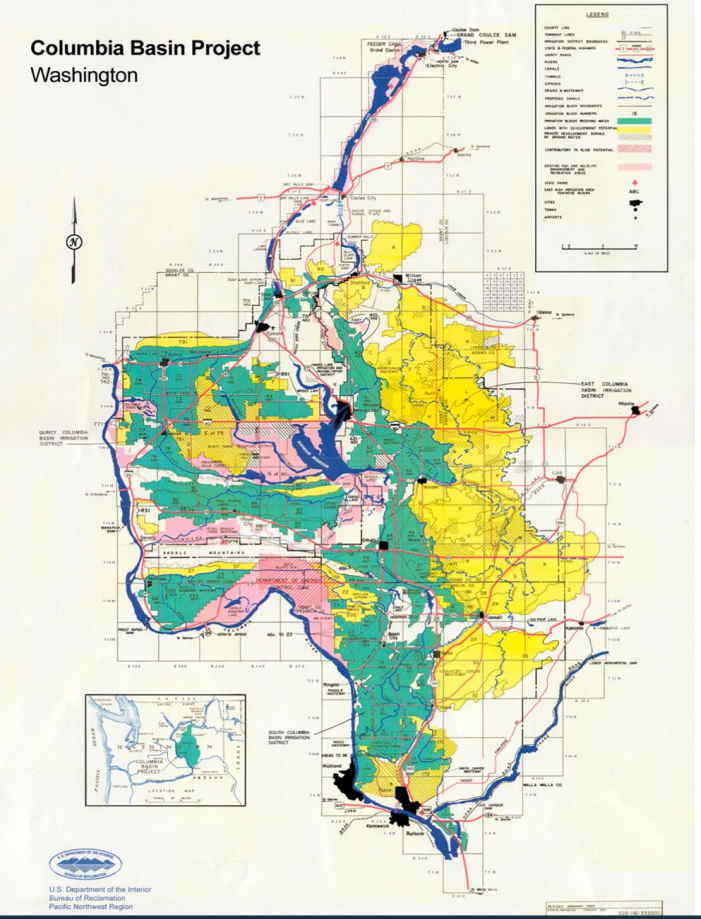
Columbia Basin Water Supply Initiatives

Kristina Ribellia
CBCD Executive Director
CBSWC Board Member

3rd Annual Water Law in Eastern Washington Conference
May 27, 2026

RECLAMATION
Managing Water in the West



Columbia Basin Project

- CBP is the backbone of our economy and the heart of our region
- ~700,000 acres under irrigation
- 1,029,000 acres authorized
- Temporary groundwater rights issued
- Deep aquifer declining 1-5 ft per year

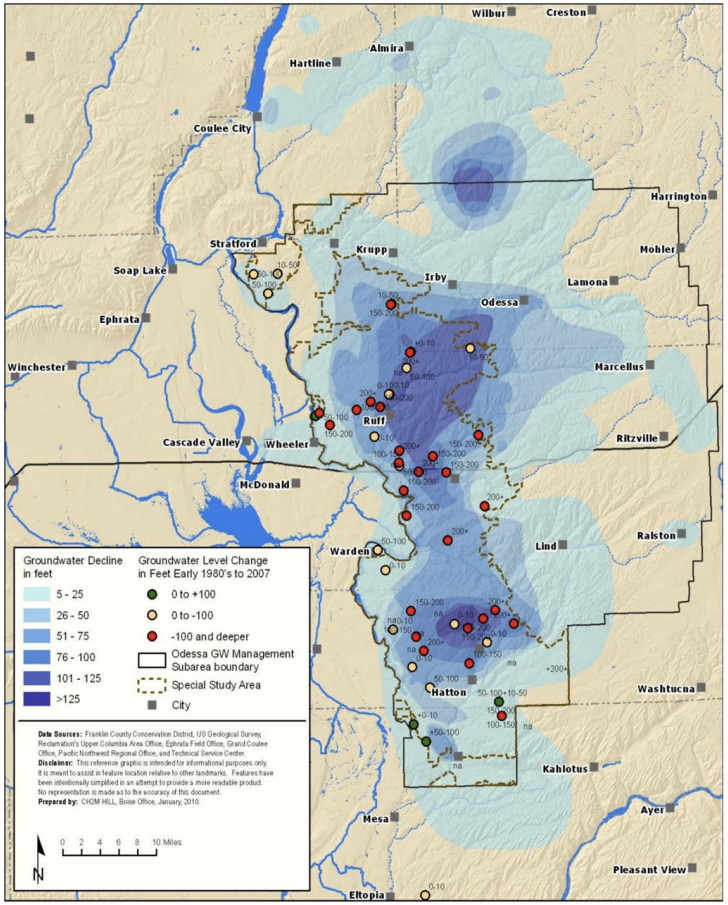


Figure 3. Groundwater level decline in aquifers of the Odessa Subarea, 1981 to 2007.

Odessa Subarea Special Study

Final Environmental Impact Statement
Volume 1

Columbia Basin Project,
Washington

U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Columbia-Cascades Area Office
Yakima, Washington

State of Washington
Office of Columbia River
Department of Ecology
Wenatchee, Washington
Ecology Publication No. 12-12-014 August 2012

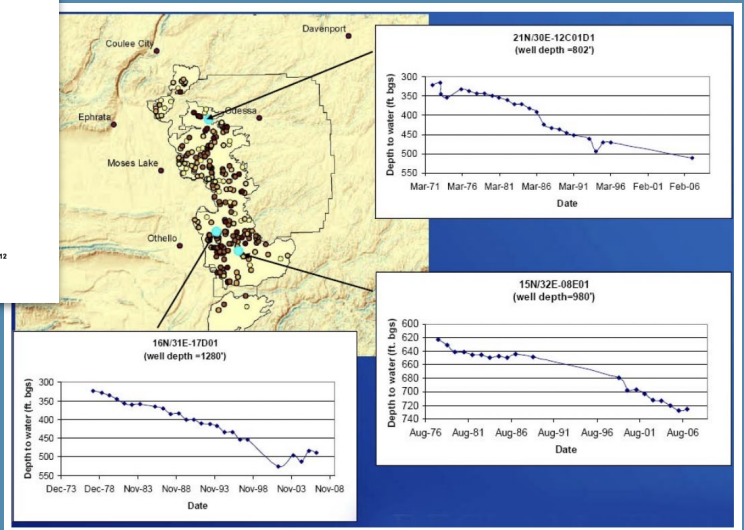


Figure 1-4. Declining trend in measurements of groundwater levels in three example wells with best available data (Reclamation 2008 Appraisal).

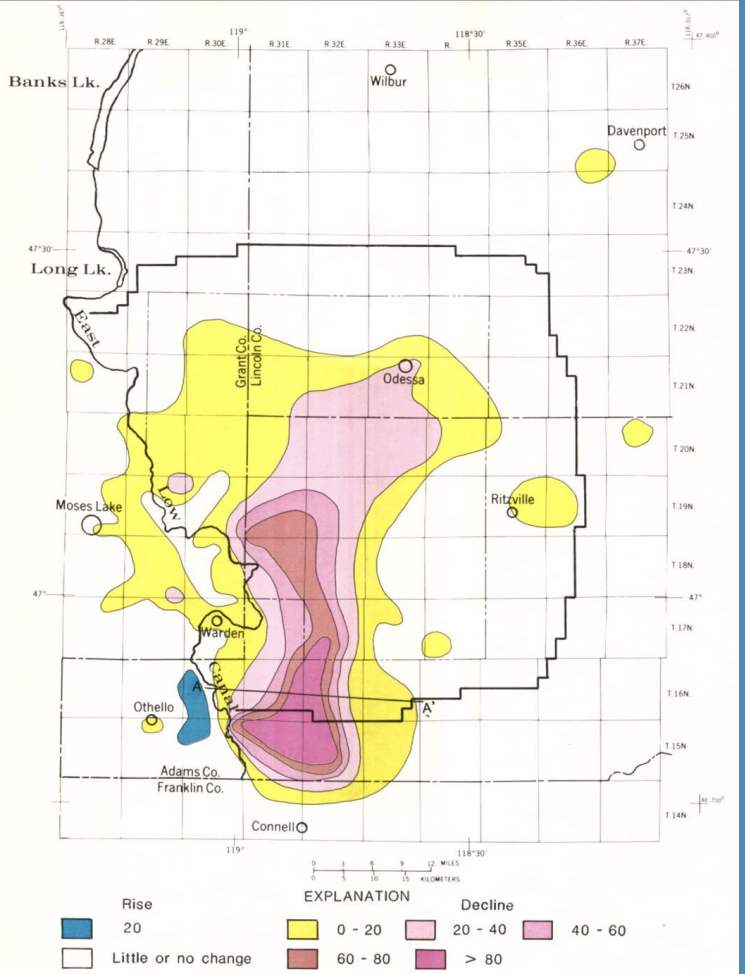
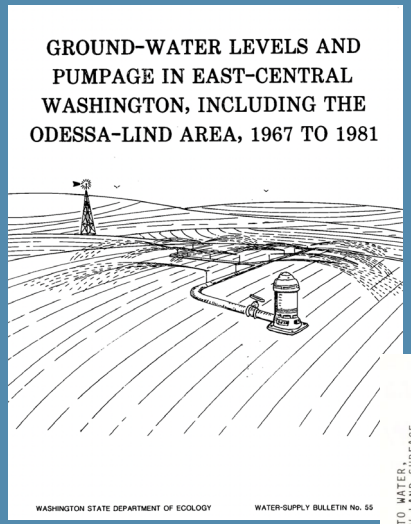


FIGURE 8.--WATER-LEVEL DECLINE (IN FEET), EXCEPT FOR RISE NEAR OTHELLO, IN WELLS TAPPING THE WANAPUM BASALT, SPRING 1968 TO SPRING 1978 (HIGHEST WATER LEVEL MEASURED FOR DECEMBER 1 - MARCH 31 PERIODS).



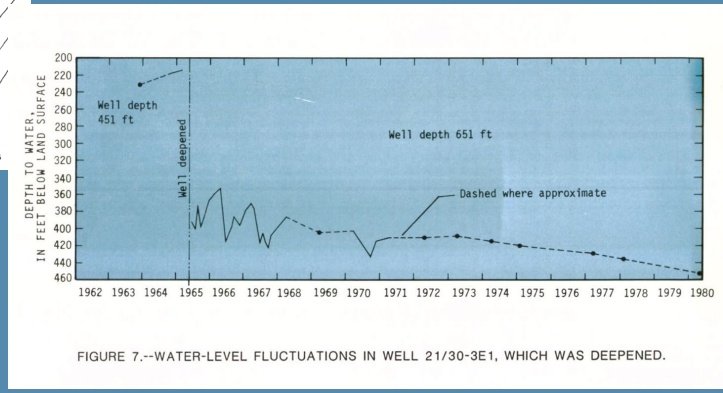


FIGURE 7.--WATER-LEVEL FLUCTUATIONS IN WELL 21/30-3E1, WHICH WAS DEEPENED.

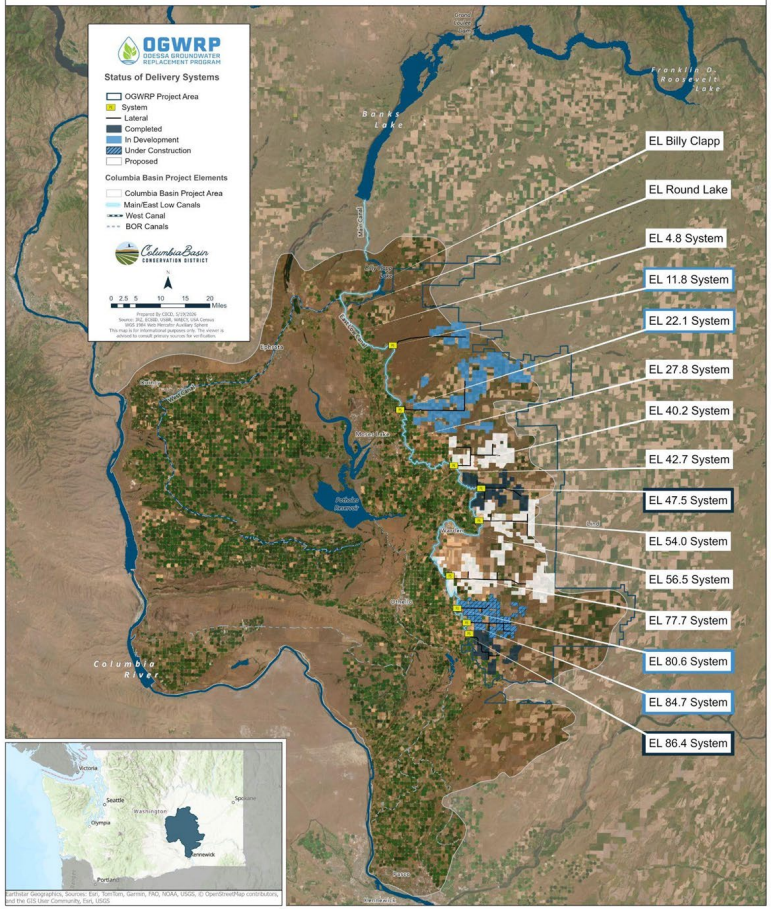
https://apps.ecology.wa.gov/publicationsdocumets/wsb55.pdf

OGWRP
ODESSA GROUNDWATER REPLACEMENT PROGRAM

The largest active water supply initiative in the Basin

And the largest irrigation development project in the Nation

Odessa Groundwater Replacement Program



EL 47.5 - First System Operational in ~~2021~~

EL 86.4 - Completed in 2025

EL 80.6 & 84.7 - Under Construction

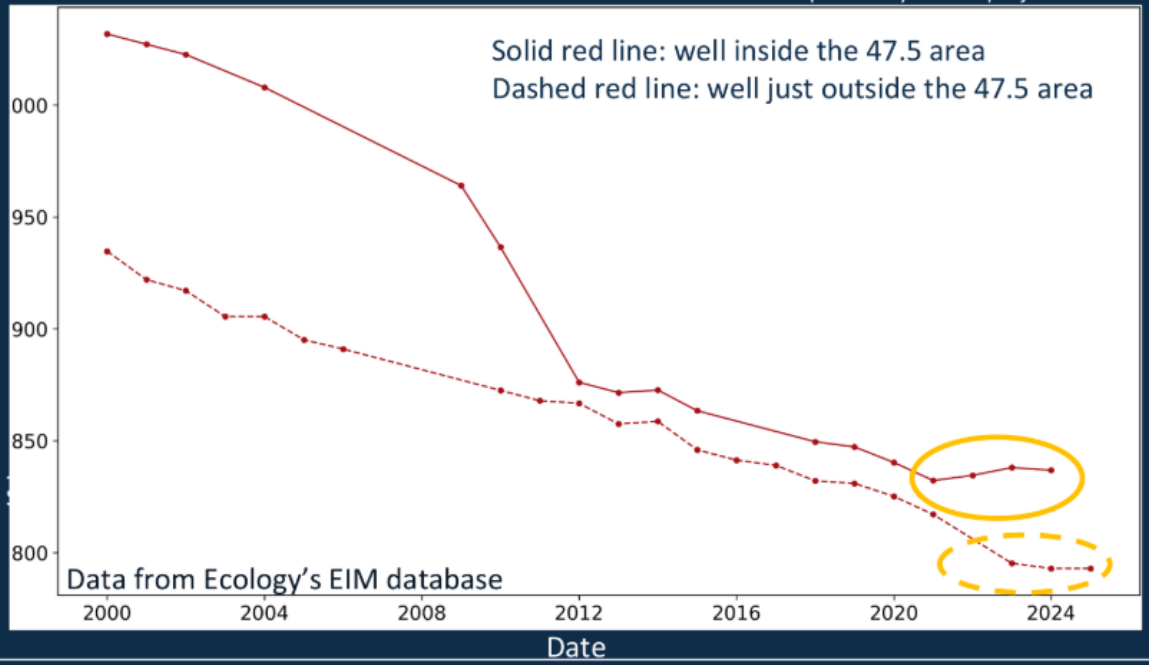
EOBID EL 80.6 Ribbon Cutting on June 10th!

EL 22.1& 11.8 - Pursuing Funding

This is where it gets good.

EL 47.5 Water Level Observations

- The overall average trend from *all* wells in this lateral area is -3.17 ft per year from 2000-2020.
- The solid line shows an increasing level coincident in time with project completion for the 47.5 after 2021
- The dashed line shows what we would expect (or hope!) – there is a little lag as the impact from project completion takes time to propagate outward. The impact is less pronounced, but does show a stabilizing of the water level.
- We have not done a full attribution to determine that these observations are specifically due to project



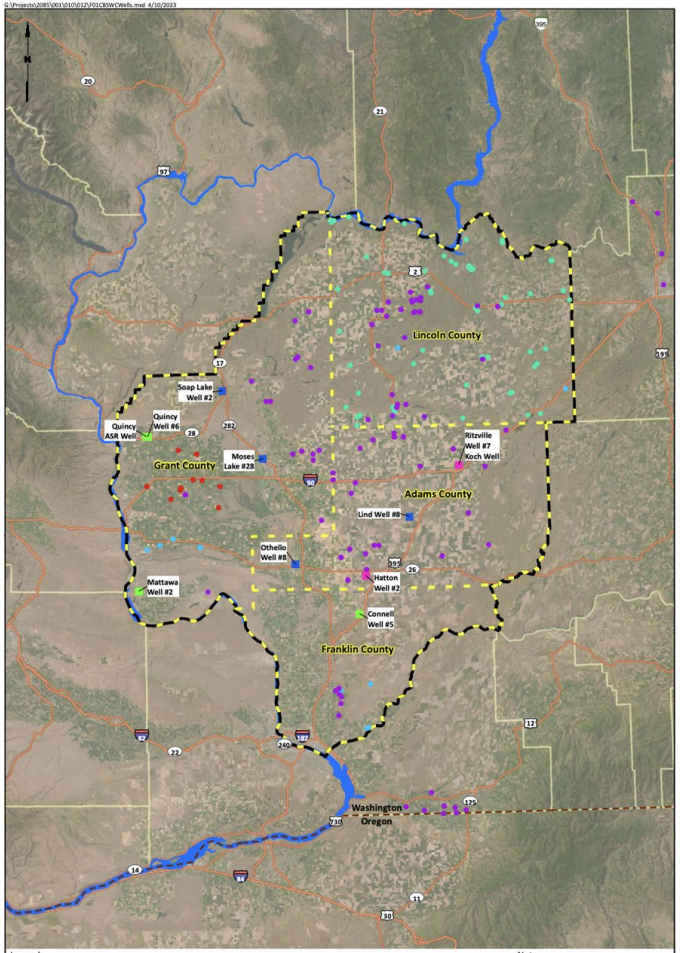
Research from Dr. Sasha Richey McLarty, WSU Department of Civil and Environmental Engineering

Lind fire 2022

Meanwhile, our communities are facing unprecedented water supply challenges

columbia basin sustainable water coalition

Helping secure the future of potable water in the Columbia Basin



CBSWC
columbia basin sustainable water coalition

PRELIMINARY WATERSHED MANAGEMENT PLAN

Mid-Columbia Basin, Washington

December 21, 2023

Prepared for

Columbia Basin Sustainable Water Coalition
Mid-Columbia Basin, Washington

LANDAU ASSOCIATES

GeoEngineers

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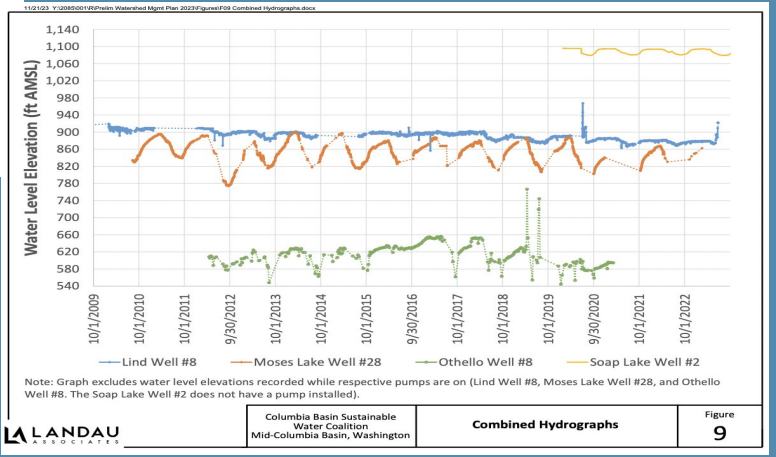


Note: Graph excludes water level elevations recorded while respective pumps are on (Lind Well #8, Moses Lake Well #28, and Othello Well #8. The Soap Lake Well #2 does not have a pump installed).

LANDAU ASSOCIATES

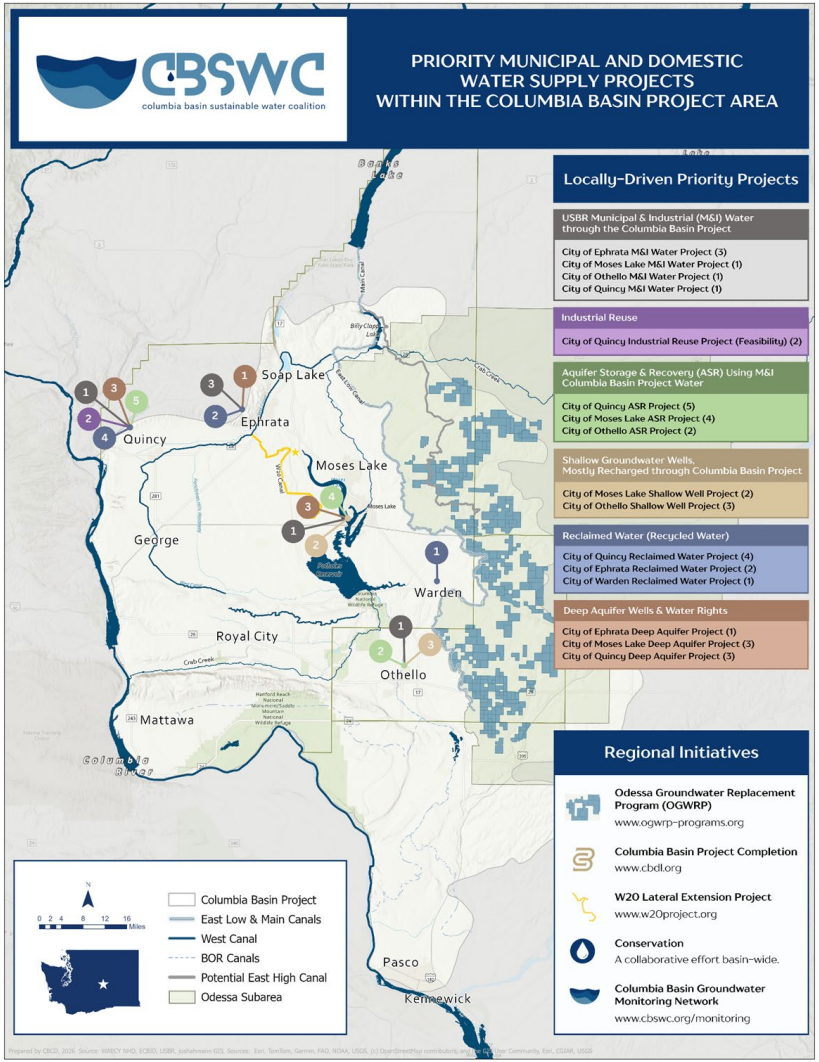
Columbia Basin Sustainable Water Coalition Mid-Columbia Basin, Washington	Combined Hydrographs	Figure 9

CBSWC Preferred Project Alternatives (2023)

1. Odessa Groundwater Replacement Program
2. New Source Treatment and Regional Distribution
3. Water Conservation
4. Columbia Basin Project Completion
5. Aquifer Recharge by Deep Well Injection
6. Aquifer Recharge by Passive Rehydration
   (Possibly Artesian / Black Lakes area)

CBSWC Priority Projects by Municipality (Dec. 2025)

- Warden & Ephrata don't currently have challenges
- CBP M&I surface water is a top priority
- Groundwater remains major part of the solution
- ASR is of interest; requires M&I water
- W20 emerged as a priority project
- Regional distribution discussed, but not prioritized
- *Representation/the map still growing*



M&I Water - Direct Use & ASR

- City of Othello - $1M Cantwell CDS for ASR
- City of Quincy - $2M Cantwell CDS for ASR
- Port of Moses Lake - $1M Cantwell CDS for W20
- City of Moses Lake
- Town of George
- Pasco
- Port of Quincy


W20 Lateral (2026)

City of Othello ASR Pilot Project (2020)

CBSWC ASR Subcommittee

- Developing recommendations for policy and legislative changes that help streamline ASR while protecting water quality
- Coordinated by Ben Lee, Landau Associates

www.cbswc.org/asr-subcommittee

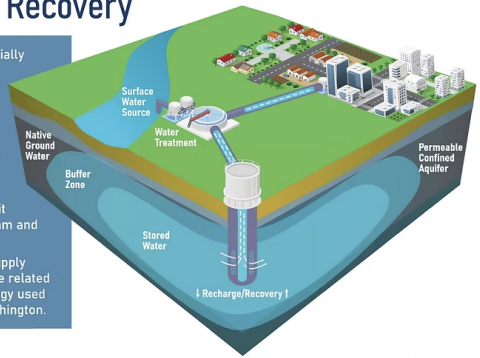
Aquifer Storage and Recovery

Aquifer Storage and Recovery (ASR) is a potentially valuable water supply management tool for municipalities and other water users.

It involves injecting water into an aquifer during times of availability (e.g., winter wet season) and extracting it back out during times of high demand (e.g., dry summer season). ASR utilizes the underground aquifer as a natural storage reservoir.

ASR has numerous environmental benefits, as it avoids the need for a surface level reservoir/dam and recharges the aquifer.

ASR is an important part of the state's water supply management toolbox to address climate change related water storage issues. ASR is a proven technology used throughout the US but it is underutilized in Washington.



PROBLEM

- ASR is under-utilized in Washington State, largely attributed to restrictive regulatory permitting requirements administered by Washington Departments of Ecology (Ecology) and Health (WDOH). Challenges in the existing ASR regulatory framework include:
  - Water quality of the injected water is required to meet the state's groundwater quality standards, which were set up to regulate hazardous substances. In order to use disinfected (i.e., chlorinated) potable water for ASR injection, a municipality must request an exemption to the groundwater quality standards and perform a costly and time-consuming evaluation of All Known and Reasonable Treatment (AKART) options. This process can be cost-prohibitive.
  - The recovery quantity of ASR water is limited to only that physical water that was injected. Because of inevitable mixing of injected and natural groundwater, as well as hydraulic gradients in the aquifer that cause injected water to flow away from the injection site, approved recovery efficiencies can be too low to make an ASR project financially feasible.
  - Overlapping regulatory authority between Ecology and WDOH creates uncertainty in the permitting process, which can be an impediment to beginning an ASR project.
- In Washington, there have been 22 ASR projects proposed and only 7 permitted. For comparison, in neighboring Oregon, with similar geologic settings but more efficient permitting, there are 19 active ASR projects.

PROPOSED APPROACH

- Engage with relevant entities to discuss the current ASR regulatory framework and potential improvements for consideration. Relevant entities may include: Ecology and WDOH staff, Tribal representatives, municipal water purveyors (and their technical consultants experienced in ASR permitting), and environmental groups.
- The desired outcome is a list of recommended statutory or regulatory rule changes that would (a) make ASR more feasible from a permitting perspective and (b) be acceptable to the relevant entities.
- The recommended statutory or rule changes would be presented to key Legislators for consideration in the 2027 Legislative session.

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(253) 203-8734

CBSWC columbia basin sustainable water coalition

W 20 La tera l Extens ion Project

- Originally considered as an alternative for the Potholes Supplemental Feed Route
- Benefits:
  - Deliver M&I water for Port of Moses Lake and City of Moses Lake
  - Improve Moses Lake's water quality
  - Provide operational flexibility for CBP

W 20 Lateral Extension Project

- Gained widespread support
  - Met with multiple entities and organizations
  - $500k from county; $1M Cantwell CDS
- Amplified underlying issues with using CBP infrastructure for municipal purposes
- Port of Moses Lake and CBCD is committed to moving forward

Columbia Basin Project M&I Water is Paramount

And also problematic

CBP Irrigation District Managers at CBSWC Stakeholder Meeting in 2024

M&I Water

- CBP infrastructure was designed for irrigation delivery
- M&I access is managed through temporary contracts
- ~30,000 AF currently available
- Great water quality

M&I Water (Cont.)

- Supply is seasonal and interruptible
- Pricing and canal capacity remain challenges
- Policy changes may affect future M&I delivery capacity
- However, existing infrastructure makes M&I water currently available and feasible for a lot of municipalities

Regional Distribution - Columbia River & Gravity

- CBSWC identified as a priority in 2023, but not in 2025
- As conversations are elevating around M&I issues, OCR is evaluating regional distribution opportunities
- Existing CBP infrastructure will likely continue to provide future opportunities
- Columbia River pump station may make the most sense for City of Quincy

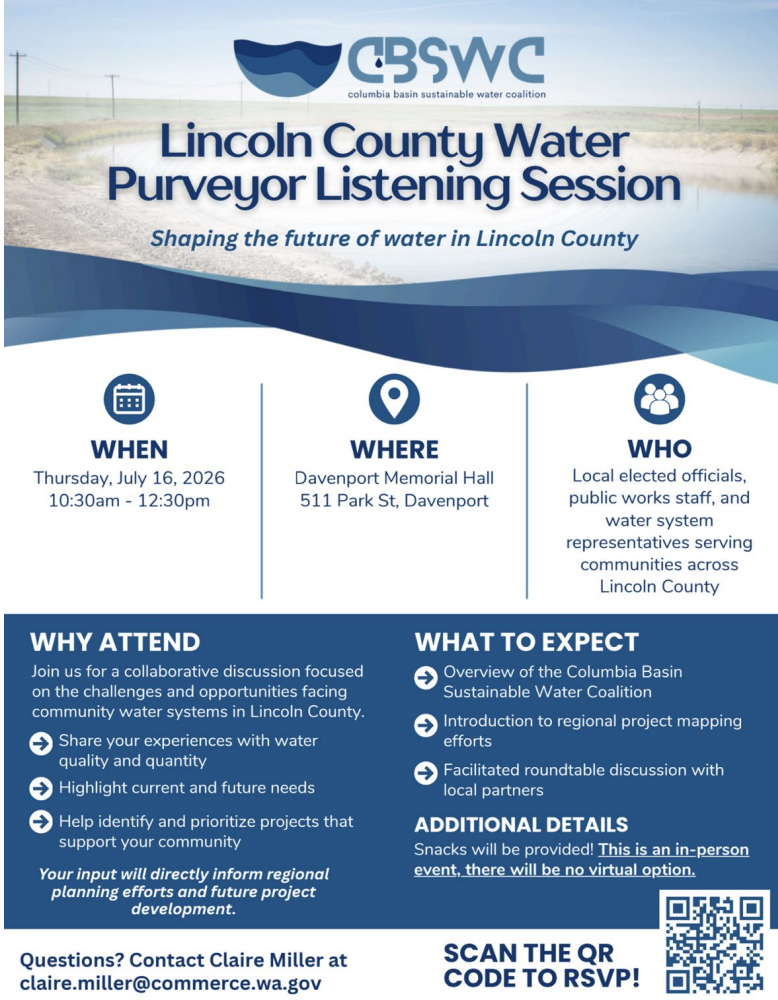
The time may be right for integrated planning in the Columbia Basin

Let's Continue the Conversation

- **Lincoln County Water Purveyor Listening Session**
  CBSWC Stakeholder Meeting - Thurs., July 16th
  Davenport Memorial Hall (In-person only)

- **Black Lake Project and Passive Rehydration in the Basin**
  CBSWC Stakeholder Meeting - Thurs., Sept. 17th
  City of Moses Lake's Council Chambers

- **CBP Municipal & Industrial (M&I) Water**
  CBSWC Annual Meeting at CBDL Annual Conference
  November 12 & 13, 2026
  Three Rivers Convention Center, Kennewick




COLUMBIA
BASIN
GROUNDWATER CO-OP
cbgroundwater.org

Thank You

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CBSWC Board Member

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