Adam K. Mikulski
PO Box 1865
Prineville, OR 97754

Wednesday, March 2, 2022

Subject: 217-21-000436-PLNG Knife River/Vanier

Dear Will,

Please enter the following information into record along with the three attachments. The attachments include: "Application for Limited Water Use License", "Memo to Kristopher Byrd - Well Construction and Compliance Section Manager from Travis Kelly – Well Construction Program Coordinator", and the "Final Order, Limited License Application LL-1876.

A Limited License Application LL-1876 was completed by Knife River and presented to the Oregon Water Resources Department on June 1, 2021. The license was finalized and issued on October 6, 2021. The license is to be in effect until June 15, 2026. Even though LL-1876 is for the Woodward property, it is directly tied to the permitting and CUP for the Vanier property.

1. Limited License LL-1876 allows Knife River to drill three new wells on the Woodward property. There is already one existing well on the property so this would bring the total to four wells. It allows pumping of ground water at 1.114 cubic feet per second (CFS) for an entire calendar year for a total of 5 years. 500 gallons a minute equals 1.114 CFS. This would equal to **78 MILLION gallons** of ground water being pumped each year. To bring it into perspective, that would be 3 acre feet of water on 80 acres. That is enough to irrigate an alfalfa crop for one season. Pumping of ground water for 5 years would amount to a total of **390 MILLION gallons** being removed from the lower aquifer. Knife River states that they estimate their use of water from the wells to be less than 500 GPM. Well, that's an estimate. The license states that they can pump up to 500 GPM. If they can, they will. Per Knife River, the water from these wells will be used for aggregate washing, dust control and general clean up. With water being such a scarce commodity, why would it be allowed to be used to wash rock and sand? Apparently there is not enough and will never be **enough water** to farm, strip mine/process aggregate and reclaim the land on the Woodward and the Vanier sites. The existing well has a depth of 255 feet and the 3 new wells will be drilled to approximately the same depth. There have been water quality/quantity concerns raised about the shallow aquifer on the Vanier property. Now there are concerns with water quality/quantity in the deeper aquifer. How many local wells that are at a depth of 255 feet will be affected when groundwater is being pumped at such a high volume? None of this information was presented to the Planning Commission or the County Court from Matt Ropp and Knife River. What would Knife River be required to do if any issues develop with the neighboring residential wells that draw water from the deeper aquifer?
2. Under "Findings of Fact" in the Final Order for LL-1876 it states "The Department has not received public comment related to the possible issuance of the limited license." It is stated that on June 8. 2021 the Department provided public notice of the application. What is the process for a public notice? Neighboring Woodward Site property owners did not receive any notice from the Department. Matt Ropp and Knife River could have been proactive and notified the local residents and the County Planning Commission but failed to do so. It appears that this withholding of information was intentionally done by Matt Ropp and Knife River so that this information would not be part of the Planning Commission's or County Court's record.

3. The attached limited water use application includes a water availability statement from the local Watermaster. It states "Subtle long term decline in groundwater head in the Lamonta are due to climate conditions and on going development". What "decline in groundwater head" will surface when Knife River starts using well water in their operations? Will it be "subtle" or will it be "major". How will this be addressed in a CUP? Knife River should be held responsible for any declines in groundwater head that affect wells located in the deeper aquifer.
4. The memo to Kristopher Byrd states that "based on a review of the Well report, applicant's well #1 "**seems**" to protect the ground water resource. It also states that "the construction of applicant's well #1 my not satisfy hydraulic connection issue". *Does this mean that the upper and lower aquifers may be tied together and the draw down of the lower aquifer will in turn draw down the upper shallow aquifer?* If well #1 does not satisfy hydraulic issues, what then? Attached to the memo is an Observation Well Data graph. It shows that the water level in the observation well in the area has dropped 28 feet since last year. How much will it drop if Knife River starts pumping 500 gallons a minute for rock processing?
5. In order to mitigate issues from strip mining, Knife River will require water from OID, the shallow aquifer and the deeper aquifer. The water usage amounts that they will require will impact the surrounding area to some degree. All of the evidence and facts that they provide to address impacts on the neighboring properties are models and estimates. If something goes awry, they would say it was just an estimate so it's not our fault. Allowing them to strip mine the Vanier property and process the aggregate on the Woodward site will be a detriment to the local water tables. Since the Vanier property has been designated as a "3B Site", no strip mining should be allowed at this time. Then there would be no need to install wells and waste good clean water on rock and sand.
6. One more thing for the record. At the Planning Commission meetings and County Court hearings, Matt Ropp, in his testimony, has always referred to our property as only residential. Our property consists of 10 acres zoned EFU-2. We produce grass hay and irrigate with water from OID. We have livestock on our property, so good and abundant clean water is essential to us.

Thank you,
Adam and Karen Mikulski

Oregon Water Resources Department

Final Order
Limited License Application LL-1876

OREGON WATER RESOURCES DEPARTMENT

Appeal Rights

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or 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.

Requested Water Use

Applicant: KNIFE RIVER CORPORATION - NORTHWEST
Date Submitted: JUNE 1, 2021
Amount: 1.114 CUBIC FEET PER SECOND (CFS)
Source: WELL 1 (CROO 50140) AND PROPOSED WELL 2, WELL 3 AND WELL 4
Use: INDUSTRIAL AND COMMERCIAL USE
Period of Use: ISSUANCE THROUGH JUNE 15, 2026
County: CROOK COUNTY
Well Locations: 14.00S-15.00E-14 SE SW

Authorities

The Department may approve a limited license pursuant to its authority under ORS 537.143, 537.144 and OAR 690-340-0030.

ORS 537.143(2) authorizes the Director to revoke the right to use water under a limited license if it causes injury to any water right or a minimum perennial streamflow.

A limited license will not be issued for more than five consecutive years for the same use, as directed by ORS 537.143(8).

Findings of Fact

1. The forms, fees, and map have been submitted, as required by OAR 690-340-0030(1).

2. On June 8, 2021 the Department provided public notice of the application, as required by OAR 690-340-0030(2).

3. The Department has not received public comment related to the possible issuance of the limited license.

4. This limited license request is limited to an area within a single drainage basin, as required by OAR 690-340-0030(3).

5. As part of its review to determine groundwater availability, the Department has determined that groundwater cannot be determined to be over appropriated. The proposed use will, if properly conditioned, avoid injury to existing groundwater rights or to the groundwater resource.

6. The Department has stipulated conditions pertaining to water-use and static water level measurements, and mitigation for impacts to surface water.

7. The Department has determined that the proposed source has not been withdrawn from further appropriation per ORS 538.200.

8. The Department has determined that the use is subject to its rules under OAR 690-33-0310. These rules aid the Department in determining whether a proposed use will impair or be detrimental to the public interest with regard to sensitive, threatened, or endangered fish species.

9. Because the proposed use is located in the Deschutes Groundwater Study Area, it has the potential for substantial interference with surface water. The Department has determined that mitigation shall be provided by the applicant in the amount of **59.8** acre-feet annually for the life of the limited license. Without the required mitigation, there is a preponderance of evidence that the proposed use will measurably reduce surface water flows necessary for the Deschutes River Scenic Waterway. The mitigation must be produced in the Crooked River Zone of Impact as defined in OAR 690-505-0605.

10. The Department has determined that, with mitigation, water is available for the requested use.

11. Pursuant to OAR 690-340-0030(4)(5), conditions have been added with regard to notice and water-use measurement.

12. Crook County has indicated that the proposed use is compatible with the applicable acknowledged comprehensive land-use plan. A copy of the land use compatibility statement is in the file.

Conclusions of Law

The proposed water use will not impair or be detrimental to the public interest pursuant to OAR 690-340-0030(2), as limited in the order below.

Order

Therefore, pursuant to ORS 537.143, ORS 537.144, and OAR 690-340-0030, Application LL-1876 is approved as conditioned below.

1. The authorized use of water under this limited license is as follows:

Amount: 1.114 CFS
Source: WELL 1 (CROO 50140) AND PROPOSED WELL 2, WELL 3 AND WELL 4
Use: INDUSTRIAL AND COMMERCIAL USE
Duration: ISSUANCE THROUGH JUNE 15, 2026

be required in a different month. If the measurement requirement is stopped, the Director may restart it at any time.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board and be submitted to the Department on forms provided by the Department. The Department requires the individual performing the measurement to:

A. Identify each well with its associated measurement;
B. Measure and report water levels to the nearest tenth of a foot as depth-to-water below ground surface;
C. Specify the method used to obtain each well measurement; and
D. Certify the accuracy of all measurements and calculations reported to the Department.

The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the well(s) if any of the following events occur:

A. Annual water-level measurements reveal an average water-level decline of three or more feet per year for five consecutive years; or
B. Annual water-level measurements reveal a water-level decline of 15 or more feet in fewer than five consecutive years; or
C. Annual water-level measurements reveal a water-level decline of 25 or more feet; or
D. Hydraulic interference leads to a decline of 25 or more feet in any neighboring well with senior priority.

The period of non-use or restricted use shall continue until the water level rises above the decline level which triggered the action or until the Department determines, based on the licensee's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights. The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this license. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

8. The Director may revoke the right to use water for any reason described in ORS 537.143(2), and OAR 690-340-0030(6). Such revocation may be prompted by field regulatory activities or by any other information.

9. Use of water under a limited license shall not have priority over any water right exercised according to a permit or certificate, and shall be subordinate to all other authorized uses that rely upon the same source.

10. The licensee shall install, use, and maintain fish screening and by-pass devices as required by the Oregon Department of Fish and Wildlife to prevent fish from entering the proposed diversion. See copy of enclosed fish screening criteria for information.

11. 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.

12. A copy of this limited license shall be kept at the place of use, and be made available for inspection by the Watermaster or other state authority.

NOTE: This water-use authorization is temporary. Applicants are advised that issuance of this final order does not guarantee that any permit for the authorized use will be issued in the future; any investments should be made with that in mind.

Issued OCT 0 6 2021

Dwight French, Water Right
Services Division Administrator, *for*
Thomas M. Byler, Director
Oregon Water Resources Department

cc: Jeremy T. Giffin, District 11 Watermaster
Danette Faucera, ODFW
Deschutes, DEQ
Steve Bruce, Skookum Water Associates Inc. -- 1626 Victorian Way, Eugene, OR 97401
Surface Water Section
File

If you need further assistance, please contact the Water Rights Section at the address, phone number, or fax number below. When contacting the Department, be sure to reference your limited license number for fastest service.

Remember, this limited license does not provide a secure source of water. Water use can be revoked at any time. Such revocation may be prompted by field regulatory activities or many other reasons.

Water Rights Section
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem OR 97301-1271
Phone: (503) 986-0817 Fax: (503) 986-0901

FISH SCREENING CRITERIA FOR WATER DIVERSIONS

This summary describes ODFW fish screening criteria for all fish species.

Screen material openings for ditch (gravity) and pump screens must provide a minimum of 27% open area:

Perforated plate: Openings shall not exceed 3/32 or 0.0938 inches (2.38 mm).
Mesh/Woven wire screen: Square openings shall not exceed 3/32 or 0.0938 inches (2.38 mm) in the narrow direction, e.g., 3/32 inch x 3/32 inch open mesh.
Profile bar screen/Wedge wire: Openings shall not exceed 0.0689 inches (1.75 mm) in the narrow direction.

Screen area must be large enough to prevent fish impact. Wetted screen area depends on the water flow rate and the approach velocity.

Approach velocity: The water velocity perpendicular to and approximately three inches in front of the screen face.
Sweeping velocity: The water velocity parallel to the screen face.
Bypass system: Any pipe, flume, open channel or other means of conveyance that transports fish back to the body of water from which the fish were diverted.
Active pump screen: Self cleaning screen that has a proven cleaning system.
Passive pump screen: Screen that has no cleaning system other than periodic manual cleaning.

Screen approach velocity for ditch and active pump screens shall not exceed 0.4 fps (feet per second) or 0.12 mps (meters per second). The wetted screen area in square feet is calculated by dividing the maximum water flow rate in cubic feet per second (1 cfs = 449 gpm) by 0.4 fps.

Screen sweeping velocity for ditch screens shall exceed the approach velocity. Screens greater than 4 feet in length must be angled at 45 degrees or less relative to flow. An adequate bypass system must be provided for ditch screens to safely and rapidly collect and transport fish back to the stream.

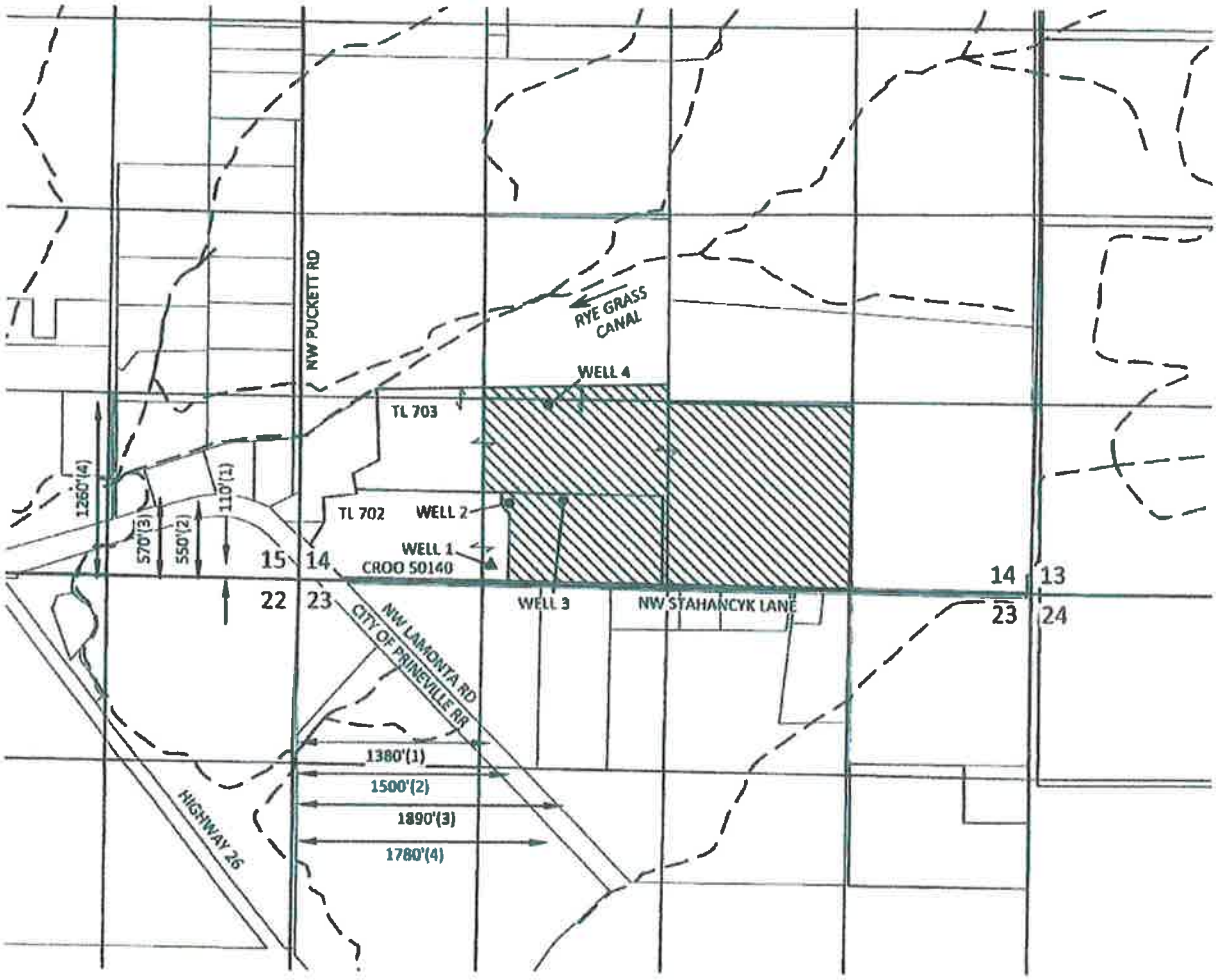
Screen approach velocity for passive pump screens shall not exceed 0.2 fps or 0.06 mps. The wetted screen area in square feet is calculated by dividing the maximum water flow rate by 0.2 fps. Pump rate should be less than 1 cfs.

For further information please contact:

Statewide Fish Screening Coordinator
Oregon Dept. Fish and Wildlife
4034 Fairview Industrial Drive SE
Salem, OR 97302
(503) 947-6229

Section 14, T14S, R15E, W.M., Crook County, Oregon

LIMITED LICENSE APPLICATION MAP
Knife River Corporation



EXPLANATION

- PROPOSED INDUSTRIAL/COMMERCIAL PLACE OF USE
- PROPOSED WELL
- EXISTING WELL CROO 50140

N

SCALE

660 0 660 1320

1 INCH = 1320 FEET

May 26, 2021

This map is not intended to provide legal dimensions or locations of property ownership lines

Figure 1

SKOOKUM WATER ASSOCIATES INC

1626 VICTORIAN WAY
EUGENE, OR 97401
(503) 319-8926

KPFF 1700014.72

LL-1876

Table 3. Wells Within a One-Half Mile and 1000-foot Buffer of the Woodward and Vanier Property

Buffer from Woodward/Vanier Property Boundary	Well #	Owner Name	Primary Use	Tax Lot	Top of Perforations (ft bgs)	Completed Depth (ft bgs)	Township & Range	Section	Potential Adverse Impacts
1000-foot buffer	86	MRS WILLIS STAFFORD	Domestic	115	35	50	T14S R15E	23	Possible
	951	BEN KOOPS	Domestic	801	20	40	T14S R15E	15	Possible
	953	CARL SHUMWAY	Domestic	801	30	50	T14S R15E	15	Possible
	970	RAY FOX	Domestic	801	20	40	T14S R15E	15	Possible
	972	WILLIS STAFFORD	Domestic	801	35	50	T14S R15E	15	Possible
	977	ELMER SELF	Domestic	108	30	50	T14S R15E	23	Possible
	329	RON WILKINSON	Domestic	116	255	260	T14S R15E	23	Not Likely
	907	L M DAIRY	Domestic	--	235	257	T14S R15E	14	Not Likely
	915	ED HUNT	Domestic	103	220	220	T14S R15E	14	Not Likely
	931	LESLIE PAYNE	Domestic	602	225	235	T14S R15E	15	Not Likely
	946	RAY MCLAMB	Domestic	600	210	220	T14S R15E	15	Not Likely
	50140		Industrial	702	250	235	T14S R15E	14	Not Likely
	50577		Irrigation	112	175	275	T14S R15E	23	Not Likely
	53568	JOHN WOERNER	Domestic	102	200	300	T14S R15E	23	Not Likely
	53661	SCOTT PROFILEY	Domestic	701	240	260	T14S R15E	14	Not Likely
	54339	ADAM MIKULSKI	Domestic	114	100	281	T14S R15E	23	Not Likely
	54660	TAUNDY BYRD	Domestic	600	140	220	T14S R15E	15	Not Likely
	54787		Domestic	200	245	255	T14S R15E	23	Not Likely
One-half Mile	81	JOHN COLLIN	Domestic	202	30	45	T14S R15E	13	Possible
	82	JOHN MITTS	Domestic	1000	30	60	T14S R15E	15	Possible
	83	N L MATHEWS	Domestic	1200	31	50	T14S R15E	15	Possible
	86	MRS WILLIS STAFFORD	Domestic	115	35	50	T14S R15E	23	Possible
	900	ARNOLD EVANS	Domestic	202	40	60	T14S R15E	13	Possible
	903	JACK BRIGGS	<Null>	104	18	34	T14S R15E	14	Possible
	904	CECIL HARNDEN	Domestic	503	30	50	T14S R15E	14	Possible
	906	JOHN DEMERITT	Domestic	503	30	50	T14S R15E	14	Possible
	909	VIRGIL W SHARP	Domestic	809	30	50	T14S R15E	15	Possible
	912	JACK BRIGGS	UNKNOWN	1300	20	50	T14S R15E	15	Possible
	916	JOHN MITTS	Domestic	1000	40	60	T14S R15E	15	Possible
	918	DALE BANNON	Domestic	2500	40	60	T14S R15E	15	Possible
	923	JIM HALSEY	Domestic	1100	20	55	T14S R15E	15	Possible
	924	TIM COOLEY	Domestic	802	40	60	T14S R15E	15	Possible
	926	PHILLIP R POWELL	UNKNOWN	800	34	54	T14S R15E	15	Possible
	927	IRA O FINLEY	Domestic	804	40	60	T14S R15E	15	Possible
	934	JOHN G PRUNER	Domestic	2400	21	42	T14S R15E	15	Possible
	939	JERRY PAYNE	Domestic	600	31	51	T14S R15E	15	Possible
	940	LARRY CHAMBERLAIN	Domestic	900	35	50	T14S R15E	15	Possible
	941	LLOYD DYMOND	Domestic	500	34	50	T14S R15E	15	Possible
	942	BASAL TURNER	Domestic	802	40	60	T14S R15E	15	Possible
	945	DAVE TURNER	Domestic	200	35	55	T14S R15E	15	Possible
	951	BEN KOOPS	Domestic	400	20	40	T14S R15E	15	Possible
	952	RICHARD FULTON	Domestic	807	36	48	T14S R15E	15	Possible
	953	CARL SHUMWAY	Domestic	601	30	50	T14S R15E	15	Possible
	970	RAY FOX	Domestic	102	20	40	T14S R15E	23	Possible
	972	WILLIS STAFFORD	Domestic	116	35	50	T14S R15E	23	Possible
	977	ELMER SELF	Domestic	111	30	50	T14S R15E	23	Possible
	980	TOM PAYNE	Domestic	110	30	42	T14S R15E	23	Possible
	983	AL BUSTILLO	Domestic	113	30	50	T14S R15E	23	Possible
	1001	CAL CATLETT	UNKNOWN	504	30	50	T14S R15E	24	Possible
	1002	GLENN A CHEEK	Domestic	501	34	48	T14S R15E	24	Possible
	51597	MARK FLEMING	Domestic	1900	40	60	T14S R15E	23	Possible
	51786	RHETT SHULTZ	Domestic	807	32	52	T14S R15E	15	Possible
	54367	MARK FLEMING	Domestic	1900	40	80	T14S R15E	23	Possible
	55017	--	Unknown	703	10	30	T14S R15E	14	Possible
	55018	--	Unknown	703	10	25	T14S R15E	14	Possible
	55019	--	Unknown	703	10	28	T14S R15E	14	Possible
	329	RON WILKINSON	Domestic	116	255	260	T14S R15E	23	Not Likely
	416	CARROL RICE	Domestic	503	60	82	T14S R15E	24	Not Likely
	438	GERALD L WHALEY	Domestic	809	196	206	T14S R15E	15	Not Likely
	458	WAYNE ROBISON	Domestic	700	192	200	T14S R15E	15	Not Likely
	460	W K TICHENOR	Domestic	1100	193	204	T14S R15E	15	Not Likely
	530	JERRY HILL	Domestic	300	220	230	T14S R15E	15	Not Likely
	548	CHARLES MERIDITH	Domestic	800	207	215	T14S R15E	15	Not Likely
	907	L M DAIRY	Domestic	--	235	257	T14S R15E	14	Not Likely
	910	BEN OWENS	Domestic	100	196	206	T14S R15E	15	Not Likely
	915	ED HUNT	Domestic	103	220	220	T14S R15E	14	Not Likely
	925	BIFFLY TURNER	Domestic	803	240	250	T14S R15E	15	Not Likely
	931	LESLIE PAYNE	Domestic	602	225	235	T14S R15E	15	Not Likely
	932	COLE STILL	Domestic	805	250	260	T14S R15E	15	Not Likely
	946	RAY MCLAMB	Domestic	600	210	220	T14S R15E	15	Not Likely
	947	--	Domestic	809	50	70	T14S R15E	15	Not Likely
	948	TERRY HILD	Domestic	801	55	75	T14S R15E	15	Not Likely
	955	M D COLAHAN	Domestic	801	210	210	T14S R15E	15	Not Likely
	974	FLOYD FITCH	Domestic	108	45	60	T14S R15E	23	Not Likely
	985	ERNEST E FORTNER	Irrigation	103	45	80	T14S R15E	23	Not Likely
	988	CLAUDE F WILLIAMS	Irrigation	405	298	320	T14S R15E	23	Not Likely
	993	CALVIN CATLETT	Domestic	502	50	62	T14S R15E	24	Not Likely
	3154	ROY PAZK	Domestic	808	180	210	T14S R15E	15	Not Likely
	3177	KEITH TAYLOR	Domestic	503	222	230	T14S R15E	14	Not Likely
	3252	GLEN HOPFER	Domestic	810	225	235	T14S R15E	15	Not Likely
	50140	--	Industrial	702	250	255	T14S R15E	14	Not Likely
	50576	--	Irrigation	200	250	<Null>	T14S R15E	23	Not Likely
	50577	--	Irrigation	112	175	275	T14S R15E	23	Not Likely
	50830	DONALD SHELTON	Domestic	900	220	230	T14S R15E	15	Not Likely
	50851	LEONARD CHANDLER	Domestic	200	235	<Null>	T14S R15E	15	Not Likely
	52281	ELSIE M SIMMONS	Domestic	402	220	325	T14S R15E	24	Not Likely
	52344	LAWRENCE E ADAMSON	Domestic	504	41	240	T14S R15E	24	Not Likely
	52453	KERMIT MCGREW	Domestic	100	65	335	T14S R15E	23	Not Likely
	53206	JULIE THOMPSON	Domestic	809	200	240	T14S R15E	15	Not Likely
	53346	DON WORTHING	Domestic	2400	232	232	T14S R15E	15	Not Likely
	53457	ILOMAE ZEHNER	Domestic	1100	190	260	T14S R15E	23	Not Likely
	53568	JOHN WOERNER	Domestic	102	200	300	T14S R15E	23	Not Likely
	53661	SCOTT PROFILEY	Domestic	701	240	260	T14S R15E	14	Not Likely
	54339	ADAM MIKULSKI	Domestic	114	100	281	T14S R15E	23	Not Likely
	54660	TAUNDY BYRD	Domestic	600	140	220	T14S R15E	15	Not Likely
	54787	--	Domestic	200	245	255	T14S R15E	23	Not Likely

6

12

38

40

TOTAL: 96 WELL

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Application for Limited Water Use License

RECEIVED
JUN 01 2021
OWRD

License No.: LL-1876

Applicant Information

NAME			PHONE (HM)
Knife River Corporation – Northwest Attn: Jeff Steyaert			
PHONE (WK) (541) 918-5142	CELL		FAX
ADDRESS 32260 Old Highway 34			
CITY Tangent	STATE OR	ZIP 97389	E-MAIL * jeff.steyaert@kniferiver.com

Agent Information

NAME			PHONE	FAX
Steven R. Bruce Skookum Water Associates Inc.			(503) 319-8926	
ADDRESS 1626 Victorian Way				CELL
CITY Eugene	STATE OR	ZIP 97401	E-MAIL * steve@skookumwater.com	

I (We) make application for a Limited License to use or store the following described surface waters or groundwater – not otherwise exempt, or to use stored water of for a use of a short-term or fixed-duration:

1. **SOURCE(S) OF WATER:** Up to Four Wells a tributary of Crooked River
2. **AMOUNT OF WATER** to be diverted;
   Maximum and instantaneous rate (cubic feet or gallons per minute): 500 gpm
   Total volume (gallons or acre-feet): 239 AF/year but consumptive use is 20% of this total volume (see Remarks). If water is to be used from more than one source, give the quantity from each: NA – the source aquifer is sand & gravel (see CROO 50140).
3. **INTENDED USE(S) OF WATER:** (check all that apply)
   - ☐ Road construction or maintenance
   - ☐ General construction
   - ☐ Forestland and rangeland management; or
   - ☒ Other: Industrial & Commercial - Aggregate washing, dust control and general cleanup
4. **DESCRIPTION OF PROPOSED PROJECT:** Include a description of the place of use as shown on the accompanying site map, the method of water diversion, the type of equipment to be used (including pump horsepower, if applicable), length and dimensions of supply ditches and pipelines: Water will be pumped from up to two wells using a 50-hp submersible pumps and conveyed by pipeline to a pond and reservoir for use. The water from aggregate washing will be reused repeatedly.
5. **PROJECT SCHEDULE:** (List day, month, and year)
   Date water use will begin: As soon as license is issued
   Date water use will be completed: June 15, 2026

Months of the year water would be diverted and used: As soon as license is issued until June 15, 2026
If for other than irrigation from stored water, how and where will water be discharged after use: Water used for the described purposes will be rediverted to a pond and reservoir for reuse. Consumptive use is expected to be less than 20 percent of the total rate and volume proposed to be diverted.

Jeffrey L Steyaert
Applicant Signature

Jeff Steyaert; Assist. Secretary
Print Name *and title if applicable*

5-26-2021
Date

PLEASE READ CAREFULLY

NOTE: A completed water availability statement from the local watermaster, Land Use Information Form completed by the local Planning Department, fees and site map meeting the requirements of OAR 690-340-030 must accompany this request. The fee for this request is **$280** for the first point of diversion plus **$30** for each additional point of diversion. Please review the Department's fee schedule to view fees required to request a limited license for Aquifer Storage and Recovery testing purposes or for Artificial Groundwater Recharge testing purposes.

Failure to provide any of the required information will result in return of your application. The license, if granted, will not be issued or replaced by a new license for a period of more than five consecutive years. The license, if granted, will be subordinate to all other authorized uses that rely upon the same source, or water affected by the source, and may be revoked at any time it is determined the use causes injury to any other water right or minimum perennial streamflow.

If water source is well, well logs or adequate information for the Department to determine aquifer, well depth, well seal and open interval, etc. are required. The licensee shall indicate the intended aquifer. If for multiple wells, each map location shall be clearly tired to a well log.

If a limited license is approved, the licensee shall give notice to the Department (Watermaster) at least 15 days in advance of using the water under the Limited License and shall maintain a record of use. The record of use shall include, but need not be limited to, an estimate of the amount of water used, the period of use and the categories of beneficial use to which the water is applied. During the period of the Limited License, the record of use shall be available for review by the Department upon request.

**A summary of review criteria and procedures that are generally applicable to these applications is available at: http://www.oregon.gov/owrd/pages/pubs/forms.aspx*

Mapping Requirements (OAR 690-340-0030):

(1) A request for a limited license shall be submitted on a form provided by the Water Resources Department, and shall be accompanied by the following:

a. A site map of reproducible quality, drawn to a standard, even scale of not less than 2 inches = 1 mile, showing:

i. The locations of all proposed points of diversion referenced by coordinates or by bearing and distance to the nearest established or projected public land survey corner;

ii. The general course of the source for the proposed use, if applicable;

iii. Other topographical features such as roads, streams, railroads, etc., which may be helpful in locating the diversion points in the field.

REMARKS: Up to two wells will be used. Additional locations are proposed in case PSI is identified.

Water is needed to augment water from the Ochoco Irrigation District during drought years. The water used in the aggregate washing will be returned to a sump for reuse. This type of reuse is common in aggregate mining. Consumptive use is expected to be less than 20 percent of the total rate and volume proposed to be diverted. Given this, the consumptive use would be 47.9 AF/year based on a consumptive use of 100 gpm for 50 hours/week x 52 weeks/year and assuming no water is available from the Ochoco Irrigation District.

For WRD Use Only

LL-1876

Land Use Information Form

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

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NOTE TO APPLICANTS

In order for your application to be processed by the Water Resources Department (WRD), this Land Use Information Form must be completed by a local government planning official in the jurisdiction(s) where your water right will be used and developed. The planning official may choose to complete the form while you wait, or return the receipt stub to you. Applications received by WRD without the Land Use Form or the receipt stub will be returned to you. Please be aware that your application will not be approved without land use approval.

This form is NOT required if:

1) Water is to be diverted, conveyed, and/or used only on federal lands; **OR**

2) The application is for a water right transfer, allocation of conserved water, exchange, permit amendment, or ground water registration modification, and <u>all</u> of the following apply:
   a) The existing and proposed water use is located entirely within lands zoned for exclusive farm-use or within an irrigation district;
   b) The application involves a change in place of use only;
   c) The change does not involve the placement or modification of structures, including but not limited to water diversion, impoundment, distribution facilities, water wells and well houses; <u>and</u>
   d) The application involves irrigation water uses only.

NOTE TO LOCAL GOVERNMENTS

The person presenting the attached Land Use Information Form is applying for or modifying a water right. The Water Resources Department (WRD) requires its applicants to obtain land-use information to be sure the water rights do not result in land uses that are incompatible with your comprehensive plan. Please complete the form or detach the receipt stub and return it to the applicant for inclusion in their water right application. You will receive notice once the applicant formally submits his or her request to the WRD. The notice will give more information about WRD's water rights process and provide additional comment opportunities. You will have 30 days from the date of the notice to complete the land-use form and return it to the WRD. If no land-use information is received from you within that 30-day period, the WRD may presume the land use associated with the proposed water right is compatible with your comprehensive plan. Your attention to this request for information is greatly appreciated by the Water Resources Department. If you have any questions concerning this form, please contact the WRD's Customer Service Group at 503-986-0801.

LL-1876

Land Use Information Form

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Applicant(s): Knife River Corporation – Northwest Attn: Jeff Steyaert

Mailing Address: 32260 Old Highway 34

City: Tangent State: OR Zip Code: 97389 Daytime Phone: (541) 918-5142

A. Land and Location

Please include the following information for all tax lots where water will be diverted (taken from its source), conveyed (transported), and/or used or developed. Applicants for municipal use, or irrigation uses within irrigation districts may substitute existing and proposed service-area boundaries for the tax-lot information requested below.

Township	Range	Section	¼ ¼	Tax Lot #	Plan Designation (e.g., Rural Residential/RR-5)	Water to be			Proposed Land Use:
14 South	15 East	14	NE SW	703		☐ Diverted	☒ Conveyed	☒ Used	Commercial/ Industrial
14 South	15 East	14	SE SW	702 & 703		☒ Diverted	☒ Conveyed	☒ Used	Commercial/ Industrial
14 South	15 East	14	SW SE	703		☐ Diverted	☒ Conveyed	☒ Used	Commercial/ Industrial

List all counties and cities where water is proposed to be diverted, conveyed, and/or used or developed:

Crook County

B. Description of Proposed Use

Type of application to be filed with the Water Resources Department:

☐ Permit to Use or Store Water ☐ Water Right Transfer ☐ Permit Amendment or Ground Water Registration Modification
☒ Limited Water Use License ☐ Allocation of Conserved Water ☐ Exchange of Water

Source of water: ☐ Reservoir/Pond ☒ Ground Water ☐ Surface Water (name) _____

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Estimated quantity of water needed: 500 ☐ cubic feet per second ☒ gallons per minute ☐ acre-feet

Intended use of water: ☐ Irrigation ☒ Commercial ☒ Industrial ☐ Domestic for _____ household(s)
☐ Municipal ☐ Quasi-Municipal ☐ Instream ☐ Other _____

Briefly describe:

Water will be pumped from one or two wells into a pond and reservoir and then used for aggregate washing, dust control and general site cleanup year-round for up to 5 years. Water not consumed in these operations (expected to be about 80 percent) will be reused. This type of water use is common at aggregate mines. The consumptive use is expected to be 47.9 AF/year.

Note to applicant: If the Land Use Information Form cannot be completed while you wait, please have a local government representative sign the receipt at the bottom of the next page and include it with the application filed with the Water Resources Department.

See bottom of Page 3. →

LL-1876

For Local Government Use Only

The following section must be completed by a planning official from each county and city listed unless the project will be located entirely within the city limits. In that case, only the city planning agency must complete this form. This deals only with the local land-use plan. Do not include approval for activities such as building or grading permits.

Please check the appropriate box below and provide the requested information

☐ Land uses to be served by the proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s):

☑ Land uses to be served by the proposed water uses (including proposed construction) involve discretionary land-use approvals as listed in the table below. (Please attach documentation of applicable land-use approvals which have already been obtained. Record of Action/land-use decision and accompanying findings are sufficient.) **If approvals have been obtained but all appeal periods have not ended, check "Being pursued."**

Type of Land-Use Approval Needed (e.g., plan amendments, rezones, conditional-use permits, etc.)	Cite Most Significant, Applicable Plan Policies & Ordinance Section References	Land-Use Approval	
Site plan & conditional use approval - file #	217-15-000115-PLNG 217-15-000350-PLNG 217-18-000347-PLNG	☑ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued

Local governments are invited to express special land-use concerns or make recommendations to the Water Resources Department regarding this proposed use of water below, or on a separate sheet.

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Name: Katie McDonald Title: Planner

Signature: Katie McDonald Phone: 541-447-3211 Date: 5/27/21

Government Entity: Crook County

Note to local government representative: Please complete this form or sign the receipt below and return it to the applicant. If you sign the receipt, you will have 30 days from the Water Resources Department's notice date to return the completed Land Use Information Form or WRD may presume the land use associated with the proposed use of water is compatible with local comprehensive plans.

Receipt for Request for Land Use Information

Applicant name: _____

City or County: _____ Staff contact: _____

Signature: _____ Phone: _____ Date: _____

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This page to be completed by the local Watermaster.

WATER AVAILABILITY STATEMENT

Name of Applicant: Knife River Corp. - NW Limited License Number: LL-1876

1. To your knowledge, has the stream or basin that is the source for this application ever been regulated for prior rights?

O Yes ☒ No

If yes, please explain:

2. Based on your observations, would there be water available in the quantity and at the times needed to supply the use proposed by this application?

☒ Yes O No

3. Do you observe this stream system during regular fieldwork?

☒ Yes O No

If yes, what are your observations for the stream?

Subtle long-term decline in groundwater head in the Lemoore area due to climactic conditions and on-going development.

4. If the source is a well and if WRD were to determine that there is the potential for substantial interference with nearby surface water sources, would there still be ground water and surface water available during the time requested and in the amount requested without injury to existing water rights?

☒ Yes O No O N/A

What would you recommend for conditions on a limited license that may be issued approving this application?

Applicant must mitigate the consumptive use in the appropriate zone of impact. Based on information in the application, aggregate washing, dust control, and general cleanup are all 100% consumptive use.

5. Any other recommendations you would like to make?

User to install flow meters on all applicable P.O.A.'s (Wells).
User to maintain accurate pumping records for duration of Limited License.

Signature [signature] WM District#: Date: 5/27/21

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Application for Limited Water Use License

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License No.:_____

Applicant Information

NAME			PHONE (HM)
Knife River Corporation – Northwest Attn: Jeff Steyaert			
PHONE (WK) (541) 918-5142	CELL		FAX
ADDRESS 32260 Old Highway 34			
CITY Tangent	STATE OR	ZIP 97389	E-MAIL * jeff.steyaert@kniferiver.com

Agent Information

NAME			PHONE	FAX
Steven R. Bruce Skookum Water Associates Inc			(503) 319-8926	
ADDRESS 1626 Victorian Way				CELL
CITY Eugene	STATE OR	ZIP 97401	E-MAIL * steve@skookumwater.com	

I (We) make application for a Limited License to use or store the following described surface waters or groundwater – not otherwise exempt, or to use stored water of for a use of a short-term or fixed-duration:

1. **SOURCE(S) OF WATER:** Up to Four Wells a tributary of Crooked River
2. **AMOUNT OF WATER** to be diverted;
   Maximum and instantaneous rate (cubic feet or gallons per minute): 500 gpm
   Total volume (gallons or acre-feet): 239 AF/year but consumptive use is 20% of this total volume (see Remarks). If water is to be used from more than one source, give the quantity from each: NA – the source aquifer is sand & gravel (see CROO 50140).
3. **INTENDED USE(S) OF WATER:** (check all that apply)
   - ☐ Road construction or maintenance
   - ☐ General construction
   - ☐ Forestland and rangeland management; or
   - ☒ Other: Industrial & Commercial - Aggregate washing, dust control and general cleanup
4. **DESCRIPTION OF PROPOSED PROJECT:** Include a description of the place of use as shown on the accompanying site map, the method of water diversion, the type of equipment to be used (including pump horsepower, if applicable), length and dimensions of supply ditches and pipelines: Water will be pumped from up to two wells using a 50-hp submersible pumps and conveyed by pipeline to a pond and reservoir for use. The water from aggregate washing will be reused repeatedly.
5. **PROJECT SCHEDULE:** (List day, month, and year)
   Date water use will begin: As soon as license is issued
   Date water use will be completed: June 15, 2026

   Months of the year water would be diverted and used: As soon as license is issued until June 15, 2026
   If for other than irrigation from stored water, how and where will water be discharged after use: Water used for the described purposes will be rediverted to a pond and reservoir for reuse. Consumptive use is expected to be less than 20 percent of the total rate and volume proposed to be diverted.

_____ Jeff Steyaert; Assist. Secretary _____
Applicant Signature | Print Name *and title if applicable* | Date

LL-1876

SKOOKUM
WATER ASSOCIATES INC

May 28, 2021
Project No. 10166.01

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301-1271

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Water-Use Estimates to Support a Limited License Application
Knife River Corporation Prineville, Oregon Facility
Crook County, Oregon

To Whom It May Concern:

In accordance with our May 27, 2021 conversation with Dwight French, we are providing the following estimates of the proposed year-round water uses described in the attached limited license application being filed by the Knife River Corporation. This information is intended to assist the Department with identifying the number of mitigation credits needed to offset the proposed groundwater use.

The application is requesting 500 gallons per minute (gpm) of groundwater from wells for commercial/industrial use. More specifically, the water would be used for aggregate washing, dust control and general cleanup. Water is needed this year under a limited license because the Ochoco Irrigation District, the customary water supplier for the facility, is only able to provide 80 gpm of water, instead of the full volume requested in this application. The application also requests the license for 5 years in case reduced deliveries from the District continue for several years. Knife River is aware that the mitigation credits would need to be purchased every year that the license is in effect.

The estimates below are based on pumping up to 10 hours/day during a 5 day/workweek each year (52 weeks assumed). This is equivalent to 2,600 hours or 156,000 minutes each year. For convenience, the following first summarizes the estimated dust control and general cleanup rates and duties, followed by the aggregate washing estimates.

Dust Control and General Cleanup Estimates
The dust control and general cleanup activities are considered to be 100% consumptive. The dust control uses are projected to consist of filling a 3,000-gallon-capacity water truck 3 times/day for a total of 9,000 gallons per day (gpd). General cleanup uses would typically involve using hoses to wash equipment at about 30 gpm for up to 3 hours/day, which is approximately 5,400 gpd. Combined these uses would total approximately 14,500 gpd.

The 14,500 gpd volume would approximately equate to 24.1 gpm when averaged over a 10-hour day. Based on the 24.1 gpm average, we propose a rate of 25 gpm for these consumptive uses. Multiplying 25 gpm by 156,000 minutes/year yields a total use of 3.9 million gallons/year (MG/year) or essentially 12 acre-feet/year (AF/year).

Aggregate Washing Estimates
Aggregate washing would constitute the majority of the water use and is only partially consumptive. As with many aggregate mines in Oregon, this process recycles water. Water losses from these operations at the site would be related to evaporation, seepage from the unlined settling pond (which recharges groundwater in the vicinity) and water retained on the aggregate trucked from the site. The consumptive

LL-1876

use for aggregate washing has been estimated to be 20%, based on past discussions with Bruce Estes (Estes Surveys LLC).

For estimating purposes, we assume the balance of the requested water not consumed for dust control and general cleanup would be used for aggregate washing. The application requests a rate of 500 gpm and a total volume of 239.4 AF/year. Therefore, subtracting the 25 gpm and 12 AF/year from this total would provide 475 gpm and 227.4 AF/year for aggregate washing. An averaged water loss of 20% from the 475 gpm and 227.4 AF/year would approximately equal 95 gpm and 45.5 AF/year.

Other Considerations
The above estimates of 12 AF/year for dust control and general cleanup and 45.5 AF/year for aggregate washing total 57.5 AF/year of consumptive use.

The following are two key factors that would affect the proposed water use under the Limited License Application.

- The 80 gpm of water the District plans to deliver to Knife River in 2021 has not been included in the above estimates. This water source would be expected to reduce the rate and volume of groundwater needed this year under the limited license. Water use in the other 4 years requested under the limited license may be substantially less if the District delivers more water during that time.

- Water lost to seepage from the unlined pond will recharge the aquifer in the vicinity from which the water would be pumped.

Please call or email us if you have any questions regarding this letter.

Sincerely,

SKOOKUM WATER ASSOCIATES INC.

Steven R. Bruce, RG, CWRE
Principal

Enclosures

cc. Jeff Steyaert; Knife River Corporation

LL-1876

Amended Well Report

CR00
50140

L01442 L01435 per driller

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

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

(START CARD) # 71925

(1) OWNER: Well Number 795
Name Prineville Saw Mill Co. #2
Address 126 w First St
City Prineville State Or. Zip 97754

(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 255 ft.
Explosives used ☐ Yes ☑ No Type _____ Amount _____

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
12	0	165	Bentonite	0	25	37
			Cement	25	165	40

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:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	5	+2	255	.250	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:
☑ Perforations Method Factory
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Telescope/pipe size	Casing	Liner
230	255	10x3	30	5		☑	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

Yield gal/min	Drawdown	Drill stem at	Time
300	80		1 hr.

Temperature of water 54 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 Crook Latitude _____ Longitude _____
Township 14 ☐ N or ☑ S Range 15 ☐ E or ☑ W. WM.
Section 14 SE 1/4 SW 1/4
Tax Lot 702 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:
24 ft. below land surface. Date 7-15-96
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 60'

From	To	Estimated Flow Rate	SWL
60	80	50	60
236	255	300+	24

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Gravel fill	0	2	
Top Soil	2	4	
Hard gravel Comp.	4	26	
Brown Sandy Clay	26	66	60
Black Sand fine & silt	66	80	
light Grey clay Soft	80	236	
Gravel & Sand	236	255	24

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WATER RESOURCES DEPT.
SALEM, OREGON

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Date started 6-11-96 Completed 7-15-96

(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 384

LL-1876

CR00 50140

L 01472 1435

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

(START CARD) # 71925

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

(1) OWNER: Well Number 795

Name Prineville Saw mill Comp.

Address 126 W First St

City Prineville State Oregon Zip 97754

(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 255 ft.

Explosives used ☐ Yes ☑ No Type ____ Amount ____

HOLE

Diameter	From	To	Material	From	To	Sacks or pounds
12	0	165	Bentonite	0	25	37
			Cement	25	165	40

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:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	255	.250	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) ____

(7) PERFORATIONS/SCREENS:

☑ Perforations Method Factory

☐ Screens Type ____ Material ____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
250	255	16x3	30	8		☑	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☑ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
300	80		1 hr.

Temperature of water 54 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 Crook Latitude ____ Longitude ____

Township 14 N or (S) Range 15 (E) or W. WM.

Section 14 SE 1/4 SW 1/4

Tax Lot 702 Lot ____ Block ____ Subdivision ____

Street Address of Well (or nearest address) ____

(10) STATIC WATER LEVEL:

24 ft. below land surface. Date 7-15-96

Artesian pressure ____ lb. per square inch. Date ____

(11) WATER BEARING ZONES:

Depth at which water was first found 60'

From	To	Estimated Flow Rate	SWL
60	80	50	60
256	255	300+	24

(12) WELL LOG:

Ground Elevation ____

Material	From	To	SWL
Gravel fill	0	2	
Top Soil	2	4	
Hard gravel cong.	4	26	
Brown Sandy Clay	26	66	60
Black Sand Fine & Silt	66	80	
Light Gray clay Soft	80	236	
Gravel & Sand	236	255	24

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SALEM, OREGON

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JUN 01 2021
OWRD

Date started 6-11-96 Completed 7-15-96

(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 584

Signed David Mayo Date 7-25-96

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

LL-18 76

Approved:

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager

From: Travis Kelly, Well Construction Program Coordinator

Subject: Review of Water Right Application LL-1876

Date: September 17, 2021

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 (CROO 50140): 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 (Proposed Well): Well# 2 is a proposed well, therefore it cannot be reviewed for construction. Construction of the proposed well shall be completed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240. During construction of the well, specific attention should be paid to ensure sealing requirements are met and that the well does not commingle aquifers.

The construction of proposed Well #2 may not satisfy hydraulic connection issues.

Applicant's Well #3 (Proposed Well): Well #3 is a proposed well, therefore it cannot be reviewed for construction. Construction of the proposed well shall be completed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240. During construction of the well, specific attention should be paid to ensure sealing requirements are met and that the well does not commingle aquifers.

The construction of proposed Well #3 may not satisfy hydraulic connection issues.

Applicant's Well #4 (Proposed Well): Well #4 is a proposed well, therefore it cannot be reviewed for construction. Construction of the proposed well shall be completed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240. During construction of the well, specific attention should be paid to ensure sealing requirements are met and that the well does not commingle aquifers.

The construction of proposed Well #4 may not satisfy hydraulic connection issues.

Amended Well Report
CR00
50140

L01442 L01435 per driller

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

(START CARD) # 71925

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

(1) OWNER: Well Number 795
Name Prineville Saw Mill Co-op
Address 126 W First St
City Prineville State Oregon Zip 97754

(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 255 ft.
Explosives used ☐ Yes ☑ No Type _____ Amount _____

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
12	0	165	Bentonite	0	25	37
			Cement	25	165	40

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:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	255	.250	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:
☑ Perforations Method Factory
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
250	255	10x3	30	8		☑	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

Yield gal/min	Drawdown	Drill stem at	Time
300	80		1 hr.

Temperature of water 54 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 Crook Latitude _____ Longitude _____
Township 14 ☐ N or ☑ S Range 15 ☑ E or ☐ W. WM.
Section 14 SE 1/4 SW 1/4
Tax Lot 202 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:
24 ft. below land surface. Date 7-15-96
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 60'

From	To	Estimated Flow Rate	SWL
60	80	50	60
236	253	300+	24

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Gravel fill	0	2	
Top Soil	2	4	
Hard gravel Comp.	4	26	
Brown Sandy Clay	26	66	60
Black Sand fine & Silt	66	80	
light Grey clay Soft	80	236	
Gravel & Sand	236	255	24

RECEIVED
NOV - 7 1996
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 6-11-96 Completed 7-15-96

(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 584

CR00 50140

L01442

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

(START CARD) # 71925

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

(1) OWNER: Well Number 795

Name Prineville Saw Mill Comp.

Address 126 W First St

City Prineville State Oregon Zip 97754

(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 255 ft.

Explosives used ☐ Yes ☑ No Type _____ Amount _____

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
12	0	165	Bentonite	0	25	37
			Cement	25	165	40

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:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	255	.250	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

☑ Perforations Method Factory

☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
250	255	16x3	30	8"		☑	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☑ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
300	80		1 hr.

Temperature of water 54 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 Crook Latitude _____ Longitude _____

Township 14 N or (S) Range 15 (E) or W. WM.

Section 14 SE 1/4 SW 1/4

Tax Lot 702 Lot _____ Block _____ Subdivision _____

Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:

24 ft. below land surface. Date 7-15-96

Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 60'

From	To	Estimated Flow Rate	SWL
60	80	50	60
236	255	300+	24

(12) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Gravel fill	0	2	
Top Soil	2	4	
Hard gravel Comp.	4	26	
Brown Sandy Clay	26	66	60
Dark Sand Fine & Silt	66	80	
Light Gray clay Soft	80	236	
Gravel & Sand	236	255	24

RECEIVED
SEP 20 1996
WATER RESOURCES DEPT
SALEM, OREGON

Date started 6-11-96 Completed 7-15-96

(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 584

Signed David Myers Date 9-25-96

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

Groundwater Application Review Summary Form

Application # LL- 1876

GW Reviewer M. Thoma **Date Review Completed: 08/17/2021**

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 **08/12/2021**

TO: Application LL- **1879**

FROM: **GW: Mike 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** Crooked 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 08/17/2021
FROM: Groundwater Section M. Thoma
Reviewer's Name
SUBJECT: Application LL- 1876 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: **Knife River Corp** County: **Crook**

A1. Applicant(s) seek(s) 1.114 cfs from 4 well(s) in the Deschutes Basin, Crooked River subbasin

A2. Proposed use Commercial / Industrial 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	CROO 50140	1	Bedrock	1.114	14.00S-15.00E-14-SE SW	110 NORTH AND 1380 FEET EAST FROM SW CORNER, SECTION 14
2	PROPOSED	2	Bedrock	1.114	14.00S-15.00E-14-SE SW	550 NORTH AND 1500 FEET EAST FROM SW CORNER, SECTION 14
3	PROPOSED	3	Bedrock	1.114	14.00S-15.00E-14-SE SW	570 NORTH AND 1890 FEET EAST FROM SW CORNER, SECTION 14
4	PROPOSED	4	Bedrock	1.114	14.00S-15.00E-14-SE SW	1260 NORTH AND 1780 FEET EAST FROM SW CORNER, SECTION 14

* 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	2910	60	24	7/15/96	255	0-165	+2-255		250-255	300	80	P
2	2910											
3	2910											
4	2910											

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 located 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:** Groundwater studies by the USGS and OWRD estimated recharge and groundwater appropriation for the Deschutes Basin as a whole and while those studies showed that recharge to the basin vastly exceeds groundwater appropriation, further calculation at the local scale has not been performed and so Over-Appropriation cannot be determined.

The proposed POAs will likely be producing from a shallow groundwater system that is in hydraulic connection with the Crooked River near the POAs. Therefore, it is unlikely that the proposed use will have a significant affect on the capacity of the resource at the local scale (i.e., will not likely lead to or contribute to groundwater level declines).

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

Analysis in Section C omitted in lieu of the Deschutes Mitigation Rule

References Used:

Gannett, M. W. and Lite, K. E., 2004, Simulation of Regional Ground-Water Flow in the Upper Deschutes Basin, Oregon, USGS Water Resources Investigation Report 2003-4195, 84 p., https://pubs.er.usgs.gov/publication/wri034195

Gannett, M. W. and Lite, K. E., 2013, Analysis of 1997-2008 Groundwater Level Changes in the Upper Deschutes Basin, Central Oregon, USGS Scientific Investigations Report 2013-5092, 34p., https://pubs.er.usgs.gov/publication/sir20135092

Gannett, M. W., Lite Jr, K. E., Morgan, D. S., and Collins, C. A., 2001, Ground-Water Hydrology of the Upper Deschutes Basin, Oregon, USGS Water-Resources Investigations Report 00-4162, 74 p., https://pubs.usgs.gov/wri/wri004162/pdf/WRIR004162.pdf

Gannett, M.W., Lite, K.E., Jr., Risley, J.C., Pischel, E.M., and La Marche, J.L., 2017, Simulation of groundwater and surface-water flow in the upper Deschutes Basin, Oregon: U.S. Geological Survey Scientific Investigations Report 2017–5097, 68 p., https://doi.org/10.3133/sir20175097.

Lite, K. E. and Gannett, M. W., 2002, Geologic Framework of the Regional Ground-Water Flow System in the Upper Deschutes Basin, Oregon. USGS Water-Resources Investigation Report 02-4015, 44 p., https://pubs.er.usgs.gov/publication/wri024015

Sherrod, D. R., Taylor, E. M., Ferns, M. L., Scott, W. E., Conrey, R. M. and Smith, G. A., 2004, Geologic Map of the Bend 30-x-60-Minute Quadrangle, Central Oregon.

Swanson, D. A., 1969, Reconnaissance Geologic Map of the East Half of the Bend Quadrangle, Crook, Wheeler, Jefferson, Wasco, and Deschutes Counties, Oregon, USGS Misc. Geologic Investigations Map I-568, https://ngmdb.usgs.gov/Prodesc/proddesc_9354.htm

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 _____;

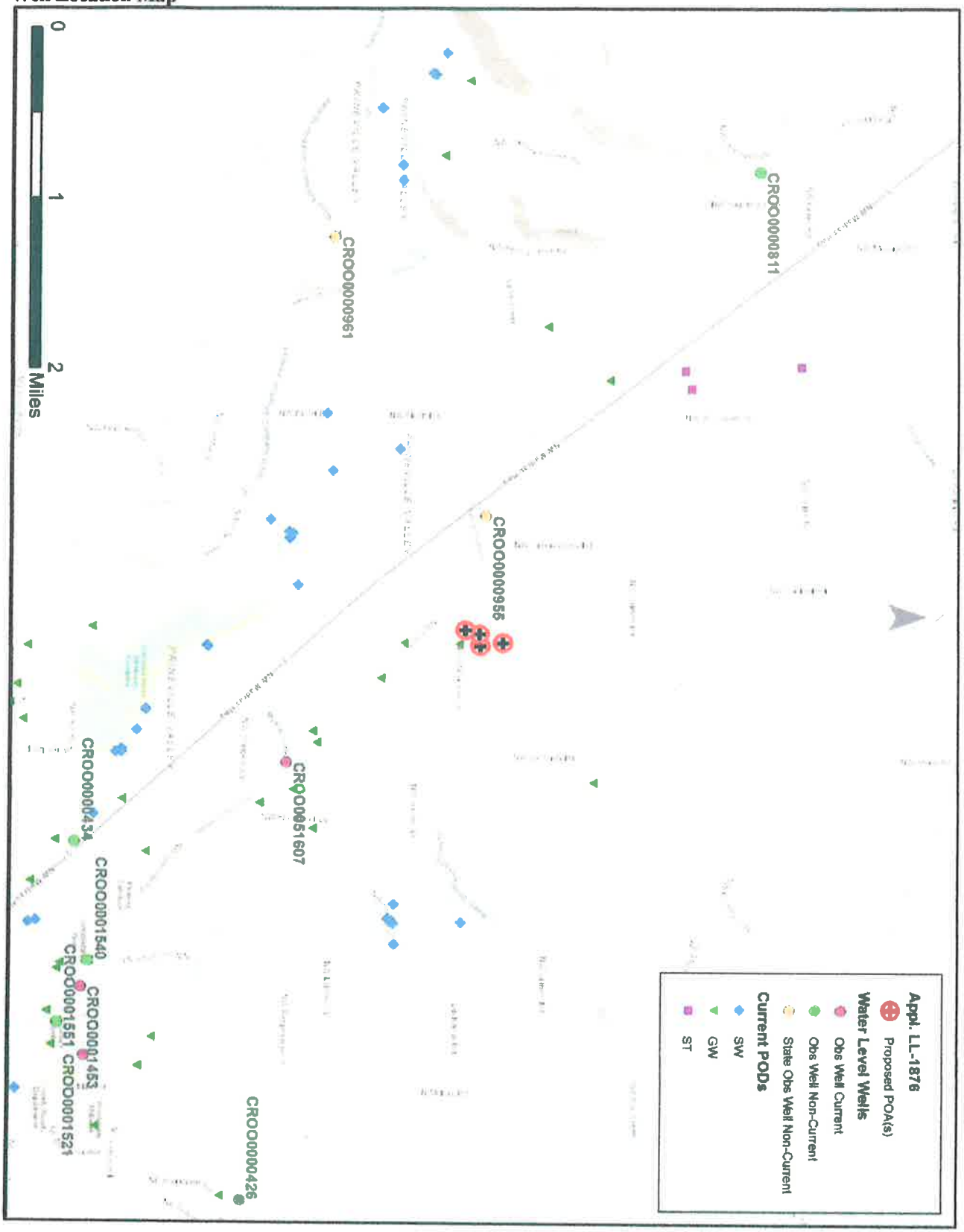
c. ☐ report of CWRE _____;

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



Water-Level Measurements in Nearby Wells