

# Orange County Sanitation District Supercritical Water Oxidation Project



# Treatment Challenges

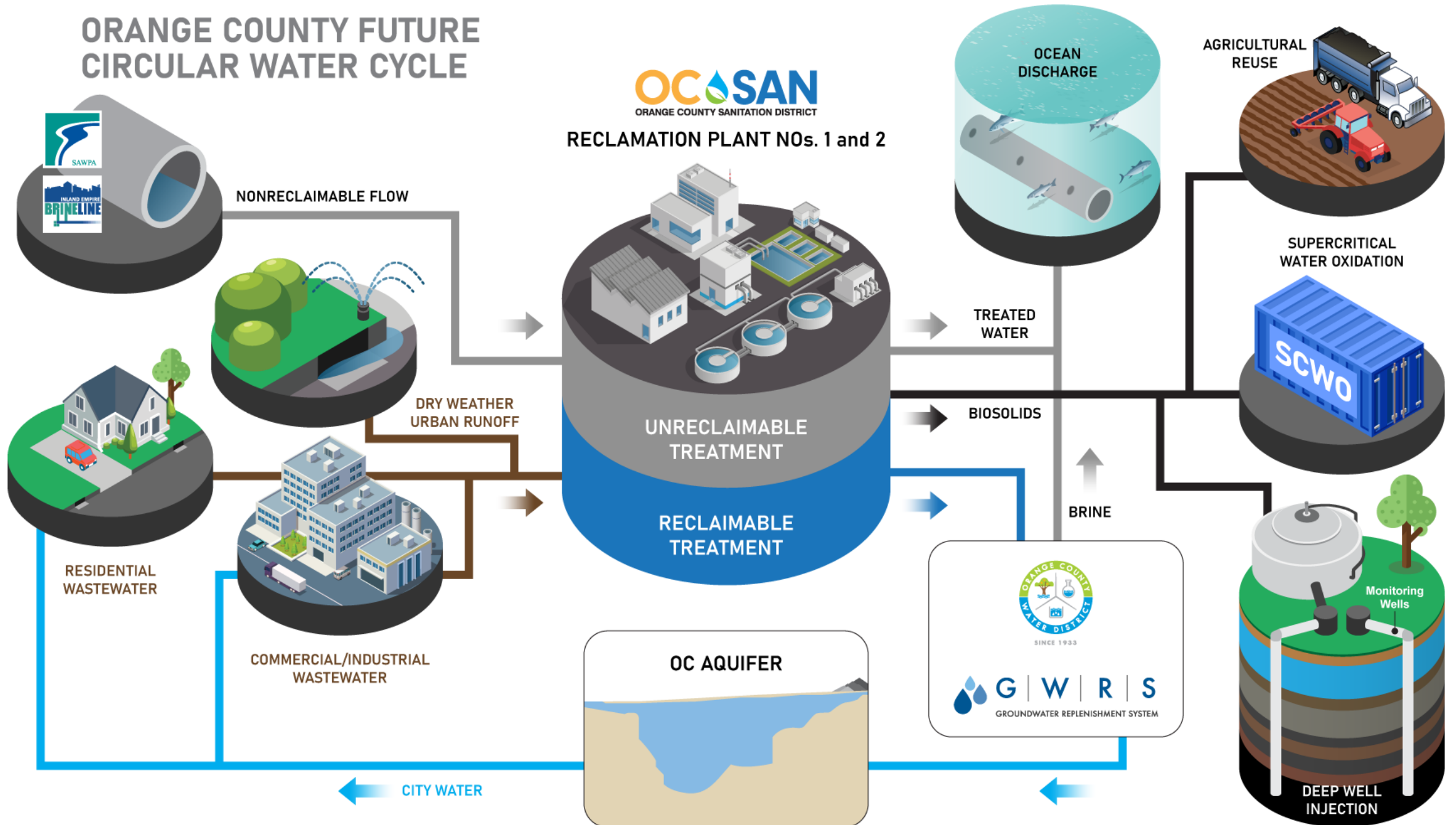


- PFAS
- Microplastics
- Methane
- Brine
- Electric Haul Trucks

# ORANGE COUNTY FUTURE CIRCULAR WATER CYCLE

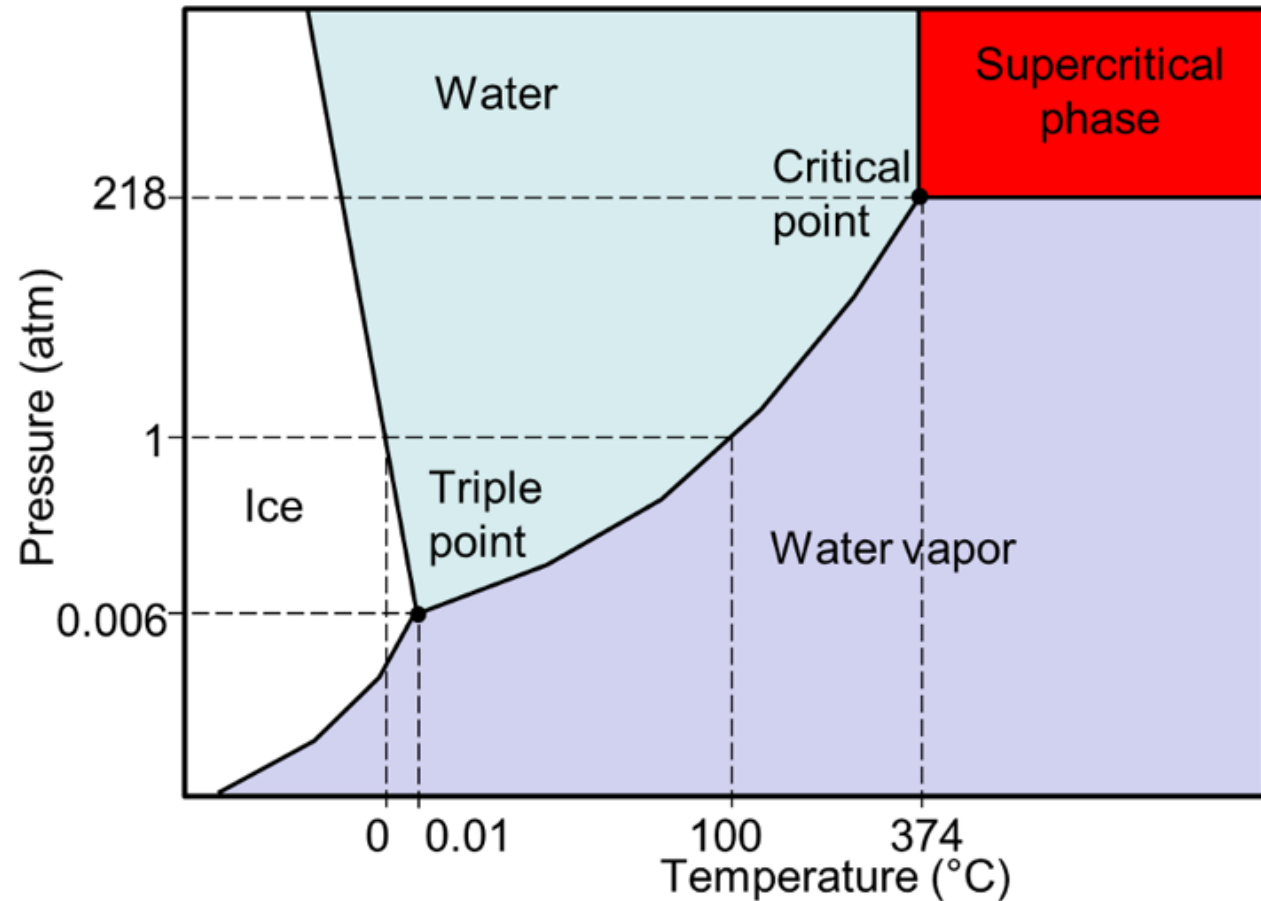


RECLAMATION PLANT NOs. 1 and 2

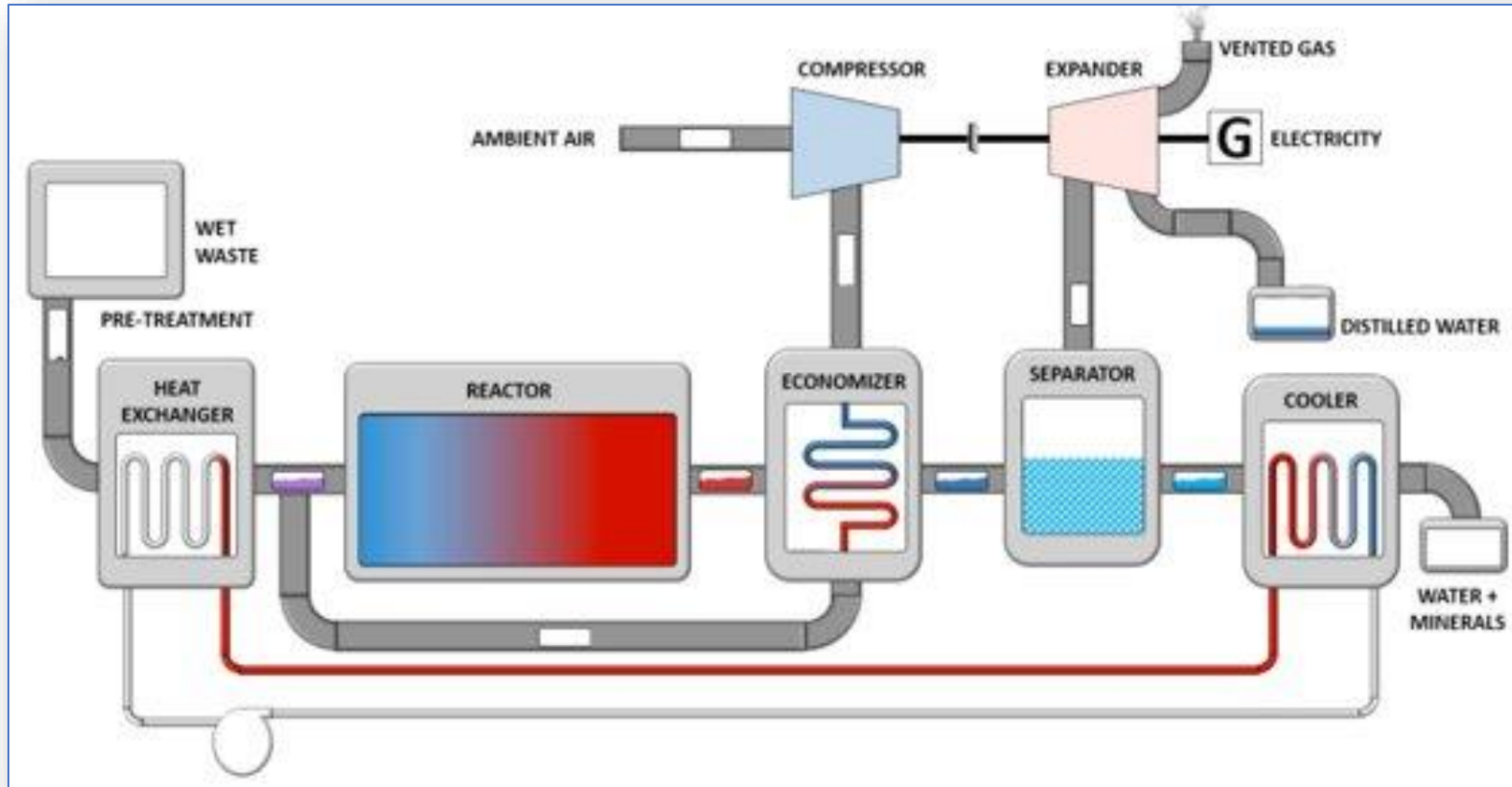


# What is Supercritical Water

The properties of H<sub>2</sub>O change significantly above 3200 psi and 705 degrees Fahrenheit.

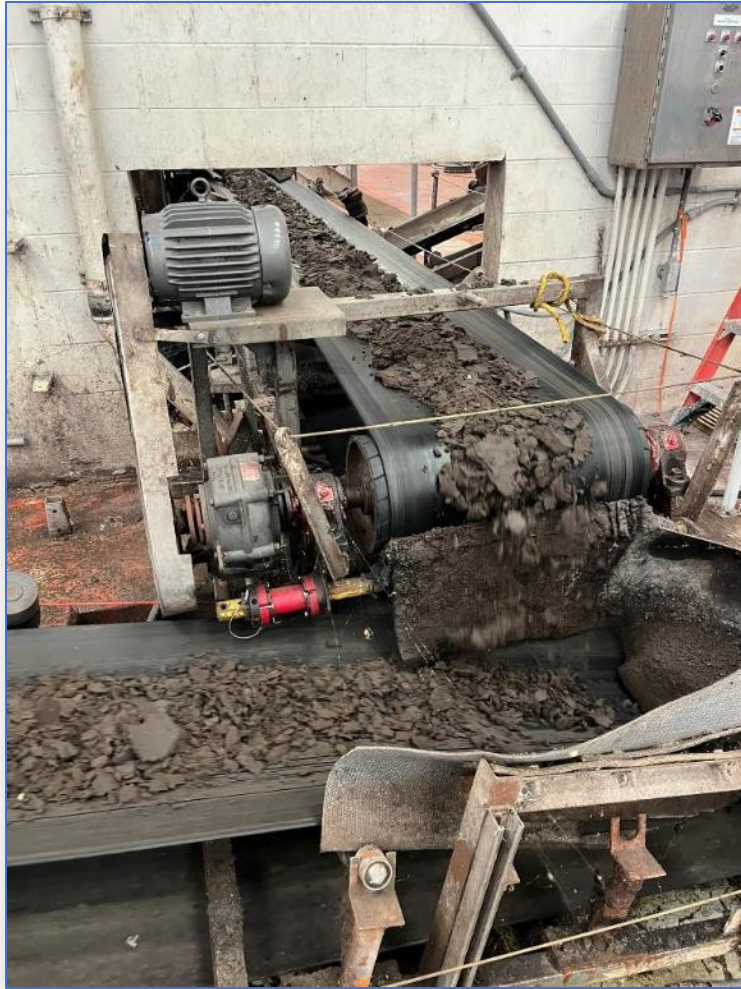


# Tomorrow's Solids Solution



OC San and 374Water<sup>®</sup> have partnered to build a six-ton-per day demonstration project called AirSCWO Nix6. This process uses water at a high temperature and pressure to oxidize and break down complex compound materials like PFAS.

# The Process...

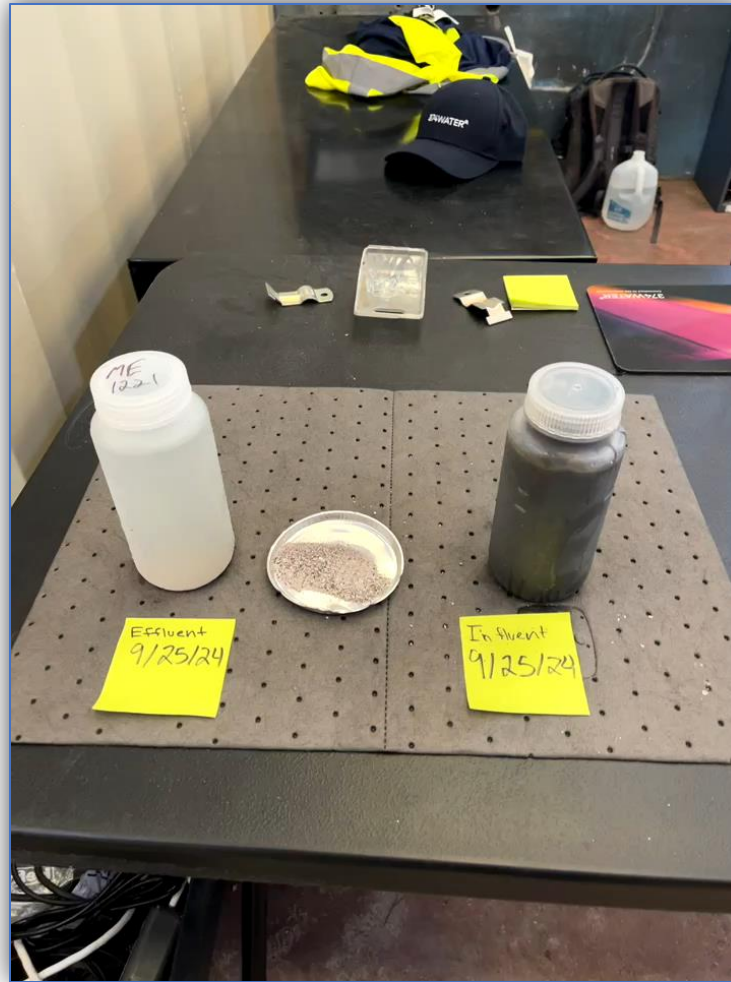


Sludge Cake to the Preprocessing Unit



Preprocessed Sludge

# The Process...



Effluent/Minerals/Influent

# What's Left



Clean Gas Effluent



Effluent Water After Processing

# Next Steps...

- Demonstrate the industrial machine at 6 tons/day
- Investigate 30 ton/day unit with energy recovery.
- How can we concentrate problem compounds?
- What path do we take to a 100 ton/day unit?
- What else might SCWO help with?
  - Leachate
  - Food waste
  - GAC/Ion Exchange Resin



# Questions?



# For More Information

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*Also on...*



Rob Thompson

(714) 593-7110

[rthompson@OCSan.gov](mailto:rthompson@OCSan.gov)