

Groundwater Application Review Summary Form

Application # G- 18820

GW Reviewer J Woody Date Review Completed: 9-13-2019

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.

✓
SI 9/18/19

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).

ok
JW

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18820
Date: September 18, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Jen Woody reviewed the application. Please see Jen's Groundwater Review and the Well Log.

Applicant's Well #1 (YAMH 1087): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

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

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report
are to be filed with the

WATER RESOURCES DEPARTMENT,
SALEM, OREGON 97310
within 30 days from the date
of well completion.

WATER WELL REPORT YAMH

STATE OF OREGON

(Please type or print)

(Do not write above this line)

State Well No. 2613W-27

State Permit No. _____

1087

(1) OWNER:

Name Richard Krueger
Address 16270 S. W. Hart
Beaverton, Oregon 97005

(2) TYPE OF WORK (check):

New Well Deepening Reconditioning Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary Driven
Cable Jetted
Dug Bored

(4) PROPOSED USE (check):

Domestic Industrial Municipal
Irrigation Test Well Other

CASING INSTALLED:

Threaded Welded
6" Diam. from 0 ft. to 6.7 ft. Gage .250
5" Diam. from 60 ft. to 380 ft. Gage 10
" Diam. from _____ ft. to _____ ft. Gage _____

PERFORATIONS:

Perforated? Yes No.
Type of perforator used Torch
Size of perforations 1/8 in. by 6 in.
20 perforations from 320 ft. to 340 ft.
20 perforations from 360 ft. to 380 ft.
_____ perforations from _____ ft. to _____ ft.

(7) SCREENS:

Well screen installed? Yes No
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom?
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " "
air test 1 gal./min. with 160 ft. drawdown after 1 hrs.
Artesian flow _____ g.p.m.
Temperature of water _____ Depth artesian flow encountered _____ ft.

(9) CONSTRUCTION:

Well seal—Material used cement
Well sealed from land surface to 65 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 21 sacks
How was cement grout placed? pumped

Was a drive shoe used? Yes No Plugs _____ Size: location _____ ft.
Did any strata contain unusable water? Yes No
Type of water? _____ depth of strata _____
Method of sealing strata off _____
Was well gravel packed? Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

(10) LOCATION OF WELL:

County Yamhill Driller's well number _____
1/4 Section 27 T. 25R. 3W W.M.
Bearing and distance from section or subdivision corner _____

(11) WATER LEVEL: Completed well.

Depth at which water was first found 210 ft.
Static level 200 ft. below land surface. Date 6-16
Artesian pressure _____ lbs. per square inch. Date _____

(12) WELL LOG:

Diameter of well below casing 6
Depth drilled 380 ft. Depth of completed well 380 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>Topsoil</u>	<u>0</u>	<u>2</u>	
<u>Brown clay</u>	<u>2</u>	<u>14</u>	
<u>Broken rock</u>	<u>14</u>	<u>58</u>	
<u>Medium brown rock</u>	<u>58</u>	<u>72</u>	
<u>Broken rock</u>	<u>72</u>	<u>275</u>	
<u>Medium brown rock</u>	<u>275</u>	<u>380</u>	

RECEIVED

JUL - 6 1979

WATER RESOURCES DEPT
SALEM, OREGON

Work started 6-10 1979 Completed 6-16 1979
Date well drilling machine moved off of well 6-16 1979

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Don Feakin Date 7-4, 1979
(Drilling Machine Operator)
Drilling Machine Operator's License No. 1217

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name Turner Drilling Co, Inc.
(Person, firm or corporation) (Type or print)
Address Rt 1 Box 522 Portland, Ore
[Signed] Don Feakin 97231
(Water Well Contractor)
Contractor's License No. 715 Date 7-4, 1979

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 9/13/2019
 FROM: Groundwater Section Jen Woody
 SUBJECT: Application G- 18820 Reviewer's Name Jen Woody
 Supersedes review of n/a 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: Miles Penner County: Yamhill

A1. Applicant(s) seek(s) 0.025 cfs from 1 well(s) in the Willamette Basin, Chehalem subbasin

A2. Proposed use Irrigation 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	YAMH 1087	1	CRBG	0.025	T2S/R3W-27 SE ¼ SE ¼	75' N, 335' W fr ESE cor DLC 52
2						
3						
4						
5						

* 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	870	210	200	6/16/2019	380	0-65	0-67, 60-380	n/a	320-340, 360-380	1	160	air

Use data from application for proposed wells.

A4. **Comments:** _____

A5. **Provisions of the** _____ 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: _____

A6. **Well(s) #** 1, _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: **Chehalem Mountain Groundwater Limited Area**

Comments: OAR 690-502-0200: Permits may be issued, for a period not to exceed five years, for fire protection and for drip or equally efficient irrigation provided the Director finds the proposed use and amount do not pose a threat to the groundwater resource or existing permit holders. The amount of water used for irrigation shall be further limited to one acre-foot per acre per year. Permits may be extended for additional five-year periods if the Director finds that the groundwater resource can probably support the extended use. _____

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) 7I, 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 a single aquifer in the Columbia River Basalt Group groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
 - d. **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

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

B3. **Groundwater availability remarks:** _____ The applicant’s proposed wells will produce from one or more water-bearing zones in the Columbia River Basalt Group (CRBG), a series of lava flows with a composite thickness that ranges from 300 to 400 feet in this area (Conlon et al., 2005). Each flow is characterized by a series of internal features, including a thin rubble zone at the contact between flows and a thick, dense, low porosity and low permeability interior zone. In some cases, sedimentary layers were deposited during the time between basalt flow emplacements. A flow top, sedimentary interbed and flow bottom are collectively referred to as an interflow zone. Unconfined groundwater occurs near the weathered top of the basalts, but most water occurs in interflow zones at the contacts between lava flows. CRBG flow features result in a series of stacked, thin aquifers that are confined by dense flow interiors. The low permeability of the basalt flow interiors usually results in little connection between stacked aquifers, which generally results in tabular aquifers with unique water level heads.

The proposed use of 14.3 acre-feet per year at a maximum rate of 11 gallons per minute (gpm) is unlikely to create drawdown interference with nearby wells that prevents access to water. Nearby water level data are not available. Wells access a variety of water-bearing zones within the CRBG aquifer system. Well logs in T2S/R3W- Section 27 report yields ranging from 1 to 60 gpm, with a median yield of 13 gpm. Water use and water level monitoring conditions are recommended to protect existing users.

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.**

Figure 1. Water Availability Tables

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
 Water Availability as of 3/11/2005 for
 CHEHALEM CR > WILLAMETTE R - AT MOUTH

Watershed ID #: 30200707 Basin: WILLAMETTE Exceedance Level: 80
 Time: 08:35 Date: 03/11/2005

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

Figure 2. Well Location Map

G-18820 Penner 2S/3W- Section 27 SE 1/4 SE 1/4

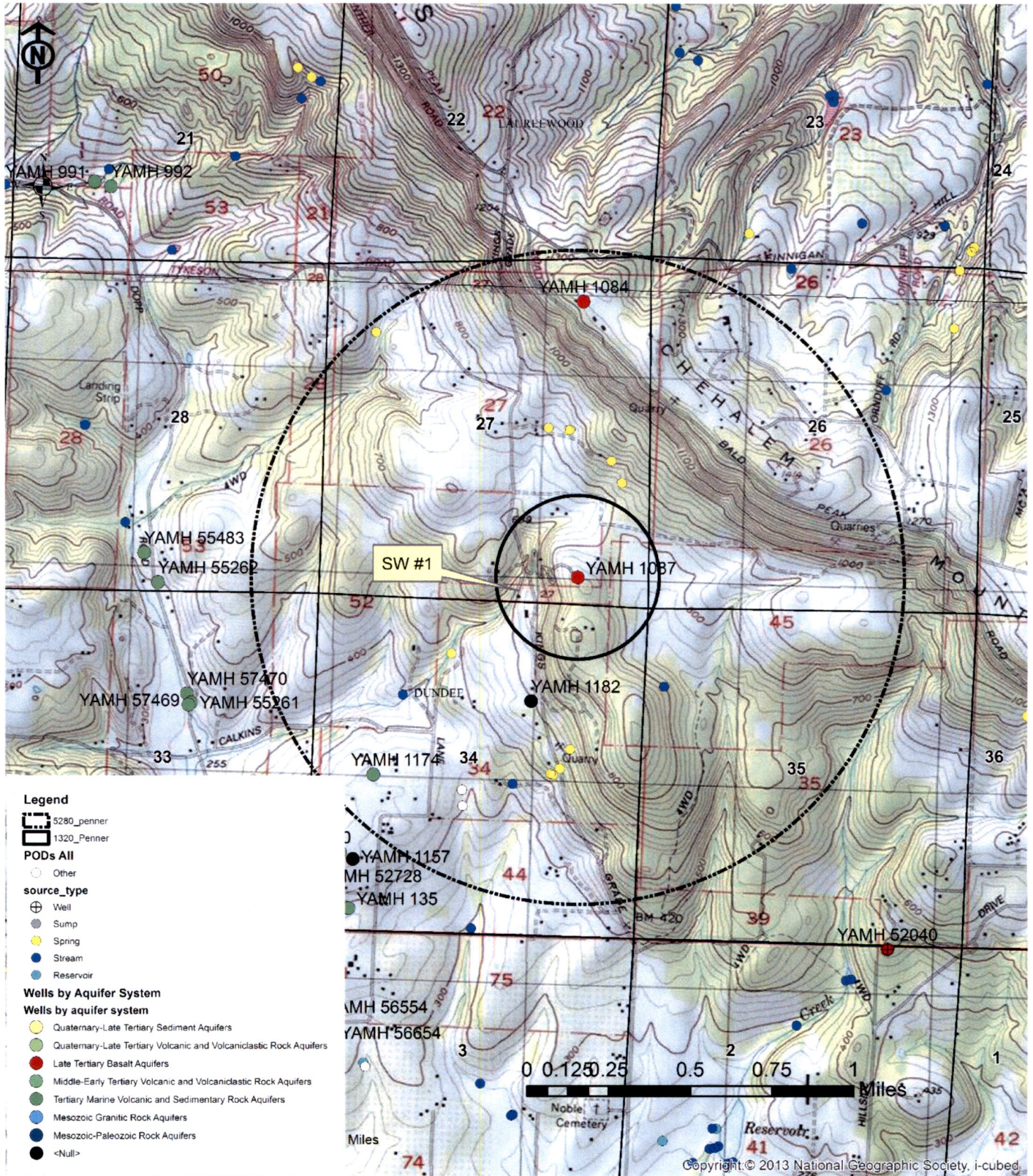


Figure 3. Water-Level Trends in Nearby Wells

