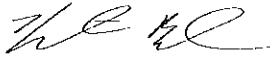


Approved: 

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Travis Kelly, Well Construction Program Coordinator
Subject: Review of Water Right Application G-19006
Date: October 21, 2020

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Joe Kemper reviewed the application. Please see Joe's review and the Well Report.

Applicant's Well #1 (JOSE 56010): 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.

Groundwater Application Review Summary Form

Application # G- 19006

GW Reviewer Joe Kemper Date Review Completed: 10/16/2020

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).

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 10/16/2020
 FROM: Groundwater Section Joe Kemper
 Reviewer's Name
 SUBJECT: Application G- 19006 Supersedes review of na
 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: Holland Loop Holdings County: Josephine

A1. Applicant(s) seek(s) 0.06 cfs from 1 well(s) in the Rogue Basin,
Illinois subbasin

A2. Proposed use Nursery (4.8 acres) 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	JOSE 56010	1	Alluvium	0.06	40S/8W-1 SE-SE	1243' S, 474' W fr NE cor TL 1550
2						
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	1407	75	22*	7/24/2004	120	0-21	0-120	na	80-100	75		Air

Use data from application for proposed wells.

A4. Comments: _____

A5. ☐ Provisions of the Rogue (OAR 690-515) 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 Rogue basin rules contain no such provisions.

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

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 of Illinois River Valley	☒	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: The applicant's well appears to produce water from discrete zones of coarse sediment interbedded within predominately clay rich deposits. Drillers' logs also indicate 10-40 feet of silt/clay at the surface, overlying more productive zones. The result is an aquifer system that is increasingly confined with depth.

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Althouse Creek	1385-1395*	1392	1215	☒	☐	☐	☐	☒
1	2	Sucker Creek	1385-1395*	1387	3590	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater elevations in an unconsolidated alluvial aquifer are coincident with adjacent streams that flow over these sediments. Thus, water can flow between the surface water source and the target aquifer. The clay horizons that are present may impact the timing of pumping impacts to streams, but it is unlikely that they isolate the stream from hydraulic connection.

*The reported SWL is taken from a well log. These measurements are often recovering from well construction, development, and capacity testing, making the WL measurement deeper than true aquifer conditions.

Water Availability Basin the well(s) are located within: ALTHOUSE CR > E FK ILLINOIS R - AT MOUTH; impacts also considered for SUCKER CR > E FK ILLINOIS R - AT MOUTH

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 < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
1	1	☒	☐	IS69810A	34	☐	6.2	☐	<10	☒
1	2	☐	☐	IS69808A	54	☐	25.9	☐	<10	☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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

C5. ☐ If properly conditioned, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:

- i. ☐ The permit should contain condition #(s) _____;
- ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. SW / GW Remarks and Conditions: The applicant's well accesses an aquifer that is found to be hydraulically connected to Althouse Creek and Sucker Creek. Because the well is hydraulically connected within ¼ mile of Althouse Creek, the proposed use is found to have the Potential for Substantial Interference (PSI) as per OAR 690-009. A reduction in rate will not change this finding.

References Used:

Hunt, Bruce. (2003). Unsteady Stream Depletion When Pumping From Semi-confined Aquifer. Journal of Hydrologic Engineering. 8. 12-, 10.1061/(ASCE)1084-0699(2003)8:1(12).

OWRD Groundwater Information System Database – Accessed 10/15/2020.

Ramp, L., and Peterson, N.V., 2004, Geologic Map of Josephine County, Oregon, 2004, plate 1, scale 1:250,000: Oregon Department of Geology and Mineral Industries, Open-File Report O-04-13, scale 1:250,000

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, Am. Geophys. Union Trans., vol. 16, pp. 519-524.

Wells, F.G., Hotz, P.E., and Cater, F.W., Jr., 1949, Preliminary description of the geology of the Kerby quadrangle: Oregon Department of Geology and Mineral Industries, Bulletin 40, scale 1:96,000

Water Availability Analysis Detailed Reports

SUCKER CR > E FK ILLINOIS R - AT MOUTH
ROGUE BASIN

Water Availability as of 10/14/2020

Watershed ID #: 69808 ([Map](#))

Exceedance Level:

Date: 10/14/2020

Time: 9:26 AM

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	132.00	0.16	132.00	0.00	135.00	-3.16
FEB	221.00	0.16	221.00	0.00	135.00	85.80
MAR	220.00	0.16	220.00	0.00	135.00	84.80
APR	215.00	2.55	212.00	0.00	135.00	77.40
MAY	162.00	4.01	158.00	0.00	135.00	23.00
JUN	79.70	5.60	74.10	0.00	80.00	-5.90
JUL	42.60	7.46	35.10	0.00	54.00	-18.90
AUG	30.40	6.17	24.20	0.00	54.00	-29.80
SEP	25.90	4.07	21.80	0.00	80.00	-58.20
OCT	26.10	1.39	24.70	0.00	80.00	-55.30
NOV	36.80	0.16	36.60	0.00	135.00	-98.40
DEC	77.30	0.16	77.10	0.00	135.00	-57.90
ANN	134,000.00	1,950.00	132,000.00	0.00	77,900.00	64,400.00

Water-Level Measurements in Nearby Wells

