

Direct Potable Reuse (DPR)

Tribal Listening Session

July 28, 2022

1:00 p.m. – 3:00 p.m.





1. Review agenda and logistics
2. Welcome and introductions
3. What is direct potable reuse?
4. What are we doing and why now?
5. Where are we going?
 - Recommended components
 - Timeline
 - ADEQ DPR Web page
6. Guiding principles and program features
7. Open Discussion/Potential Impacts



WELCOME

Randall Matas

Deputy Director

ADEQ Water Quality Division



**What is direct potable
reuse?**

ADEQ Reclaimed Water History

- 1926 - Reuse of reclaimed water began at South Rim, Grand Canyon
- 1932 - Reuse of effluent from 23rd Ave. WTP to irrigate Peterson Farms
- 1972 - First reclaimed water rules by ADHS
- 1973 - WTP effluent to cool Palo Verde Nuclear Generating Station
- 1980 - GW Management Act limited legal use of water from aquifers in high use areas in the state Scottsdale
- 1989 - *APS v. Long*, AZ Supreme Court case deciding effluent is a resource subject to regulation and a commodity that utilities and governments could buy and sell
- 2001 - New comprehensive reclaimed water rules
- 2018 - Rule revision to allow direct potable reuse of purified water for human consumption



What is Direct Potable Reuse?

Recycled or reclaimed water

Water that has been used more than once to expand a community's available water supply.

Potable reuse

Use of recycled or treated reclaimed water that is safe for drinking.

May be accomplished directly or indirectly

Indirect potable reuse

Wastewater or reclaimed water is treated to drinking water levels and discharged into an "environmental buffer"

"Environmental buffer" is a natural depository such as a groundwater aquifer or surface water.

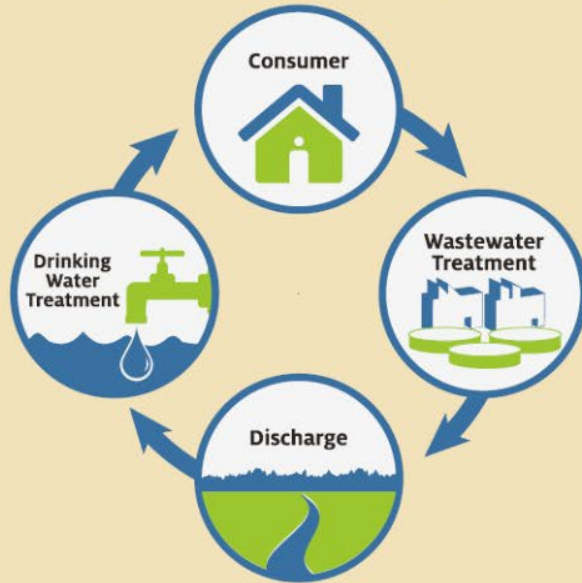
Direct potable reuse (DPR)

Water is treated and distributed as a drinking water supply without an environmental buffer

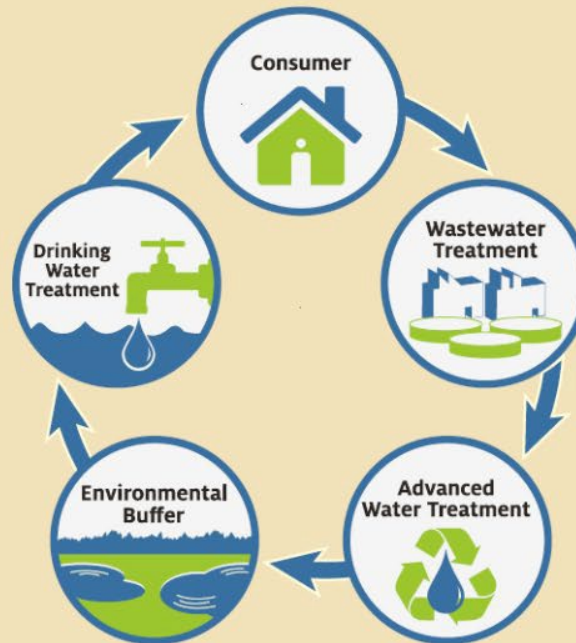
Purified water may be introduced directly into an existing drinking water treatment plant or distribution system

(Potable water – water treated appropriately for human consumption, i.e., to safely be used as drinking water and for other everyday uses such as bathing or dishwashing)

De facto Water Reuse



Indirect Potable Reuse

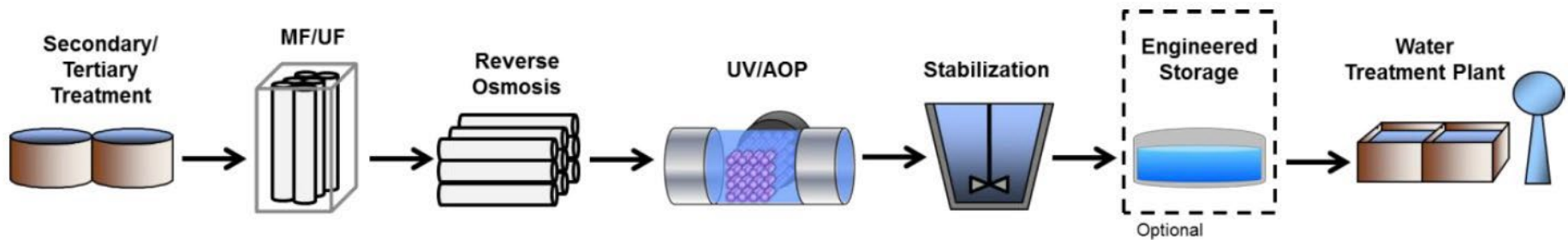
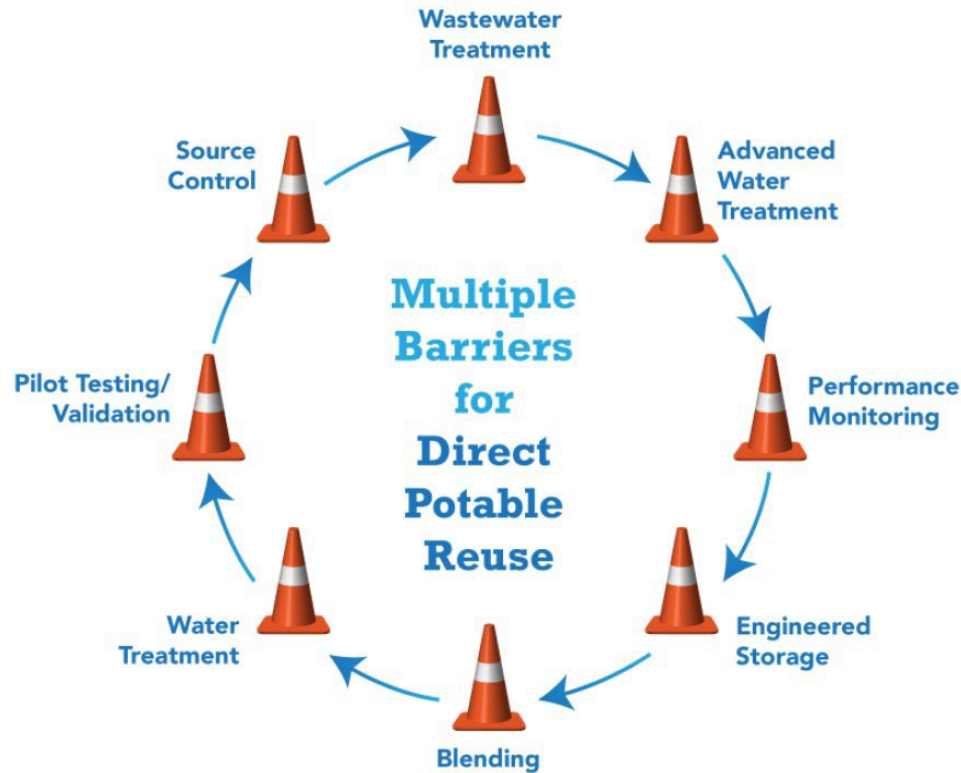


Direct Potable Reuse



Types of Potable Reuse. Source: Texas Water Development Board

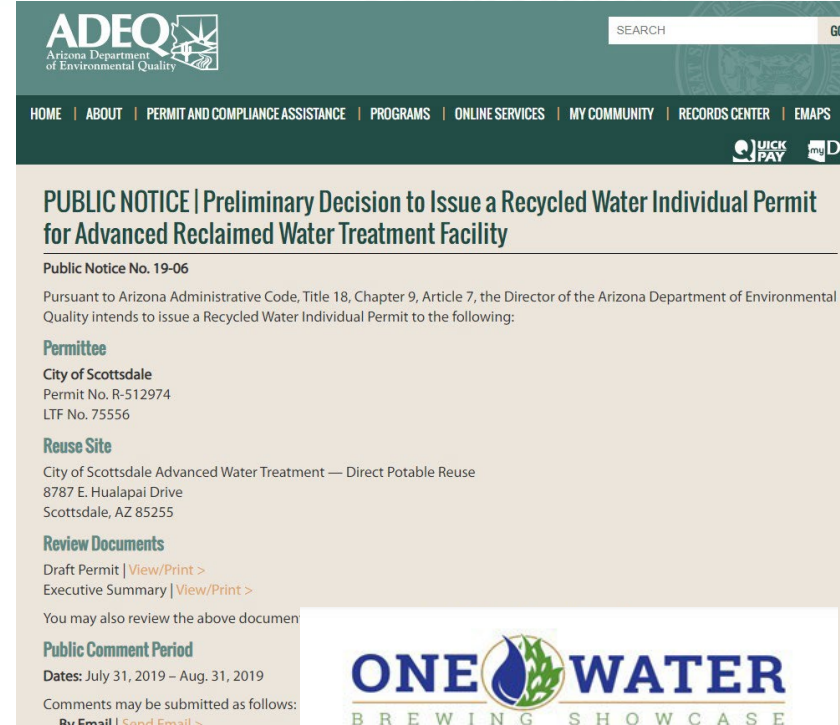
Potable Reuse: Multi-barrier treatment



Isn't DPR Happening in Arizona Already?

In 2019, the City of Scottsdale obtained a permit under A.A.C. R18-9-E701 for:

- A drinking fountain for demonstrations, and
- Supplying water to beverage manufacturers (e.g., beer).
- Has been doing IPR for decades



The screenshot shows the ADEQ website's public notice page. At the top is the ADEQ logo and a search bar. Below the navigation menu, the main heading reads "PUBLIC NOTICE | Preliminary Decision to Issue a Recycled Water Individual Permit for Advanced Reclaimed Water Treatment Facility". The notice number is "Public Notice No. 19-06". The text states that the Director of the Arizona Department of Environmental Quality intends to issue a permit to the following:

- Permittee**
City of Scottsdale
Permit No. R-512974
LTF No. 75556
- Reuse Site**
City of Scottsdale Advanced Water Treatment — Direct Potable Reuse
8787 E. Hualapai Drive
Scottsdale, AZ 85255
- Review Documents**
Draft Permit | [View/Print >](#)
Executive Summary | [View/Print >](#)

Below this, it says "You may also review the above document".

- Public Comment Period**
Dates: July 31, 2019 – Aug. 31, 2019
Comments may be submitted as follows:
[By Email](#) | [Send Email](#)



In 2019, Scottsdale Water will become the first water agency in Arizona to be permitted to supply recycled water for potable use. To celebrate this landmark achievement, Scottsdale Water is teaming with the city's premier public art and education event, Canal Convergence, to create the One Water Brewing Showcase – a unique opportunity for Arizona breweries to share their craft beer creations while bringing awareness to the global need for innovative water treatment technologies.

THE BASICS

- The One Water Brewing Showcase is open to commercial brewers licensed to produce a saleable product in Arizona at time of registration.
- Participation will be capped at 10 breweries.
- Judging will follow World Beer Cup rules.
- At least 50 percent of the water used in the brewing process must be recycled water provided by Scottsdale Water.
- Brewers may collaborate in the submission of an entry.
- Breweries must agree to donate three half-barrel kegs of the judged beer to Canal Convergence and participate in the One Water Brewing Showcase on Nov. 8 or 9, 2019.
- Participants must commit to storing, delivering and providing staffing to serve their beer at one day (Nov. 8 or 9) of the event. Volunteers to support the brewers may be available upon request.
- All proceeds from beer sales at the two-day One Water Brewing Showcase will go to Scottsdale Arts and their designated charity. An in-kind tax document for the keg donation will be provided to the breweries.
- Breweries are allowed – and STRONGLY encouraged – to commercially sell and market their One Water Brewing Showcase beer in compliance with Arizona laws.
- Scottsdale Water will provide tap handles for brewery use.
- A non-refundable fee of \$100 per brewery is due at time of registration and breweries may enter up to two beers of different styles.



What are we doing and why now?

What are we doing?

Provide more specificity in rule

Build on past work and evaluate other state programs.

Demonstrate safety and efficiency of the rules and program

Bridge legal gaps to align with other legal programs
(SDWA & APP & CWA)

Program implementation and outreach planning

Why Is ADEQ Doing This Now?

- Legislation – HB2861 & HB2862
- Water supply issues
 - Colorado River water shortage cuts (30%)
- Utilities need specificity to plan
- Communities need to know the water is safe



Source: ADWR via Bureau of Reclamation

ARIZONA'S WATER SUPPLY

36%

COLORADO RIVER

18%

IN-STATE RIVERS



5%

RECLAIMED WATER

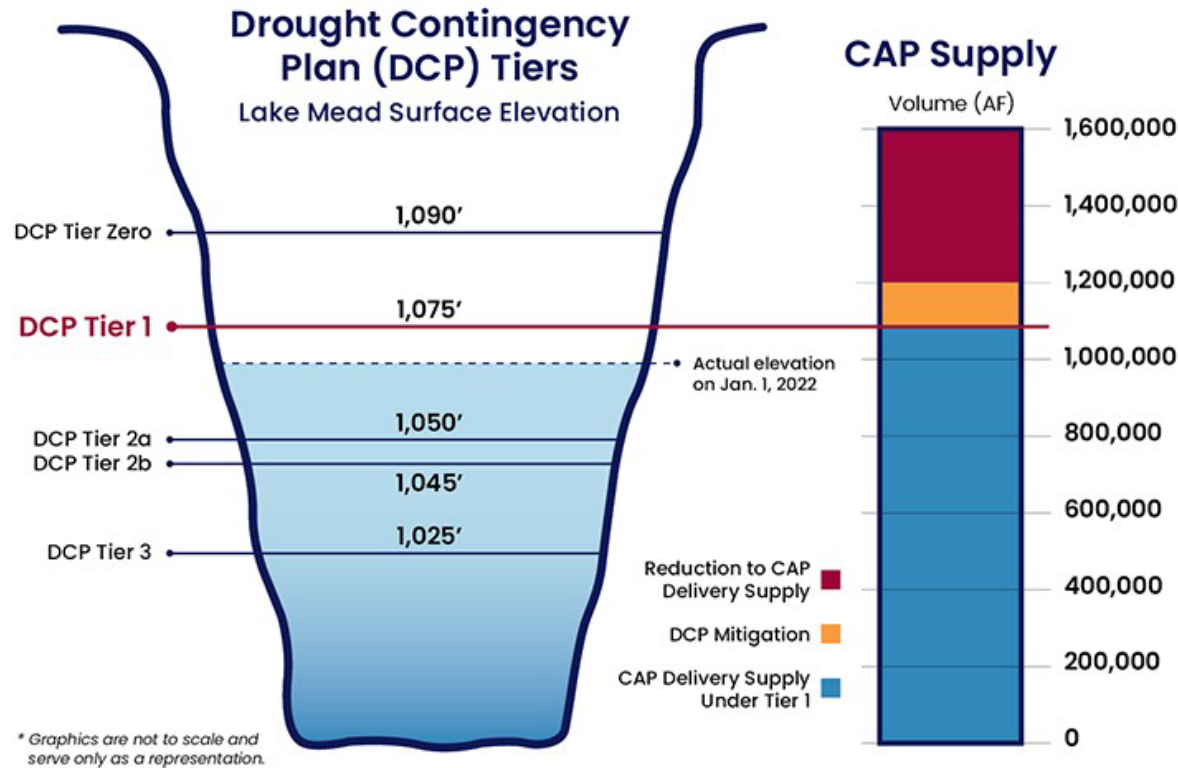
41%

GROUNDWATER

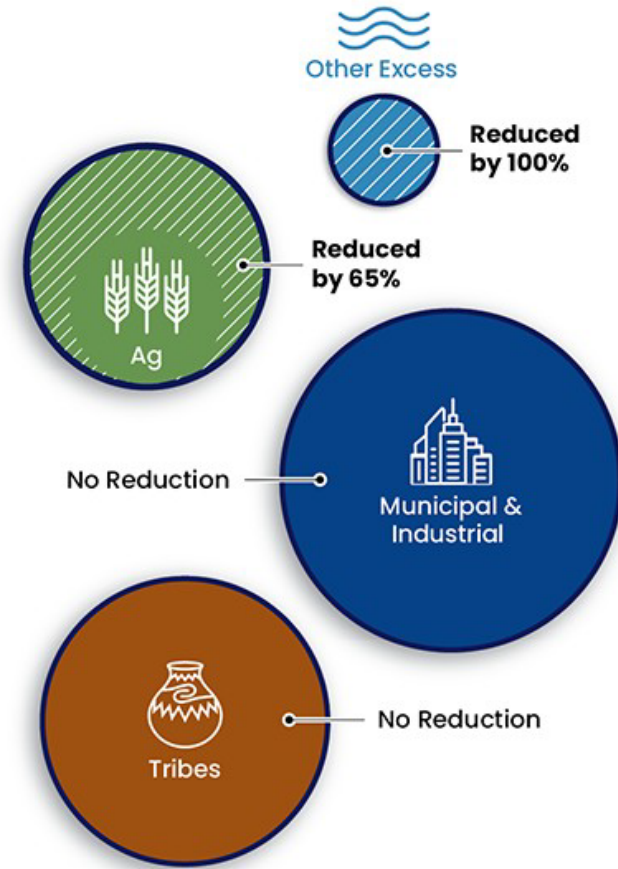
SOURCE: ADWR, 2020



Tier 1 Shortage: CAP Reductions



2022 Reduction to CAP Users After DCP Mitigation

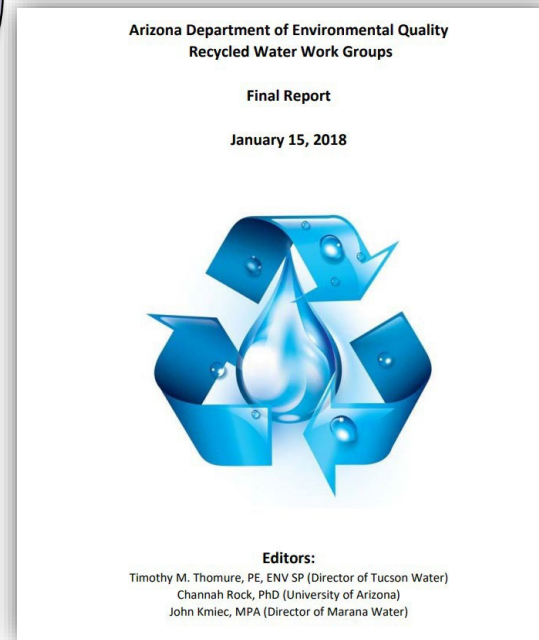


To learn more, please visit: www.cap-az.com/colorado-river-shortage

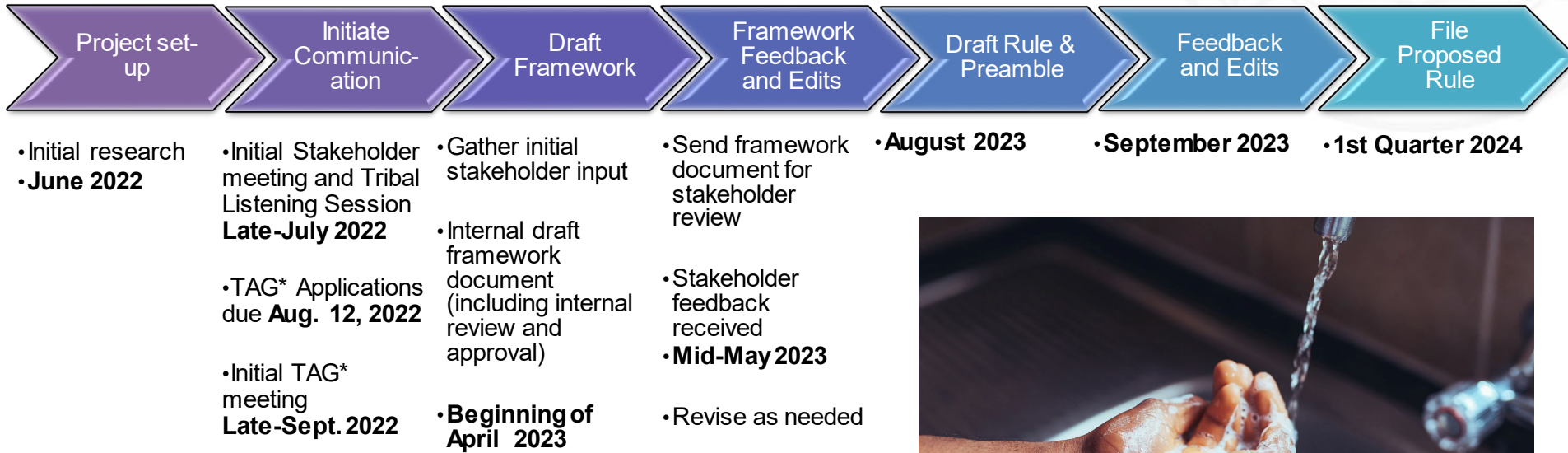


Where are we going?

Recommended DPR Program Components



Rulemaking Critical Path Timeline



*TAG = technical advisory group

Implementation Critical Path Timeline



**By December
2024**



How to Find the Recycled Water Webpage

Air Quality Programs ▶

Water Quality Programs ▶

Waste Programs ▶

Other Programs ▶



Arizona Water Watch

Engineering Review

Groundwater Protection

Monitoring Assistance Program

Operator Certification

Public Water System (PWS)

Recycled Water

Safe Drinking Water

Surface Water Monitoring & Assessment

Surface Water Protection

Watershed Protection

PFAS Resources

Arizona's clearinghouse for PFAS information, guidance and state actions.

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[< RETURN TO LEARN MORE ABOUT THE WATER QUALITY PROGRAMS](#)

Recycled Water

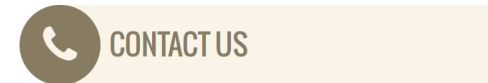
Revised on: July 13, 2022 - 2:52pm

The Recycled Water Program regulates the use of recycled water.

Recycled Water is a processed water that originates as a waste or discarded water, including reclaimed water and gray water, which can be used for beneficial purposes upon meeting designated water quality standards.

Gray Water

Gray water is wastewater that has been collected separately from a sewage flow and that originates from a clothes washer or a bathroom tub, shower or sink, but gray water does not include wastewater from a kitchen sink, dishwasher or toilet. Gray water uses, such as landscape irrigation, augment Arizona's water supply.



[Email >](#)



[Recycled Water Program >](#)

[Recycled Water Rulemaking >](#)

[Gray Water >](#)

[Direct Potable Reuse Rulemaking >](#)

[< RETURN TO ACTIVE RULEMAKINGS](#)

Direct Potable Reuse (DPR) Comprehensive Rulemaking

Revised on: July 19, 2022 - 10:20am

Summary:

ADEQ is in the process of revising the Arizona Administrative Code (A.A.C.) to allow for expansion of potable reuse for facilities subject to the Safe Drinking Water Act and for pilot, demonstration, or educational facilities. Expanding potable reuse will improve the sustainability of Arizona's water supplies.

While potable reuse, direct and indirect, is currently allowed under ADEQ's rules in A.A.C. Title 18, Chapter 9, Article 7, additional regulatory specificity is needed to ease water suppliers' ability to engage in potable reuse. ADEQ will rely heavily on stakeholder involvement and expertise during this revision process.

Additional Information:

- Stakeholder Engagement Materials | [View >](#)
- Frequently Asked Questions | [View >](#)
- For notifications and updates regarding the development of a DPR program and the Technical Advisory Group, subscribe to our Water Quality Rulemakings list | [Subscribe to Receive Updates >](#)



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SEE MORE

[DPR Comprehensive Rulemaking >](#)
[Stakeholder Engagement Materials >](#)
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[Frequently Asked Questions >](#)



MEETING INFORMATION

[Upcoming Meetings >](#)

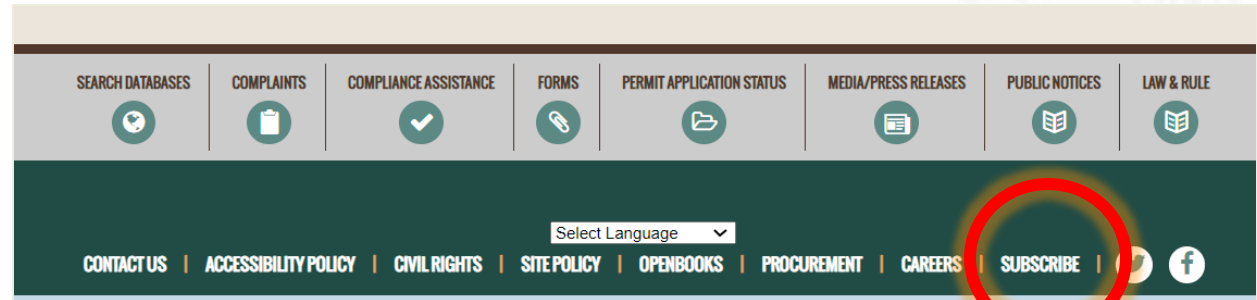
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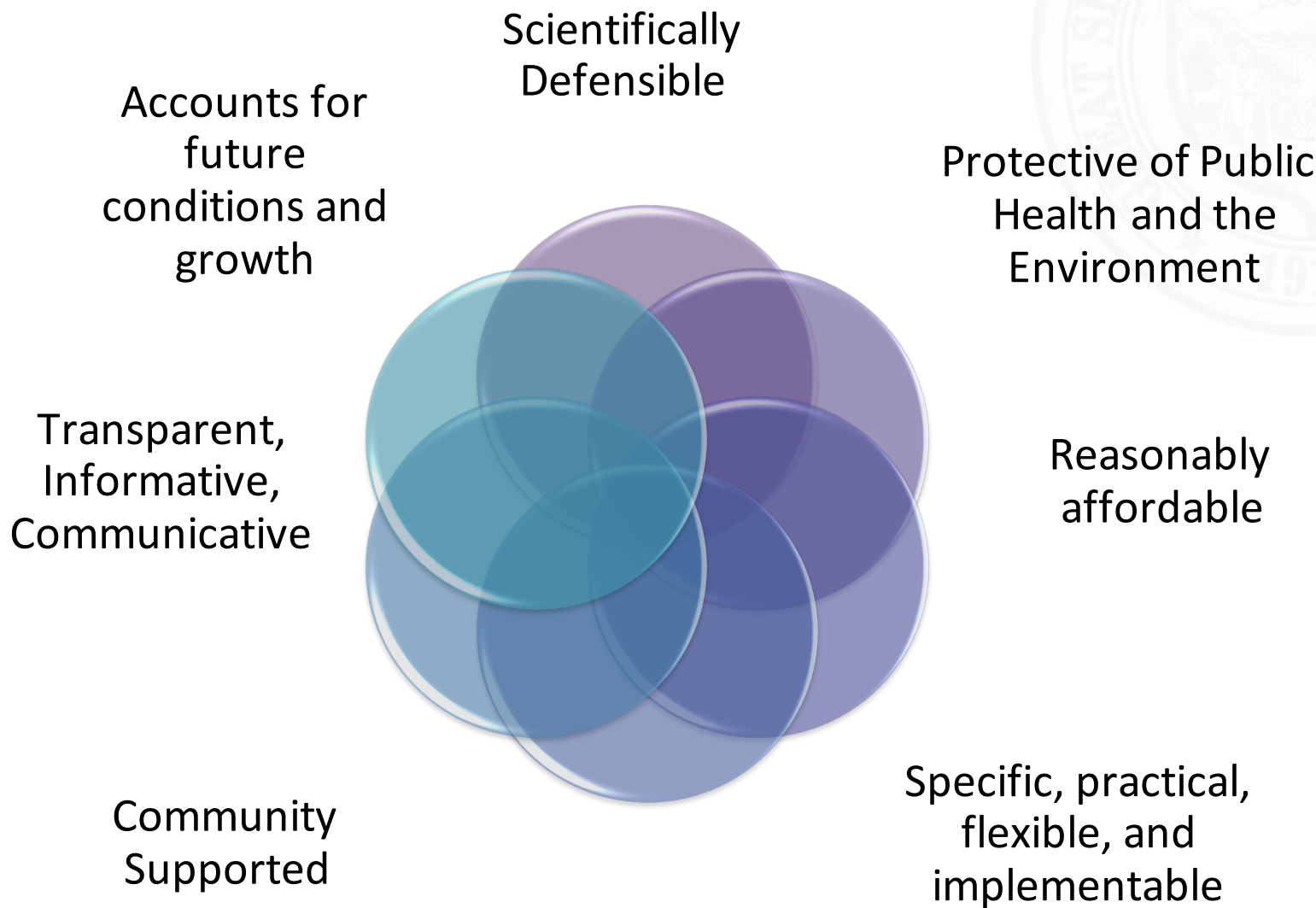
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4. Scroll Down and Click:
“Water Quality Division Rulemaking” and save
your preferences

Rulemaking

- Air Quality Division Rulemaking
- Waste Programs Division Rulemaking
- Water Quality Division Rulemaking



For questions and comments:

- Email: reuserulemaking@azdeq.gov

OR

- Len Drago, ADEQ Tribal Liaison
Email: drago.leonard@azdeq.gov





Open Discussion/Potential Impacts?