



PUBLIC HEALTH DIVISION  
Drinking Water Services

Kate Brown, Governor

Oregon  
**Health**  
Authority

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[www.healthoregon.org/DWP](http://www.healthoregon.org/DWP)

April 26, 2018

Jonathan Smith, PE  
Cascade Water Works, Inc.  
13469 Morrow Lane SE  
Turner, OR 97392

**Re: Well #5 project (PR#141-2017)**  
**Luckiamute Domestic Water Co-op (PWS ID#00538)**  
**SRF Project #SD-16-158**  
**Conditional Approval**

Dear Mr. Smith:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Well #5 project for Luckiamute Domestic Water Co-op. On December 12, 2017, our office received plans, a land use compatibility statement, well log, sample results and a plan review fee of \$4,125.

The project includes installation of well, pump, treatment (residual maintenance using hypochlorination and corrosion control using soda ash) along with waterlines connecting the well to the system. The waterline portion of the project is assumed to be handled under Luckiamute's plan review exemption for waterlines and isn't included here.

The well was drilled to a depth of 49 feet in 2016. A regional geologist in our program reviewed the well construction details for well ID POLK 53933 (Source DA). He noted that the well appears to meet current construction standards in a confined aquifer. He noted that the casing seal extends to the bottom of the hole and is sealed to a depth of 20 feet. The confining layer above the aquifer occurs at a depth of 1 foot and is 17 feet thick. The well draws water from a shallow confined aquifer and the well construction doesn't contribute to the overall sensitivity of this drinking water supply to local land use practices.

The plans are approved with the following conditions:

- A copy of the land use compatibility statement with the county's signature indicating that the project is compatible (section 2b) must be submitted to our office prior to construction.
- A copy of the water right permit for the well must be submitted to our office. A portion of the 100' radius around the well may encompass part of the nearby road. Please confirm whether or not the road is within the 100' radius. If it is, since the well is drilled in a confined aquifer and located near an access road, OAR 333-061-0050(2)(a)(D) would apply. In that case, information must be submitted that demonstrates that the well is "...protected against contamination from surface runoff or hazardous liquids which may be spilled on the roadway and is protected from unauthorized access".
- A casing vent for the well must be provided and the return bend must be fitted with a screen.
- Results from a coliform bacteria sample from the raw water sample tap at the wellhead must be submitted.
- All items in contact with potable water must meet NSF Standard 61 (this applies to the well project including the pump, the treatment system and the pipeline). Chemicals used must meet NSF Standard 60.
- The operations and maintenance plan for the water system must be updated to include the new facilities and should cover operation of the new well, pump, and treatment system.

**Until we receive verification that the conditions have been met and final approval has been issued, the facility is not approved for use.** Upon completion of the project, the engineer must verify in writing that construction was completed according to the submitted plans. If substantial changes are made, a set of as-built drawings must be submitted. Documentation demonstrating how the above conditions were met should reference Plan Review #141-2017 and can be emailed to me at [Carrie.L.Gentry@state.or.us](mailto:Carrie.L.Gentry@state.or.us) or mailed to:

Attn: Carrie Gentry  
 OHA-Oregon Drinking Water Services  
 PO Box 14450  
 Portland, OR 97293-0450

In addition to the above requirements, I have the following comments:

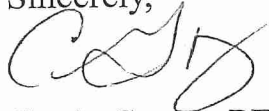
- Once the well has received final approval and is operational, nitrate sampling for this well will be set at quarterly for at least one year, as the result was over 1/2 of the

maximum contaminant level (MCL.) After one year of sample results, please contact Polk County Environmental Health Department to determine whether a reduction is possible.

- Quarterly radionuclide sampling must be conducted for at least two quarters. The initial sampling for radionuclides didn't include gross alpha (only radium 226/228 combined, and uranium.) Depending on the results, a reduction may be possible. Please contact Polk County Environmental Health Department after completing two quarters of sampling. If the pump is in the well and can be operated, the monitoring for this can begin. Results can be sent to my attention prior to the project receiving final approval; after final approval please send the results to the data management section as usual.
- Additional lead and copper distribution sampling may be required. This will be determined prior to issuing final approval for this project.

If you have any questions, please feel free to call me at (971) 673-0191.

Sincerely,



Carrie Gentry, PE  
Regional Engineer  
Drinking Water Services

cc: Carol Clark, Luckiamute Domestic Water Co-op  
✓Michelle Bilberry, Business Oregon  
✓Jim Solvedt, Polk County Environmental Health