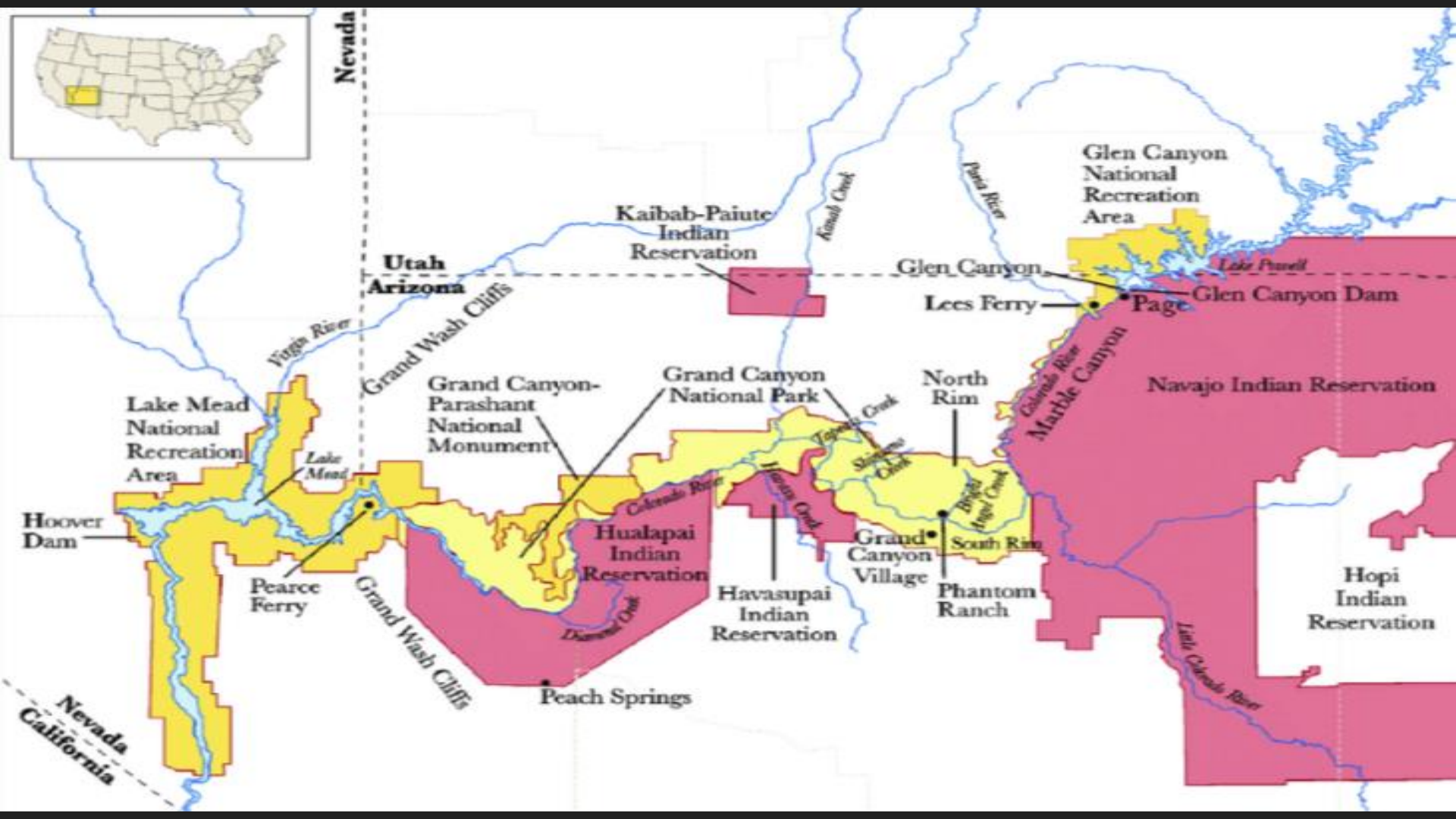
Surface spills or failed pit liners allow contamination of aquifers.

High pressure fracking fluids migrate via fissures or faults.

Casing fails allowing fracking fluids or methane to contaminate aquifer. PSR estimates casing failure rates at 15%

VOC and radium linger in the air in proximity wells.





## **LEAKY WELLS = CLIMATE CHANGE**

The EPA currently estimates the methane leak rate at 1.4%.

Newer studies show up to 2.3%,  
which is a 60% difference.

## Methane vs. CO<sub>2</sub>

Methane is a highly potent greenhouse gas, with more than 80 times the climate warming impact of carbon dioxide over the first 20 years after it is released.

# Where the natural gas industry is leaking methane

Methane leaks occur at every step and stage from production to distribution. These estimates are from 2016.

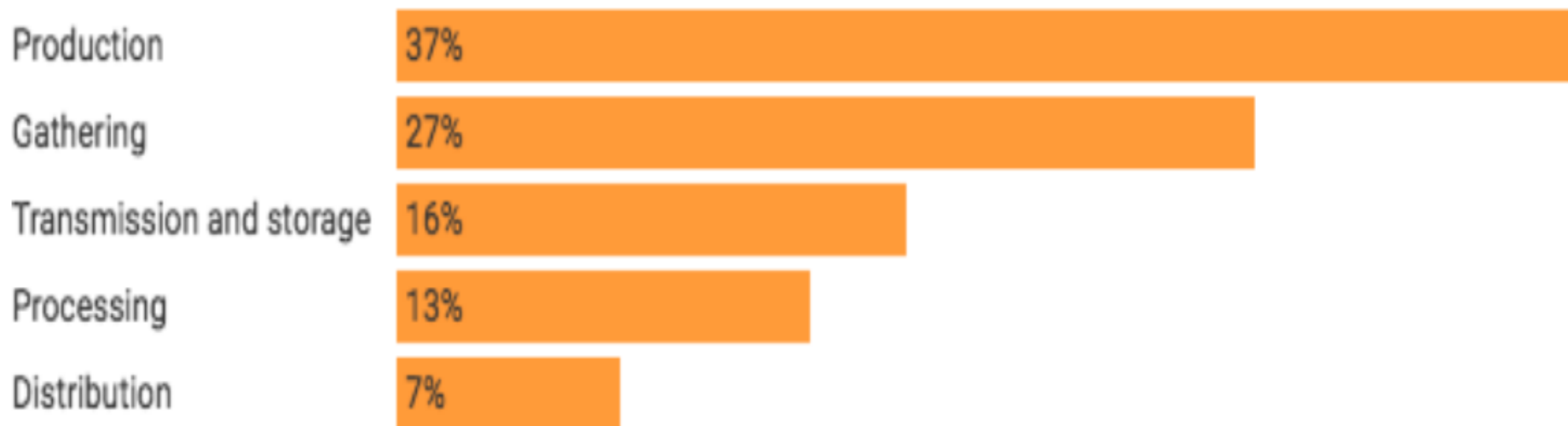


Chart: The Conversation, CC-BY-ND • Source: [Environmental Protection Agency](#) • [Get the data](#)

Spot 93.6 °F

 FLIR

N 36°29.124' W 109°9.506'

Dist = 3.3 Trefl = 68.0  $\epsilon$  = 0.95



EARTHWORKS

## **INFO FROM THE EPA'S WEBSITE**

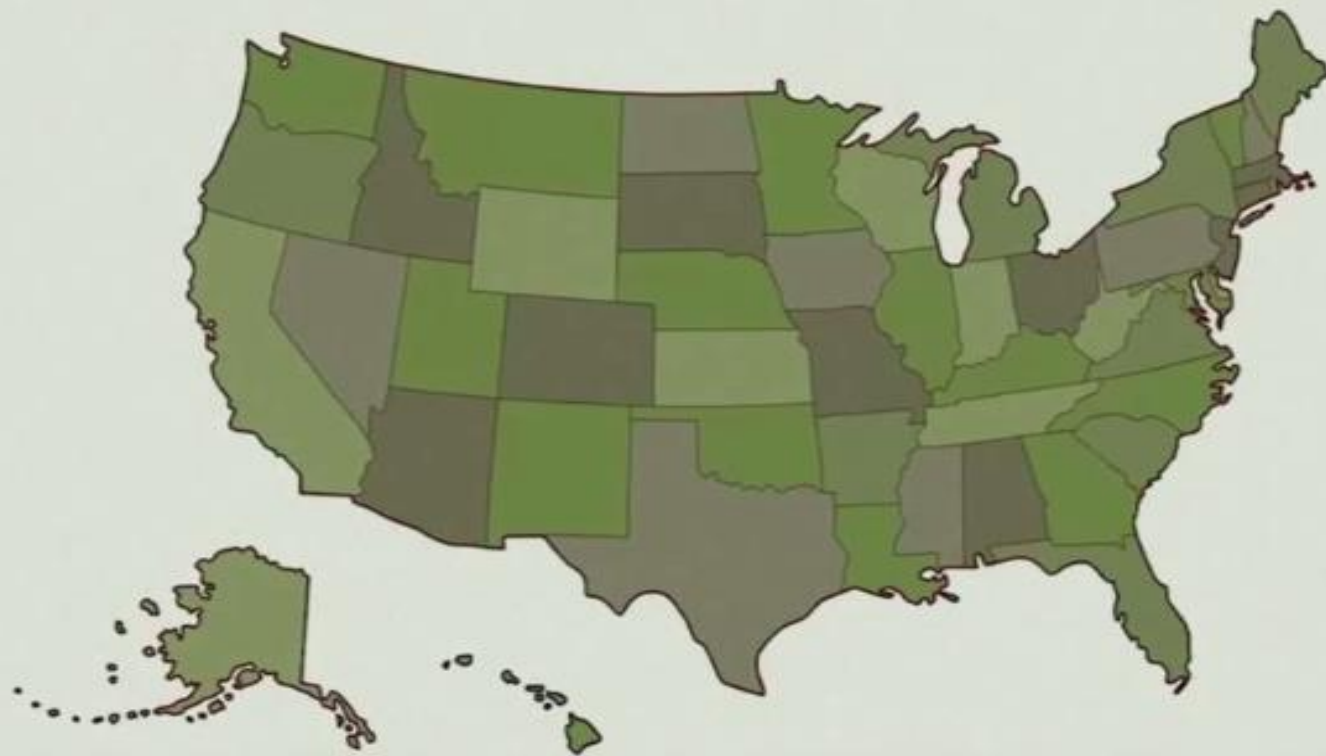
- Of the 1,606 chemical identified by EPA, 173 had chronic oral toxicity values

Pre- and post-fracturing data on groundwater and surface water quality is generally lacking

- Full characterization of the fate and impacts of spilled hydraulic fracturing fluids, additives, and produced water also generally lacking

- Causal assessment of alleged impacts challenging
- Information on chemicals associated with hydraulic fracturing incomplete
- Data gaps limit full characterization of the frequency and/or severity of impacts

# We Have Opportunity to Get Ahead of the Problem





To keep informed about the  
issues surrounding fracking  
in Arizona, please visit:

[NoFrackingAZ.org](http://NoFrackingAZ.org)