PORA WATER COMMITTEE

A Quick Look at Some Water Issues for Sun City West

2022

ARIZONA WATER

COMES FROM THREE SOURCES:

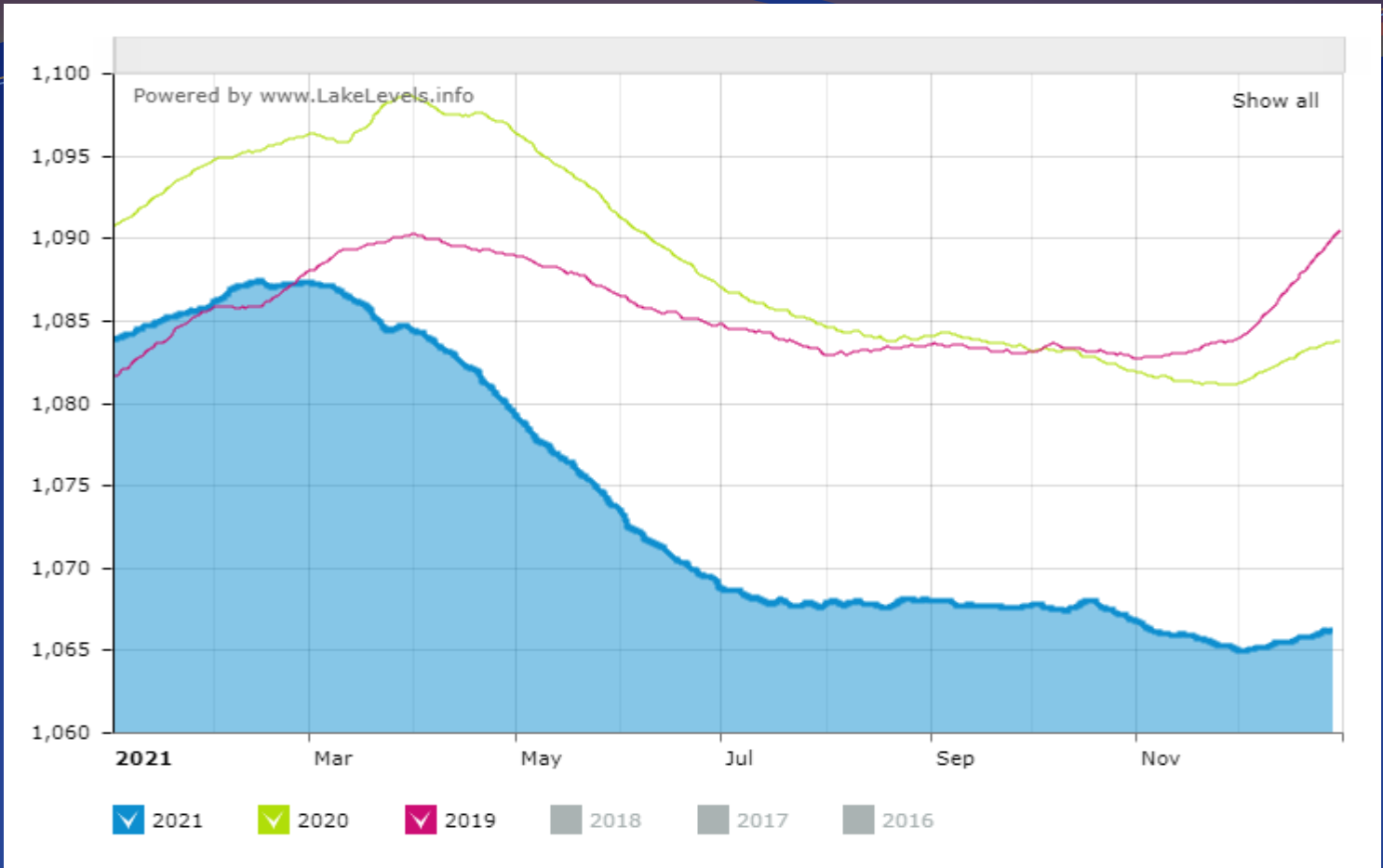
1. **Surface Water: Rivers, Lakes, Rain, Snowmelt.**

2. Groundwater: Water Wells

3. Recharged Water: *Natural* from aquifer contact with surface sources and *Artificial* from recharge ponds, injection wells.

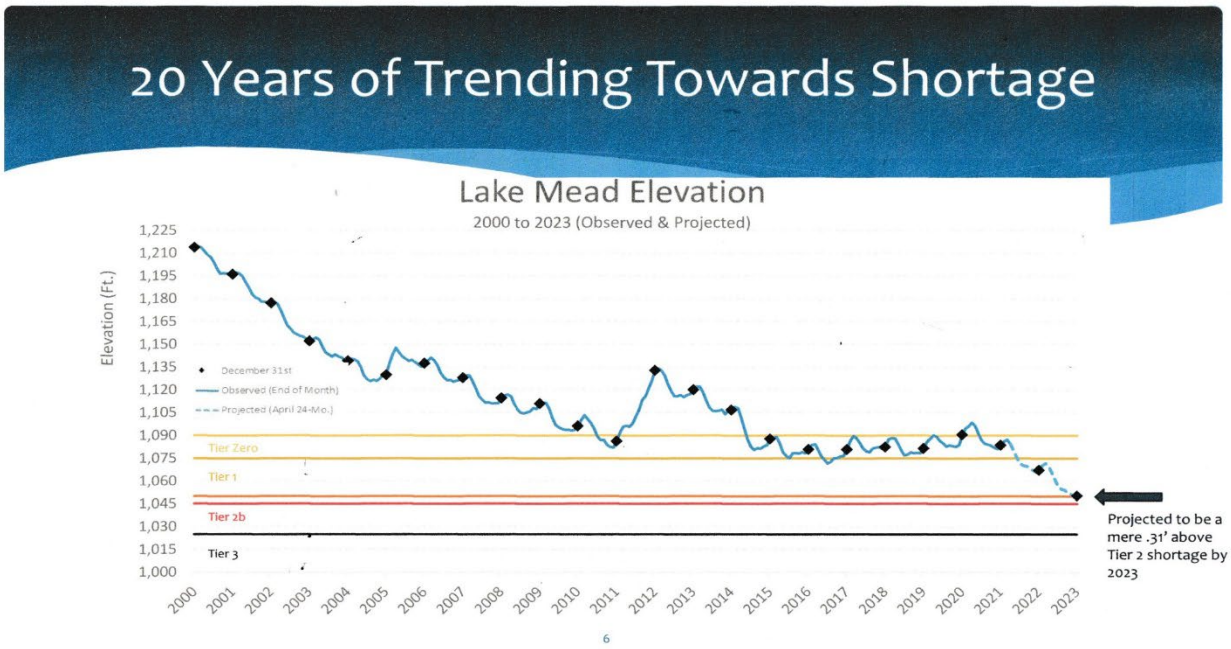
Surface Water

Lake Mead Ring. The Water Level is 163 Feet Below Full Pool. This part of the Colorado River is the source of much of Arizona's water.



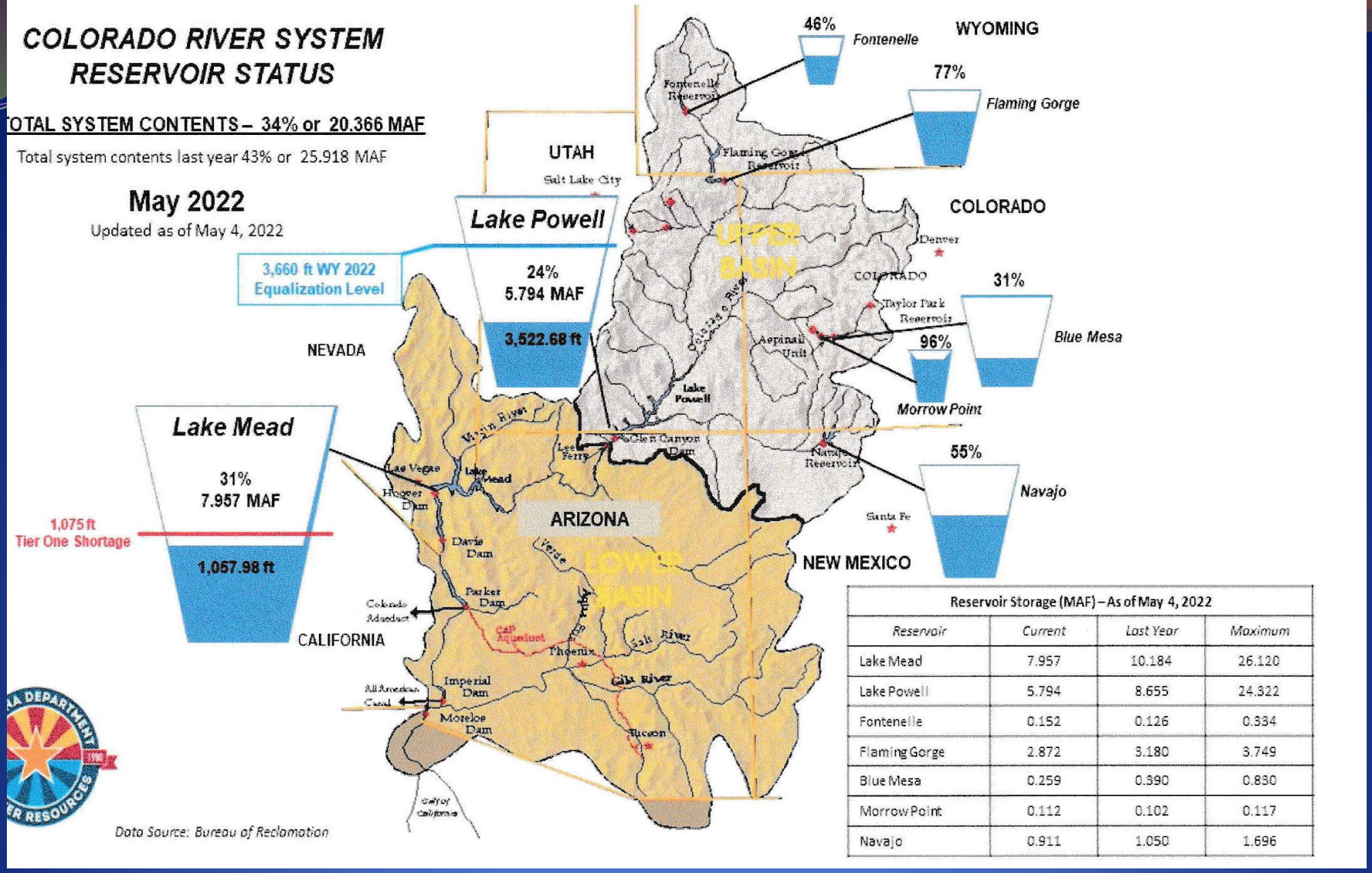
Surface Water

Lake Mead Level.



Lake Mead History and Projected Levels

Note: Levels Approaching Tier 2 Shortage Soon



Reservoir Storage (MAF) – As of May 4, 2022			
Reservoir	*Current*	*Last Year*	*Maximum*
Lake Mead	7.957	10.184	26.120
Lake Powell	5.794	8.655	24.322
Fontenelle	0.152	0.126	0.334
Flaming Gorge	2.872	3.180	3.749
Blue Mesa	0.259	0.390	0.830
Morrow Point	0.112	0.102	0.117
Navajo	0.911	1.050	1.696

Colorado River System

Lake Powell

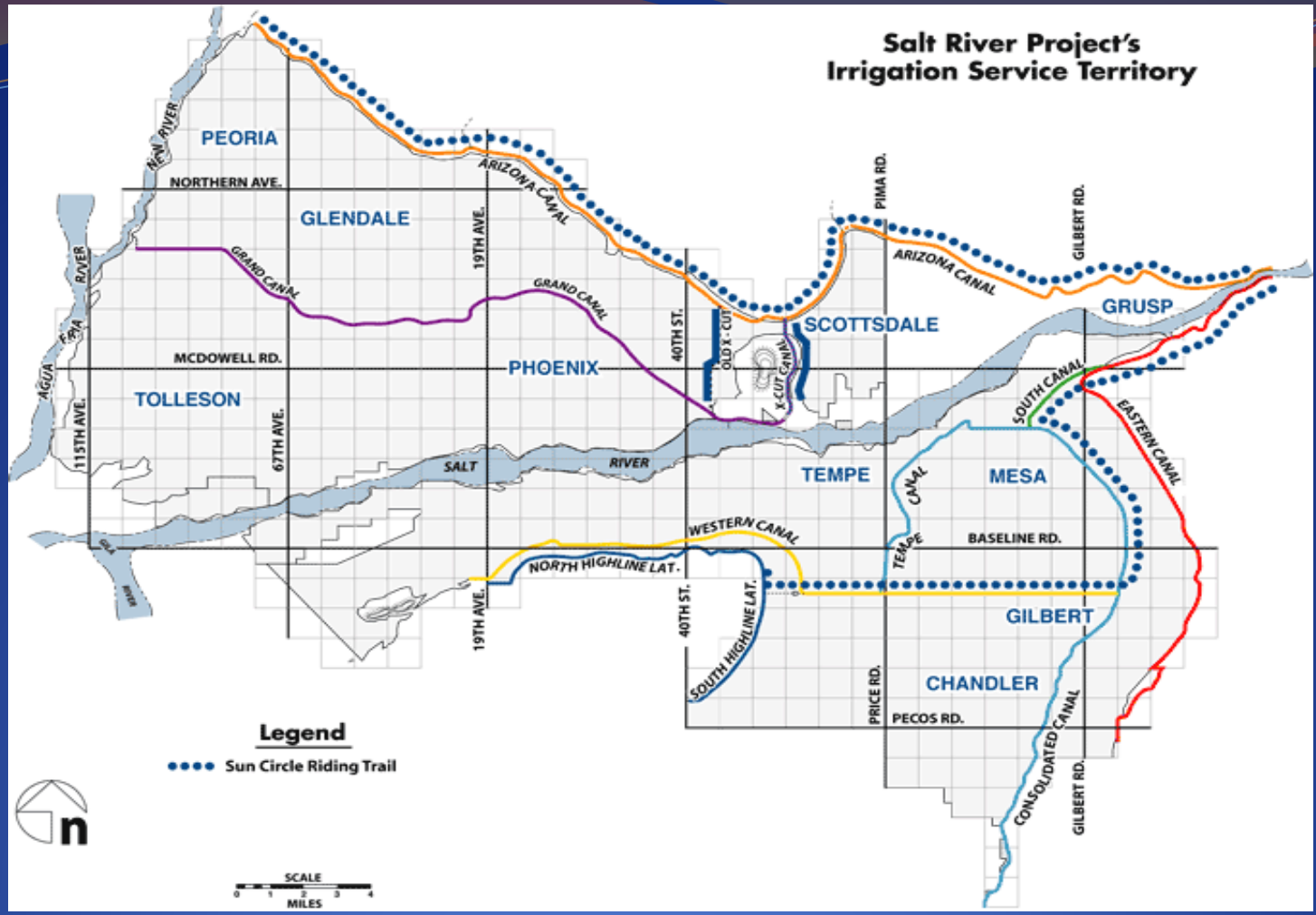
Reaching Historic Low Level

Beyond the Mirage

"The Future of Water in the West." A PBS Documentary about the Colorado River: beyondthemirage.org

Surface Water - CAP

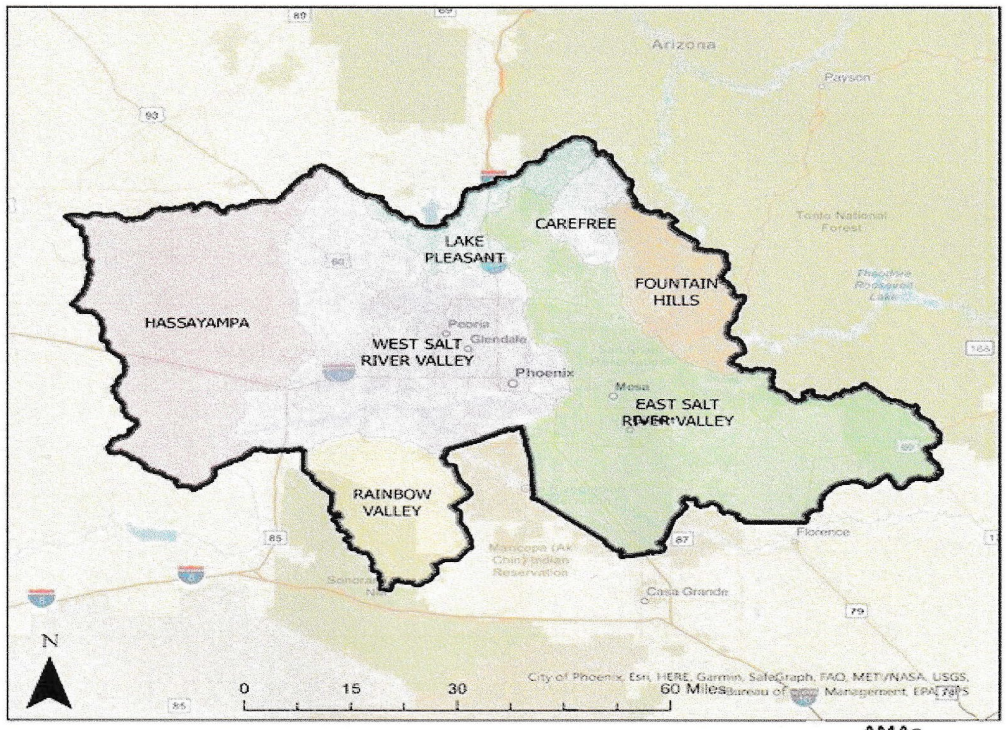
Central Arizona Project Canal – 336 miles.
Provides 40% of the State's Water Needs.
It is Subject to Lake Mead Fluctuations



Surface Water – Arizona Canal

Transports Salt River Water to Glendale, Peoria, Scottsdale

Figure 1-1 Phoenix Active Management Area and Sub-Basins



Major Sub-Basins in Phoenix AMA

Groundwater Recharge

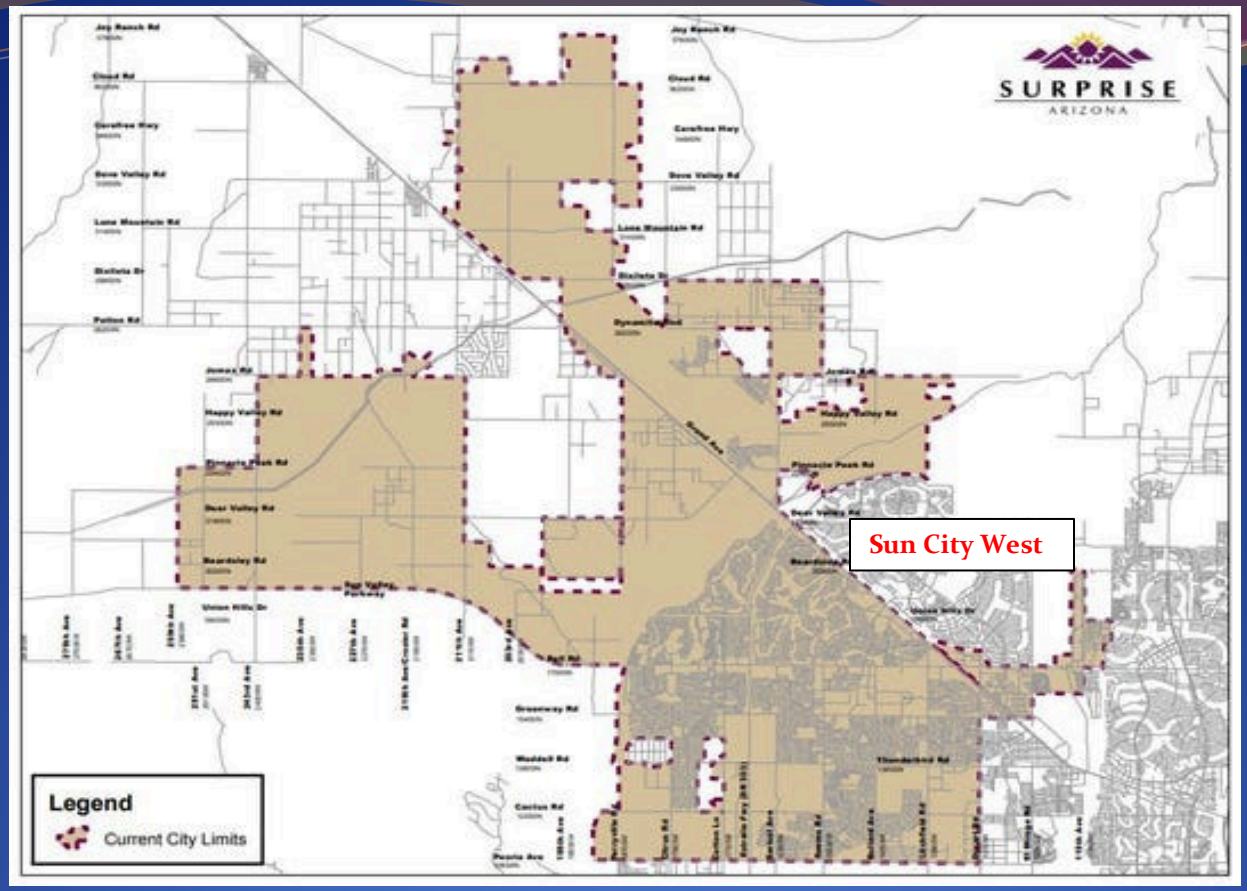
Recharge Basin for Reclaimed Wastewater or Excess CAP Water

Groundwater Pumpinng

Typical SCW Water Well-200+ Hp Motor. Approximately 1000 feet deep. These wells provide 100% of SCW water.

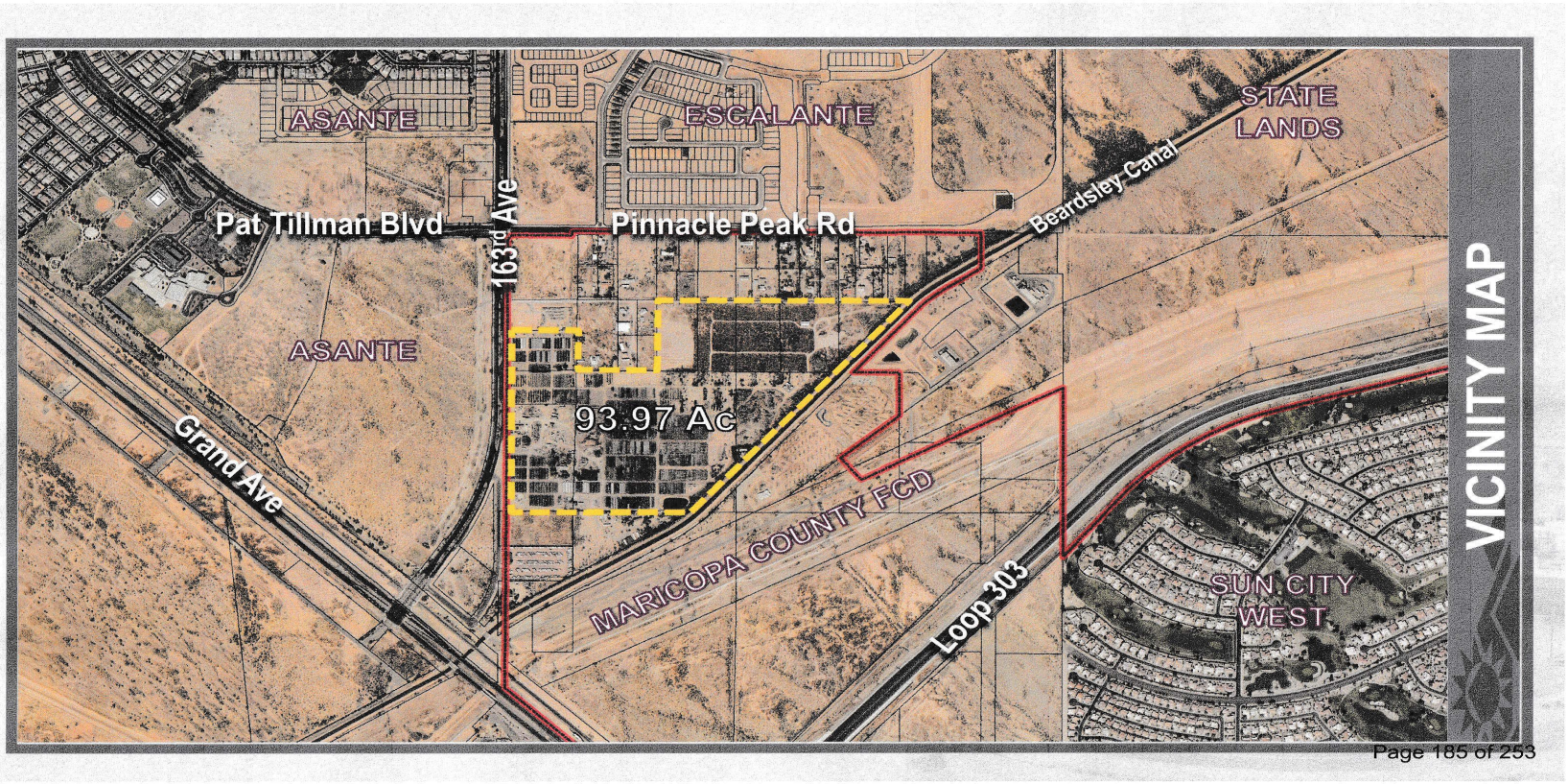
Groundwater Depletion

Ground Fissure from Overpumping & Subsidence in Eastern Pinal County, Arizona

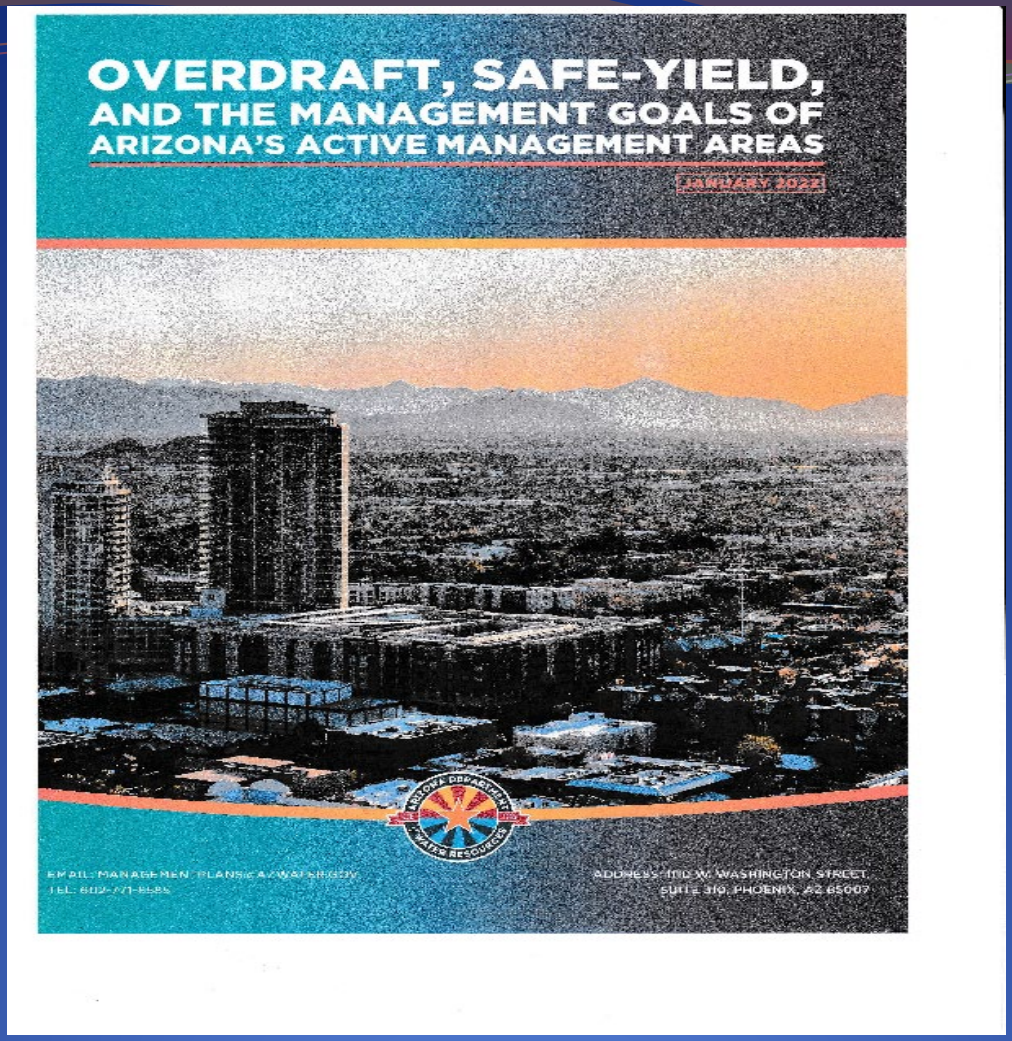


Groundwater?

Limits of City of Surprise. Development Continues to the West and NW of SCW



City of Surprise - Development Continues to the West and North of SCW



The ADWR Committee on Safe Yield, etc. Concludes "It is unlikely that Safe-Yield will be met…….in any AMA where that is the Goal."

Reasons for Overdraft and Safe Yield Goals not being met:

- **Climate Change**
- **Drought**
- **Population and Industrial increases**
- **Competition for non-groundwater supplies used for recharge**
- **Restrictive Management Tools**
- **Reduced Colorado River Water used for Storage Facilities**
- **Groundwater Pumping may Increase**

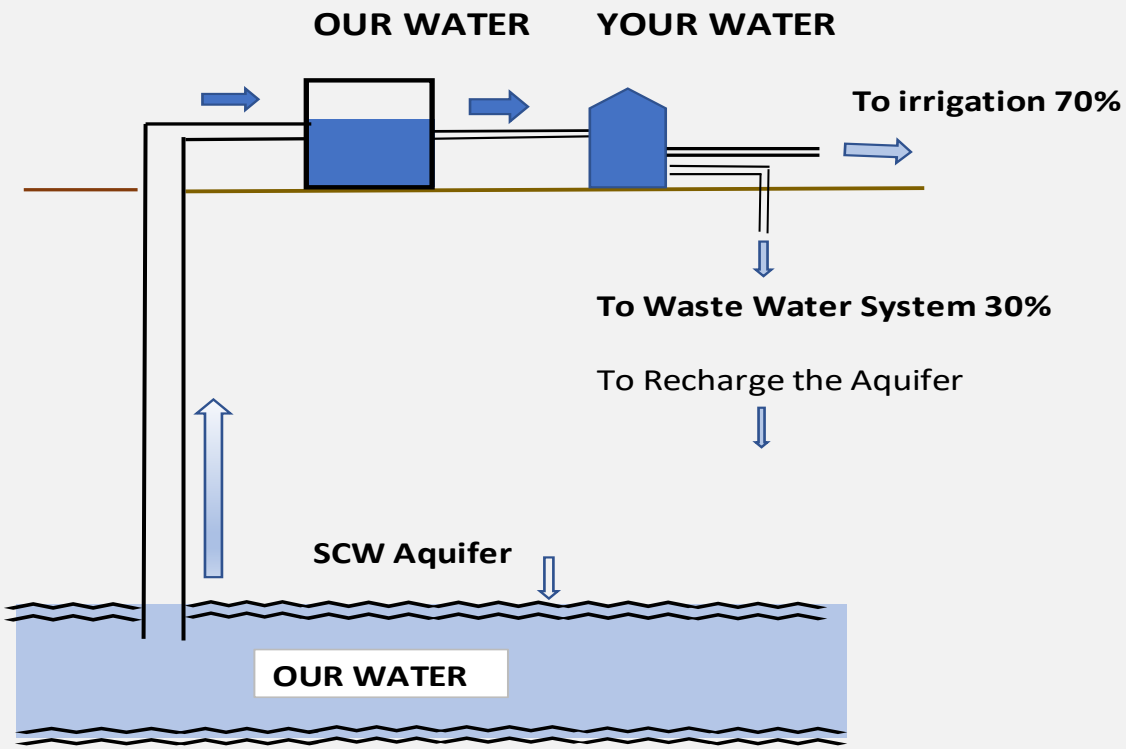
Groundwater Gone

Irrigation Leak

Groundwater Gone

Swimming Pool Draining in SCW

YOUR WATER IS OUR WATER

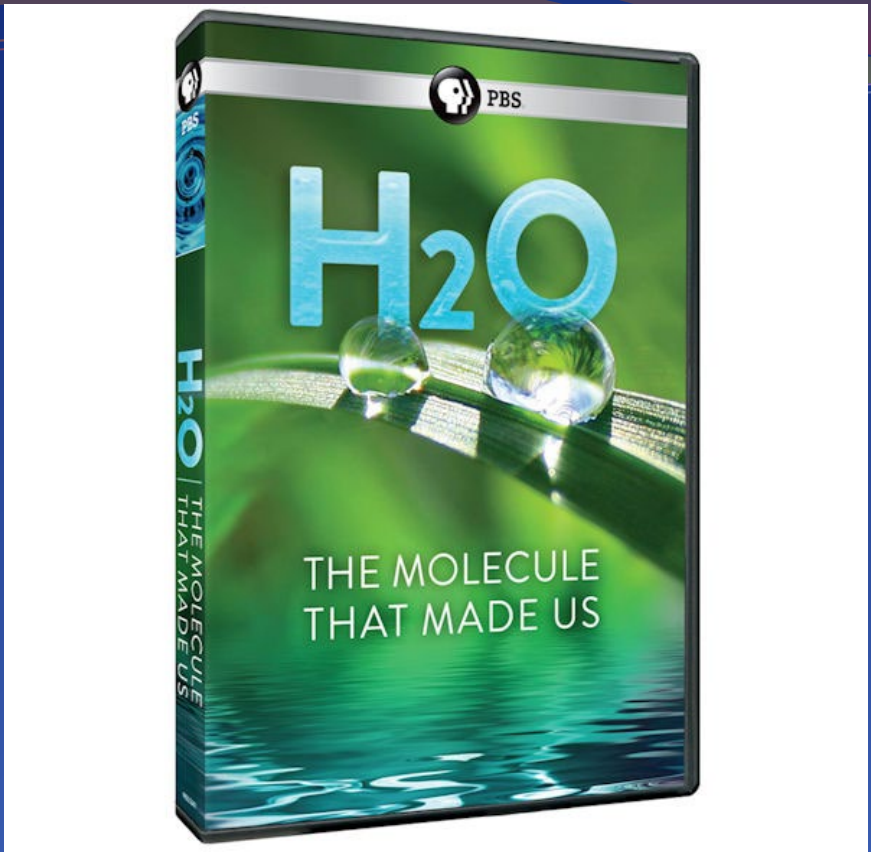


Groundwater Going

Your Water is Our Water

Groundwater Recovery

Use the Sewer Cleanout Piping to Send Water to the Wastewater System for Treatment and Recharge

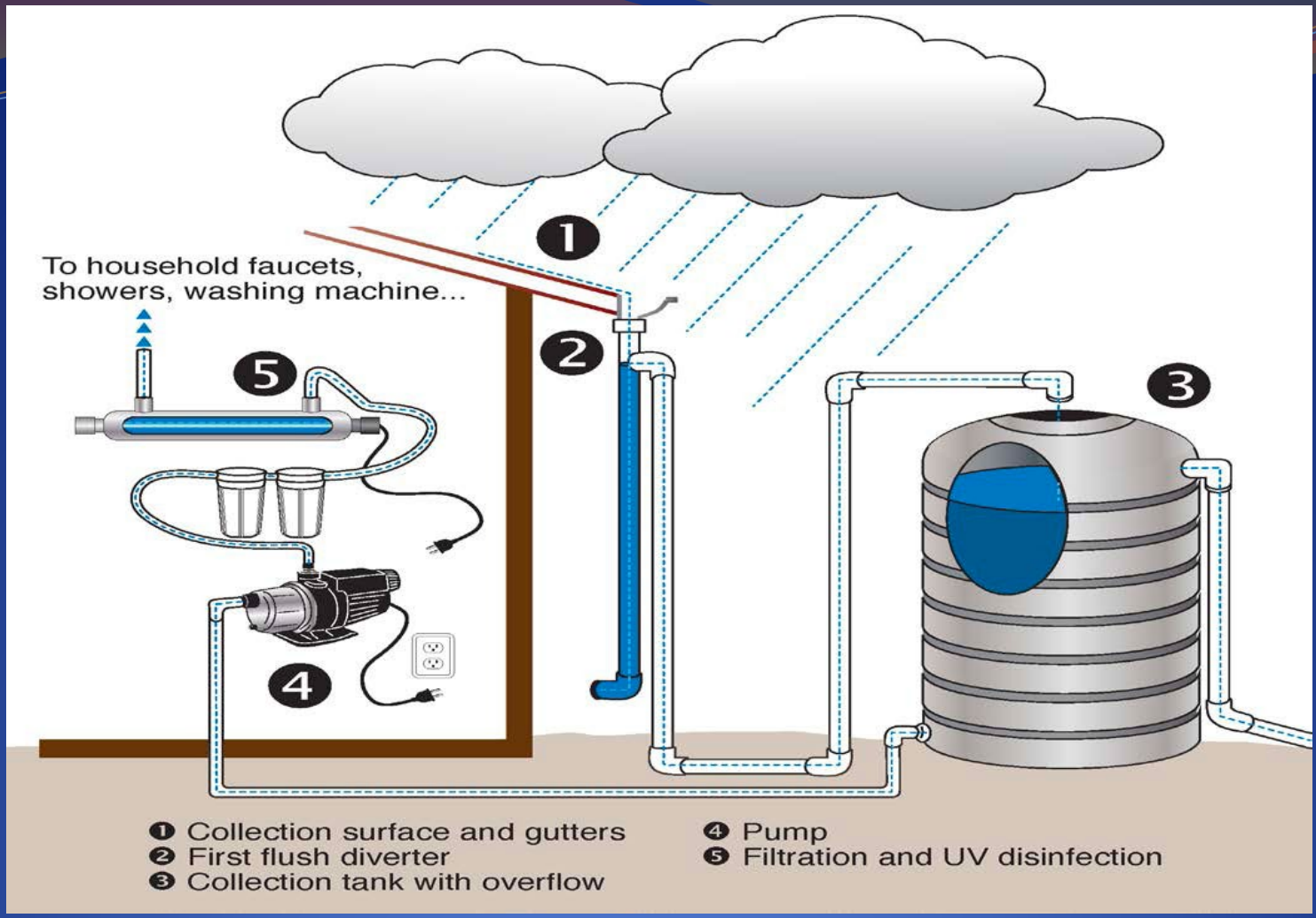


H_2O the Molecule that Made Us

A PBS Documentary. Episode III – Crisis: "Dry Areas are Getting Dryer and Wet Areas are Getting Wetter."

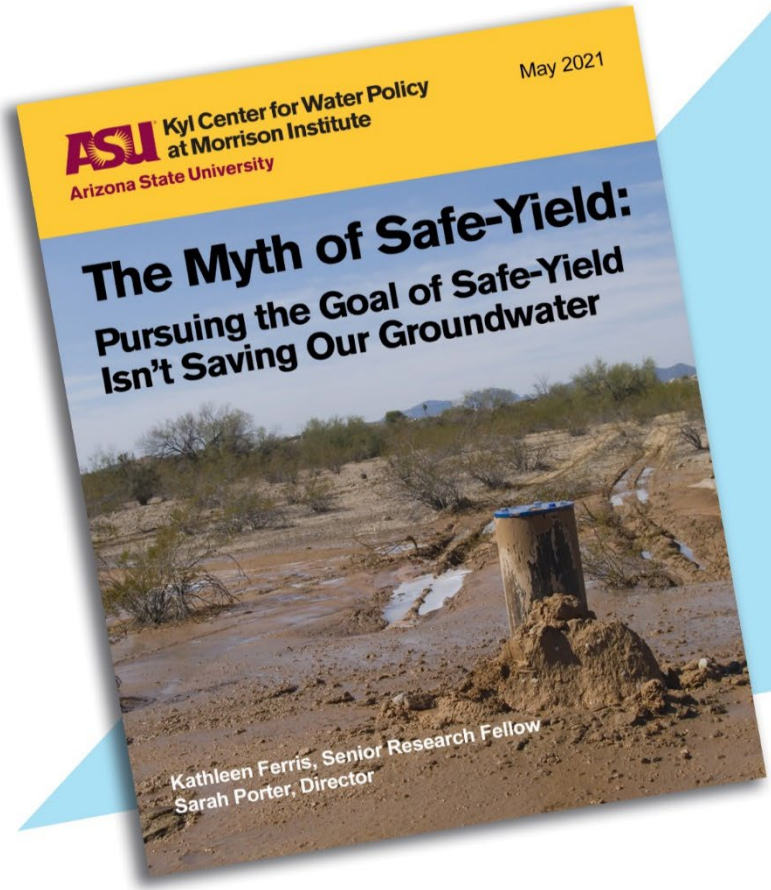
Water Conservation Kit

Available by Request on Internet At "Water Conservation Kit-Epcor"



Rainwater for Potable Use

Basic Capture and Treatment System



If Arizona is to prosper into the next century, our focus needs to turn to what is essential for our future: The preservation of our groundwater and our increasingly fragile aquifers.

Read This Report to Learn All About Groundwater Management in Arizona

CREDITS

Information Presented in this Document has been Researched and/or Supplied by:

- **Arizona Department of Water Resources (ADWR): *new.azwater.gov***
- **Arizona Republic: *environment.azcentral.com***
- **Joanna Allhands: *joanna.allhands@azcentral.com***
- **Arizona Water News: *azwaternews.com***
- **ASU Cronkite News: *cronkitenews.azpbs.org***
- **Water Resources Research Center: *wrrc.arizona.edu***
- **Beyond the Mirage, documentary by Arizona Public Media, PBS, U of A: *beyondthemirage.org***
- **H2O, The Molecule that Made Us: *PBS documentary***
- **Layperson's Guide to Arizona Water, *U of A, wrrc***

Our Water

Any Questions?

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This presentation is a Work in Progress. Please visit periodically for occasional updates.

Your PORA Water Committee

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