

July 2, 2025

Brad Johnson
Umpqua Basin Water Association
4972 Garden Valley Road
Roseburg, OR 97470

sent by email only

**Re: Disinfection (PR#59-2025)
Umpqua Basin Water Association (PWS ID# 00719)
Conditional Approval**

Dear Brad Johnson:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new disinfection for Umpqua Basin Water Association. On May 29th, 2025, DWS received requested information, plans, specifications and a plan review fee of \$825.

The project includes the removal of existing sodium hypochlorite storage tanks, brine tanks and pumps and replaces them with a new onsite sodium hypochlorite generation, storage and injection system. The project will be located within the water system's water treatment plant near Roseburg, Oregon.

The plans are approved subject to the following conditions:

Facilities for disinfection and disinfectant residual maintenance-

- With installation of the new disinfection system, provide verification that disinfectant is still applied proportional to the filtered water flow to be treated. Refer to OAR 333-061-0050(5)(c)(B).
- The disinfectant applied shall be capable of effectively destroying pathogenic organisms. Sufficient contact time shall be provided to achieve "CT" values capable of the inactivation required by OAR 333-061-0032(1). Reservoirs and Clearwells that are to be used for disinfection contact time to treat surface water shall use a tracer study to determine the actual contact time and associated "CT". The Authority must approve procedures and protocols for the tracer study prior to the initiation of the

study. The Authority recommends the US EPA Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources for a tracer study procedure and protocol. OHA appears to have no record that the Umpqua Basin Water Association has an approved tracer study for its current clearwell configuration in use at the water treatment plant. Provide a disinfection “CT” tracer study for the planned new disinfection system to demonstrate its effectiveness in destroying pathogenic organisms. Refer to OAR 333-061-0050(5)(c)(D) and OAR 333-061-0050(6)(a)(R).

- With installation of the new disinfection system, provide verification provisions are made to alert the water supplier the chlorine supply is exhausted. Water systems serving more than 3,300 people shall have an auto-dial call out alarm or an automatic shut-off for low chlorine residual when chlorine is used as a disinfectant. Refer to OAR 333-061-0050(5)(e).
- Provide verification that the Umpqua Basin Water Association has a developed disinfection profile and has a calculated disinfection benchmark according to OAR 333-061-0036(4)(e) for the existing disinfection system and that the new disinfection system falls within the confines of existing profiles and benchmarks. Please reference OAR 333-061-0060(e) and the U.S. EPA Disinfection Profiling and Benchmarking Guidance Manual or the U.S. EPA LT1-ESWTR Disinfection Profiling and Benchmarking Technical Guidance Manual.

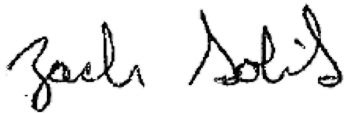
Product Acceptability Criteria-

- Provide verification that all designed equipment and associated chemicals in contact with potable water will meet NSF 60 and 61 criteria. Refer to 333-061-0087(5) & (6).

Until we receive verification that the conditions have been met and final approval has been issued, the new disinfection 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 #59-2025 and can be emailed to me at zachariah.cunningham-golik@oha.oregon.gov.

If you have any questions, please feel free to email me at call me at 541-231-9077.

Sincerely,

A handwritten signature in black ink, appearing to read "Zach Golik".

Zach Golik, PE
Regional Engineer
Drinking Water Services