

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-19132
Date: February 4, 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 Reports.

Applicant's Well #1 (DESC 54048): 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.

Applicant's Well #2 (DESC 54049): 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)

WELL I.D. # L 34650
 START CARD # 131779

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number 2
 Name HAP TAYLOR
 Address P O BOX 83
 City BEND State OR Zip 97708

(2) TYPE OF WORK
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

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

(4) PROPOSED USE:
☐ Domestic ☐ Community ☒ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
 Special Construction approval ☐ Yes ☒ No Depth of Completed Well 535 ft.
 Explosives used ☐ Yes ☒ No Type - Amount -

HOLE				SEAL			
Diameter	From	To	Material	From	To	Sacks or pounds	
12	0	18	BENTONITE	0	18	26 sacks	
8	18	550					

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☒ Other POURED DOWN DRY
 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	+2	-23	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	6	-1	535	188	☒	☐	☒	☐
					☐	☐	☐	☐

Final location of shoe(s) NO SHOE USED

(7) PERFORATIONS/SCREENS:

☒ Perforations Method MACHINE CUT
☐ Screens Type SLOT Material STEEL

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
355	375	1/2" x 6	248	6	-	☐	☒
435	455	1/2" x 6	248	6	-	☐	☒
515	535	1/2" x 6	248	6	-	☐	☒

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

☐ Pump ☐ Bailer ☒ Air ☐ Flowing ☐ Artesian
 Yield gal/min 50 Drawdown 0 Drill stem at 548 Time 1 hr.
surging
 Temperature of water 49° 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 DESCHUTES Latitude Longitude
 Township 17 N or S Range 11 XE or W. WM.
 Section 21 SW 1/4 SW 1/4
 Tax Lot 4300 Lot Block Subdivision
 Street Address of Well (or nearest address) BULL SPRINGS TREE FARM

(10) STATIC WATER LEVEL:

351 ft. below land surface. Date 8/1/01
 Artesian pressure - lb. per square inch. Date -

(11) WATER BEARING ZONES:

Depth at which water was first found 480

From	To	Estimated Flow Rate	SWL
480	550	75+ GPM	351

(12) WELL LOG:

Material	From	To	SWL
SOIL & LAVA	0	8	
GREY LAVA	8	45	
TAN CONG	45	115	
TAN SS CONG	115	170	
RED SS CONG	170	220	
BROWN SS	220	295	
FRACTURED LAVA	295	315	
RED CONG	315	340	
TAN CONG	340	410	
VESICULAR GRAVELS	410	480	
FRACTURED BASALT	480	550	351

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AUG 13 2001

WATER RESOURCES DEPT.
 SALEM, OREGON

Date started 7/30/01 Completed 8/01/01

(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 water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number

Signed 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 water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1556

Signed Date 8/10/01

Groundwater Application Review Summary Form

Application # G- 19132

GW Reviewer M. Thoma Date Review Completed: 11/29/2021

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

11/29/2021

TO: Application G- 19132

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 11/29/2021
 FROM: Groundwater Section M. Thoma
 Reviewer's Name
 SUBJECT: Application G- 19132 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: Bull Springs Ranch County: Deschutes

A1. Applicant(s) seek(s) 0.24 cfs from 2 well(s) in the Deschutes Basin,
Middle Deschutes subbasin

A2. Proposed use Multi-Purpose 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	DESC0054048	1	Bedrock	0.24	17.00S-11.00E-22-NE SW	2465 FEET NORTH AND 1500 FEET EAST FROM SW CORNER, SECTION 22
2	DESC0054049	2	Bedrock	0.24	17.00S-11.00E-22-SE SW	445 FEET NORTH AND 2240 FEET EAST FROM SW CORNER, SECTION 22
3						
4						

* 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		525	275	7/28/01	550	0-18	+1-18	10-550	370-550	0	-	-
2		480	351	8/1/01	535	0-18	+2-23	1-535	355-535	50	-	A

Use data from application for proposed wells.

A4. **Comments:** _____

A5. ☒ **Provisions of the** Deschutes (OAR 690-505) 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 POAs are within the Deschutes Groundwater Study Area

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) 7C (7-yr SWL); 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

Impacts to surface water are addressed by the Deschutes Basin Rule (OAR 690-505)

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

OWRD Well Log Database, Accessed 11/29/2021 [https://apps.wrd.state.or.us/apps/gw/well_log/Default.aspx]

OWRD Groundwater Information System Database, Accessed 11/29/2021 [https://apps.wrd.state.or.us/apps/gw/gw_info/gw_info_report/gw_search.aspx]

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 Oregon. USGS Geologic Investigations Series Map I-2683

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

