



August 29, 2019

Darrin Eckman, P.E.  
Tenneson Engineering Corp.  
3775 Crates Way  
The Dalles, OR 97058

**Re: Well #3, Plan Review # 89-2019  
City of Cascade Locks, PWS ID # 41 00172  
Site Plan Evaluation**

Dear Mr. Eckman:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for well #3 for the City of Cascade Locks. On June 6, 2019, our office received plans and specifications, an approved land use compatibility statement, and water rights documentation for the source. A plan review fee of \$3,300 was received.

The project includes drilling a roughly 120-foot deep well to serve the City through the existing entry point of wells #1 and #2.

A regional geologist in our program reviewed the proposed well construction. He noted the following, which should be shared with the well driller:

The well will be constructed into sediments (clay, sand, and gravel) with an estimated water bearing zone of 61 feet. The targeted aquifer is likely unconfined. Wells in this area appear to produce water from sands and gravels ranging from 58 to 106 feet in depth. The proposed casing seal exceeds the minimum 18 feet for sealing of wells in unconsolidated formations without significant clay beds (Oregon Administrative Rule-OAR 690-210-0130). If the well driller encounters significant clay beds or other layers of low permeability, the well will need to be sealed a minimum of 5 feet into the layer overlying the water bearing zone.

The proposed well is located within 100 feet of well #1, that does not meet current state construction standards, as cement and sand are not approved casing sealant materials. Therefore, the sanitary hazard setbacks for the new source are not met. **A waiver for the setback cannot be approved prior to drilling a well. The City is encouraged to meet the sanitary hazard setback and take full advantage of the protections provided by the standard. However, there is a benefit to utilizing sources that are built**

**according to current standards, including the development of an appropriate casing seal. Additionally, both of the City’s existing wells have not had any water quality problems. Consequently, DWS may be able to waive the setback requirement for this new well if it meets all other state construction standards.**

Due to the setback, **the site plan/location cannot be approved at this time.** After the well is drilled, please submit:

1. The well driller’s report (well log).
2. A waiver request for the above noted setback issue.
3. Well pumping test information including static water level, pumping rate, drawdown and rate of recover.
4. Pump information.
5. Raw (Untreated) Water Quality Data including coliform bacteria, IOCs (including nitrate, nitrite and arsenic), SOCs, VOCs and radionuclides. These are to be taken from the new well’s raw water sample tap at the wellhead.
6. Engineered plans or photographs that show the above-well structure detail including the well house, concrete slab, drainage, pump-to-waste piping and plans and specifications for reconnection of the well to the water system.
7. A copy of any updated water rights documentation.

The above items should reference Plan Review # 89-2019 and can be emailed to me at [james.b.nusrala@state.or.us](mailto:james.b.nusrala@state.or.us) or mailed to:

Attn: James Nusrala  
OHA-Oregon Drinking Water Program  
800 NE Oregon Street, Suite 640  
Portland, OR 97232-2162

If you have any questions or concerns, or would like this in an alternate format, please contact me at (971) 673-0459, or [james.b.nusrala@state.or.us](mailto:james.b.nusrala@state.or.us). Your cooperation is appreciated.

Sincerely,



James Nusrala, P.E., Regional Engineer  
Drinking Water Services

ec:

Gordon Zimmerman, City of Cascade Locks Administrator  
Sheldon Price, City of Cascade Locks Public Works Director  
Ian Stromquist, REHS, Hood River County Environmental Health