



City of Othello

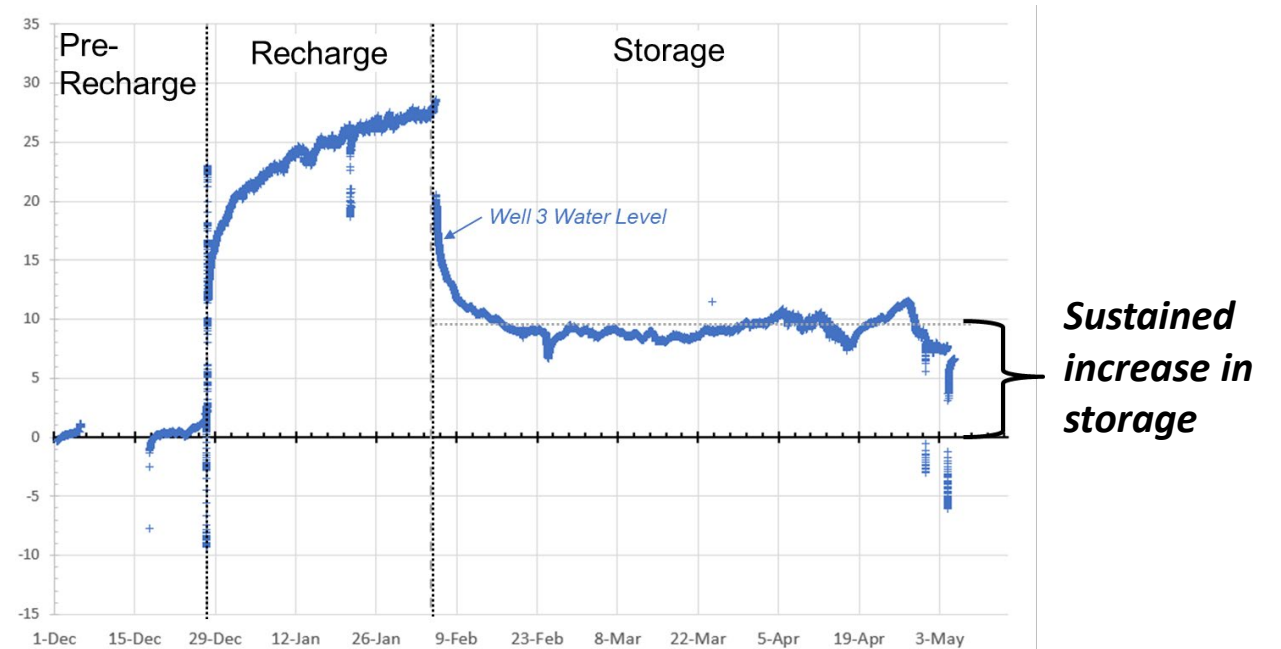
Water Supply Plan

Aquifer Storage and Recovery (ASR)

Program Funded in Part by WA Dept. of Ecology:
Office of Columbia River

Presentation Outline

- Background on the City of Othello
- Water Supply Planning & How ASR Fits in
- Milestones and Current Status
- Planning and Next Steps



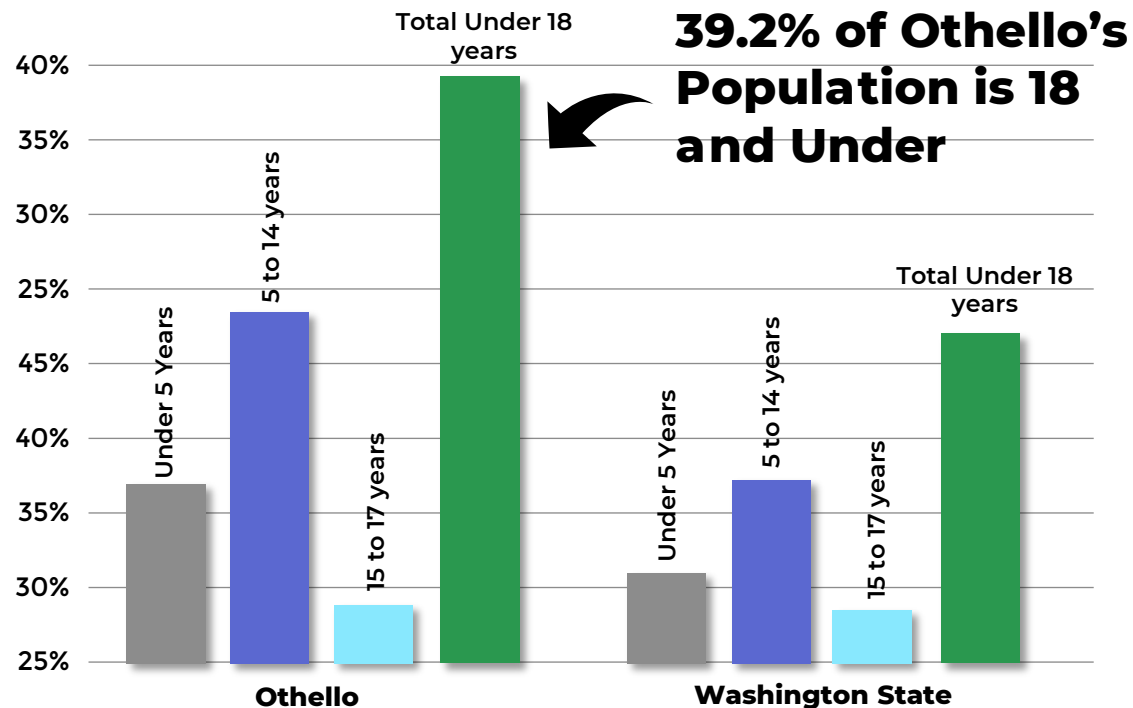
Othello Demographics

- ➔ Median Income Below State Average
- ➔ Child Poverty Rate 3x State Average
- ➔ 88% Persons of Color

Persons of Color:

Project Census Tract 88%

WA Avg. 31%



Mortality Rate:

Project Census Tract 871/100,000

WA Avg. 682/100,000



Othello's Water Supply Issues and Objectives

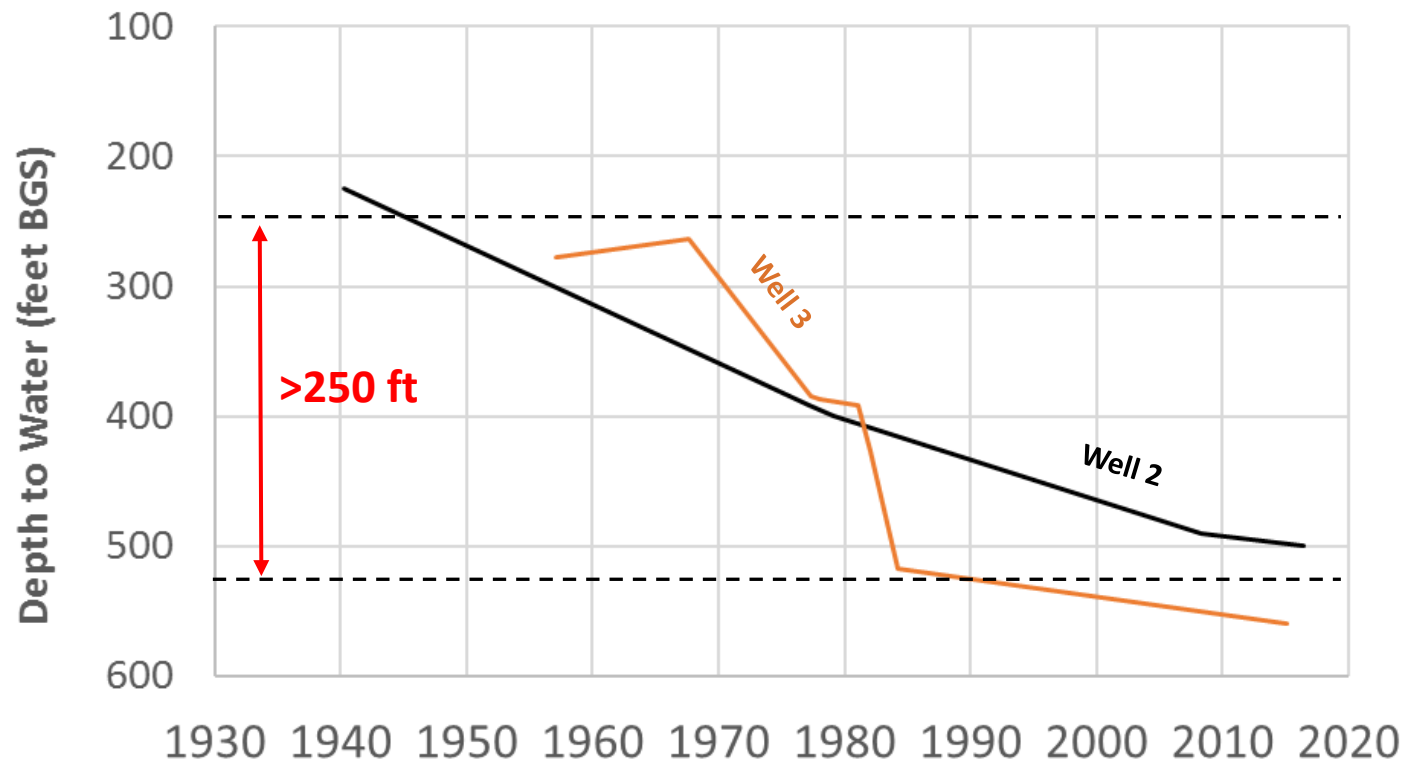
- 100% reliant on **rapidly depleting** groundwater supply
- Ensure our community has access to **reliable clean water supply**
- Provide for **economic vitality** (we are a home to regional ag processors)
- **Mitigating** environmental disparities
- **Resilience** to drought



We Have a Critical Need to Diversify Water Supply for Future Sustainability

Othello's Water Supply Issues and Objectives

- Wells in Wanapum Basalt have experienced long term decline
- Immediate and long-term solutions needed



Water Supply Strategy Advancement

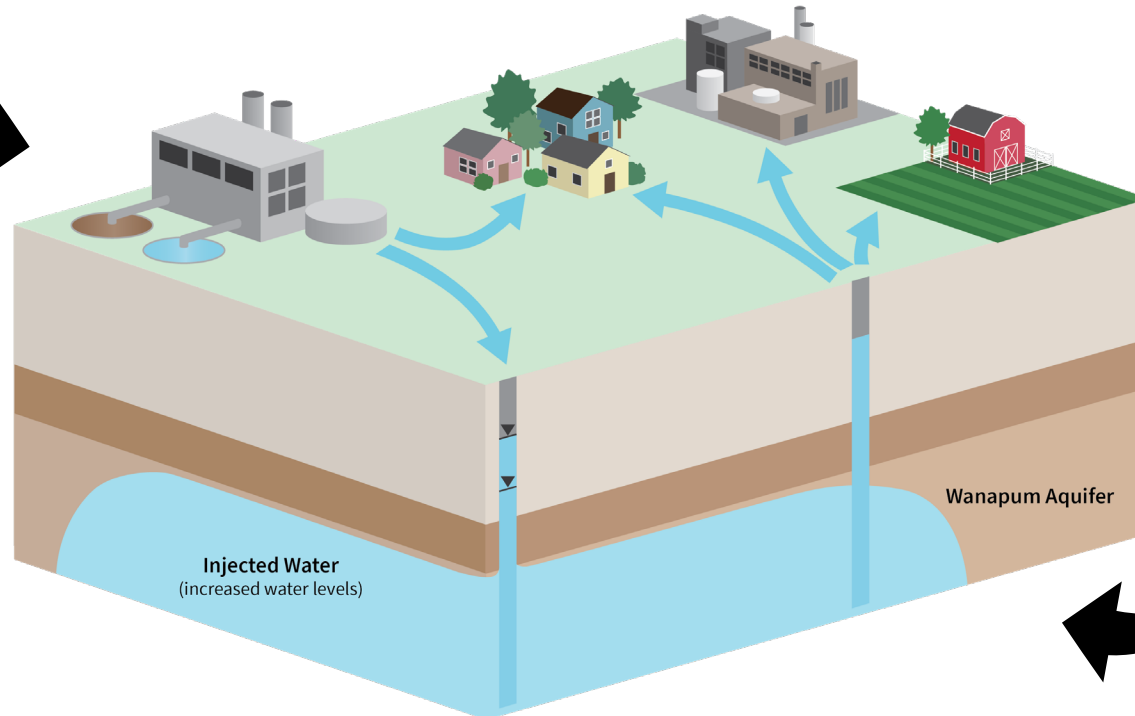
→ Development of Water Supply Sustainability Strategy

Short-term: Optimize groundwater capacity (completed)

Long term: Diversify water supply source options

→ Optimize Seasonally Available Surface Water through Treatment, Direct Use, and Aquifer Storage and Recovery (ASR)

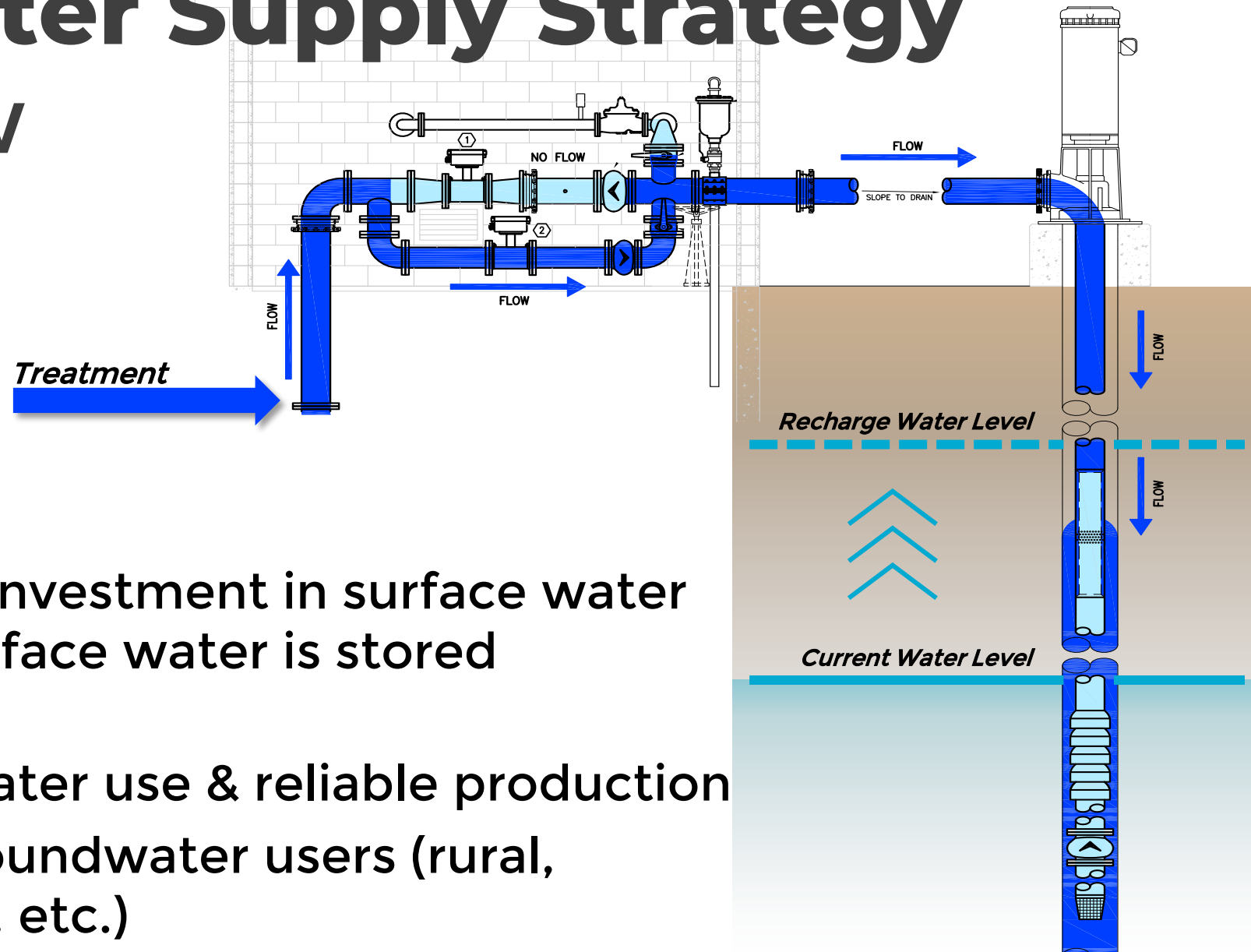
ASR involves pumping treated water into aquifer for storage and later use.



The depleted aquifer is a large storage vessel that can be recharged.

Othello's Water Supply Strategy

ASR Overview



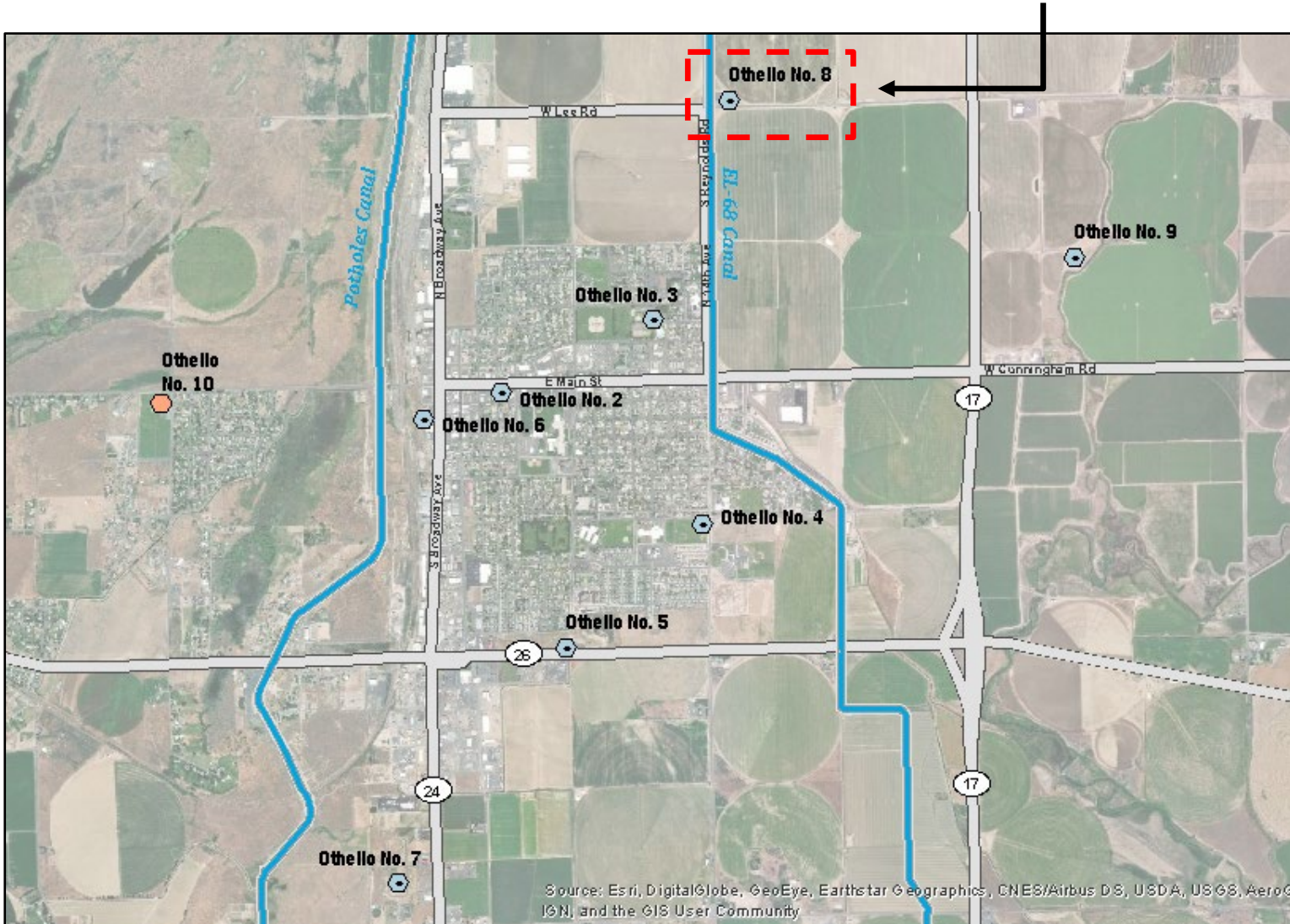
- ➔ Maximizes the City's investment in surface water treatment (excess surface water is stored underground)
- ➔ Sustainable groundwater use & reliable production
- ➔ Benefit to all local groundwater users (rural, agriculture, industrial, etc.)

ASR Program Development

- ✓ Feasibility Study
- ✓ Evaluate Source Options (City Funded)
- ✓ Feasibility Study (OCR Funded)
- ✓ Phase 1 Testing (OCR Funded)
- ✓ Initiate Permitting
- ✓ Phase 2 Testing (OCR, Commerce, and City Funded)
- ✓ Treatment System Predesign (Commerce Funded)
- ☐ Design
- ☐ Construction

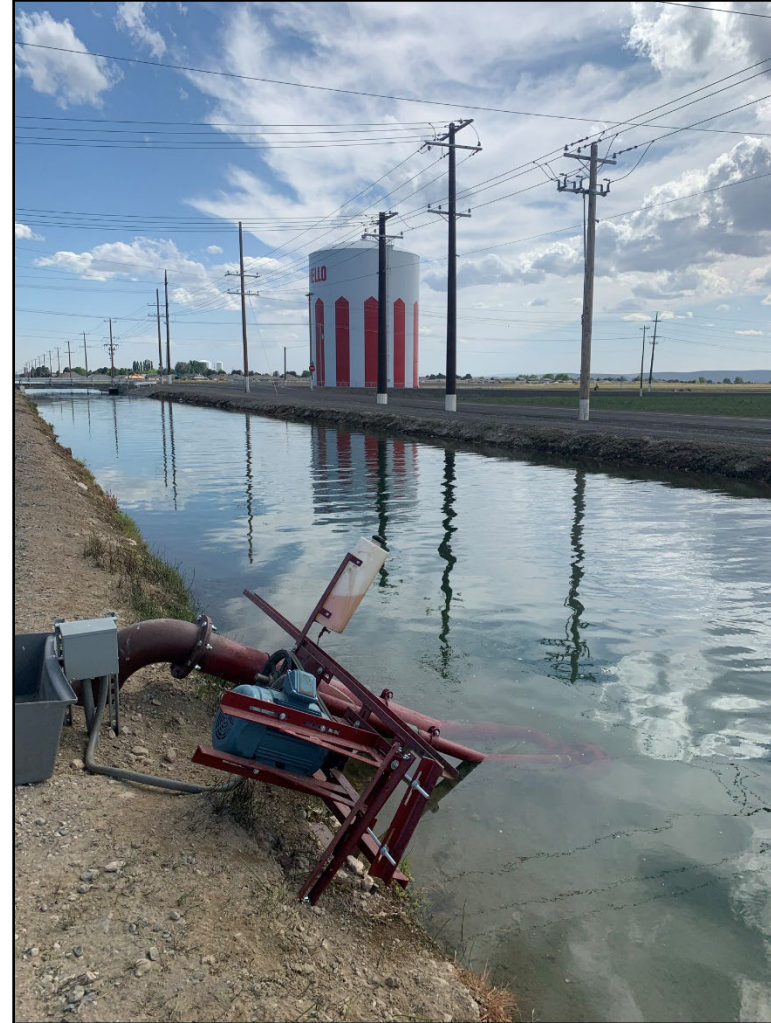
City Wells and Phase 2 Test Site

ASR Phase II Pilot Test Injection Site



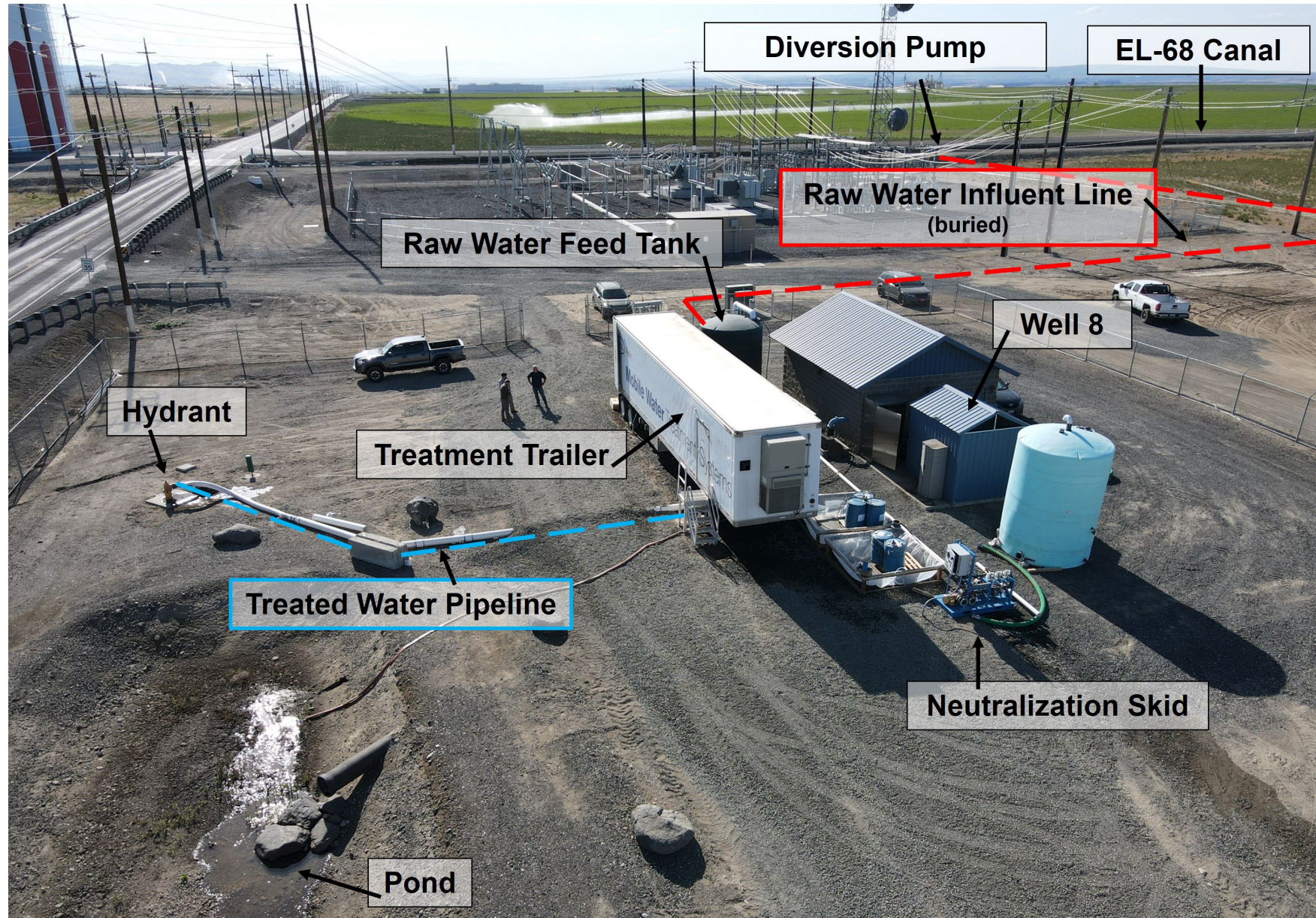
City Wells and Phase 2 Test Site

- Demonstration-scale
(330 acre-feet
recharged)
- New Temporary Canal
Diversion
- 1 MGD Ultrafiltration
System



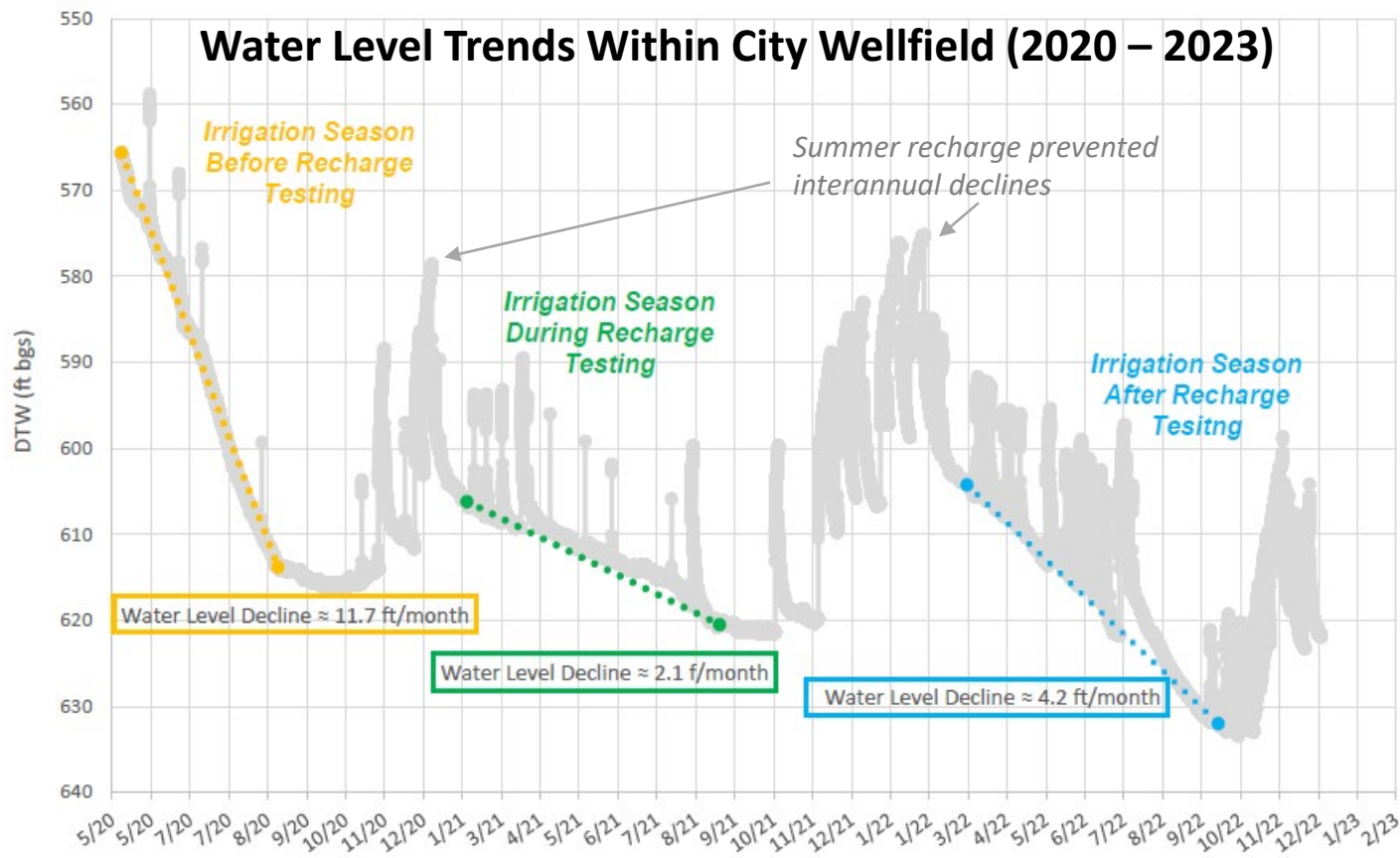
Phase 2 Test Site

- Significant infrastructure required for program testing



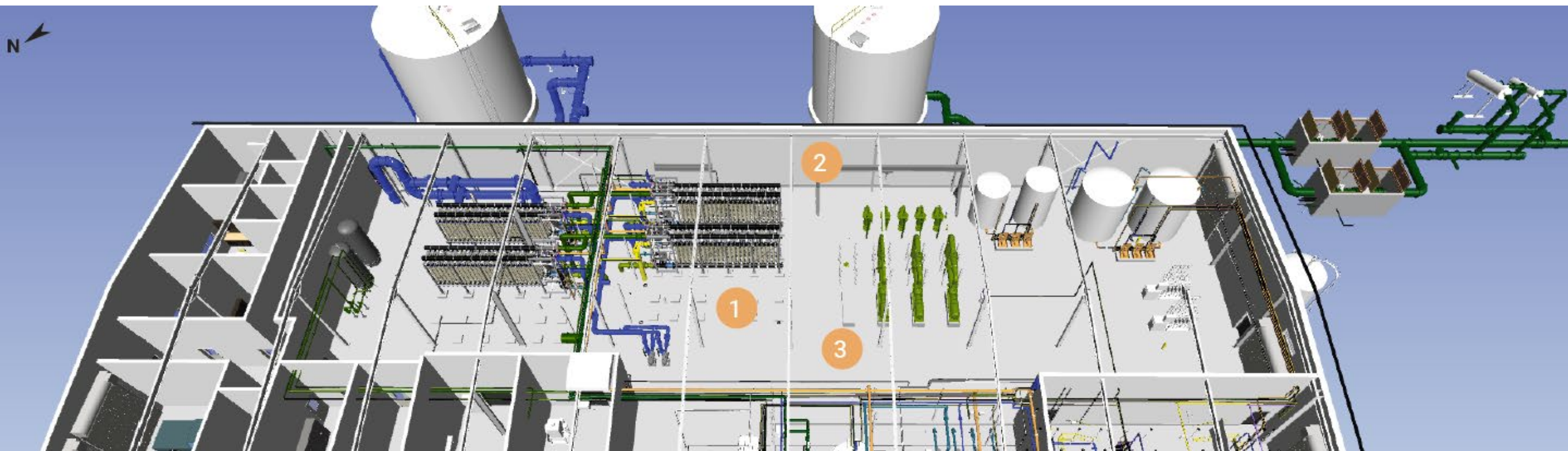
Positive Phase 2 Test Results

- Recharge during high demand irrigation season (summer)
- Water levels **increased** at recharge well and remained elevated
- Summer water level decline in aquifer **drastically reduced**



Next Steps: Treatment Facility

- ➔ Recent CB Project improvements made source water available
- ➔ Treatment System needs flexibility, **expandability**, easy of use
- ➔ Ability to expand for future reuse of food processor water



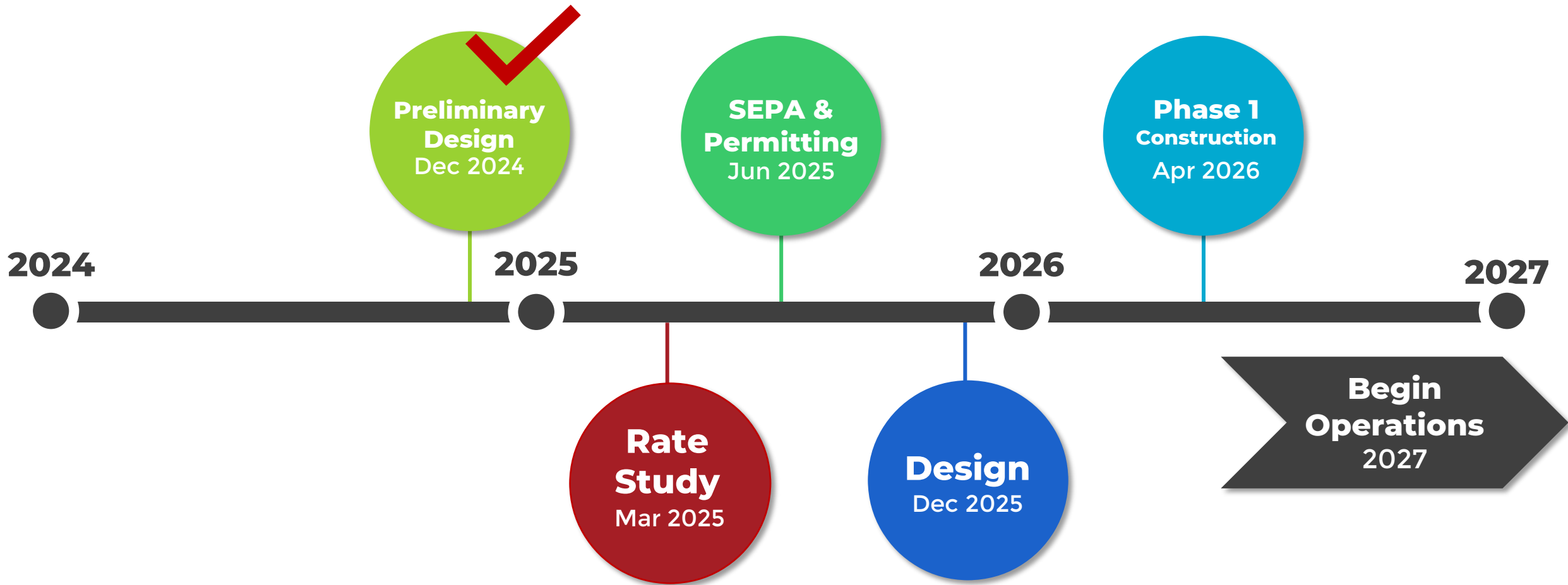
Cost Estimates for Initial Treatment Capacity

Current need is funding for Phase 1 Buildout—with initial capacity of 3 MGD:



✂ Annual O&M: \$252,000

Delivery Timeline



Future Phases

How we'll scale our modular facility in the future...

What we need now

2027

3 MGD WTP
design and
construction

*direct supply and
initiate ASR*

What we'll do next

2025+

Reuse planning &
WTP
modifications

*reuse or increased
diversion*

Where we're going

2030+

Year-round
treatment /
higher capacity

*expand ASR
operations*

Thank You!

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