



State of Washington
DEPARTMENT OF HEALTH

NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

December 13, 2021

STEVE HUNTER
BOARD OF TRUSTEES
MAURY MUTUAL WATER CO
MMWATER@COMCAST.NET

Subject: Maury Mutual Water Co (ID#52100)
King County
2021 Routine Sanitary Survey

Dear Mr. Hunter:

This letter is in follow up to our routine sanitary survey of the water system on December 7, 2021. The purpose of the sanitary survey is to inspect water system facilities, to review operations & maintenance programs, and to reinforce our long-term relationships. We covered the eight elements of a survey, with a focus on changes since the last survey. The storage tank air vent replacement from the chimney style to the mushroom style vent is a significant improvement. Nice work on the system schematics.

2021 Sanitary survey issues

The enclosed survey photos and this letter reflect my understanding of your water system and highlight key issues we discussed during my visit. **Please, in the next 45 days, respond to this letter.** Note any inaccuracies and include them in your response. Send photos of things you can complete in the short term. If you are unable to take action within 45 days, please explain your intentions and provide a schedule for addressing the applicable issues.

Significant Deficiencies – *Potential significant public health risks.*

1. Think like a bug. Cover the direct openings to the sodium hypochlorite tanks in the spring house and well house. Consider venting to the exterior of the building (with an air gapped downward facing screened vent) to protect the equipment and plumbing from premature corrosion.

Significant Findings – *Defects in your facilities or operations that need immediate attention.*

2. Think like a bug and consider surface runoff. Inspect and photograph the level indicator penetration of the storage tanks. If there is an opening around the cable, consider retrofitting hard piping around the level indicator cable.



Observations – *To notify you of other violations of drinking water rules.*

3. The double check valve assembly at the Vashon Island Golf & Country Club has not been tested within the last year. There are no other backflow prevention assemblies in the system. Known potential hazards include horse troughs, swimming pool(s), and irrigation systems. Have a Cross Connection Control Specialist review your system and verify that all required assemblies are installed appropriately and that they are tested by the appropriate person annually.
4. Update the Coliform Monitoring Plan to reflect the changes in the Revised Total Coliform Rule. As a courtesy, please send us copy for our records.

Recommendations – *To improve your technical, managerial or financial capacity.*

5. Date your SOPs. This helps with version control. Based on our conversation, it sounds like a startup and shut down procedure for the well treatment plant would be useful. Consider putting that together.
6. I support your plan to develop a written agreement with the Vashon Island Gold & Country Club regarding the emergency intertie. Consider defining process for activation, shut down, and quantity limitations.



Figure 1. (Left) Please cover the opening on the lid of the sodium hypochlorite solution tanks. (Right) Lower storage tank level indicator design is notorious for not providing a good seal or barrier to prevent roof surface water flow from entering the tank. Please investigate and respond accordingly.

System overview

The system serves a residential community on Maury Island with an intertie to feed Vashon Island Golf & Country Club (ID 43146) in an emergency. It has a green operating permit and is approved to serve 99 connections.

Spring/wellpoints (S01) and well 1 (S02) with CT6 disinfection treatment feed the lower storage tank on 63rd Avenue. The lower zone is fed by gravity. The 63rd avenue pump station feeds the upper zone and tank(s) from the lower tank. Well 1 treatment also includes greensand filtration

for iron, manganese, and hydrogen sulfide removal. The well source is typically used to meet summer demand.

There are several private wells and some Group B water systems within the original platted service area.

2016 sanitary survey issues completed (see previous survey notes for detail)

- *Recommend modifying the storage tank common inlet/outlet to provide better water turnover.* – No change. Might consider during future storage tank replacement projects.
- *Recommend developing written Standard Operating Procedures for treatment processes and O&M activities.* – System has several SOPs (many not dated) including instructions for how to determine that CT6 is met. This is an on-going process to document critical procedures.
- *Recommend installing backup power supply for extended power outages.* – Considered. They find that customers naturally curtail use during an outage. This might change as more customers install their own backup power allowing them to heat their water supply. The system is part of an island wide emergency response plan/network.
- *Recommend installing a bypass for the 63rd Ave. storage tank for maintaining service during maintenance.* – Evaluated option. No plans to change the configuration currently. Pressure reducing valves would need to be installed if the upper tank(s) were to feed the entire system.

Changes in water system or water system operations since last survey and planned work

- Steel upper tank taken out of service to reduce storage volume with water quality in mind. Fire flow not provided. (possibly taken out of service prior to the last survey?)
- The storage tanks were cleaned (divers) three years ago. Tank cleaning frequency of five or six years.
- Spring source and well can now run at the same time with installation of new controls. The approved disinfection design accounts for this configuration. Target chlorine residual at entry point is 0.6-0.8mg/L free chlorine, where the minimum required to meet CT6 is 0.3mg/L. The system has no trouble meeting the disinfection residual requirements at entry point or in the distribution system.
- The intertie that feeds the Vashon Island Golf & Country Club has not been utilized in years.
- Reserve fund capable of replacing many system components.
- Plan to replace piping components in the wellhouse.

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The Drinking Water Regulations require that all Group A public water systems have a sanitary survey every 3-5 years. Regulations establishing a schedule of fees for sanitary surveys have been adopted (WAC 246-290-990). In order to receive credit for the survey, a sanitary survey fee must be paid. The total cost is \$510.00. An itemized invoice for this survey has been sent to the primary contact on file for your water system. Please remit complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or mail payment to: **WSDOH, Revenue Section, PO Box 1099, Olympia, WA 98507-1099.**

Thank you for all that you do to provide safe and reliable drinking water. If you have any questions, please contact me at (253) 395-6770 or brietta.carter@doh.wa.gov.

Sincerely,



Brietta Carter, P.E.
Regional Engineer
NW Drinking Water Operations

Enclosure: Invoice

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