

February 18, 2025

Ian Goodwin, RG  
Staff Hydrogeologist  
C2M H2O, LLC  
Via email: lgodwin@cwmh2o.com

**Re: Well #2 (PR#158-2023)  
Metro Parks – Oxbow Visitor Center (PWS ID#XXXXX)  
Conditional Approval**

Dear Ian:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of additional plan review information for the new well for Metro Parks – Oxbow Visitor Center. On January 3, 2025, we received engineered plans. A well log for the new well and sample results were previously submitted. Additional information submitted indicated that the water system will not be installing the iron and manganese treatment but will be installing residual maintenance. A 5,000-gallon stainless steel tank and 300-gallon pressure tank are included in the plans along with a booster pump.

Our regional hydrogeologist reviewed the well log construction details for MULT 142514 and noted the following:

- The well meets current below ground construction standards.
- The well draws from a confined aquifer made up of separate layers of mixed sand and gravel, gravel, sand, and silty sand. The aquifer is overlain by 31 feet of cemented clay with sand and cemented sand that acts as a confining layer. Water in the aquifer is under pressure, rising 21 feet above the top of the aquifer to a depth of 61 feet below ground level.
- Results from a sensitivity analysis indicate that the well construction has a low sensitivity to local land use practices and the aquifer is not highly sensitive to local land use practices.
- The distance of the stormwater swale is outside of the groundwater under the direct influence of surface water (GWUDI) setback of 200 feet for aquifers that contain coarse sand and gravel, so the well does not need to be considered for GWUDI.

**The plans are approved with the following conditions:**

- All items in contact with potable water must meet NSF Standard 61 or equivalent.

### Well

- The casing height must be 12" above the slab (or 12" above grade, if a pitless adapter was installed.)
- A watertight sanitary seal must be provided.
- A sample tap at the well head must be provided.
- A casing vent with a screened return bend must be provided. If a pitless adapter was installed, the caps are typically vented.

### Storage tank and pressure tank

- A fence or other vandal deterrence must be provided for the reservoir.
- Steel reservoirs must be constructed in conformance with AWWA Standards D100 and D103.
- A watertight roof must be provided.
- Screened vents must be provided above the highest water level to permit circulation of air above the water.
- The outlet end of the drain/overflow must be fitted with angle-flap valve or equivalent protection and must discharge with an airgap to a watercourse or storm drain capable of accommodating the flow.
- The roof access hatch must have curbing around the opening and a lockable watertight cover that overlaps the curbing.
- A silt stop must be provided at the outlet pipe.
- Disinfection of the storage tank and pressure tank prior to use must be accomplished according to AWWA Standard C652.
- Coliform bacteria sample result(s) must be submitted after disinfection of the tanks is complete.

### Residual maintenance

- A sample tap prior to the application of chlorine is required. The well's raw water sample tap may serve this purpose.
- Provisions must be made to alert the water supplier before the chlorine supply is exhausted. This requirement can be satisfied by either a low-level alarm or by creating a written procedure to check the tank regularly.
- Chlorinator piping must be designed to prevent the contamination of the potable water system by backflow of untreated water or water having excessive concentrations of chlorine.

**Until we receive verification that the conditions have been met and final approval has been issued, the facility 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 #158-2023 and can be emailed to me at [Carrie.L.Gentry@oha.oregon.gov](mailto:Carrie.L.Gentry@oha.oregon.gov).

Note that the waterlines are on one property and are assumed to fall under local plumbing code. DWS recommends disinfecting the waterlines per AWWA standards.

If you have any questions, please feel free to call me at (971) 201-9794.

Sincerely,



Carrie Gentry, PE  
Regional Engineer  
OHA-Drinking Water Services  
[Carrie.L.Gentry@oha.oregon.gov](mailto:Carrie.L.Gentry@oha.oregon.gov)

cc: Jenifer George Parish, REHS, Multnomah County Health Department  
Robert Long, RG, LHG, CWRE, Principal Consultant, CwM-H2O, LLC  
Kendra Carrillo, Maintenance Lead, Metro, [Kendra.carrillo@oregonmetro.gov](mailto:Kendra.carrillo@oregonmetro.gov)