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October 27, 2017

Rocky Hudson Douglas County Parks – Whistler's Bend 1036 SE Douglas Ave. Room 116 Roseburg, OR 97470

Re: New Cartridge Filtration and Disinfection (PR#2017-99)
Douglas County Parks Whistler's Bend (PWS#93944)
Conditional Approval

Dear Rocky:

Thank you for your submittal of plan review information for the new cartridge filtration and disinfection system for Douglas County Parks – Whistler's Bend to the Oregon Health Authority's Drinking Water Services (DWS). On August 14, 2017, our office received a site map, layout design, specifications, LUCS form, and the plan review fee of \$825. At this time DWS grants conditional approval.

This project includes the installation of a new cartridge filter, a 30 gallon contact tank, chlorination injection system, and a new surface water intake. The cartridge filter being installed is a Harmsco HC/170-LT2 with a Hurricane MUNI 90MP housing.

The plans are approved with the following condition:

- 1. Provisions shall be made for sampling the water before and after chlorination (OAR 333-061-0050(5)(f)). This was not shown on the plans submitted, but we would like to have a sample tap for raw water (before treatment) and before storage (after treatment).
- 2. Water systems using cartridge filtration must have pressure gauges installed before and after the filter (OAR 33-061-0050(4)(c)(K)). The location of the pressure gauges was not shown on the plans.
- 3. Provisions shall be made to alert the water supplier before the chlorine

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supply is exhausted (OAR 333-061-0050(5)(e)). This could include an alarm or just scheduling someone to routinely check the level of the sodium hypochlorite.

- 4. Testing equipment shall be provided to determine the chlorine residual (OAR 333-061-0050(5)(g)). This can be done either using a test kit or an online chlorine analyzer that uses the DPD method for testing chlorine residual.
- 5. 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. 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 (OAR 333-061-0050(5)(c)(D)). You can contact the circuit rider, Civil West Engineering Services, Inc., at 541-266-8601 with help performing the tracer study. This tracer study will help you determine the contact time to be used on the attached monthly report that will need to be submitted monthly.

In addition to the above requirements, I have the following comments:

1. In addition to reporting the contact time monthly, the turbidity will need to be monitored daily as well on the same monthly report.

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 filtration and disinfection system is not approved for use.

When construction is complete, you will need to submit reports monthly with records of the chlorine residual, cartridge filter pressure readings, and turbidity. I have attached a blank copy of this report.

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

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should reference Plan Review #2017-99 and can be e-mailed to me at rebecca.a.templin@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

Caroline Gross-Regan, Douglas County Environmental Health