



July 25, 2023

Jim Newton, PE, RG, CWRE
Cascade Geoengineering, LLC
21145 Scottsdale Dr
Bend, OR 97701

**Re: New Well (PR#205-2021)
Jasper Knolls Water District (PWS#00678)
Conditional Approval**

Dear Jim:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new well for Jasper Knolls Water District. On July 13, 2023, our office received well log CROO55398 associated with the site plan referenced in the February 7, 2022 site plan evaluation letter.

The project includes a newly drilled well, used to augment and potentially replace the current authorized wells in Jasper Knolls Water District. The well was drilled to a depth of 717 ft, with a casing diameter of 6 inches. OHA/DWS anticipates the well to be listed as a new entry point (source BA, entry point B), to be determined prior to final approval.

The well location is within 100 ft of the adjoining property and a roadway. The well is properly drilled into a confined aquifer and is considered to have low sensitivity to the influence of surface water. If the well is positive for *E. coli* or if coliform is repeatedly detected, the well will be considered for assessment monitoring.

The plans are approved with the following conditions:

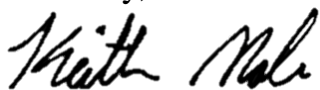
- Above ground well head details must be provided (pictures may be the best way of showing these items), specifically:
 - Unless a pitless adapter was installed, a concrete slab must be provided around the well.
 - The casing height must be 12" above the slab (or 12" above grade, if a pitless adapter was installed.)
 - A watertight sanitary seal must be provided.

- Provisions must be made for determining the depth to water surface in the well under pumping and static conditions.
- A sample tap at the well head must be provided.
- Piping arrangements must include provisions for pumping the total flow of the well to waste. Pump-to-waste piping is typically installed for this, however, some systems plan to pump the flow to waste through the sample tap.
- A method of determining the total output of the well must be provided (typically a flowmeter is installed for this purpose).
- Unless a pitless adapter is installed, a well house must be provided. If the well house is not a small dog-house style, then it must be provided with light and heat. In all cases it must be lockable.
- A casing vent with a screened return bend must be provided. If a pitless adapter was installed, the caps are typically vented.
- Coliform bacteria, nitrate, and arsenic sample results must be submitted. These samples must be obtained from the well head raw water sample tap.

Until we receive verification that the conditions have been met and final approval has been issued, the well 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 #205-2021 and can be emailed to me at keith.male@oha.oregon.gov.

If you have any questions, please feel free to email me or call me at 503-939-1322.

Sincerely,



Keith Male, PE
Regional Engineer
Drinking Water Services

cc: Julie Wray, DWS
Carrie Gentry, PE, OHA/DWS
Michelle Byrd, REHS, OHA/DWS
Max Hamblin, REHS, Crook County Health Department
Bill Nashem, District 24 Water Master
Ron Stanley, Jasper Knolls Water District