



November 13, 2020

Lura Huff  
BLM Loon Lake Rec Site  
1300 Airport Lane  
North Bend, OR 97459

Re: **Treatment Plant and Storage Tank Repair (PR#2020-142)**  
**BLM Loon Lake Rec Site (PWS#90619)**  
*Conditional Approval*

Dear Lura Huff:

Thank you for your submittal of plan review information for the treatment plant and storage tank repair for BLM Loon Lake Rec Site to the Oregon Health Authority's Drinking Water Services (DWS). On September 23, 2020, our office received the site drawings and specifications. The plan review fee of \$825 was also received. At this time DWS grants conditional approval.

The review for this project is for the Harmsco Hurricane MUNI 90 MP cartridge filter, the ion exchange softening, chlorine disinfection and repairs to the storage tank. The cartridge filter is granted 2.5-log removal credit. The system has already gone through approval for the UV reactor (PR#2014-157) and is replacing with the same model.

The plans are approved with the following conditions:

1. Cartridge filters need to be changed out at the maximum pressure drop between pressure gauges of 30 psi. This needs to be added to the operation and maintenance manual.
2. 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. 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. If the water system chooses the full-scale study during the initial operation period, then note that depending on the results of the pilot study, the final approval can be subject to revocation.

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

1. Where the UV reactor is located there appears to be a valved bypass. Since the UV reactor is installed for peace-of-mind, there is no requirement to have a physical separation in the bypass. If at some point the UV reactor is required for disinfection treatment, then a physical separation will need to be made in this bypass.

**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 reconstructed treatment plant and storage tank are 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 #2020-142 and can be e-mailed to me at [rebecca.a.templin@dhsoha.state.or.us](mailto:rebecca.a.templin@dhsoha.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  
Stuart Mitchell, BLM Loon Lake Rec Site  
Angela Scott, Douglas County Environmental Health