Groundwater Application Review Summary Form

Application # G- 19021 re-review #2

GW Reviewer Travis Brown Date Review Completed: 12/28/2025

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 **_12/28/2025_**

TO: **Application** G-**_19021 re-review #2_**

FROM: **GW: _Travis Brown_**
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ **YES**
☒ **NO**
The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries

☐ **YES**
☒ **NO**
Use the Scenic Waterway Condition (Condition 7J)

☐ Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below

☐ Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is *unable to make a Preponderance of Evidence finding.*

Exercise of this permit is calculated to reduce monthly flows in _[Enter]_ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 12/28/2025
FROM: Groundwater Section Travis Brown
Reviewer's Name
SUBJECT: Application G- **19021 re-review #2** Supersedes review of 5/9/2023
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: **Brad Graff** County: **MULTNOMAH**

A1. Applicant(s) seek(s) 0.0334 cfs from 1 well(s) in the Columbia River Basin, _____ subbasin

A2. Proposed use Pond Maintenance (3 af/yr) Seasonality: Year-round

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

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	MULT 101947	1	CRB	0.033	2N/2W-25 SE-SE	900' N, 975' W fr SE cor S 25

* 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	745	0-11	+2-111 (6")	25-745 (4.5")	725-745 (Perf)	24		Air (1 hr)

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	771	580	499	6/18/2025	479.00	3/19/2010

Use data from application for proposed wells.

A4. **Comments:** The proposed POA/POU is ~2 miles northwest of the city limits of Portland, OR. Applicant proposes to use existing POA well (**MULT 101947**) to "top off" a 9-acre-foot fire suppression pond as needed, with the majority of the pond's volume supplied by runoff capture. Annual use of groundwater will not exceed 3 acre-feet/year.

A5. ☐ **Provisions of the** Columbia River 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: The Columbia River Basin Program (OAR 690-519) contains no provisions related to the development, classification, and/or management of groundwater hydraulically connected to surface water.

A6. ☐ **Well(s) #** _____ , _____ , _____ , _____ , _____ , tap(s) an aquifer limited by an administrative restriction.
Name of administrative area: **N/A**
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) **7RLA (15 ft, 15 ft); 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 **Columbia River Basalt Group** groundwater reservoir between approximately **110** ft. and **750** 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 appropriation status of the proposed groundwater reservoir cannot be determined due to a lack of relevant water level data.

The proposed POA (**MULT 101947**) is in the Tualatin Mountains highlands, on the southwest limb of the Portland Hills (a.k.a. Tualatin Mountains) Anticline (Walsh et al., 2011; Wells et al., 2020). Near the proposed POA, the basalt flows are dipping primarily to the southwest. A mapped fault (the Multnomah Channel Fault) to the east/northeast of the proposed POA may act as a local barrier to groundwater flow. The proposed POA is open from 111-745 ft bls, an interval which penetrates several members of the Grande Ronde Basalt Formation. The well log for the proposed POA (MULT 101947) notes water-bearing zones at 580-590 and 700-745 ft bls, which are likely near the contacts of or within the Ortley, Grouse Creek, and Wapshilla Ridge Members of the Grande Ronde Basalt (Tolan and Beeson, 1990; Wells et al., 2020).

The nearest neighboring basalt well is **MULT 120335**, an exempt domestic use well ~500 ft north of the proposed POA. Given the low proposed rate of use (15 gpm / ~0.0334 cfs) and the typically high transmissivity of basalt aquifers, it is unlikely that the proposed use would deprive **MULT 120335** or similarly located wells of their customary use of groundwater.

A water level measurement of 499 ft bls for MULT 101947 was reported for 6/18/2025. The only previous measurement for the POA was 479 ft bls on 3/19/2010 (from the water well report). The available measurements suggest water levels in the well may have declined by ~20 ft since it was drilled; however, because the measurements were not collected at the same time of year (summer 2025 vs spring 2010), there is considerable uncertainty regarding the magnitude of any potential decline. **Regardless, water levels in the POA do not appear to be declined/declining excessively and the aquifer is likely not over-appropriated.**

The applicant should be aware, however, that the recommended permit decline condition (B1.d.i.) would require water use be curtailed if annual water level measurements reveal a decline of 15 ft or greater from the highest known water level, which at present is the well report water level of 479 ft bls. If future annual March water level

measurements are comparable to the most recent water level measurement in June 2025, the applicant may not be able to use water under the permit as intended.

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

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	**Columbia River Basalt – Grande Ronde**	☒	☐

Basis for aquifer confinement evaluation: Reported static water levels in the proposed POA and nearby wells are generally above the applicable water-bearing zones, indicating confined conditions.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Unnamed tributary to McCarthy Creek**	**~292**	**~160-440[a]**	**~2,000[b]**	☒	☐	☐	☐	☒
1	**2**	**Unnamed tributary to Rock Creek**	**~292**	**~330-740[a]**	**~950**	☐	☒	☐	☐	☒
1	**3**	**McCarthy Creek**	**~292**	**~120-290[a]**	**~3,100**	☒	☐	☐	☐	☒
1	**4**	**Rock Creek**	**~292**	**~280-470[a]**	**~3,650**	☐	☒	☐	☐	☒

[a] Elevation within 1 mile of proposed POA (OLC, 2016)
[b] Distance to likely point of hydraulic connection

Basis for aquifer hydraulic connection evaluation: SW 1 drops quickly from the highlands to the east of the proposed POA and intersects the elevations of the proposed POA's reported static water level (~292 ft amsl) and uppermost basalt water-bearing zone (~190 ft amsl). In its upper reaches, SW 1 is likely fed by direct precipitation and groundwater discharging from the Portland Hills silt and shallow weathered basalt soils and regolith. At lower elevations, however, SW 1 most likely loses some of its flow to recharge of the permeable basalt interflow zones, since these zones seem to have their locally highest elevation outcrops/subcrops along the eastern slope of the Tualatin Mountains highlands (Wells et al., 2020). Because of the typically high transmissivity of basalt aquifers and the high rate of erosion corresponding to the steep gradient of SW 1, the hydraulic connection between the proposed POA and SW 1 is likely highly efficient.

SW 2 also drops quickly from the highlands to the west of the proposed POA. However, its lowermost elevation – the point at which it joins SW 4 (Rock Creek) – is still above the reported static water level elevation for the proposed POA and substantially above the noted water-bearing zones. Therefore, it is unlikely the proposed POA has a significant hydraulic connection to SW 2. There are several small streams along the western slope of the highlands that are similar to SW 2, and these are also unlikely to have a significant hydraulic connection to the proposed POA.

SW 3 (McCarthy Creek) flows at a more moderate gradient along the local valley floor to the east of the proposed POA, receiving numerous smaller tributaries that emerge from the surrounding highlands. Reaches of SW 3 within 1 mile of the proposed POA are all at or below the elevation of the reported static water level for the proposed POA and – in the lower reaches – are at or below the elevation of the noted water-bearing zones in the proposed POA. Furthermore, because of the southwesterly dip of the basalt flows, the permeable basalt interflow zones tapped by the proposed POA are likely exposed at or near the land surface around SW 3. It is highly likely, therefore, that SW 3 is hydraulically connected to the proposed POA.

SW 4 (Rock Creek) flows at a moderate gradient along the local valley floor to the southwest of the proposed POA, receiving several smaller tributaries from the surrounding highlands. The lowermost reach of SW 4 is at or below the elevation of the reported static water level for the proposed POA. However, because of the southwesterly dip of the basalt flows in this area, the permeable basalt interflow zones tapped by the proposed POA are likely at a lower elevation beneath SW 4 than beneath the proposed POA. Due to the intervening low permeability basalt flow interiors, groundwater flow between SW 4 and the water-bearing zones tapped by the proposed POA would be limited to fractures and faults – of which none are mapped near SW 4 – making any hydraulic connection inefficient. Therefore, it is unlikely that SW 4 has a meaningful hydraulic connection with the proposed POA.

Water Availability Basin the well(s) are located within: **SW 1&3: Columbia River Basin (No WID)**

SW 2&4: Rock Cr > Tualatin R – AT MOUTH (WID 238)

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
1	**1**	☐[a]	☐	**N/A**	**N/A**	☐	[b]	☐[b]	[c]	☐
1	**3**	☐	☐	**N/A**	**N/A**	☐	[b]	☐[b]	[c]	☐

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells**. Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			☐			☐		☐		☐

Comments: [a] Although reaches of SW 1 are within ¼ mile of the proposed POA, due to their elevation above the reported static water level for the proposed POA, these reaches are not likely hydraulically connected with the water-bearing zones tapped by the proposed POA. The NHD notes these reaches as perennial, but they are most likely fed by the Portland Hills silt and shallow weathered basalt soils and regolith.

[b] Natural flow has not been assessed for the subject surface water sources or watershed (Columbia River Basin). The watershed has not been included in the Water Availability Reporting System.

[c] Interference with hydraulically connected surface water sources could not be quantitatively estimated due to the lack of a readily available analytical model appropriate for the complex geometry of the proposed aquifer and its connections with local surface water sources.

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: N/A

C4b. **690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.**

C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:

i. ☐ The permit should contain condition #(s)_____;

ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** None

References Used:

Application File: G-19021

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, Ground-water hydrology of the Willamette Basin, Oregon, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

Oregon Lidar Consortium (OLC), 2016, OLC metro 2014 lidar project, Oregon Department of Geology & Mineral Industries, Portland, OR, November 30.

Tolan, T. L., and Beeson, M. H., 1990, Geologic log for Site MULT 5, Unite States Geologic Survey https://or.water.usgs.gov/projs_dir/crbg/data/wells/mult_____5/mult_____5_geol.pdf, accessed 10/5/2021.

Walsh, K.P., Peterson, G.L., Beeson, M.H., Wells, R.E., Fleck, R.J., Evarts, R.C., Duvall, Alison, Blakely, R.J., and Burns, Scott, 2011, A tunnel runs through it – An inside view of the Tualatin Mountains, Oregon: U.S. Geological Survey Scientific Investigations Map 3144.

Wells, R., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, L., Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H., Tolan, T.L., Wheeler, K.L., Hanson, W.B., and Sawlan, M.G., 2020, *Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington*: U.S. Geological Survey Scientific Investigations Map 3443, pamphlet 55 p., 2 sheets, scale 1:63,360.

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 _____;

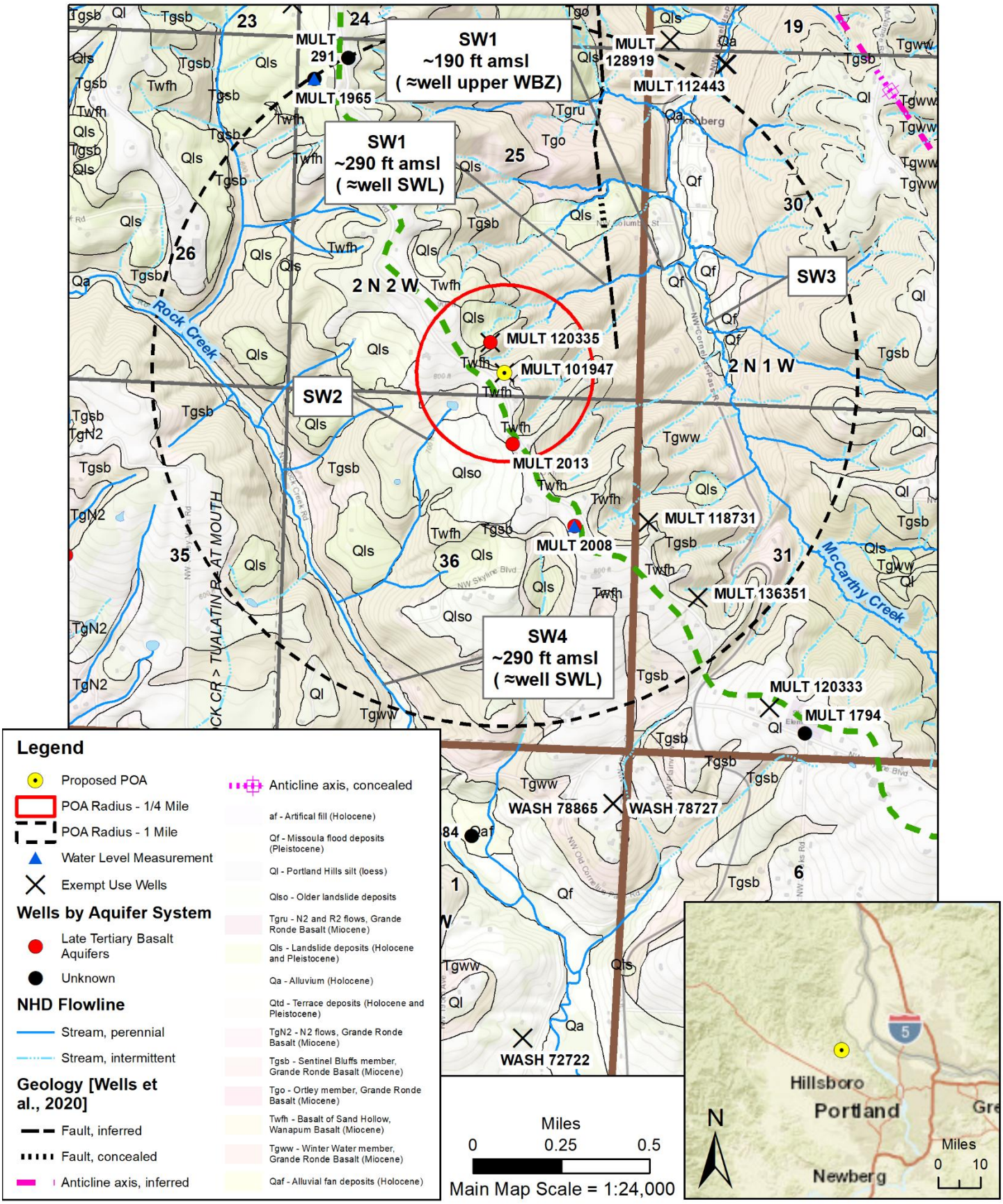
d. ☐ other: (specify) _____

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

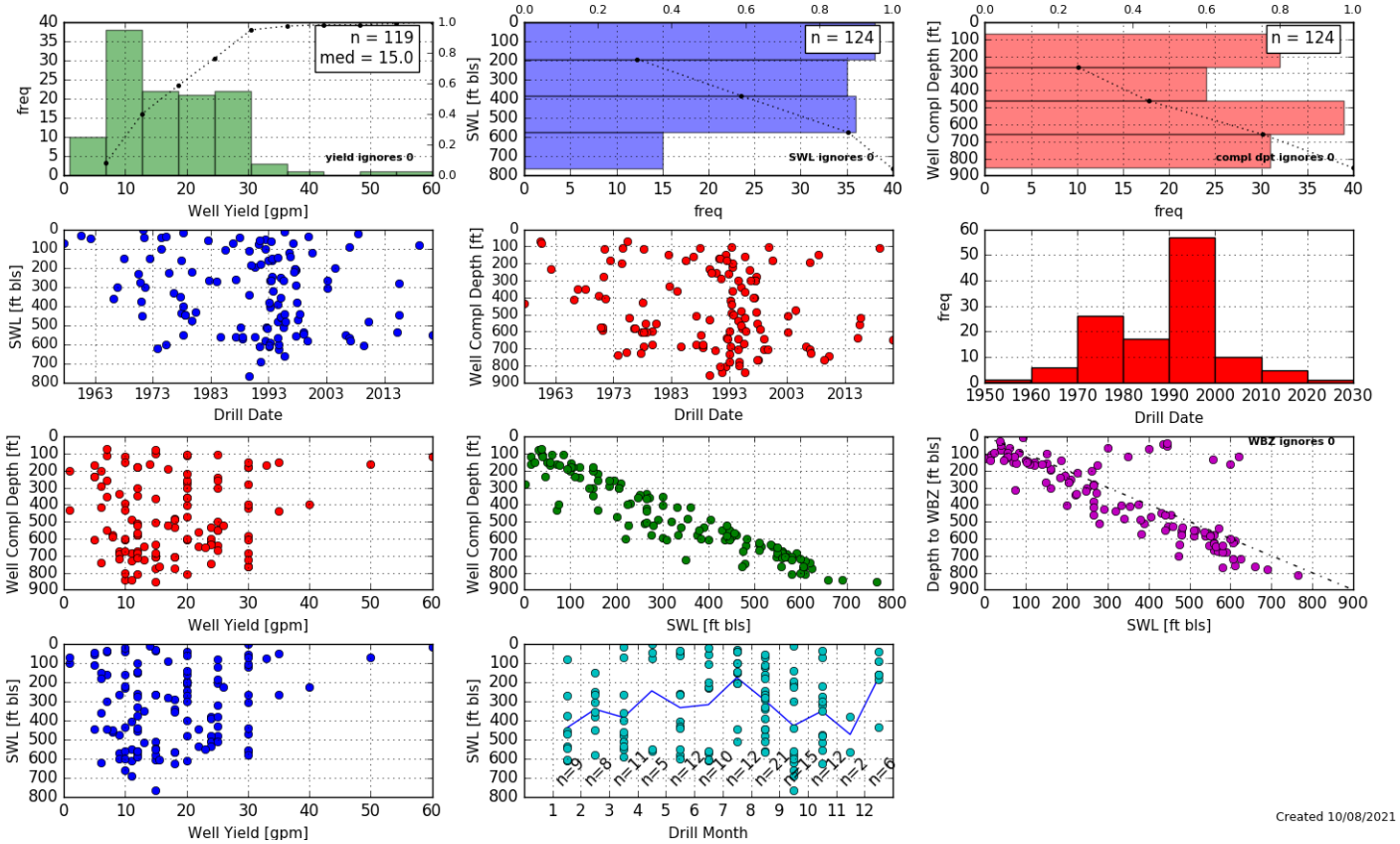
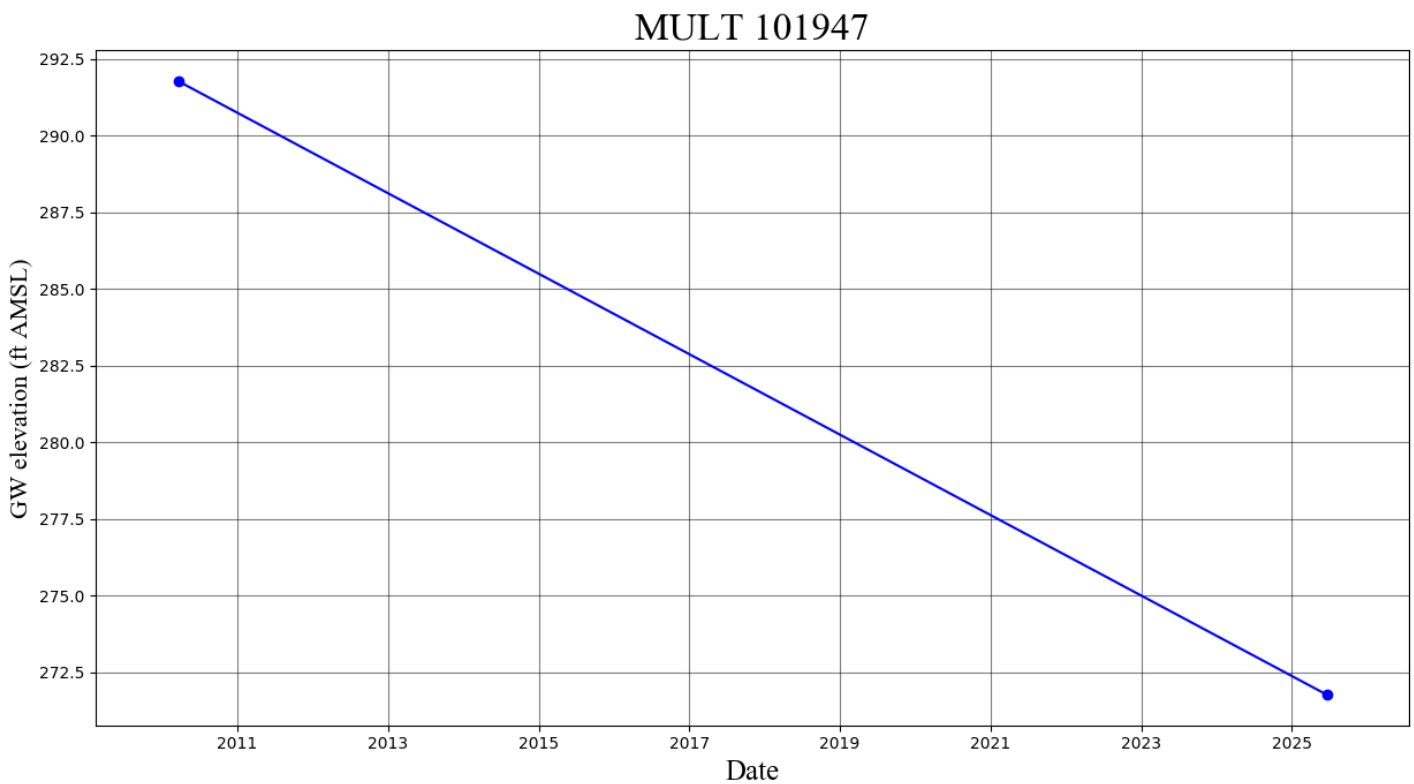
D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Well Location Map

G-19021 Graff



Well Completion Statistics – T2N/R2W-S24,25,36; T2N/R1W-S31



Hydrograph – MULT 101947