



January 28, 2020

Corinne Shrode
Whaleshead RV Park & Resort
19921 Whaleshead Road
Brookings, OR 97415

Re: **New Cartridge and Disinfection Treatment (PR#2019-171)**
Whaleshead RV Park & Resort (PWS#94489)
Conditional Approval

Dear Corinne Shrode:

Thank you for your submittal of plan review information for the new cartridge filter and disinfection for Whaleshead RV Park & Resort to the Oregon Health Authority's Drinking Water Services (DWS). On November 20, 2019, our office received a site map and construction details. We also received the plan review fee of \$825. At this time DWS grants conditional approval.

The project includes installation of a Harmsco HC/40-LT2 with the Harmsco Hurricane MUNI-40MP housing. The maximum flow through this cartridge filter is 30 gpm in order to meet treatment standards. The maximum allowed pressure differential is 30 psi. This system is granted 2.5-log removal credit for giardia.

The plans are approved with the following conditions:

1. Flow restrictor or alternative is required to assure maximum flow is not exceeded (OAR 333-061-0050(4)(c)(J)(v)). Please confirm that the flow through the cartridge filter will not exceed 30 gpm.
2. Sample taps shall be provided before and following the treatment process and before the first user when any form of water treatment is used (OAR 333-061-0050(4)(a)(E) and -0050(5)(f)). The plans do not show any sample tap locations prior to treatment at either water treatment plant. Also, there is no identified sample tap after chlorination at the lower water treatment plant (WTP-A).

3. The disinfectant is applied in proportion to water flow (OAR 333-061-0050(5)(i)). The plans do not make it clear if the chlorine that will be applied is proportional to flow.
4. Provisions shall be made to alert the water supplier before the chlorine supply is exhausted (OAR 333-061-0050(5)(e)). The plans did not explicitly state how the system would be notified if the chlorine level gets too low.
5. Any community that treats surface water or groundwater under the influence of surface water and that desires to make a significant change to its disinfection treatment process as defined by paragraphs (1)(e)(A) through (1)(e)(D) of this rule, is required to develop a disinfection profile and calculate a disinfection benchmark according to OAR 333-061-0036(4)(e). The water system must develop a disinfection profile for *Giardia lamblia* and viruses, calculate a disinfection benchmark, describe the proposed change in the disinfection process, and analyze the effect(s) of the proposed change on current levels of disinfection according to the USEPA Disinfection Profiling and Benchmarking Guidance Manual or the USEPA LT1-ESWTR Disinfection Profiling and Benchmarking Technical Guidance Manual and submit the information to the Authority for review and approval (OAR 333-0061-0060(1)(e)). A disinfection profile was not submitted and should be done to show the disinfection is effective.

In addition to the conditions listed above, I have the following recommendations:

1. Make sure you change the cartridge filters per manufacturer's recommendations which means before the pressure differential is 30 psi.
2. Add the procedures for changing the cartridge filter, filling in the monthly surface water reports, etc. to the operations and maintenance manual.
3. Typically, a pilot study is conducted when using cartridge filtration. The pilot study is done to identify any operational issues such as plugging of the prefilters. Parameters include (but are not limited to) raw turbidity, filtered turbidity, and amount of filtration time for filter to reach maximum pressure drop of 30 psi. Therefore, if the cartridge filters are installed without a pilot study, it is at the water system's risk as to if the filters will function properly.

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Until we receive verification that the project was completed with the conditions listed above met and we have granted Final Approval for the project, the new water treatment plant is not approved for use.

Upon completion of the project, please verify in writing that construction was completed according to the submitted plans and conditions listed above. If substantial changes are made, a set of record (as-built) drawings must be submitted. Documentation demonstrating how the above conditions were met should reference Plan Review #2019-171 and can be e-mailed to me at rebecca.a.templin@dhsosha.state.or.us or mailed to:

Attn: Rebecca Templin
OHA-Oregon Drinking Water Services
444 A Street
Springfield, OR 97477

If you have any questions or would like this in an alternate format, please feel free to call me at (541) 726-2587 x29.

Sincerely,



Rebecca Templin, P.E.
Regional Engineer
Drinking Water Services

cc: Julie Wray, DWS Portland
Betsy Parry, DWS Springfield
Kent Downs, Curry County Environmental Health
Rob Henry, PE, HBH Consulting Engineers