

WATER RESOURCES DEPARTMENT

MEMO

June 16, 2020

TO: Application G- 18878

FROM: GW: Ben Scandella, Jen woody, and 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 June 16, 2020
 FROM: Groundwater Section Ben Scandella, Jen Woody, Karl Wozniak
 SUBJECT: Application G-18878 Supersedes review of _____
 Reviewer's Name _____
 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: **EMILY EVERETT; SANDAN, LLC** County: **YAMHILL**

- A1. Applicant(s) seek(s) 0.15 cfs (67.3 gpm) from 3 well(s) in the Willamette Basin,
Chehalem Creek subbasin
- A2. Proposed use Storage Seasonality: December 1 – April 30
- 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 704	1	Bedrock	0.0446	3S/3W-19 SE-SW	660' N, 2950' W fr SE cor S 19
2	YAMH 57912	2	Bedrock	0.0668	3S/3W-19 SE-SW	490' N, 3015' W fr SE cor S 19
3	YAMH 57913	3	Bedrock	0.0357	3S/3W-19 SE-SW	160' N, 32770' W fr SE cor S 19

* 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	375	110	2	3/25/1991	120	0-33	+1-39	5-120	110-120	30	90	Bail
2	385	29	14.5	4/19/2018	222	0-76	+1.5-76.5	2-122	122-222	51	N/A	Air
3	390	131	24	4/20/2018	222	0-38	+2-38	4-104	104-222	21	N/A	Air

Use data from application for proposed wells.

A4. **Comments:** The applicant's wells are located on the southern edge of the Chehalem Valley, about 3 miles north of Lafayette. The applicant seeks a maximum of 0.15 cfs (67.3 gpm) from 3 wells to supply water for storage of up to 13.08 acre feet in 2 lined ponds. Production for this use would be limited to the months of December through April. The application lists well specific rates of 20 gpm (0.0446 cfs) from Well 1, 30 gpm (0.0668 cfs) from Well 2, and 16 gpm (0.0357 cfs) from Well 3. The wells are also listed as POAs on LL-1783, with a requested rate of 0.067 (30 gpm). Assuming that limited license is issued, then the use of these wells stacks on top of the limited license for the duration of its validity. The requested stacked rates then become 50 gpm (0.1114 cfs) for Well 1, 60 gpm (0.1336 cfs) for Well 2, and 46 gpm (0.1024 cfs) for Well 3, and the total requested rate from both rights is (30 + 67.3 =) 97.3 gpm. This review considers these well-specific rates and assumes that pumping for the proposed use would only occur in the months of December through April.

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 applicant's wells will produce from a confined aquifer, so the pertinent basin 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) **7N (Annual Measurement), 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:** Groundwater for the proposed use cannot be determined to be over-appropriated due to insufficient available data regarding rates of recharge and the current quantity of groundwater withdrawals from the aquifer system.

The subject wells are located on bedrock uplands at the southern edge of the Chehalem Creek watershed about 3 miles east of the town of Carlton. The uplands are underlain by the Spencer and Pittsburg Bluff Formations, 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. The OWRD well log database indicates a median well yield of 12.5 gpm in the adjacent sections 20 and 29 of T3S/3W and sections 19 and 30 of T3S/4W 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. The applicant is requesting a maximum rate of 0.15 cfs (67 gpm), which is high relative to median well yield in the area but seems reasonably feasible based on a combined rate of 102 gpm reported on the well logs or the 3 wells.

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. The nearest domestic wells appear to be at least ¼-mile from the subject wells (based on tax lot data and 2018 Oregon Statewide Imagery digital imagery) but precise locations are unknown. The nearest irrigation wells are at distances greater than 2200 feet.

There is a permitted spring with a certificated water right (Certificate 11154) within 1,700 feet of the subject wells and at an elevation consistent with their water levels. Another certificated spring (Certificate 61841) is also located within ½ mile. The proximity of these springs suggests that they may be vulnerable to injury, but estimating the magnitude of interference from the proposed use is difficult due to the fractured hydrogeology with a wide range of transmissivity estimates and unknown

anisotropy. Furthermore, the sensitivity of the springs' flow to interference is unknown, especially during the winter months of proposed use, when active recharge could offset interference. Given the potential for injury, this water right should include water-level and water-use monitoring conditions, as well as the following shut-off condition:

Special Condition: water use from all wells on this right shall be shut off if either Certificate 11154 or Certificate 61841 does not receive the water to which it is legally entitled. The wells shall remain shut off until the following December, unless their use is specifically re-authorized by the Director.

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	Bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: General experience indicates that the low-yield bedrock aquifer is typically confined. Also, the well logs for all 3 wells show static water levels significantly higher than the top of the reported water-bearing zones accessed by the wells, and such observations are consistent with 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?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Unnamed trib. Chehalem Cr	370	220-250	1930	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Unnamed trib. Hawn Cr	370	182-230	3000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	3	Unnamed trib. Millican Cr	370	175-310	3700	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Unnamed trib. Chehalem Cr	370	220-250	2090	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Unnamed trib. Hawn Cr	370	182-230	2800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	3	Unnamed trib. Millican Cr	370	175-310	3600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Unnamed trib. Chehalem Cr	365	220-250	2400	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	2	Unnamed trib. Hawn Cr	365	182-230	2600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	Unnamed trib. Millican Cr	365	175-310	3600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Surface water elevations reflect the range of elevations within 1 mile of any of the proposed POAs. Distances to surface water sources in Table C2 were measured to the nearest perennial stream reaches as depicted on current USGS 7.5-minute topographic maps. 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 generally mimics topography and discharges to local streams (e.g. Frank and Collins, 1978). Therefore, all 3 wells are likely connected to all 3 surface water sources.

Water Availability Basin the well(s) are located within: Chehalem Cr. > Willamette R. (WID 30200707); YAMHILL R > WILLAMETTE R - AB PALMER CR (WID 188). Although the wells are physically located within the Chehalem Creek watershed, they occur at the drainage divide with the Yamhill River watershed and have the potential to impact streamflow in both watersheds. Impacts are only assessed against the Chehalem Creek Water Availability Basin in the following tables since it is the limiting watershed with the lowest natural streamflows.

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"/>			<input type="checkbox"/>	33.00	<input type="checkbox"/>		<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	33.00	<input type="checkbox"/>		<input type="checkbox"/>
3	1	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	33.00	<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?
	1	<input type="checkbox"/>			<input type="checkbox"/>	33.00	<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments:

None of the rates considered in this review exceed 1% of the 80% natural flow in the months of use in the Chehalem WAB; neither combined nor distributed among wells, and considering rates stacked with both the requested and likely rates on LL-1783. There is an instream requirement for WAB 188, but its rate of 31.00 cfs is still more than 100 times greater than any proposed rate. 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 anisotropy in the 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: 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:** _____

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.

Wells, R.E., A.R. Niem, N.S. MacLeod, P.D. Snavely, and W.A. Niem, 1983. Preliminary Geologic Map of the West Half of the Vancouver (Wa.-Ore.) 1 Degree X 2 Degree Quadrangle, Oregon. https://ngmdb.usgs.gov/Prodesc/proddesc_14118.htm. Accessed 16 Jun 2020.

D. WELL CONSTRUCTION, OAR 690-200

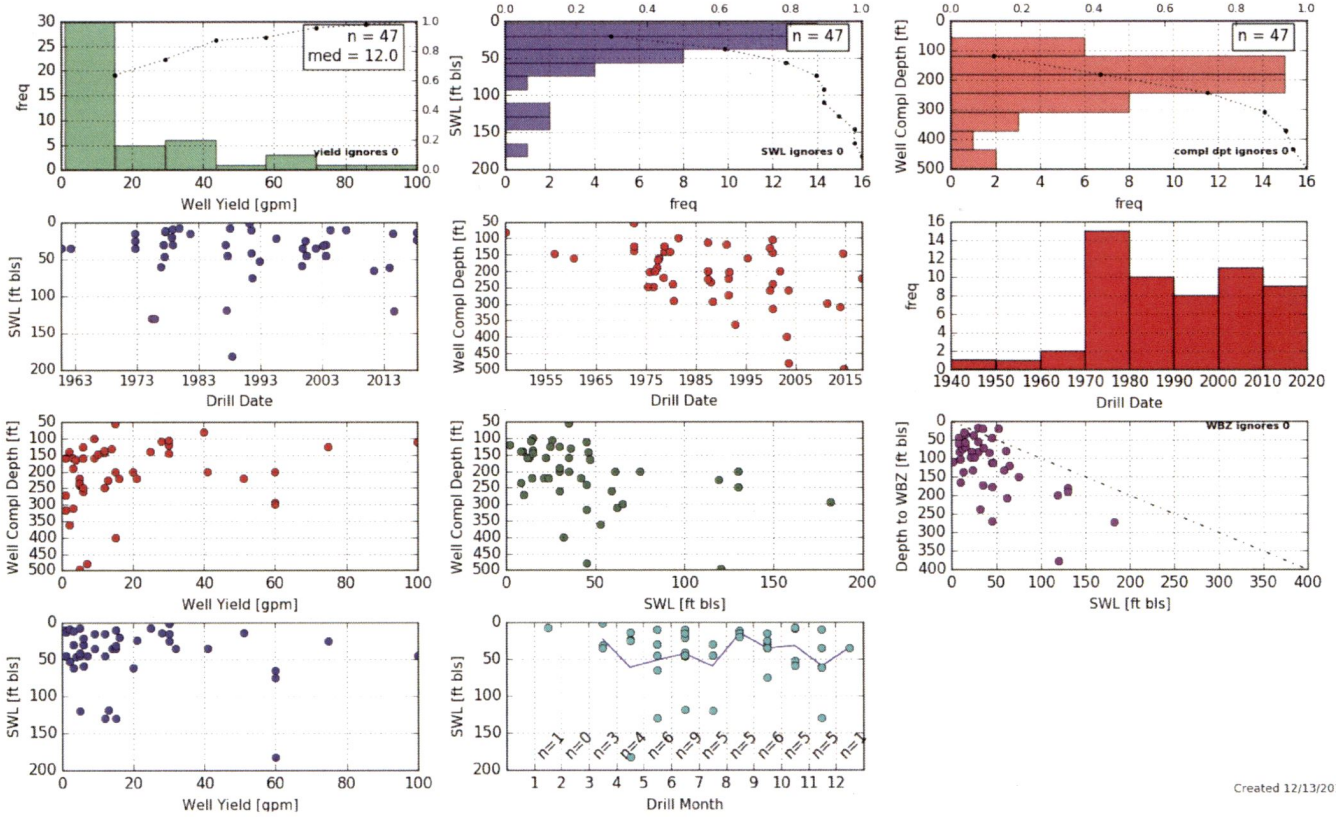
D1. **Well #:** 1 **Logid:** YAMH 704

- 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:** According to the state geologic map, the subject wells penetrate either the Spencer Formation or the Pittsburg Bluff Formation. In either case, these are lithified marine sedimentary rocks, notwithstanding how the driller described them on the well logs. The newer well logs (YAMH 57912 & 57913) report claystone or sandstone beginning at relatively shallow depths (16 feet and 7 feet, respectively). This is consistent with the description of these units from the original source for the state geologic map in this area (Wells et al., 1983), which describes the Pittsburg Bluff Formation as siltstones and sandstones and the Spencer Formation as friable sandstone, siltstone, and claystone. Therefore, while well log for YAMH 704 (about 180 feet north of YAMH 57912) describes clay from 1-44 feet, the geologic context suggests that this shallow lithology is actually claystone.

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

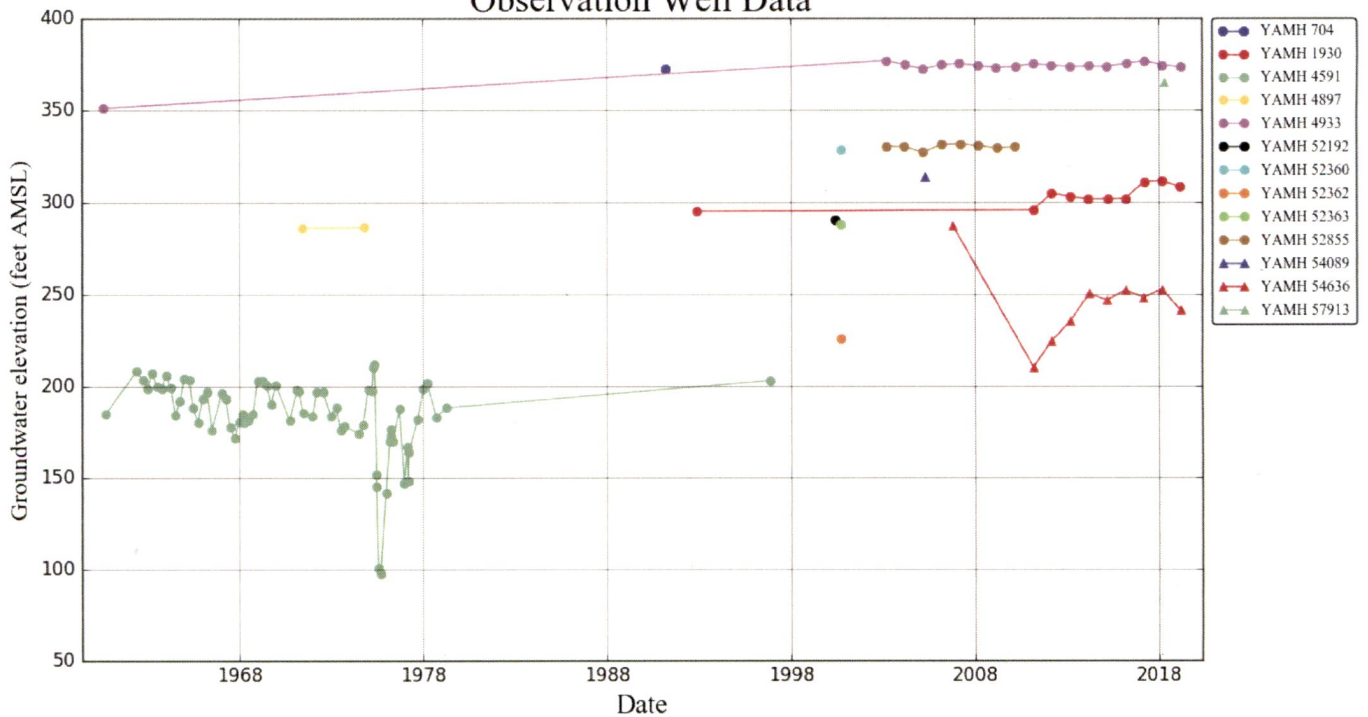
Well Statistics (Sections 20 and 29, T3S/3W and 19 and 30, T3S/4W)



Created 12/13/2019

Water-Level Trends in Nearby Wells

Observation Well Data



Version: 05/07/2018

Water Availability Tables (80% Exceedance Flows)

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
 Water Availability as of 10/19/2004 for
 CHEHALEM CR > WILLAMETTE R - AT MOUTH

Watershed ID #: 30200707 Basin: WILLAMETTE Exceedance Level: 80
 Time: 15:19 Date: 10/19/2004

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	101.00	3.11	0.00	97.90	0.00	0.00	97.90
2	115.00	2.97	0.00	112.00	0.00	0.00	112.00
3	80.60	2.20	0.00	78.40	0.00	0.00	78.40
4	33.00	1.31	0.00	31.70	0.00	0.00	31.70
5	14.90	1.87	0.00	13.00	0.00	0.00	13.00
6	8.48	3.14	0.00	5.34	0.00	0.00	5.34
7	2.13	4.69	0.00	-2.56	0.00	0.00	-2.56
8	0.59	3.87	0.00	-3.28	0.00	0.00	-3.28
9	0.39	2.26	0.00	-1.87	0.00	0.00	-1.87
10	3.05	0.61	0.00	2.44	0.00	0.00	2.44
11	11.50	0.90	0.00	10.60	0.00	0.00	10.60
12	66.20	2.44	0.00	63.80	0.00	0.00	63.80
Stor	48900	1770	0	47300	0	0	47300

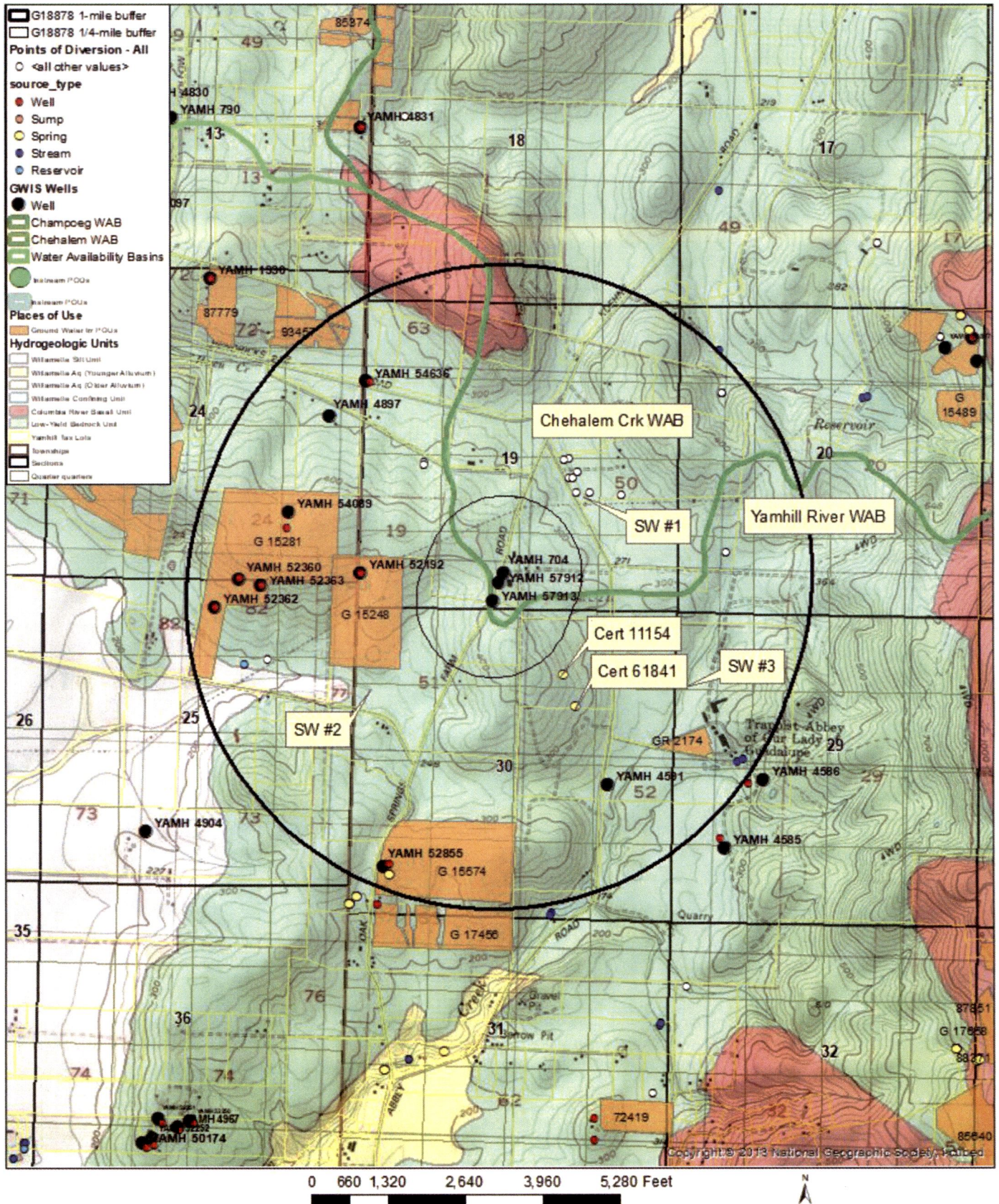
DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

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

Watershed ID #: 188 Exceedance Level: 80
 Time: 3:09 PM Date: 06/03/2019

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	57.80	1,720.00	0.00	31.00	1,690.00
FEB	2,010.00	55.80	1,950.00	0.00	31.00	1,920.00
MAR	1,710.00	34.10	1,680.00	0.00	31.00	1,640.00
APR	1,030.00	41.40	989.00	0.00	31.00	958.00
MAY	512.00	56.00	456.00	0.00	31.00	425.00
JUN	229.00	75.20	154.00	0.00	31.00	123.00
JUL	107.00	95.50	11.50	0.00	31.00	-19.50
AUG	66.60	84.50	-17.90	0.00	31.00	-48.90
SEP	56.30	53.80	2.45	0.00	31.00	-28.50
OCT	72.70	14.90	57.80	0.00	31.00	26.80
NOV	465.00	31.10	434.00	0.00	31.00	403.00
DEC	1,640.00	54.90	1,590.00	0.00	31.00	1,550.00
ANN	1,150,000	39,600	1,110,000	0	22,500	1,090,000

Well Location Map



Approved:



MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Travis Kelly, Well Construction Program Coordinator
Subject: Re-Review of Water Right Application G-18878
Date: June 25, 2020

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Ben Scandella, Jen Woody, and Karl Wozniak reviewed the application. Please see Ben, Jen, and Karl's review and the Well Reports.

Applicant's Well #1 (YAMH 704): A review of the well report for this well appears to show that the construction does not meet minimum well construction standards based on the reported lithology. Because of this reported lithology, the well construction and compliance section (WCC) previously found that the well must be cased and sealed to a minimum depth of 38 feet bgs, however, since WCC's previous review, the Groundwater Section has performed a re-review that indicates the reported clay on the report is actually a claystone that is a confining unit. Based on this re-review by the Groundwater Section, WCC re-reviewed the construction of Applicant's Well #1 and has determined that the construction of 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 (YAMH 57912): Based on a review of the Well Report, Applicant's Well #2 seems to protect the groundwater resource.

The construction of Applicants Well #2 may not satisfy hydraulic connection issues.

Applicant's Well #3 (YAMH 57913): Based on a review of the Well Report, Applicant's Well #3 seems to protect the groundwater resource.

The construction of Applicants Well #3 may not satisfy hydraulic connection issues.

APR 17 1991

L-127717
35/30/19ac

STATE OF OREGON WATER RESOURCES DEPT.
WATER WELL REPORT SALEM, OREGON
(as required by ORS 537.765)

YAMH 704

(START CARD) # 17468

(1) OWNER: Name MR & Mrs C. I. E. G. I. Well Number: 91-291
Address 10280 Oak Spring Farms Rd
City Carlton State OR Zip 97111

(2) TYPE OF WORK:
 New Well Deepen Recondition Abandon

(3) DRILL METHOD
 Rotary Air Rotary Mud Cable
 Other

(4) PROPOSED USE:
 Domestic Community Industrial Irrigation
 Thermal Injection Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes No Depth of Completed Well 120 ft.
Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	33	Cement	0	33	17
6	33	120				

How was seal placed: Method A B C D E
 Other _____
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

Diameter	From	To	Gauge	Casing/Liner			
				Steel	Plastic	Welded	Threaded
6	4	39	1.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4"	5	120		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:
 Perforations Method SKILL Saw
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
110	120	6"	24	1/16		<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian
Yield gal/min 30 Drawdown 90 Drill stem at _____ Time 1 hr.

Temperature of water 51 Depth Artesian Flow Found _____
Was a water analysis done? No Yes By whom _____
Did any strata contain water not suitable for intended use? No Too little
 Salty Muddy Odor Colored Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Yamhill Latitude _____ Longitude _____
Township 35 N or S, Range 3 W E or W, WM.
Section 19 SW 1/4 NE 1/4
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) Same

(10) STATIC WATER LEVEL:
_____ ft. below land surface. Date 3/25/91
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found _____

From	To	Estimated Flow Rate	SWL
110	120	30	2

(12) WELL LOG: Ground elevation 450

Material	From	To	SWL
Topsoil	0	1	
Clay Red	1	4	
Clay Tan	4	33	
Sandstone Gray	33	120	7

RECEIVED
MAR 26 2018
OWRD

Date started 3/23/91 Completed 3/25/91

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number _____
Signed _____ Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, 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 well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 703
Signed Tom Bryant Date 3/25/91

Groundwater Application Review Summary Form

Application # G- 18878

GW Reviewers: Ben Scandella, Jen Woody, and Karl Wozniak

Date Review Completed: 6/16/2020

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 57913

4/23/2018

Map of Hole

STATE OF OREGON
WELL LOCATION MAP

Oregon Water Resources Department

725 Summer St NE, Salem OR 97301
(503)986-0900



This map is supplemental to the WATER SUPPLY WELL REPORT

LOCATION OF WELL

Latitude: 45.2883891063 Datum: WGS84

Longitude: -123.10557648089

Township/Range/Section/Quarter-Quarter Section:

WM 3S 3W 19 SESW

Address of Well:

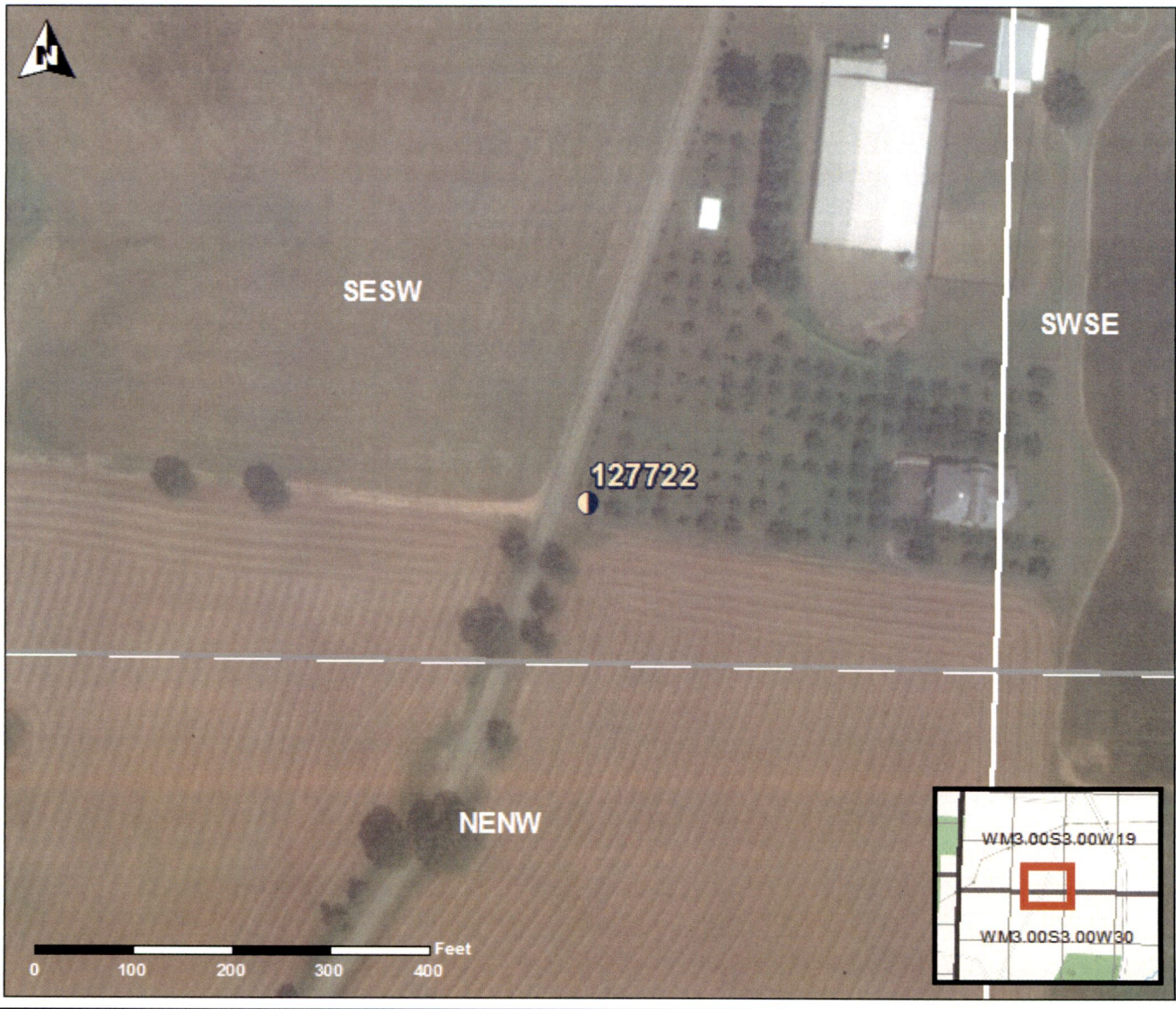
10501 NE ABBEY RD. CARLTON, CARLTON, OR 97111

Well Label: 127722

Printed: April 23, 2018

DISCLAIMER: This map is intended to represent the approximate location the well. It is not intended to be construed as survey accurate in any manner.

Provided by well constructor



appropriate, whether the proposed use is detrimental to the protection or recovery of a threatened or endangered fish species and whether the use can be conditioned or mitigated to avoid the detriment.

If a permit is issued, it will likely contain conditions to ensure the water use complies with existing state and federal water quality standards; and water use measurement, recording and reporting required by the Water Resources Department. The application may be denied, or if appropriate, mitigation for impacts may be needed to obtain approval of the proposed use.

If yes, you will be required to provide the following information, if applicable.

Yes No The proposed use is for more than **one** cubic foot per second (448.8 gpm) and is not subject to the requirements of OAR 690, Division 86 (Water Management and Conservation Plans).

If yes, provide a description of the measures to be taken to assure reasonably efficient water use:
N/A – Proposed use is for less than 1 cfs

Statewide - OAR 690-033-0330 thru -0340

Is the well or proposed well located in an area where the Statewide rules apply?

Yes No

If yes, and the proposed groundwater use is determined to have the potential for substantial interference with nearby surface waters you are notified that the Water Resources Department will determine whether the proposed use will occur in an area where endangered, threatened or sensitive fish species are located. If so, the Water Resources Department, Department of Fish and Wildlife, Department of Environmental Quality, and the Department of Agriculture will recommend conditions required to achieve “no loss of essential habitat of threatened and endangered (T&E) fish species,” or “no net loss of essential habitat of sensitive (S) fish species.” If conditions cannot be identified that meet the standards of no loss of essential T E fish habitat or no net loss of essential S fish habitat, the agencies will recommend denial of the application unless they conclude that the proposed use would not harm the species.

SECTION 5: WATER USE

USE	PERIOD OF USE	ANNUAL VOLUME (ACRE-FEET)
Storage for irrigation and agricultural use	December 1 to April 30	Up to 13.08 AF

For irrigation use only:

Please indicate the number of primary and supplemental acres to be irrigated (*must match map*).

Primary: N/A Acres Supplemental: N/A Acres

If you listed supplemental acres, list the Permit or Certificate number of the underlying primary water right(s):

N/A

Indicate the maximum total number of acre-feet you expect to use in an irrigation season: N/A

- If the use is **municipal or quasi-municipal**, attach **Form M**
- If the use is **domestic**, indicate the number of households: N/A (**Exempt Uses:** Please note that 15,000 gallons per day for single or group **domestic** purposes and 5,000 gallons per day for a single **industrial or commercial** purpose are exempt from permitting requirements.)
- If the use is **mining**, describe what is being mined and the method(s) of extraction (*attach additional sheets if necessary*): N/A

SECTION 6: WATER MANAGEMENT

A. Diversion and Conveyance

What equipment will you use to pump water from your well(s)?

- Pump (give horsepower and type): **Wells 1, 2 and 3 have 1.5 hp submersible pumps**
 Other means (describe): _____

Provide a description of the proposed means of diversion, construction, and operation of the diversion works and conveyance of water. **Water will be pumped from the wells to two storage ponds (East Pond and North Pond) via 12-inch PVC piping.**

B. Application Method

What equipment and method of application will be used? (e.g., drip, wheel line, high-pressure sprinkler) (attach additional sheets if necessary)

Water will be pumped and conveyed to two storage ponds. The East Pond will hold up to 3.97 acre-feet and the North Pond will store up to 9.11 acre-feet.

C. Conservation

Please describe why the amount of water requested is needed and measures you propose to: prevent waste; measure the amount of water diverted; prevent damage to aquatic life and riparian habitat; prevent the discharge of contaminated water to a surface stream; prevent adverse impact to public uses of affected surface waters (attach additional sheets if necessary).

The storage of groundwater is needed for multiple purposes, specifically irrigation and agricultural use, when live flow is unavailable in the Chehalem Creek basin. Conveyance of groundwater to the storage ponds will be through enclosed PVC piping. Storage ponds will be lined to prevent leaks and adverse impacts to the surrounding area.

SECTION 7: PROJECT SCHEDULE

- Date construction will begin: Within 5 years of permit issuance
- Date construction will be completed: Within 5 years of permit issuance
- Date beneficial water use will begin: Within 5 years of permit issuance

SECTION 8: RESOURCE PROTECTION

In granting permission to use water the state encourages, and in some instances requires, careful control of activities that may affect adjacent waterway or streamside area. See instruction guide for a list of possible permit requirements from other agencies. Please indicate any of the practices you plan to undertake to protect water resources.

- Water quality will be protected by preventing erosion and run-off of waste or chemical products.
Describe: **Water will be conveyed through enclosed PVC piping to prevent leaks to surrounding area and resources.**

- Excavation or clearing of banks will be kept to a minimum to protect riparian or streamside areas.
Note: If disturbed area is greater than one acre, applicant should contact the Oregon Department of Environmental Quality to determine if a 1200C permit is required.
Describe planned actions and additional permits required for project implementation: **N/A – No excavation or clearing of banks is planned.**

- Other state and federal permits or contracts required and to be obtained, if a water right permit is granted:
List: N/A