

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14503

GW Reviewer Joe Kemper Date Review Completed: 12/16/2024

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 Water Level Decline Condition 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-14503

Applicant Name: Avion Water Company

- Proposed Changes: POA, APOA, SW -> GW, RA, USE, POU, OTHER

Reviewer(s): Joe Kemper

Date of Review: 12/16/2024

Date Reviewed by GW Mgr. and Returned to WRSD: _____

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: Permit G-12766 authorizes 0.223 cfs of group domestic use from two wells (DESC 4699 & DESC 4698). This permit amendment proposes adding an undrilled APOA.
2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
Yes No Comments: DESC 4699 and DESC 4698 are drilled 783-793 feet through Quaternary-aged extrusive volcanics and into the arc-adjacent facies of the Deschutes Formation. The target aquifer is the regional Deschutes aquifer. The APOA is proposed to be located within 50 feet of DESC 4698 and drilled to a depth of 899 feet. Despite being 100 feet deeper, the APOA would still access the same aquifer.
3. a) Is the existing authorized POA subject to a water level decline condition?
Yes No Comments: _____
b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: _____
4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
Yes No Comments: _____

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.): _____

5. 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 APOA creates the possibility for a higher instantaneous pumping rate when DESC 4698 and the APOA are in operation, which could increase any well-to-well interference with wells in that area.

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: There are no other exempt-wells or permitted wells within 1/4 mile of the applicant's wells. The target aquifer has typically high permeability/storage, low seasonal variability, and extends for several hundred feet below the depth of the APOA. Considering these factors, it is unlikely that any increase in well-to-well interference would be of high enough magnitude to be considered injury.

6. 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 current POAs and proposed APOAs have water level elevations of ~2800 feet amsl while the adjacent Tumalo Creek spans elevations of 3400-3600 feet amsl. While there is some local GW-SW flux on Tumalo Creek, the transfer wells access a deeper portion of the aquifer with flowpaths that do not impact surface water until the confluence area of the Deschutes/Crooked Rivers located 25+ miles to the north. Assuming there is no enlargement, the change in point of appropriation will have a negligible impact on the stream depletion that results from this permit.

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: _____ Minimal Significant

Stream: _____ Minimal Significant

Provide context for minimal/significant impact: NA

7. 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

8. What conditions or other changes in the application are necessary to address any potential issues identified above: NA

9. Any additional comments:

References

Gannett, M.W. 1987. Groundwater Availability in the Powell Buttes Area, Central Oregon. Oregon Water Resources Department.

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 Accessed 12/16/2024.

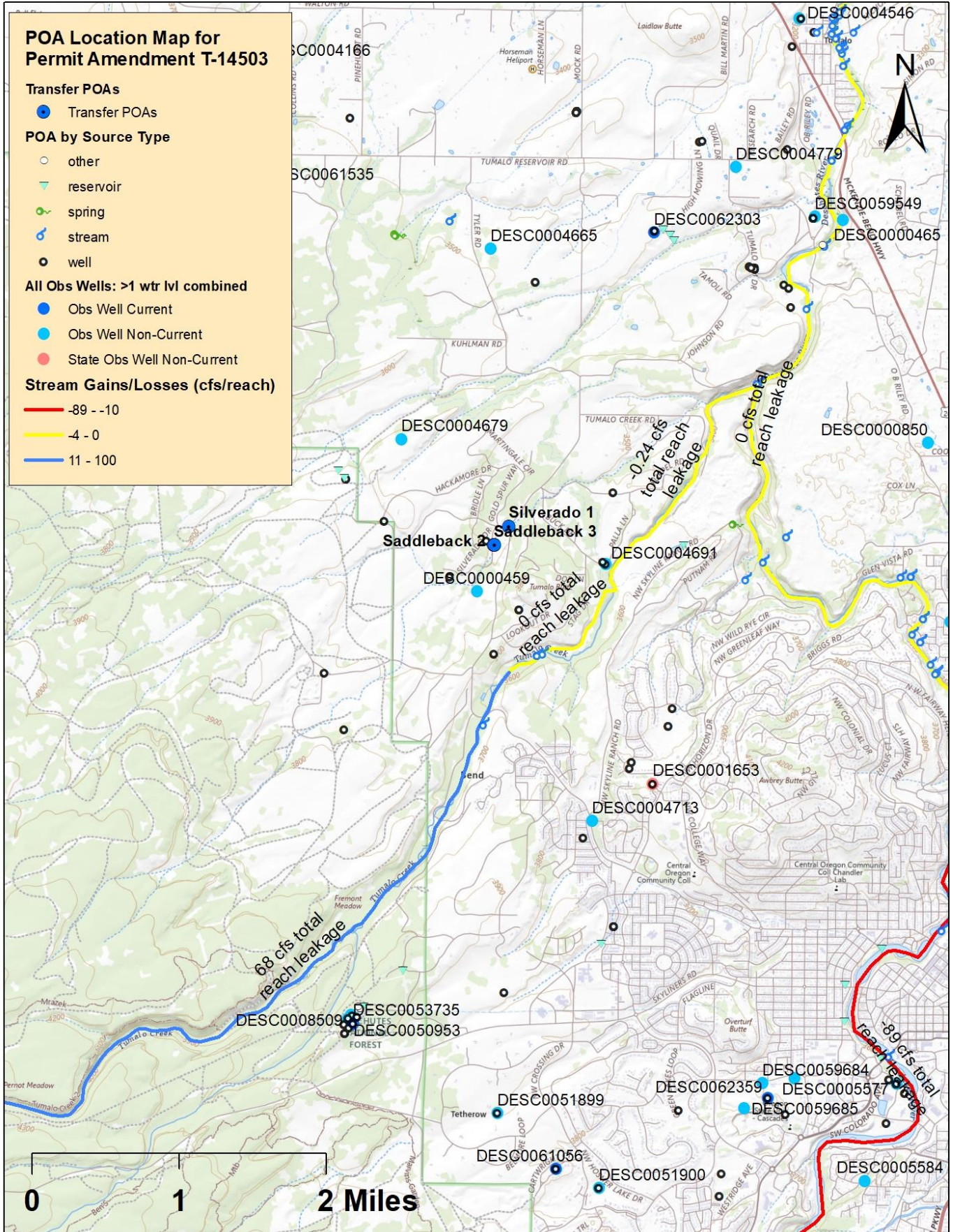
Lite, K. E. and Gannett, M. W., 2002, Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. USGS Water-Resources Investigation Report 02-4015, 44 p., <https://pubs.er.usgs.gov/publication/wri024015>

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/>

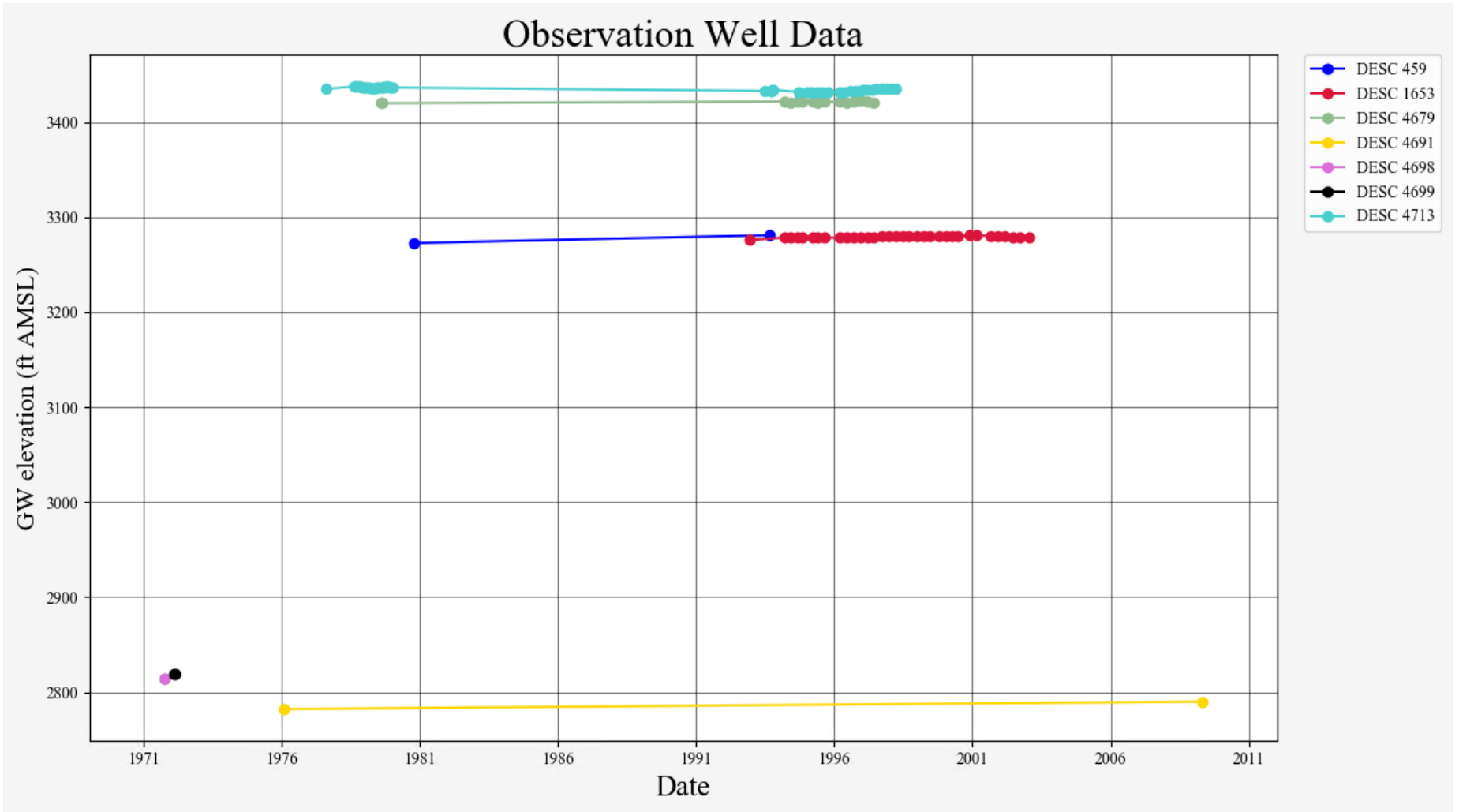
Well Summary Table

POA #	POA Name	POA Status	OWRD LOGID	TRS	Legal Location	Permitted Rate (cfs)
1	Silverado Well 1	Valid	DESC 4699	17S/11E-14 NW-SE	151' S, 111' E fr center 1/4 cor S 14	0.1115
2	Saddleback Well 2	Valid	DESC4698	17S/11E-14 NW-SE	801' S, 430' W fr center 1/4 cor S 14	0.1115
3	Saddleback Well 3	Proposed	Undrilled	17S/11E-14 NW-SE	810' S, 440' W fr center 1/4 cor S 14	0.223

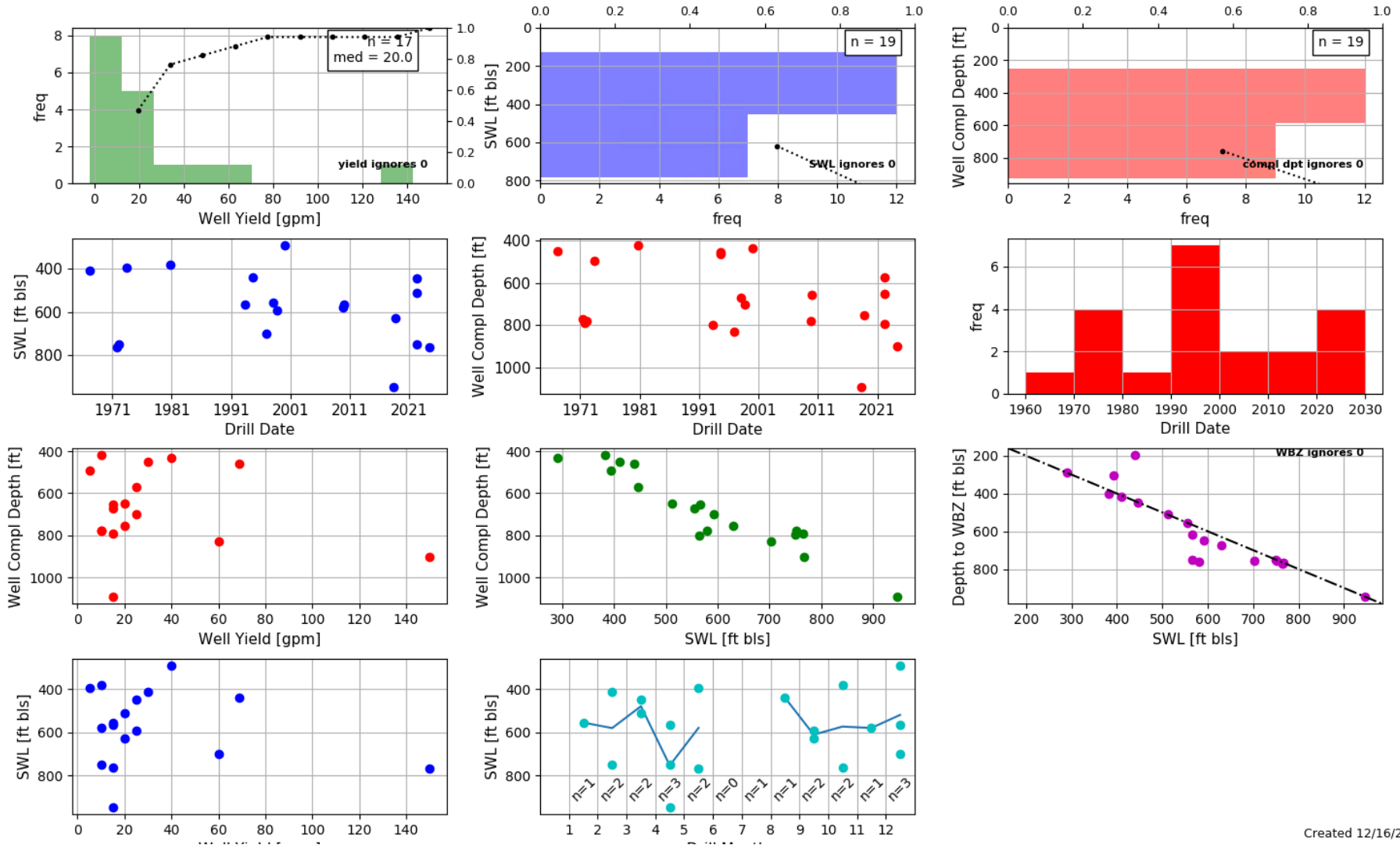
Transfer Map



Water Levels in Adjacent Observation Wells



Summary Statistics for Well Reports in TRS 17S/11E-14



Created 12/16/2024