

Groundwater Application Review Summary Form

Application # G- 18778

GW Reviewer Ben Scardella, Jen Woody Date Review Completed: 8/15/20A

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.

in 8/24/17

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).



MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18778
Date: August 27, 2019

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

Applicant's Well #2 (YAMH 58090) Based on a review of the Well Report, Applicant's Well #2 seems to protect the groundwater resource.

The 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 58090

WELL I.D. LABEL#	L131340
START CARD #	1041534
ORIGINAL LOG #	

1/9/2019

(1) LAND OWNER Owner Well I.D. 3181
 First Name _____ Last Name _____
 Company STE. MICHELLE WINE ESTATES
 Address POB 1976
 City WOODINVILLE State WA Zip 98072

(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 435.00 ft.
 BORE HOLE SEAL

Dia	From	To	Material	From	To	Amt	sacks/lbs
10	0	299	Bentonite Chips	0	144	68	S
6.1	299	400			Calculated	63	
6	400	435	Cement	144	299	53	S
					Calculated	40	

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
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6	<input checked="" type="checkbox"/> 1	299	.25	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	4	<input type="checkbox"/> 15	355	sch40	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

 Shoe Inside Outside Other Location of shoe(s) 299
 Temp casing Yes Dia 10 From + 1 To 19

(7) PERFORATIONS/SCREENS
 Perforations Method _____
 Screens Type machine slotted Material PVC

Perf/Screen	Casing/Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/pipe size
Screen	Liner	4	355	435	.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)
31		430	4

 Temperature 54 °F Lab analysis Yes By _____
 Water quality concerns? Yes (describe below) TDS amount 47 ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)
 County YAMHILL Twp 3.00 S N/S Range 3.00 W E/W WM
 Sec 22 SW 1/4 of the SW 1/4 Tax Lot 900
 Tax Map Number _____ Lot _____
 Lat _____ " or 45.29045115 DMS or DD
 Long _____ " or -123.05049119 DMS or DD
 Street address of well Nearest address
 18600 NE FAIRVIEW DR, DUNDEE

(10) STATIC WATER LEVEL

Existing Well / Pre-Alteration	Date	SWL(psi)	+ SWL(ft)
Completed Well	12/19/2018		291

 Flowing Artesian? Dry Hole?
 WATER BEARING ZONES Depth water was first found 98.00

SWL Date	From	To	Est Flow	SWL(psi)	+ SWL(ft)
12/17/2018	98	156	6		98
12/19/2018	304	414	31		291

(11) WELL LOG Ground Elevation _____

Material	From	To
Top Soil	0	6
Clay, brown, w/some grit	6	34
Clay, brown w/some decayed basalt	34	49
basalt, decayed w/brown clay	49	89
basalt, decayed w/some gray	89	93
basalt, decayed w/gray and some vesic	93	156
basalt, gray med. hard	156	164
basalt, hard brown	164	175
basalt, hard gray	175	274
basalt, med. gray w/some brown	274	291
basalt, gray hard	291	304
basalt, brown vesic w/some green, soft	304	381
basalt, brown vesic soft	381	395
basalt, decay brown, less vesic	395	414
basalt, gray w/some brown	414	429
basalt, hard gray w/some light gray clay	429	435

Date Started 12/14/2018 Completed 12/19/2018

(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 _____ Date _____
 Signed _____

(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 1/9/2019
 Signed DAVID PAYSINGER (E-filed)
 Contact Info (optional) bluewaterdrilling.com || 503 868 7878

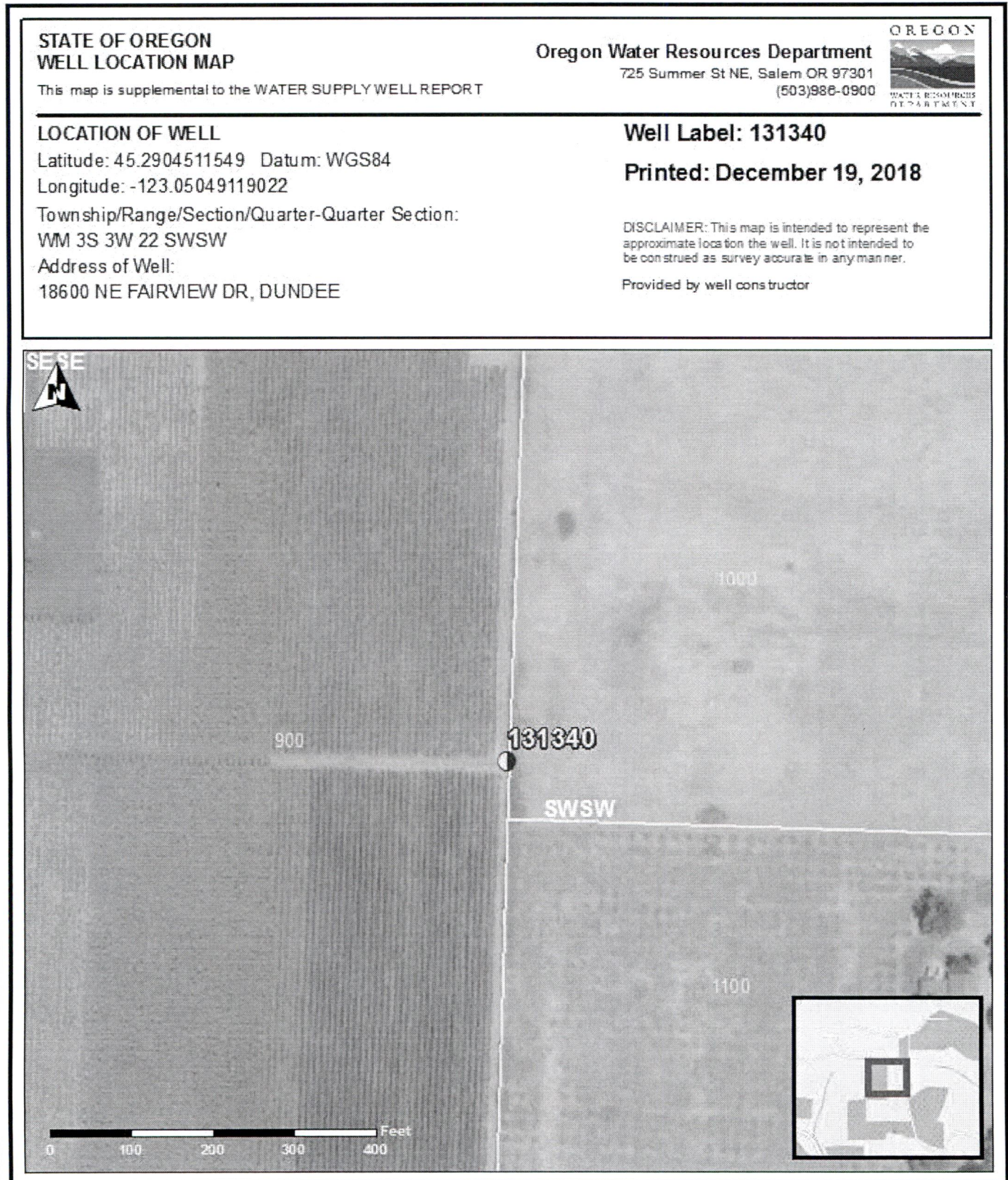
wlk

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

YAMH 58090

1/9/2019

Map of Hole



PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 8/15/19
 FROM: Groundwater Section Benjamin Scandella, Jen Woody
 Reviewer's Name
 SUBJECT: Application G-18778 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: STE MICHELLE WINE ESTATES County: YAMHILL

- A1. Applicant(s) seek(s) 0.067 CUBIC FOOT PER SECOND from 1 well(s) in the Willamette Basin, Middle Willamette subbasin
- A2. Proposed use COMMERCIAL USES Seasonality: JANUARY 1 THROUGH DECEMBER 31
- 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 58090	2	CRBG	0.067	3S/3W-22 SW-SW	603'S, 550' E fr NW Cor SW ¼ SW ¼ S 22

* 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	910	98	291	12/19/2018	435	0-299	1-299	15-355	355-435	31	N/A	Air (4-hr)

Use data from application for proposed wells.

- A4. **Comments:** YAMH 58090 is also on App G-18501, which was permitted as Permit G-18116 on 10/26/2018. That permit has a maximum rate of 0.33 cfs for irrigation of 46.45 acres, using either of 2 wells (YAMH 58090 and YAMH 7944).
-
- 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: 690-502-0240 classifies use from unconfined alluvial aquifers. This application proposes use from a confined aquifer in the CRBG, so this rule is not activated.
-
- 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) 7I, Large Water Use Reporting Condition;
 - 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 11.5 acre-feet per year at a maximum rate of 30 gallons per minute (gpm) is unlikely to create drawdown interference with nearby wells that prevents access to water. Nearby wells access a variety of water-bearing zones within the CRBG aquifer system. Well logs in T3S/R3W- Sections 21, 22, 27 and 28 report yields ranging from 1 to 264 gpm, with a median yield of 15 gpm. Wells that access the upper elevation water-bearing zones show reasonably stable trends (see figure below), while wells that access the lower elevation water bearing zones show slightly more long-term decline. The subject well appears to access upper elevation water-bearing zones, with a water-level elevation of 618 ft above mean sea level according to the measurement on the well log from 12/19/2018. Water use and water level monitoring conditions are recommended to protect existing users.

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 Group (CRBG) Aquifer	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: According to the well log, static water levels rise above water-bearing zones, indicating the aquifer is confined.

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	Harvey Creek	620	365-646	1550	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Unnamed trib. to Bronson Cr.	620	280-620	2200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	3	Hess Creek	620	400-790	1760	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Water-bearing zones are reported in the confined interflow zones of the CRBG. These water-bearing zone, as well as the water level reported on the well log, are coincident with or above perennial reaches of Harvey Creek, an unnamed tributary to Bronson Creek, and Hess Creek within a mile. The 3 creeks have incised through several hundred feet of CRBG. Groundwater from the uplands likely discharges to surface water, providing baseflow or spring flow to sustain nearby perennial reaches of the creek.

Water Availability Basin the well(s) are located within: Watershed ID #30200707 Chehalem Creek. Watershed ID #: 182, WILLAMETTE R > COLUMBIA R - AB MOLALLA R.

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"/>	0.39	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	0.39	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
1	3	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	3830	<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: * There is no appropriate model to estimate streamflow depletion from pumping in CRBG interflow zones that are incised by streams or discharge to point sources such as springs. Therefore, the percentage of interference at 30 days is not calculated.

The permitted maximum rate on YAMH 58090, 0.33 cfs, plus the proposed rate on this application (0.397 cfs) is greater than 1% of the minimum 80% natural flow in the Chehalem WAB (0.39 cfs), such that PSI is assumed for SW #1 and SW #2.

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.

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:** The applicant's well is within the Chehalem WAB and is likely hydraulically connected with at least 2 stream reaches in that WAB. The combined rate on all water rights on the well is greater than 1% of the minimum natural flow in the WAB, so PSI was found.

References Used:

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: U.S. Geological Survey Scientific Investigations Report 2005-5168.

US Geological Survey Topographic Map, Dundee Quadrangle.

OWRD water level and well log databases, includes reported water levels.

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.**

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

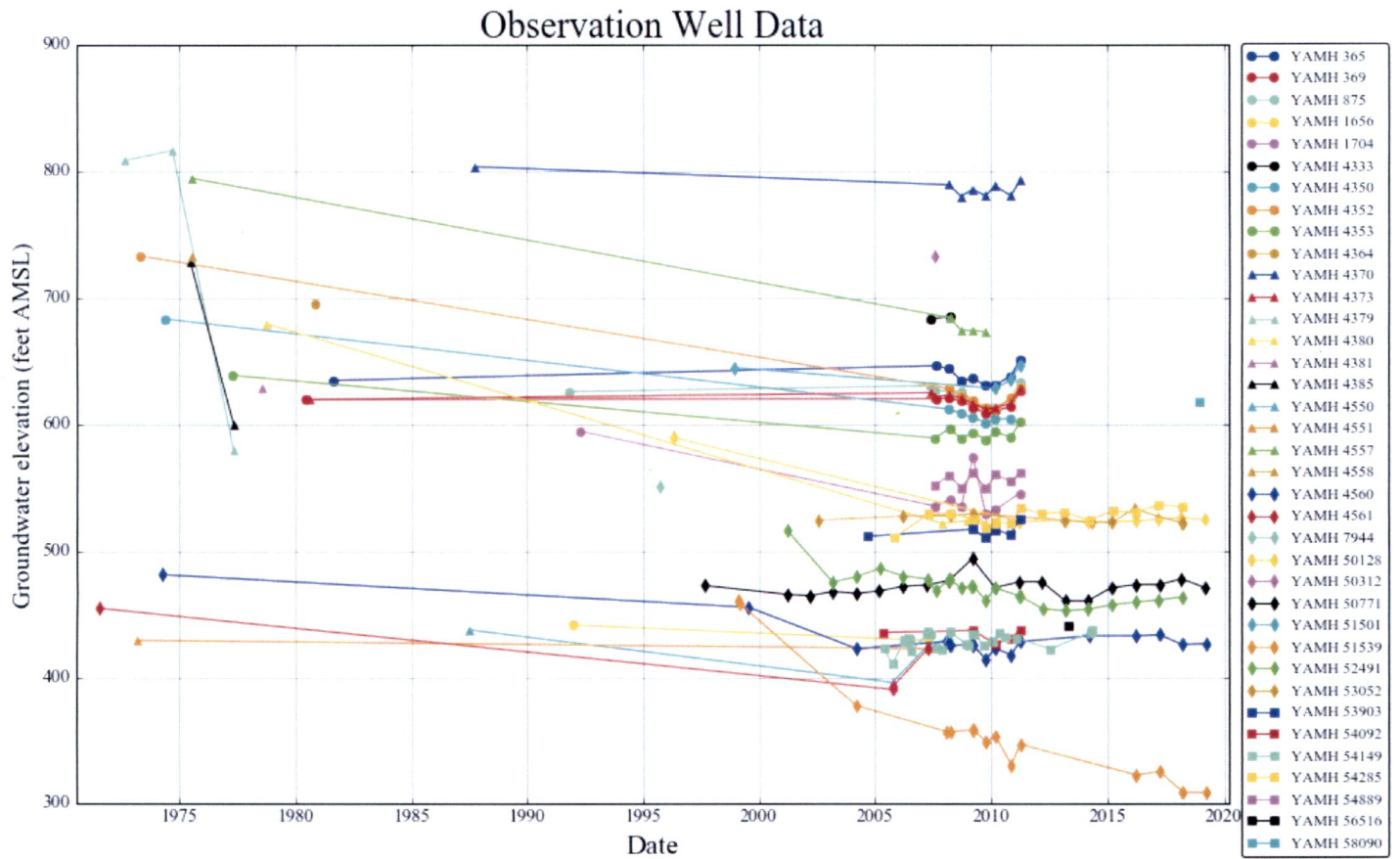
Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	101.00	3.11	0.00	97.90	0.00	0.00	97.90
2	115.00	2.97	0.00	112.00	0.00	0.00	112.00
3	80.60	2.20	0.00	78.40	0.00	0.00	78.40
4	33.00	1.31	0.00	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

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Watershed ID #: 182
 Time: 1:05 PM
 WILLAMETTE R > COLUMBIA R - AB MOLALLA R
 Basin: WILLAMETTE
 Exceedance Level: 80
 Date: 08/15/2019

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	21,400.00	2,300.00	19,100.00	0.00	1,500.00	17,600.00
FEB	23,200.00	7,480.00	15,700.00	0.00	1,500.00	14,200.00
MAR	22,400.00	7,250.00	15,100.00	0.00	1,500.00	13,600.00
APR	19,900.00	6,910.00	13,000.00	0.00	1,500.00	11,500.00
MAY	16,600.00	4,250.00	12,300.00	0.00	1,500.00	10,800.00
JUN	8,740.00	1,980.00	6,760.00	0.00	1,500.00	5,260.00
JUL	4,980.00	1,810.00	3,170.00	0.00	1,500.00	1,670.00
AUG	3,830.00	1,650.00	2,180.00	0.00	1,500.00	677.00
SEP	3,890.00	1,400.00	2,490.00	0.00	1,500.00	992.00
OCT	4,850.00	753.00	4,100.00	0.00	1,500.00	2,600.00
NOV	10,200.00	886.00	9,310.00	0.00	1,500.00	7,810.00
DEC	19,300.00	967.00	18,300.00	0.00	1,500.00	16,800.00
ANN	15,200,000	2,250,000	13,000,000	0	1,090,000	11,900,000

Water Levels in Nearby Wells



Well Location Map

G-18778: Ste Michelle. T3S / R3W - S22

