

Approved:

A handwritten signature in blue ink, appearing to be 'Tommy Laird', written over a light blue horizontal line.

MEMO

To: Kristopher Byrd, Well Construction Manager
From: Tommy Laird, Well Construction Program Coordinator
Subject: Review of Water Right Application LL-1962
Date: May 15, 2024

The attached application was forwarded to the Well Construction Section by the Groundwater Section. Travis Brown and Mitra Khadka reviewed the application. Please see Travis' and Mitra's Groundwater Review and the Well Reports.

Applicant's Well Hagerty Well (BENT 654): Based on a review of the Well Report, Applicant's Hagerty Well seems to protect the groundwater resource.

The construction of Hagerty Well may not satisfy hydraulic connection issues.

Applicant's Well Sissel Well (BENT 56583): Based on a review of the Well Report, Applicant's Sissel Well seems to protect the groundwater resource.

The construction of Sissel Well may not satisfy hydraulic connection issues.

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

BENT 654

RECEIVED
BENT 654
JAN 31 1991

1/5/40/b
24109

(START CARD) #

(1) OWNER:

Name: Gary Ferguson
Address: 633 Nadergalt Loop RD.
City: Adrian State: Oreg Zip: 97371

Well Number: _____ LOCATION OF WELL by legal description:
SALEM, OREGON

County: Denton Latitude _____ Longitude _____
Township: 11 N of 9 Range: 4 E of 10 WM.
Section: 6 1/4 _____ 1/4 _____
Tax Lot: 500 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address): Patterson RD.
Lewardsburg, Oreg

(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 140 ft.

Explosives used Yes No Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10"	0	39	Cement	0	39	10
6"	39	140				

How was seal placed: Method A B C D E

Other _____

Backfill placed from _____ ft. to _____ ft. Material _____

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Casing:	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6"	0	39	290	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:	4"	0	140	188	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

Perforations Method Shell Screen

Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
40	135	4" long	110	1/2" wide		<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

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

Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
30	109	139	1 hr.

Temperature of water 52 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: _____

(10) STATIC WATER LEVEL:

30 ft. below land surface. Date 1-26-91

Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 122'

From	To	Estimated Flow Rate	SWL
122	126	30 gal/min	30'

(12) WELL LOG:

Ground elevation _____

Material	From	To	SWL
Brown clay and grit	0	6	
Brown and gray clay	6	10	
Brown sandy clay	10	15	
Brown and gray clay	15	24	
gray sand stone	24	55	
hard gray sand	55	115	
stone			
light gray sand	115	140	30'
stone			

Date started 1-24-91 Completed 1-26-91

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed R. With WWC Number 1271
Date 1-29-91



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301
(503) 986-0900
www.wrd.state.or.us

Application for
Well ID Number

RECEIVED

FEB 08 2018

OWRD

Do not complete if the well already has a Well Identification Number.

I. OWNER INFORMATION

Current Owner Name (please print): DAVID BEISIEGEL
Mailing Address: 6400 NE PETTIBONE DR
City, State, Zip: CORVALLIS, OR 97330
Mail Well ID Tag to: [X] SAME AS ABOVE [] In Care Of (C/O)
Name & Address:
City, State, Zip:

II. WELL LOCATION INFORMATION (Please fill out as completely as possible)

Township: 11S (North / South) Range: 4W (East / West) Section: 6 1/4 of the 1/4
Tax Lot (usually last 3-5 numbers of Tax Map #): 2300 County BENTON
GPS Coordinates:
Street Address of Well, City: 6400 NE PETTIBONE DR
If the property had a different street address in the past: PETTIBONE DR formerly part of TL 500

III. GENERAL WELL INFORMATION (Please fill out as completely as possible, AND attach copy of Well Log, if available)

Use of Well (domestic, irrigation, commercial, industrial, monitoring): DOMESTIC
Date Well Constructed (or property built): 1/26/91 Total Well Depth: 140' Casing Diameter: 6"
Owner at time the well was constructed (if known): GARY FERGUSON Well Log # (if known): BENT 654
Other Information:

SUBMITTED BY (please print): DAVID GIBBS M&H PUMP SERVICES
PHONE: 541-740-3859 EMAIL &/or FAX: mhpump@msn.com

Send application to: Oregon Water Resources Department 725 Summer St NE, Suite A, Salem, Oregon 97301; or fax to (503) 986-0902.
Applications are processed in the order they are received, and Well ID Numbers are mailed within 4-5 business days.

For Official Use Only by the Oregon Water Resources Department:

Received Date:

2-8-18

Well Log Number:

BENT 654

Well Identification #:

L-129023

STATE OF OREGON WATER SUPPLY WELL REPORT

BENT 56583

WELL I.D. LABEL# L 148879 START CARD # 1060516 ORIGINAL LOG #

3/31/2023

(as required by ORS 537.545 & 537.765 and OAR 690-205-0210)

(1) LAND OWNER Owner Well I.D. DR-3656 First Name TIM & ALLISON Last Name SISSEL Company HILLTOP VINYARDS LLC Address 7160 NE AVALON DR. City CORVALLIS State OR Zip 97330

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

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

(3) DRILL METHOD [X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Cable Mud [] Reverse Rotary [] Other

(4) PROPOSED USE [X] Domestic [] Irrigation [] Community [] Industrial/ Commercial [] Livestock [] Dewatering [] Thermal [] Injection [] Other

(5) BORE HOLE CONSTRUCTION Special Standard [] (Attach copy) Depth of Completed Well 100.00 ft. BORE HOLE Dia From To Material SEAL From To Amt sacks/lbs

How was seal placed: Method [] A [] B [] C [] D [] E [X] Other POURED DRY 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 Shoe [] Inside [X] Outside [] Other Location of shoe(s) 28.6 Temp casing [X] Yes Dia 10 From + [X] 0.6 To 3

(7) PERFORATIONS/SCREENS Perforations Method Saw Cut Screens Type Material Perf/ Casing/ Screen Dia From To Scrn/slot width length # of slots Tele/ pipe size

(8) WELL TESTS: Minimum testing time is 1 hour [] Pump [] Bailer [X] Air [] Flowing Artesian Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)

Temperature 53 °F Lab analysis [] Yes By Water quality concerns? [] Yes (describe below) TDS amount 205 ppm From To Description Amount Units

(9) LOCATION OF WELL (legal description) County BENTON Twp 11.00 S N/S Range 4.00 W E/W WM Sec 6 SW 1/4 of the SW 1/4 Tax Lot 3500 Tax Map Number Lot Lat Long Street address of well Nearest address 7160 NE AVALON DR. CORVALLIS, OR 97330

(10) STATIC WATER LEVEL Date SWL(psi) + SWL(ft) Existing Well / Pre-Alteration Completed Well 3/30/2023 7 Flowing Artesian? Dry Hole?

WATER BEARING ZONES Depth water was first found 35.00 SWL Date From To Est Flow SWL(psi) + SWL(ft)

(11) WELL LOG Ground Elevation Material From To Crushed Rock Fill 0 1 Clay Brown Sticky 1 9 Clay Brown w/ Grit 9 20 Sandstone Tan Hard 20 23 Sandstone Blue/Brown Hard Fractured 23 27 Sandstone Blue Medium Fractured Broken 27 45 Sandstone Dark Blue/Gray Fractured 45 100

Date Started 3/29/2023 Completed 3/30/2023

(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. License Number 1974 Date 3/30/2023 Signed CJ NUGENT (E-filed)


(bonded) Water Well Constructor Certification I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. License Number 664 Date 3/31/2023 Signed CHARLES NUGENT (E-filed) Contact Info (optional) Nugent Drilling Co. Lebanon Oregon

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

BENT 56583

3/31/2023

Map of Hole

STATE OF OREGON WELL LOCATION MAP	Oregon Water Resources Department 725 Summer St NE, Salem OR 97301 (503)986-0900	
This map is supplemental to the WATER SUPPLY WELL REPORT		
LOCATION OF WELL	Well Label: 148879	
Latitude: 44.63783150 Datum: WGS84	Printed: March 30, 2023	
Longitude: -123.22657419	<small>DISCLAIMER: This map is intended to represent the approximate location the well. It is not intended to be construed as survey accurate in any manner.</small>	
Township/Range/Section/Quarter-Quarter Section: WM11.00S4.00W6SWSW	<small>Provided by well constructor</small>	
Address of Well: 7160 NE AVALON DR. CORVALLIS, OR 97330		



Groundwater Application Review Summary Form

Application # LL- 1962

GW Reviewer Mitra Khadka/Travis Brown Date Review Completed: 10/17/2023

Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

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

WATER RESOURCES DEPARTMENT

MEMO

October 17, 2023

TO: **Application LL- 1962**

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

SUBJECT: Scenic Waterway Interference Evaluation

- YES** The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries
- NO**

- YES**
- NO** Use the Scenic Waterway Condition (Condition 7J)

- Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below

- Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in [Enter] Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 10/17/2023
 FROM: Groundwater Section Mitra Khadka/Travis Brown
 Reviewer's Name
 SUBJECT: Application LL- 1962 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: Tim Sissel, Patrick Hagerty County: Benton

A1. Applicant(s) seek(s) 0.027 cfs from 2 well(s) in the Willamette Basin,
Upper Willamette subbasin

A2. Proposed use Irrigation Seasonality: May - September

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	BENT 654	Hagerty Well	Marine Volcanic and Sedimentary Rock	0.027	11S/4W-S6	1485'N, 1015'W fr SW cor S 6
2	BENT 56583	Sissel Well	Marine Volcanic and Sedimentary Rock	0.027	11S/4W-S6	730'N, 1200'W fr SW cor S 6

* 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
Hagerty	~410 ^a	122	30	01/26/1991	140	0-39	+1-39	39-140	40-135	30	109	Air
Sissel	~295 ^a	35	7	03/30/2023	100	0-28.6	+1.6-28.6	0-100	44-95	55	NA	Air

Use data from application for proposed wells.

A4. **Comments:** The POA/POU are located about 5 miles northeast of Corvallis, Oregon. Applicant requests for a limited license to pump a maximum annual volume of 8.1 af groundwater at the rate of 0.027 cfs from two existing domestic wells (BENT 654 and BENT 56583) for irrigation to establish 13.3 acres of grape vines.

^a Well head elevation estimated based on LIDAR measurements at well locations (Watershed Sciences, 2009).

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 are not located within ¼ mile of any perennial surface water body, and the wells will produce groundwater from a confined bedrock aquifer. Therefore, per OAR 690-502-0240, the relevant Willamette Basin rules do not apply.

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: _____
 Comments: _____

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

- B1. **Based upon available data**, I have determined that groundwater* for the proposed use:
- 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;
 - 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;
 - will not or will likely to be available within the capacity of the groundwater resource; or
 - will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource:
 - The permit should contain condition #(s) 7C, Medium water use reporting;
 - The permit should be conditioned as indicated in item 2 below.
 - The permit should contain special condition(s) as indicated in item 3 below;
- B2.
- Condition** to allow groundwater production from no deeper than _____ ft. below land surface;
 - Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
 - Condition** to allow groundwater production only from the marine sedimentary bedrock groundwater reservoir ~~between approximately~~ _____ ft. and _____ ft. below land surface;
 - 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:** Applicant's wells are completed to the Coast Range Tertiary Marine Volcanic and Sedimentary Rock Aquifers (TMVS) and produce from the marine sedimentary rocks of the Tyee and Spencer Formations. The formations are composed of low to moderately permeable, fine-grained, fractured sandstone interbedded with siltstone and shale (Frank, 1974; Gannet and Caldwell, 1998). In the area, the marine sedimentary rocks are intruded by sheets, dikes, and sills of basalt, gabbro, and diabase. These intrusive rocks are of generally low permeability and will not yield appreciable amount of water to wells (Frank and Collins, 1978).

The sedimentary rocks yield small to moderate quantities of water to the wells which are a source of stock and domestic water in a large part of this area. In the area, most wells drilled into these deposits produces about 6-40 gpm with an average yield of 16 gpm (Frank, 1974). The requested pumping rate (12 gpm) is within the range of reported yields for wells in the area. Well-logs of the proposed POA, BENT 654 and BENT 56583 report 30 gpm and 55 gpm yield, respectively.

Current and long-term groundwater level data for the TMVS in the immediate vicinity (within 1 mile radius of the POA) are not available. Wells from the surrounding areas, completed to the TMVS indicate varying groundwater conditions (see attached hydrograph). BENT 1390, located about 3 miles southwest of the proposed POA shows nearly 90 ft water level decline from the highest known level and thus, meets the definition of declined excessively or declining excessively. Another well (BENT 926) located about 700 ft away from BENT 1390 indicates about 60-70 ft seasonal fluctuation in groundwater levels. Those wells appear to produce from the volcanic rocks of the Siletz River Volcanics, a different source than the proposed POA. Other nearby wells (BENT 774, BENT 804, BENT 805, BENT 806) that produce from the volcanic rocks of the Siletz River Volcanics, however show reasonably stable water levels. BENT 1821 (located ~5 miles NE of the POA) and BENT 3498 (located ~2 miles SW of the POA) appear to produce from the same source as the proposed POA (i.e., marine sedimentary rocks) and show reasonably stable groundwater conditions at the current level of use (see attached hydrograph).

The nearest permitted well to the proposed POA appears to be BENT 55346 (Permit: G-18254), located ~700 ft southeast of the POA BENT 56583. It is likely the proposed use would cause some degree of well-to-well interference with the well

BENT 55346. However, given the low requested rate (12 gpm), the proposed use of groundwater is not anticipated to cause significant interference with the nearest groundwater user. Because of unavailability of appropriate models for fractured rock aquifers, well-to-well interference with BENT55346 was not quantified.

Based on the analysis of available groundwater data and given the limited groundwater development in the area of proposed POA, it is assumed that groundwater for the proposed use is not over-appropriated and is within the capacity of resources. However, in order to monitor and protect the resources and other groundwater rights in the area, the conditions specified in Item B1(d) and B2(c) are recommended for any permit issued pursuant to this application.

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
Hagerty	Marine Volcanic and Sedimentary Rock	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sissel	Marine Volcanic and Sedimentary Rock	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: In this area, the wells that produce from TMVS generally report SWLs above the water-bearing zones. Additionally, available well-logs in the area indicate the water-bearing zones are overlain by thick layers of claystone and shale.

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 ^a	SW Elev ft msl ^b	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
Hagerty	1	Mountain View Creek	~221	~210-290	~3500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hagerty	2	Frazier Creek Ditch	~221	~210	~4000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hagerty	3	Arbor Creek	~221	~295-315	~5000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sissel	1	Mountain View Creek	~221	~210-290	~3200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sissel	2	Frazier Creek Ditch	~221	~210	~3300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sissel	3	Arbor Creek	~221	~295-315	~5800	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: The lower reaches of SW1(Mountain View Creek) and SW2 (Frazier Creek Ditch), within 1-mile radius of the POA, are at lower elevations than the most recent groundwater elevation measured at nearby well and thus, are hydraulically connected with groundwater in the area. However, SW3 (Arbor Creek) and upper reach of SW1 are at higher elevation and not hydraulically connected with groundwater within a mile radius.

^aGroundwater elevation from well BENT 55346, measured on 4/3/2023. The well is completed at the depth of 120 ft and produces from the same source as the proposed POA.

^bSurface water elevations are estimated from LiDAR (Watershed Sciences, 2009).

Water Availability Basin the well(s) are located within: WID# 30200321 WILLAMETTE R > COLUMBIA R – AB PERIWINKLE CR AT GAGE 14174

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 (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, 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 < 1/4 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?
Hagerty	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	2540	<input type="checkbox"/>	<<25%	<input type="checkbox"/>
Hagerty	2	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	2540	<input type="checkbox"/>	<<25%	<input type="checkbox"/>
Sissel	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	2540	<input type="checkbox"/>	<<25%	<input type="checkbox"/>
Sissel	2	<input type="checkbox"/>	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	2540	<input type="checkbox"/>	<<25%	<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"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: Nearby well-logs (e.g., BENT 2603, BENT 2611, BENT55422) indicate that the Mountain View Creek and Frazier Creek Ditch are underlain by low-permeability clay layers, which would impede the groundwater and surface water interactions. Given the hydrogeological settings of the area and low requested pumping rate, impact of the proposed use of groundwater on stream depletion is expected to be minimal.

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: _____

C4b. **690-09-040 (5) (b)** The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

- C5. **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
 - i. The permit should contain condition #(s) _____;
 - ii. The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** _____

References Used:

Application File: LL-1962

Gannett, M.W. and Caldwell, R., 1998, Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

Frank, F.J., 1974, Groundwater in the Corvallis-Albany Area, Central Willamette Valley, Oregon. U.S. Geological Survey Water-Supply Report 2032, 48p.

Frank, F.J., D., 1967, Ground water in the Eola-Amity Hills area Northern Willamette Valley, Oregon. U.S. Geological Survey Water-Supply Paper 1847, 98p

Watershed Sciences, 2009, LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Hood to Coast, Oregon: 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:**

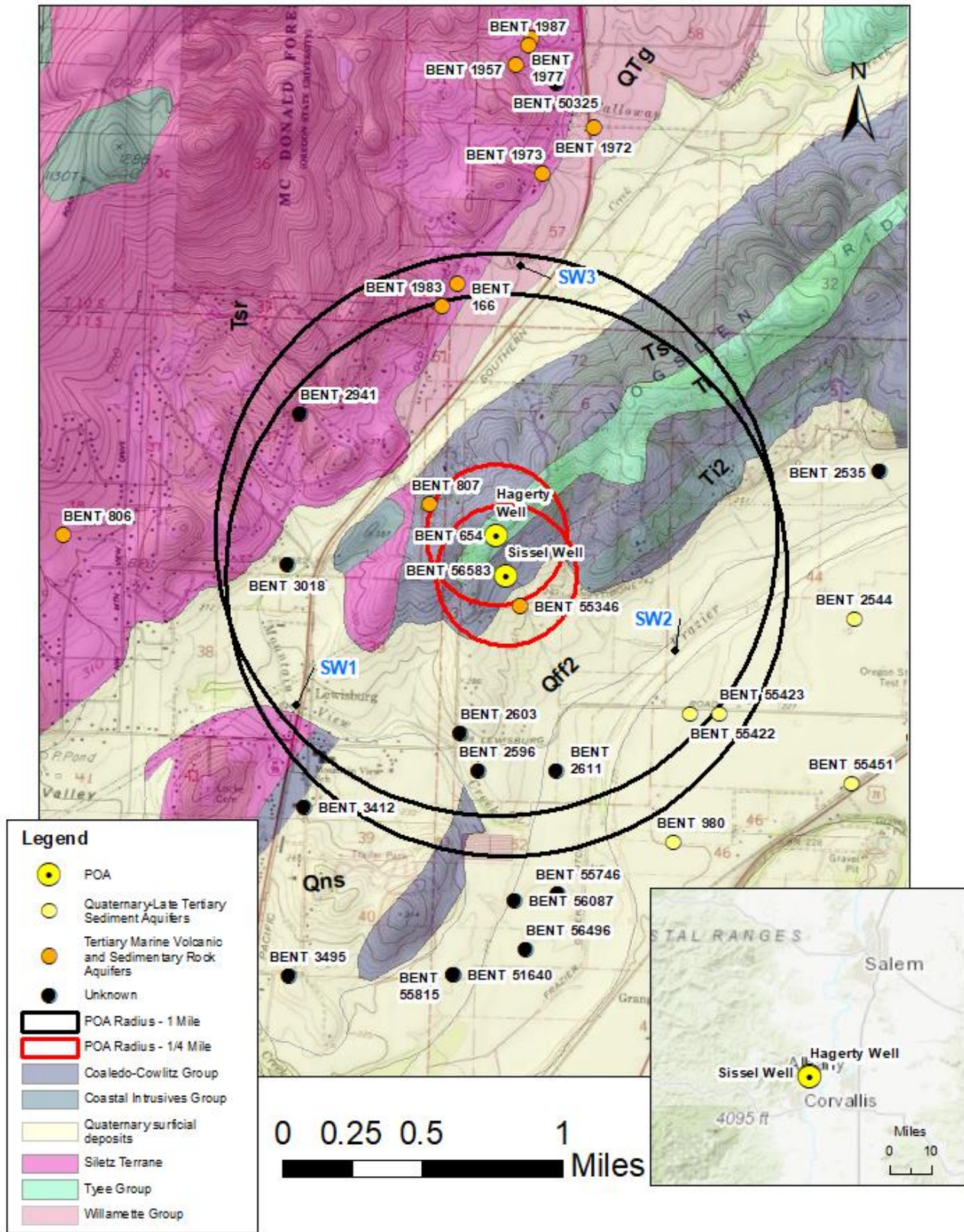
- a. review of the well log;
- b. field inspection by _____;
- c. report of CWRE _____;
- d. other: (specify) _____

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.**

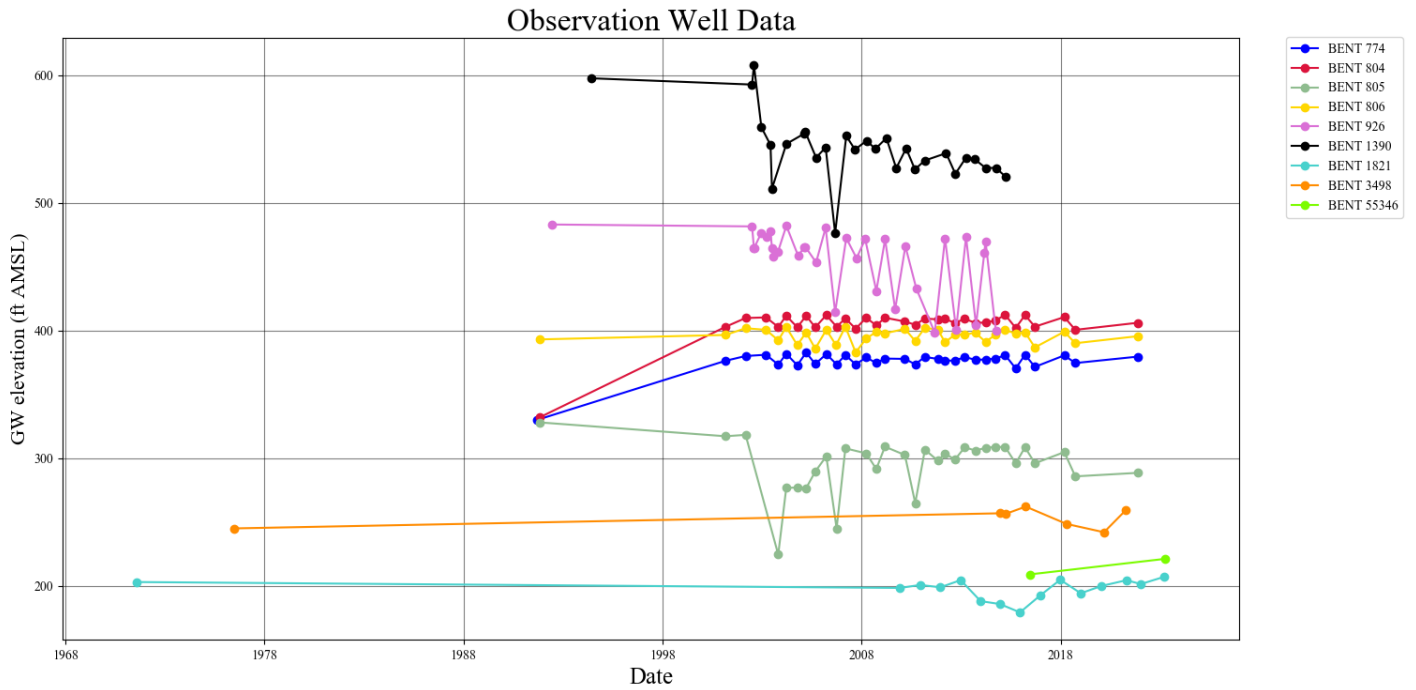
Well Location Map

LL-1962



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

Water-Level Measurements in Nearby Wells



Water Availability Tables

Water Availability Analysis
Detailed Reports

WILLAMETTE R > COLUMBIA R - AB PERIWINKLE CR AT GAGE 14174
WILLAMETTE BASIN

Water Availability as of 10/16/2023

Watershed ID #: [30200321](#) (Map)

Exceedance Level: 80%

Date: 10/16/2023

Time: 12:23 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	10,100.00	1,370.00	8,730.00	0.00	1,750.00	6,980.00
FEB	11,600.00	4,290.00	7,310.00	0.00	1,750.00	5,560.00
MAR	11,000.00	4,560.00	6,440.00	0.00	1,750.00	4,690.00
APR	9,760.00	4,260.00	5,500.00	0.00	1,750.00	3,750.00
MAY	8,430.00	2,560.00	5,870.00	0.00	1,750.00	4,120.00
JUN	5,360.00	856.00	4,500.00	0.00	1,750.00	2,750.00
JUL	3,270.00	666.00	2,600.00	0.00	1,750.00	854.00
AUG	2,560.00	604.00	1,960.00	0.00	1,750.00	206.00
SEP	2,540.00	517.00	2,020.00	0.00	1,750.00	273.00
OCT	2,860.00	270.00	2,590.00	0.00	1,750.00	840.00
NOV	4,170.00	355.00	3,810.00	0.00	1,750.00	2,060.00
DEC	8,150.00	381.00	7,770.00	0.00	1,750.00	6,020.00
ANN	7,460,000.00	1,240,000.00	6,230,000.00	0.00	1,270,000.00	4,960,000.00