



December 21, 2023

Frank Howard
(frank@hopevillage.org)
Zion Mennonite Church

Sent by email only

Re: **Ultraviolet Disinfection (PR#152-2023)**
Zion Mennonite Church (PWS ID#95120)
Preliminary Approval

Dear Frank:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Program (DWP) of plan review information for the UV disinfection system for Zion Mennonite Church. On December 21, 2023, our office received system information, UV NSF Class A Model information, and on November 27, 2023, project plans and a plan review fee of \$248.

The project includes the installation of a Viqua PRO20 system. The UV unit has a maximum flow rate of 20 gpm, and meets the specifications of NSF Standard 55 Class A. Because Zion Mennonite Church is a non-community system with no *E. coli* detections in the groundwater source, this unit is acceptable, according to Oregon Administrative Rules (OAR) 333-061-0050 (5)(k)(J).

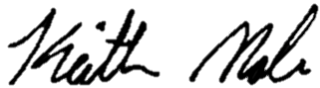
With the installation of the new UV system, I have the following comments:

- As noted above, the installation of the Viqua PRO20 is acceptable for use at Zion Mennonite Church. If the water system experiences *E. coli* detections at the groundwater source, then this unit may no longer be appropriate, as it is approved only for total coliform issues.
- Please note that UV disinfection does not provide residual disinfection in a distribution system. In the event that coliform bacteria continue to be detected in the distribution system at Zion Mennonite Church, chlorination will be required to maintain an adequate residual in the distribution system.
- The manufacturer notes that lamp replacement should take place every 24 months. The water system's operation and maintenance manual should be updated to include this maintenance schedule.

- The minimum ultraviolet light failsafe dosage set point should be equivalent to 40 mJ/cm² with a wavelength between 200 and 300 nanometers.

If you have any questions or concerns, or would like this in an alternate format, please contact me at 503-939-1322 or email me at keith.male@oha.oregon.gov.

Sincerely,



Keith Male, PE
Regional Engineer
Drinking Water Services

cc: Julie Wray, DWS
Carrie Gentry, PE, OHA/DWS
Joel Ferguson, REHS, Clackamas County Health Department