

Approved:



MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Travis Kelly, Well Construction Compliance Coordinator
Subject: Review of Water Right Application G-19051
Date: January 6, 2022

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Mike Thoma reviewed the application. Please see Mike's Groundwater Review and the Well Report.

Applicant's Well #1 (DESC 62485): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

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

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

DESC 62485

WELL I.D. LABEL# L 141143
START CARD # 1050604
ORIGINAL LOG #

2/24/2021

(1) LAND OWNER

Owner Well I.D.
First Name NANCY Last Name KERKVLIIET
Company BRYAN MILLER
Address 4364 NW HONEY SUCKLE 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 Thrld
Material From To Amt sacks/lbs
Seal:

(3) DRILL METHOD

[X] Rotary Air [] Rotary Mud [] Cable [] Auger [] Cable Mud
[] Reverse Rotary [] Other

(4) PROPOSED USE

[X] Domestic [X] Irrigation [] Community
[] Industrial/ Commercial [] Livestock [] Dewatering
[] Thermal [] Injection [X] Other TEST IRRIGATION

(5) BORE HOLE CONSTRUCTION

Special Standard [] (Attach copy)
Depth of Completed Well 493.00 ft.

Table with columns: Dia, From, To, Material, From, To, Amt, lbs. Rows include Bentonite and Calculated values.

How was seal placed: Method [] A [] B [] C [] D [] E

[X] Other BENTONITE 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

Table with columns: Casing, Liner, Dia, From, To, Gauge, Stl, Plstc, Wld, Thrld. Includes rows for 10, 8, and 6 inch diameters.

Shoe [] Inside [] Outside [] Other Location of shoe(s)

Temp casing [] Yes Dia From + To

(7) PERFORATIONS/SCREENS

Perforations Method FACTORY CUT

Screens Type Material

Table with columns: Perf/ Screen, Casing/ Screen, Dia, From, To, Scrm/slot width, Slot length, # of slots, Tele/ pipe size.

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

[] Pump [] Bailer [X] Air [] Flowing Artesian

Table with columns: Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr). Row 1: 85, 470, 1.

Temperature 52 °F Lab analysis [] Yes By

Water quality concerns? [] Yes (describe below) TDS amount 45 ppm

Table with columns: From, To, Description, Amount, Units.

(9) LOCATION OF WELL (legal description)

County DESCHUTES Twp 16.00 S N/S Range 10.00 E E/W WM
Sec 1 SE 1/4 of the NE 1/4 Tax Lot 1500
Tax Map Number Lot
Lat 44.21860803 DMS or DD
Long -121.46751577 DMS or DD
[] Street address of well [X] Nearest address

66595 SISEMORE ROAD BEND OR

(10) STATIC WATER LEVEL

Table with columns: Existing Well / Pre-Alteration, Date, SWL(psi), SWL(ft). Row 1: Completed Well, 2/2/2021, 298.

Flowing Artesian? [] Dry Hole? []

WATER BEARING ZONES

Depth water was first found 295.00

Table with columns: SWL Date, From, To, Est Flow, SWL(psi), SWL(ft). Row 1: 2/2/2021, 295, 493, 150, 298.

(11) WELL LOG

Ground Elevation

Table with columns: Material, From, To. Lists soil types and depths from 0 to 500 ft.

Date Started 1/29/2021 Completed 2/2/2021

(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 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.

License Number 1970 Date 2/24/2021

Signed NEIL FAGEN (E-filed)


Contact Info (optional) 541-548-1245

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

DESC 62485

2/24/2021

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: 141143	
Latitude: 44.21860803 Datum: WGS84	Printed: February 24, 2021	
Longitude: -121.46751577	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.	
Township/Range/Section/Quarter-Quarter Section:	Provided by well constructor	
WM16.00S10.00E1SENE		
Address of Well:		
66595 SISEMORE ROAD BEND OR		



Groundwater Application Review Summary Form

Application # G- 19051

GW Reviewer M. Thoma Date Review Completed: 11/18/2021

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****11/18/2021****TO: Application G- 19051****FROM: GW: M. Thoma**
(Reviewer's Name)**SUBJECT: Scenic Waterway Interference & General/Local Surface Water Evaluation for Deschutes Ground Water Study Area**

The source of appropriation is within or above the Deschutes Scenic Waterway

Use the Scenic Waterway condition (Condition 7J).

PREPONDERANCE OF EVIDENCE FINDING UNDER ORS 390.835:

Department has found that there is a preponderance of evidence that the proposed use of groundwater will measurably reduce the surface water flows necessary to maintain the free-flowing character of the Deschutes Scenic Waterway in quantities necessary for recreation, fish and wildlife.

LOCALIZED IMPACT FINDING

The proposed use of groundwater will have a localized impact to surface water in the Middle Deschutes River/Creek Subbasin.

If the localized impact box above is checked, then the water use under any right issued pursuant to this application is presumed to have a localized impact on surface water within the identified subbasin. Mitigation of the impact, originating from within the Local Zone of Impact identified by the Department, will be required before a permit may be issued for the proposed use.

If the localized impact box above is not checked, then the water use under any right issued pursuant to this application is presumed to have a general (regional) impact on surface water. Mitigation of the impact, originating anywhere within the Deschutes Basin above the Madras gage, will be required before a permit may be issued for the proposed use.

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 11/18/2021
FROM: Groundwater Section M. Thoma Reviewer's Name
SUBJECT: Application G- 19051 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: Nancy Kerkvliet County: Deschutes

A1. Applicant(s) seek(s) 0.22 cfs from 1 well(s) in the Deschutes Basin, Middle Deschutes (Deep Canyon) subbasin

A2. Proposed use Nursery (28.53 acres) Seasonality: Year-Round; Proposed 75 AF/year

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

Table with 7 columns: 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

* Alluvium, CRB, Bedrock

Table with 13 columns: 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

Use data from application for proposed wells.

A4. Comments: *A new well (DESC 62485 - attached) has been drilled on the taxlot and very near the proposed location of the POD in February, 2021. This review assumes that this new well was drilled for this permit. If it is not intended to be used for this permit, the location and depth provide excellent estimates for the above table.

A5. [X] Provisions of the Deschutes (OAR 690-505) Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water [X] are, or [] are not, activated by this application. (Not all basin rules contain such provisions.) Comments: The proposed use is within the Deschutes Groundwater Study Area and subject to OAR 690-505 rules.

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

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

B1. **Based upon available data**, I have determined that groundwater* for the proposed use:

- a. is over appropriated, is not over appropriated, or **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. **will not** or **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. **will not** or **will** likely to be available within the capacity of the groundwater resource; or
- d. **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
 - i. The permit should contain condition #(s) 7N (Annual SWL); 7J (Scenic); Medium 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:**

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

Consideration of impacts to surface water are addressed in the Deschutes Basin Rules: OAR 690-505

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

Gannett, M. W. and K. E. Lite. 2004. Simulation of Regional Ground-Water Flow in the Upper Deschutes Basin, Oregon. USGS Water Resources Investigations Report 2003-4195

Gannett, M. W. and K. E. Lite. 2013. Analysis of 1997-2009 Groundwater Level Changes in the Upper Deschutes Basin, Central Oregon. USGS Scientific Investigations Report 2013-5092

Gannett, M. W., Lite, K. E., Risley, J. C., Pischel, E. M., and J. L. LaMarche. 2017. Simulation of Groundwater and Surface-Water Flow in the Upper Deschutes Basin, Oregon. USGS Scientific Investigations Report 2017-5097

Lite, K. E. and M. W. Gannett. 2002. Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. USGS Water-Resources Investigations Report 02-4015

Sherrod, D. R., Taylor, E. M., Ferns, M. L., Scott, W. E., Conrey, R. M., and G. A. Smith. 2004. Geologic Map of the Bend 30- X 60-Minute Quadrangle, Central Orgon. USGS Geologic Investigations Series Map I-2683

OWRD Well Log Database, Accessed 11/16/2021 [https://apps.wrd.state.or.us/apps/gw/well_log/Default.aspx]

OWRD Groundwater Information System Database, Accessed 11/16/2021 [https://apps.wrd.state.or.us/apps/gw/gw_info/gw_info_report/gw_search.aspx]

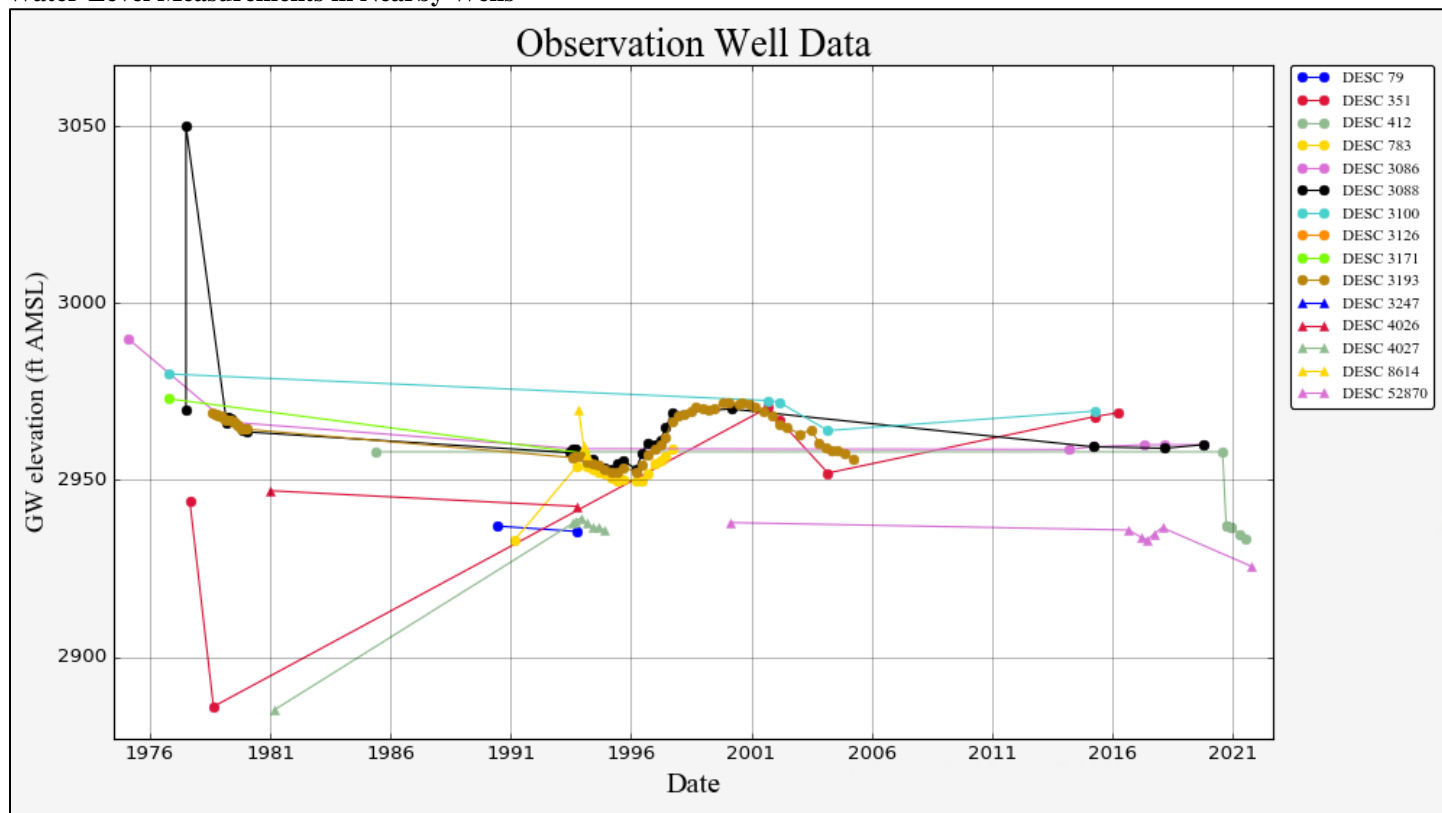
D. WELL CONSTRUCTION, OAR 690-200

- D1. Well #: 1 Logid: DESC 62485
- D2. **THE WELL does not appear to meet current well construction standards based upon:**
- review of the well log;
 - field inspection by _____;
 - report of CWRE _____;
 - other: (specify) DESC 62485 was drilled in the approximate location of the proposed POA and is likely the proposed source for this application and should be reviewed as such.
- 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.**

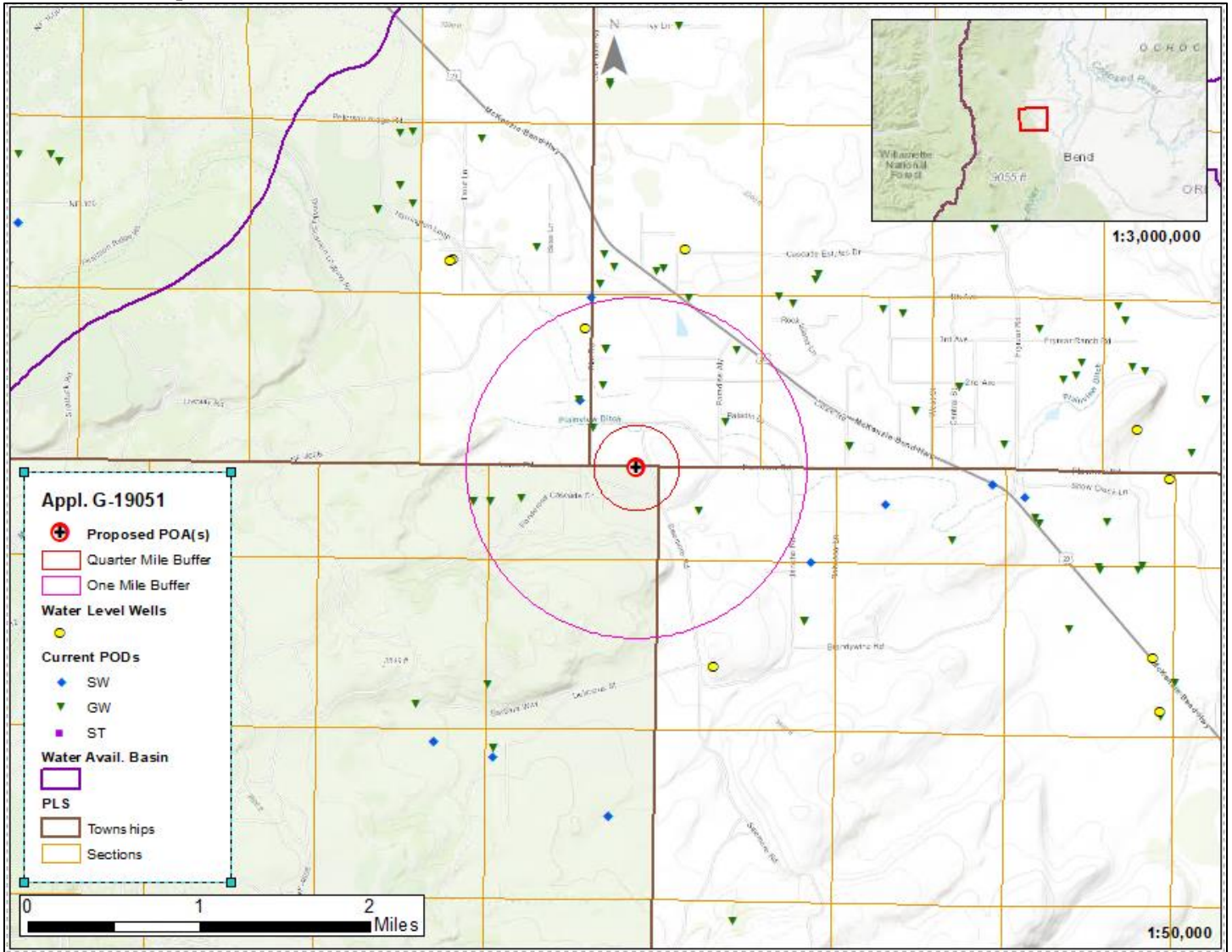
Water Availability Tables

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION						
Watershed ID #: 30530643			DESCHUTES R > COLUMBIA R - AB SHITIKE CR		Exceedance Level: 80	
Time: 10:09 AM			Basin: DESCHUTES		Date: 11/18/2021	
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	4,310.00	642.00	3,670.00	119.00	4,500.00	-951.00
FEB	4,540.00	700.00	3,840.00	119.00	4,500.00	-779.00
MAR	5,040.00	1,050.00	3,990.00	119.00	4,500.00	-627.00
APR	5,270.00	1,150.00	4,120.00	119.00	4,000.00	-0.18
MAY	5,180.00	1,170.00	4,010.00	119.00	4,000.00	-107.00
JUN	4,840.00	1,240.00	3,600.00	119.00	4,000.00	-522.00
JUL	4,090.00	1,020.00	3,070.00	119.00	4,000.00	-1,050.00
AUG	3,880.00	892.00	2,990.00	119.00	3,500.00	-631.00
SEP	3,990.00	765.00	3,230.00	119.00	3,800.00	-694.00
OCT	4,070.00	775.00	3,300.00	119.00	3,800.00	-624.00
NOV	4,130.00	837.00	3,290.00	119.00	3,800.00	-626.00
DEC	4,230.00	759.00	3,470.00	119.00	4,500.00	-1,150.00
ANN	3,620,000	665,000	2,960,000	86,200	2,950,000	119,000

Water-Level Measurements in Nearby Wells



Well Location Map



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

DESC 62485 2/24/2021

WELL I.D. LABEL# L 141143 START CARD # 1050604 ORIGINAL LOG #

(1) LAND OWNER Owner Well I.D. First Name NANCY Last Name KERKVLIIET Company BRYAN MILLER Address 4364 NW HONEY SUCKLE 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 [X] Irrigation [] Community [] Industrial/ Commercial [] Livestock [] Dewatering [] Thermal [] Injection [X] Other TEST IRRIGATION

(5) BORE HOLE CONSTRUCTION Special Standard [] (Attach copy) Depth of Completed Well 493.00 ft.

Table with columns: Dia, From, To, Material, SEAL, Amt, sacks/lbs. Row 1: 14, 0, 18.5, Bentonite, 0, 18.5, 16, S. Row 2: 10, 18.5, 500, Calculated, 12.54.

How was seal placed: Method [] A [] B [] C [] D [] E [X] Other BENTONITE 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 [] Outside [] Other Location of shoe(s) Temp casing [] Yes Dia From + To

(7) PERFORATIONS/SCREENS Perforations Method FACTORY CUT Screens Type Material

Table with columns: Perf/Screen, Casing/Liner, Dia, From, To, Scm/slot width, Slot length, # of slots, Tele/pipe size. Row 1: Perf 1, Liner 8, Dia 8, From 447, To 493, Scm/slot width .125, Slot length 3, # of slots 1872.

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

Table with columns: Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr). Row 1: 85, 470, 1.

Temperature 52 °F Lab analysis [] Yes By Water quality concerns? [] Yes (describe below) TDS amount 45 ppm From To Description Amount Units

(9) LOCATION OF WELL (legal description)

County DESCHUTES Twp 16.00 S N/S Range 10.00 E E/W WM Sec 1 SE 1/4 of the NE 1/4 Tax Lot 1500 Tax Map Number Lot Lat 44.21860803 DMS or DD Long -121.46751577 DMS or DD Street address of well Nearest address 66595 SISEMORE ROAD BEND OR

(10) STATIC WATER LEVEL

Table with columns: Date, SWL(psi), SWL(ft). Row 1: Existing Well / Pre-Alteration, 2/2/2021, 298.

WATER BEARING ZONES Depth water was first found 295.00

Table with columns: SWL Date, From, To, Est Flow, SWL(psi), SWL(ft). Row 1: 2/2/2021, 295, 493, 150, 298.

(11) WELL LOG

Table with columns: Material, From, To. Rows include: Top soil Brown (0-2), Gravel Congl Brown (2-8), Pink- Red rock hard (8-32), Brown SS Tuff (32-50), Brown-tan SS tuff (50-140), Lava rock Brown - Gray (140-150), Lava rock hard gray (150-180), Lava Rock Hard Gray Brown-marron (180-250), Brown Marron SS Tuff Congl (250-280), Lava rock (280-295), Lava rock Congl Brown (295-305), Lava rock Gray Midd (305-355), Lava rock Broken Midd Congl Brown (355-380), Brown Marron SS Tuff Congl (380-390), Brown lava rock Congl (390-430), Brown SS Tuff (430-470), Cinder lava caving Congl (470-500).

Date Started 1/29/2021 Completed 2/2/2021

(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 1970 Date 2/24/2021

Signed NEIL FAGEN (E-filed)

Contact Info (optional) 541-548-1245