



February 4, 2021

Ben Klayman
Medford Water Commission
200 S. Ivy Street, Room 117
Medford, OR 97501

**Re: Duff WTP Reservoir Baffles (PR#7-2021)
Medford Water Commission (PWS ID#00513)
Conditional Approval**

Dear Ben Klayman:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Duff Water Treatment Plant Reservoir baffles project for Medford Water Commission. On February 1, 2021, DWS received plans, specifications, tracer study plan information and a plan review fee of \$825.

The project includes new baffles to be installed in the Duff Water Treatment Plant Reservoir to increase the plant's capacity to 65 million gallons per day. The baffles are being installed to increase the baffling factor and contact time within the reservoir. A new tracer study will be initiated when the reservoir baffle installation is complete.

The plans and specifications are approved with the following conditions:

- Per OAR 333-061-0050(6)(a)(R), 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. DWS must approve procedures and protocols for the tracer study prior to the initiation of the study. DWS recommends that you follow the *US EPA Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources* for the tracer study procedure and protocol.

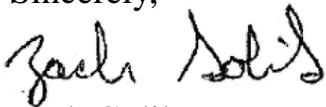
- Per OAR 333-061-0050(6)(a)(S), reservoirs and clearwells that are to be used for disinfection contact time to treat surface water shall have a means to adequately determine the flow rate on the effluent line.
- Per OAR 333-061-0050(10)(a), following construction or installation of new facilities and repairs to existing facilities, those portions of the facilities which will be in contact with water delivered to users must be cleaned and flushed with potable water and disinfected according to AWWA Standards C651 through C654 before they are placed into service. Disinfection must be by chlorine unless another disinfectant can be demonstrated to be equally effective.
- Per OAR 333-061-0050(10)(e), for reservoirs and tanks, disinfection by chlorination shall be accomplished according to AWWA Standard C652 which includes, but is not limited to, the following methods:
 - A. Filling the reservoir or tank and maintaining a free chlorine residual of not less than 10 mg/l for the appropriate 6- or 24-hour retention period; or
 - B. Filling the reservoir or tank with a 50 mg/l chlorine solution and leaving for six hours; or
 - C. Directly applying by spraying or brushing a 200 mg/l solution to all surfaces of the storage facility in contact with water if the facility were full to the overflow elevation.
- Per OAR 333-061-0050(10)(f), when the procedures described in paragraphs OAR 333-061-0050(10)(e)(A) and (B) of this rule are followed, the reservoir or tank shall be drained after the prescribed contact period and refilled with potable water, and a sample taken for microbiological analysis. If the results of the analysis indicate that the water is free of coliform organisms, the facility may be put into service. If not, the procedure shall be repeated until a sample free of coliform organisms is obtained.
- Per OAR 333-061-0050(10)(g), when the procedure described in paragraph OAR 333-061-0050(10)(e)(C) of this rule is followed, the reservoir or tank shall be filled with potable water and a sample taken for microbiological analysis. It will not be necessary to flush the reservoir or tank after the chlorine solution is applied by spraying or brushing. Microbiological analysis shall indicate that the water is free of coliform organisms before the facility can be put into service.
- Per OAR 333-061-0060(1)(c)(A), sufficient detail, including specifications, to completely and clearly illustrate what is to be constructed and how those facilities will meet the construction standards set forth in these regulations must be provided to DWS. Elevation or section views shall be provided where required for clarity. Provide detailed information regarding the tracer study plan and report. As part of the tracer study plan/report, illustrations (plans/drawings) showing how existing baffling factor parameters (i.e., water flow patterns, contact surface lengths/areas, etc.) are changed

with the addition of the new baffles reflected in the submitted drawings.

Until we receive verification that the conditions have been met and final approval has been issued, the Duff WTP Reservoir baffles project 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 #7-2021 and can be emailed to me at ZACHARIAH.CUNNINGHAM-GOLIK@dhsosha.state.or.us

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

Sincerely,

A handwritten signature in black ink that reads "Zach Golik". The signature is written in a cursive, slightly slanted style.

Zach Golik, PE
Regional Engineer
Drinking Water Services

cc: Julie Wray, DWS Portland