

# Groundwater Application Review Summary Form

Application # G- 18885\_\_\_\_\_

GW Reviewer \_\_\_Karl Wozniak\_\_\_\_\_ Date Review Completed: \_2/18/2020\_\_\_\_\_

## 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.

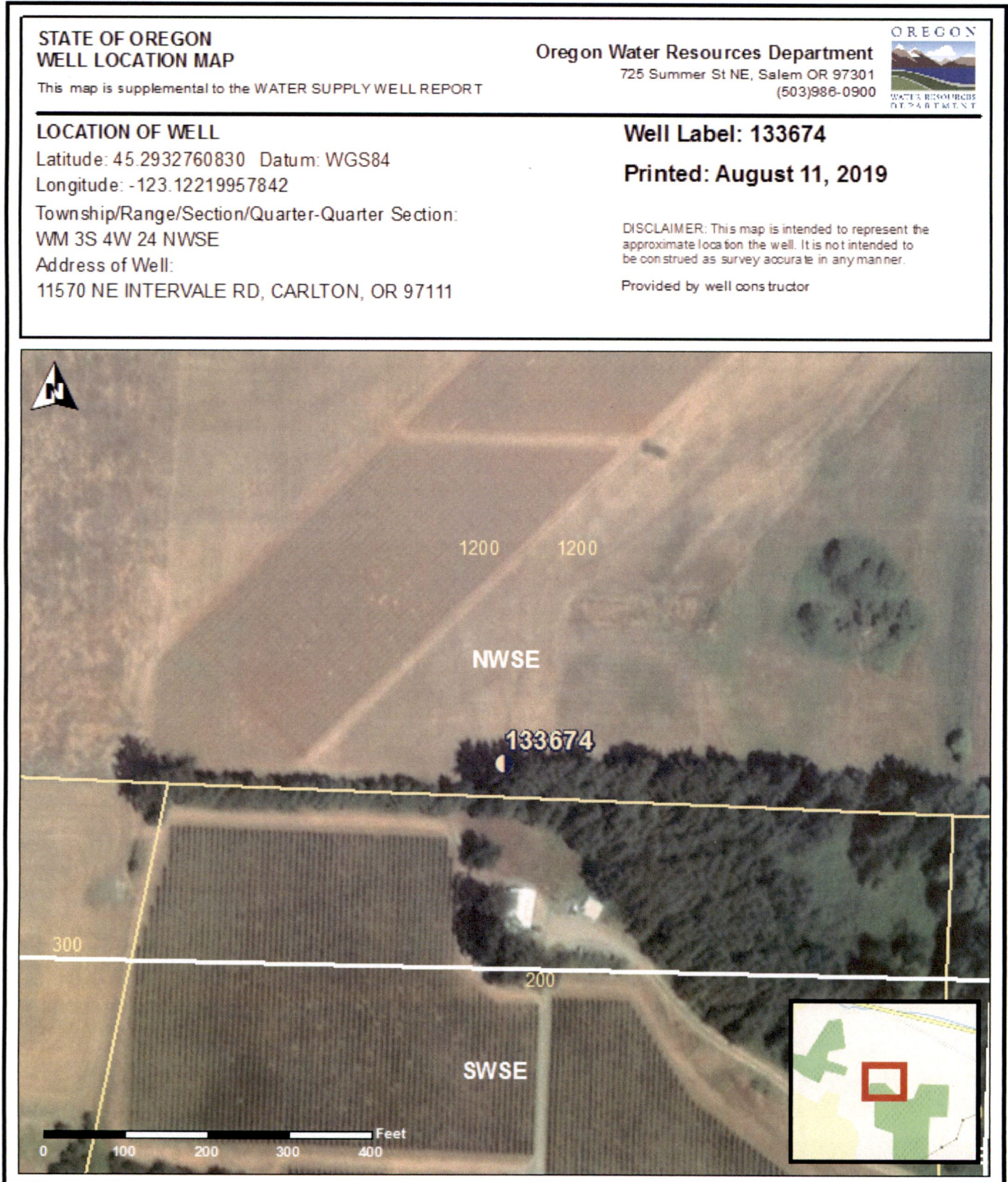
*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).*

WATER SUPPLY WELL REPORT - Map with location identified must be attached and shall include an approximate scale and north arrow

YAMH 58251

8/27/2019

Map of Hole



**WATER RESOURCES DEPARTMENT**

**MEMO**

February 18, 2020

**TO:** Application G- 18885

**FROM:** GW: Karl Wozniak  
(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 \_\_\_\_\_ 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 February 18, 2020  
 FROM: Groundwater Section Karl Wozniak  
 Reviewer's Name  
 SUBJECT: Application G- 18885 Supersedes review of  
 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: Burg Farm, LLC County: Yamhill

- A1. Applicant(s) seek(s) 0.0668 cfs from 2 well(s) in the Willamette Basin,  
Yamhill River subbasin
- A2. Proposed use Irrigation & Commerical Seasonality: March 1-October 30 (Irr) & Year round (Com)
- 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	YAMH 58251	1	Bedrock	0.0668	3S/4W-24 NW-SE	1080' S, 745' E fr C1/4 cor S 24
2	Proposed	2	Bedrock	0.0668	3S/4W-24 NW-SE	1085' S, 1070' E fr C1/4 cor S 24
3						

\* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	428	233	53.5	08/09/2019	301.5	0-99	0-99	1.5-301.5	241.5-261.5 281.5-301.5	30	NA	Air
2	400				300	0-99	1-250		250-300			

Use data from application for proposed wells.

- A4. **Comments:** The applicant seeks 0.0668 cfs (30 gpm) from 1 existing well (YAMH 58251) and 1 proposed well for primary irrigation of 66.2 acres at a maximum annual volume of 6.32 acre feet and for year-round commercial use at a maximum annual volume of 2.30 acre feet.
- A5.  **Provisions of the** Willamette 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 wells do not produce from unconfined alluvium so the pertinent rules (OAR 690-502-0240) do not apply.
- 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) 7c, medium 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:**

**Special Conditions:** Annual water use shall be limited to a total of 8.62 acre feet.

The 2 proposed POAs are located on bedrock uplands near the northern boundary of the Yamhill River watershed about 2.5 miles east of the town of Carlton. The uplands near the wells are underlain by the Spencer Formation, part of the low-yield bedrock aquifer system that consists of Tertiary marine sedimentary and volcanic rocks. Productive zones in the host rocks are likely to be water-bearing fractures as the primary porosity has largely been destroyed by secondary mineralization. The low-yield aquifer system is characterized by low permeability, low porosity, low well yield, considerable anisotropy, and excessive pumping drawdowns; it is generally not capable of producing sustainable yields for irrigation of high water-use crops.

Not enough information is available to determine whether the groundwater system is over-appropriated as prescribed in OAR 690-310-130.

The OWRD well log database indicates a median well yield of 8.5 gpm in section 24 (3S/4W) and adjacent section 19 (3S/3W). Well yields range from 1-100 gpm (see enclosed plot) but the distribution is highly skewed toward lower values. Actual yields are likely to be lower since most of the reported yields are based on air tests which tend to overestimate yields in completed wells. Also, the above statistics do not include about ½-dozen wells that found no usable quantities of water. The applicant is requesting a maximum rate of 0.0668 cfs (30 gpm), which is high relative to the median well yield in the

area. Existing Well 1 (YAMH 58251) reports a well yield of 30 gpm so it seems reasonably likely that a combined total of 30 gpm can be produced from the existing well and the proposed well. These factors and the low proposed annual volume of use indicate that groundwater is likely to be available, in the amounts requested, within the capacity of the resource.

Limited water-level data in the area show no evidence of long-term declines.

Domestic and irrigation well densities are quite low in the area. Most domestic wells appear to be greater than ¼-mile from the 2 proposed POAs but YAMH 57970 (L-129669), a recently drilled domestic well is about 450 feet west-southwest of POA 1 (YAMH 58251). YAMH 57970 is 299 feet deep and has a reported static water level of 57 feet when the well was completed on 07/18/2018 which indicates an available water column of 242 feet. Pump and bailer tests recorded on well logs of nearby wells indicate a median drawdown of 94 feet and a range of drawdowns from 12-225 feet on 1-hour tests (section 24, 3S/4W & section 19, 3S/3W). These facts indicate a reasonable likelihood that the water column in YAMH 54970 is sufficient to buffer a moderate degree of interference even when the well is pumping.

The nearest irrigation well is YAMH 54089 (Permit G-15281), at about 600-800 feet southeast of the two proposed POAs. Other permitted wells are at distances greater than ¼-mile. A 4-hour pump test of YAMH 54089, conducted on 07/14/2012 at a rate of 7 gpm, resulted in a maximum drawdown of 75 feet and a stable pumping level at a depth of 180 feet after 30 minutes of pumping. This indicates a remaining water column of 180 feet since the well has a total depth of 360 feet.

Potential interference with wells less than ¼-mile from the two POAs is likely, but difficult to predict. Aquifer transmissivity is likely to be quite low, which should produce steep but narrow cones of depression. This suggests that pumping drawdowns should be relatively local. However, if fracture porosity dominates (as expected), the aquifer is likely to be highly anisotropic such that hydraulic interference can propagate rapidly and widely in selective directions.

The application proposes to use drip irrigation and a maximum annual volume of only 6.32 acre feet water for irrigation, which is quite small compared to the 66.2 acres of irrigated land. The application also proposes to use only 2.30 acre feet for commercial use which combined with the irrigation use equals a total annual volume of 8.62 acre feet. This total is reasonably conservative considering the properties of the low-yield bedrock aquifer system. The small proposed annual volume and the available water column in the nearest domestic and irrigation wells indicates that groundwater is likely available, in the amounts requested, without injury to prior groundwater rights. However, the close proximity of an existing domestic and irrigation well and the general properties of the aquifer indicate that it would be prudent to include water-level and water-use monitoring conditions if the Department issues a permit.

**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	low-yield bedrock aquifer system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	low-yield bedrock aquifer system	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** General experience indicates that the low-yield bedrock aquifer is confined. Also, the well log for Well 1 (YAMH 58251) shows a static water level significantly higher than the top of the reported water-bearing zone.

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?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Hawn Creek	375	175-240	2120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Hawn Creek	375	175-240	2130	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Unnamed trib to Hawn Cr	375	155-220	3300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Unnamed trib to Hawn Cr	375	155-220	3250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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;
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- 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) 7c, medium water-use reporting;
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**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:**

**Special Conditions:** Annual water use shall be limited to a total of 8.62 acre feet.

The 2 proposed POAs are located on bedrock uplands near the northern boundary of the Yamhill River watershed about 2.5 miles east of the town of Carlton. The uplands near the wells are underlain by the Spencer Formation, part of the low-yield bedrock aquifer system that consists of Tertiary marine sedimentary and volcanic rocks. Productive zones in the host rocks are likely to be water-bearing fractures as the primary porosity has largely been destroyed by secondary mineralization. The low-yield aquifer system is characterized by low permeability, low porosity, low well yield, considerable anisotropy, and excessive pumping drawdowns; it is generally not capable of producing sustainable yields for irrigation of high water-use crops.

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The application proposes to use drip irrigation and a maximum annual volume of only 6.32 acre feet water for irrigation, which is quite small compared to the 66.2 acres of irrigated land. The application also proposes to use only 2.30 acre feet for commercial use which combined with the irrigation use equals a total annual volume of 8.62 acre feet. This total is reasonably conservative considering the properties of the low-yield bedrock aquifer system. The small proposed annual volume and the available water column in the nearest domestic and irrigation wells indicates that groundwater is likely available, in the amounts requested, without injury to prior groundwater rights. However, the close proximity of an existing domestic and irrigation well and the general properties of the aquifer indicate that it would be prudent to include water-level and water-use monitoring conditions if the Department issues a permit.

**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	low-yield bedrock aquifer system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	low-yield bedrock aquifer system	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** General experience indicates that the low-yield bedrock aquifer is confined. Also, the well log for Well 1 (YAMH 58251) shows a static water level significantly higher than the top of the reported water-bearing zone.

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?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Hawn Creek	375	175-240	2120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Hawn Creek	375	175-240	2130	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Unnamed trib to Hawn Cr	375	155-220	3300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Unnamed trib to Hawn Cr	375	155-220	3250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



**Basis for aquifer hydraulic connection evaluation:** Water levels in local wells in the bedrock uplands (above stream levels) show hydraulic heads that are above local stream levels. This is consistent with general observations and published reports in the Willamette basin that indicate that the water table in the low-yield bedrock aquifer system mimics topography and discharges to local streams (e.g. Frank and Collins, 1978). Distances to surface water sources in Table C2 were measured to the nearest perennial stream reaches as shown on current USGS 7.5-minute topographic maps. Groundwater elevation is based on the static water level reported on YAMH 58251.

**Water Availability Basin the well(s) are located within:** WAB 188: Yamhill R > Willamette R – AB Palmer Cr

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 source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and 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	<input type="checkbox"/>	<input type="checkbox"/>	NA		<input type="checkbox"/>	56.30	<input type="checkbox"/>		<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	NA		<input type="checkbox"/>	56.30	<input type="checkbox"/>		<input type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	NA		<input type="checkbox"/>	56.30	<input type="checkbox"/>		<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	NA		<input type="checkbox"/>	56.30	<input type="checkbox"/>		<input type="checkbox"/>

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?
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

**Comments:** Interference @ 30 days was not calculated in Table C3a or C3b because of the lack of a readily available suitable model for fractured bedrock aquifer systems and a lack of knowledge about likely anisotropy in the local low-yield bedrock aquifer system.

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:** NA. Impacts are expected to be limited to the streams listed in table C2.

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:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**References Used:**

Frank, F.J., and Collins, C.A., 1978, Groundwater in the Newberg area, northern Willamette Valley, Oregon: Oregon Water Resources Department Groundwater Report No. 27, 77p.  
 Freeze, R.A., and J.A. Cherry, 1979, groundwater: Prentice Hall, Englewood Cliffs, N.J.  
 Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-A, 32 p.  
 O'Connor, J.E., Sarna-Wojcicki, A., Wozniak, K.C., Polette, D.J., and Fleck, R.J., 2001: U.S. Geological Survey Professional Paper 1620.  
 Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82p.

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

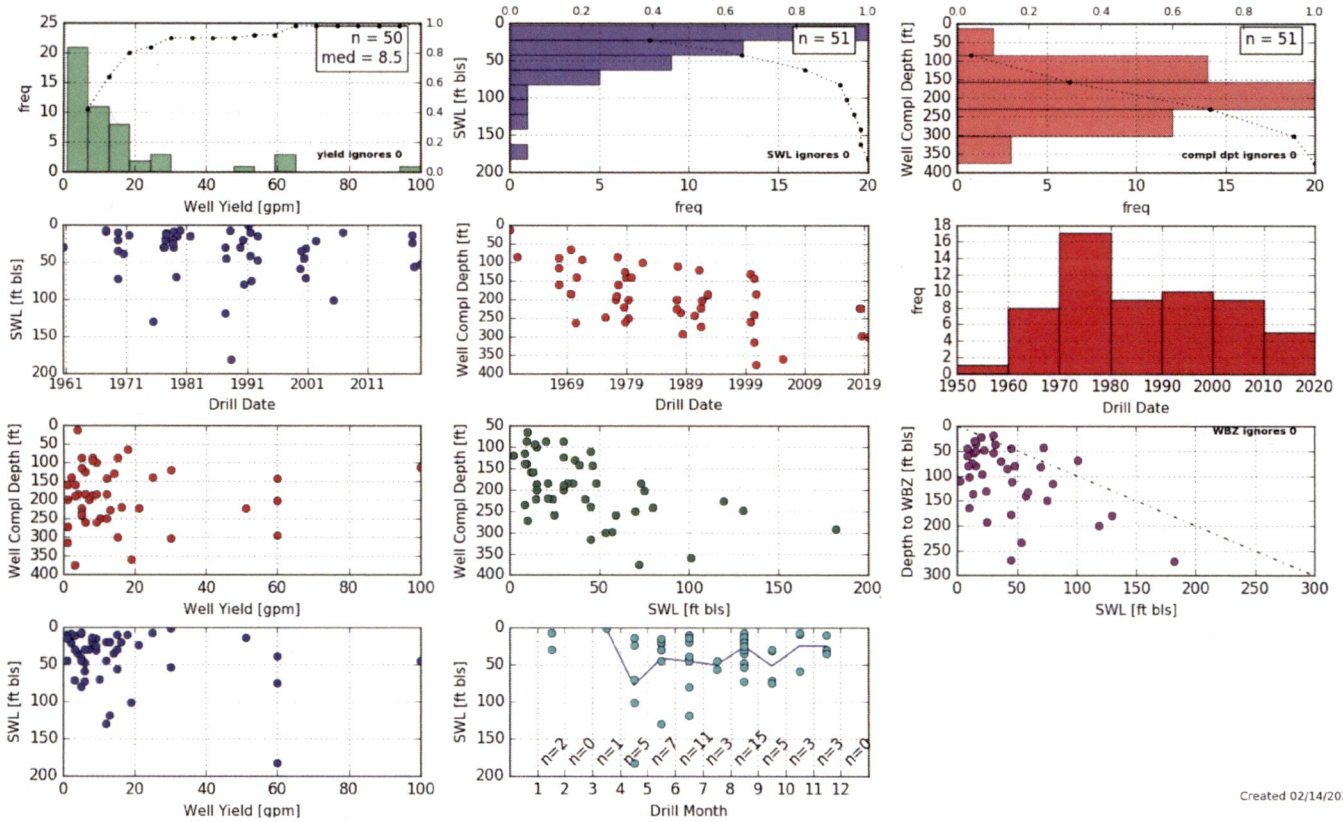
D1. **Well #:** \_\_\_\_\_ **Logid:** \_\_\_\_\_

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:** \_\_\_\_\_  
 \_\_\_\_\_

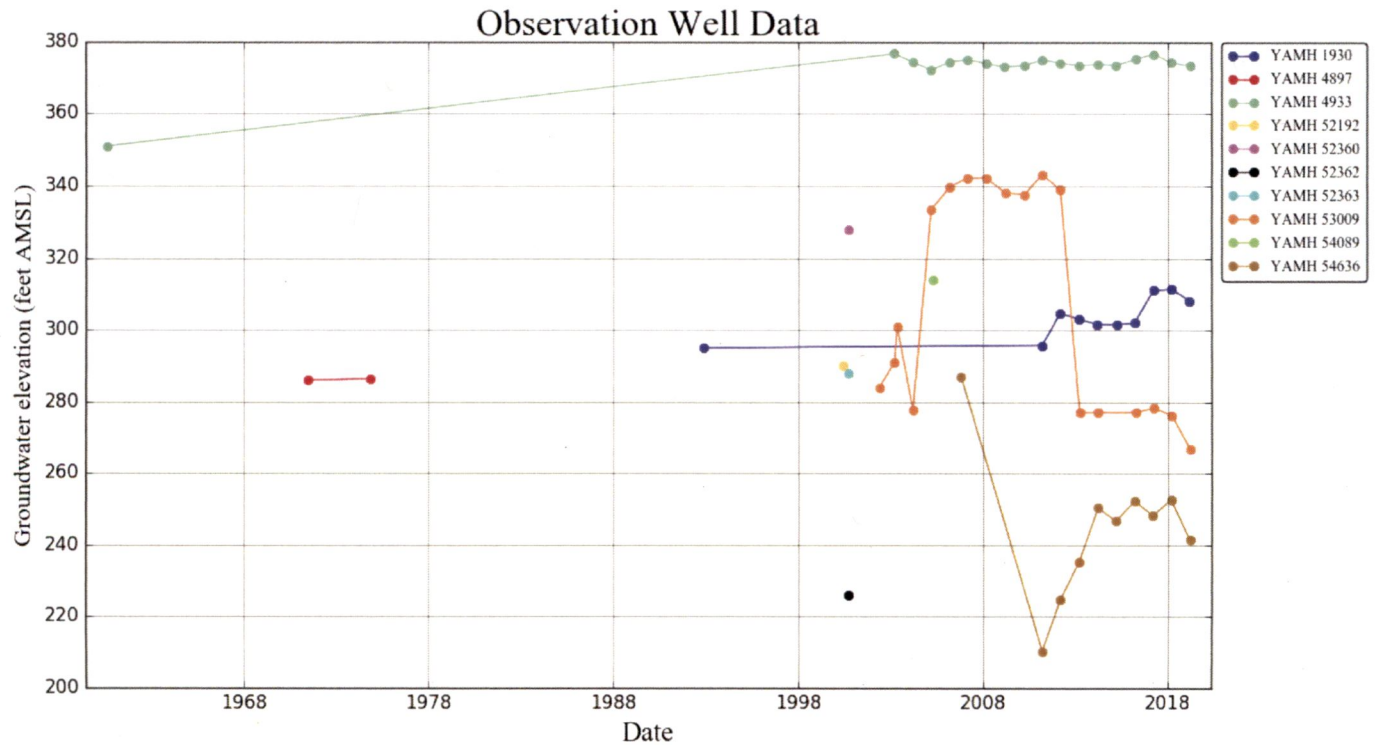
D4.  **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Well Statistics (section 24, 3S/4W & section 19, 3S/3W)



Created 02/14/2020

Water-Level Trends in Nearby Wells



**Water Availability Tables**

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

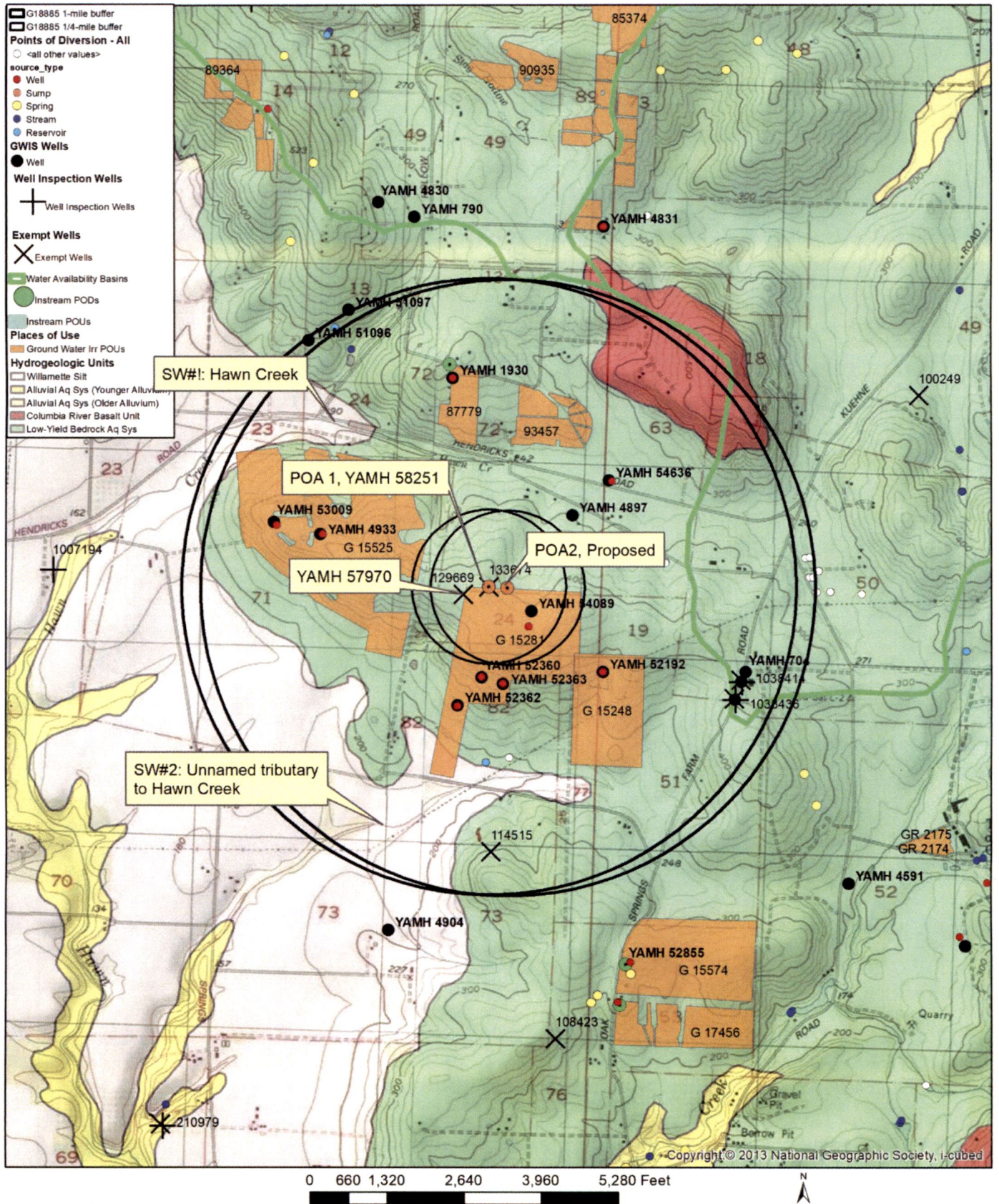
YAMHILL R > WILLAMETTE R - AB PALMER CR  
 Basin: WILLAMETTE

Watershed ID #: 188  
 Time: 1:11 PM

Exceedance Level: 80  
 Date: 02/14/2020

Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	1,780.00	60.50	1,720.00	0.00	31.00	1,690.00
FEB	2,010.00	58.40	1,950.00	0.00	31.00	1,920.00
MAR	1,710.00	36.70	1,670.00	0.00	31.00	1,640.00
APR	1,030.00	43.80	986.00	0.00	31.00	955.00
MAY	512.00	58.10	454.00	0.00	31.00	423.00
JUN	229.00	77.20	152.00	0.00	31.00	121.00
JUL	107.00	97.40	9.60	0.00	31.00	-21.40
AUG	66.60	86.50	-19.90	0.00	31.00	-50.90
SEP	56.30	56.00	0.35	0.00	31.00	-30.70
OCT	72.70	17.10	55.60	0.00	31.00	24.60
NOV	465.00	33.40	432.00	0.00	31.00	401.00
DEC	1,640.00	57.50	1,580.00	0.00	31.00	1,550.00
ANN	1,150,000	41,200	1,100,000	0	22,500	1,080,000

### Well Location Map



Approved: 

# MEMO

**To:** Kristopher Byrd, Well Construction and Compliance Section Manager  
**From:** Travis Kelly, Well Construction Program Coordinator  
**Subject:** Review of Water Right Application G-18885  
**Date:** June 30, 2020

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Karl Wozniak reviewed the application. Please see Karl's review and the Well Report.

Applicant's Well #1 (YAMH 58251): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

Applicant's Well #2 (Proposed): Is a proposed well, therefore it cannot be reviewed for construction. Construction of the proposed well shall be completed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240. During construction of the well, specific attention should be paid to ensure sealing requirements are met and that the well does not commingle aquifers.

The proposed construction of Applicant's Well #2 may not satisfy hydraulic connection issues.

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765 & OAR 690-205-0210)

YAMH 58251  
8/27/2019

WELL I.D. LABEL# L 133674  
START CARD # 1044195  
ORIGINAL LOG #

(1) LAND OWNER  
Owner Well I.D. 3227  
First Name \_\_\_\_\_ Last Name \_\_\_\_\_  
Company BURG FARM LLC  
Address 659 NE 9TH ST.  
City MCMINNVILLE State OR Zip 97128

(2) TYPE OF WORK  New Well  Deepening  Conversion  
 Alteration (complete 2a & 10)  Abandonment (complete 5a)

(2a) PRE-ALTERATION  
Dia + From To Gauge Stl Plstc Wld Thrd  
Casing: \_\_\_\_\_  
Material From To Amt sacks/lbs  
Seal: \_\_\_\_\_

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  Auger  Cable Mud  
 Reverse Rotary  Other \_\_\_\_\_

(4) PROPOSED USE  Domestic  Irrigation  Community  
 Industrial/ Commercial  Livestock  Dewatering  
 Thermal  Injection  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION Special Standard  (Attach copy)  
Depth of Completed Well 301.50 ft.  
BORE HOLE SEAL sacks/lbs  
Dia From To Material From To Amt lbs  
10 0 99 Bentonite Chips 0 99 51 S  
6 99 301.5 Calculated 45  
Calculated

How was seal placed: Method  A  B  C  D  E  
 Other POUR/PROBE/HYDRATE  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Filter pack from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_ Size \_\_\_\_\_  
Explosives used:  Yes Type \_\_\_\_\_ Amount \_\_\_\_\_

(5a) ABANDONMENT USING UNHYDRATED BENTONITE  
Proposed Amount \_\_\_\_\_ Actual Amount \_\_\_\_\_

(6) CASING/LINER  
Casing Liner Dia + From To Gauge Stl Plstc Wld Thrd  
  6  1 99 .25       
  4  1.5 241.5 sch40       
  4  261.5 281.5 sch40       
Shoe  Inside  Outside  Other Location of shoe(s) 99  
Temp casing  Yes Dia 10 From +  1 To 5

(7) PERFORATIONS/SCREENS  
Perforations Method \_\_\_\_\_  
Screens Type machine slotted Material PVC  
Perf/ Casing/ Screen Scrm/slot Slot # of Tele/  
Screen Liner Dia From To width length slots pipe size  
Screen Liner 4 241.5 261.5 .032 4  
Screen Liner 4 281.5 301.5 .032 4

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)  
30 300 1  
30 275 2  
Temperature 54 °F Lab analysis  Yes By \_\_\_\_\_  
Water quality concerns?  Yes (describe below) TDS amount 78 ppm  
From To Description Amount Units

(9) LOCATION OF WELL (legal description)  
County YAMHILL Twp 3.00 S N/S Range 4.00 W E/W WM  
Sec 24 NW 1/4 of the SE 1/4 Tax Lot 1200  
Tax Map Number \_\_\_\_\_ Lot \_\_\_\_\_  
Lat \_\_\_\_\_ " or 45.29327608 DMS or DD  
Long \_\_\_\_\_ " or -123.12219958 DMS or DD  
 Street address of well  Nearest address  
11570 NE INTERVALE RD, CARLTON, OR 97111

(10) STATIC WATER LEVEL  
Date SWL(psi) + SWL(ft)  
Existing Well / Pre-Alteration \_\_\_\_\_  
Completed Well 8/9/2019 \_\_\_\_\_ 53.5  
Flowing Artesian?  Dry Hole?   
WATER BEARING ZONES Depth water was first found 233.00  
SWL Date From To Est Flow SWL(psi) + SWL(ft)  
8/9/2019 233 284 30 \_\_\_\_\_ 53.5

(11) WELL LOG  
Ground Elevation \_\_\_\_\_  
Material From To  
Top Soil 0 5  
Clay, red and brown 5 16  
Clay, tan w/brown claystone, packed sand 16 27  
Packed sand, hard w/white like layers 27 34  
Cemented sand, coarse blk/gray 34 76  
Same, with some fine gravels 76 87  
Sandstone, gray hard fine 87 167  
Sandstone, coarse gray w/white layers 167 233  
Same, also w/thin tan layers 233 252  
Sandstone, fine gray w/occ hd crse layers 252 284  
Sandstone, fine/dirty w/claystone gray 284 301.5

Date Started 8/7/2019 Completed 8/9/2019

(unbonded) Water Well Constructor Certification  
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.  
License Number 1977 Date 8/11/2019  
Signed JOSE ESTRADA (E-filed)

(bonded) Water Well Constructor Certification  
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.  
License Number 1438 Date 8/11/2019  
Signed DAVID PAYSINGER (E-filed)  
Contact Info (optional) bluewaterdrilling.com || 503 868 7878