



OneWater Nevada
Our Sustainable Water Future

Advanced Purified Water Facility at American Flat



University of Nevada, Reno



Recycled Water Uses in the Region

- 💧 Wastewater is treated and disinfected
 - Safely used for irrigation, industrial uses, construction, etc.
 - Safe for human contact. Not suitable for drinking.
- 💧 Region has decades of experience using recycled water
- 💧 8,000 AFA per year of recycled water used for irrigation
 - 10% of total regional water supply



- Sierra Sage Golf Course
- North Valleys Sports Complex
- O'Brien Middle School
- The Lakes Apartment Complex
- Mayor's Park
- Truck Filling Station for Construction Use



Reno Stead Water Reclamation Facility (RSWRF)

- 💧 Treats wastewater from central North Valleys (approx. 25,000 residents)
- 💧 City of Reno owned and operated
- 💧 Produces high quality recycled water



OneWater Nevada

- 💧 Collaboration between regional agencies exploring the future sustainability of local water resources
 - Regional solutions, comprehensive resource management, climate variability, snowpack changes
- 💧 Partnership with University of Nevada, Reno/Nevada Water Innovation Institute
- 💧 Variety of Projects
 - TMWA/Washoe County Water Consolidation
 - Palomino Farms Sustainable Water Resource Feasibility
 - TRI General Improvement District
 - Mt. Rose Water Treatment Plant
 - Advanced Purified Water Research



Nevada Recycled Water Approved Uses

Approved Use Examples	Water Category E	Water Category D	Water Category C	Water Category B	Water Category A	Advanced Purified Water A+
Ground water augmentation						✓
Snowmaking					✓	✓
Unrestricted irrigation and commercial use					✓	✓
Restricted Irrigation (golf courses, cemeteries)			✓	✓	✓	✓
Wetland restoration			✓	✓	✓	✓
Dust control		✓	✓	✓	✓	✓
Restricted Irrigation (agricultural land only)	✓	✓	✓	✓	✓	✓
Used in the Truckee Meadows				✓	✓	

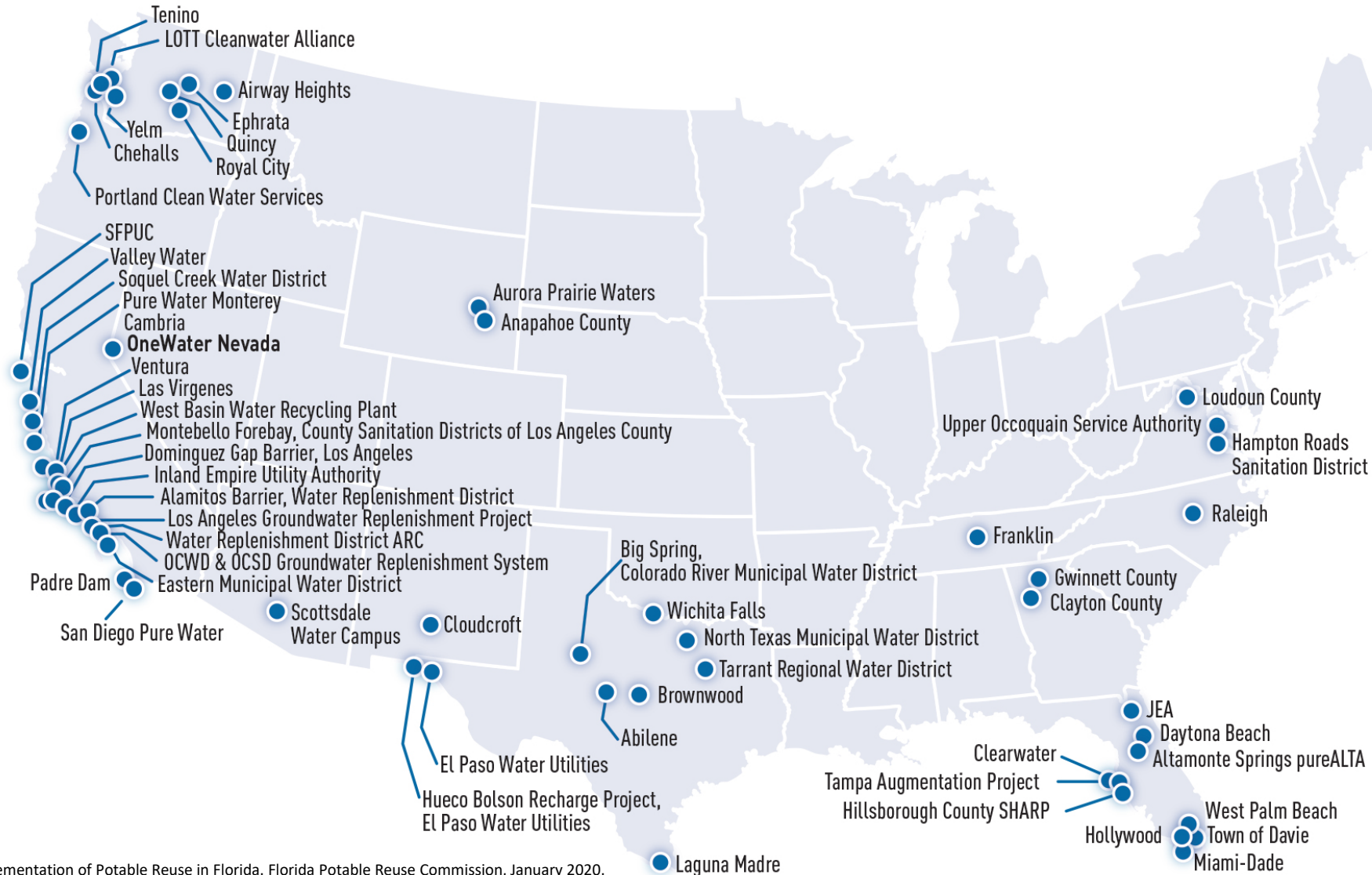


Category A+: Advanced Purified Water

- 💧 Recycled water is purified to drinking water quality through several advanced treatment processes
- 💧 Purified water is injected into a groundwater aquifer where further natural treatment occurs
- 💧 Meets all Federal and State drinking water regulations
- 💧 Removes unregulated contaminants of emerging concern
 - PFAS, pharmaceuticals, personal care products
- 💧 Safe, reliable and sustainable with added environmental benefits
- 💧 Becoming more common throughout the United States



National Advanced Purified Water Programs and Demonstrations



Source: Framework for the Implementation of Potable Reuse in Florida. Florida Potable Reuse Commission, January 2020.



OneWater Nevada APW Pilot Demonstration

- ◆ **Goal: Determine if advanced purified water can provide long-term benefits for our region's water future.**
- ◆ 2017-2020 pilot demonstrations at local water reclamation facilities
- ◆ Used a carbon/biological-based treatment approach
- ◆ First Category A+ permit in Nevada
- ◆ Strict water quality goals and advanced monitoring



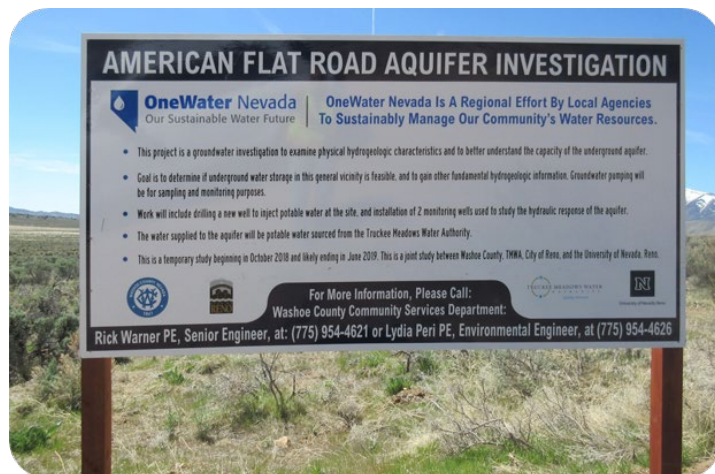
Study Summary

- 💧 All water quality regulations and objectives were met
- 💧 Injected approximately 220,000 gallons of A+ water
- 💧 Carbon/Biological Treatment vs Membrane (Reverse-Osmosis)
 - No brine/waste stream
 - More sustainable and energy efficient

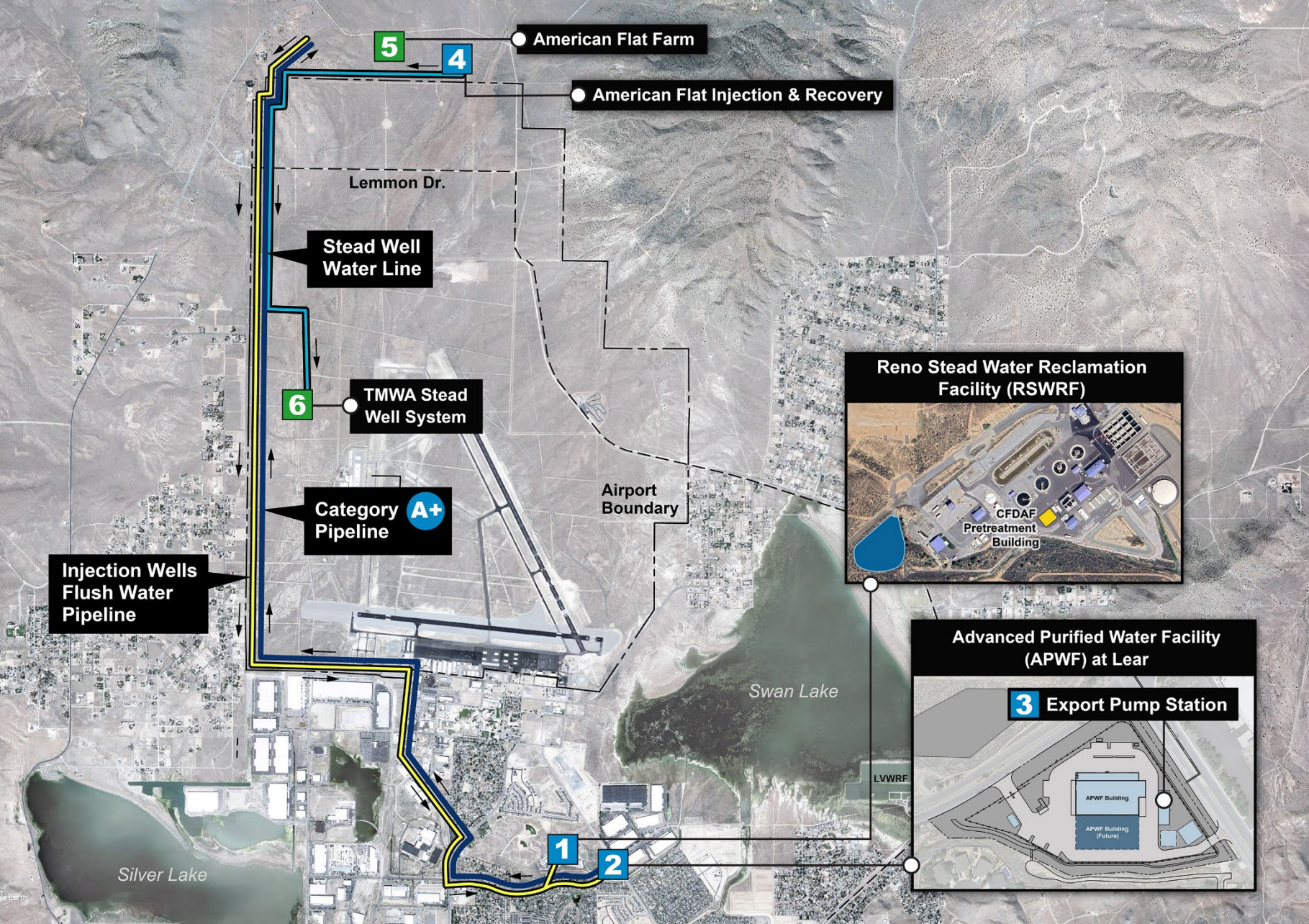


Advanced Purified Water Facility at American Flat

- 💧 Nevada's first Category A+ large scale project
- 💧 2 MGD Advanced Purified Water Facility
- 💧 \$220+ million
 - Received \$30 million BOR grant June 2024
- 💧 City of Reno and TMWA joint venture
- 💧 Suitable aquifer and hydrogeology

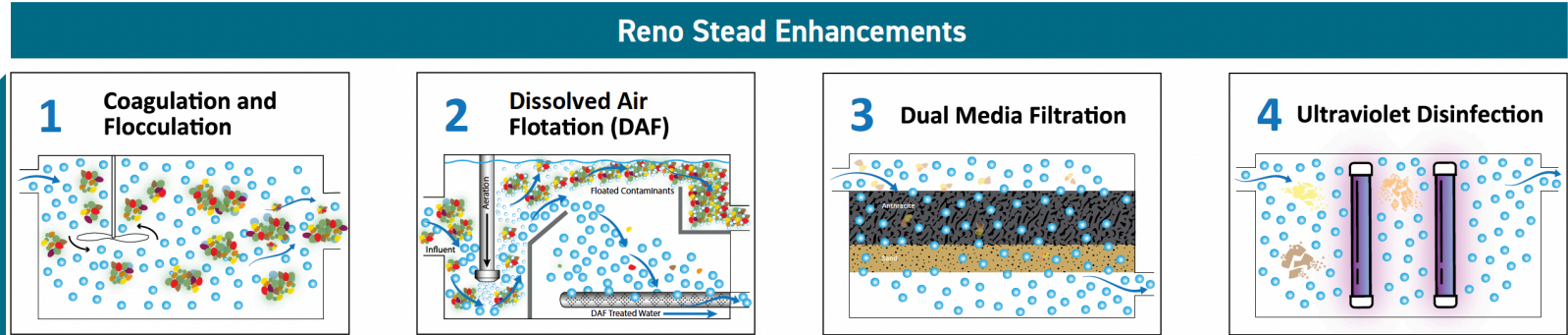


Site Map

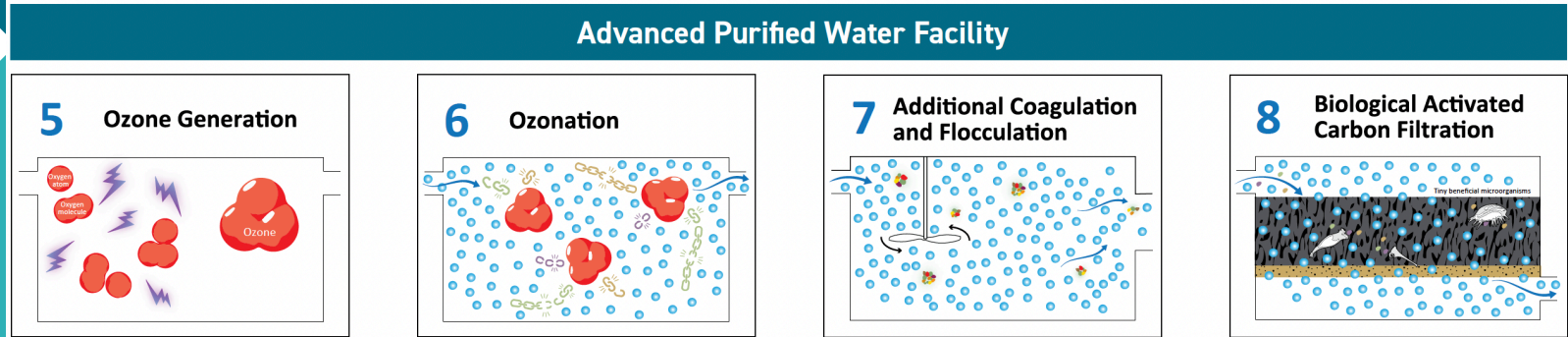


Advanced Purified Water Technology

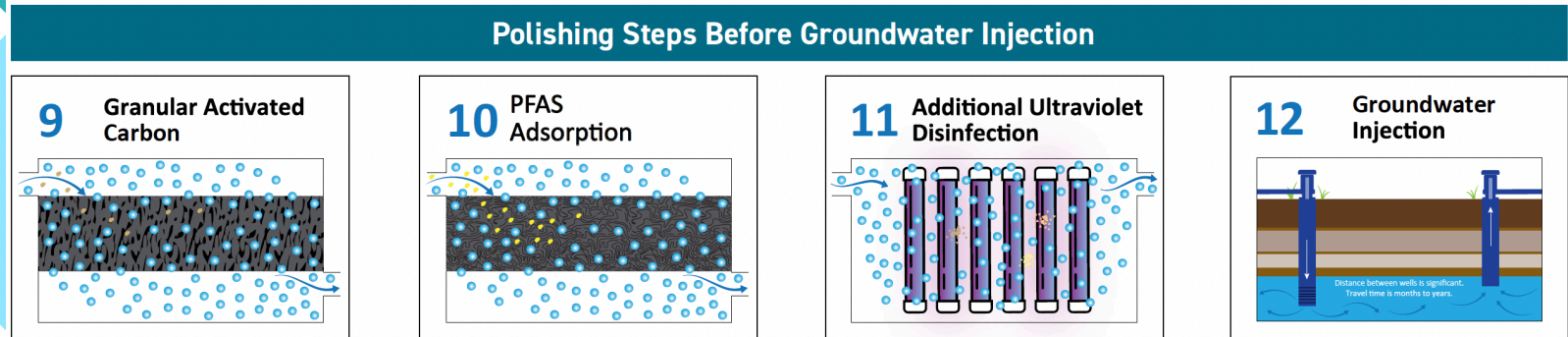
Reno Stead Water Reclamation Facility (RSWRF)



Advanced Purified Water Facility (APWF)



Polishing Steps Before Groundwater Injection



Ensuring Water Quality

- National advanced purified water efforts deemed safe
- Selected treatment train will meet all water quality objectives
- Unregulated constituents (PFAS, pharmaceuticals, personal care products, etc.)
 - Will meet all health guidance levels
- Phased approach
 - Irrigation of American Flat Farm



Program Legitimacy



Nevada Water Innovation Institute


Innovative partnership creating water management solutions

N University of Nevada, Reno



THE Bulletin

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SPECIAL ISSUE

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