



PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services

Tina Kotek, Governor



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August 22, 2023

Josh Sabota & Jake Scanlon
Josephine County Parks Lake Selmac 2
125 Ringuette Street
Grants Pass, OR 97527

Re: New Cartridge Filter System (PR#92-2023)
Josephine County Parks Lake Selmac 2 (PWS ID#94645)
Conditional Approval

Dear Josh Sabota & Jake Scanlon:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new cartridge filter system for Josephine County Parks Lake Selmac 2. On August 17, 2023, our office received site plans, photos, contact time tracer study, a project summary, and a plan review fee of \$825.

The project includes the installation of a new cartridge filter and chlorination system. The cartridge filter is a Harmsco HC/90-LT2 model with a housing model of HurricaneTM MUNI 90 MP. The maximum flow through this unit is 65 gpm, but a flow restrictor has been installed to restrict the flow to 7 gpm through the cartridge filter. The maximum pressure drop allowed between the pressure gauges on either side of the cartridge filter is 30 psi at 20°C. The chlorination system is a metered drive pump Blue-White A-100NV. The system also is installing a membrane pre-filter HYDRAcap MAX40 and a course pre-filter Evoqua V200-P NSF (250 micron).

Log removal credit given for this cartridge filter is 2.5-log removal for giardia and 2.0-log removal for cryptosporidium. The system is required to get an additional 0.5-log removal credit for the chlorine disinfection.

The plans are approved with the following conditions:

1. A pilot study must be conducted when using cartridge filtration. The pilot study is required to identify any operational issues such as plugging of the prefilters. Pilot study protocol must be approved in advance. Parameters include (but are not limited to) raw turbidity, filtered turbidity and amount of filtration time for filter to

reach maximum pressure drop of 25 psi. After the pilot study protocol is approved and prior to final approval of this project, results of a completed small scale, filter-to-waste pilot study must be submitted. (OAR 333-061-0050(4)(c)(C)). If the system chooses, a full-scale study during the initial operation period may be approved as an alternative to the small scale, filter-to-waste study.

2. Provisions shall be made to alert the water supplier before the chlorine supply is exhausted (OAR 333-061-0050(e)). If it will be a visual check, please confirm.
3. Testing equipment shall be provided to determine the chlorine residual (OAR 333-061-0050(g)). Please confirm what equipment will be used to measure the chlorine residual at a minimum of once a day and that it is a DPD type or EPA approved test kit.
4. The water system must develop a disinfection profile for Giardia lamblia and viruses, calculate a disinfection benchmark, and analyze the effects of changing the chlorination from post- to pre-chlorination according to the USEPA Disinfection Profiling and Benchmarking Technical Guidance Manual (OAR 333-061-0060(1)(e)). Since the system is now going to add sodium hypochlorite before the cartridge filter, the system needs to do a study to determine the minimum chlorine dosage to meet treatment requirements.
5. Please confirm that the filters will be changed out per manufacturer's recommendations (when the maximum pressure drop reaches 30 psi or sooner) and that this is described in the O&M manual.

Until we receive verification that the conditions have been met and final approval has been issued, the water treatment plant 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 #92-2023 and can be emailed to me at rebecca.a.templin@oha.oregon.gov or Zach Golik at zachariah.cunningham-golik@oha.oregon.gov or mailed to:

Attn: Rebecca Templin or Zach Golik
OHA-Oregon Drinking Water Services
2080 Laura Street
Springfield, OR 97477

If you have any questions, please feel free to email me at rebecca.a.templin@oha.oregon.gov or call me at 541-650-4868.

Sincerely,



Rebecca Templin, PE
Regional Engineer
Drinking Water Services

CC: Julie Wray, DWS
Kent Downs, OHA/DWS
Justin Fimbres, Josephine County Public Health
Robert Henry, PE, HBH Consulting Engineers, Inc.
Dave Funderburk, 541 Water Inc.