

# Groundwater Transfer Review Summary Form

Transfer/PA # T- 13657

GW Reviewer Joe Kemper Date Review Completed: 6/28/2024

## Summary of Same Source Review:

☐ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

## Summary of Decline Conditions Review:

☒ Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

## Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

## Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.*



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## Ground Water Review Form:

- ☒ **Water Right Transfer**  
☐ **Permit Amendment**  
☐ **GR Modification**  
☐ **Other**

Application: T-13657

Applicant Name: Red Rock Water, LLC

Proposed Changes: ☐ POA ☒ APOA ☐ SW→GW ☐ RA  
☒ USE ☒ POU ☐ OTHER

Reviewer(s): Joe Kemper

Date of Review: 6/28/2024

Date Reviewed by GW Mgr. and Returned to WRSD: JI 4/18/25

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other \_\_\_\_\_

- 
1. Basic description of the changes proposed in this transfer: Originating certificate 85995 permits the irrigation of 194.6 acres from two POAs. This transfer proposes to add two APOAs, change the place of use, and character of use to from irrigation to quasi-municipal for a 70.5 acres (0.88 cfs) portion of certificate 85995. See the Well Summary below for details of the proposed APOAs.
  2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?  
☒ Yes ☐ No Comments: CROO 50431 (408-ft) and CROO 576 (500-ft) produce groundwater lava flows at depth within the Deschutes Formation. APOA Well 5 and Well 6 are both proposed to be drilled to 600 feet and would also access the Deschutes regional groundwater system.
  3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?  
☐ Yes ☒ No \_\_\_\_\_  
b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): NA

4. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?  
☒ Yes   ☐ No   Comments: The proposed changes will shift some groundwater production from CROO 50431 and CROO 576 to proposed Well 5 and Well 6. This will lessen well to well interference from domestic wells to the south but will increase interference with wells to the north.
- b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?  
☐ Yes   ☒ No   If yes, explain: Considering the considerable depth, storage, and permeability of the target aquifer along with the relative distance to adjacent groundwater users to the north, it is unlikely that any increased well-to-well interference would be significant enough to meet the current definitions of injury.
5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?  
☐ Yes   ☒ No   Comments: The Deschutes regional groundwater system is disconnected from local stream networks in this area. Approximately 10 miles to the NW, groundwater begins discharging to the Crooked River. The proposed change in location of groundwater production would have a negligible impact on stream depletion considering the distance to the point of groundwater-surface water interaction with the Crooked River.
- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?  
Stream: NA   ☐ Minimal   ☐ Significant  
Stream: NA   ☐ Minimal   ☐ Significant  
Provide context for minimal/significant impact: NA
6. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?  
☐ Yes   ☐ No   Comments: NA
7. What conditions or other changes in the application are necessary to address any potential issues identified above:

Certificate 85995 Decline Condition Status: Hydrograph 1 and the decline threshold analysis table below summarize the reference levels outlined in the originating certificate, the most recent water level data in the authorized POAs, and the water level changes in adjacent observation well CROO 24. Considering the measurement method (airline) and apparent fluctuations of submitted permit condition water levels, there are no accurate measurements for CROO 50431 since 2017 or in CROO 576 since 2006. CROO 24 is located approximately 4 miles SSE from the applicants wells. and its groundwater elevations and trend track closely with the applicant's wells. Hydrograph 2 shows that CROO 24 is the most appropriate proxy for water level fluctuations in CROO 50431 and CROO 576. **The decline threshold table below indicates that CROO 50431 and CROO 576 has likely exceeded their respective permitted declined thresholds.** As per OAR 690-380-0010(2)(d), the proposed changes may meet the definition of enlargement because water may not be legally available at an original point of diversion.

Setting APOA Reference Levels: If this transfer is approved, reference levels at the POAs shall be set by the following guidance. Permit G-13237 (precedes certificate 85995) designated the decline condition reference level to be the first water level submitted to OWRD after the first year of water use. Those reference levels were submitted in March 1999.

Proposed Well 5 and Well 6 are not drilled at the time of this review. Because water level trends within the target aquifer are very consistent at a single well (CROO 24) and between other wells (see Hydrograph 3), the most reliable way to set a reference level for the proposed APOAs is to refer to the water level history at CROO 24. When the APOAs are drilled, the reference level will be set by calculating the change in water level in CROO 24 from March 1999 to the most recent March measurement and subtracting that value from the subsequent March measurement at each APOA. This will estimate the water level in the APOA had it been constructed in March 1999.

As a hypothetical, the APOAs could have been completed in January 2024 and water levels were measured at 300 feet BLS in March 2024. In CROO 24, the March 1999 water level was 267.93 ft BLS, and the March 2024 water level was 401.64 ft BLS (a total change of 33.71 feet). The reference level at the APOAs would be calculated by taking the hypothetical March 2024 measurement (300 feet BLS) and subtracting 33.71 feet. The hypothetical reference level for the APOAs would be 266.29 feet BLS.

If OWRD staff are unable to measure CROO 24 at the time when APOAs are constructed, the other observation wells included in Hydrograph 3 shall be used to calculate total change in the aquifer and thus calculate the reference levels for the APOAs.

8. Any additional comments: NA

## References

Gannett, M. W. and Lite, K. E., 2004, Simulation of Regional Ground-Water Flow in the Upper Deschutes Basin, Oregon, USGS Water Resources Investigation Report 2003-4195, 84 p., <https://pubs.er.usgs.gov/publication/wri034195>

Gannett, M. W., Lite Jr, K. E., Morgan, D. S., and Collins, C. A., 2001, Ground-Water Hydrology of the Upper Deschutes Basin, Oregon, USGS Water-Resources Investigations Report 00-4162, 74 p., <https://pubs.usgs.gov/wri/wri004162/pdf/WRIR004162.pdf>

Groundwater Information System (GWIS). Oregon Water Resources Department.  
[https://apps.wrd.state.or.us/apps/gw/gw\\_info/gw\\_info\\_report/gw\\_search.aspx](https://apps.wrd.state.or.us/apps/gw/gw_info/gw_info_report/gw_search.aspx) Accessed 9/26/2026

Lite, K. E. and Gannett, M. W., 2002, Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon, USGS Water-Resources Investigation Report 02-4015, 44 p., <https://pubs.er.usgs.gov/publication/wri024015>

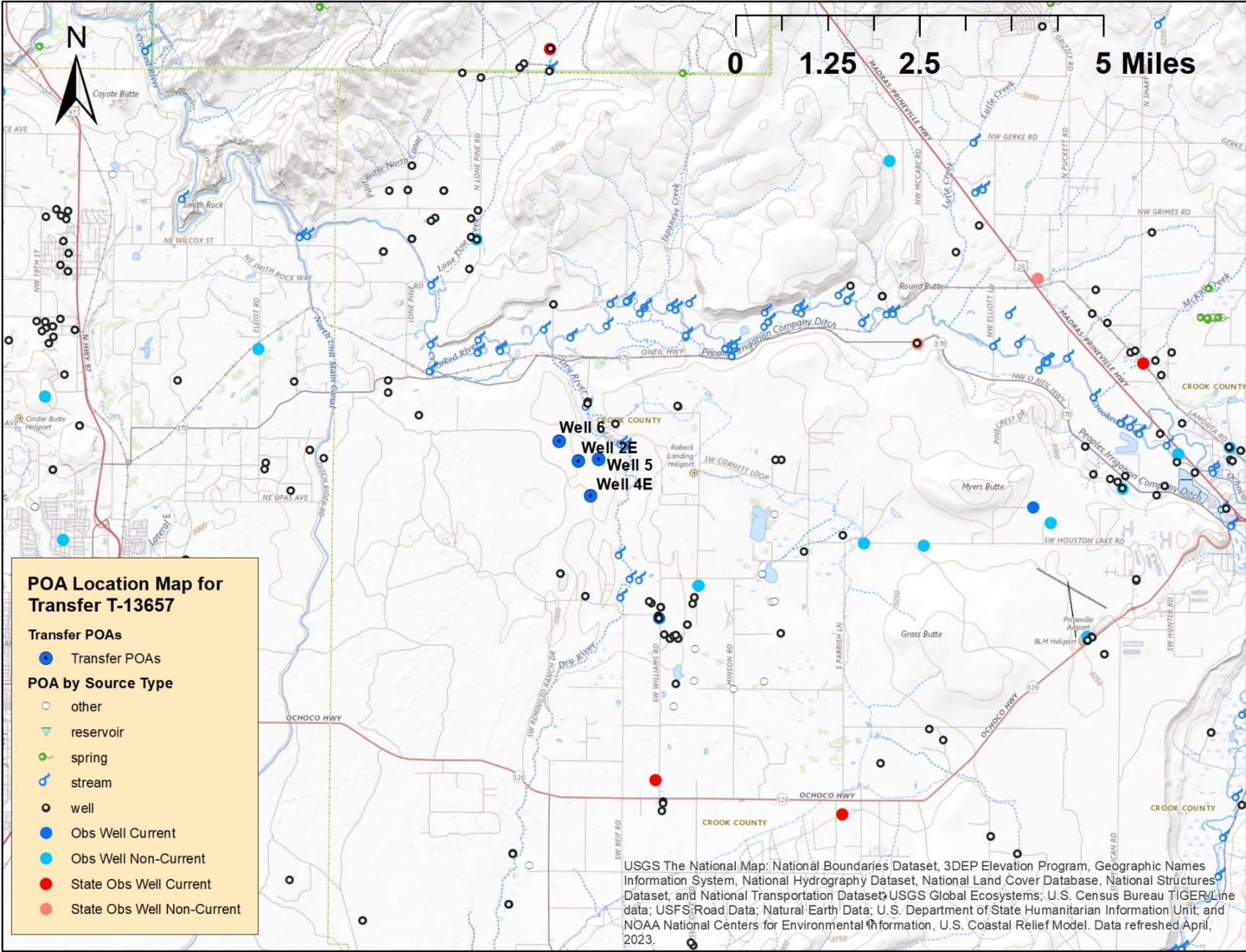
McClaghry, J. D., et al. Geologic Map of the North Half of the Lower Crooked River Basin, Crook, Deschutes, Jefferson, and Wheeler Counties, Oregon, scale 1:63,360, 64" x 60". DOGAMI Bulletin 108

Sherrod, D. R., Taylor, E. M., Ferns, M. L., Scott, W. E., Conrey, R. M. and Smith, G. A., 2004, Geologic Map of the Bend 30-x-60-Minute Quadrangle, Central Oregon, U. S. Geological Survey Geologic Investigations Series Map I-2683. 49p., <https://pubs.usgs.gov/imap/i2683/>

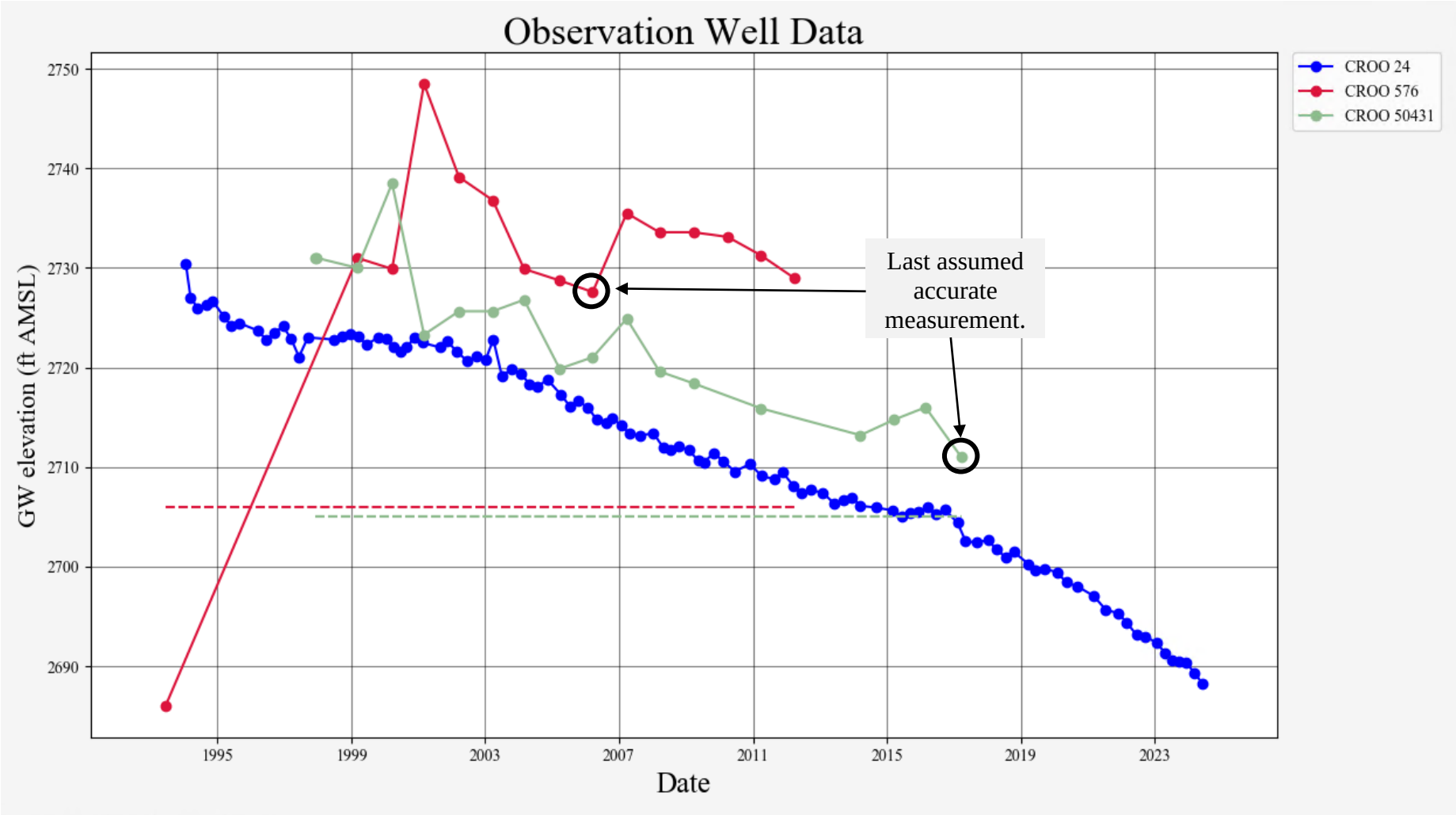
## Well Summary Table

| Well Name | Status     | LOGID      | TRS              | Metes and Bounds                         |
|-----------|------------|------------|------------------|------------------------------------------|
| Well 2E   | Authorized | CROO 50431 | 14S/14E-34 SE-NW | 2140' S & 1900' E from NW cor Section 34 |
| Well 4E   | Authorized | CROO 576   | 14S/14E-34 SW-SE | 620' N & 2810' E from SW cor Section 34  |
| Well 5    | APOA       | Proposed   | 14S/14E-34 SW-NE | 1980' S & 1930' W from NE cor Section 34 |
| Well 6    | APOA       | Proposed   | 14S/14E-34 NW-NW | 720' S & 480' E from NW cor Section 34   |

Transfer Map



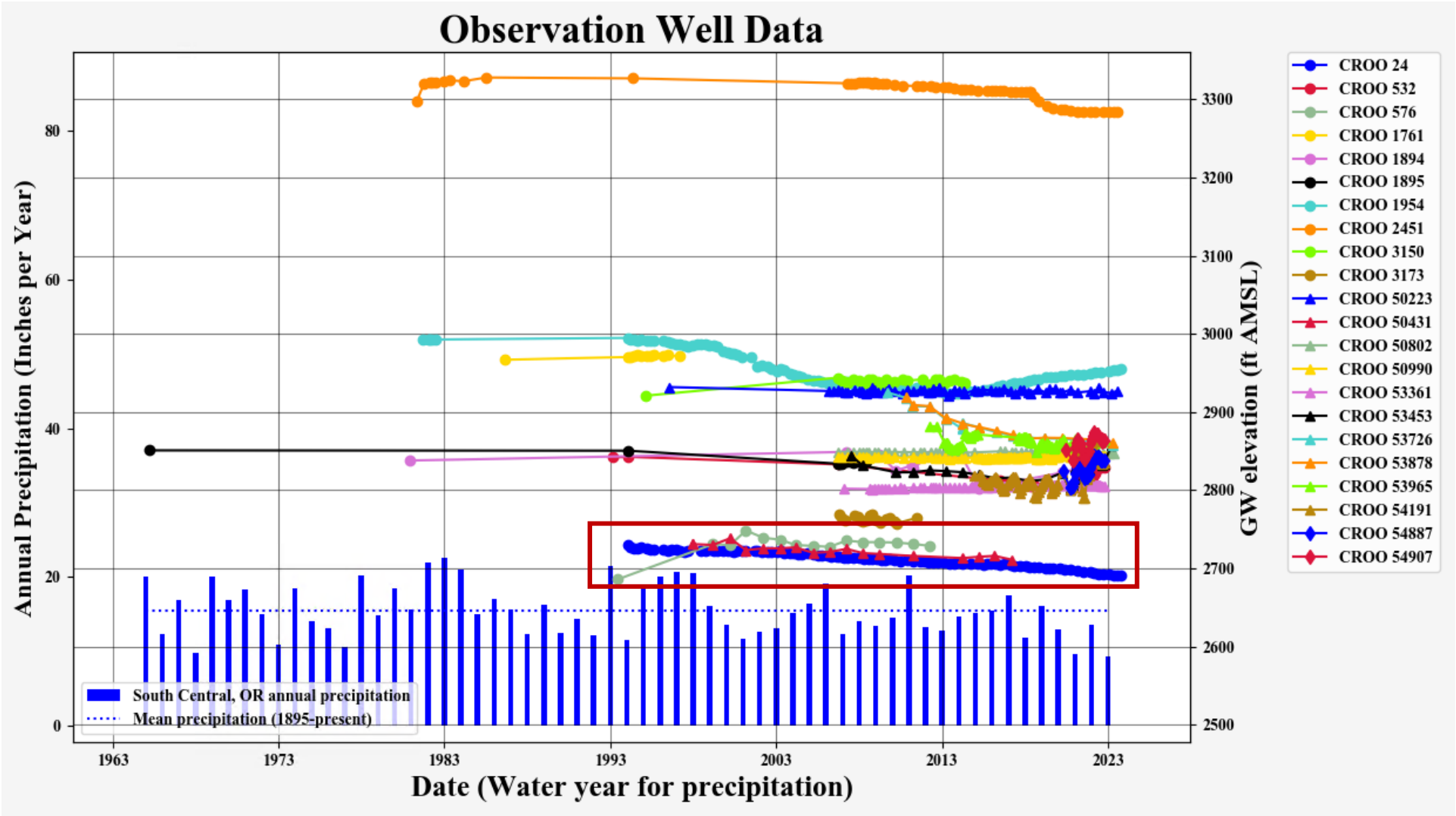
**Hydrograph 1.** The colored dashed lines indicate the decline trigger level for the corresponding well. CROO 24 is a state observation well with quarterly measurements taken by OWRD staff that shares similar groundwater elevation and trend as the permitted wells.



**Decline Threshold Analysis**

| Well Name | LOGID      | Reference Level (ft bls) | Decline Threshold (ft bls) | Date of last Accurate msmt | Last Accurate Msmt (ft bls) | CROO 24 Decline Since Last Accurate Msmt (ft) | Assumed Water Level at Well (ft bls) |
|-----------|------------|--------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------------------------|--------------------------------------|
| Well 2E   | CROO 50431 | 266                      | 291                        | 3/21/2017                  | 284.99                      | 14.33                                         | 299.32                               |
| Well 4E   | CROO 576   | 265                      | 290                        | 3/20/2006                  | 268.42                      | 26.58                                         | 295                                  |

Hydrograph 2



**Hydrograph 3:** The total change in water level elevations since the mid-1990s in OWRD observation wells between Powell Buttes, Redmond, and Bend is very similar.

