

Groundwater Transfer Review Summary Form

Transfer/PA # T- 13446

GW Reviewer Aurora C Bouchier Date Review Completed: June 19, 2020

Summary of Same Source Review:

The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

Summary of Injury Review:

The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



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Ground Water Review Form:

- Water Right Transfer
- Permit Amendment
- GR Modification
- Other

Application: T-13446

Applicant Name: City of Prineville

Proposed Changes: POA APOA SW→GW RA
 USE POU OTHER

Reviewer(s): Aurora C Bouchier

Date of Review: 6/19/2020

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 6/26/2020

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- Other _____

1. Basic description of the changes proposed in this transfer: The City of Prineville is proposing to add an APOA (CROO 54871, Lamonta Well 2) to Permit G-18304. Permit G-18304 authorizes a maximum rate of 3.99 cfs out of 7 wells, three of which have not yet been drilled. A recent transfer (T-13026, the most recent groundwater review dated 6/5/2019) added 4 PODs to the underlying water right (was Permit G-12541, became Permit G-18304 after the transfer was approved). In Permit G-18304, the original 3 wells have a rate restriction of 1.33 cfs, whereas the 4 added wells are authorized for the full maximum rate of 3.99 cfs. This current transfer (T-13446) does not specify a well specific rate for the proposed APOA (CROO 54871, Lamonta Well 2).

CROO 54871 is included in a recent limited license application (LL-1825), which proposed producing a maximum rate of 1200 gpm from CROO 54871, and proposed limiting the combined annual volume of water appropriated under Permits G-17577, G-18155 and LL-1825 to no more than the annual volume authorized and mitigated for under Permits G-17577 and G-18155. The groundwater review for LL-1825 identified well-to-well interference concerns with CROO 1540 (Lamonta Well 1) if CROO 54871 (Lamonta Well 2) was in fact pumped at 1200 gpm. CROO 1540 is authorized for a maximum rate of 0.51 cfs under Certificate 94818 for municipal uses (City of Prineville). If this current transfer (T-13446) and the limited license (LL-1825) are both approved, then the well-to-well interference concerns are even larger.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
 Yes No Comments: _____
3. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
 Yes No _____
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): _____
4. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?
 Yes No Comments: _____

b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?
 Yes No If yes, explain: **Well-to-well interference modeling predicates that pumping at the maximum allowed rate of use (3.99 cfs) authorized by Permit G-18304 from CROO 54871, then the drawdown at nearby CROO 1540 (authorized under Certificate 94818 for municipal uses) could be between 200 feet to over 400 feet using published transmissivity values (Robinson and Price, 1963). Pumping water level measurement at CROO 1540 are approximately 200+ feet below land surface without interference due to pumping at CROO 54871. CROO 1540 is 256 feet deep. CROO 1540 cannot accommodate the predicted additional drawdown. Please note, this modeled well-to-well interference only accounts for the water authorized by Permit G-18304, it does not include the additional requested water use under limited license application LL-1825.**

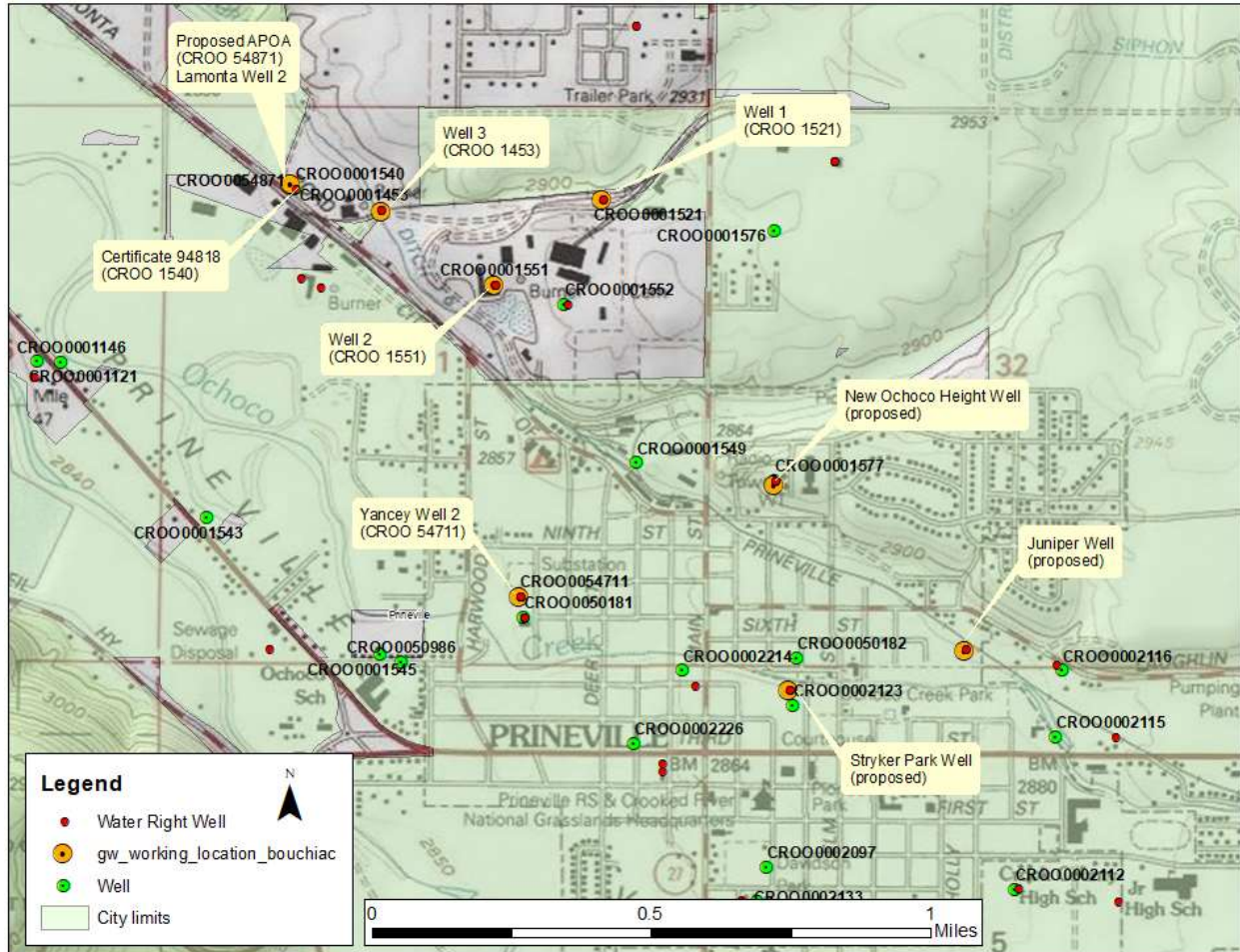
Both water rights in question are owned by the City of Prineville. Careful water level monitoring and pumping rate adjustments may allow operation of both water rights.

5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?
 Yes No Comments: _____
- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?
 Stream: _____ Minimal Significant
 Stream: _____ Minimal Significant
 Provide context for minimal/significant impact: _____
6. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?
 Yes No Comments: NA
7. What conditions or other changes in the application are necessary to address any potential issues identified above: _____
8. Any additional comments: _____

References Used:

Robinson, J. W., and Price, D., 1963, Ground Water in the Prineville Area Crook County, Oregon: U.S. Geological Survey Water-Supply Paper 1619-P.

Well Location Map



Well-to-Well Interference Modeling Results

Thisis Time-Drawdown Worksheet v.3.00
 Calculates Thisis nonequilibrium drawdown and recovery at any arbitrary radial distance, r, from a pumping well for 3 different T values and radial distance, r, from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

| Input Data: | Var Name | Scenario 1 | Scenario 2 | Scenario 3 | Units | |
|-----------------------------------|----------|------------|------------|------------|----------------------|--|
| Total pumping time | t | | 365 | | d | |
| Radial distance from pumped well: | r | | 50 | | ft | Q conversions |
| Pumping rate | Q | | 3.99 | | cfs | 1,790.71 gpm |
| Hydraulic conductivity | K | 18 | 25 | 36 | ft/day | 3.99 cfs |
| Aquifer thickness | b | | 40 | | ft | 239.40 cfm |
| Storativity | S 1 | | 0.01 | | | 344,736.00 cfd |
| | S 2 | | 0.001 | | | 7.91 af/d |
| Transmissivity Conversions | T f2pd | 720 | 1000 | 1440 | ft ² /day | <input type="button" value="Recalculate"/> |
| | T ft2pm | 0.5 | 0.69444444 | 1 | ft ² /min | |
| | T gpdpft | 5385.6 | 7480 | 10771.2 | gpd/ft | |

Use the Recalculate button if recalculation is set to manual

