

# Groundwater Application Review Summary Form

Application # G- 19393

GW Reviewer Joe Kemper Date Review Completed: 8/1/2024

## Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

## Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

## Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).*

**WATER RESOURCES DEPARTMENT**

**MEMO**

**8/1/2024**

**TO: Application G- 19393**

**FROM: GW: Joe Kemper**  
(Reviewer's Name)

**SUBJECT: Scenic Waterway Interference & General/Local Surface Water Evaluation for Deschutes Ground Water Study Area**

The source of appropriation is within or above the Deschutes Scenic Waterway

Use the Scenic Waterway condition (Condition 7J).

**PREPONDERANCE OF EVIDENCE FINDING UNDER ORS 390.835:**

Department has found that there is a preponderance of evidence that the proposed use of groundwater will measurably reduce the surface water flows necessary to maintain the free-flowing character of the Deschutes Scenic Waterway in quantities necessary for recreation, fish and wildlife.

**LOCALIZED IMPACT FINDING**

The proposed use of groundwater will have a localized impact to surface water in the [River Name] River/Creek Subbasin.

If the localized impact box above is checked, then the water use under any right issued pursuant to this application is presumed to have a localized impact on surface water within the identified subbasin. Mitigation of the impact, originating from within the Local Zone of Impact identified by the Department, will be required before a permit may be issued for the proposed use.

If the localized impact box above is not checked, then the water use under any right issued pursuant to this application is presumed to have a general (regional) impact on surface water. Mitigation of the impact, originating anywhere within the Deschutes Basin above the Madras gage, will be required before a permit may be issued for the proposed use.

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 8/1/2024  
 FROM: Groundwater Section Joe Kemper  
 Reviewer's Name  
 SUBJECT: Application G- 19393 Supersedes review of na  
 Date of Review(s)

**PUBLIC INTEREST PRESUMPTION; GROUNDWATER**

**OAR 690-310-130 (1)** *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

**A. GENERAL INFORMATION:**

Applicant's Name: Central Oregon Irrigation District & River Bend Limited Partnerships LLC County: Deschutes

A1. Applicant(s) seek(s) 0.92 cfs from 1 well(s) in the Deschutes Basin,  
Upper Deschutes subbasin

A2. Proposed use Irrigation (55.2 ac) Seasonality: 4/1 to 11/1

A3. Well and aquifer data (**attach and number logs for existing wells; mark proposed wells as such under logid**):

POA Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	Proposed	1	Deschutes Fm	0.92	18S/12E-5 SE-NW	1330' S, 1990' E fr NW cor S 5
2						

\* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	700-775	0-600	0-600	Na	600-775	Na	Na	na
2								

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
1	3610	Unknown	Unknown	NA	NA	NA
2						

Use data from application for proposed wells.

A4. **Comments:** Reference level will be set once well has been drilled and water levels have been submitted to the Department.

A5.  **Provisions of the** Deschutes (OAR 690-505) Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water  **are**, or  **are not**, activated by this application. (Not all basin rules contain such provisions.)  
 Comments: Impacts to surface water are addressed by the Mitigation Program defined in basin rule.

A6.  **Well(s) #** \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction.  
 Name of administrative area: \_\_\_\_\_  
 Comments: \_\_\_\_\_

**B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070**

B1. **Based upon available data**, I have determined that groundwater\* for the proposed use:

- a.  is over appropriated,  is not over appropriated, or  cannot be determined to be over appropriated during any period of the proposed use. \* This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b.  will not or  will likely be available in the amounts requested without injury to prior water rights. \* This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c.  will not or  will likely to be available within the capacity of the groundwater resource; or
- d.  will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource:
  - i.  The permit should contain condition #(s) 7RLN (March, 25), large water use reporting;
  - ii.  The permit should be conditioned as indicated in item 2 below.
  - iii.  **The permit should contain special condition(s) as indicated in item 3 below;**

- B2.
- a.  **Condition** to allow groundwater production from no deeper than \_\_\_\_\_ ft. below land surface;
  - b.  **Condition** to allow groundwater production from no shallower than \_\_\_\_\_ ft. below land surface;
  - c.  **Condition** to allow groundwater production only from the \_\_\_\_\_ groundwater reservoir between approximately \_\_\_\_\_ ft. and \_\_\_\_\_ ft. below land surface;
  - d.  **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

**Describe injury** –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B3. **Groundwater availability remarks:** The applicant’s well will penetrate mixed Cascade-sourced Quaternary volcanics and then access the Deschutes aquifer hosted within the Deschutes Formation. The groundwater gradient flows from southwest to northeast. Water level elevations in adjacent observation wells are 3430 to 3470 feet AMSL. Water levels have very little season fluctuation. Water level records are intermittent and often have coarse precision which creates uncertainty in discerning trends in the aquifer. Water levels in DESC 4713, DESC 5658, and DESC 5584 rise several feet in response to high precipitation periods (e.g. 1996). DESC 5654 and DESC 5655 show 20+ feet of decline since the mid-1980s, but other observation wells do not show decline. There is some concern with persistent declines due to increasing pumping and decreasing climate recharge, however the preponderance of evidence does not show high-magnitude year on year declines that would rise issues of Capacity of the Resource. The above conditions are recommended; there is a strong emphasis on accurate and consistent water level measurements at the proposed well.

There is moderate groundwater development near the proposed POA including three senior POAs located 750-800 feet to the west. The target aquifer is at least 500 feet thick (and likely exceeds 1000 feet) and is highly transmissive in this area. Any well-to-well interference caused by the requested use is unlikely to be enough to be considered injury.

**Special condition:** Dedicated Measuring Tube: A dedicated water level measuring tube shall be installed in each well. The measuring tube shall meet the standards described in OAR 690-215-0060. When requested, access to the wells shall be provided to Department staff in order to make water level measurements.

**C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**

C6. **SW / GW Remarks and Conditions:** Impacts to surface water are addressed by the mitigation program as defined in Deschutes basin rules.

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**References Used:**

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>

Gannett, M.W., Lite, K.E., Jr., Risley, J.C., Pischel, E.M., and La Marche, J.L., 2017, Simulation of groundwater and surface-water flow in the upper Deschutes Basin, Oregon: U.S. Geological Survey Scientific Investigations Report 2017-5097, 68 p., <https://doi.org/10.3133/sir20175097>.

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 8/1/2024.

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>

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/>

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**D. WELL CONSTRUCTION, OAR 690-200**

D1. **Well #:** \_\_\_\_\_ **Logid:** \_\_\_\_\_

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a.  review of the well log;
  - b.  field inspection by \_\_\_\_\_;
  - c.  report of CWRE \_\_\_\_\_;
  - d.  other: (specify) \_\_\_\_\_
- 

D3. **THE WELL construction deficiency or other comment is described as follows:** \_\_\_\_\_

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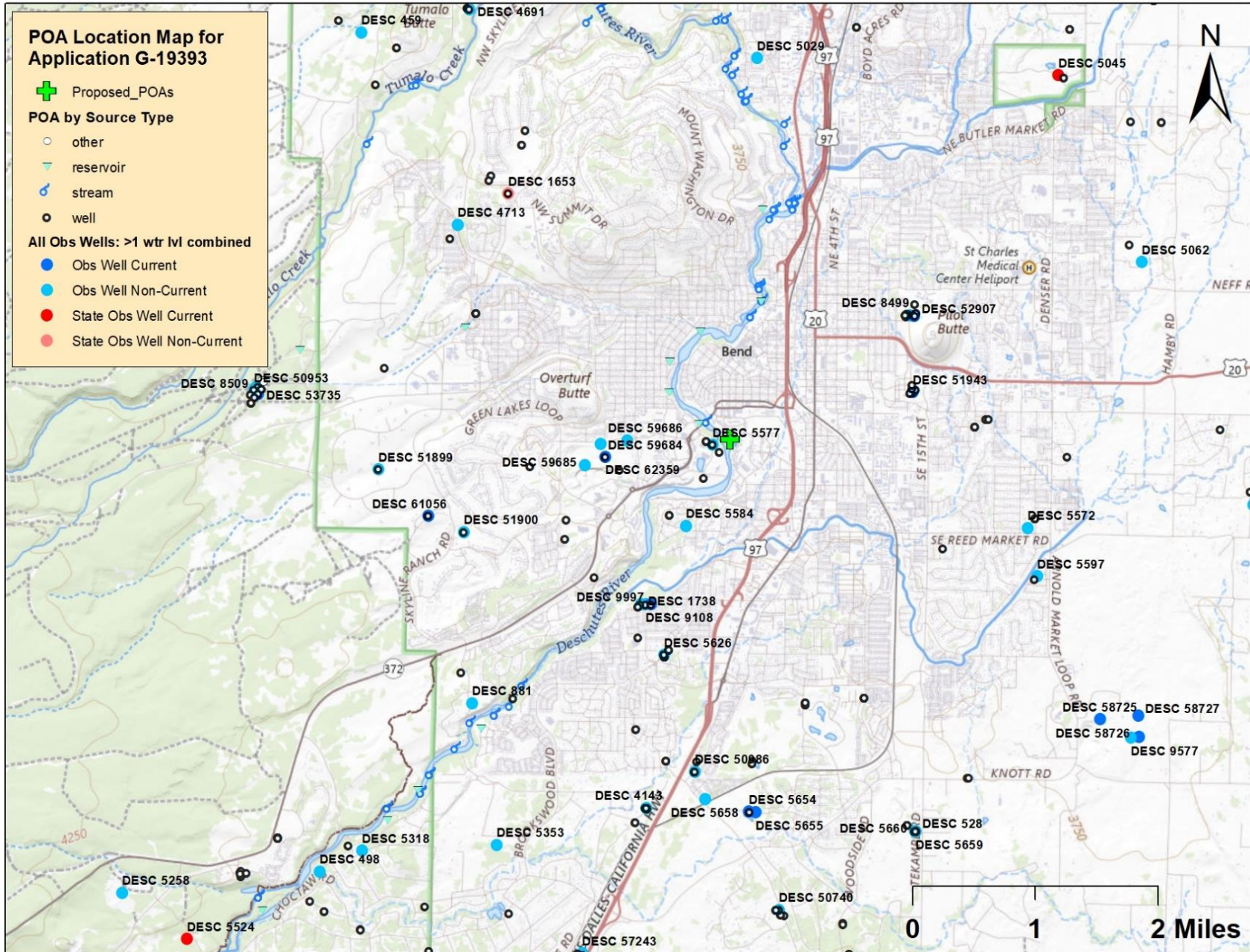
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D4.  **Route to the Well Construction and Compliance Section for a review of existing well construction.**

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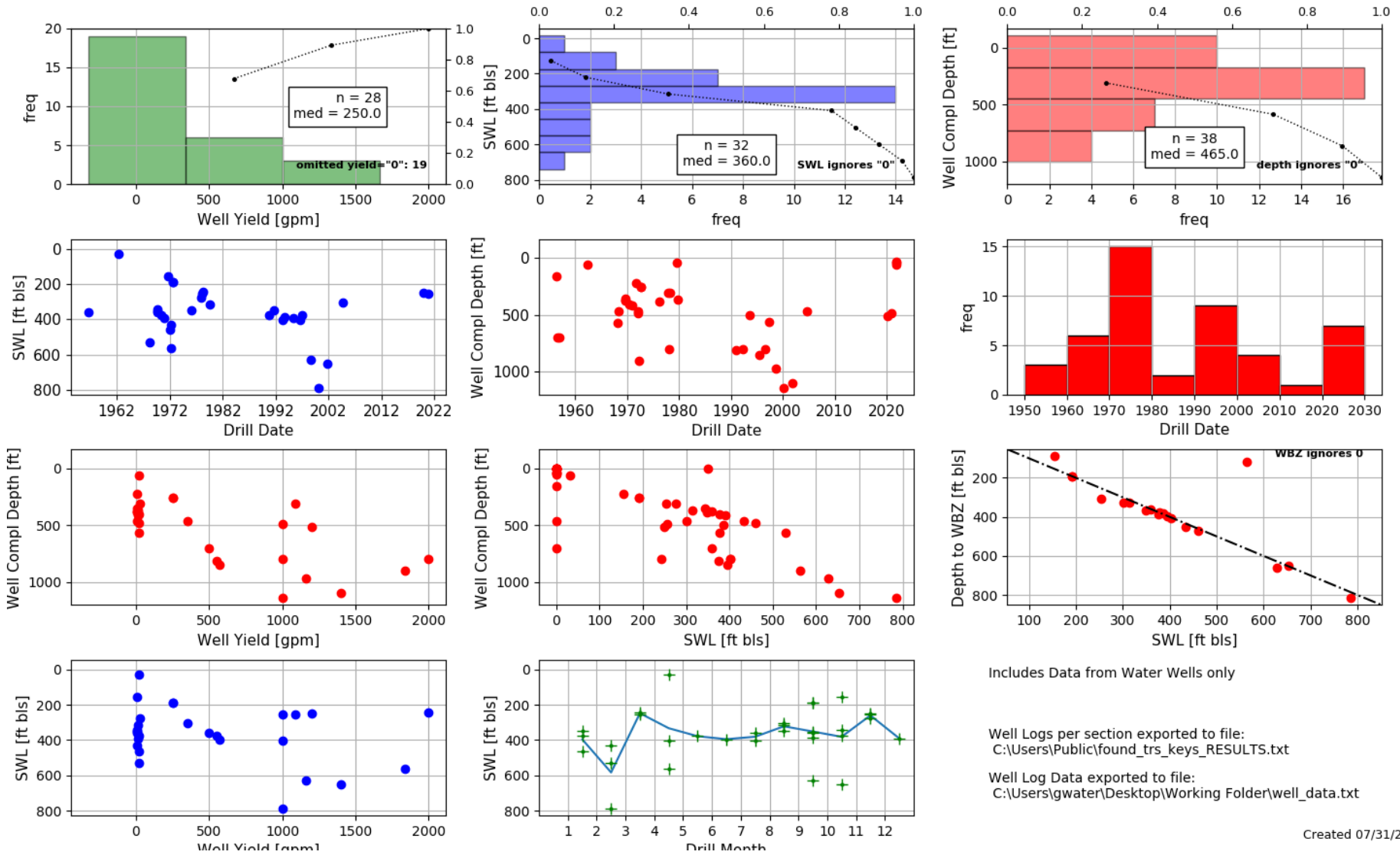
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Well Location Map



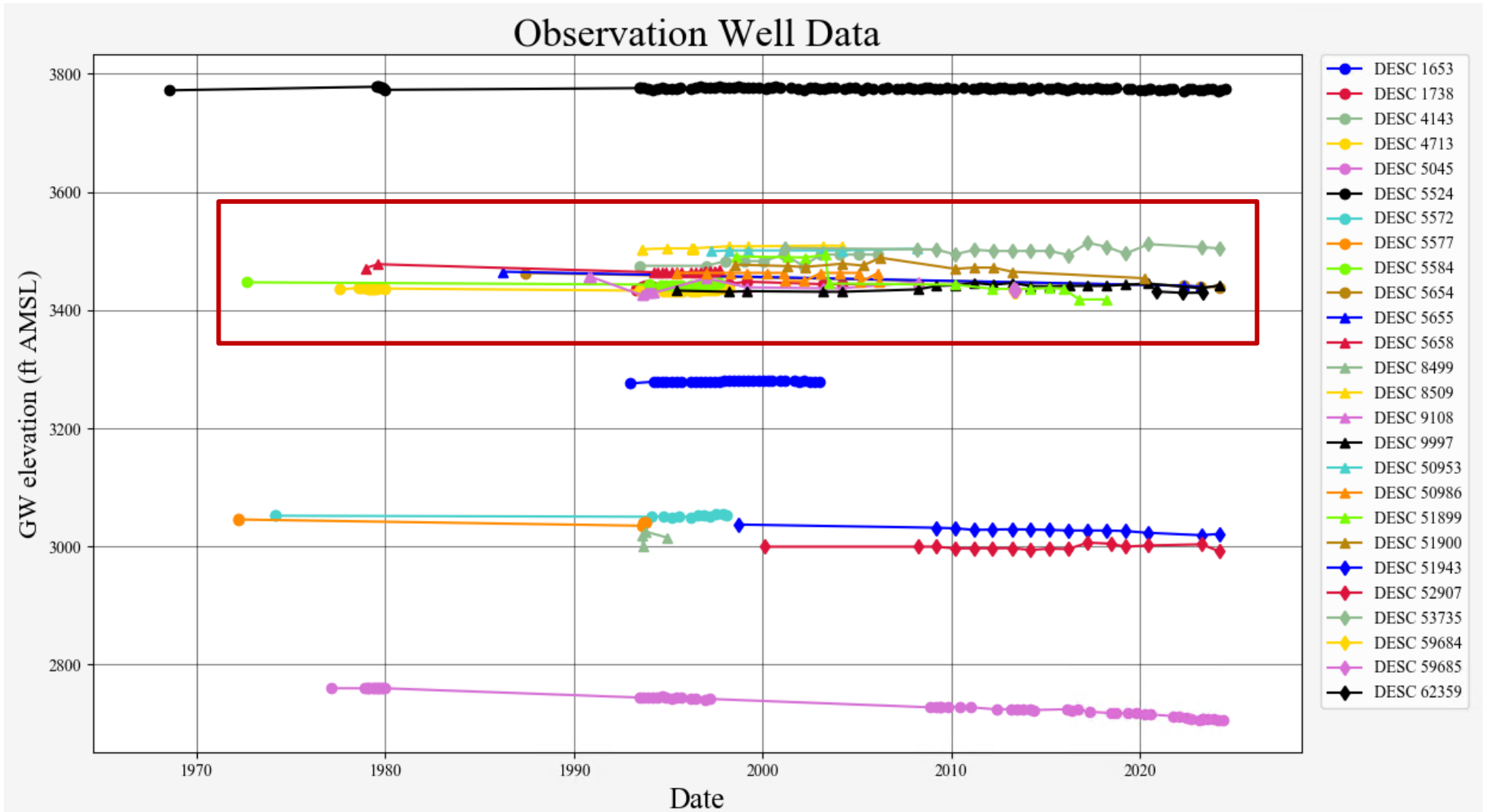


Well Statistics for TRS 17S/12E sections 31-33, and 18S/12E sections 4-9



**Water-Level Measurements in Nearby Wells**

**Hydrograph One:** Groundwater Level Elevations from the Cascade Foothills to Northeast Bend. The box indicates the water levels that the proposed POA will likely encounter.





**Hydrograph Two: Observation Wells Adjacent to the Proposed POA**

### Observation Well Data

