

**BEFORE THE WASHINGTON
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

CASCADIA WATER, LLC

Respondent.

DOCKET UW-240151

**CROSS-EXAMINATION EXHIBIT OF RACHEL STARK
ON BEHALF OF THE
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL
PUBLIC COUNSEL UNIT**

EXHIBIT RS-__X

Staff Discovery Response to WCAW DR 39 Supp. Att. B

February 6, 2025

Supplemental DR 39

ATTACHMENT B



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
PO BOX 47800 ATTN: MS K17-12 OLYMPIA, WA 98504-7800

May 3, 2023

Cully Lehman
culley@cascadiawater.com

Subject: CAL Waterworks ID# 31040
Island County
2023 Sanitary Survey

Dear Cully Lehman:

Thank you for your time and attention during your recent sanitary survey. This report documents the information collected during the survey. Defects in your water system facilities or operations that need your immediate attention are listed below as **Significant Deficiencies** or **Significant Findings**. **You must complete the corrective action on these by June 17, 2023.**

After completing, email verification of completion, including photographs and supporting narrative to Carmen Tupas at nwro.sanitarysurveys@doh.wa.gov or mail to the address above in the letterhead. Please include your water system name, ID number and the date when you corrected the deficiencies. Ensuring your water system completes each corrective action is a high priority for the Office of Drinking Water. Failure to complete each of these corrections within the designated time may result in enforcement action. If you believe you need additional time to correct any defect, contact me at (253) 395-6752. Please explain your need for additional time.

Significant Deficiencies – *potential significant public health risks.*

- Submit photos (less than 12 months old) of the reservoir hatch and a vent. The photos must show enough detail to determine whether these features protect the storage tank against entry of contaminants. At a minimum, provide photos of the: hatch in the open and closed position showing the gasket and the lock, vent showing the overall vent structure and the screen material, any other tank penetrations on the top of the reservoir.

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

- **None**

Observations - *to notify you of other violations of drinking water rules.*

- Consider extending the overflow closer to the ground to facilitate screen inspection and/or replacement. We recommend that the overflow discharge about 24 inches above grade onto a splash plate or other structure to prevent erosion and damage of property.
- Finish up installation of residential water meters to facilitate water use calculations.
- Develop the legal authority to implement cross-connection control program and employ a certified cross-connection control (CCC) specialist to conduct a hazard assessment of all service

CAL Waterworks ID# 31040
May 3, 2023
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connections. Ensure that the appropriate CCC device is installed on the service line of each high health hazard premises.

- Consider replacing the reservoir to prevent water loss.

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

- **None**

Please note that failing to correct a Significant Deficiency or Significant Finding or addressing it with an action plan by the designated due date will result in a Treatment Technique Violation.

Thank you for your cooperation in the successful completion of the sanitary survey. Your water system met the requirements in WAC 246-290-416. Your next sanitary survey will be in 2028. Please note that you should not interpret satisfying the requirements of a sanitary survey as meeting other applicable local, state or federal statutes, ordinances, or regulations.

If you have any questions or need additional information, please call me at (253) 395-6752 or email to nwro.sanitarysurveys@doh.wa.gov

Sincerely,



Carmen Tupas
Office of Drinking Water
Washington State Dept. of Health

Enclosures: Survey Report

ecc: Aneta Hupfauer, PhD. ICHD
Alexis Medina, DOH
Krista Chavez, DOH

Office of Drinking Water
Third Party Sanitary Survey Form (Checklist)

System Name:	CAL Waterworks	Survey Date:	3/28/23
PWS ID#:	31040	County:	Island
		System Type:	Community
Persons Attending Inspection:	Culley Lehman – Cascadia Water, Operator		
	Alexis Medina – Drinking Water Office, Washington State Department of Health		
Inspector's Name:	Aneta Hupfauer – Island County Public Health		

PART A: SUMMARY OF SIGNIFICANT DEFICIENCIES AND SIGNIFICANT FINDINGS

The following is a completed sanitary survey checklist and summary of inspection findings. This completed sanitary survey checklist is the basis for the cover letter you receive from your local health jurisdiction or from the WA Dept. of Health (DOH). The cover letter documents any significant deficiencies or significant findings that must be corrected. The cover letter may also summarize observations concerning compliance with certain rules, and offer recommendations you can use to make improvements to the operation and management of your water system. Contact your DOH regional office with any questions you have about this survey.

Bolded and highlighted checklist items represent significant deficiencies that, if left uncorrected, create a significant public health risk. **Highlighted** checklist items represent significant findings that, if left uncorrected, create a significant risk to the physical safety, security, or reliability of the public drinking water supply. You will be required to take some sort of corrective action for each checklist answer that is **bolded and highlighted**, or **highlighted**.

Significant deficiencies and significant findings identified during this sanitary survey:

Submit photos (less than 12 months old) of the reservoir hatch, vent and overflow outlet. The photos must show enough detail to determine whether these features protect the storage tank against entry of contaminants. At a minimum, provide photos of the: hatch in the open and closed position showing the gasket and the lock, vent showing the overall vent structure and the screen material, overflow discharge, any other tank penetrations on the top of the reservoir.

Significant deficiencies or significant findings identified in the previous sanitary survey that remain unaddressed:

Observations and recommendations identified during this survey

Consider extending the overflow closer to the ground to facilitate screen inspection and/or replacement. We recommend that the overflow discharge about 24 inches above grade onto a splash plate or other structure to prevent erosion and damage of property.

Finish up installation of residential water meters to facilitate water use calculations.

Develop the legal authority to implement cross-connection control program and employ a certified cross-connection control (CCC) specialist to conduct a hazard assessment of all service connections. Ensure that the appropriate CCC device is installed on the service line of each high health hazard premises.

Consider replacing the reservoir to prevent water loss.

PART B: GENERAL WATER SYSTEM DESCRIPTION

Provide a general description of the water system including changes, updates, connections, source(s), storage, number of pressure zones, treatment, and control system(s) and alarm(s). Make corrections and updates to the purveyor's water facilities inventory form (WFI).

- **Community water system approved for 121 connections with 100 connections currently active;**
- **System consists of two drilled well sources, a 41,000 gallon octagonal concrete reservoir, two sets of booster pumps and pressure tanks and two pressure distribution systems (upper and lower);**
- **System also provides wholesale water, through an intertie, to the Goss Lakeridge Acres Association;**
- **System located in the low risk with regard to seawater intrusion rating;**

PART C: OPERATIONS and MANAGEMENT

1. Was the system operator, who is most knowledgeable about the system's day-to-day operations, present for the survey?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2. Were water system records available for your review?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3a. If no, are the following planning documents complete and up to date:	
Service Area and Facility Map	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Cross-Connection Control Program	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Source Water Protection Program	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Emergency Response Plan	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Operation and Maintenance Program	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Coliform Monitoring Plan	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Component Inventory and Assessment	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Asset Replacement and Other System Improvements	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Budget	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Were the water system's current and future water quality monitoring requirements reviewed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Was water quality sample results and trends reviewed with the purveyor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Does the system have emergency power?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11. Does there appear to be adequate reliability provided for this system? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe the general level of planning and management documents developed by this water system and any recommendations for additional development, including updates, system management practices and processes, water rates, etc.

Item 4: The owner is getting ready to replace a reservoir, a pump house and in general to upgrade the system.

Item 5: System is owned and managed by Cascadia Water, with Culley Lehman as certified operator of record and several certified operators as a backup.

PART D: SOURCES		(This page may be reproduced to add more sources)	
12. Did you observe a source connected to the water system that is NOT listed on the WFI and in active use?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
12a. If so, has the source received written DOH approval? (confirm with DOH post-survey)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
13. DOH Source Number:		SO #1	SO #2
14. Source Name from the WFI: (For example, North Well; Well #2; ABC334.)		AGA928 Well 1	AGA927 Well 2
15. Dept of Ecology Well Tag Number: (Use Well tag ID#, None or Not readable)		AGA928	AGA927
16. Source Use:	P - Permanent S - Seasonal E - Emergency	P	P
17. If this is an emergency source, should it be disconnected?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
18. <i>Is the source a potential GWI source?</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
WELL (if there is no well, skip to question 34)			
19. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
20. Is the wellhead located in a pit or vault?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
21. Is the wellhead at risk of submergence?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
22. Is the well cap sealed, watertight, and free of unprotected openings?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
23. Is the well casing free of any unprotected openings?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
24. Is there a vent on the well?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
24a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
25. Are conduits and junction boxes sealed to prevent contaminant entry?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
26. Is the well unreasonably at risk to physical damage?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
27. Is there a raw water source sample tap?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
28. Is the source metered?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
28a. If yes, is the source meter read at least monthly?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
28b. If yes, are the water production records maintained?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
29. Is the wellhouse properly constructed and maintained? If no, explain below		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
30. Is there any evidence of infestation by rodents or other pests?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
31. Is the wellhouse and well adequately protected from unauthorized access and tampering?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
32. Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
33. Are the source pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
SPRING (if there is no spring, skip to question 41)			
34. Is the springbox (structure, hatch, and overflow) constructed to prevent the entry of contaminants or direct surface drainage? If yes, describe below.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
35. Is there a raw water source sample tap?		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
36. Is the source metered?		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
36a. If yes, is the source meter read at least monthly?		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
36b. If yes, are the water production records maintained?		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
37. Is the springhouse properly constructed and maintained? If no, explain below		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

38. Is there any evidence of infestation by rodents or other pests?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
39. Is the springhouse and spring box adequately protected from unauthorized access?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
40. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Describe and evaluate the source facilities including maintenance, operations, sanitary and security observations and any major change made to the source such as pump replacement, deepening or reconstruction:

- **Well 1 (SO1) is a 6-inch, 178 feet deep well drilled in 1963;**
- **SO1 is equipped in a screened vent, a water meter and a sample tap;**
- **Well 2 (SO2) is a 6-inch, 179 feet deep well drilled in 1985;**
- **SO1 Qobs was 37 gpm;**
- **SO2 is equipped in a water meter and a sample tap;**
- **Well pumps are controlled by floats in an adjacent water reservoir;**
- **SO2 is currently not operating;**

Item 24a: The vent on the well has small opening around a vent pipe. The openings are not screened and do not provide adequate protection from small insects

Item 28: Source meters are read monthly.

Item 31: SO1 is located outside of the pump house, in the open.

PART E: DISINFECTION		<i>(if no disinfection, answer question 41 and skip rest of Part E)</i>
41. Does the operator batch chlorinate the source, the distribution system, or the reservoir just before collecting routine or repeat coliform samples? If yes, provide details below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
42. Did you observe disinfection treatment connected to the water system in active use that is NOT listed on the WFI? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
43. Is ultraviolet light (UV) used for disinfecting a drinking water source? If no, skip to question 46.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
44. Is the UV unit sized for the maximum flow rate, and is there a UV transmittance sensor controlling a solenoid valve or other device to shut off supply if the UV light fails?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
45. Describe the UV equipment including: UV manufacturer and model number: _____ Rated capacity (gpm): _____ Cleaning frequency of quartz sleeve : _____ Mo/Yr UV light last replaced: _____		
46. Is there continuous chlorination? If no, skip to Part F	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
46a. If yes, please measure the free chlorine residual from a representative location in the distribution system.		
Location description:	Free chlorine residual:	
47. Is there a water supply line plumbed directly into a chlorine solution tank without a reduced pressure backflow assembly on the supply line?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
48. Is there a post-treatment sample tap?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
49. Does the chlorine compound meet NSF/ANSI Standard 60? - household bleach is exempted	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
50. Is a backup chemical feed pump or spare parts for the operating chemical feed pump available onsite?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
51. According to the operator, is there a DOH requirement for Chlorine Contact Time? If no, skip to Part F	<input type="checkbox"/> Yes <input type="checkbox"/> No	
51a. <i>If yes, measure and record the free chlorine residual at the CT6 compliance location: Describe compliance sampling location below – location must be prior to the first service connection downstream of chlorine addition.</i>		
52. Is the chlorine pump and pump controls constructed and maintained to provide uninterrupted, reliable CT6 treatment? If no, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Describe the chlorination facilities including purpose for chlorination, concerns with maintenance or operations, purveyor's record keeping of monthly reports, and sanitary and security observations: System does not provide continuous chlorination. The coliform testing history indicates there was not a positive coliform test in almost a decade.		

PART F: TREATMENT

53. Is there any treatment other than chlorination or UV in use? If no, skip Part F.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
54. Did you observe a treatment process connected to the water system in active use that is NOT listed on the WFI? If yes, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No
55. Is there a water supply line plumbed directly into a chemical solution tank (e.g., fluoride saturator) without a reduced pressure backflow assembly on the supply line?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
56. Are primary contaminant treatment facilities (e.g., nitrate, corrosion control, arsenic) operating properly? If no, describe below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
57. Do the water treatment chemicals meet NSF/ANSI Standard 60?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
58. Is there a post-treatment sample tap?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe the treatment facilities including purpose for treatment, concerns with maintenance or operations, purveyor's record keeping of monthly reports, and sanitary and security observations: System does not provide any treatment. Arsenic, nitrate, manganese and iron are all below established maximum contaminant level.	

PART G: BOOSTER PUMPING FACILITIES and CONTROLS	
59. Are there any booster pumps in use? If no, skip Part G	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
60. Are the booster pumps in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
61. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
62. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
63. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the pump facilities and controls including maintenance, operations, sanitary and security observations: <ul style="list-style-type: none"> • Two booster pump stations to pressurize the distribution system; • The booster pump station for the lower distribution zone consists of three 5 HP pumps (Sta-Rite model DHJ170), two with Sta-Rite electric motor and one with Baldor electric motors, and a smaller 2.5 HP start-up pump (Sta-Rite model DHG) that provides initial response to pumping request from the pressure sensors; • The booster pump station for the higher pressure zone consists of two 2HP pumps (Flint & Wallin) with F&W electric motor; • Pumps alternate in use, lead lag; 	

PART H: PRESSURE TANKS	
64. Are there any pressure tanks in use? If no, skip Part H	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
65. For systems using an air compressor, is the compressor an oil-free type or does it use food-grade oil?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
66. Are valves present to isolate pressure tanks for maintenance or repair?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
67. Is there an ASME pressure relief valve installed between each pressure tank and any shutoff valve? (see DOH publication #331-429)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
68. Are the pressure tanks in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the pressure tanks including maintenance, operational, sanitary and security observations: <ul style="list-style-type: none"> • The upper pressure zone is protected by a pair of 86-gallon bladder pressure tanks (Well Rite model WR260) and one 81-gallon Challenger tank; there is also a small expansion tank (Flow-Thru model FT18) • The lower pressure zone is protected by three 315 gallons galvanized hydropneumatic pressure tanks; • The hydropneumatic pressure tanks are manually "aired up" as needed with a portable oil-free air compressor; 	

PART I: FINISHED WATER STORAGE	
69. Is there a finished water storage tank in use? If no, skip Part I	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
70. If unable to physically inspect the storage tank hatch, vent, roof, or overflow outlet, select the method you discussed with the purveyor to document their condition:	

a	<input type="checkbox"/> Reviewed and discussed maintenance records and recent photos		
b	<input checked="" type="checkbox"/> Photos will be taken and mailed by purveyor; additional follow-up required by DOH		
c	<input type="checkbox"/> Purveyor unable or unwilling to document; additional follow-up required by DOH		
	Insert Tank Names	41,200	
71.	Is the storage tank protected from unauthorized entry or vandalism? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
72.	Is the reservoir roof free of any unprotected openings? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
73.	Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
74.	If able to open hatch, is the stored water free of visible contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75.	Is there a dedicated air vent on the storage tank?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75a.	If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
76.	Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
77.	Does the overflow line discharge near ground level?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
78.	Is the overflow line discharge area protected from potential erosion?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79.	Does the overflow line discharge into a storm drain or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79a.	If yes, is there an air gap at the discharge of the overflow OR does the overflow drop at least 34 vertical feet measured from the overflow connection to the reservoir down to the receiving water body?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
80.	Does the overflow line discharge directly into a sanitary sewer without an air gap?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
81.	Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
82.	When was the tank inspected last? Explain below if necessary	2020	
83.	What is the tank cleaning frequency? Explain below if necessary	Every 2-3 years or as needed	
84.	Does the tank size, operation, and internal piping configuration appear to provide adequate water turnover (i.e. separate inlet/outlet, baffling or mixing to reduce stagnant water)? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
85.	Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the finished water storage facilities including volume, operational drawdown, configuration of the inlet/outlet piping, any concerns about operations and maintenance, and sanitary and security observations: <ul style="list-style-type: none"> • 41,200 gallons, above-ground octagonal concrete reservoir; • The overflow outlet and the reservoir drain outlet are both screened; • Floats in the reservoir control pumps in SO1 and SO2; • Reservoir is filled from the top; • Reservoir and a pump house will be upgraded in a near future; Item 70: The top of the reservoir has not been inspected during the survey. The purveyor will provide pictures of reservoir top directly to DOH Drinking Water Office. Item 77: The reservoir overflow does not extend all the way to the ground and though it is screened it might be difficult to inspect the integrity of the screen and replace it as needed.			

PART J: DISTRIBUTION SYSTEM

86.	Is a complete, up to date and accurate map of the distribution system maintained?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
87.	Does the system provide adequate pressure throughout the distribution system? If no, explain below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

88. Are proper procedures followed for disinfection of new construction or repairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
89. Are there any air relief or vacuum relief valves subject to submersion?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
90. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
91. Does the purveyor exercise its distribution system valves? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations:	
<ul style="list-style-type: none"> • Two pressure zones; • The higher pressure zone serves about 90% of customers with remaining 10% served by the lower distribution zone; • Distribution is primarily through 6-inch, 4-inch and 2-inch PVC water mains. The 6-inch main directly from the reservoir serves a fire hydrant; • Service water meters are installed for most of user connections; there are few lines that still need to be located in order to install service meters; • Water meters are read every two month, and water use efficiency is calculated; • There is an intertie with the Goss Lakeridge Acres Association to provide wholesale water to that development; 	
Item 90 and 91: System is flushed as deemed necessary and distribution valves are exercised at that time.	

PART K: CROSS CONNECTION CONTROL (CCC)

92. Does the water system serve a single connection? If yes, refer the purveyor to the Uniform Plumbing Code and skip Part K	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
93. Is the water system known to serve one or more high health hazard premises, such as those listed in Table 9 in WAC 246-290-490? If yes, describe the premise(s) below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
94. Has the purveyor established the legal authority to implement a CCC program (i.e., formally adopted an ordinance, resolution, by-laws, or other document defining the purveyor's CCC program requirements, and empowering the purveyor to enforce them)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
95. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
95a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	<input type="checkbox"/> Yes <input type="checkbox"/> No
95b. If yes, has the purveyor completed installation of a backflow prevention assembly on the service line to each identified high health hazard premise?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
96. Has each testable backflow prevention assembly installed for premises isolation been tested by a DOH certified backflow assembly tester (BAT) within the past 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
97. Did you observe the end of a hose connected to the potable water system submerged in a pool, hot tub, watering trough, or other non-potable body of water observed during the survey?	<input type="checkbox"/> Yes <input type="checkbox"/> No
98. This question only applies to a facility operating a sewage dump station: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Additional cross connection control program comments:
The system does not have Cross Connection Control program in place. There is one BAT installed on the intertie with the Goss Lakeridge Acres Association. This BAT is tested by the Goss Lakeridge Acres Assn. on annual basis;

PART L: OPERATOR

99. Is the operator of the water system certified?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
100. Describe the operator's certification level (if certified), duration of employment with this water system, relationship with the system (e.g., contract operator, SMA, direct hire employee, volunteer, temporary, or owner), and duties and responsibilities.	
101. Does the operator conduct self-inspections of the water system? If yes, describe frequency and scope of these self-inspections below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
102. Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
103. Is the operator using proper inputs to treatment plant operations reports, such as correct volume, peak flow rate, time, and making the proper calculations? If no, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
104. Does the operator take compliance water quality samples at the proper location? If no, describe below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Additional operator comments:

Culley Lehman is the Certified Operator of record.

PART M: FIELD NOTES AND OTHER

Descriptions of any water quality tests, physical measurements, or simple repairs completed during the inspection:

WFI has been updated and is attached to this survey.

PART N: SUPPLEMENTAL NOTES AND SAFETY CONCERNS

Supplemental comments from other parts of the checklist, and documentation of field safety concerns:

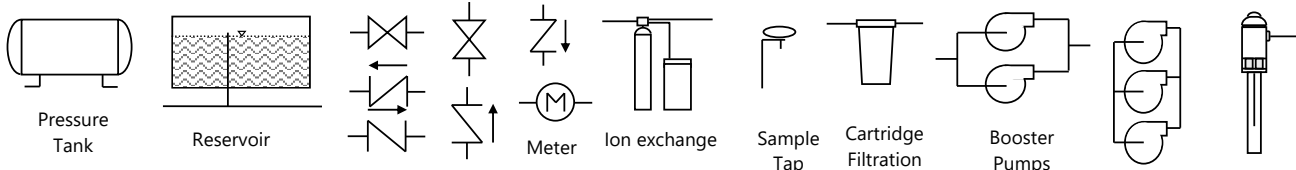
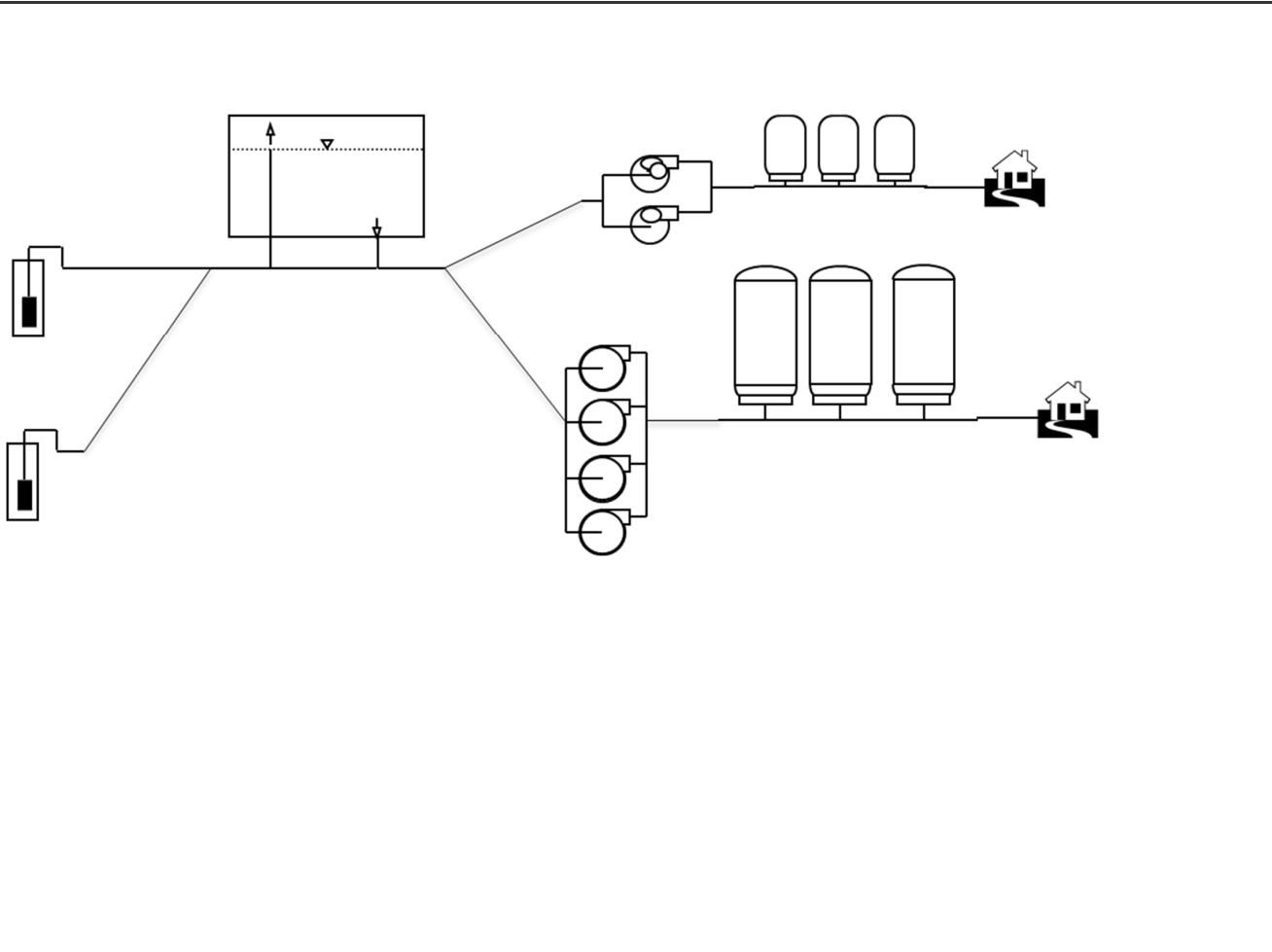
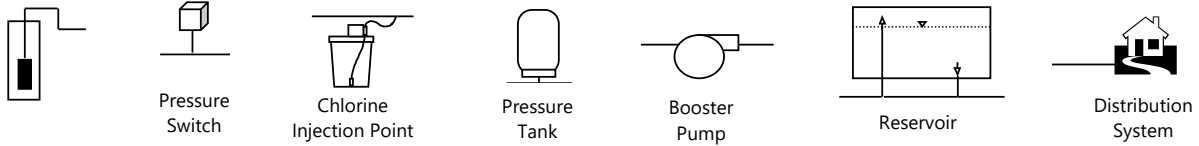
If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

PART O: WATER SYSTEM FACILITIES FIELD SCHEMATIC

Use the space below to sketch a simple schematic of the water system facilities. You may use the templates shown below to help build your schematic. The sketch should show location of sources, treatment, pressure tanks, booster pumps, storage tanks, and a simple representation of the distribution system. Include direction of flow (directional arrows) and brief description of how the controls function.

Source Name: **Well 1 and well 2** Source Number: **SO1 and SO2**

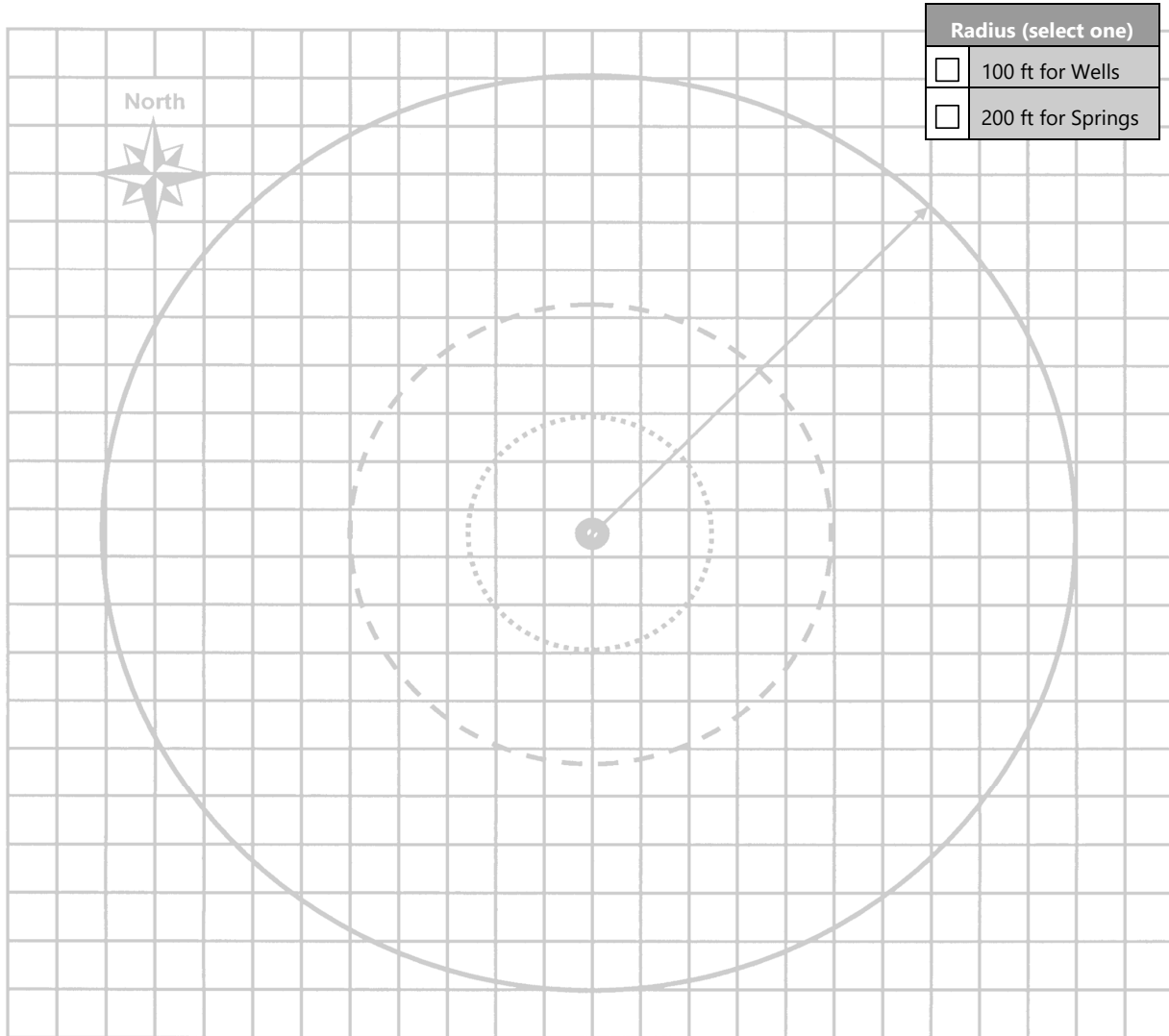
Example templates you can use to build your schematic:



PART P: INVENTORY OF POTENTIAL SOURCES OF CONTAMINANTS WITHIN THE SANITARY CONTROL AREA

Use the graph below to locate any potential biological and chemical contaminants found within the source's Sanitary Control Area (SCA). The SCA is the protective area within 100 feet of wells or 200 feet of springs.

Source Name:		Source Number:	
--------------	--	----------------	--



Description of Features Shown on the SCA Schematic

A.		C.		E.	
B.		D.		F.	
Sources of Contamination	Feet	Sources of Contamination	Feet	Sources of Contamination	Feet
Abandoned water wells		Dumpsters		Pesticide storage	
Animal burial		Fuel tanks (above or below ground)		Roads and parking lots	
Biological contaminants		Graveyards		Sewer lines, gravity or pressure	
Buildings		Hazardous waste disposal site		Storm water catch basins	
Chemical contaminants		Hazardous waste facility		Surface water	
Drainfields and septic tanks		Irrigation canal		Wastewater spray irrigation	
Drug lab		Landfill, dump, disposal area		Other:	
Dry wells		Pesticide application			

Waterworks



SO1 wellhead



SO1 well tag



SO1 sample tap



SO1 electrical



SO1 water meter



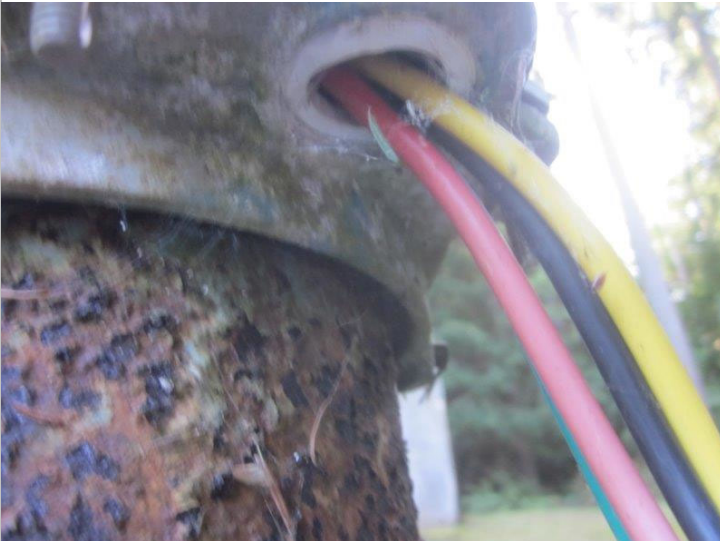
SO2 wellhead



SO2 well tag



SO2 electrical



SO2 sample tap



SO2 vent



SO2 vent close-up



SO2 water meter



Lower zone booster pumps



Lower zone pressure tanks



Pressure relief valve



Upper zone booster pumps



Figure 1



Upper zone pressure tank



Pump house interior



Water reservoir



Water tank overflow



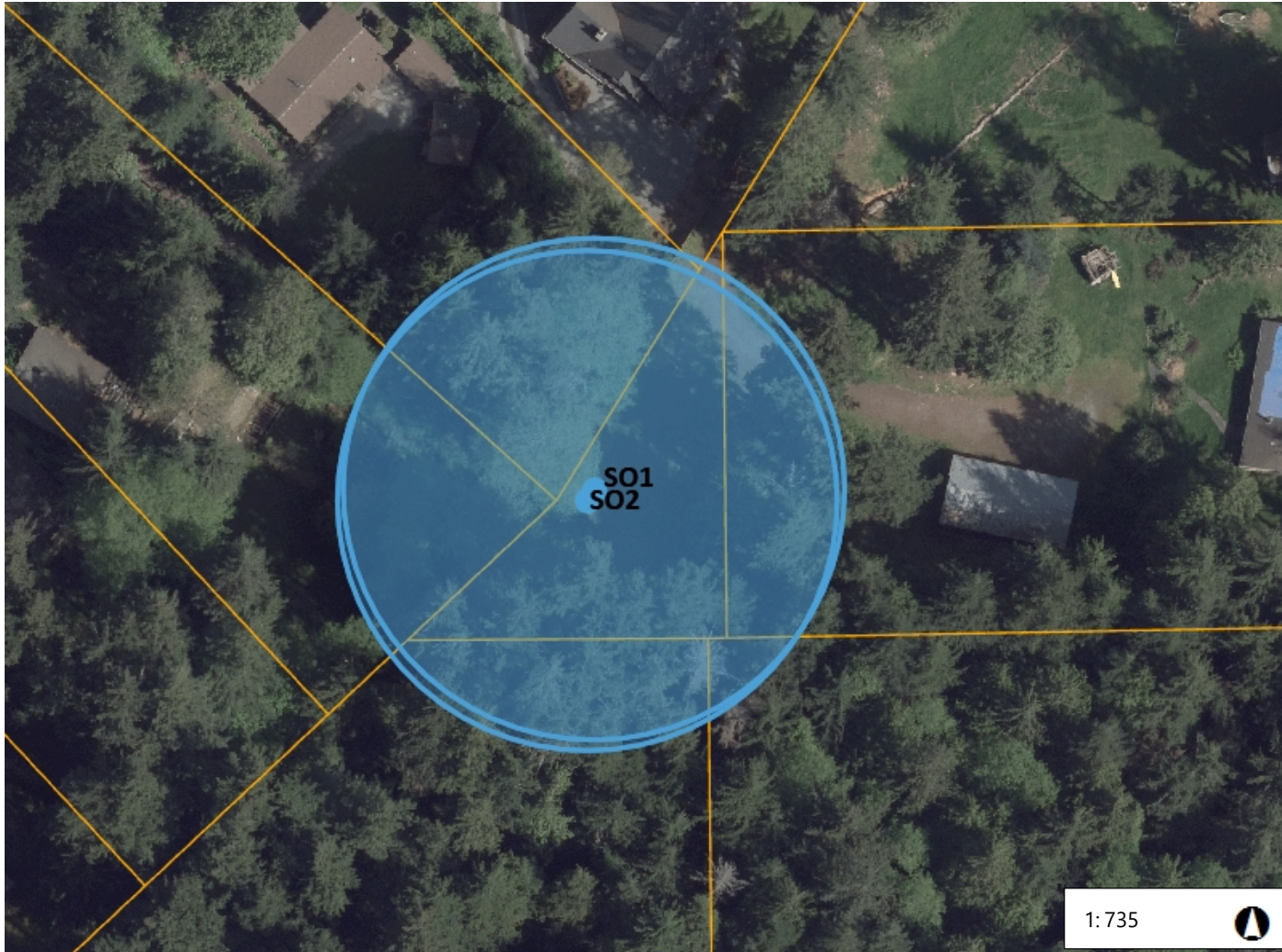
Leaking reservoir corner



Figure 2



ICGeoMap



Legend

- Parcels
- Roads
 - Highway
 - Collector and Arterial
 - Local
 - Private

Notes

122.5 0 61.24 122.5 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
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WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 31040 6	2. SYSTEM NAME CAL WATERWORKS	3. COUNTY ISLAND	4. GROUP A	5. TYPE Comm
-----------------------------	----------------------------------	---------------------	---------------	-----------------

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS									
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		99	120									
A. Full Time Single Family Residences (Occupied 180 days or more per year)	99											
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0											
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)												
A. Apartment Buildings, condos, duplexes, barracks, dorms	0											
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0											
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0											
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)												
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0									
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	1	1	1									
28. TOTAL SERVICE CONNECTIONS		100	121									
29. FULL-TIME RESIDENTIAL POPULATION												
A. How many residents are served by this system 180 or more days per year? <u>235</u>												
30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												
31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												
32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?												
B. How many days per month are they present?												
33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1
34. NITRATE SCHEDULE	QUARTERLY			ANNUALLY				ONCE EVERY 3 YEARS				
(One Sample per source by time period)												
35. Reason for Submitting WFI:												
<input type="checkbox"/> Update - Change <input checked="" type="checkbox"/> Update - No Change <input type="checkbox"/> Inactivate <input type="checkbox"/> Re-Activate <input type="checkbox"/> Name Change <input type="checkbox"/> New System <input type="checkbox"/> Other _____												
36. I certify that the information stated on this WFI form is correct to the best of my knowledge.												
SIGNATURE: <u>Aneta Hupf</u>						DATE: <u>4/14/23</u>						
PRINT NAME: <u>ANETA HUPFAUER</u>						TITLE: <u>EHS III</u>						



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
PO BOX 47800 MS:47822 OLYMPIA, WA 98504-7800

January 10, 2024

Culley Lehman
culley@cascadiawater.com

Subject: Del Bay ID# 18575
Island County
2023 Sanitary Survey

Dear Culley Lehman:

Thank you for your time and attention during your recent sanitary survey. This report documents the information collected during the survey. Defects in your water system facilities or operations that need your immediate attention are listed below as ***Significant Deficiencies*** or ***Significant Findings***. **You must complete the corrective action on these by February 22, 2024.**

After completing, email verification of completion, including photographs and supporting narrative to nwro.sanitarysurveys@doh.wa.gov or mail to the address above in the letterhead. Please include your water system name, ID number and the date when you corrected the deficiencies. Ensuring your water system completes each corrective action is a high priority for the Office of Drinking Water. Failure to complete each of these corrections within the designated time may result in enforcement action. If you believe you need additional time to correct any defect, contact me at (564) 233-8721. Please explain your need for additional time.

The system is in the process of consolidation with W & B Waterworks. The system will convert the existing well house/pump house to a pump station for W&B Waterworks once the consolidation is completed. The reservoir will be disconnected and demolished. The chlorination will be discontinued. The existing well will be maintained as an emergency source for W&B Waterworks once the water rights are transferred.

The following significant deficiencies and significant findings must be corrected if the reservoir is still in use. Otherwise, send proof that the reservoir is no longer in use.

Significant Deficiencies – *potential significant public health risks.*

1. Locate overflow/drain line outlet and ensure it is properly screened or a flapper valve is installed.

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

2. Submit photos (less than 12 months old) of the reservoir hatch, vent and overflow outlet. The photos must show enough detail to determine whether these features protect the storage tank against entry of contaminants. At a minimum, provide photos of the: hatch in the open and closed position showing the gasket and the lock, vent showing the overall vent structure and the screen material, overflow discharge, any other tank penetrations on the top of the reservoir.

Del Bay ID# 18575
January 10, 2024
Page 2

Observations and Recommendations - *to notify you of other violations of drinking water rules and to improve your technical, managerial, or financial capacity.*

3. Maintain free chlorine residual at the concentration of minimum 0.2 ppm throughout the system as long as the existing source and reservoir are being used.

Please note that failing to correct a Significant Deficiency or Significant Finding or addressing it with an action plan by the designated due date will result in a Treatment Technique Violation.

Thank you for your cooperation in the successful completion of the sanitary survey. Your water system met the requirements in WAC 246-290-416. Your next sanitary survey will be in 2028 if still in service. Please note that you should not interpret satisfying the requirements of a sanitary survey as meeting other applicable local, state or federal statutes, ordinances, or regulations.

If you have any questions or need additional information, please call me at (564) 233-8721 or email to nwro.sanitarysurveys@doh.wa.gov

Sincerely,



Bethany Brunny, MPH
Sanitary Survey Program Manager
Office of Drinking Water
Washington State Dept. of Health

Enclosures: Survey Report

ecc: Aneta Hupfauer, PhD. ICHD
Alexis Medina, DOH
Brian Wilson, DOH



**Office of Drinking Water
 Third Party Sanitary Survey Form (Checklist)**

System Name:	Del Bay Inc.	Survey Date:	12/7/23
PWS ID#:	18575K	County:	Island
System Type:	Community		
Persons Attending Inspection:	Culley Lehman – Certified Operator, Cascadia Water		
Inspector's Name:	Aneta Hupfauer – Island County Public Health		

PART A: SUMMARY OF SIGNIFICANT DEFICIENCIES AND SIGNIFICANT FINDINGS

The following is a completed sanitary survey checklist and summary of inspection findings. This completed sanitary survey checklist is the basis for the cover letter you receive from your local health jurisdiction or from the WA Dept. of Health (DOH). The cover letter documents any significant deficiencies or significant findings that must be corrected. The cover letter may also summarize observations concerning compliance with certain rules, and offer recommendations you can use to make improvements to the operation and management of your water system. Contact your DOH regional office with any questions you have about this survey.

Bolded and highlighted checklist items represent significant deficiencies that, if left uncorrected, create a significant public health risk. Highlighted checklist items represent significant findings that, if left uncorrected, create a significant risk to the physical safety, security, or reliability of the public drinking water supply. You will be required to take some sort of corrective action for each checklist answer that is **bolded and highlighted**, or highlighted.

Significant deficiencies and significant findings identified during this sanitary survey:

Submit photos (less than 12 months old) of the reservoir hatch, vent and overflow outlet. The photos must show enough detail to determine whether these features protect the storage tank against entry of contaminants. At a minimum, provide photos of the: hatch in the open and closed position showing the gasket and the lock, vent showing the overall vent structure and the screen material, overflow discharge, any other tank penetrations on the top of the reservoir.

Significant deficiencies or significant findings identified in the previous sanitary survey that remain unaddressed:

Observations and recommendations identified during this survey

The system is in the process of consolidation with W & B Waterworks 1. All deficiencies noted are just for the record. The system will convert the existing well house/pump house to a pump station for W&B Waterworks 1 once the consolidation is completed. The reservoir will be disconnected and demolished. The chlorination will be discontinued. The existing well will be maintained as an emergency source for W&B Waterworks 1 once the water rights are transferred:

Maintain free chlorine residual at the concentration of minimum 0.2 ppm throughout the system as long as the existing source and reservoir are being used.

Locate overflow/drain line outlet and ensure it is properly screened or a flapper valve is installed.

PART B: GENERAL WATER SYSTEM DESCRIPTION

Provide a general description of the water system including changes, updates, connections, source(s), storage, number of pressure zones, treatment, and control system(s) and alarm(s). Make corrections and updates to the purveyor's water facilities inventory form (WFI).

- **Small community system approved for 43 connections, currently serving 37;**
- **Located in an area classified as low risk with regard to seawater intrusion;**
- **Consists of a single well source that pumps, chlorination station, a booster pump station, pressure tanks, a water reservoir and a pressure distribution system**
- **Distribution system consists of 3-inch mains;**
- **Fire flow is not provided;**
- **System is consolidating with W&B Waterworks 1 water system, PWS ID #46670**

PART C: OPERATIONS and MANAGEMENT

1. Was the system operator, who is most knowledgeable about the system's day-to-day operations, present for the survey?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2. Were water system records available for your review?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3a. If no, are the following planning documents complete and up to date:	
Service Area and Facility Map	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Cross-Connection Control Program	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Partial
Source Water Protection Program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Emergency Response Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Operation and Maintenance Program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Coliform Monitoring Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Component Inventory and Assessment	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Asset Replacement and Other System Improvements	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Partial
Budget	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Were the water system's current and future water quality monitoring requirements reviewed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Was water quality sample results and trends reviewed with the purveyor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Does the system have emergency power?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11. Does there appear to be adequate reliability provided for this system? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe the general level of planning and management documents developed by this water system and any recommendations for additional development, including updates, system management practices and processes, water rates, etc.

Item 5: Del Bay water system is owned and managed by Cascadia Water, with several certified operators on staff.

PART D: SOURCES				(This page may be reproduced to add more sources)					
12. Did you observe a source connected to the water system that is NOT listed on the WFI and in active use?				<input type="checkbox"/> Yes	<input type="checkbox"/> No				
12a. If so, has the source received written DOH approval? (confirm with DOH post-survey)				<input type="checkbox"/> Yes	<input type="checkbox"/> No				
13. DOH Source Number:		SO #1		SO #					
14. Source Name from the WFI: (For example, North Well; Well #2; ABC334.)		AGA812 Well 1							
15. Dept of Ecology Well Tag Number: (Use Well tag ID#, None or Not readable)		AGA812							
16. Source Use:	<input type="checkbox"/> P - Permanent	<input type="checkbox"/> S - Seasonal	<input type="checkbox"/> E - Emergency	P					
17. If this is an emergency source, should it be disconnected?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA			
18. Is the source a potential GWI source?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
WELL (if there is no well, skip to question 34)									
19. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
20. Is the wellhead located in a pit or vault?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
21. Is the wellhead at risk of submergence?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
22. Is the well cap sealed, watertight, and free of unprotected openings?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
23. Is the well casing free of any unprotected openings?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
24. Is there a vent on the well?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
24a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
25. Are conduits and junction boxes sealed to prevent contaminant entry?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
26. Is the well unreasonably at risk to physical damage?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
27. Is there a raw water source sample tap?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
28. Is the source metered?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
28a. If yes, is the source meter read at least monthly?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
28b. If yes, are the water production records maintained?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
29. Is the wellhouse properly constructed and maintained? If no, explain below				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
30. Is there any evidence of infestation by rodents or other pests?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
31. Is the wellhouse and well adequately protected from unauthorized access and tampering?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
32. Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
33. Are the source pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
SPRING (if there is no spring, skip to question 41)									
34. Is the springbox (structure, hatch, and overflow) constructed to prevent the entry of contaminants or direct surface drainage? If yes, describe below.				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
35. Is there a raw water source sample tap?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
36. Is the source metered?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
36a. If yes, is the source meter read at least monthly?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
36b. If yes, are the water production records maintained?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
37. Is the springhouse properly constructed and maintained? If no, explain below				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
38. Is there any evidence of infestation by rodents or other pests?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
39. Is the springhouse and spring box adequately protected from unauthorized access?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
40. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Describe and evaluate the source facilities including maintenance, operations, sanitary and security observations and any major change made to the source such as pump replacement, deepening or reconstruction:									

- **Source SO1 is a 6-inch diameter well drilled in 1962 and completed at the depth of 254 feet;**
- **Well is equipped in a vent, a sample tap and a water meter;**
- **The well pump is controlled by probes in an adjacent water reservoir;**
- **The well was not working during the survey – the system is currently in process of consolidation with W&B Waterworks and was supplied by the W&B Waterworks at the time of inspection;**

Item 28a: Water meter is read two times per week.

PART E: DISINFECTION

(if no disinfection, answer question 41 and skip rest of Part E)

41. Does the operator batch chlorinate the source, the distribution system, or the reservoir just before collecting routine or repeat coliform samples? If yes, provide details below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
42. Did you observe disinfection treatment connected to the water system in active use that is NOT listed on the WFI? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
43. Is ultraviolet light (UV) used for disinfecting a drinking water source? If no, skip to question 46.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
44. Is the UV unit sized for the maximum flow rate, and is there a UV transmittance sensor controlling a solenoid valve or other device to shut off supply if the UV light fails?	<input type="checkbox"/> Yes <input type="checkbox"/> No
45. Describe the UV equipment including: UV manufacturer and model number: _____ Rated capacity (gpm): _____ Cleaning frequency of quartz sleeve: _____ Mo/Yr UV light last replaced: _____	
46. Is there continuous chlorination? If no, skip to Part F	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
46a. If yes, please measure the free chlorine residual from a representative location in the distribution system.	
Location description: Pump house	Free chlorine residual: 0.06 ppm
47. Is there a water supply line plumbed directly into a chlorine solution tank without a reduced pressure backflow assembly on the supply line?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
48. Is there a post-treatment sample tap?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
49. Does the chlorine compound meet NSF/ANSI Standard 60? - household bleach is exempted	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
50. Is a backup chemical feed pump or spare parts for the operating chemical feed pump available onsite?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
51. According to the operator, is there a DOH requirement for Chlorine Contact Time? If no, skip to Part F	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
51a. <i>If yes, measure and record the free chlorine residual at the CT6 compliance location: Describe compliance sampling location below – location must be prior to the first service connection downstream of chlorine addition.</i>	
52. Is the chlorine pump and pump controls constructed and maintained to provide uninterrupted, reliable CT6 treatment? If no, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe the chlorination facilities including purpose for chlorination, concerns with maintenance or operations, purveyor's record keeping of monthly reports, and sanitary and security observations: <ul style="list-style-type: none"> • Chlorination is not required but performed as a purveyor option; • 12.5 % sodium hypochlorite batch solution is diluted 10x prior to being injected from a tank in the pump house. The injector pump is activated as the well pumps; • The operator tests the chlorine residual three days per week, adjusting as needed, and reports readings to DOH; • The chlorination is only working when the system is supplied by SO1, it is not working when the distribution system is supplied by W&B Waterworks 1. Item 46a: At the time of inspection the system has been supplied with water from W&B Waterworks 1 and the chlorination system has not been operating. Therefore, I was unable to measure free chlorine residuals.	

PART F: TREATMENT

53. Is there any treatment other than chlorination or UV in use? If no, skip Part F.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
54. Did you observe a treatment process connected to the water system in active use that is NOT listed on the WFI? If yes, describe below.	<input type="checkbox"/> Yes <input type="checkbox"/> No
55. Is there a water supply line plumbed directly into a chemical solution tank (e.g., fluoride saturator) without a reduced pressure backflow assembly on the supply line?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
56. Are primary contaminant treatment facilities (e.g., nitrate, corrosion control, arsenic) operating properly? If no, describe below	<input type="checkbox"/> Yes <input type="checkbox"/> No

57. Do the water treatment chemicals meet NSF/ANSI Standard 60?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
58. Is there a post-treatment sample tap?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe the treatment facilities including purpose for treatment, concerns with maintenance or operations, purveyor's record keeping of monthly reports, and sanitary and security observations: System does not provide any treatment. Arsenic, nitrate and iron levels are below MCL. Manganese is above MCL but treatment is not provided. After integration with W&B Waterworks 1, manganese won't be an issue.	

PART G: BOOSTER PUMPING FACILITIES and CONTROLS

59. Are there any booster pumps in use? If no, skip Part G	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
60. Are the booster pumps in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
61. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
62. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
63. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe and evaluate the pump facilities and controls including maintenance, operations, sanitary and security observations:

- **Two variable frequency drive pumps maintain pressure in the system;**
- **Both pumps are Goulds eSV model 15SV3FG4C50 with 5 hp motor;**
- **Pumps alternate with automatic change once per week;**
- **Pumps are controlled by Franklin Control System;**

PART H: PRESSURE TANKS

64. Are there any pressure tanks in use? If no, skip Part H	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
65. For systems using an air compressor, is the compressor an oil-free type or does it use food-grade oil?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
66. Are valves present to isolate pressure tanks for maintenance or repair?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
67. Is there an ASME pressure relief valve installed between each pressure tank and any shutoff valve? (see DOH publication #331-429)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
68. Are the pressure tanks in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe and evaluate the pressure tanks including maintenance, operational, sanitary and security observations:

- **One 85 gallons Flow Thru bladder tank, model FT266, protects booster pumps;**

PART I: FINISHED WATER STORAGE

69. Is there a finished water storage tank in use? If no, skip Part I	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
70. If unable to physically inspect the storage tank hatch, vent, roof, or overflow outlet, select the method you discussed with the purveyor to document their condition:	
a <input type="checkbox"/> Reviewed and discussed maintenance records and recent photos	
b <input checked="" type="checkbox"/> Photos will be taken and mailed by purveyor; additional follow-up required by DOH	
c <input type="checkbox"/> Purveyor unable or unwilling to document; additional follow-up required by DOH	

Insert Tank Names	49,0000	
71. Is the storage tank protected from unauthorized entry or vandalism? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
72. Is the reservoir roof free of any unprotected openings? If no, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk
73. Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk
74. If able to open hatch, is the stored water free of visible contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75. Is there a dedicated air vent on the storage tank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75a. If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk

76. Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
77. Does the overflow line discharge near ground level?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
78. Is the overflow line discharge area protected from potential erosion?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79. Does the overflow line discharge into a storm drain or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79a. If yes, is there an air gap at the discharge of the overflow OR does the overflow drop at least 34 vertical feet measured from the overflow connection to the reservoir down to the receiving water body?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
80. Does the overflow line discharge directly into a sanitary sewer without an air gap?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
81. Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
82. When was the tank inspected last? Explain below if necessary	2023	
83. What is the tank cleaning frequency? Explain below if necessary	Every 2 years	
84. Does the tank size, operation, and internal piping configuration appear to provide adequate water turnover (i.e. separate inlet/outlet, baffling or mixing to reduce stagnant water)? If no, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
85. Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the finished water storage facilities including volume, operational drawdown, configuration of the inlet/outlet piping, any concerns about operations and maintenance, and sanitary and security observations: <ul style="list-style-type: none"> • A corrugated steel 49,000-gallon above-ground cylindrical reservoir manufactured by Butler Manufacturing Company; • The reservoir is lined; • The reservoir access hatch and vent for the steel tank was inaccessible for this survey; • Tank is filled from the bottom; Item 76: There is an internal overflow that discharges by a common overflow/drain line into a drainage ditch; the overflow/drain line outlet has not been located at the time of this survey; Item 83: The tank was cleaned every 2 years by a professional to prevent hypalon liner from being damaged. After integration with W&B Waterworks 1 is completed, the reservoir will be demolished.		
PART J: DISTRIBUTION SYSTEM		
86. Is a complete, up to date and accurate map of the distribution system maintained?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
87. Does the system provide adequate pressure throughout the distribution system? If no, explain below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
88. Are proper procedures followed for disinfection of new construction or repairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
89. Are there any air relief or vacuum relief valves subject to submersion?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
90. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
91. Does the purveyor exercise its distribution system valves? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations: <ul style="list-style-type: none"> • The distribution system consists of the original 3-inch diameter PVC pipes formed in a single dead-ended main (not looped); • The system is pressurized though 1/3 of properties can be fed by gravity flow, if needed; • Fire flow is not provided; • There is blow-off assembly at the distal end which is used for flushing; • System is fully metered and water production records are maintained; Item 90 and 91: System is flushed every two months and distribution valves are exercised at the time of flushing;		
PART K: CROSS CONNECTION CONTROL (CCC)		
92. Does the water system serve a single connection? If yes, refer the purveyor to the Uniform Plumbing Code and skip Part K	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
93. Is the water system known to serve one or more high health hazard premises, such as those listed in Table 9 in WAC 246-290-490? If yes, describe the premise(s) below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

94. Has the purveyor established the legal authority to implement a CCC program (i.e., formally adopted an ordinance, resolution, by-laws, or other document defining the purveyor's CCC program requirements, and empowering the purveyor to enforce them)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
95. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
95a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
95b. If yes, has the purveyor completed installation of a backflow prevention assembly on the service line to each identified high health hazard premise?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
96. Has each testable backflow prevention assembly installed for premises isolation been tested by a DOH certified backflow assembly tester (BAT) within the past 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
97. Did you observe the end of a hose connected to the potable water system submerged in a pool, hot tub, watering trough, or other non-potable body of water observed during the survey?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
98. This question only applies to a facility operating a sewage dump station: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Additional cross connection control program comments: Item 95a: Cross Connection Control program has been discussed with association members during this survey. The CCC questionnaire will be mailed to all association members to evaluate system for potential cross connections.	
PART L: OPERATOR	
99. Is the operator of the water system certified?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
100. Describe the operator's certification level (if certified), duration of employment with this water system, relationship with the system (e.g., contract operator, SMA, direct hire employee, volunteer, temporary, or owner), and duties and responsibilities.	
101. Does the operator conduct self-inspections of the water system? If yes, describe frequency and scope of these self-inspections below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
102. <i>Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
103. <i>Is the operator using proper inputs to treatment plant operations reports, such as correct volume, peak flow rate, time, and making the proper calculations? If no, describe below.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
104. <i>Does the operator take compliance water quality samples at the proper location? If no, describe below.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Additional operator comments: System is owned and operated by Cascadia Water LLC with Culley Lehman as certified operator of record.	
PART M: FIELD NOTES AND OTHER	
Descriptions of any water quality tests, physical measurements, or simple repairs completed during the inspection: WFI has been updated as the part of this survey and emailed to DOH NW Drinking Water Program.	
PART N: SUPPLEMENTAL NOTES AND SAFETY CONCERNS	
Supplemental comments from other parts of the checklist, and documentation of field safety concerns:	

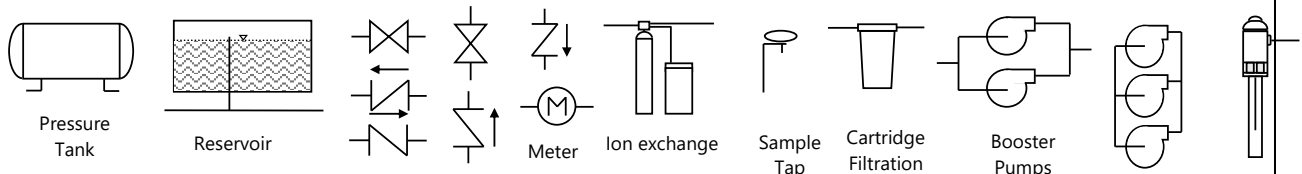
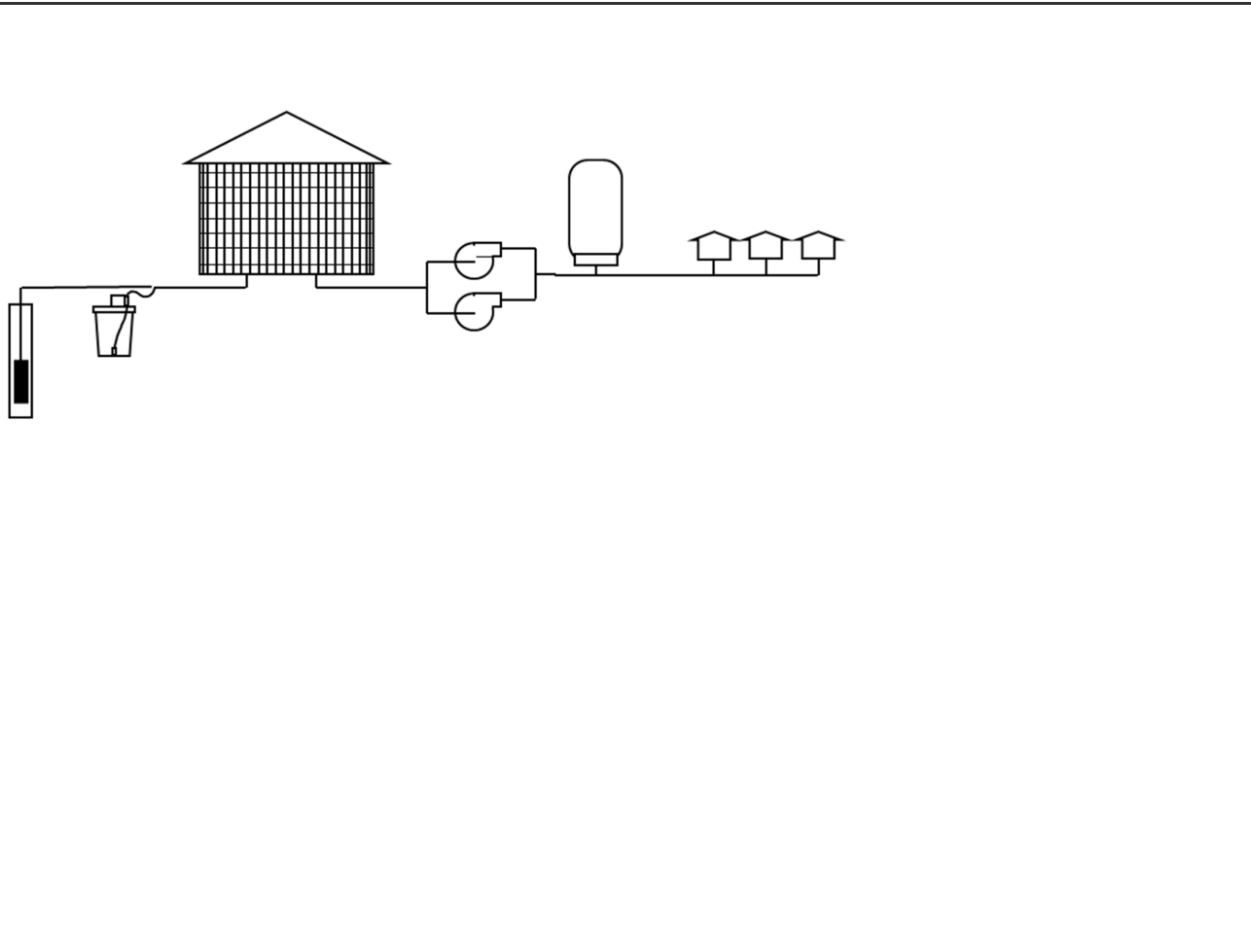
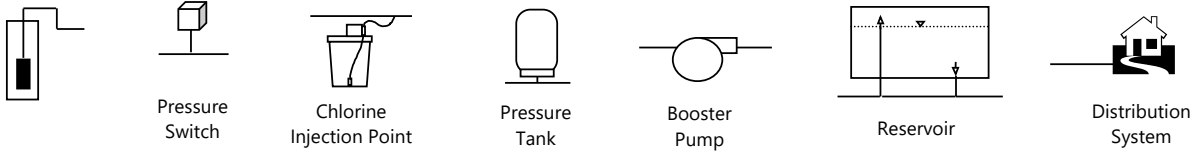
If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

PART O: WATER SYSTEM FACILITIES FIELD SCHEMATIC

Use the space below to sketch a simple schematic of the water system facilities. You may use the templates shown below to help build your schematic. The sketch should show location of sources, treatment, pressure tanks, booster pumps, storage tanks, and a simple representation of the distribution system. Include direction of flow (directional arrows) and brief description of how the controls function.

Source Name: **AGA812 Well 1** Source Number: **SO1**

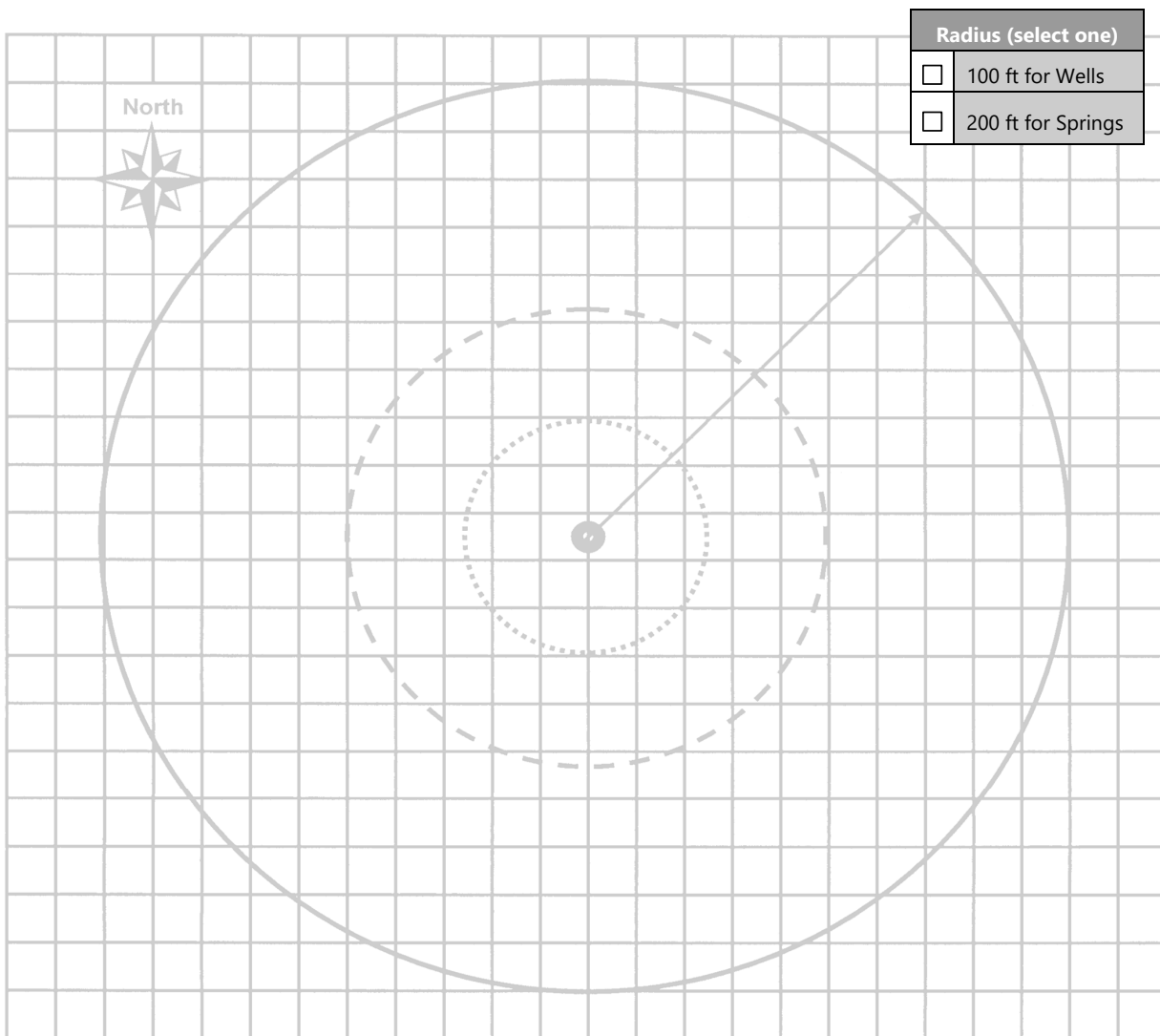
Example templates you can use to build your schematic:



PART P: INVENTORY OF POTENTIAL SOURCES OF CONTAMINANTS WITHIN THE SANITARY CONTROL AREA

Use the graph below to locate any potential biological and chemical contaminants found within the source's Sanitary Control Area (SCA). The SCA is the protective area within 100 feet of wells or 200 feet of springs.

Source Name:		Source Number:	
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Description of Features Shown on the SCA Schematic					
A.		C.		E.	
B.		D.		F.	
Sources of Contamination	Feet	Sources of Contamination	Feet	Sources of Contamination	F
Abandoned water wells		Dumpsters		Pesticide storage	
Animal burial		Fuel tanks (above or below ground)		Roads and parking lots	
Biological contaminants		Graveyards		Sewer lines, gravity or pressure	
Buildings		Hazardous waste disposal site		Storm water catch basins	
Chemical contaminants		Hazardous waste facility		Surface water	
Drainfields and septic tanks		Irrigation canal		Wastewater spray irrigation	
Drug lab		Landfill, dump, disposal area		Other:	
Dry wells		Pesticide application			

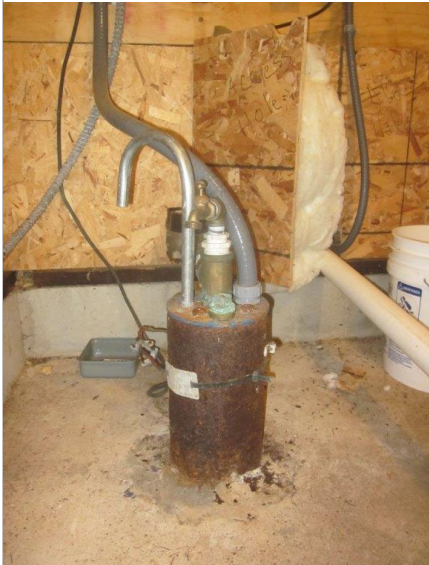
Waterworks



Pump house / well house



Wellhead SO1



SO1 water meter



SO1 well tag



Chlorine solution storage



Chlorination pump



Chlorine pump



Booster pumps



Pressure tank



Pump controls

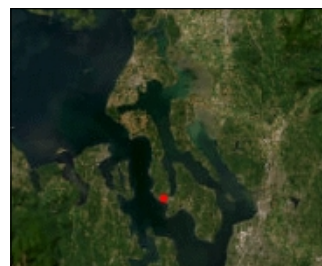


Water reservoir



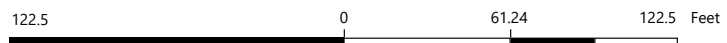


ICGeoMap



- Legend**
- Wells**
 - Private (black circle)
 - Public Water System (blue circle)
 - Parcels** (yellow outline)
 - Roads**
 - Highway (thick grey line)
 - Collector and Arterial (medium grey line)
 - Local (thin grey line)
 - Private (dashed grey line)

Notes



WGS_1984_Web_Mercator_Auxiliary_Sphere
© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
DO NOT USE AS A LEGAL DOCUMENT. ACCURACY IS NOT GUARANTEED.

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 18575 K	2. SYSTEM NAME DEL BAY	3. COUNTY ISLAND	4. GROUP A	5. TYPE Comm	
			ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)			37	37	43
A. Full Time Single Family Residences (Occupied 180 days or more per year)			0		
B. Part Time Single Family Residences (Occupied less than 180 days per year)					
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)					
A. Apartment Buildings, condos, duplexes, barracks, dorms			0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year			0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year			0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)					
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)			0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.			0	0	0
28. TOTAL SERVICE CONNECTIONS				37	43

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 50

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

34. NITRATE SCHEDULE (One Sample per source by time period)	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
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35. Reason for Submitting WFI:

Update - Change
 Update - No Change
 Inactivate
 Re-Activate
 Name Change
 New System
 Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: Aneta Slupf DATE: 12/20/23
 PRINT NAME: ANETA SLUPFALTER TITLE: EPS III



STATE OF WASHINGTON
 DEPARTMENT OF HEALTH
 SOUTHWEST DRINKING WATER REGIONAL OPERATIONS
 111 Israel Road Southeast • PO Box 47823 • Olympia, Washington 98504-7823
 Tel: (360) 236-3030 • Fax: (360) 236-3029 • TDD/TTY 711

SANITARY SURVEY REPORT

Sanitary surveys are the Office of Drinking Water’s (ODW) way to inspect public water systems through a field visit. We are also able to offer technical assistance to help improve system operations and ensure public health is protected.

This report documents the findings for the following water system.

August 16, 2023 Culley Lehman Cascadia Water LLC Post Office Box 549 Freeland, Washington 98249	Diamond Point ID #19210	
	County:	Clallam
	System Type:	Community
	Operating Permit Color:	Green
	Surveyor:	Charese Gainor
	Water System Attendees:	Culley Lehman Korey Jones
	Inspection Date:	July 20, 2023

Significant Deficiencies and Findings are assigned a due date. If you are not able to complete the work by the assigned date, you MUST submit a Corrective Action Plan describing how and when you will complete the work. Failure to respond by the date below will result in further compliance actions in accordance with WAC 246-290-050.

As you correct the items, send me documentation that demonstrates the items have been completed as directed. Include the system name, ID number, item #, and the date the deficiencies were corrected. You can send them to me by e-mail at charese.gainor@doh.wa.gov.

SIGNIFICANT DEFICIENCIES*

None were identified.

SIGNIFICANT FINDINGS - COMPLETED**

1. During the survey, Tank 2’s drain and overflow outlet was found to not have a complete screen. Photos were provided on August 3, 2023, showing a new screen had been installed. Thank you for the quick response.

OBSERVATIONS

2. Based on the approved corrective action plan for disinfection treatment, the final drawings, project report, and constructions documents were to be submitted by July 15, 2023. We do not have record of reaching the submittal. Please submit the complete project report and construction documents to remain in compliance with the engineering directive and corrective action plan.
3. There is one pressure relief valve present for all seven pressure tanks. There are isolation valves between the seven tanks and pressure relief valve. WAC 246-290-200 requires the application of

good engineering criteria in the construction of public water systems. The state Department of Labor and Industries (L&I) and ODW agree that an adequately sized ASME Section VIII pressure relief valve (PRV) must be installed in the water piping adjacent to each pressure tank. When installing a PRV, be sure there is no isolation valve between the PRV and the pressure tank.

SYSTEM INFORMATION

The system was originally constructed in 1961 along the Miller Peninsula east of the City of Sequim serving 305 residential connection and one non-residential connection. The system consists of two wells, three reservoirs, two pressure reducing stations, and a booster pump station.

SECTION 1: SOURCE

The system has two sources that alternate and fill Tank 3 via a 4-inch transmission main. The wells are located on undeveloped land leased from Washington State Parks with no potential sources of contamination within the sanitary control areas. The lease last renewed in August 2023 after the change of ownership from Aquarius Utilities to Cascadia Water. It is believed that the lease continues to be renewed, no end date. Well 1 and Well 2 alternate pumping to Tank 3 through the transmission main along Diamond Point Road.

S01 (Well 1) is an 8-inch cased well drilled to 393 feet in 1975. Screens were installed from 373 feet to the bottom and a 24-foot bentonite and cement surface seal was installed.

S02 (Well 2) is an 8-inch cased well drilled to 392 feet in 1981. Screens were installed from 372 feet to the bottom and a 20-foot bentonite surface seal was installed.

Source ID #	Name:	Description:	Ecology Tag #	Listed on WFI		Approved by ODW	
				Yes	No	Yes	No
01	Well #1	393 ft deep, 373 ft doi, 150 gpm pump replaced 2004	AGP297	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02	Well #2	392 ft deep, 372 ft doi, 150 gpm pump replaced 2004	AGP298	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

WELLHEAD	Source ID #01		Source ID #02	
	Yes	No	Yes	No
*Wellcap sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Vent screened	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected from flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Raw water sample tap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from unauthorized access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

WELLHEAD	Source ID #01	Source ID #02
	Yes No	Yes No
Sanitary control area free of contaminants (*If no, is there an approved mitigation plan for the contaminant identified)	Yes	Yes
**Protected from physical damage	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>

At the time of the survey, machine screws were missing from the S01 junction box. Since the survey, photos have been provided to show the screws have been replaced.

WELL PUMP EQUIPMENT	Source ID #01	Source ID #02
	Yes No	Yes No
*Pump control valve or vacuum relief valve with a protected air gap at discharge	n/a	n/a
Generator available	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
Generator has automatic startup	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>

Generators are on the list of improvements for this system. Overall, one large generator and two small generators are planned: well site, booster transfer station, north street. The generators will use propane.

EMERGENCY SOURCES

No emergency sources are available.

SECTION 2: DISINFECTION

Disinfection treatment is being designed to be installed. The plan that was discussed during the survey was to have temporary plastic sheds at the well sites for the day tanks along with two injection points – one for each well. The long-term plan will be to have one injection point at the booster pump tank transfer station, after some reconfiguring of the tanks at this location.

Based on the approved corrective action plan, the final drawings, project report, and construction documents were to be submitted by July 15, 2023. We do not have record of reaching the submittal. Please submit the complete project report and construction documents to remain in compliance with the engineering directive and corrective action plan.

SECTION 3: OTHER TREATMENTS

No treatment processes are in use.

SECTION 4: DISTRIBUTION SYSTEM

The distribution system was installed piecemeal as the need arose for extensions to serve developments on the Miller Peninsula east of the City of Sequim and approximately 2 miles north of the wells. The distribution system contains five pressure zones. The wells pump directly to Tank 3, which is then boosted to the steel Tank 2 serving Zone 1 via gravity. Zone 1 is a large lot plat. All other zones are smaller lots. Zone 2 is fed from Tank 3 through pressure reducing valve (PRV) 1. Tank 3 feeds the lower concrete reservoir (Tank 1), which then feeds Zone 3 via gravity and Zone 4 through PRV 2. The booster pump station (BPS), which serves Zone 5, is provided water from Tank 3. According to the most recent WSP, the distribution system consists of: PVC class 160/200 installed from 1970 to 1990, black plastic installed in 1961, PVC C900 class 150 installed from 1990 to the present, asbestos cement installed from 1965 to 1970, and PVC schedule 80 installed from 2000 to 2005.

FEATURES	Yes	No
Service area and facility map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Service meters (reading frequency monthly)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water system leakage (%)	32%	

Cascadia Water is working on getting a GIS system setup for external users as well. In the last year, many leaks have been found and fixed. Cascadia has hired a leak detection company to inspect the entire system to assist in finding additional leaks.

CROSS CONNECTION CONTROL (Community Systems)	Yes	No
System has enabling authority	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High hazards identified	<input type="checkbox"/>	<input checked="" type="checkbox"/>
High hazards protected	n/a	
Annual testing	n/a	
CCS on staff or under contract	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cross connections observed have been eliminated	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cascadia has recently sent out a cross-connection control survey. The new water system/SMA plan will include a full cross-connection control program.

SECTION 5: FINISHED WATER STORAGE

The system has three reservoirs in operation. Tank 1 is a concrete standpipe that was constructed in 1974 to serve the original service area of the Diamond Point subdivisions. This tank was upgraded with a new overflow, ladder, and emergency overflow sump in 2012. The emergency overflow kicks in when the overflow is active, but the tank continues to fill. The overflow water drains to a vault; if that overflows, the water will flow downhill to the roadside ditch. The overflow drain vault is pumped out as needed. This emergency overflow is also the tank drain. The tank site also includes a PRV, an altitude valve (inlet 56 psi/outlet 20 psi), and a visual/auditory alarm. The alarm is triggered by high level and low level in the tank. The neighbors would be alerted by the alarm and contact the water system manager.

Tank 2 was an elevated steel tank purchased from the City of Grandview, Washington, and erected in 1986. The full tank volume is approximately 100,000 gallons, but due to building codes, the system has been limited to 57,000 gallons. The tank interior and exterior were sandblasted and recoated at the time

of installation; it has not been recoated since installation. There is a goal to replace this tank with a concrete tank in 2025.

Tank 3 is concrete reservoir located adjacent to Tank 2 and constructed in 2012. Tanks 2 and 3 have a common drain buried to the outlet. The drain outlet is screened and flows to a wooded area.

Total storage capacity is 252,000 gallons

Reservoir	Reservoir Name	Description	Year Built	Total Volume (Gal)
1	West St Tank 1	20 ft dia x 50 ft concrete standpipe, floating, filled by altitude valve	1974	125,000
2	Tank 2	Elevated steel at transfer station, gravity feed	1986	57,000
3	Tank 3	30 ft high concrete standpipe at transfer station, floating	2012	70,500

TOP OF RESERVOIR	Res #1		Res #2		Res #3	
	Yes	No	Yes	No	Yes	No
**Hatch: Locked	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Hatch: Watertight seal or gasket	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hatch: Over-lapping cover	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Screened air vent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed/protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

FEATURES	Res #1		Res #2		Res #3	
	Yes	No	Yes	No	Yes	No
Protected drain outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected overflow outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Overflow line discharges into a sanitary sewer with an air gap	n/a		n/a		n/a	
**Protected from unauthorized entry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

During the survey, Tank 2's drain and overflow outlet was found to not have a complete screen. Photos were provided on August 3, 2023, showing a new screen had been installed. Thank you for the quick response.

MAINTENANCE	Res #1		Res #2		Res #3	
	Yes	No	Yes	No	Yes	No
Frequency of cleaning	As needed. Last cleaned February or March 2022					
Frequency of routine site visit	Weekly		Weekly		Weekly	
**Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 6: PRESSURE TANKS

This system has seven 86-gallon bladder tanks providing pump protection at the BPS. The system would like to replace the booster pump in the pressure tank building with a VFD pump which will allow for one 119-gallon pressure tank instead of seven.

Site	Location	# and size of Hydropneumatic Tanks	# and size of Bladder Tanks
1	Protection Point BPS		7 – 86 gallon

BLADDER	Site: 1	
	Yes	No
Isolation valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure relief valve	<input checked="" type="checkbox"/> *	<input type="checkbox"/>
Pressure gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
In good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

There is one pressure relief valve present for all seven pressure tanks. There are isolation valves between the seven tanks and pressure relief valve. WAC 246-290-200 requires the application of good engineering criteria in the construction of public water systems. The state Department of Labor and Industries (L&I) and ODW agree that an adequately sized ASME Section VIII pressure relief valve (PRV) must be installed in the water piping adjacent to each pressure tank. When installing a PRV, be sure there is no isolation valve between the PRV and the pressure tank.

SECTION 7: BOOSTER PUMPS AND FACILITIES

There is a BPS and a transfer station (at storage tank location). The BPS provides pressure to the Protection Point area homes and is located just inside the gate of this secured community. The transfer station is located on Diamond Point Road at the tank site; it moves water from Tank 3 to Tank 2.

Facility	Name	Description	Total Capacity (gpm)
1	Transfer Station	(2) Baldor Reliance 7.5 HP, 150 gpm, 1750 rpm, 208-230/460 volt, 3 Phase pumps	300
2	Protection Point BPS (North St)	Berkley 1-1/2 HP, 40 gpm, 3460 rpm, 115/230 volt, 1 Phase pump	40

BOOSTER PUMPS	Facility 1		Facility 2	
	Yes	No	Yes	No
Number of pumps	2		1	

BOOSTER PUMPS	Facility 1		Facility 2	
	Yes	No	Yes	No
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*Functional pump and pump controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equipment in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Generator has automatic startup	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

BUILDINGS/ ENCLOSURE	Facility 1		Facility 2	
	Yes	No	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 8: WATER QUALITY MONITORING AND REPORTING

Refer to the Water Quality Monitoring Schedule for your monitoring requirements and status. If you have any questions on source monitoring, please contact Sophia Petro at (360) 236-3046.

CHEMICAL	
Sample Point	Description
1	S01
2	S02

CHEMICAL	Sample Point 1		Sample Point 2	
	Yes	No	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ODW WQ data reviewed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample collection sites correct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
System has prior: <ul style="list-style-type: none"> <input type="checkbox"/> Nitrate results above 5 mg/L <input type="checkbox"/> Nitrite results above 0.5 mg/L <input type="checkbox"/> Primary MCL <input type="checkbox"/> Secondary MCL exceedance(s) <input type="checkbox"/> Organic detections <input type="checkbox"/> Other <u>Enter Other</u> 				

COLIFORM	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>

COLIFORM	Yes	No
Monitoring plan adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
# of Treatment Technique Violations (TTV)	0	
# of <i>E. coli</i> MCL Violations	1	

Updated coliform monitoring plan will accompany the umbrella plan (WSP/SMA Plan).

LEAD & COPPER	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring plan followed	n/a	
Results below action level	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We discussed the new EPA requirement to complete a service line inventory. The deadline is October 16, 2024. The following are links to some resources regarding this requirement and options for completing the inventory. We have funding options to help with both doing the inventory and replacing service laterals.

[Lead Service Line Inventory—EPA's Lead and Copper Rule Revisions | Washington State Department of Health](#)

[Lead Survey Line Inventory Frequently Asked Questions \(wa.gov\)](#)

[Lead Service Line Inventory Guidance \(wa.gov\)](#)

[Drinking Water State Revolving Fund \(DWSRF\) | Washington State Department of Health](#)

[2022 Drinking Water State Revolving Fund \(DWSRF\) Construction Loan Overview](#)

Cascadia Water is planning on doing company-wide sampling for PFAS in 2023.

SECTION 9: SYSTEM MANAGEMENT AND OPERATIONS

The water system was recently purchased by Cascadia Water LLC.

If there are no plans to expand the water system, the WSP could be converted to a Small Water System Management Program (SWSMP)

PROJECT/PLANNING	Yes	No
System approved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current WSP/SWSMP	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Year WSP/SWSMP approved	2008	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---
Consumer confidence report (Community only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water use efficiency report (Municipal Water Suppliers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross connection control annual report (> 1000 conn)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

OPERATOR CERTIFICATION

This system is required to have a Water Distribution Manager 1 certified operator. Korey Jones of Cascadia Water has recently become a certified operator. The mandatory position has been switched to be filled by him, rather than Dale Metzger.

If you have any questions or this information is inaccurate, please contact Operator Certification at (800) 525-2536.

Name of Operator	Certification Number	Certifications	Mandatory Operator
Korey Jones	015993	WDM1	<input checked="" type="checkbox"/>

WDS-Water Distribution Specialist; WDM-Water Distribution Manager; WTPO-Water Treatment Plant Operator, BTO-Basic Treatment Operator; CCS-Cross Connection Specialist; BAT-Backflow Assembly Tester

OPERATIONS	Yes	No
Operational records maintained	<input type="checkbox"/>	<input type="checkbox"/>
Current survey has significant deficiencies identified	<input type="checkbox"/>	<input type="checkbox"/>
Previous survey deficiencies/findings corrected, if no list below	<input type="checkbox"/>	<input type="checkbox"/>

CLOSING

Your system does not qualify for the reduced frequency of sanitary surveys under WAC 246-290-416. Your next survey is due in 3 years.

Regulations establishing a schedule of fees, including fees for sanitary surveys, were adopted March 18, 2012 (WAC 246-290-990). The amount due is \$433.50. An itemized worksheet is enclosed with the invoice.

If you have any questions, please contact me at (360) 236-3045 or by e-mail at charese.gainor@doh.wa.gov.

Sincerely,

Charese Gainor
 Office of Drinking Water, Coliform Program Manager

Enclosures

cc: Clallam County Health & Humans Services



S02 Well #2



S02 Well #2



S01 Well #1



S01 Well #1



Booster Pump Transfer Station



Booster Pumps in Transfer Station



Tank 2 & 3 at Transfer Station



Tank 3 hatch & gasket



Tank 2 hatch & gasket



West St Storage (Tank 1)



Altitude Valve controlling
West St Tank water level



Protection Point BPS

STATE OF WASHINGTON
Department of Health
OFFICE OF DRINKING WATER
SANITARY SURVEY INSPECTION

INVOICE

ACCOUNTS PAYABLE
DIAMOND POINT
PO BOX 549
FREELAND, WA 98249

WS ID: 19210
Invoice No: 53494
Invoice Date: 08/16/2023
Due Date: 09/30/2023

WS NAME: DIAMOND POINT SURVEY DATE: 07/20/2023

DESCRIPTION	QTY	COST	AMOUNT
Scheduling, Research, Prep	1.00	x \$102.00	\$102.00
Survey Documentation Survey	1.75	x \$102.00	\$178.50
Field Work	1.50	x \$102.00	\$153.00
Total Amount Due			\$433.50

1. **Pay online** with a credit card, debit card, or electronic check (ACH) using the Environmental Health Payment System at <https://secureaccess.wa.gov/>.
2. For billing questions, please contact Southwest Drinking Water Regional Operations at (360) 236-3030.
3. This invoice is issued in accordance with WAC 246-290-990(3)(c)(iii).
4. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 711 Washington Relay Service.
5. If paying by check:

Make checks payable to Department of Health, Federal ID #91-1444603.

Please return the bottom portion of this invoice with your check.

Invoice Number: 53494
INVOICE AMOUNT: \$433.50
Owner Number: 038167
WS Name: DIAMOND POINT

Invoice Date: 08/16/2023
Invoice Due Date: 09/30/2023
Region: SW
WS ID: 19210

Reference: SANITARY SURVEY INSPECTION PERFORMED ON 07/20/2023

Please remit to:
**ACCOUNTS RECEIVABLE
DOH SANITARY SURVEY PROGRAM
PO BOX 1099
OLYMPIA, WA 98507-1099**

SANITARY SURVEY FEE WORKSHEET

Department of Health Office of Drinking Water Sanitary Survey Time Tracking				
System Name Diamond Point			PWS ID # 19210	
County Clallam County				
Surveyor Charese Gainor			Date: 08/16/23	
System over 10,000 Connections?			NO	
		Quantity		
Department of Health Paid Costs		Hours/Miles	Cost	
Survey program RO Coordination	1	\$	102	\$ 102.00
Survey Program Administrative Support	1	\$	102	\$ 102.00
Travel expenses (Mileage)	27		(# Miles) x (\$.58/Mile)	\$ 15.66
Technical Assistance	1	\$	102	\$ 102.00
Travel Time <10,000	1.75		102	\$ 178.50
Total Department of Health Costs to Perform All Surveys				\$ 500.16
Water System Paid Costs		Hours		
Scheduling, research, prep	1	\$	102	\$ 102.00
Survey Field Work	1.5	\$	102	\$ 153.00
Survey documentation – preparation of survey report to the purveyor	1.75	\$	102	\$ 178.50
Additional Water System Paid Costs for systems serving 10,000 or more connections				
		Hours		
		0	\$	-
NOTES: Travel time and mileage split between 4 surveys.	Total Cost of Survey			\$ 933.66
	Costs Covered by DOH			\$ 500.16
	Invoice amount due (Less than 10,000 Connections)			\$ 433.50



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
 SOUTHWEST DRINKING WATER OPERATIONS
P.O. Box 47823 Olympia, Washington 98504-7823
PHONE (360) 236-3030 FAX (360) 236-3029

SANITARY SURVEY REPORT

Sanitary surveys are the Office of Drinking Water's (ODW) way to inspect public water systems through a field visit. We are also able to offer technical assistance to help improve system operations and ensure public health is protected.

This report documents the findings for the following water system.

January 12, 2022 Dale Metzger Estates Inc. Post Office Box 92 Sequim, Washington 98382	Estates Inc. Water System ID #081669	
	County:	Clallam
	System Type:	Community
	Operating Permit Color:	Green
	Surveyor:	Jocelyne Gray
	Water System Attendees:	Dale Metzger Culley Lehman
	County Health Attendees:	Sue Waldrip Ben Majors
	Inspection Date:	December 8, 2021

Significant Deficiencies and Findings are assigned a due date. If you are not able to complete the work by the assigned date, you **MUST** submit a Corrective Action Plan describing how and when you will complete the work. Failure to respond by the date below will result in further compliance actions in accordance with WAC 246-290-050.

As you correct the items, send me documentation that demonstrates the items have been completed as directed. Include the system name, ID number, item #, and the date the deficiencies were corrected. You can send them to me by e-mail at jocelyne.gray@doh.wa.gov or by mail at PO Box 47823, Olympia, Washington 98504-7823.

SIGNIFICANT DEFICIENCIES* - COMPLETED DURING THE SURVEY

1. Electrical wires entering Well 1 needs to be sealed. Wires were sealed during inspection.

SIGNIFICANT FINDINGS - BY FEBRUARY 11, 2022**

2. Submit a corrective action plan for engineering design and construction of the proposed tank. Tank 2, the larger tank, has several locations on the north side and one on the east side that are leaking. ODW is aware Cascadia Water plans to replace both buried reservoirs with an above ground storage tank.

If a new tank is not proposed, hire a qualified structural inspector to evaluate the reservoir. Submit a copy of the inspection results and a corrective action plan describing how you will address the inspector's findings.

OBSERVATIONS

3. Update the Coliform Monitoring Plan to meet the Revised Total Coliform Rule and Ground Water Rule regulations, WAC 246-290-300 and -320. Contact Charese Gainor at (360) 236-3045 or by e-mail at Charese.gainor@doh.wa.gov for assistance.
4. Ensure cross connection control assemblies within the water system, including on the customer's side of the meter, are tested annually by a certified Backflow Assembly Tester, WAC 246-290-490. Ensure yard hydrants with weep holes have cross connection control assemblies.

RECOMMENDATIONS

5. Lead and copper regulations have changed. The water system is required to inventory all service line materials and determine if service lines were ever downstream of a lead component or lead water line. There are new tiering criteria from EPA so lead and copper sampling sites should be re-evaluated. See attached lead and copper documents.
6. If the water system does not expect to expand beyond the approved 480 connections, it can convert the Water System Plan (WSP) to a Small Water System Management Program (SWSMP). ODW is aware a WSP is under development. Please contact Mark Mazeski, Regional Planner, at mark.mazeski@doh.wa.gov or (360) 236-3038 to discuss planning requirements for this system.
7. Please develop an Operations & Maintenance Program along with an Emergency Response Plan.

SYSTEM INFORMATION

This is a community water system that currently serves 367 connections including one school and a park; the remaining connections are single-family residences. The system is approved to serve 480 connections. This approval was established through a water system plan in 1994 that defined the capacity-limiting factor as the available standby storage and the booster pump capacity.

The original water system was constructed in the 1970s to serve Mountain Park; and Well 2 was drilled. Dungeness Estates was later added. In 1982, the system expanded to serve Blue Ribbon Farms and County Park; and Well 1 was drilled. Well 2 was deepened in 1983. The two wells pump into the reservoirs that are intertied together. Booster pumps then move water to the distribution system. The distribution is made of 4- to 6-inch PVC and provides some fire flow.

SECTION 1: SOURCE

There are two wells that create a wellfield (S03). Well 1 (S01) is drilled to 607 feet deep with a 4-inch casing and located next to the small reservoir and access road. Well 2 (S02) is drilled to 436 feet deep and located behind Well 1 and next to the storage shed. A 6-inch casing from 0 to 437 feet below ground surface and a 5-inch casing from 433 feet to 436 feet below ground surface. Both wells pump into the reservoirs. Well 1 pumps into the smaller reservoir and Well 2 pumps into the larger reservoir. The access road is off Ridge View Drive and the site is not fenced. Each well has pump capacity of 180 gallons per minute (gpm).

There is a portable generator that can power either one of the submersible pumps or the fire pump or two of the distribution pumps. The operator manually switches it as needed.

The sanitary control area (SCA) includes a garage that houses various types of equipment, such as a lawnmower. The operator has moved all extra fuel to be stored somewhere else and is not storing any other chemicals in this garage for increased SCA protection. The homes in the area have septic systems.

Source ID #	Name	Description	Ecology Tag #	Listed on WFI		Approved by ODW	
				Yes	No	Yes	No
01	Well #1 WW	4-inch Casing Drilled In 1982 to 607 Feet, 180 GPM, Wellfield S03	ACA573	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02	Well #2 WW	6-inch Casing Drilled In 1974, Deepened In 1983 to 436 Feet, 180 GPM, Wellfield S03, 7.5 HP	ACA574	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

WELLHEAD	Source ID #01		Source ID #02	
	Yes	No	Yes	No
*Wellcap sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Vent screened	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected from flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Raw water sample tap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from unauthorized access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sanitary control area free of contaminants (*If no, is there an approved mitigation plan for the contaminant identified)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from physical damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Electrical wires entering Well 1 need to be sealed. Wires were sealed during inspection.

WELL PUMP EQUIPMENT	Source ID #01		Source ID #02	
	Yes	No	Yes	No
*Pump control valve or vacuum relief valve with a protected air gap at discharge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator has automatic startup	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The generator is currently sized to run just the booster pumps for Tank 1, which requires water conservation during power outages. A larger generator is on order that can run both wells and booster pumps without conservation. This increases system reliability. Due to supply chain issues worldwide, delivery and installation are delayed.

SECTION 2: DISINFECTION

No long-term treatment is provided in this system. Chlorine bleach is available if the water system has a total coliform positive sample.

SECTION 3: OTHER TREATMENTS

There is no other treatment on this system. Cascadia Water is evaluating water quality to determine need for iron and manganese removal.

SECTION 4: DISTRIBUTION SYSTEM

The distribution consists of 4- to 6-inch PVC lines constructed in the 1970s and 1980s; the system provides limited fire flow. All customers are supplied by the booster pumps and there is only one pressure zone. The distribution has some looping. Pressures at the pump house vary between 40 and 60 pounds per square inch (psi). The highest distribution pressure is around 74 psi.

FEATURES	Yes No
Service area and facility map	<input checked="" type="checkbox"/> <input type="checkbox"/>
Service meters (reading frequency)	<input checked="" type="checkbox"/> <input type="checkbox"/>
Water system leakage (%)	6.3%

Annual water leakage has increased. The water operator repaired several leaks and a source meter this year so the 2021 leakage should decrease. The 3-year annual average is less than 10 percent, which meets the state standard.

CROSS CONNECTION CONTROL (Community Systems)	Yes No
System has enabling authority	<input checked="" type="checkbox"/> <input type="checkbox"/>
High hazards identified	<input type="checkbox"/> <input checked="" type="checkbox"/>
High hazards protected	<input type="checkbox"/> <input checked="" type="checkbox"/>
Annual testing	<input type="checkbox"/> <input checked="" type="checkbox"/>
CCS on staff or under contract	<input checked="" type="checkbox"/> <input type="checkbox"/>
Cross connections observed have been eliminated	NA

Customer cross connection control survey is planned for 2022. All known non-sanitary (have a weep-hole drain) yard hydrants need backflow assemblies. Cascadia Water’s cross connection control program allows for service disconnection if a customer does not have a backflow assembly tested annually. Testing is the responsibility of the customers.

SECTION 5: FINISHED WATER STORAGE

Two partially buried concrete tanks provide a total of 180,000 gallons of storage to the system. The tanks are tied together and have only one overflow. The tanks are connected to Cascadia Water’s SCADA system, which allows for remote monitoring by the owner and operator.

Reservoir	Reservoir Name	Description	Year Built	Total Volume (Gal)
1	Tank 1	Partially Buried Concrete Tank	1972	30,000
2	Tank 2	Partially Buried Concrete Tank	1981	150,000

TOP OF RESERVOIR	Res #1		Res #2	
	Yes	No	Yes	No
**Hatch: Locked	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Hatch: Watertight seal or gasket	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hatch: Over-lapping cover	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Screened air vent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed/protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

FEATURES	Res #1		Res #2	
	Yes	No	Yes	No
Protected drain outlet			None	None
*Protected overflow outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Overflow line discharges into a sanitary sewer with an air gap			NA	NA
**Protected from unauthorized entry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

According to the system drawings, the reservoirs have drains, but they have never been located. Only Tank 1 appears to have a drain. The tanks can be emptied down to about a foot from the bottom with the booster pumps and there is an internal sump where a sump pump can be placed for emptying most of the water out.

MAINTENANCE	Res #1		Res #2	
	Yes	No	Yes	No
Frequency of cleaning		6 Years		6 Years
Frequency of routine site visit		3x/Week		3x/Week
**Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Tank 2, the larger tank, has several locations on the north side and one on the east side that are leaking. ODW is aware Cascadia Water plans to replace both buried reservoirs with an above ground storage tank. Submit a corrective action plan for engineering design and construction of the proposed tank. If a new tank is not proposed, hire a qualified structural inspector to evaluate the reservoir. Submit a copy of the inspection results and a corrective action plan describing how you will address the inspector's findings.

SECTION 6: PRESSURE TANKS

This system has two hydropneumatic tanks. One is 940 gallons and the other is 1300 gallons.

Site	Location	# and size of Hydropneumatic Tanks
1	Pump Station	1 – 940 gal, 1 – 1300 gal

HYDROPNEUMATIC	Site: 1	
	Yes	No
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water level sight glass	<input type="checkbox"/>	<input checked="" type="checkbox"/>
**Oilless Air compressor	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 7: BOOSTER PUMPS AND FACILITIES

The pump house has three 5-horsepower (hp) service pumps and one 10-hp fire pump controlled by the distribution system pressure. The pumps are attached to the top of the reservoirs. Two pumps draw water from each reservoir and are alternated manually. Pumps 1 and 2 pull from Tank 1. Pumps 3 and 4 pull from Tank 2.

Facility	Name	Description	Total Capacity (gpm)
1	Pump Station	(3) 5 HP, 100 GPM Service Pumps; (1) 10 HP, 250 GPM Fire Pump	550

BOOSTER PUMPS	Facility 1	
	Yes	No
Number of pumps	4	
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Functional pump and pump controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equipment in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator has automatic startup	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The existing generator only runs the booster pumps for Tank 1.

BUILDINGS/ENCLOSURE	Facility 1	
	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 8: WATER QUALITY MONITORING AND REPORTING

Refer to the Water Quality Monitoring Schedule for your monitoring requirements and status. If you have any questions on source monitoring, please contact Sophia Petro at (360) 236-3046.

CHEMICAL	
Sample Point	Description
1	Wellfield S03 sample tap on the pressure tanks' inlet

CHEMICAL	Sample Point 1	
	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ODW WQ data reviewed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample collection sites correct	<input checked="" type="checkbox"/>	<input type="checkbox"/>
System has prior:		
<input type="checkbox"/> Nitrate results above 5 mg/L		
<input type="checkbox"/> Nitrite results above 0.5 mg/L		
<input type="checkbox"/> Primary MCL		
<input type="checkbox"/> Secondary MCL exceedance(s)		
<input type="checkbox"/> Organic detections		
<input type="checkbox"/> Other		

COLIFORM	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
# of Treatment Technique Violations (TTV)	0	
# of <i>E. coli</i> MCL Violations	0	

Update the Coliform Monitoring Plan to meet the Revised Total Coliform Rule and Ground Water Rule regulations. Contact Charese Gainor at (360) 236-3045 or by e-mail at charese.gainor@doh.wa.gov for assistance.

LEAD & COPPER	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Results below action level	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Lead and copper regulations have changed. The water system is required to inventory all service line materials and determine if service lines were ever downstream of a lead component or lead water line. There are new tiering criteria from EPA so lead and copper sampling sites should be re-evaluated. See attached lead and copper documents.

SECTION 9: SYSTEM MANAGEMENT AND OPERATIONS

The system is privately owned and managed by Cascadia Water. The ownership changed since the last survey.

If the water system does not expect to expand beyond the approved 480 connections, it can convert the WSP to a SWSMP. Please contact Mark Mazeski, Regional Planner, at mark.mazeski@doh.wa.gov or (360) 236-3038 to discuss planning requirements for this system. It is the understanding of ODW that a WSP is under development.

Please develop an Operations & Maintenance Program along with an Emergency Response Plan.

PROJECT/PLANNING	Yes	No
System approved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current WSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Year WSP approved	1994	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---
Consumer confidence report (Community only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water use efficiency report (Municipal Water Suppliers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross connection control annual report (> 1000 conn)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

OPERATOR CERTIFICATION

This system is required to have one Water Distribution Manager (WDM1) certified operator. Dale Metzger fulfills this position. He assisted the previous owner with water system management. The current owners retained his services for system operations.

If you have any questions or this information is inaccurate, please contact Operator Certification at (800) 525-2536.

Name of Operator	Certification Number	Certifications	Mandatory Operator
Dale Metzger	011895	WDM2, CCS	<input checked="" type="checkbox"/>

WDS-Water Distribution Specialist; WDM-Water Distribution Manager; WTPO-Water Treatment Plant Operator, BTO-Basic Treatment Operator; CCS-Cross Connection Specialist; BAT-Backflow Assembly Tester

OPERATIONS	Yes	No
Operational records maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>

OPERATIONS	Yes	No
Current survey has significant deficiencies identified	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Previous survey deficiencies/findings corrected, if no list below	<input checked="" type="checkbox"/>	<input type="checkbox"/>

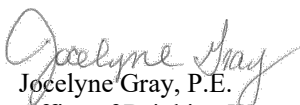
CLOSING

Your system has significant deficiencies identified in this current survey. You can qualify for the reduced frequency under WAC 246-290-416 of once every 5 years, if all the identified significant deficiencies are addressed by the due date in this report.

Regulations establishing a schedule of fees, including fees for sanitary surveys, were adopted March 18, 2012 (WAC 246-290-990). The amount due is \$714. An itemized worksheet is enclosed with the invoice.

If you have any questions, please contact me at (360) 236-3034 or by e-mail at jocelyne.gray@doh.wa.gov.

Sincerely,



Jocelyne Gray, P.E.
Office of Drinking Water, Acting Assistance Regional Manager

Enclosures

cc: Culley Lehman, Cascadia Water
Jeff Tasoff, DCG Engineers
Clallam County Health & Humans Services



Water Facilities Site



Large Storage Tank - Ponding



Large Storage Tank Vent



East Side Large Storage Tank



North Side Large Storage Tank



North Side Large Storage Tank



Well 1 With Sealed Wires



Well 2



Pressure Tanks



Small Storage Tank Vent



Small Storage Tank Hatch Gasket



Booster Pumps for Small Storage Tank



Large Storage Tank Hatch Gasket



Oilless Air Compressor for Pressure Tanks

STATE OF WASHINGTON
Department of Health
OFFICE OF DRINKING WATER
SANITARY SURVEY INSPECTION

INVOICE

CASCADIA WATER, LLC
ESTATES INC
PO BOX 549
FREELAND, WA 98249

WS ID: 08166
Invoice No: 48052
Invoice Date: 01/12/2022
Due Date: 02/26/2022

WS NAME: ESTATES INC

SURVEY DATE: 12/29/2021

DESCRIPTION	QTY	COST	AMOUNT
Scheduling, Research, Prep	3.00	x \$102.00	\$306.00
Survey Field Work	1.00	x \$102.00	\$102.00
Survey Documentation	3.00	x \$102.00	\$306.00
Total Amount Due			\$714.00

1. **Make checks payable to Department of Health, Federal ID #91-1444603.**
2. For billing questions, please contact Southwest Drinking Water Regional Operations at (360) 236-3030.
3. This invoice is issued in accordance with WAC 246-290-990(3)(c)(iii).
4. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 711 Washington Relay Service.

Please return the bottom portion of this invoice with your check.

Invoice Number: 48052
INVOICE AMOUNT: \$714.00

Invoice Date: 01/12/2022
Invoice Due Date: 02/26/2022

WS Name: ESTATES INC

WS ID: 08166

Reference: SANITARY SURVEY INSPECTION PERFORMED ON 12/29/2021

Please remit to:
**ACCOUNTS RECEIVABLE
SANITARY SURVEY PROGRAM
DEPARTMENT OF HEALTH
PO BOX 1099
OLYMPIA, WA 98507-1099**

SANITARY SURVEY FEE WORKSHEET

Department of Health Office of Drinking Water Sanitary Survey Time Tracking				
System Name Estates Inc.			PWS ID # 08166	
County Clallam County				
Surveyor Jocelyne Gray			Date: 12/29/21	
System over 10,000 Connections?			NO	
		Quantity	Cost	
Department of Health Paid Costs		Hours/Miles		
Survey program RO Coordination	1	\$	102	\$ 102.00
Survey Program Administrative Support	1	\$	102	\$ 102.00
Travel expenses (Mileage)	91.3		(# Miles) x (\$.58/Mile)	\$ 52.95
Technical Assistance	0.5	\$	102	\$ 51.00
Travel Time <10,000	2		102	\$ 204.00
Total Department of Health Costs to Perform All Surveys				\$ 511.95
Water System Paid Costs		Hours		
Scheduling, research, prep	3	\$	102	\$ 306.00
Survey Field Work	1	\$	102	\$ 102.00
Survey documentation – preparation of survey report to the purveyor	3	\$	102	\$ 306.00
Additional Water System Paid Costs for systems serving 10,000 or more connections				
		Hours		
		0	\$	-
NOTES: Travel shared with Monterra, ID 55990	Total Cost of Survey			\$ 1,225.95
	Costs Covered by DOH			\$ 511.95
	Invoice amount due (Less than 10,000 Connections)			\$ 714.00



February 1, 2022

Jocelyne Gray
State of Washington Department of Health
Southwest Drinking Water Operations
PO Box 47823
Olympia, WA 98504-3029

Re: Sanitary Survey – Estates Inc. Water System ID# 081669

Dear Ms. Gray,

As the engineering firm supporting Cascadia Water, Davido Consulting Group, Inc. was provided a copy of the Sanitary Survey Report dated January 12, 2022. This report identified a significant finding in regard to the system's underground storage reservoir. We agree that underground reservoirs are a potential problem due to the fact that surface or ground water could leak into the reservoir as opposed to an above ground reservoir where water inside of the reservoir would leak out. Although there is no indication that the leakage is a current concern based upon routine coliform monitoring, the company plans on installing a new above ground reservoir and discontinuing use of the existing below ground reservoirs.

A sizing report and construction plan for the new reservoir and associated site piping will be submitted to your office once those items are completed. Attached is a preliminary schedule with major deliverables to properly size, approve, and construct a suitable reservoir. Please let us know if you have any questions on the schedule or feel that we have omitted a significant step.

We thank you for inspecting the Estates Inc. Water System and supporting Cascadia Water in providing safe drinking water.

Sincerely,

Davido Consulting Group, Inc.

A handwritten signature in blue ink that reads 'Jeffrey M. Tasoff'.

Digitally signed by
Jeffrey M. Tasoff, PE
Date: 2022.02.01
12:18:04 -08'00'

Jeffrey M. Tasoff, PE
Principal-Civil Engineer

CC: Dale Metzger
Culley Lehman

Seattle	Mount Vernon	Freeland	Federal Way	Spokane
9706 4th Ave NE, Ste 300 Seattle, WA 98115 Tel 206.523.0024	2210 Riverside Dr, Ste 110 Mount Vernon, WA 98273 Tel 360.899.1110	1796 E Main St, Ste 105 Freeland, WA 98249 Tel 360.331.4131	31620 23rd Ave S, Ste 307 Federal Way, WA 98003 Tel 253.237.7770	601 Main Ave, Ste 617 Spokane, WA 99201 Tel 509.606.3600

Estates Water System - New Reservoir Development Timeline

Phase	Task Description	Duration	Start	End
Design	Engineering Capacity Analysis for Reservoir sizing	4 weeks	2/18/2022	3/18/2022
	New Reservoir Location Site Selection	2 weeks	3/18/2022	4/1/2022
	Survey	8 weeks	4/1/2022	5/27/2022
	Cost Evaluation of Reservoir Options	8 weeks	4/1/2022	5/27/2022
	Site Plan/Layout Development	12 weeks	5/27/2022	8/19/2022
	Obtain DOH Approval	18 weeks	8/19/2022	12/23/2022
Permit	Geotech Analysis of Site	4 weeks	8/19/2022	9/16/2022
	Concrete Reservoir Construction Plans and Structural Engineering	8 weeks	12/23/2022	2/17/2023
	Develop Building Permit Submittal Packet	4 weeks	2/17/2023	3/17/2023
	Obtain Building Permit from Clallam County	12 weeks	3/17/2023	6/9/2023
Construction	Contractor Selection	4 weeks	6/9/2023	7/7/2023
	Scheduling and Material Procurement	12 weeks	7/7/2023	9/29/2023
	Construction	12 weeks	9/29/2023	12/22/2023
	Project Closeout and Certification	4 weeks	12/22/2023	1/19/2024



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
 SOUTHWEST DRINKING WATER OPERATIONS
P.O. Box 47823 Olympia, Washington 98504-7823
PHONE (360) 236-3030 FAX (360) 236-3029

SANITARY SURVEY REPORT

Sanitary surveys are the Office of Drinking Water’s (ODW) way to inspect public water systems through a field visit. We are also able to offer technical assistance to help improve system operations and ensure public health is protected.

This report documents the findings for the following water system.

March 2, 2022 Dale Metzger Monterra Post Office Box 92 Sequim, Washington 98382	Monterra ID #55990Y	
	County:	Clallam
	System Type:	Community
	Operating Permit Color:	Green
	Surveyor:	Jocelyne Gray
	Water System Attendees:	Culley Lehman Dale Metzger
	Inspection Date:	December 8, 2021

Significant Deficiencies and Findings are assigned a due date. If you are not able to complete the work by the assigned date, you MUST submit a Corrective Action Plan describing how and when you will complete the work. Failure to respond by the date below will result in further compliance actions in accordance with WAC 246-290-050.

As you correct the items, send me documentation that demonstrates the items have been completed as directed. Include the system name, ID number, item #, and the date the deficiencies were corrected. You can send them to me by e-mail at jocelyne.gray@doh.wa.gov or by mail at PO Box 47823, Olympia, Washington 98504-7823.

SIGNIFICANT DEFICIENCIES* - COMPLETE DECEMBER 8, 2021

1. The opening in the electrical junction box at S01 was sealed the day of the survey.

SIGNIFICANT FINDINGS - NONE FOUND**

OBSERVATIONS

2. Well 1 must have a casing vent constructed to maintain atmospheric pressure inside the well by allowing air to enter and exit as the water level in the well changes (WAC 246-290-200 and -415). Install a casing vent with a screened, downward facing opening. The screen must be noncorrodible, 24-mesh and the down-turned opening should be at least 18 inches above the floor. Please see Simple Fixes for Wellhead Openings (331-232).
3. Update Coliform Monitoring Plan to meet the Revised Total Coliform Rule and Ground Water Rule regulations, WAC 246-290-300 through -320. Contact Charese Gainor at (360) 236-3045 or Charese.gainor@doh.wa.gov for assistance.

4. Develop a Lead and Copper monitoring plan to comply with the Revised Lead and Copper Rule (LCRR), WAC 246-290-300 through -320. It is encouraged you begin the service line inventory, including identification of the materials on the customer’s side, which is due October 16, 2024. Contact Sophia Petro at (360) 236-3036 or at Sophia.petro@doh.wa.gov regarding LCR sampling sites.
5. Please develop an Operations & Maintenance Program along with an Emergency Response Plan, WAC 2416-290-100.

RECOMMENDATIONS

6. Cut back branches of the trees around the storage tank.

SYSTEM INFORMATION

Monterra is a community Group A water system comprised of entirely single-family residences. The system has 188 active service connections with approval for up to 203. Two ground water wells with a combined capacity of 380 gallons per minute (gpm) deliver water to distribution under pressure. A 75,000-gallon tank fills by a control valve in the reservoir, and water is pumped from the reservoir into distribution by a booster pump. A fire pump also connected to the system provides fire suppression storage. The tank operates on a large operational storage range to introduce new water into the water and prevent stagnation.

The wells are located inside small doghouses near a driveway. Although the residence is currently owned by a person friendly with the water system, the system should ensure that it has the legal capacity to enforce a restrictive covenant around the wells if it has not done so.

SECTION 1: SOURCE

There are two wells that create a wellfield (S03). Well 1 (S01) is drilled to 221 feet deep with first open interval (foi) at 109 feet below ground surface (bgs). Well 2 (S02) is drilled to 221 feet deep with FOI at 89 feet bgs. Each well has pump capacity of 180 gallons per minute (gpm).

Source ID #	Name	Description	Ecology Tag #	Listed on WFI		Approved by ODW	
				Yes	No	Yes	No
01	Well #1 WW North	Drilled In 1979 to 221 Feet, 180 GPM, Wellfield S03		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	Well #2 WW South	Drilled In 1979 to 221 Feet, 180 GPM, Wellfield S03	No Tag	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WELLHEAD	Source ID #01		Source ID #02	
	Yes	No	Yes	No
*Wellcap sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Vent screened	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected from flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Raw water sample tap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from unauthorized access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

WELLHEAD	Source ID #01		Source ID #02	
	Yes	No	Yes	No
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sanitary control area free of contaminants (*If no, is there an approved mitigation plan for the contaminant identified)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from physical damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The opening in the electrical junction box at S01 was sealed the day of the survey.

Raw water sample taps are after the source meters in the pressure tank building.

WELL PUMP EQUIPMENT	Source ID #01		Source ID #02	
	Yes	No	Yes	No
*Pump control valve or vacuum relief valve with a protected air gap at discharge	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator has automatic startup	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Improvement plans include a large generator for the well site that will operate automatically.

SECTION 2: DISINFECTION

There is no disinfection on this system.

SECTION 3: OTHER TREATMENTS

There is no other treatment on this system.

SECTION 4: DISTRIBUTION SYSTEM

The distribution consists of PVC lines constructed in the 1970s and 1980s. All customers are supplied by the booster pumps and there is only one pressure zone. The distribution has some looping. Pressures at the pump house vary between 40 and 60 pounds per square inch (psi). The highest distribution pressure is around 74 psi.

FEATURES	Yes	No
Service area and facility map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Service meters (reading frequency #)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water system leakage (%)	Unknown	

Monterra is not fully metered. Cascadia Water is in the process of installing service meters.

CROSS CONNECTION CONTROL (Community Systems)	Yes No
System has enabling authority	<input checked="" type="checkbox"/> <input type="checkbox"/>
High hazards identified	<input checked="" type="checkbox"/> <input type="checkbox"/>
High hazards protected	NA
Annual testing	NA
CCS on staff or under contract	<input checked="" type="checkbox"/> <input type="checkbox"/>
Cross connections observed have been eliminated	NA

There are no backflow assemblies installed on this system.

SECTION 5: FINISHED WATER STORAGE

There is a concrete standpipe on the north side of the distribution system next to the booster pump station.

Reservoir	Reservoir Name	Description	Year Built	Total Volume (Gal)
1	Tank 1	Concrete Tank	1985	75,000

TOP OF RESERVOIR	Res #1
	Yes No
**Hatch: Locked	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Hatch: Watertight seal or gasket	<input checked="" type="checkbox"/> <input type="checkbox"/>
Hatch: Over-lapping cover	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Screened air vent	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Openings sealed/protected	<input checked="" type="checkbox"/> <input type="checkbox"/>

Thank you for submitting photos of the top of the tank including the hatch gasket and vent screen.

FEATURES	Res #1
	Yes No
Protected drain outlet	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Protected overflow outlet	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Overflow line discharges into a sanitary sewer with an air gap	NA
**Protected from unauthorized entry	<input checked="" type="checkbox"/> <input type="checkbox"/>

MAINTENANCE	Res #1
	Yes No
Frequency of cleaning	9 Years
Frequency of routine site visit	Weekly
**Structure in good condition	<input checked="" type="checkbox"/> <input type="checkbox"/>

Cut back branches of the trees around the reservoir.

SECTION 6: PRESSURE TANKS

This system has two 750-gallon hydropneumatic tanks.

Site	Location	# and size of Hydropneumatic Tanks
1	Pressure Tank Building	2 – 750 gal

HYDROPNEUMATIC	Site: 1	
	Yes	No
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water level sight glass	<input type="checkbox"/>	<input checked="" type="checkbox"/>
**Oilless Air compressor	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 7: BOOSTER PUMPS AND FACILITIES

The reservoir is primarily used for fire protection. To prevent water stagnation, the reservoir operates on a float system that gives a relatively large (several feet) operational storage range to permit cycling of the water in the tank. When pressure falls below regular service pressure, indicating a fire or flushing event, a 500-gallon gasoline fueled fire pump engages, delivering high flow. The booster pump was replaced in 2018.

Facility	Name	Description	Total Capacity (gpm)
1	Pump Station	(1) 5 HP, 140 GPM Service Pumps; (1) 500 GPM Fire Pump	640

BOOSTER PUMPS	Facility 1	
	Yes	No
Number of pumps	2	
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Functional pump and pump controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equipment in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator has automatic startup	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BUILDINGS/ ENCLOSURE	Facility 1	
	Yes	No
**Facility secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Improvement plans include replacing the generator at the booster pump station.

SECTION 8: WATER QUALITY MONITORING AND REPORTING

Refer to the Water Quality Monitoring Schedule for your monitoring requirements and status. If you have any questions on source monitoring, please contact Sophia Petro at (360) 236-3046.

CHEMICAL	
Sample Point	Description
1	Wellfield S03 sample tap

CHEMICAL	Sample Point 1	
	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ODW WQ data reviewed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample collection sites correct	<input checked="" type="checkbox"/>	<input type="checkbox"/>
System has prior: <ul style="list-style-type: none"> <input type="checkbox"/> Nitrate results above 5 mg/L <input type="checkbox"/> Nitrite results above 0.5 mg/L <input type="checkbox"/> Primary MCL <input checked="" type="checkbox"/> Secondary MCL exceedance(s) <input type="checkbox"/> Organic detections <input type="checkbox"/> Other <u>Enter Other</u> 		

The wellfield has exceeded the manganese secondary maximum contaminant level of 0.05 mg/L. The levels are below the lifetime health advisory of 0.3 mg/L. The system may want to consider manganese treatment. There have been no customer complaints about water quality. The operator routinely flushes the system.

COLIFORM	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
# of Treatment Technique Violations (TTV)	0	
# of <i>E. coli</i> MCL Violations	0	

Update Coliform Monitoring Plan to meet the Revised Total Coliform Rule and Ground Water Rule regulations. Contact Charese Gainor at (360) 236-3045 or Charese.gainor@doh.wa.gov for assistance.

LEAD & COPPER	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Results below action level	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Develop a Lead and Copper monitoring plan to comply with the Revised Lead and Copper Rule (LCRR). It is recommended you begin the service line inventory, including identification of the materials on the customer's side, which is due October 16, 2024. Contact Sophia Petro at (360) 236-3036 or at Sophia.petro@doh.wa.gov regarding LCR sampling sites.

SECTION 9: SYSTEM MANAGEMENT AND OPERATIONS

The system is privately owned and managed by Cascadia Water which is regulated by the Utilities Trade Commission. Ownership has changed since the last survey.

It is the understanding of ODW that Cascadia Water is working on the Water System Plan. Please contact Mark Mazeski, Regional Planner, at mark.mazeski@doh.wa.gov or (360) 236-3038 to discuss planning requirements for this system.

Please develop an Operations & Maintenance Program along with an Emergency Response Plan.

PROJECT/PLANNING	Yes	No
System approved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current WSP	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Year WSP approved	1994	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	---
Consumer confidence report (Community only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water use efficiency report (Municipal Water Suppliers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross connection control annual report (> 1000 conn)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

OPERATOR CERTIFICATION

This system is required to have one Water Distribution Manager (WDM1) certified operator.

If you have any questions or this information is inaccurate, please contact Operator Certification at (800) 525-2536.

Name of Operator	Certification Number	Certifications	Mandatory Operator
Dale Metzger	011895	WDM2, CCS	<input checked="" type="checkbox"/>

WDS-Water Distribution Specialist; WDM-Water Distribution Manager; WTPO-Water Treatment Plant Operator, BTO-Basic Treatment Operator; CCS-Cross Connection Specialist; BAT-Backflow Assembly Tester

OPERATIONS	Yes	No
Operational records maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current survey has significant deficiencies identified	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Previous survey deficiencies/findings corrected, if no list below	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CLOSING

Your system qualifies for the reduced frequency of sanitary surveys under WAC 246-290-416. Your next survey is due in 5 years.

Regulations establishing a schedule of fees, including fees for sanitary surveys, were adopted March 18, 2012 (WAC 246-290-990). The amount due is \$510. An itemized worksheet is enclosed with the invoice.

If you have any questions, please contact me at (360) 236-3024 or by e-mail at jocelyne.gray@doh.wa.gov.

Sincerely,



Jocelyne Gray, P.E.

Office of Drinking Water, Assistant Regional Manager

Enclosures

cc: Culley Lehman, Cascadia Water
 Robert Bennion, DCG Engineers
 Clallam County Health & Humans Services



Wellfield



Well 2 – Junction Box Hole Filled



Pressure Tank Building



Storage Tank and BPS

STATE OF WASHINGTON
Department of Health
OFFICE OF DRINKING WATER
SANITARY SURVEY INSPECTION

INVOICE

CASCADIA WATER, LLC
MONTERRA
PO BOX 549
FREELAND, WA 98249

WS ID: 55990
Invoice No: 48346
Invoice Date: 03/02/2022
Due Date: 04/16/2022

WS NAME: MONTERRA

SURVEY DATE: 12/08/2021

DESCRIPTION	QTY	COST	AMOUNT
Scheduling, Research, Prep	2.00	x \$102.00	\$204.00
Survey Field Work	1.00	x \$102.00	\$102.00
Survey Documentation	2.00	x \$102.00	\$204.00
Total Amount Due			\$510.00

1. **Make checks payable to Department of Health, Federal ID #91-1444603.**
2. For billing questions, please contact Southwest Drinking Water Regional Operations at (360) 236-3030.
3. This invoice is issued in accordance with WAC 246-290-990(3)(c)(iii).
4. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 711 Washington Relay Service.

Please return the bottom portion of this invoice with your check.

Invoice Number: 48346
INVOICE AMOUNT: \$510.00

Invoice Date: 03/02/2022
Invoice Due Date: 04/16/2022

WS Name: MONTERRA

WS ID: 55990

Reference: SANITARY SURVEY INSPECTION PERFORMED ON 12/08/2021

Please remit to:
**ACCOUNTS RECEIVABLE
SANITARY SURVEY PROGRAM
DEPARTMENT OF HEALTH
PO BOX 1099
OLYMPIA, WA 98507-1099**

SANITARY SURVEY FEE WORKSHEET

Department of Health Office of Drinking Water Sanitary Survey Time Tracking				
System Name Monterra			PWS ID # 55990	
County Clallam County				
Surveyor Jocelyne Gray			Date: 12/08/21	
System over 10,000 Connections?			NO	
		Quantity		
Department of Health Paid Costs		Hours/Miles	Cost	
Survey program RO Coordination	1	\$	102	\$ 102.00
Survey Program Administrative Support	1	\$	102	\$ 102.00
Travel expenses (Mileage)	91.3		(# Miles) x (\$.58/Mile)	\$ 52.95
Technical Assistance	0	\$	102	\$ -
Travel Time <10,000	2		102	\$ 204.00
Total Department of Health Costs to Perform All Surveys				\$ 460.95
Water System Paid Costs		Hours		
Scheduling, research, prep	2	\$	102	\$ 204.00
Survey Field Work	1	\$	102	\$ 102.00
Survey documentation – preparation of survey report to the purveyor	2	\$	102	\$ 204.00
Additional Water System Paid Costs for systems serving 10,000 or more connections				
		Hours		
		0	\$	-
NOTES: Travel shared with Estates Inc, ID 08166	Total Cost of Survey			\$ 970.95
	Costs Covered by DOH			\$ 460.95
	Invoice amount due (Less than 10,000 Connections)			\$ 510.00

October 17, 2022

RYAN WYNN
WATER & WASTEWATER SERVICES
ryanw@wwsvc.com

Subject: Rolf Bruun Water System (ID#08915)
Skagit County
2022 Routine Sanitary Survey

Dear Mr. Wynn:

This letter is in follow up to my inspection of the water system on October 13, 2022. Inspections are required every 3-5 years as part of our routine sanitary survey program. The purpose of this program is to inspect water system facilities to help ensure compliance with the drinking water regulations – and to offer technical assistance along the way. I want to thank Jon Pfeffer for meeting with us and showing us the system.

A copy of my survey is enclosed, please check it for accuracy. I did not identify any “Significant Deficiencies” during the survey. Listed below are several observations and recommendations:

- Please update our records by reporting the change of ownership as required by WAC 246-290-035(2).
- Begin collecting data and submit the Water Use Efficiency Report every year.

Regulations establishing a schedule of fees, including fees for sanitary surveys, were adopted August 3, 2007 (WAC 246-290-990). The total cost of this survey is **\$408.00**. An itemized invoice is enclosed. Please remit your complete payment in the form of a check or money order within thirty days of the date of this letter to: **WSDOH, Revenue Section, PO Box 1099, Olympia WA 99507-1099**.

Your next survey will be required in 2027. Please contact me at bob.james@doh.wa.gov or (206) 601-1637 if you have any questions.

Sincerely,



Robert E. James, PE
Regional Engineer
NW Drinking Water Operations

Enclosures

cc: Skagit County Health Department

STATE OF WASHINGTON
Department of Health
OFFICE OF DRINKING WATER
SANITARY SURVEY INSPECTION

INVOICE

NORTHWEST WATER SERVICES, LLC
ROLF BRUUN
14263 CALHOUN ROAD
MOUNT VERNON, WA 98273-8873

WS ID: 08915
Invoice No: 49958
Invoice Date: 10/17/2022
Due Date: 12/01/2022

WS NAME: ROLF BRUUN

SURVEY DATE: 10/13/2022

DESCRIPTION	QTY	COST	AMOUNT
Scheduling, Research, Prep	1.50	x \$102.00	\$153.00
Survey Documentation	2.00	x \$102.00	\$204.00
Survey Field Work	0.50	x \$102.00	\$51.00
Total Amount Due			\$408.00

1. **Pay online** with a credit card, debit card, or electronic check (ACH) using the Environmental Health Payment System at <https://secureaccess.wa.gov/>.
2. For billing questions, please contact Northwest Drinking Water Regional Operations at (253) 395-6750.
3. This invoice is issued in accordance with WAC 246-290-990(3)(c)(iii).
4. For persons with disabilities, this document is available on request in other formats. To submit a request, please call 711 Washington Relay Service.
5. If paying by check:

Make checks payable to Department of Health, Federal ID #91-1444603.

Please return the bottom portion of this invoice with your check.

Invoice Number: 49958
INVOICE AMOUNT: \$408.00
Owner Number: 036082
WS Name: ROLF BRUUN

Invoice Date: 10/17/2022
Invoice Due Date: 12/01/2022
Region: NW
WS ID: 08915

Reference: SANITARY SURVEY INSPECTION PERFORMED ON 10/13/2022

Please remit to:
**ACCOUNTS RECEIVABLE
DOH SANITARY SURVEY PROGRAM
PO BOX 1099
OLYMPIA, WA 98507-1099**



Office of Drinking Water Sanitary Survey Form (Checklist)

System Name:	Rolf Bruun	Survey Date:	October 13, 2022
PWS ID#:	08915	County:	Skagit
Persons Attending Inspection:	Jon Pfeffer		
Inspector's Name:	Bob James		

PART A: SUMMARY OF SIGNIFICANT DEFICIENCIES AND SIGNIFICANT FINDINGS

The following is a completed sanitary survey checklist and summary of inspection findings. This completed sanitary survey checklist is the basis for the cover letter you receive from the WA Dept. of Health (DOH). The cover letter documents any significant deficiencies or significant findings that must be corrected. The cover letter may also summarize observations concerning compliance with certain rules, and offer recommendations you can use to make improvements to the operation and management of your water system. Contact your DOH regional office with any questions you have about this survey.

Bolded and highlighted checklist items represent significant deficiencies that, if left uncorrected, create a significant public health risk. **Highlighted** checklist items represent significant findings that, if left uncorrected, create a significant risk to the physical safety, security, or reliability of the public drinking water supply. You will be required to take some sort of corrective action for each checklist answer that is **bolded and highlighted**, or **highlighted**.

Significant Deficiencies identified during this sanitary survey:

None

Significant Deficiencies identified in the previous sanitary survey that remain unaddressed:

None

Observations and recommendations identified during this survey

Submit an annual Water Use Efficiency Report

PART B: GENERAL WATER SYSTEM DESCRIPTION

Provide a general description of the water system including changes, updates, connections, source(s), storage, number of pressure zones, treatment, and control system(s) and alarm(s). Make corrections and updates to the purveyor's water facilities inventory form (WFI).

The Rolf Bruun water system was recently purchased by Cascadia Water. The water system is comprised of one 6" well that operates on floats within a 10,000 gallon reservoir. When the system demands water, it is provided by a 3 HP pump that operates on pressure switches and is protected by a pressure tank. The system has one pressure zone serving 14 residential connections and the design is approved to provide water to 14 ERUs.



PART C: OPERATIONS and MANAGEMENT

1. Was the system operator, who is most knowledgeable about the system's day-to-day operations, present for the survey?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2. Were water system records available for your review?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3a. If no, are the following planning documents complete and up to date:	
Service Area and Facility Map	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Partial
Cross-Connection Control Program	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Partial
Source Water Protection Program	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Partial
Emergency Response Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Operation and Maintenance Program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Coliform Monitoring Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Component Inventory and Assessment	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
Asset Replacement and Other System Improvements	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Partial
Budget	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Were the water system's current and future water quality monitoring requirements reviewed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Was water quality sample results and trends reviewed with the purveyor?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Does the system have emergency power?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11. Does there appear to be adequate reliability provided for this system? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe the general level of planning and management documents developed by this water system and any recommendations for additional development, including updates, system management practices and processes, water rates, etc.

PART D: SOURCES

1. Did you observe a source connected to the water system that is NOT listed on the WFI and in active use?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1a. If so, has the source received written DOH approval? (confirm with DOH post-survey)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2. DOH Source Number:	S01
3. Source Name from the WFI: (For example, North Well; Well #2; ABC334.)	Well #1
4. Dept of Ecology Well Tag Number: (Use Well tag ID#, None or Not readable)	AET022

Source Use	Permanent	Seasonal	Emergency	P		
5. If this is an emergency source, should it be disconnected?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
6. <i>Is the source a potential GWI source?</i>				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
7. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
8. Is the wellhead located in a pit or vault?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
9. Is the wellhead at risk of submergence?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
10. Is the well cap sealed, watertight, and free of unprotected openings?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
11. Is the well casing free of any unprotected openings?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
12. Is there a vent on the well?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
12a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
13. Are conduits and junction boxes sealed to prevent contaminant entry?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
14. Is the well unreasonably at risk to physical damage?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
15. Is there a raw water source sample tap?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
16. Is the source metered?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
16a. If yes, is the source meter read at least monthly?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
16b. If yes, are the water production records maintained?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
17. Is the wellhouse properly constructed and maintained? If no, explain below				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
18. Is there any evidence of infestation by rodents or other pests?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
19. Is the wellhouse and well adequately protected from unauthorized access and tampering?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
20. Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
21. Are the source pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Describe and evaluate the source facilities including maintenance, operations, sanitary and security observations and any major change made to the source such as pump replacement, deepening or reconstruction:



PART E: BOOSTER PUMPING FACILITIES and CONTROLS

1. Are there any booster pumps in use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Are the booster pumps in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
5. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

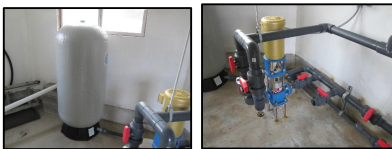
Describe and evaluate the pump facilities and controls including maintenance, operations, sanitary and security observations:



PART F: PRESSURE TANK

1. Are there a pressure tanks in use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. For systems using an air compressor, is the compressor an oil-free type or does it use food-grade oil?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
3. Are valves present to isolate the pressure tanks for maintenance or repair?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Is there an ASME pressure relief valve installed between each pressure tank and any shutoff valve? (see DOH publication #331-429)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Is the pressure tanks in good working condition? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Describe and evaluate the pressure tanks including maintenance, operational, sanitary and security observations



PART G: FINISHED WATER STORAGE

1. Are there finished water storage tanks in use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. If unable to physically inspect the storage tank hatch, vent, roof, or overflow outlet, select the method you discussed with the purveyor to document their condition:	
a	<input checked="" type="checkbox"/> Reviewed and discussed maintenance records and recent photos
b	<input type="checkbox"/> Photos will be taken and mailed by purveyor; additional follow-up required by DOH
c	<input type="checkbox"/> Purveyor unable or unwilling to document; additional follow-up required by DOH
	Insert Tank Names
	Tank 1 – 10K gallons
3. Is the storage tank protected from unauthorized entry or vandalism? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
4. Is the reservoir roof free of any unprotected openings? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
5. Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
6. If able to open hatch, is the stored water free of visible contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk
7. Is there a dedicated air vent on the storage tank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
7a. If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
8. Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
9. Does the overflow line discharge near ground level?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
10. Is the overflow line discharge area protected from potential erosion?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
11. Does the overflow line discharge into a storm drain or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk
12. Does the overflow line discharge directly into a sanitary sewer without an air gap?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk
13. Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
14. When was the tank inspected last? Explain below if necessary	2022
15. What is the tank cleaning frequency? Explain below if necessary	3 to 5 years

16. Does the tank size, operation, and internal piping configuration appear to provide adequate water turnover (i.e. separate inlet/outlet, baffling or mixing to reduce stagnant water)? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	
17. Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Describe and evaluate the finished water storage facilities including volume, operational drawdown, configuration of the inlet/outlet piping, any concerns about operations and maintenance, and sanitary and security observations:



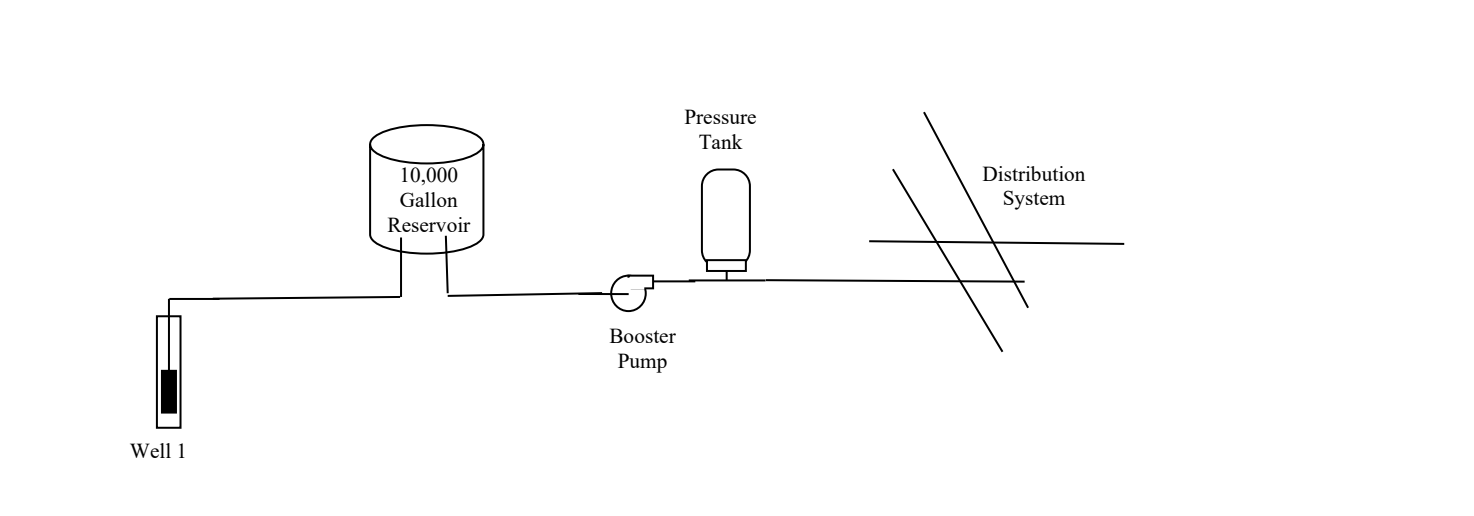
PART H: DISTRIBUTION SYSTEM		
1. Is a complete, up to date and accurate map of the distribution system maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Partial	
2. Does the system provide adequate pressure throughout the distribution system? If no, explain below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. Are proper procedures followed for disinfection of new construction or repairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Are there any air relief or vacuum relief valves subject to submersion?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	
5. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Does the purveyor exercise its distribution system valves? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	
Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations: Distribution System Leakage – No Report		

PART I: CROSS CONNECTION CONTROL (CCC)		
1. Does the water system serve a single connection? If yes, refer the purveyor to the Uniform Plumbing Code.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2. Is the water system known to serve one or more high health hazard premises, such as those listed in Table 9 in WAC 246-290-490? If yes, describe the premise(s) below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Has the purveyor established the legal authority to implement a CCC program (i.e., formally adopted an ordinance, resolution, by-laws, or other document defining the purveyor's CCC program requirements, and empowering the purveyor to enforce them)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4b. If yes, has the purveyor completed installation of a backflow prevention assembly on the service line to each identified high health hazard premise?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	
5. Has each testable backflow prevention assembly installed for premises isolation been tested by a DOH certified backflow assembly tester (BAT) within the past 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	
6. Did you observe the end of a hose connected to the potable water system submerged in a pool, hot tub, watering trough, or other non-potable body of water observed during the survey?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7. This question only applies to a facility operating a sewage dump station: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
Additional cross connection control program comments:		

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PART J: OPERATOR	
1. Is the operator of the water system certified?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Describe the operator's certification level (if certified), duration of employment with this water system, relationship with the system (e.g., contract operator, SMA, direct hire employee, volunteer, temporary, or owner), and duties and responsibilities.	
3. Does the operator conduct self-inspections of the water system? If yes, describe frequency and scope of these self-inspections below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. <i>Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
5. <i>Is the operator using proper inputs to treatment plant operations reports, such as correct volume, peak flow rate, time, and making the proper calculations? If no, describe below.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
6. <i>Does the operator take compliance water quality samples at the proper location? If no, describe below.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Additional operator comments: Ryan Wynn is certified as a WDM2, WTPO2, & CCS.	

PART K: WATER SYSTEM FACILITIES FIELD SCHEMATIC





STATE OF WASHINGTON
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
PO BOX 47800 MS: 47822 OLYMPIA, WA 98504-7800

April 12, 2024

W&B WATERWORKS 1
CULLEY LEHMAN, GENERAL MANAGER
culley@cascadiawater.com

Subject: W&B Waterworks 1, ID #46670
Island County
Routine Sanitary Survey

Dear Culley Lehman:

This letter is in follow-up to my routine sanitary survey of your water system on March 19, 2024. Thank you for meeting with me.

The purpose of the sanitary survey is to inspect water system facilities, review operations & maintenance, and discuss ideas to help ensure the drinking water system will continue to be safe and reliable for years to come. These inspections are required by the drinking water regulations (WAC 246-290) every 3-5 years. We covered the eight EPA elements of a survey described in 40 CFR 142.16.

General conclusions. W&B Waterworks is in the middle of constructing a new reservoir to replace the two existing reservoirs and build a treatment system to remove naturally occurring arsenic and manganese in the source water. Thank you for investing in the water system to best protect public health!

2024 Sanitary Survey Issues

Enclosed is a copy of my Sanitary Survey Notes. They, along with this letter, reflect my understanding of your water system and highlight the key issues and specific recommendations (bold type in notes) we discussed during my visit. Please, in the next 45 days, respond to this letter and recommendations. If you disagree with them and/or are unable to take action within 45 days, please explain your intentions and provide a schedule for addressing the applicable findings. Thanks.

Significant Deficiencies – *Potential significant public health risks*

1. The overflow screen on the newer, 50,000-gal tank needs finer 24-size mesh. Please replace the screen and submit photos.

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

None

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

1. Iron and manganese are present in the water above the secondary maximum contaminant level (MCL). Manganese does have health effects associated with exposure at high levels. DOH recommends installing treatment to remove iron and manganese if present above the secondary MCL, and issuing PN if above 0.3 mg/L. Refer to the guidance on our website for more information.
<https://doh.wa.gov/sites/default/files/2023-12/331-741.pdf>
2. Please note that water systems need to develop and submit a Lead Service Line Inventory (LSI) by October 16, 2024. Please visit our website for additional guidance. <https://doh.wa.gov/community-and-environment/drinking-water/contaminants/lead/lead-and-copper-rule-revisions>
3. Notify DOH when the consolidation of W&B Waterworks and Del Bay is completed.

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

1. Improve the well enclosures for all 4 wells. The structures do not allow easy access to the wells and are not adequately protected to prevent rodent and bug entry.
2. Research different methods for cleaning manganese build-up in the mains once treatment is constructed and working to remove manganese and arsenic from the source water.

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). To receive credit for the survey, a sanitary survey fee must be paid. The total cost is **\$408.00**. An itemized invoice for this survey has been sent to the DOH 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**. DOH now accepts online payment for sanitary surveys. Review DOH Pub #331-688 for guidance.

Your next sanitary survey is tentatively scheduled for 2029.

Helping you ensure a safe and reliable drinking water supply is our highest priority. Please contact me if you have any questions or concerns. **Send all responses to this survey to me and our NWRO Sanitary Survey email: nwro.sanitarysurveys@doh.wa.gov.**

Sincerely,

A handwritten signature in cursive script that reads "Alexis Medina".

Alexis Medina, EIT

Northwest Regional Engineering Staff
Office of Drinking Water
Washington State Department of Health

Alexis.Medina@doh.wa.gov

Cell: 564-200-2706

Enclosures – Invoice, Survey Report

ecc: Aneta Hupfauer – Island County Health Department
NWRO Sanitary Survey Program



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
PO BOX 47800 MS:47822 OLYMPIA, WA 98504-7800

SANITARY SURVEY SUMMARY

March 19, 2024

System: W&B Waterworks 1
Island County
ID #46670

Persons Attending: Culley Lehman, Cascadia Water LLC
Alexis Medina, DOH

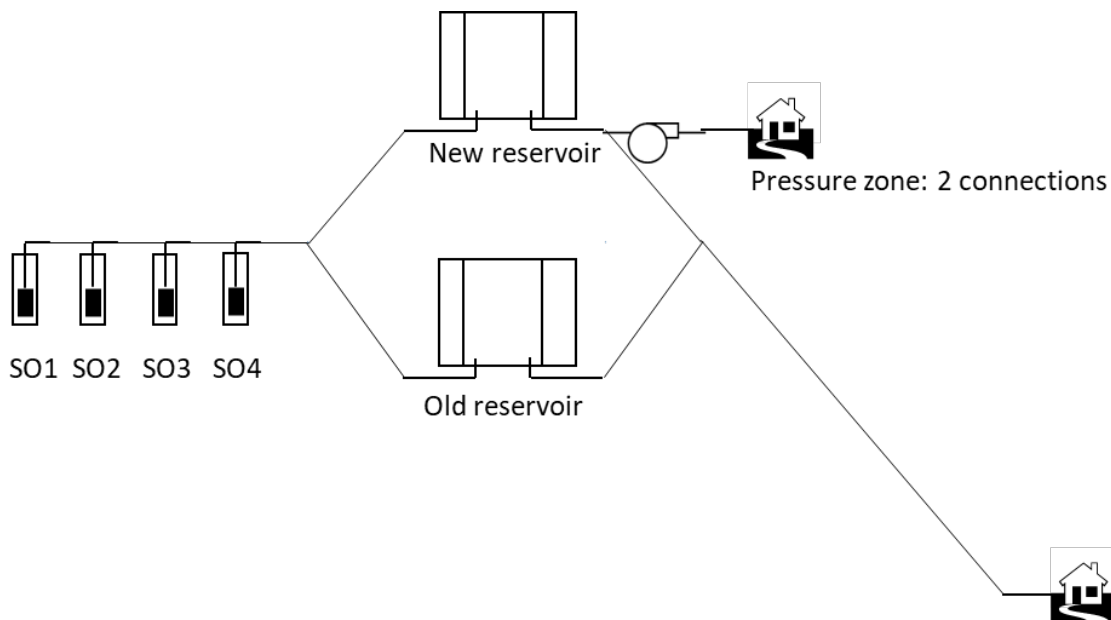
Purpose: Routine Sanitary Survey

General:

W&B Waterworks 1 located just outside of Freeland on Whidbey Island serves 456 single-family residential connections. The system is approved for 500 connections. W&B Waterworks 1 is owned and operated by Cascadia Water, LLC.

Your water system was last surveyed in September 2019 by Aneta Hupfauer, ICHD. No complaints on file. Your water system has a green operating permit. DOH approved a Water System Plan for Cascadia-owned systems, which included W&B Waterworks in August 2022.

SYSTEM DESCRIPTION:



Wells 1, 2, 3, and 4 form a wellfield (S05) and are the sole sources of the water system. No treatment is currently provided. Water is pumped into 2 reservoirs. There are two pressure zones, one gravity and one pressurized. The pressure zone is pressurized by one booster pump that serves 2 connections. The wells are in an area currently classified as medium risk of seawater intrusion (SWI).

Source:



(L) Well #1 with sample tap and source meter (R) Screened vent on Well #1



(L) Well #2 (Center) Screened vent on Well #2 (R) Source meter and sample tap



(L) Well #3 (Center) Secondary vent on Well #3 (R) Source meter and sample tap



(L) & (R) Screened vents on Well #3



(L) Well #4 (R) Screened vent on Well #4 – screen bubbled but fully intact

Well	Description
Well #1 (AGA932)	Permanent, lead source. 6-inch diameter well drilled to 310 feet. A screened vent, source meter, and sample tap are present. The transducer in the reservoir that is tied into SCADA calls the well on.
Well #2 (AGA931)	Seasonal source. Drilled to 291 feet. Only used in periods of high demand (typically only in the summer or a fire event).
Well #3 (AGA930)	Permanent lag source. 6-inch diameter well drilled to 280 feet. A screened vent, source meter, and sample tap are present.
Well #4 (AGA929)	Seasonal source. Drilled to 307 feet. Only used in periods of high demand (typically only in the summer or a fire event).

Well #1 is the lead well, well #3 is called on next, followed by well #2 and #4 which will come on simultaneously. All the wells are located near the two existing reservoirs and are in an area classified as medium risk for SWI. The operator performs site visits 3-5x a week. The generator on site can only supply power to well #1.

The structures over all 4 wells need improvement. They are hard to open and access the well and do not provide adequate protection from rodents and bugs.

Treatment:

W&B Waterworks 1 does not currently provide any type of treatment. However, treatment to remove naturally occurring manganese and arsenic was designed and approved by DOH in June 2023. Construction of the treatment plant will begin after the new reservoir construction is completed.

Reservoir:



(L) & (R) Existing reservoirs – soon to be demolished once the new tank is finished and online



(L) Existing reservoirs with wells nearby (Center) Overflow for reservoir (R) Finer mesh needed for overflow screen



(Above) Construction is underway for the new reservoir

W&B Waterworks 1 has two 50,000-gal octagonal concrete reservoirs. The reservoirs are filled from the bottom. Both reservoirs are filled in parallel from the sources. Both reservoirs were cleaned in January 2023 and are scheduled to be cleaned every 3-4 years. The design for a 185,000-gal reinforced circular concrete reservoir was approved by DOH in August 2022. Construction was underway during the time of the survey and the expected completion date was the end of May 2024. The 185,000-gal reservoir will replace both the 50,000-gal reservoirs. The older of the two 50,000-gal reservoirs was leaking significantly at the corners. Thank you for planning and replacing the aging infrastructure!

The reservoirs have high and low-level alarms that are tied into the SCADA system and able to be viewed by the operator at any time. The alarms will call out to the operator.

Photos were received on 4/12/2024 of the reservoir appurtenances for both reservoirs. Thank you. **The overflow screen on the newer, 50,000-gal tank needs finer 24-size mesh. Please replace the screen and submit photos.**

Booster Pumps and Pressure Tank:



(L) Booster pump housing near reservoir (R) 1-HP Booster pump for 2 connections

This system has two pressure zones, gravity and pressurized. The pressurized zone is supplied by one 1-hp booster pump that supplies 2 residential connections. This booster pump will be eliminated with the completion of the reservoir and treatment system upgrades.

W&B Waterworks does not have any pressure tanks.

Distribution:



(L) Generator for backup power (R) Newly rebuilt PRV in distribution

The water mains are 8- and 6-inch PVC throughout with a few 4-inch lateral lines. Three pressure-reducing valves reduce pressure to the lower elevation connections. Fire flow is provided to 34 fire hydrants in the distribution system. The system is flushed 1x a year due to iron and manganese buildup. Valves are exercised at the time of the flush.

Individual meters are installed on all connections. Individual meters are read every other month. Distribution system leakage in 2022 was reported as 1.7% with the 3-year average DSL at 9.6%. Due to large leaks in 2021, the 3-year average DSL increased, however a downward trend is expected.

W&B Waterworks 1 does have an active, written Cross Connection Control program. Surveys have been sent to and received from the residents. Cascadia Water is currently working on evaluating the risks and installing any required devices. Ensure the proper backflow prevention devices are installed and inspected annually. Keep up the good work!

Water Quality Monitoring and Reporting:

Nitrate and Arsenic:

Nitrate concentrations reported are consistently less than 2.5 mg/L, which is below the MCL of 10 mg/L.

The arsenic concentrations for a blended sample were 7.9 ppb, which is 10 ppb. Well #4 (S04) has the highest concentration of the wells at 8.2 ppb. The treatment system has been designed to remove arsenic to as low as possible.

Iron and Manganese:

Iron concentrations were reported at 0.09 mg/L in 2019. Manganese exceeds the secondary MCL in the raw water. The sample results from a sample collected in 2022 from the wellfield had manganese concentrations at 0.474. The secondary MCL for iron and manganese are 0.3 mg/L and 0.05 mg/L, respectively.

Manganese is a naturally occurring mineral found in rocks, groundwater, and surface water. Small amounts of manganese are essential nutrients for humans. Our bodies need some manganese to stay healthy, but too much can be harmful, especially to infants. Manganese in water can also stain laundry and create a brownish-black or black stain on toilets, showers, bathtubs, or sinks. Manganese can make water look, smell, or taste bad. Manganese accumulates inside pipes in distribution systems and can be released at higher concentrations. Research worldwide has given us a more complete understanding of how manganese interacts with drinking water systems and its human health impacts. DOH recommends that any water system with manganese above the secondary MCL install treatment to limit the exposure and issue public notification to customers if manganese is present above 0.3 mg/L.

W&B Waterworks treatment system is designed to remove manganese below the SMCL and should be constructed and operational by the end of 2024.

Coliform Monitoring:

The system is required to collect two coliform samples every month. In the last 5 years, they have not had any confirmed, positive coliform samples. This system is in compliance with the coliform program.

Disinfection By-Products (DBP):

W&B Waterworks does not disinfect and therefore does not collect DBP samples.

Lead and Copper:

W&B Waterwork's lead and copper results collected between 2021 and 2023 were below the action levels. The lead 90th % was 0.0013 mg/L and the copper 90th % was 0.16 mg/L. The action levels for lead and copper are 0.015 mg/L and 1.3 mg/L, respectively.

Please note, that water systems need to develop and submit a Lead Service Line Inventory (LSI) by October 16, 2024. Please visit our website for additional guidance.

<https://doh.wa.gov/community-and-environment/drinking-water/contaminants/lead/lead-and-copper-rule-revisions>

PFAS:

From the sample collected in August 2023, all PFAS components were below the detection limits.

SYSTEM OPERATIONS AND MANAGEMENT:

W&B Waterworks 1 water system is included in Cascadia Water LLC's company-wide Water System Plan that was approved by DOH in 2022.

W&B Waterworks and Del Bay Water System are working to consolidate. The consolidation of the two water systems is underway, however, not yet completed. Notify DOH when the consolidation is complete.

W&B Waterworks 1 last updated its Water Facilities Inventory (WFI) form on 08/03/2023. The WFI form needs to be updated annually. Thank you!

OPERATOR CERTIFICATION:

This system is required to have a WDM 1 certified operator.

Name of Operator	Certification Number	Certifications	Mandatory Operator
Adam Lehman	010506	WTPO 1, WDM 3, CCS, WDS	<input checked="" type="checkbox"/>

WDS-Water Distribution Specialist; WDM-Water Distribution Manager; WTPO-Water Treatment Plant Operator, CCS-Cross Connection Specialist; If you have any questions or if this information is inaccurate, please contact Operator Certification at (800) 525-2536.