

***NOWRA Onsite Wastewater
Mega-Conference
Springfield, Missouri
2022***

***Looking Back
&
Moving Forward***

NOWRA

“The opinions expressed in this presentation and on the following slides are solely those of the presenter and not necessarily those of NOWRA.

NOWRA does not guarantee the accuracy or reliability of the information provided herein.”





3 **BIG**
THINGS
YOU NEED TO KNOW



***Looking Back
Legacy Systems***



Rural Electrification Administration

The Goal?

Sewer the entire country



In 1976 EPA's letter to Congress says:

We can't do it....and

We must rely on decentralized onsite systems to fill the needs of rural America

And this created "Legacy Systems" and an opportunity for our industry

*When these legacy systems were first built,
common practice was to install the least
costly solution, which was not necessarily
the most appropriate solution for the
conditions*

EPA Estimates that 10 to 20 percent of onsite systems are failing



Using data we have if 15% are failing that is 4.6 million failing systems – or 92,000 failing system in each state

*Neglecting the “past”
would be missed
opportunities*



Looking Forward

LOTS

Large Onsite Treatment Systems

WAC 246-272B-01000

Purpose and objectives.

(1) The purpose of this chapter is to protect public health and the environment by establishing a comprehensive framework for statewide management of LOSS.



Looking Forward
Water Shortages Across Our Country

Is this really a problem?

and

How can this benefit our industry?



Lake Mead

Yes!!



Lake Powell



Lake Oroville

It is a problem

How Much Water Do We Have?



70% of the earth is covered in water

BUT

97% Saltwater

3% Freshwater

AND

2% is ice

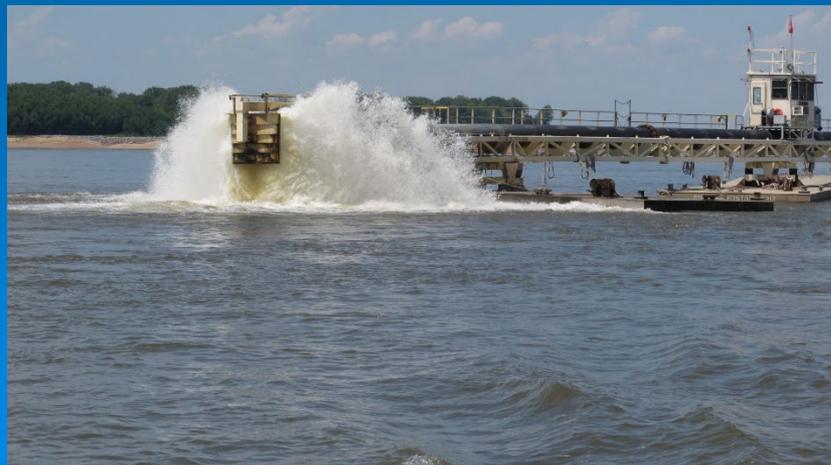
Aquifers



0.98% Groundwater

0.02% Lakes & Streams

Missouri Gov. Mike Parson issues drought alert for almost half of Missouri counties



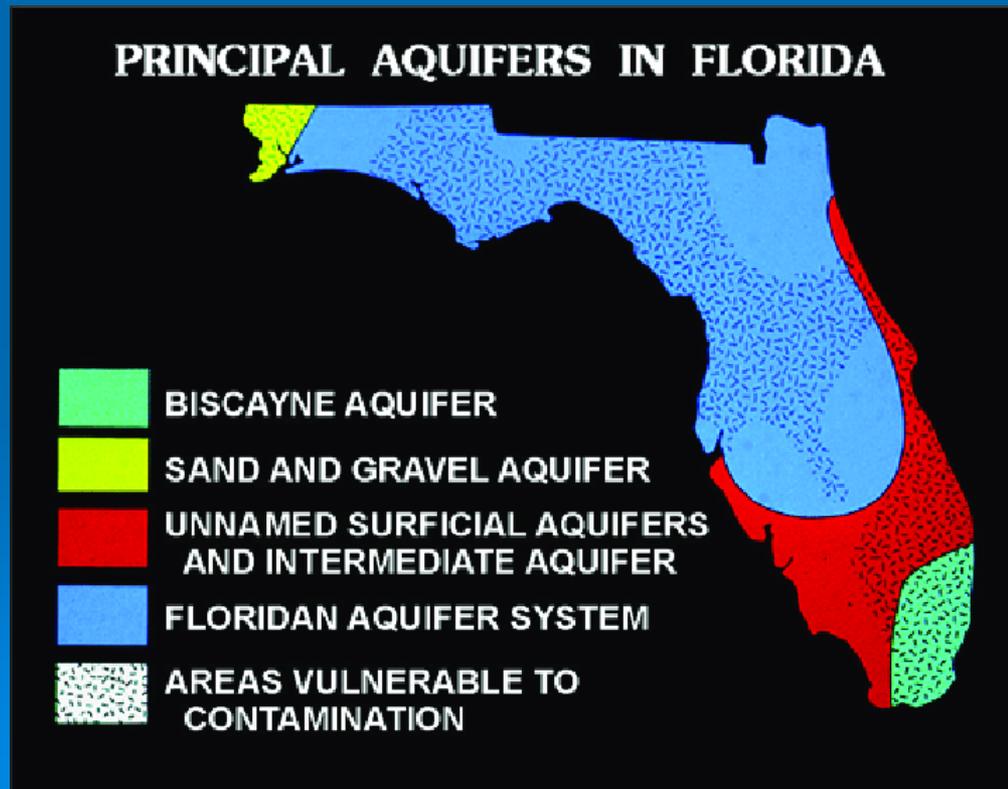
Ogallala Aquifer

In Kansas “Day Zero” – the day wells run dry – has arrived for 30% of the aquifer

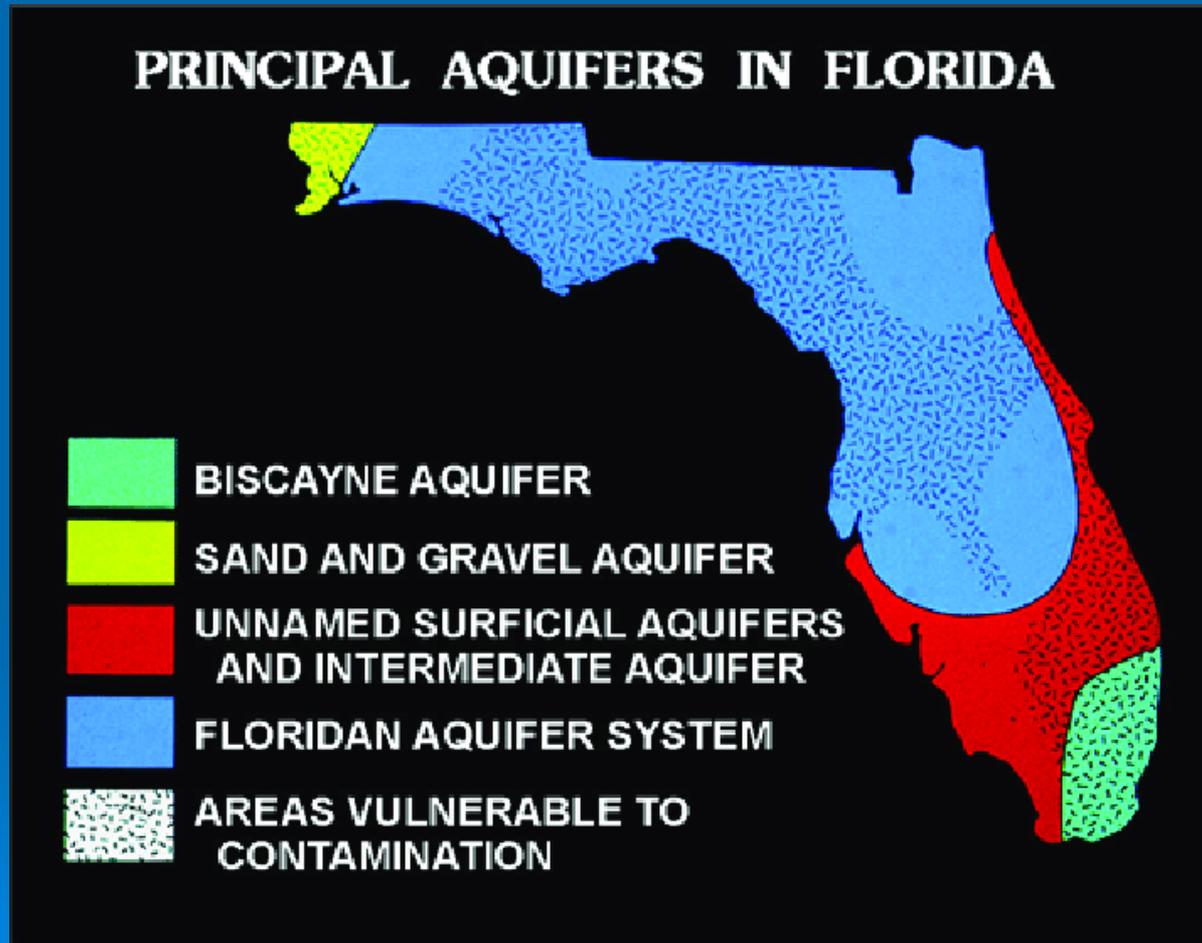


Biscayne Aquifer

*Primary source of drinking water for Miami /
Dade County*



Floridan Aquifer

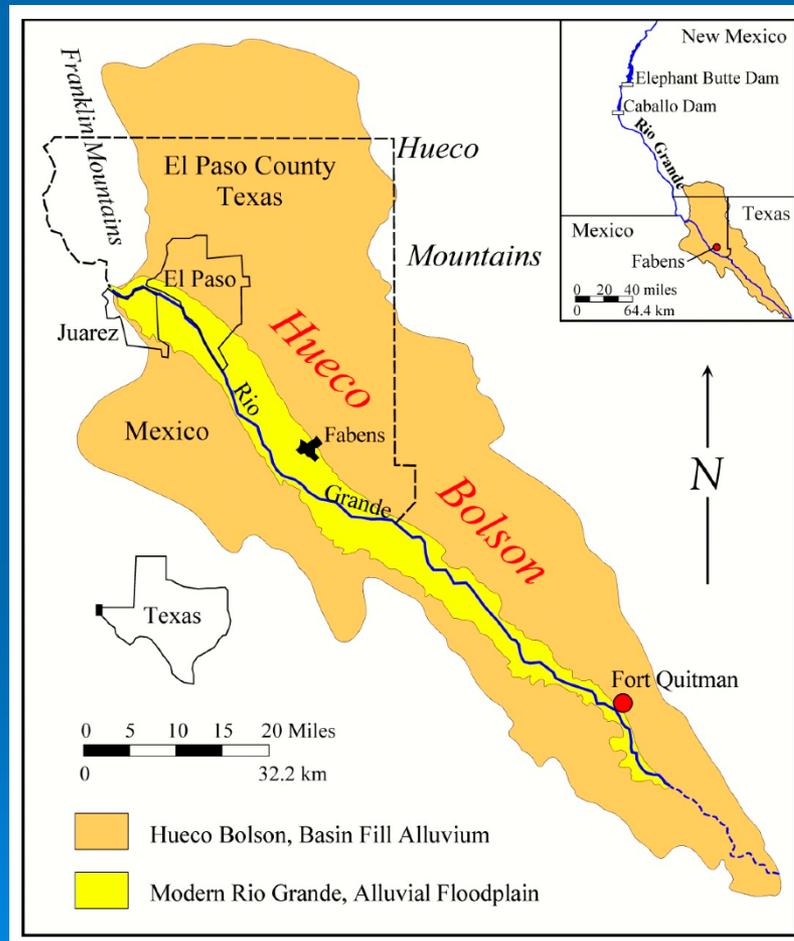


Sparta Aquifer

■ Memphis aquifer
■ Mississippi Embayment



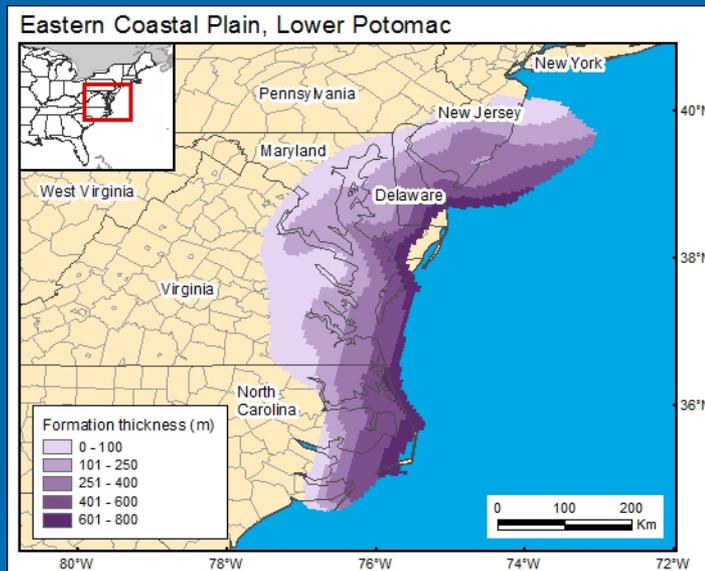
Hueco Bolson Aquifer



*City of El Paso
recharges 12
million GPD of
treated
wastewater*

Potomac Aquifer

- *Homes and businesses in the Hampton Roads region are drawing groundwater faster than it can be replenished.*
- *In some areas the earth is sinking.*
- *They are pumping 1 million GPD of treated wastewater into the aquifer*





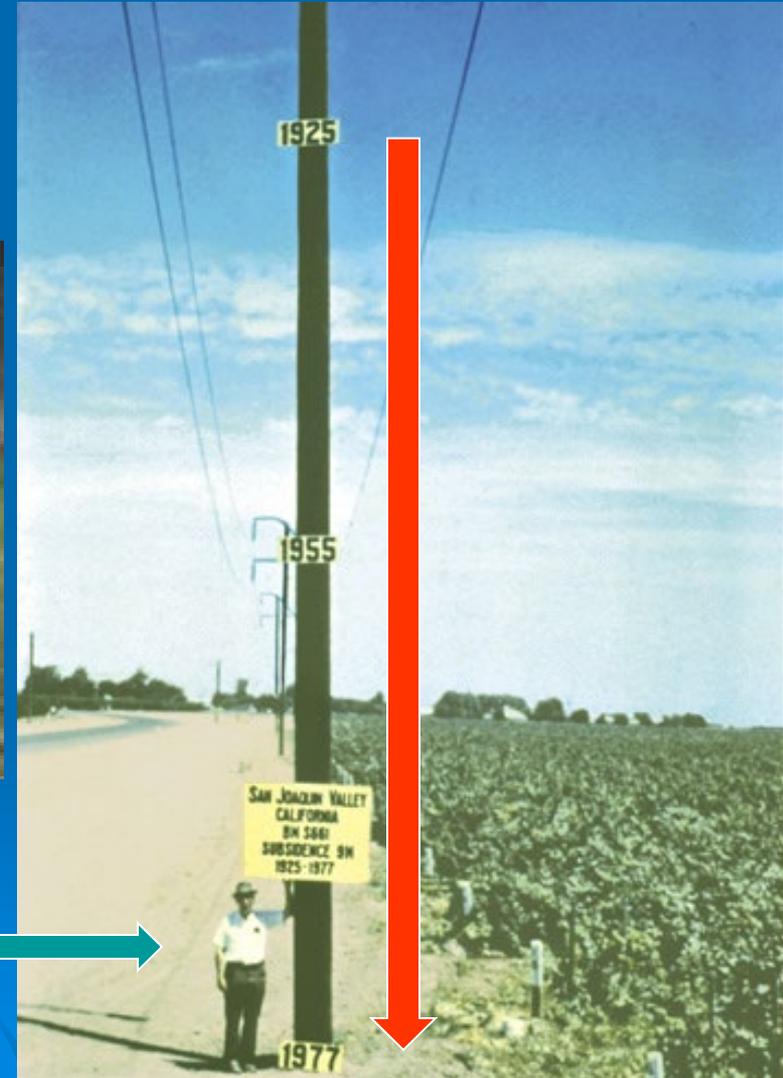
Orange County California Groundwater Replenishment System

Treating 100 million
GPD of wastewater to
be put back into the
aquifer

The Water Crisis



*Dr. Joseph Poland
Stanford University*



How much can the onsite systems in the US contribute to our dwindling aquifers?

11.1 Billion gallons per day

or

4 Trillion gallons per year

Maybe we should take a lesson from Israel

90% of Israeli wastewater is purified and used in irrigation...The world leader and four times more than any other country



Questions?

NO WRA