

Water Science and Management in the Fifteenmile Creek Watershed



Chris Kowitz – North Central Region Manager

Jon LaMarche – Surface Water Hydrologist

Josh Hackett - Hydrogeologist

May 26th, 2026

Meeting Agenda

Overview of the Problem

Introduction to the Groundwater Study

Study Workplan Overview and Goals

Project Updates Since 2025

Moving Forward Together

OWRD works alongside communities to address water concerns of today and the future

- Collecting, analyzing, and providing data
- Protecting public safety
- Distributing water under the system of prior appropriation
- Providing planning, technical assistance, and funding to address water supply needs
- Processing water rights transactions

STATEWIDE:

23 Districts in 6 Regions

~236 staff

Surveys ~110,000 miles of streams

Maintains ~89,000 water rights

Monitors ~230,000 wells

Inspects ~950 non-federal dams

Maintains ~250 stream gaging stations

Collects ~1,270 observation wells

Within the Eightmile and Fifteenmile Watersheds

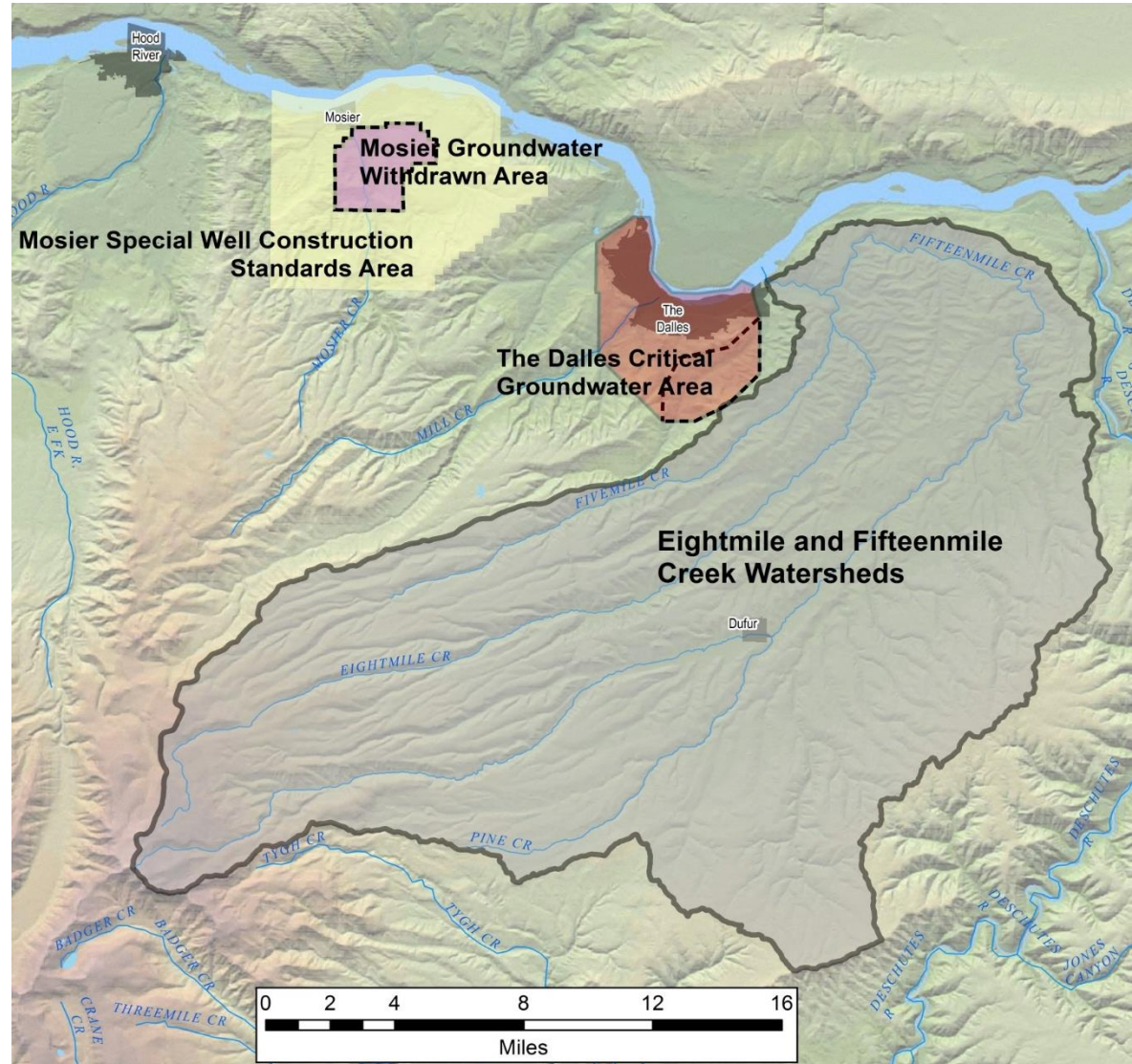
Part of District 3 Watermaster

Dedicated regional
Assistant Watermaster

Maintains 9 stream gages

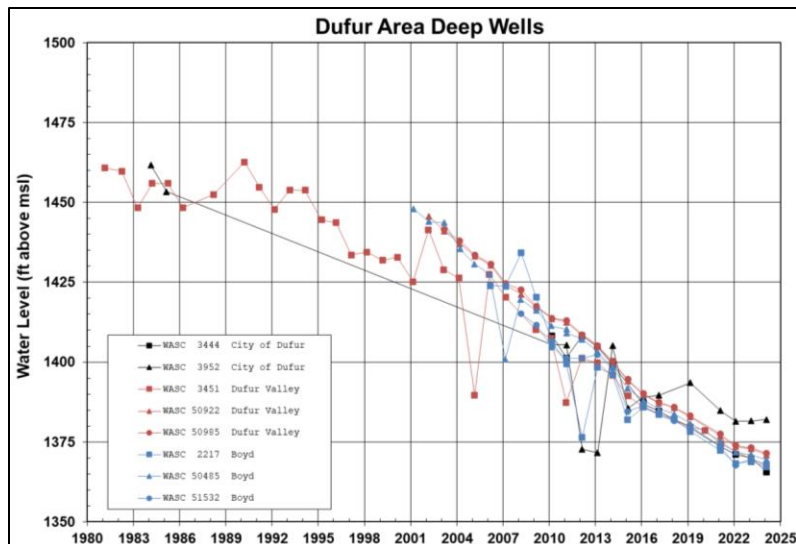
464 Active water rights

Monitors +80 wells



Why are we doing this study?

- **Groundwater level declines**
- **Groundwater pumping interference with springs**
- **Lower reaches of Fifteenmile Creek occasionally go dry**

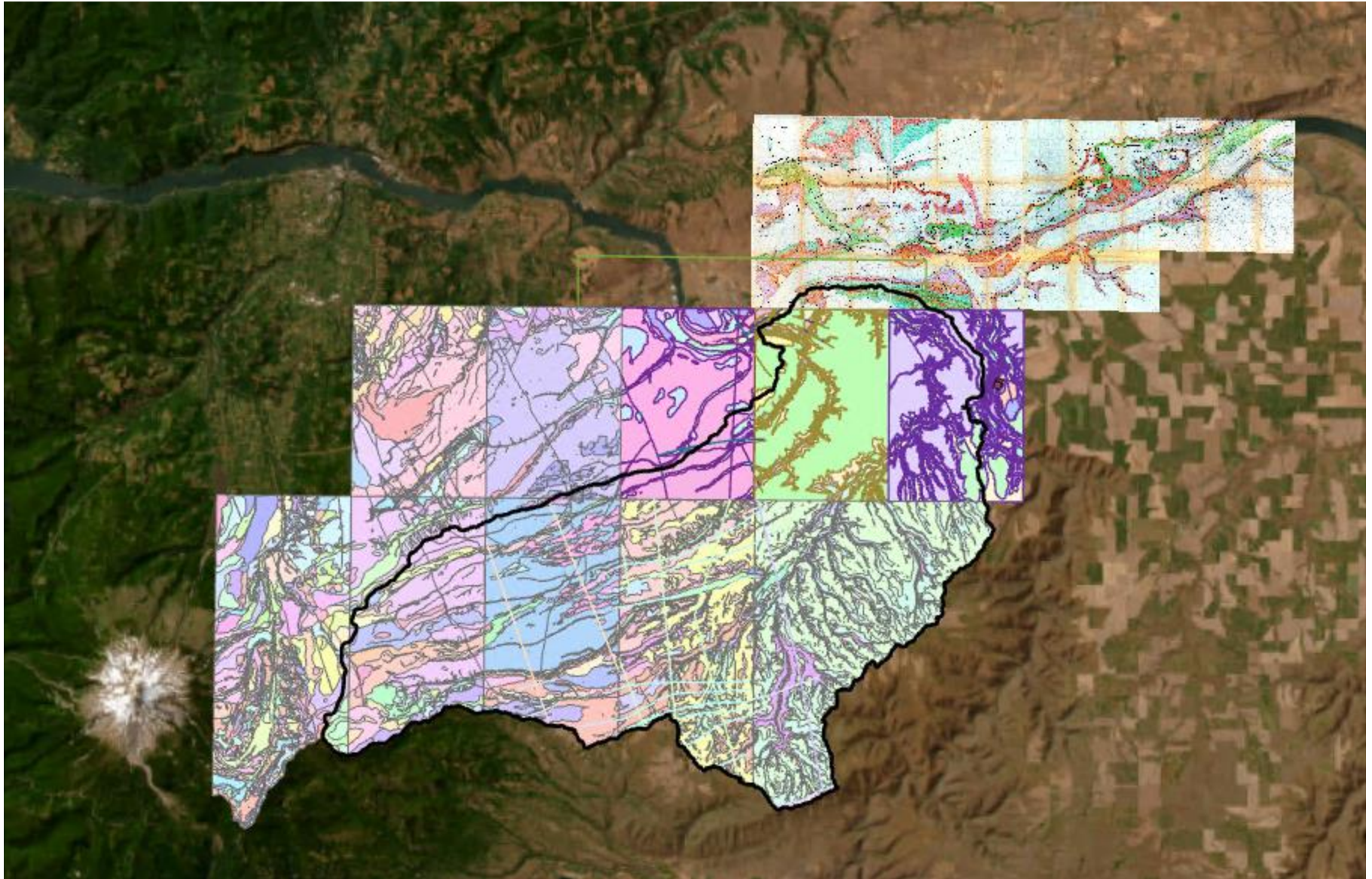


What do we hope to accomplish?

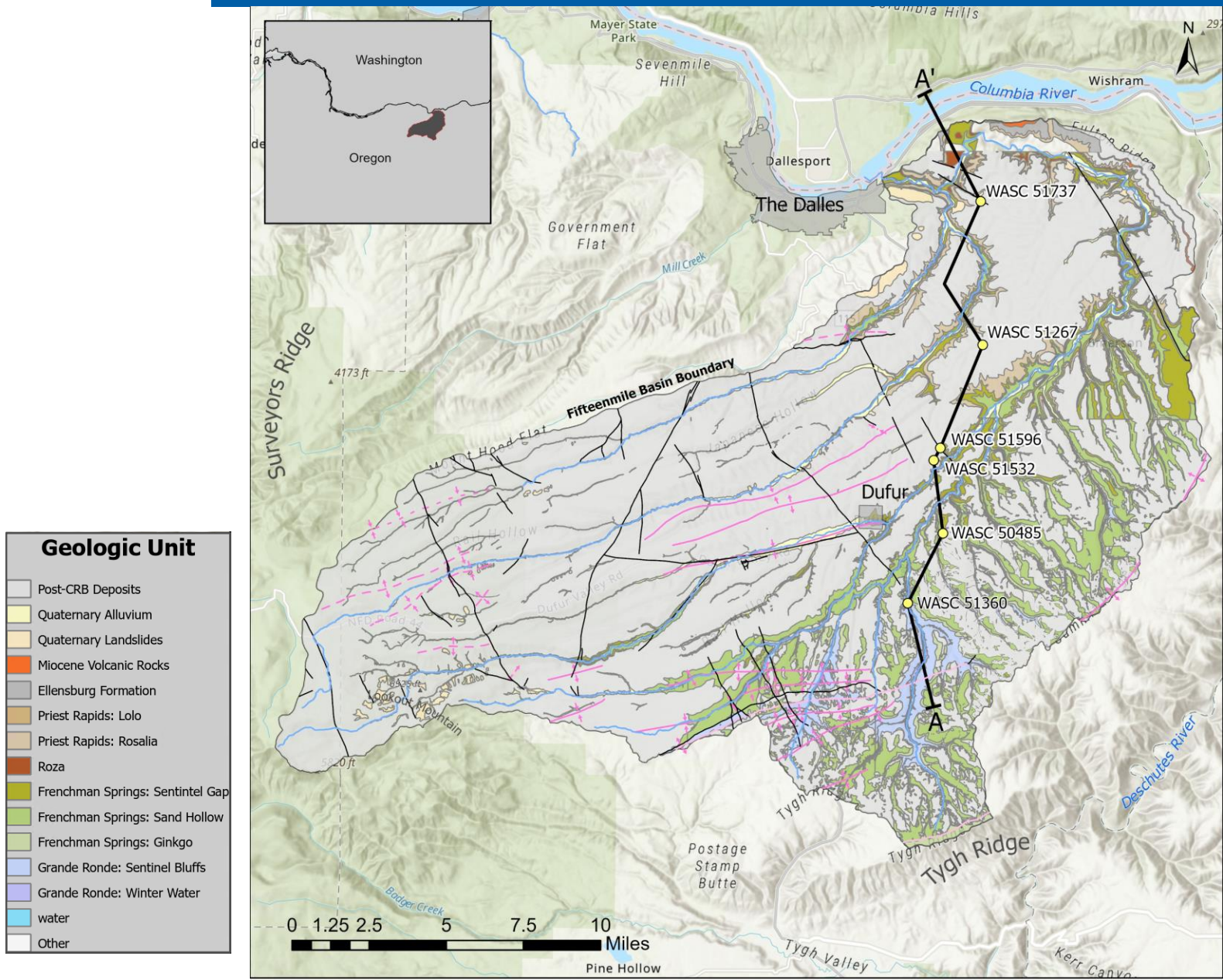
- **Refine our understanding of the groundwater flow system**
- **Assess the causes of groundwater level declines**
- **Assess the causes of periodic stream desiccation**

- **Finished Workplan**
- Geologic Map Compilation
- Updated Groundwater hydrographs
- Surface water and Groundwater Metering
- Other Monitoring Updates

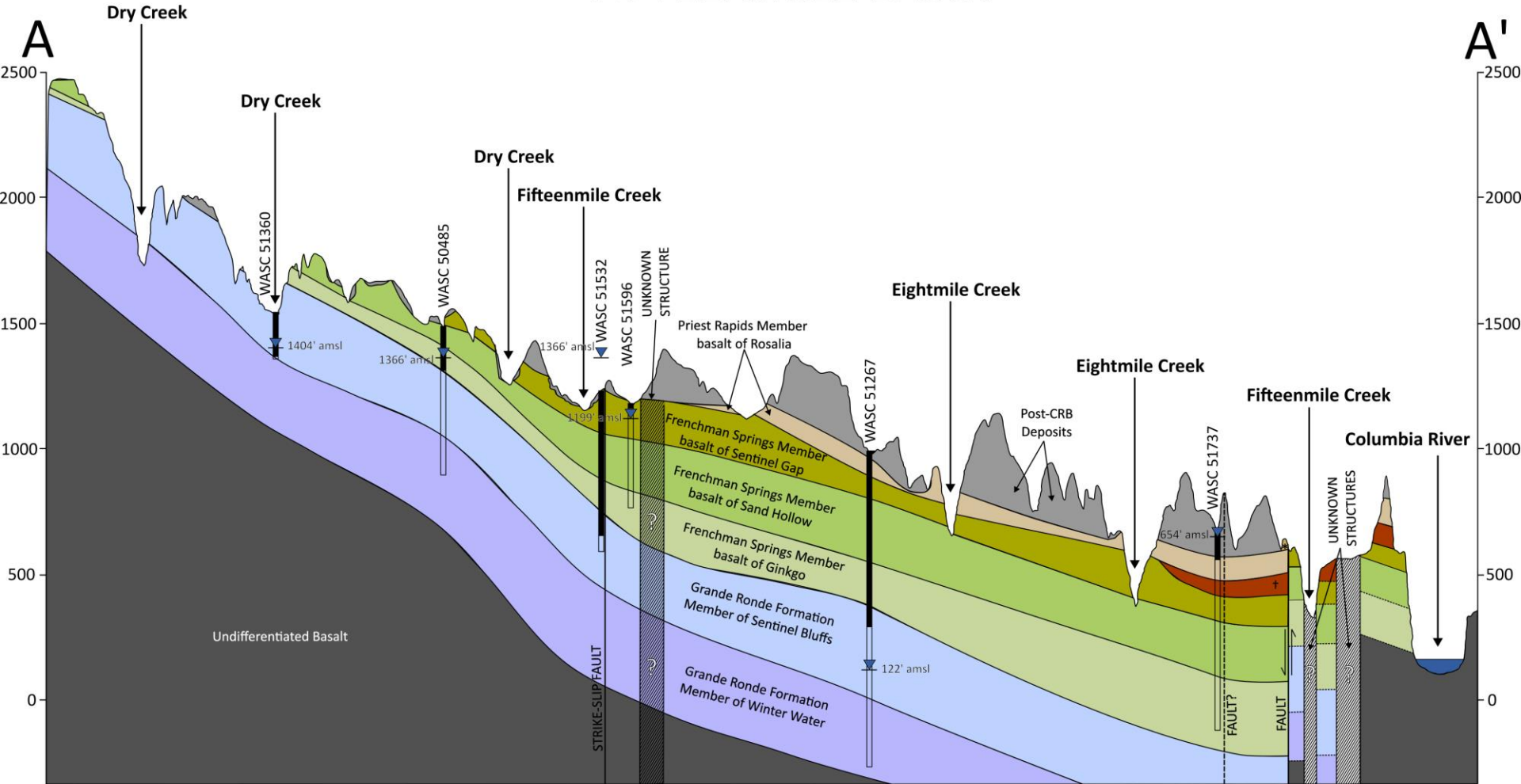
Project Updates: Geologic Map



Project Updates: Geologic Map

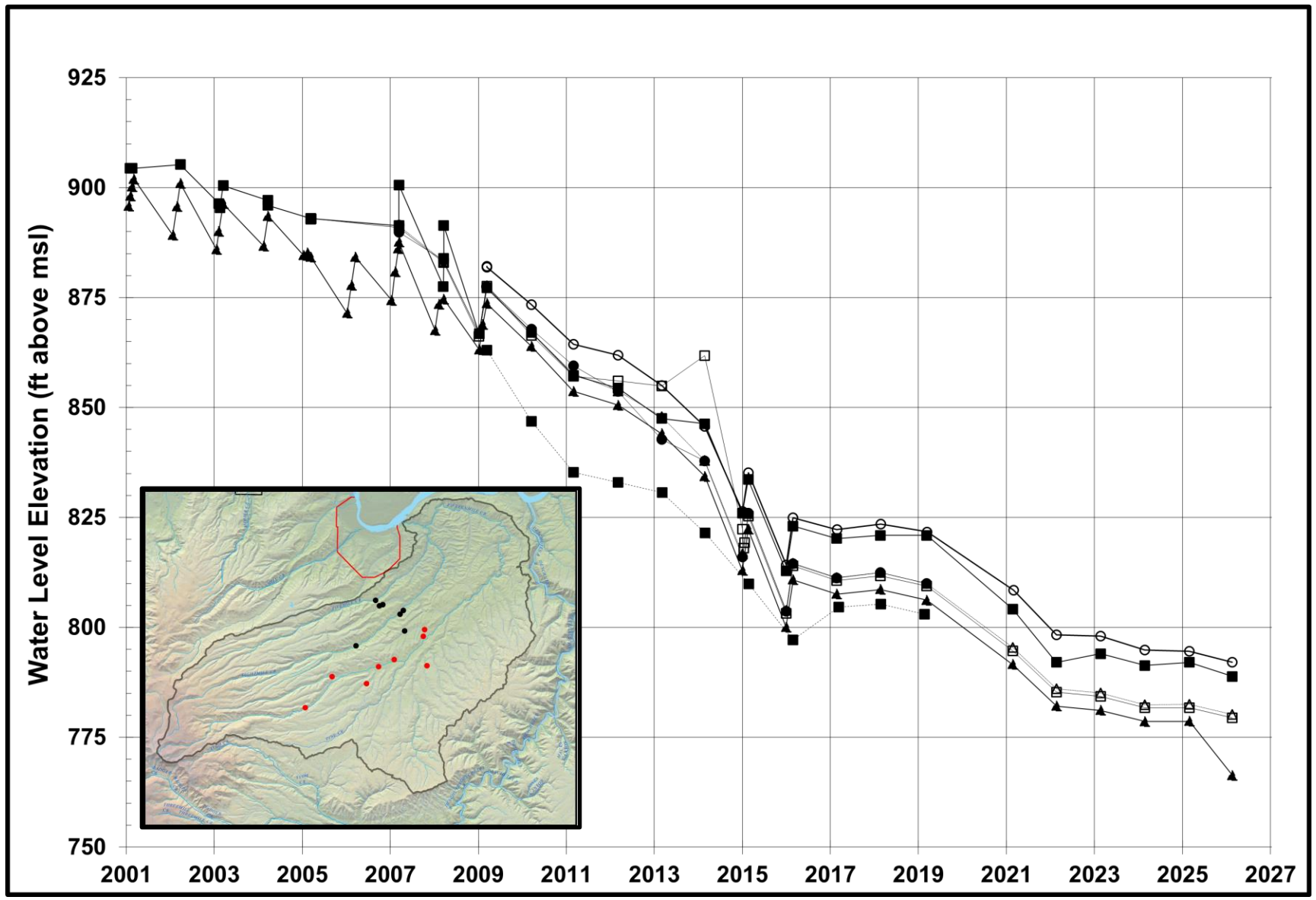


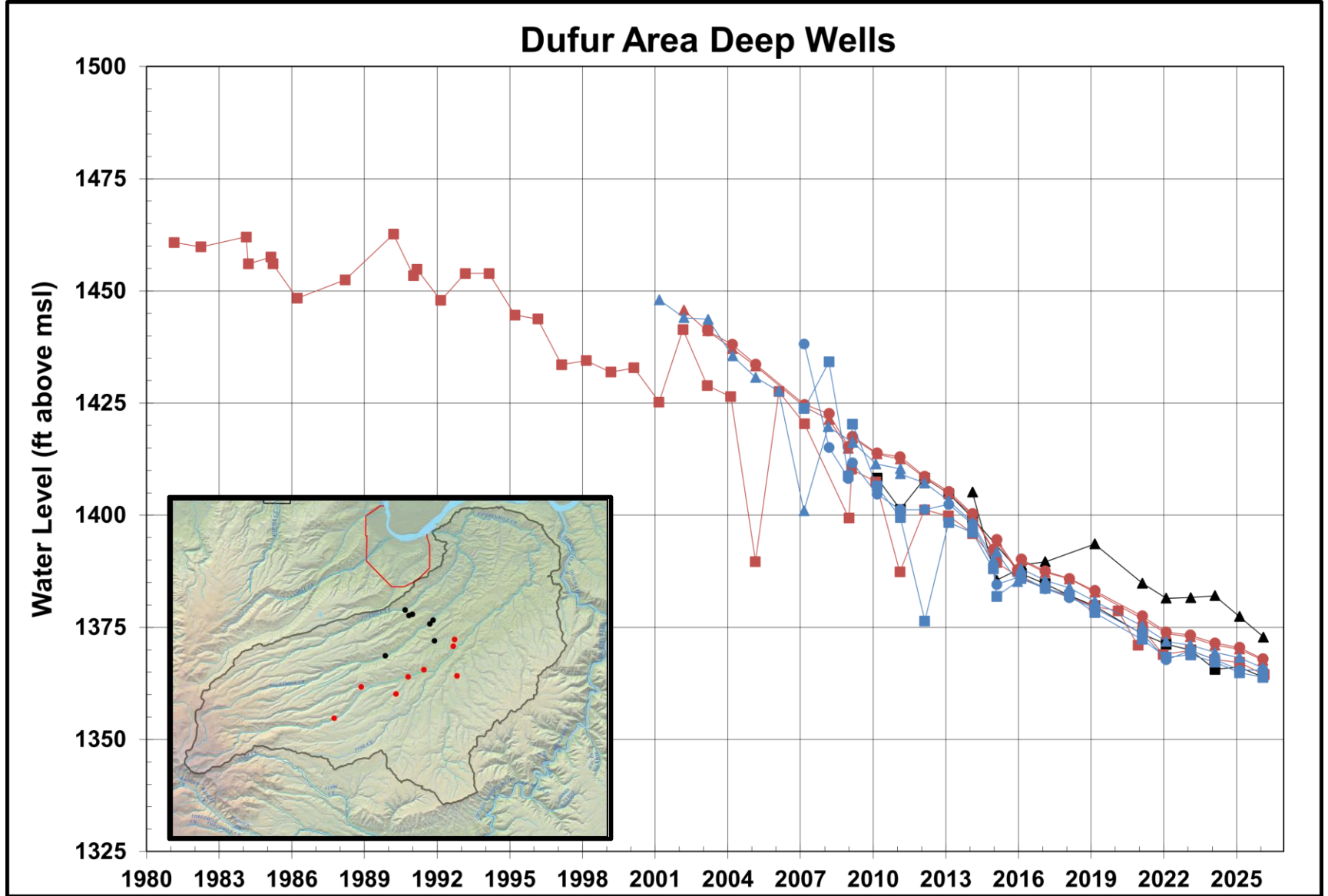
FIFTEENMILE BASIN



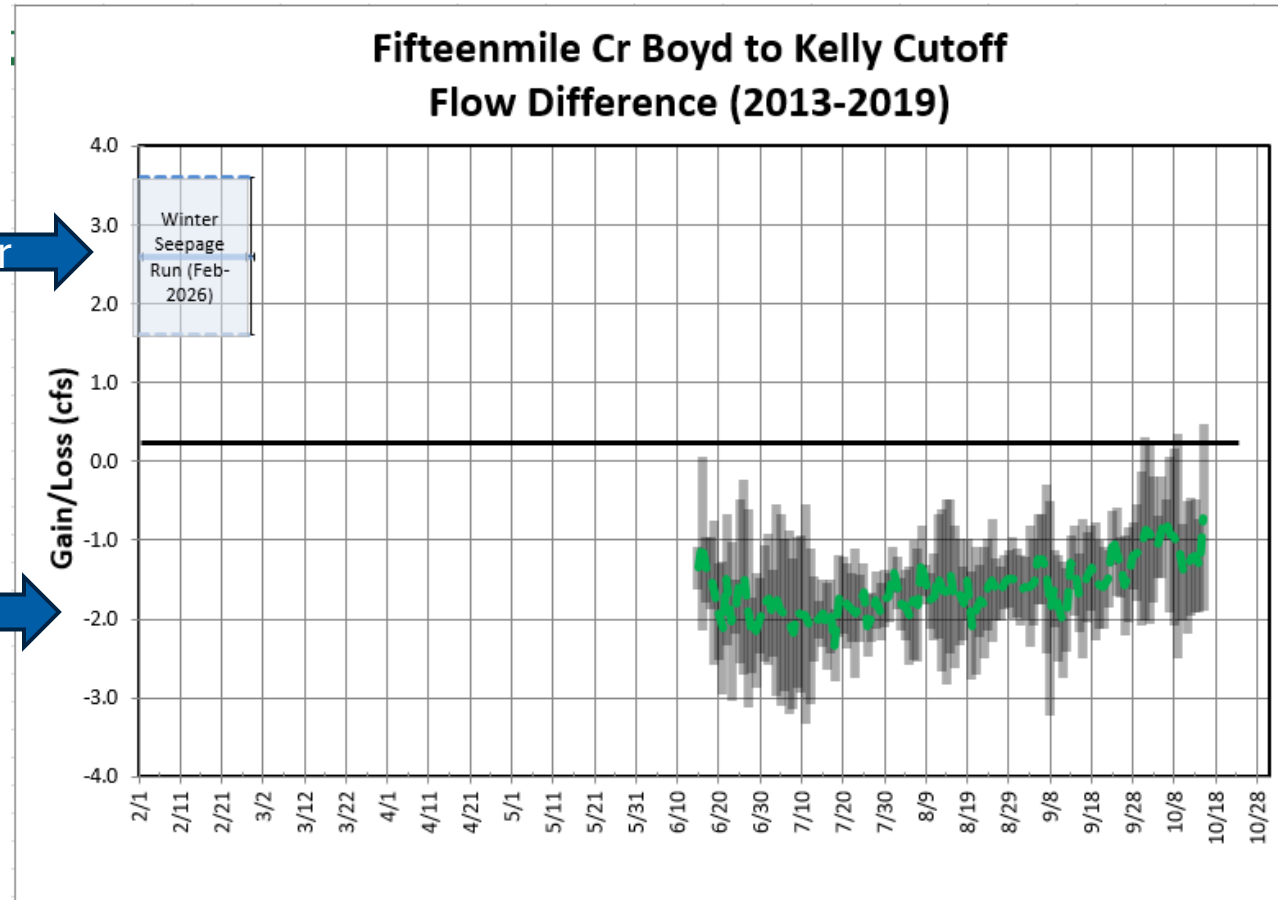
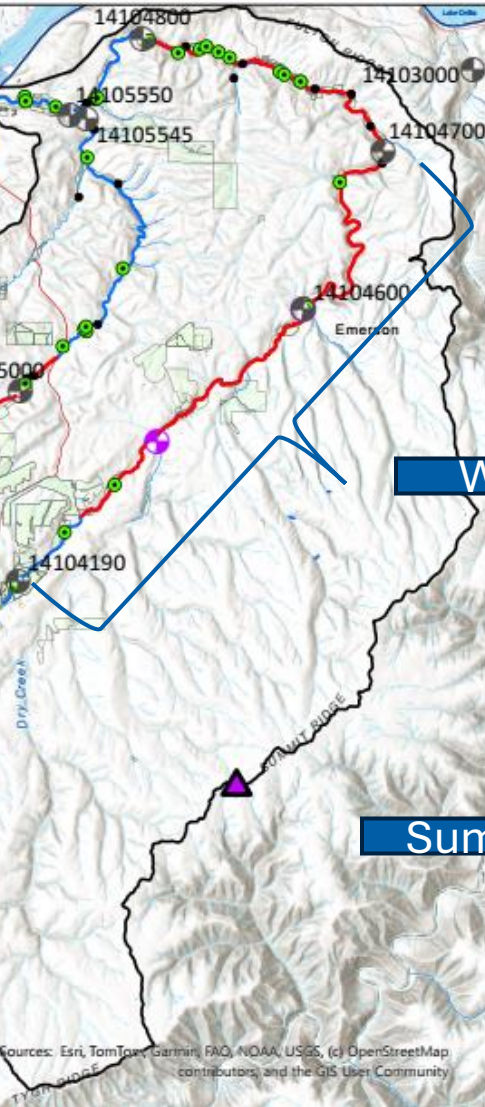
*Priest Rapids Member, basalt of Lolo
†Roza Member

Eightmile Area Groundwater Levels





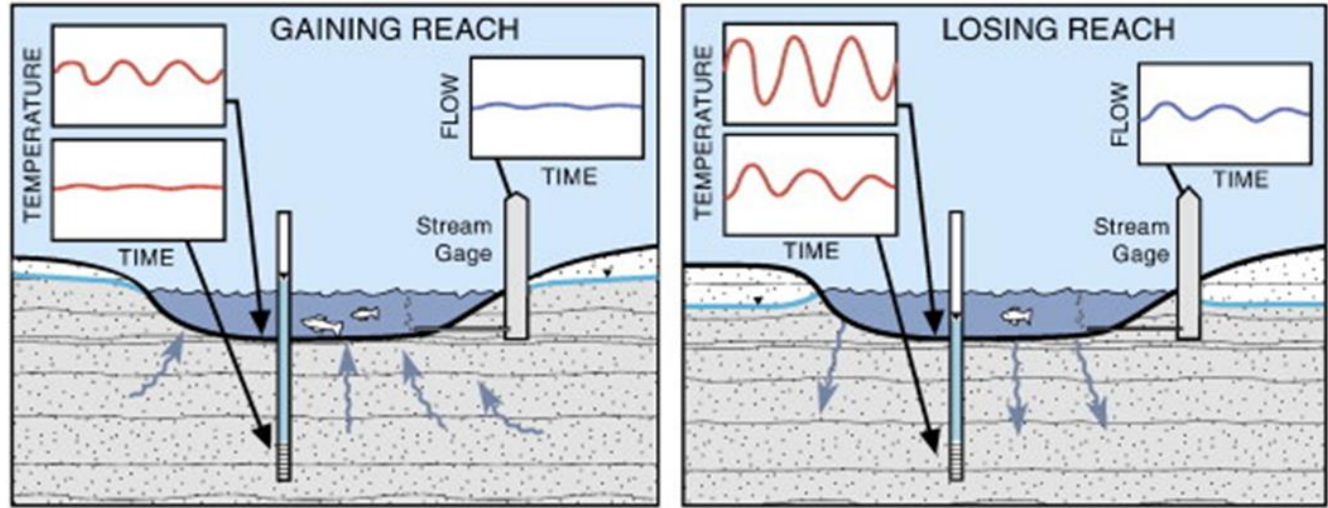
Winter Seepage Run



GW/SW Exchange: Temperature Rods



Temperature rods being prepped before deployment, white silicon seals the temperature sensors from water.



Daily temperature fluctuations at the stream surface become smaller and delayed with increasing depth below the bed. By measuring the amount of temperature attenuation and lag between sensors, OWRD can estimate the direction and magnitude of vertical water movement through the streambed.

Vertical streambed temperature rod with sensors installed at multiple depths to measure heat transport through streambed sediments.

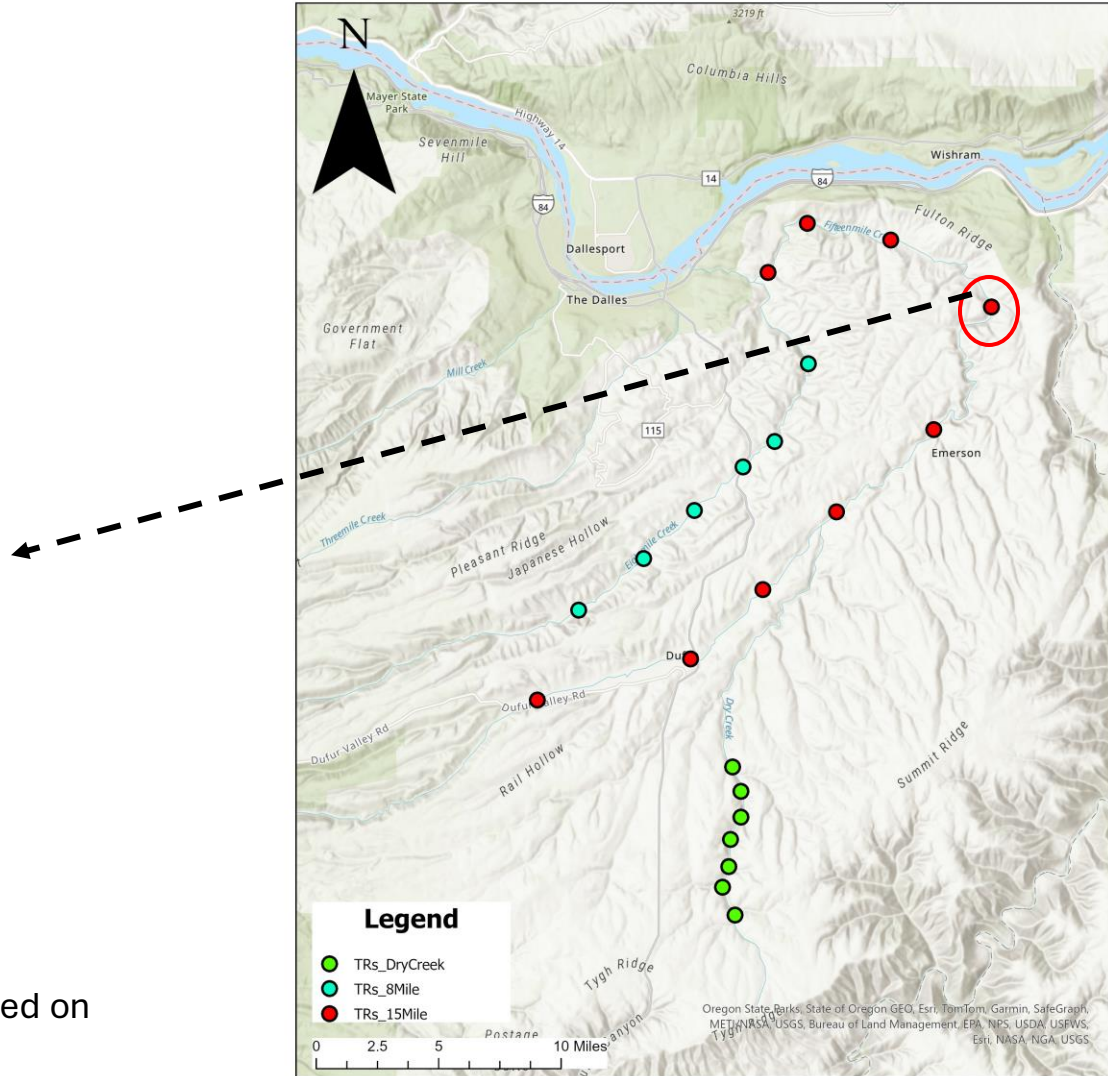


A temperature rod deployed in a stream with orange flagging to spot during retrieval.

Moody Site:

Estimated vertical velocity based on amplitude: 3.8 cm/day

preliminary data and analysis subject to change.

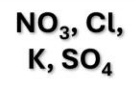


Water Chemistry

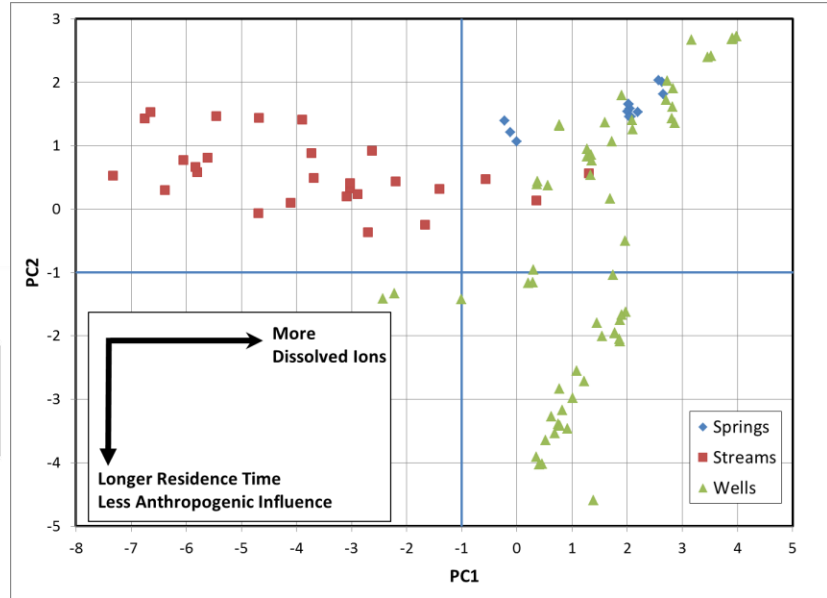
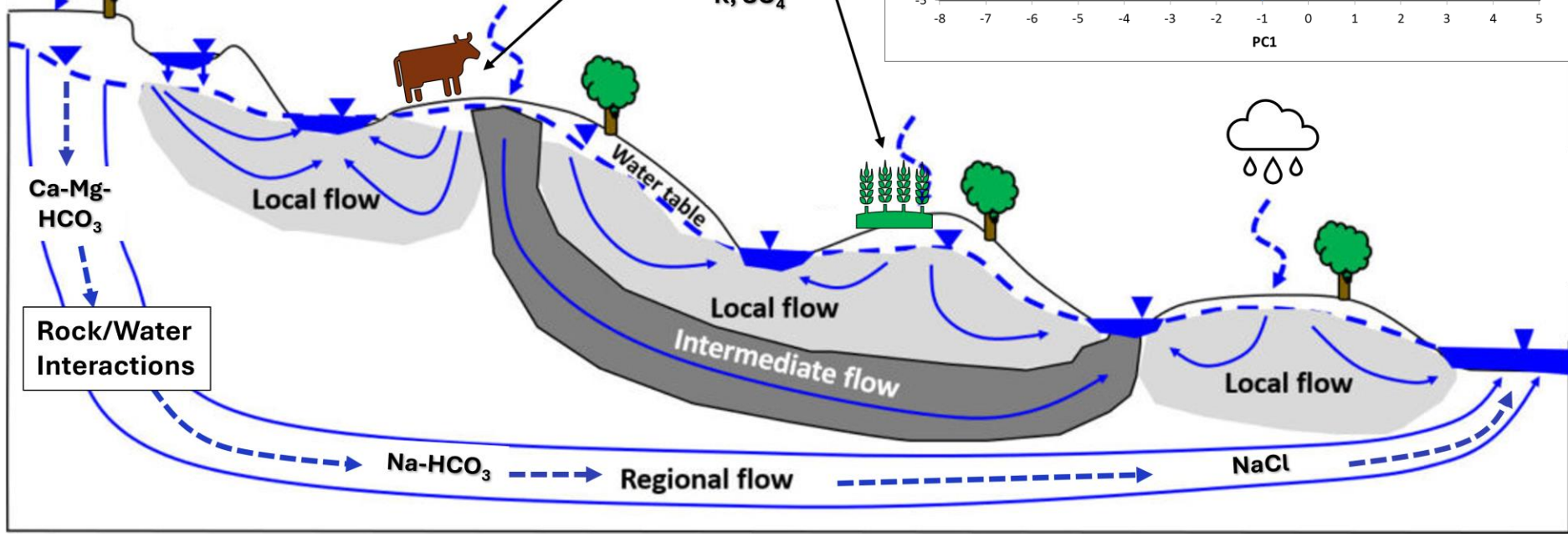
Precipitation



Anthropogenic Inputs



Rock/Water Interactions



In Spring 2026 –

OWRD shares the Groundwater Study Work Plan with the inclusion of community engagement outline.

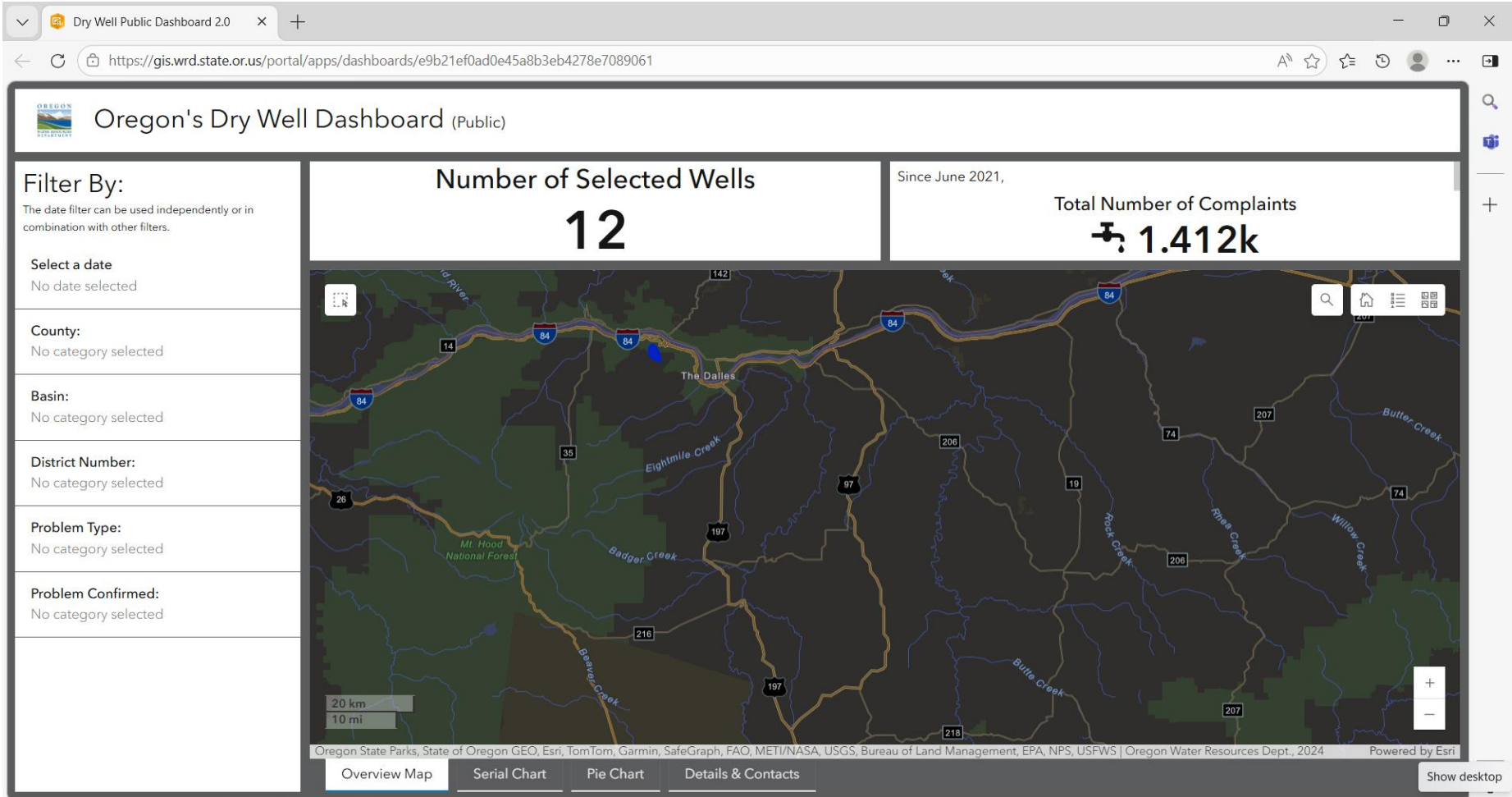
By Summer 2026 –

OWRD intensifies data collection, including new data collections sites within the basin.

By Fall 2026 –

OWRD will provide additional community updates on study progress through a community newsletter and listserv updates.

Dry Well? Please Let Us Know



Additional Actions

- Open houses with community members to engage and gather additional local insight (June 2025 and May 2026)
- Administrative review of water rights subject to forfeiture and permit decline conditions
- Flow meters provide valuable data for water users and the Department. Data captured by flow meters will also be used by the study team as well to help determine surface/groundwater interactions and stream losses.

How to get involved during a Groundwater Study:



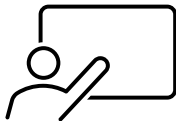
Visit our study website

<http://owrd.info/fifteenmile>



Sign-up to our Study Email Listserv

<https://owrd.info/email-signup>



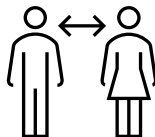
Attend Community meetings

Gatherings with study updates



Study Newsletters

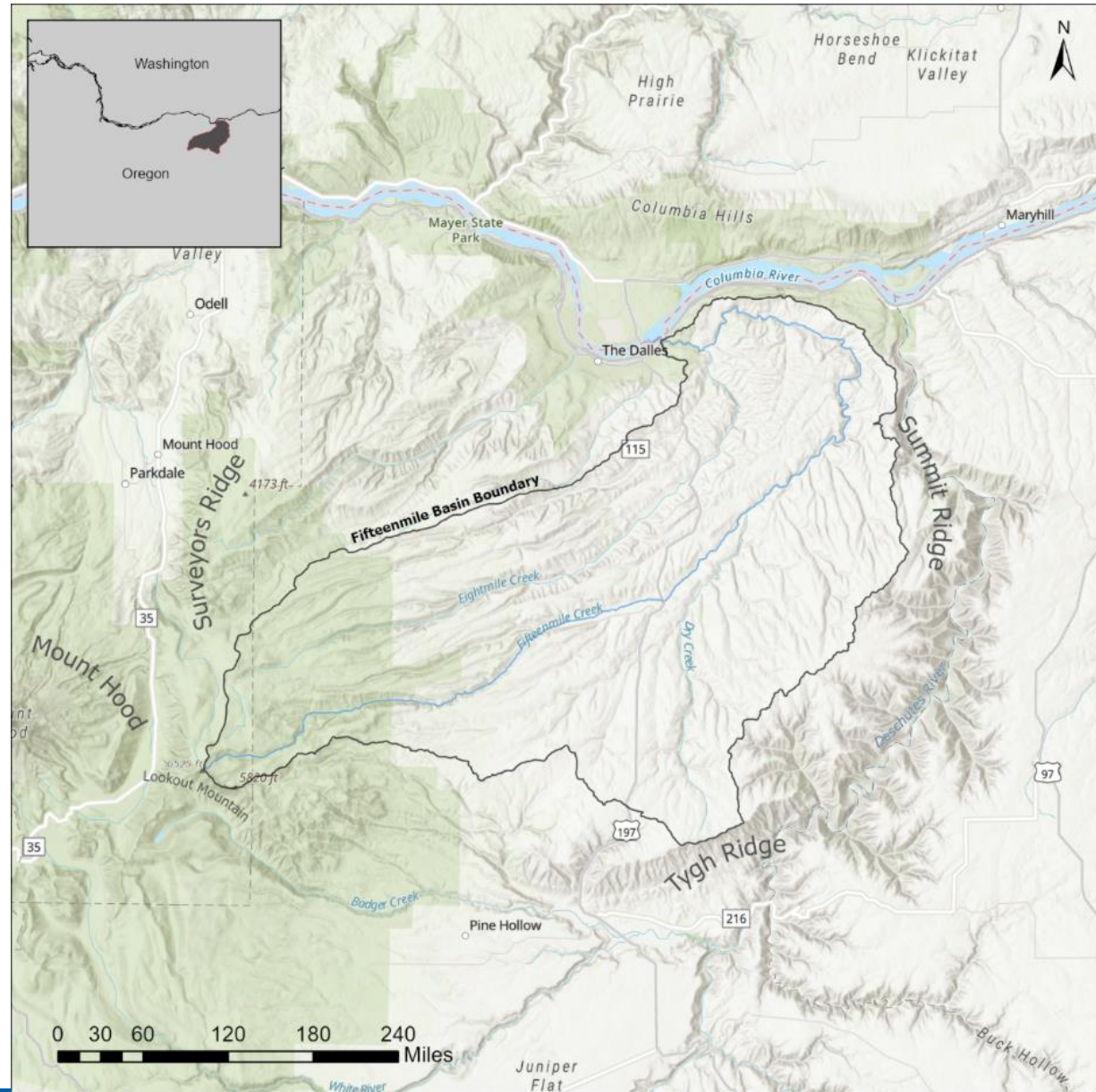
Materials with study updates



Reach out to field staff in your community

What questions
and concerns do
you have?

What information
do you want to
learn more
about?



Staff Contact	Position	Phone	Email
Chris Kowitz	North Central Region Manager	541-278-5456	chris.c.kowitz@water.oregon.gov
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