

May 29, 2025

Steven Wilson
Shiloh Water Systems
PO Box 257
Mt. Angel, OR 97362

Sent by email only.

**Re: PR# 69-2025 – Residual Maintenance Chlorination
Western Christian School (PWS ID# 90582)
Conditional Approval**

Dear Mr. Wilson,

On May 20, 2025 our office received plans and specifications for installing sodium hypochlorite for residual maintenance to address persistent total coliform positive samples in the distribution system at the Western Christian School (Public Water System ID# 90582). A plan review fee payment in the amount of \$825 was also received on May 20, 2025. A land use compatibility statement is not being required for this project. This project is assigned plan review ID #69-2025, which is now viewable on our website at:
<https://yourwater.oregon.gov/planreview.php?pwsno=90582>.

Under OAR 333-061-0060(1)(b), submittals must be prepared by a Professional Engineer registered in Oregon, unless exempted by DWS. An exemption was granted for this submittal. **Note that by utilizing this exemption, the water system (Western Christian School) takes full responsibility for the design of the project.**

The submitted plans are approved for construction provided the following conditions are met:


- 1) ☐ Sample taps are provided to be able to measure the raw water from each well, prior to treatment for annual assessment sampling (required for systems using sodium hypochlorite for maintaining a residual disinfectant in the distribution system).
- 2) ☐ A sample tap is provided after disinfection injection, which may be used to verify the sodium hypochlorite dose.
- 3) ☐ A sample tap is provided after the storage tanks and at or prior to the first point of consumption for measuring the disinfectant residual entering the distribution system.
- 4) ☐ New facilities are disinfected as applicable and coliform sampling is completed to

demonstrate adequate disinfection and that the system is able to maintain a residual disinfectant throughout the distribution system. Please ensure the free chlorine residual is measured using a DPD test kit and the results are recorded on the lab reporting forms at the time coliform samples are taken.

In addition to the conditions above, please submit a response addressing the following:

- ☐ Confirm and submit more details on the piping configuration for the tanks.
- ☐ Describe how the rate of flow leaving the storage tanks is accomplished (this is typically either through one or more tank effluent flowmeters or based on the pumping rate of pumps used to transfer water from a tank to the distribution system).
- ☐ Provide the maximum anticipated demand flow leaving the tanks in gpm.
- ☐ Ensure the tanks are inspected, and any breaches or deficiencies are addressed in such a way as to prevent insects, rodents, infiltration of groundwater from the surrounding soils, and rainwater or surface runoff from entering any of the storage tanks. Please submit information on the breaches or deficiencies found and the corrective action taken.

Until documentation showing how these conditions have been met and Final Approval has been granted, the chlorination system is not approved for use.

To close out this project and request final approval, please fill out the Project Final Approval  [request form](#) and email it me at evan.e.hofeld@oha.oregon.gov along with any supplemental documentation showing how the above conditions have been met (be sure to reference Plan Review #69-2025 and public water system (PWS) ID #90582).

The remainder of this letter includes schematics and a description of the proposed disinfection system.

Thank you for your cooperation and patience in this plan review process and if you have any questions, please feel free to call me at 971-200-0288 or email me at evan.e.hofeld@oha.oregon.gov.

Sincerely,

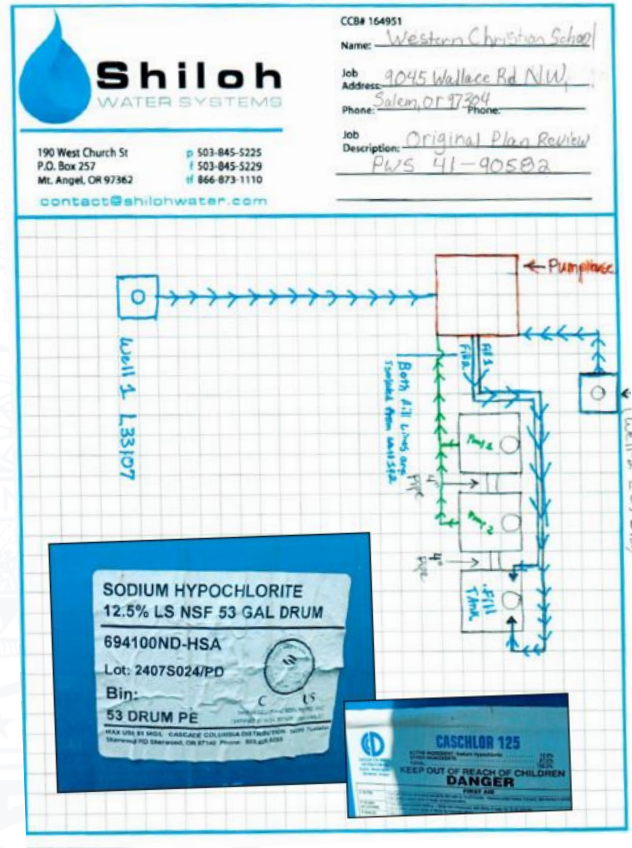
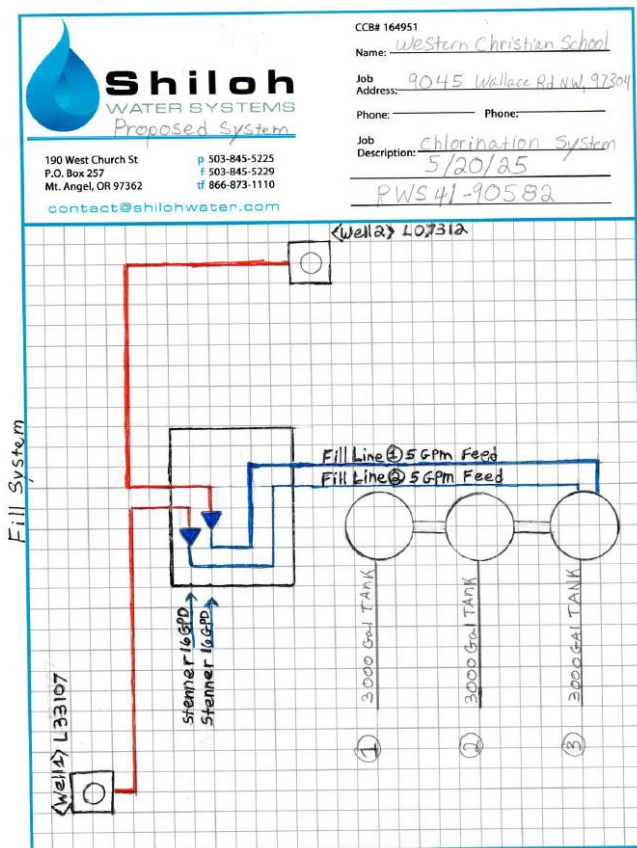


Evan Hofeld, Regional Engineer
OHA-Drinking Water Services

CC: Daniel Graber, Western Christian School, dgraber@wcspioneers.org
Christina Tisdell, Polk County Community Development, tisdell.christina@co.polk.or.us

Water treatment system project description

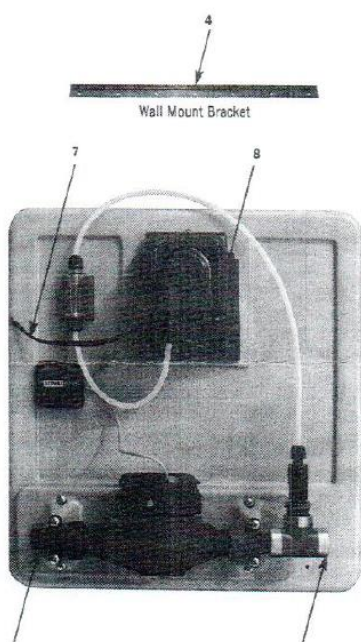
Our intention is to install two (2) 16 gallon per day Stenner Econ Pumps activated by water meters, one for each water source feed line. Please see proposed approximant installation location marked with blue arrows on the drawing and on the picture inside the pump house. There are two horizontal lines highlighted and labeled in the picture, these are the feed lines from Well #1 and Well #2. Please refer to drawing for well ID numbers and approximant location of wells. The feed of each line to the storage tank system is filled at a rate of 5 GPM. The feed pumps will be set at 1 second, at 72%. We are basing this setting on the water chemistry with a 10-1 gallon ratio. I have included the information for the chemical with this packet along with the NSF 60 and 61 standards. This mix and this rate should result in a 1 PPM chlorine residual. We have approximately 9000 gallons of storage capacity for more than adequate contact time.



STENNER PUMPS

ECON METER SYSTEM START-UP INSTRUCTIONS

⚠ WARNING TO BE INSTALLED AND MAINTAINED BY PROPERLY TRAINED PROFESSIONAL INSTALLER ONLY. READ MANUAL & LABELS FOR ALL SAFETY INFORMATION & INSTRUCTIONS.



1. Select a dry location to mount panel to avoid water intrusion. When selecting the location, note the water flow direction as indicated on the flow meter. Location should allow mounting hardware to be anchored into studs or concrete to support the weight of the panel.
2. Isolate and depressurize the water system.
3. Mark location of lag bolt holes 14 1/4" above center line of the horizontal pipe.
4. Secure wall mount bracket to wall studs using the included lag bolts or other suitable hardware. Hang panel on to wall mount bracket.
5. For convenience, the panel has 3/4" NPT (or 1" NPT) connections on the inlet and outlet. Connect the inlet and outlet of the panel to the water system.
6. Cut necessary length of suction tubing and connect to the suction side of the pump. Secure the weighted strainer to one end and secure the tubing to the pump tube fitting with the provided nut and ferrule. **DO NOT** use wrenches or thread seal tape. Connection needs to be finger tightened.
7. Plug pump power cord into an appropriate receptacle as specified in the pump manual. Follow the wiring directions for your model and application.
8. Prime the pump, per the instruction manual, and observe the liquid being drawn from the solution tank. When it reaches the injection point, discontinue priming.
9. Pressurize the system slowly, check for leaks, and verify pump operation.

⚠ WARNING When pressurizing the system, gradually allow water to flow. Shocking the meter by over speeding it with high flow rates can damage the internal assembly.

⚠ CAUTION Ensure the piping is properly aligned and supported both upstream and downstream of the panel.

① It is the installer's responsibility to comply with all national and local plumbing and electrical codes.



IP44



THIS PUMP IS TESTED
AND CERTIFIED BY IAPMO
ACCORDING TO ANSI/NSF 61
FOR CONTACT WITH SODIUM
HYPOCHLORITE AND WATER
ONLY AND NSF/ANSI 372.