Groundwater Application Review Summary Form

Application # G- 18783

GW Reviewer Travis Brown **Date Review Completed:** 4/11/2019

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.

✓ 4/15/19

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).

WATER RESOURCES DEPARTMENT

MEMO April 11, 2019

TO: **Application G-** 18783

FROM: **GW:** Travis Brown
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ YES
The source of appropriation is within or above a Scenic Waterway
☒ NO

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

☐ 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

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager

From: Joel Jeffery, Well Construction Program Coordinator

Subject: Review of Water Right Application G-18783

Date: April 16, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Travis Brown reviewed the application. Please see Travis's Groundwater Review and the Well Logs.

Applicant's Well #1 (MARI 2625): Based on a review of the Well Report, Applicant's Well #1 does not appear to comply with current minimum well construction standards (See OAR 690 Division 210). According to the Well Report "cement and puddle clay" was used as an annular seal. Puddle clay is not an approved sealing material. In order to meet minimum well construction standards, the well must be properly resealed with an approved grout. In addition, the well log indicates that the annular space within the sealing interval was one inch. In order to meet minimum well construction standards, the annular space must be a minimum of 2 inches.

My recommendation is that the Department not issue a permit for Applicant's Well #1 (MARI 2625) unless it is brought into compliance with current minimum well construction standards or information is provided showing that it is in compliance with current minimum well construction standards.

Bringing Applicant's Well #1 into compliance with minimum well construction standards may not satisfy hydraulic connection issues.

Applicant's Well #2 (MARI 2614): 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.

2625
MARION

RECEIVED
MAR 10 1967
STATE ENGINEER
SALEM, OREGON

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

WATER WELL REPORT
STATE OF OREGON
(Please type or print)

State Well No. 5/2W-23
State Permit No.

(1) OWNER:
Name AL BRINLEE
Address RT. I BOX 337 A
GERVAIS, OREGON 97206

(2) LOCATION OF WELL:
County MARION Driller's well number I200
¼ ¼ Section 23 T. 5S R. 2W W.M.
Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check):
Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):
Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) TYPE OF WELL:
Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(6) CASING INSTALLED:
Threaded [ ] Welded [X]
6 " Diam. from TOP ft. to I32 ft. Gage 250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(7) PERFORATIONS:
Perforated? [ ] Yes [X] No
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(8) SCREENS:
Well screen installed? [ ] Yes [X] No
Manufacturer's Name
Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:
Well seal—Material used in seal CEMENT & PUDDLE CLAY
Depth of seal 20 ft. Was a packer used?
Diameter of well bore to bottom of seal 8 in.
Were any loose strata cemented off? [ ] Yes [ ] No Depth
Was a drive shoe used? [X] Yes [ ] No
Was well gravel packed? [ ] Yes [ ] No Size of gravel:
Gravel placed from ft. to ft.
Did any strata contain unusable water? [ ] Yes [ ] No
Type of water? depth of strata
Method of sealing strata off

(10) WATER LEVELS:
Static level I9 ft. below land surface Date 3/ I3/67
Artesian pressure lbs. per square inch Date

(11) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Bailer test 30 gal./min. with I6 ft. drawdown after I hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? [ ] Yes [ ] No

(12) WELL LOG:
Diameter of well below casing
Depth drilled I32 ft. Depth of completed well I32 ft.
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
TOP SOIL	0	2
YELLOW CLAY	2	28
BLUE CLAY	28	75
BLACK SAND	75	95
BLUE CLAY	95	II0
BLACK SAND	II0	I25
GRAVEL	I25	I32

Work started MAR. 3 I967 Completed MAR. I3 I967
Date well drilling machine moved off of well MAR. I3 I967

(13) PUMP:
Manufacturer's Name
Type: H.P.

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 WILLAMETTE DRILLING CO
(Person, firm or corporation) (Type or print)
Address RT. 2 BOX 276 SALEM, OREGON 97303
Drilling Machine Operator's License No. I4I
[Signed] Emil O. Beier
(Water Well Contractor)
Contractor's License No. 2 Date MAR. I3 I967

(USE ADDITIONAL SHEETS IF NECESSARY)

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

MARI. 2614

5S/2W/23dd

(START CARD) # 8653

(1) OWNER:

Well Number: 2814

Name Pinecrest Properties

Address 1115 Madison Street NE Box # 125

City Salem State OR Zip 97303

(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 152 ft.

Explosives used Yes ☐ No ☐ Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
14	0	19	dry Bentonite	0	19	
8	0	152				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☐ Other As Per 690-210-340

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	+3	152	.250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) 152

(7) PERFORATIONS/SCREENS:

☒ Perforations Method XXXXXX Mills Knife

☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
135	151	3/8" X 2"	192			☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
500+		152	1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Marion Latitude ' " Longitude ' "

Township 5S N or S, Range 2W E or W, WM.

Section 23 SE ¼ SE ¼

Tax Lot Lot Block Subdivision

Street Address of Well (or nearest address) about the 13700 block of Butteville Road

(10) STATIC WATER LEVEL:

45 ft. below land surface. Date 6-19-89

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 71

From	To	Estimated Flow Rate	SWL
71	97	50	
115	151	500+ gpm	

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
Topsoil	0	2	
Brown clay	2	21	
Gray clay	21	57	
Gray clay & black sand	57	71	
Muddy black sand	71	97	
Gray clay, sticky	97	112	
Soft Brown Clay	112	115	
Brown Sand	115	124	
Black Sand	124	127	
Black Sandy Gravel	127	131	
Black Sand and Gravel	131	151	
Gray Clay	151	152	

RECEIVED
JUN 20 1989
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 6/19/89 Completed 6/19/89

(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.

Signed Mark R Beis WWC Number 753

Date 6/19/89

(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.

Signed Mark R Beis WWC Number 753

Date 6/19/89

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER 9809C 3/88

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 4/11/2019
FROM: Groundwater Section Travis Brown
Reviewer's Name
SUBJECT: Application G- 18783 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: **David and Nancy McKinnon** County: **Marion**

A1. Applicant(s) seek(s) 1.114 cfs from 2 well(s) in the Willamette Basin, Molalla-Pudding subbasin

A2. Proposed use Nursery 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	MARI 2625	1	Alluvium	1.114	5S/2W-23 NW-SE	1750' N, 15' E fr S1/4 cor S 23
2	MARI 2614	2	Alluvium	1.114	5S/2W-23 SW-SE	740' N, 54' E fr S1/4 cor S 23

* 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	~189		19	3/13/1967	132	0-20	0-132			30	16	Bailer
2	~189	71	45	6/19/1989	152	0-19	+3-152		135-151	500+		Air

Use data from application for proposed wells.

A4. **Comments:** The proposed POA are less than 0.5 miles north of the City of Gervais, Oregon.

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 proposed POA would produce water from a confined aquifer; therefore, per OAR 690-502-0240, the relevant Willamette Basin rules (OAR 690-502-0140) do not apply.

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) **7n (annual measurement condition), 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 proposed POA produce water from 22 to 36 ft of sand and gravel within the alluvial Willamette Aquifer, which is overlain by 110 to 120 ft of fine-grained sediment (the "Willamette Silt") (Gannett and Caldwell, 1998). Reported static water levels compared to reported "first water" in nearby wells indicate that the Willamette Aquifer is predominantly confined in this area (see Well Statistics – Section 23, attached).

POA 2 (MARI 2614) is already an authorized POA under Certificate 89507 (which is still in the name of Edward Drescher and has not yet been assigned to the Applicant). Under Certificate 89507, POA 2 (MARI 2614) may divert groundwater for irrigation at a maximum rate of 0.48 cfs (~215 gpm) up to 95 af/year. If the requested allocation per this application were approved, POA 2 (MARI 2614) would be able to legally divert at a total maximum rate of 1.594 cfs (~715 gpm) up to 270 af/year, based on the combined rate and duty proposed in this application and authorized in Certificate 89507. At its proposed legally permissible rate, MARI 2614 could therefore pump for ~85.5 days continuously before exceeding its maximum annual volume.

Potential injury to other nearby groundwater rights was analyzed using the Theis equation for drawdown in a confined aquifer (Theis, 1935). Hydraulic parameters used for the analysis were derived from regional data and studies (Pumping Test Reports, Conlon et al., 2003, 2005; Iverson, 2002; McFarland and Morgan, 1996; Woodward et al., 1998) or are within a typical range of values for the parameter within the hydrogeologic regime (Freeze and Cherry, 1979; Domenico and Mifflin, 1965). The nearest known groundwater right to the proposed POA is MARI 2633, approximately 1,275 ft southeast of POA 2 (MARI 2614) (see Well Location Map, attached). Assuming a continuous pumping rate of 1.594 cfs (~715 gpm) for 85.5 days (the most conservative pumping scenario) under the most likely hydraulic parameters, results using the Theis equation indicate that pumping of MARI 2614 is not anticipated to affect another groundwater right such that said right would not be able to divert water to which it is legally entitled (see Theis Drawdown Analysis, attached).

Recent water levels for nearby observation wells do not indicate persistent or widespread declines in the Willamette Aquifer in this area (see Hydrograph, attached). Reported yields for nearby wells range from 20 to 700 gpm, with a median yield of 150 gpm. Although the requested rate under this application (1.114 cfs / 500 gpm) combined with the authorized rate under Certificate 89507 (0.48 cfs / ~215 gpm) would exceed the reported yield of both MARI 2625 (30 gpm) and MARI 2614 (500 gpm) and is significantly higher than the median yield in this area, it would not be much outside the range of reported yields. Based on the preponderance of evidence, it cannot be stated that the proposed use would exceed available capacity of the groundwater resource in this area.

Given the uncertainties inherent in the assessment of groundwater availability, it is recommended that any permit issued for the proposed use be conditioned as noted in B(1)(d)(i), above.

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	**Alluvium**	☒	☐
2	**Alluvium**	☒	☐

Basis for aquifer confinement evaluation: Reported static water levels for the proposed POA are above the noted water-bearing zones and within the overlying fine-grained sediments, indicating confined conditions. Reported static water levels compared to reported "first water" in nearby wells indicate that the Willamette Aquifer is predominantly confined in this area (see Well Statistics – Section 23, attached).

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Sam Brown Creek**	**~170**	**~155**	**~7,645**	☒	☐	☐	☐	☒
2	**1**	**Sam Brown Creek**	**~145**	**~155**	**~6,840**	☒	☐	☐	☐	☒

Basis for aquifer hydraulic connection evaluation: The nearest identified surface water source to the proposed POA is Sam Brown Creek (SW 1). Estimated surface water elevation at the perennial headwater of SW 1 is below or less than 10 ft above the estimated groundwater elevation in the proposed POA (WatershedSciences, 2009; USGS, 2013). Water table mapping in this area indicates that groundwater in the alluvial Willamette Aquifer in this area flows toward and discharges into local streams incised into the French Prairie plateau, including SW 1 (Gannett and Caldwell, 1998; Conlon et al, 2005). The available evidence is therefore sufficient to conclude hydraulic connection between the alluvial Willamette Aquifer and SW 1.

Water Availability Basin (WAB) the well(s) are located within: POA: MILL CR > PUDDING R – AT MOUTH
SW 1: PUDDING R > MOLALLA R – AB MILL 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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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

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

Comments: No surface water sources were identified within 1 mile of the proposed POA.

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
2	**1**	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %	<1 %
Well Q as CFS		0.242	0.242	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.438	0.242	0.242
Interference CFS		<0.002	<0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002

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.		<0.002	<0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002
(B) = 80 % Nat. Q		1,040	1,180	1,010	787	425	224	109	71	67.3	91.6	363	957
(C) = 1 % Nat. Q		10.4	11.8	10.1	7.87	4.25	2.24	1.09	0.71	0.673	0.916	3.63	9.57
(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: Stream depletion of SW 1 due to pumping of POA 2 (MARI 2614) – being the nearest proposed POA to SW 1 – was evaluated using the Hunt 2003 analytical stream depletion model (Hunt, 2003). Hydraulic parameters used for the analysis were derived from regional data and studies (Pumping Test Reports, Conlon et al., 2003, 2005; Iverson, 2002; McFarland and Morgan, 1996; Woodward et al., 1998) or are within a typical range of values for the parameter within the hydrogeologic regime (Freeze and Cherry, 1979; Domenico and Mifflin, 1965). The pumping rate was pro-rated based on the total permissible volume and season of use proposed in this application and authorized in Certificate 89507.

Based on the Hunt 2003 model results, the depletion of SW 1 due to pumping of POA 2 (MARI 2614) within one year of pumping is anticipated to be much less than 1 percent of the proposed pumping rate. The anticipated depletion is also much less than 1 percent of the stream discharge that is equaled or exceeded 80 percent of the time as estimated for the PUDDING R > MOLALLA R – AB MILL CR WAB, which encompasses SW 1 (Sam Brown Creek) (see Water Availability Tables, attached). The low proportional rate of depletion is likely due to the significant distance between the proposed POA and SW 1 as well as the substantial quantity of low-permeability, fine-grained sediment underlying the stream channel.

Although SW 1 is the nearest identified surface water source, the proposed POA are actually located within the MILL CR > PUDDING R – AT MOUTH WAB, which has a significantly lower estimated 80 percent exceedance stream discharge (as little as 1.88 cfs). However, the nearest surface water source within that WAB is Mill Creek, located much further (greater than 11,000 ft) away from the proposed POA and at a higher elevation than SW 1, meaning that even more low-permeability, fine-grained sediment underlies Mill Creek than SW 1. As such, the anticipated depletion of Mill Creek due to pumping of the proposed POA is even less than that anticipated for SW 1, which is already less than 1 percent of the stream discharge that is equaled or exceeded 80 percent of the time as estimated for the MILL CR > PUDDING R – AT MOUTH WAB (see Water Availability Tables, attached).

Based on the preponderance of evidence and analysis, the proposed use of groundwater detailed in this application is not anticipated to substantially interfere with nearby surface water sources.

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:** **Based on the preponderance of evidence and analysis, the proposed use of groundwater detailed in this application is not anticipated to substantially interfere with nearby surface water sources.**

References Used:

Application File: G-18783

Certificate 89507

Pumping Test Files: MARI 1901, 2437, 2614, 2634, 2651, 2655, 2656, 2659, 2681, 18489, 18805, 53043

Conlon, T.D., Lee, K.K., and Risley, J.R., 2003, Heat tracing in streams in the central Willamette Basin, Oregon, in Stonestrom, D.A. and Constantz, Jim, eds., Heat as a tool for studying the movement of groundwater near streams: U.S. Geological Survey Circular 1260, chapter 5, p. 29-34.

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Domenico, P.A. and Mifflin, 1965, Water from low-permeability sediments and land subsidence: Water Resource Research, v. 1, no. 4, p. 563-576.

Freeze, R.A. and Cherry, J.A., 1979, *Groundwater*, Prentice Hall, Englewood Cliffs, New Jersey, 604 p.

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.

Hunt, B., 2003, Unsteady stream depletion when pumping from semiconfined aquifer: Journal of Hydrologic Engineering, January/February, 2003.

Iverson, J., 2002, Investigation of the hydraulic, physical, and chemical buffering capacity of Missoula flood deposits for water quality and supply in the Willamette Valley of Oregon: Unpublished M.S. thesis, Oregon State University, 147 p.

McFarland, W.D., and Morgan, D.S., 1996, Description of the Ground-Water Flow System in the Portland Basin, Oregon and Washington: U.S. Geological Survey Water Supply Paper 2470-A, 58 p.

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, American Geophysical Union Transactions, vol. 16, p. 519-524.

United States Geological Survey, 2013, National Elevation Dataset (NED) [DEM geospatial data]. 1/9th arc-second, updated 2013.

United States Geological Survey, 2017, *Gervais quadrangle*, Oregon [map], 1:24,000, 7.5 minute topographic series, U.S. Department of the Interior, Reston, Virginia.

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, 82 p.

Watershed Sciences, 2009, LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Hood to Coast 2009, Portland, OR, May 27.

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** _____ **Logid:** _____

D2. **THE WELL does not appear to meet current well construction standards based upon:**

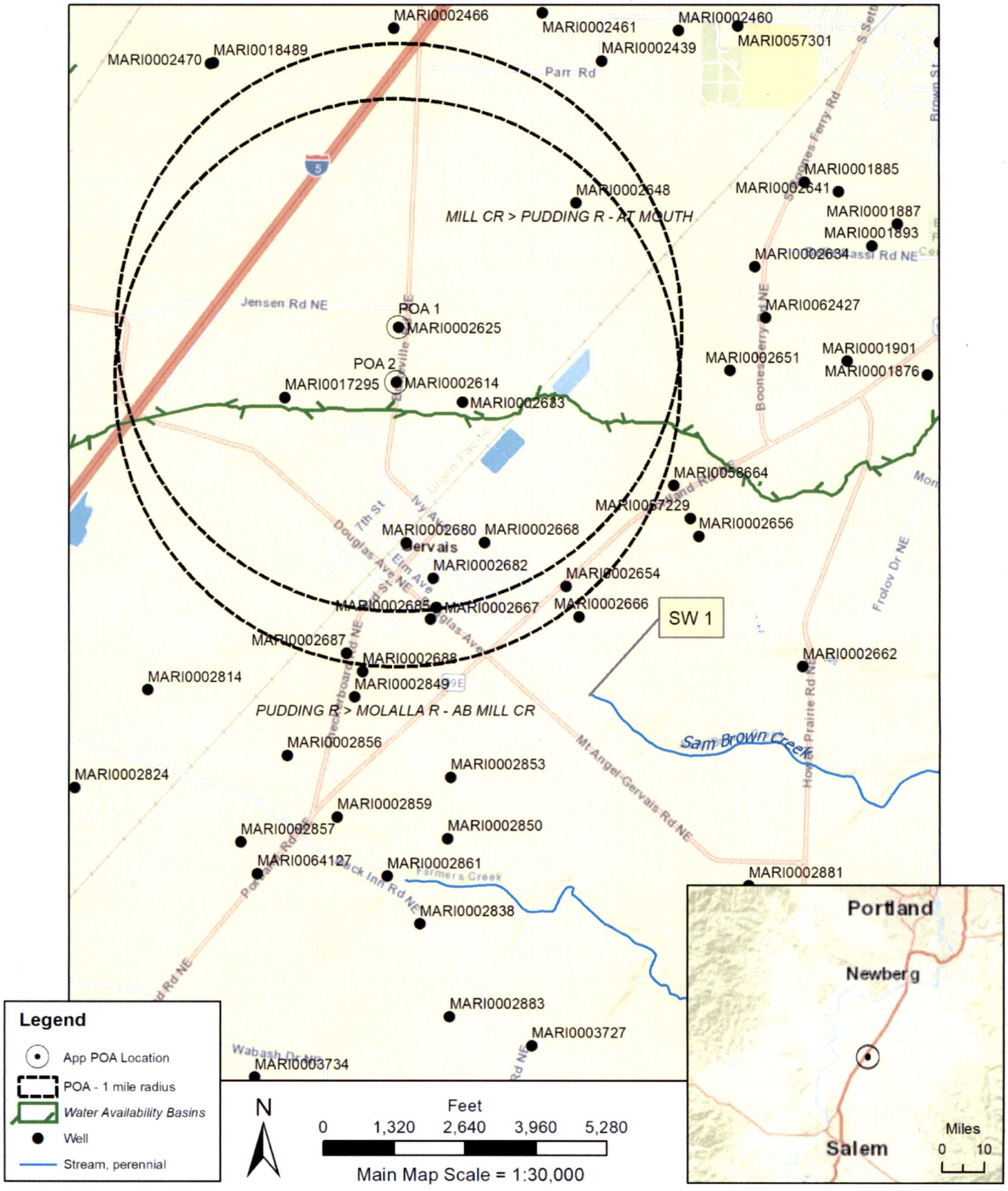
a. ☐ review of the well log;
b. ☐ field inspection by _____;
c. ☐ report of CWRE _____;
d. ☐ other: (specify) _____

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

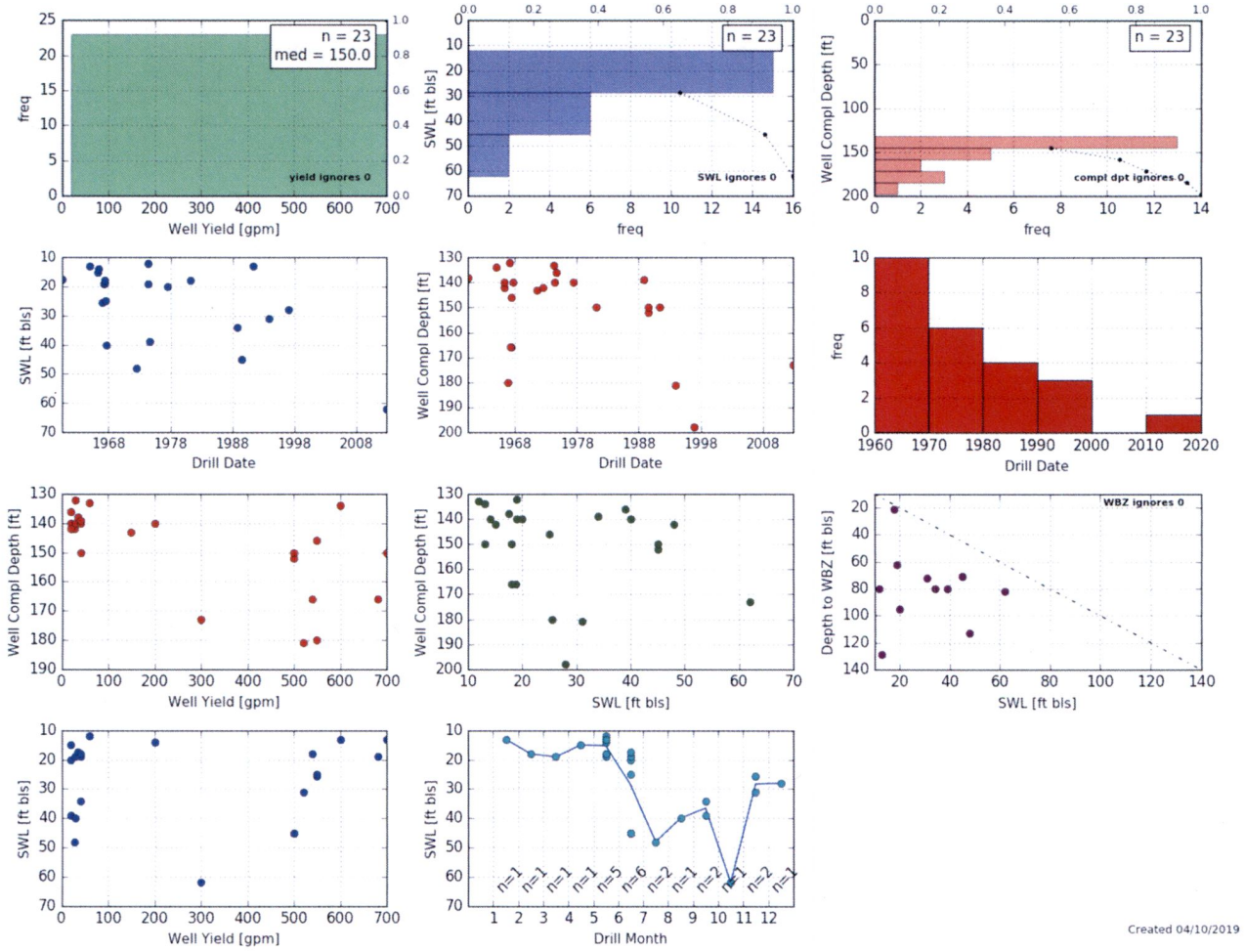
D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Well Location Map

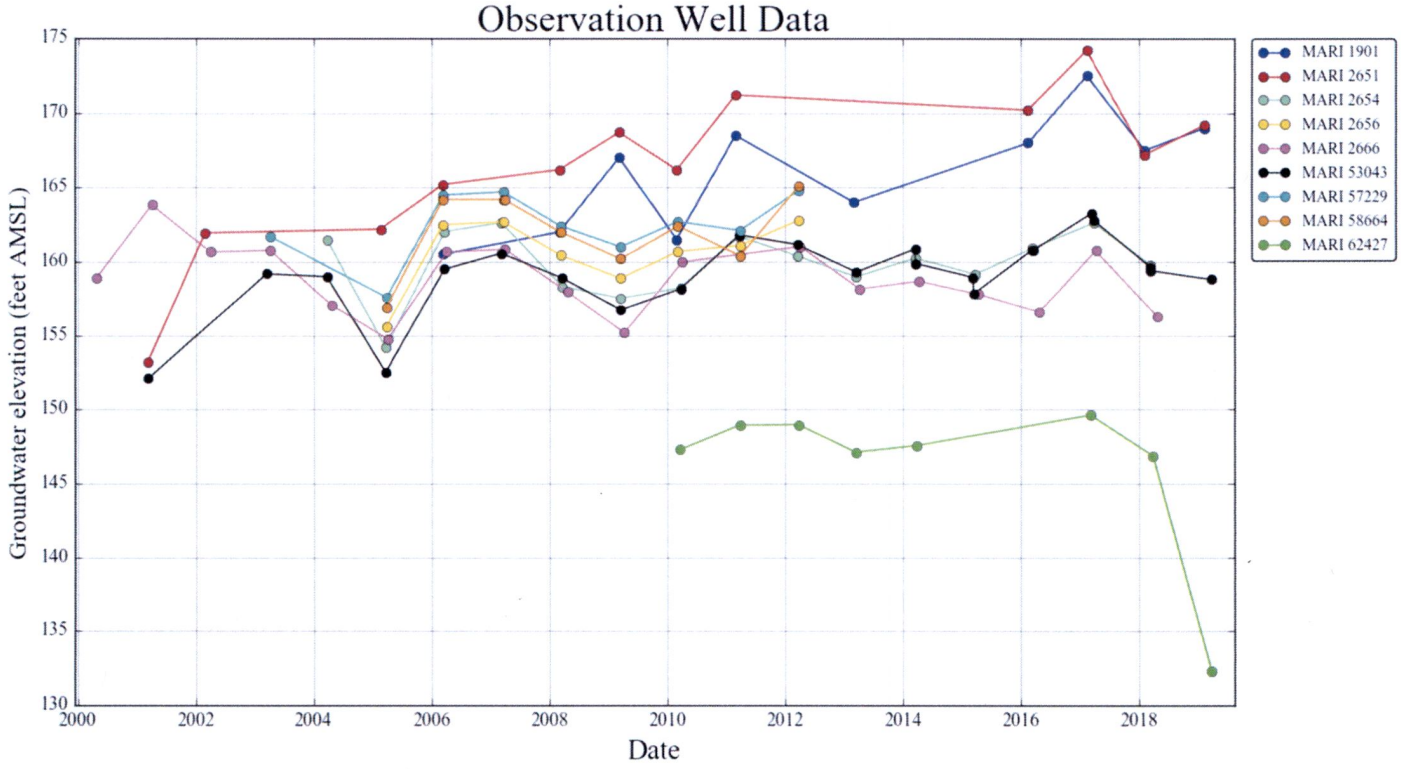
G-18783 McKinnon



Well Statistics – Section 23



Hydrographs



Version: 05/07/2018

Water Availability Tables

Water Availability Analysis
Detailed Reports

PUDDING R > MOLALLA R - AB MILL CR
WILLAMETTE BASIN
Water Availability as of 4/11/2019

Watershed ID #: 151 (Map)
Date: 4/11/2019

Exceedance Level: 80%
Time: 2:33 PM

Water Availability Calculation | Consumptive Uses and Storages | Instream Flow Requirements | Reservations | Water Rights | Watershed Characteristics

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	1,040.00	124.00	916.00	0.00	36.00	880.00
FEB	1,180.00	114.00	1,070.00	0.00	36.00	1,030.00
MAR	1,010.00	75.70	934.00	0.00	36.00	898.00
APR	787.00	51.60	735.00	0.00	36.00	699.00
MAY	425.00	49.40	376.00	0.00	36.00	340.00
JUN	224.00	70.90	153.00	0.00	36.00	117.00
JUL	109.00	112.00	-2.75	0.00	36.00	-38.70
AUG	71.00	91.60	-20.60	0.00	36.00	-56.60
SEP	67.30	52.10	15.20	0.00	36.00	-20.80
OCT	91.60	11.00	80.60	0.00	36.00	44.60
NOV	363.00	48.30	315.00	0.00	36.00	279.00
DEC	957.00	118.00	839.00	0.00	36.00	803.00
ANN	706,000.00	55,400.00	650,000.00	0.00	26,100.00	627,000.00

Water Availability Analysis
Detailed Reports

MILL CR > PUDDING R - AT MOUTH
WILLAMETTE BASIN
Water Availability as of 4/11/2019

Watershed ID #: 30200901 (Map)
Date: 4/11/2019

Exceedance Level: 80%
Time: 2:33 PM

Water Availability Calculation | Consumptive Uses and Storages | Instream Flow Requirements | Reservations | Water Rights | Watershed Characteristics

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	39.20	9.85	29.30	0.00	0.00	29.30
FEB	53.90	10.00	43.90	0.00	0.00	43.90
MAR	38.40	9.56	28.80	0.00	0.00	28.80
APR	27.60	7.13	20.50	0.00	0.00	20.50
MAY	13.70	5.68	8.02	0.00	0.00	8.02
JUN	8.72	6.93	1.79	0.00	0.00	1.79
JUL	3.79	10.60	-6.82	0.00	0.00	-6.82
AUG	2.09	8.63	-6.54	0.00	0.00	-6.54
SEP	1.88	4.71	-2.83	0.00	0.00	-2.83
OCT	2.39	1.24	1.15	0.00	0.00	1.15
NOV	6.05	7.24	-1.19	0.00	0.00	-1.19
DEC	25.90	9.66	16.20	0.00	0.00	16.20
ANN	30,000.00	5,500.00	25,300.00	0.00	0.00	25,300.00

Theis Drawdown Analysis

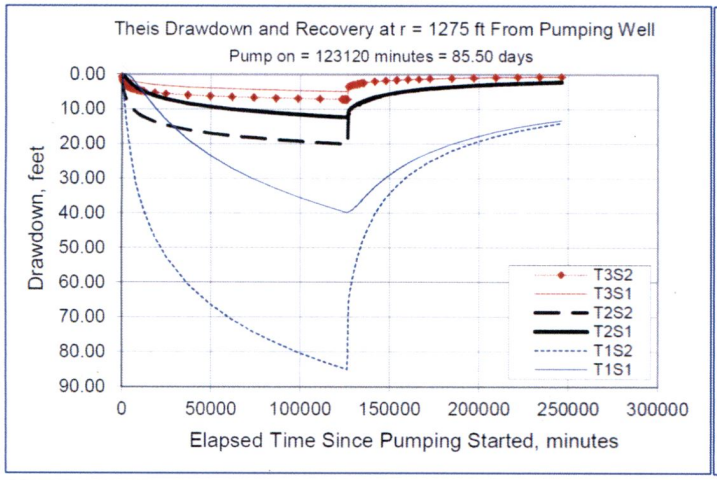
Theis Time-Drawdown Worksheet v.3.00

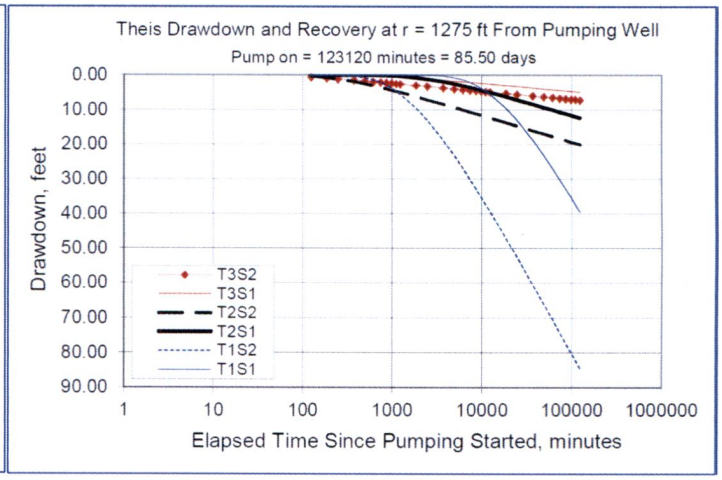
Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r, from a pumping well for 3 different T values and radial distance, r, from a pumping well for 3 different T values and 2 different S values.

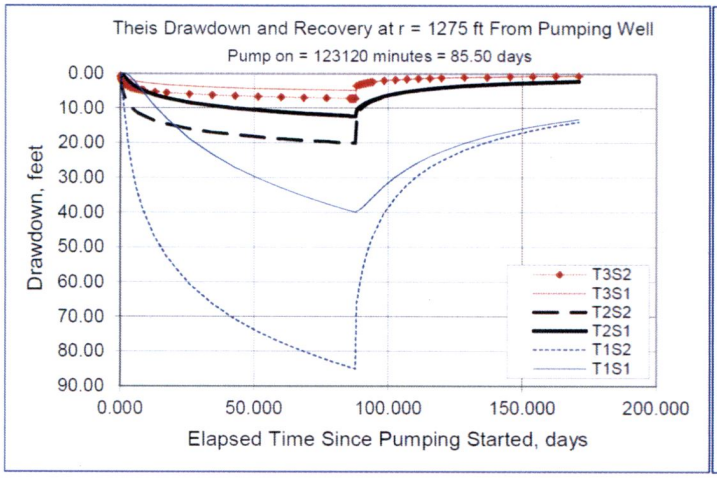
Written by Karl C. Wozniak September 1992. Last modified December 30, 2014

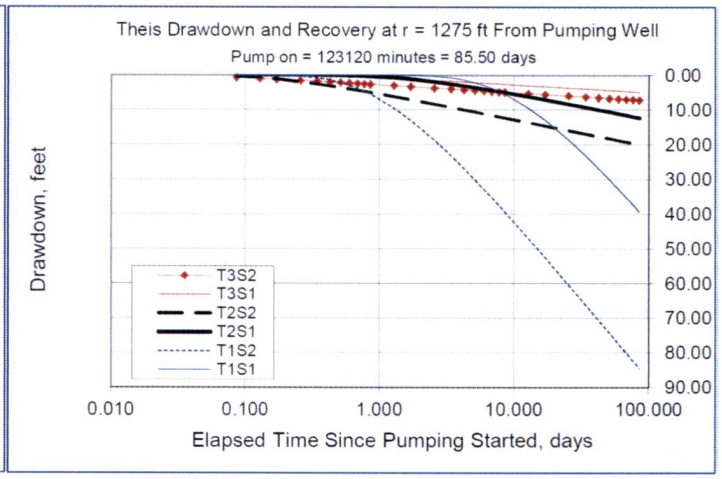
Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		85.5		d	
Radial distance from pumped well:	r		1275.00		ft	Q conversions
Pumping rate	Q		715.4		gpm	715.39 gpm
Hydraulic conductivity	K	14	81	275	ft/day	1.59 cfs
Aquifer thickness	b		40		ft	95.64 cfm
Storativity	S_1		0.01000			137,721.60 cfd
	S_2		0.00100			3.16 af/d
Transmissivity Conversions	T_f2pd	540	3,255	11,000	ft2/day	
	T_ft2pm	0.3750	2.2604	7.6389	ft2/min	
	T_gpdpft	4,039	24,347	82,280	gpd/ft	

Use the Recalculate button if recalculation is set to manual









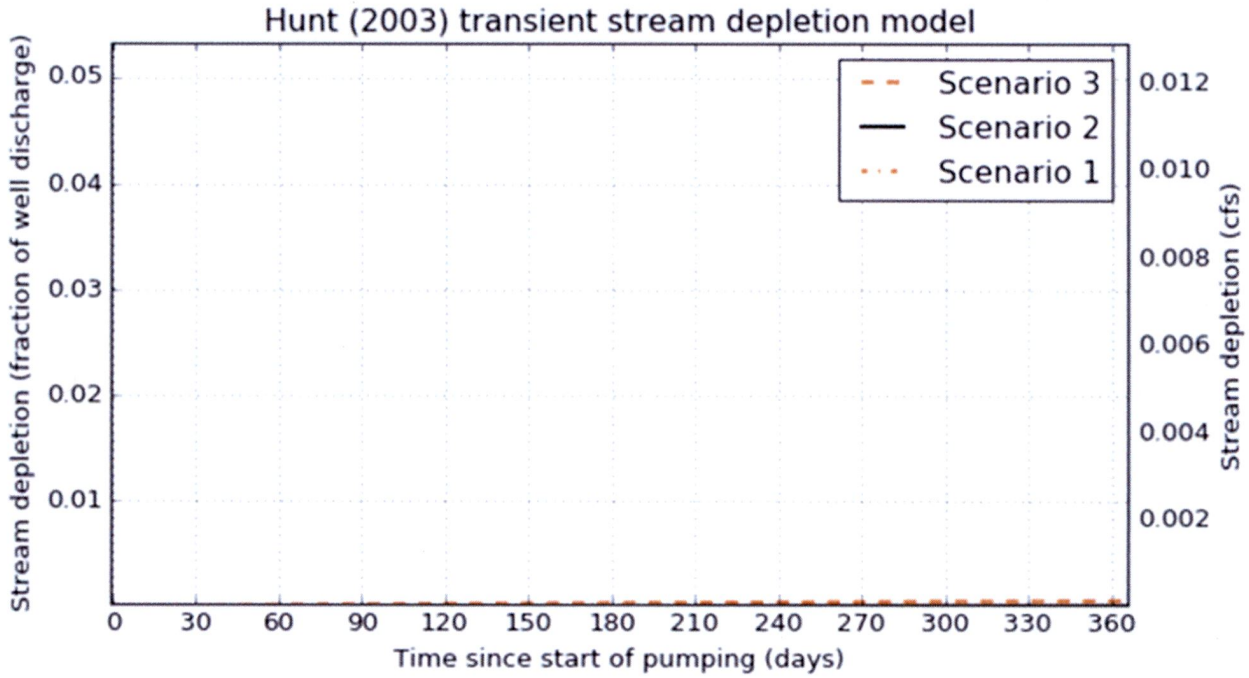
Stream Depletion Analysis: POA 2 – SW 1

Application type:	G
Application number:	18783
Well number:	2
Stream Number:	1
Pumping rate (cfs):	0.242
Pumping duration (days):	365
Pumping start month number (3=March)	1

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	6840	6840	6840	ft
Aquifer transmissivity	T	540	3255	11000	ft2/day
Aquifer storativity	S	0.15	0.1	0.05	-
Aquitard vertical hydraulic conductivity	Kva	0.01	0.05	0.1	ft/day
Aquitard saturated thickness	ba	90	90	90	ft
Aquitard thickness below stream	babs	85	85	85	ft
Aquitard specific yield	Sya	0.2	0.2	0.2	-
Stream width	ws	10	10	10	ft

Stream depletion for Scenario 2:

Days	10	30	60	90	120	150	180	210	240	270	300	330	360
Depletion (%)	0	0	0	0	0	0	0	0	0	0	0	0	0
Depletion (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



STATE OF OREGON

COUNTY OF MARION

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

EDWARD DRESCHER
34224 S MERIDIAN RD
WOODBURN OR 97071

confirms the right to use the waters of A WELL in the PUDDING RIVER Basin for IRRIGATION of 38.0 ACRES.

This right was perfected under Permit G-12024. The date of priority is FEBRUARY 25, 1993. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.48 CUBIC FOOT PER SECOND or its equivalent in case of rotation, measured at the well.

The well is located as follows:

Twp	Rng	Mer	Sec	Q-Q	GLot	Measured Distances
5 S	2 W	WM	23	SW SE	6	740 FEET NORTH & 54 FEET EAST FROM S1/4 CORNER, SECTION 23

The amount of water used for irrigation, together with the amount secured under any other right existing for the same lands, is limited to a diversion of ONE-EIGHTIETH of one cubic foot per second, or its equivalent for each acre irrigated, and shall be further limited to a diversion of not to exceed 2.5 acre-feet per acre for each acre irrigated during the irrigation season of each year.

THE PERIOD OF USE FOR IRRIGATION IS MARCH 1 THROUGH OCTOBER 31 OF EACH YEAR.

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q	GLot	DLC	Acres
5 S	2 W	WM	23	NE SW	2		3.0
5 S	2 W	WM	23	SE SW	5		23.0
5 S	2 W	WM	23	NW SE	2		1.0
5 S	2 W	WM	23	SW SE	5		1.5
5 S	2 W	WM	26	NE NW	2		9.0
5S	2 W	WM	26	NE NW		54	0.5

NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

WORK COPY

Measurement, recording and reporting conditions:

A. The water user shall maintain the meter or measuring device in good working order.

B. The water user shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

C. The Director may require the water user to keep and maintain a record of the amount (volume) of water used and may require the water user to report water use on a periodic schedule as established by the Director. In addition, the Director may require the water user to report general water use information, the periods of water use and the place and nature of use of water under the right. The Director may provide an opportunity for the water user to submit alternative reporting procedures for review and approval.

This right is limited to any deficiency in the available supply of any prior right existing for the same land.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The well shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a useable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

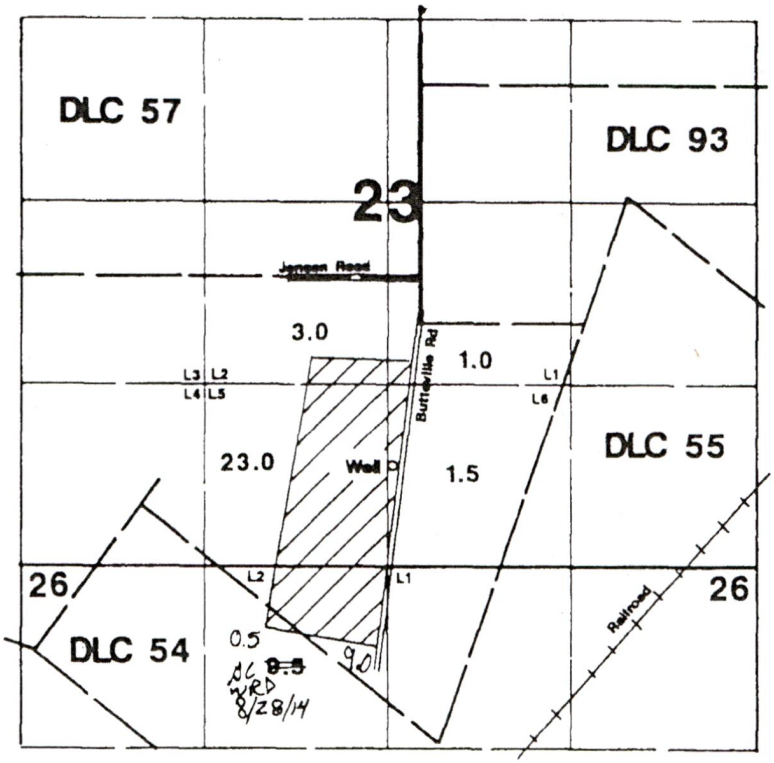
The use of water shall be limited when it interferes with any prior surface or ground water rights.

The right to the use of the water for the above purpose is restricted to beneficial use on the place of use described.

Issued SEP 19 2014

Dwight French
Water Right Services Division Administrator for
Director
Oregon Water Resources Department

T.5S. R.2W., W.M



1" = 1320'

Area Irrigated

Well is located 740'N & 54'E from the S 1/4 corner of Section 23.

RECEIVED
JUL 01 1999
WATER RESOURCES DEPT
SALEM, OREGON

Final Proof Survey

Application #: G-13305 **Permit #:** G-12024

In Name Of

Edward Drescher

Surveyed on June 22, 1999 by JM Schuette

This Map Was Prepared For The Purpose Of Identifying The Location Of A Water Right Only And Is Not Intended To Provide Legal Dimensions Or Location Of Property Ownership Lines.

Certified Water Right Examiner
#117
James M. Schuette
Nov. 19, 1987
STATE OF OREGON

WORK COPY

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager

From: Joel Jeffery, Well Construction Program Coordinator

Subject: Re-Review of Water Right Application G-18783

Date: December 12, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Travis Brown reviewed the application. Please see Travis's Groundwater Review and the Well Logs.

Applicant's Well #1 (MARI 2625 and MARI 68946, the repair of MARI 2625). Based on a review of the Repair Well Report, Applicant's Well #1 appears to protect the groundwater resource.

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

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager

From: Joel Jeffery, Well Construction Program Coordinator

Subject: Review of Water Right Application G-18783

Date: April 16, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Travis Brown reviewed the application. Please see Travis's Groundwater Review and the Well Logs.

Applicant's Well #1 (MARI 2625): Based on a review of the Well Report, Applicant's Well #1 does not appear to comply with current minimum well construction standards (See OAR 690 Division 210). According to the Well Report "cement and puddle clay" was used as an annular seal. Puddle clay is not an approved sealing material. In order to meet minimum well construction standards, the well must be properly resealed with an approved grout. In addition, the well log indicates that the annular space within the sealing interval was one inch. In order to meet minimum well construction standards, the annular space must be a minimum of 2 inches.

My recommendation is that the Department not issue a permit for Applicant's Well #1 (MARI 2625) unless it is brought into compliance with current minimum well construction standards or information is provided showing that it is in compliance with current minimum well construction standards.

Bringing Applicant's Well #1 into compliance with minimum well construction standards may not satisfy hydraulic connection issues.

Applicant's Well #2 (MARI 2614): 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)

water Right APP-G18548

WELL I.D. LABEL# L 131593
START CARD # 1045921
ORIGINAL LOG #

(1) LAND OWNER
Owner Well I.D. 1
First Name Dave Last Name McKinnon
Company McKinnon Nursery
Address 13835 ButtevilleRD NE
City Gervais State OR Zip 97026

(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:	6		0	132	250	◉	○	☒	☐

Seal: Material | From | To | Amt | sacks/lbs

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Reverse Rotary ☐ Other

(4) PROPOSED USE
☐ Domestic ☒ Irrigation ☐ Community
☐ Industrial/ Commericial ☐ Livestock ☐ Dewatering
☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION
Special Standard ☐ (Attach copy)
Depth of Completed Well 132 ft.

BORE HOLE

Dia	From	To
10	0	2
10	2	20

SEAL

Material	From	To	Amt	sacks/lbs
Bentonite Chips	0	2	1	S
		Calculated	1	
Cement with 3% Bente	2	20	9	S
		Calculated	6	

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☒ Other Poured and Probed
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 Pounds Actual Amount Pounds

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
◉	○	6	☒	1	0	250	◉	○	☒	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s)
Temp casing ☒ Yes Dia 10 From 0 To 20

(7) PERFORATIONS/SCREENS
Perforations Method
Screens Type Material

Perf/Screen	Casing/Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/pipe size

(8) WELL TESTS: Minimum testing time is 1 hour
○ Pump ○ Bailer ○ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)

Temperature °F Lab analysis ☐ Yes By
Water quality concerns? ☐ Yes (describe below) TDS amount

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)
County MARION Twp 5 S N/S Range 2 W E/W WM
Sec 23 NW 1/4 of the SW 1/4 Tax Lot 1900
Tax Map Number Lot
Lat ° ' " or DMS or DD
Long ° ' " or DMS or DD
◉ Street address of well ○ Nearest address
13835 Butteville RD NE Gervais OR ,97026

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration	12-08-2019		☐	30
Completed Well	12-08-2019		☐	30

Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES Depth water was first found 30

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) WELL LOG
Ground Elevation

Material	From	To
Concrete and gravel	0	1
Clay yellow and tan sticky firm	1	20
NOTE: 10 inch overshot was run to re seal well to		
20 ft and pump cement with tremie pipe, casing		
highth adjustment was done to bring well 1ft above		
ground and original well log is attached!!!!		
permit #is written on top of new well log next to		
new id tag #		

RECEIVED
DEC 9 2019
OWRD

Date Started 12-08-2019 Completed 12-08-2019

(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 1725 Date 12-09-2019
Signed Troy L Reynolds

(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.
RECEIVED
License Number 1725 Date 12-09-2019
Signed
DEC 9 2019
Contact Info (optional)

ORIGINAL - WATER RESOURCES DEPARTMENT
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK
OWRD
Form Version: 0.95

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

water Right Appl # G 18783
MARI 68946

WELL I.D. LABEL# L 131593
START CARD # 1045921
ORIGINAL LOG #

(1) LAND OWNER

Owner Well I.D. 1
First Name Dave Last Name McKinnon
Company McKinnon Nursery
Address 13835 ButtevilleRD NE
City Gervais State OR Zip 97026

(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:	6	☐	0	132	250	◉	○	☒	☐

	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 132 ft.

BORE HOLE

Dia	From	To
10	0	2
10	2	20

SEAL

Material	From	To	Amt	sacks/lbs
Bentonite Chips	0	2	1	S
		Calculated	1	
Cement with 3% Bento	2	20	9	S
		Calculated	6	

How was seal placed Method ☐ A ☐ B ☒ C ☐ D ☐ E
☒ Other Poured and Probed
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 Pounds Actual Amount Pounds

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
◉	○	6	☒	1	0	250	◉	○	☒	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s)
Temp casing ☒ Yes Dia 10 From 0 To 20

(7) PERFORATIONS/SCREENS

Perforations Method
Screens Type Material

Perf/Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size

(8) WELL TESTS: Minimum testing time is 1 hour

○ Pump ○ Bailer ○ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)

Temperature °F Lab analysis ☐ Yes By
Water quality concerns? ☐ Yes (describe below) TDS amount

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County MARION Twp 5 S N/S Range 2 W E/W WM
Sec 23 NW 1/4 of the SW 1/4 Tax Lot 1900
Tax Map Number Lot
Lat ° ' " or DMS or DD
Long ° ' " or DMS or DD
◉ Street address of well ○ Nearest address
13835 Butteville RD NE Gervais OR ,97026

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration	12-08-2019		☐	30
Completed Well	12-08-2019		☐	30

Flowing Artesian? ☐ Dry Hole? ☐

WATER BEARING ZONES Depth water was first found 30

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					☐	
					☐	
					☐	
					☐	
					☐	

(11) WELL LOG

Ground Elevation

Material	From	To
Concrete and gravel	0	1
Clay yellow and tan sticky firm	1	20
NOTE: 10 inch overshot was run to re seal well to		
20 ft and pump cement with tremie pipe, casing		
highth adjustment was done to bring well 1ft above		
ground and original well log is attached!!!!		
permit #is written on top of new well log next to		
new id tag #		

RECEIVED
DEC 9 2019
OWRD

Date Started 12-08-2019 Completed 12-08-2019

(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 1725 Date 12-09-2019
Signed Troy L Reynolds

(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

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DEC 9 2019
OWRD

License Number 1725 Date 12-09-2019
Signed
Contact Info (optional)

ORIGINAL - WATER RESOURCES DEPARTMENT
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK. Form Version: 0.95

MAR 2625

RECEIVED
MAR 10 1967
STATE ENGINEER
OREGON

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the
STATE ENGINEER, SALEM, OREGON 97310
within 30 days from the date of well completion.

WATER WELL REPORT
STATE OF OREGON
(Please type or print)

State Well No. 5/2W-23
State Permit No.

(1) OWNER:
Name AL BRINLEE
Address RT. I BOX 337 A
GERVAIS, OREGON 97206

(2) LOCATION OF WELL:
County MARION Driller's well number I200
¼ ¼ Section 23 T. 5S R. 2W W.M.
Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check):
Well [X] Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):
Domestic [X] Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) TYPE OF WELL:
Rotary ☐ Driven ☐
Cable [X] Jetted ☐
Dug ☐ Bored ☐

(6) CASING INSTALLED:
Threaded ☐ Welded [X]
6 " Diam. from TOP ft. to I32 ft. Gage 250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(7) PERFORATIONS:
Perforated? ☐ Yes [X] No
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(8) SCREENS:
Well screen installed? ☐ Yes [X] No
Manufacturer's Name
Model No.
Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:
Well seal—Material used in seal CEMENT & PUDDLE CLAY
Depth of seal 20 ft. Was a packer used?
Diameter of well bore to bottom of seal 8 in.
Were any loose strata cemented off? ☐ Yes ☐ No Depth
Was a drive shoe used? [X] Yes ☐ No
Was well gravel packed? ☐ Yes ☐ No Size of gravel:
Gravel placed from ft. to ft.
Did any strata contain unusable water? ☐ Yes ☐ No
Type of water? depth of strata
Method of sealing strata off

(10) WATER LEVELS:
Static level I9 ft. below land surface Date 3/ I3/67
Artesian pressure lbs. per square inch Date

(11) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes [X] No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Bailer test 30 gal./min. with I6 ft. drawdown after I hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

(12) WELL LOG:
Diameter of well below casing
Depth drilled I32 ft. Depth of completed well I32 ft.
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
TOP SOIL	0	2
YELLOW CLAY	2	28
BLUE CLAY	28	75
BLACK SAND	75	95
BLUE CLAY	95	II0
BLACK SAND	II0	I25
GRAVEL	I25	I32

Work started MAR. 3 I967 Completed MAR. I3 I967
Date well drilling machine moved off of well MAR. I3 I967

(13) PUMP:
Manufacturer's Name
Type: H.P.

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 WILLAMETTE DRILLING CO
(Person, firm or corporation) (Type or print)
Address RT. 2 BOX 276 SALEM, OREGON 97303
Drilling Machine Operator's License No. I4I
[Signed] Emil O. Beier
(Water Well Contractor)
Contractor's License No. 2 Date MAR. I3 I967

(USE ADDITIONAL SHEETS IF NECESSARY)