Exh. RS-8
Docket UW-240151
Witness: Rachel Stark

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **CASCADIA WATER, LLC** **Respondent.**	**DOCKET UW-240151**

EXHIBIT TO TESTIMONY OF

RACHEL STARK

DOH Letter and Sanitary System Surveys

January 13, 2024

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

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?		☒Yes ☐No ☐NA
2. Were water system records available for your review?		☒Yes ☐No ☐Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?		☒Yes ☐No
3a. If no, are the following planning documents complete and up to date:		
	Service Area and Facility Map	☐Yes ☐No ☐Partial
	Cross-Connection Control Program	☐Yes ☐No ☐Partial
	Source Water Protection Program	☐Yes ☐No ☐Partial
	Emergency Response Plan	☐Yes ☐No ☐Partial
	Operation and Maintenance Program	☐Yes ☐No ☐Partial
	Coliform Monitoring Plan	☐Yes ☐No ☐Partial
	Component Inventory and Assessment	☐Yes ☐No ☐Partial
	Asset Replacement and Other System Improvements	☐Yes ☐No ☐Partial
	Budget	☐Yes ☐No ☐Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below		☒Yes ☐No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below		☒Yes ☐No
6. Were the water system's current and future water quality monitoring requirements reviewed?		☒Yes ☐No
7. Was water quality sample results and trends reviewed with the purveyor?		☒Yes ☐No
8. Does the system have emergency power?		☐Yes ☒No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below		☐Yes ☒No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below		☐Yes ☒No
11. Does there appear to be adequate reliability provided for this system? If no, explain below		☒Yes ☐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?	☐Yes ☒No	
12a. If so, has the source received written DOH approval? (confirm with DOH post-survey)	☐Yes ☐**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?**	☐**Yes** ☐No ☐NA	☐**Yes** ☐No ☐NA
18. *Is the source a potential GWI source?*	☐*Yes* ☒*No*	☐*Yes* ☒*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?	☒Yes ☐**No**	☒Yes ☐**No**
20. Is the wellhead located in a pit or vault?	☐Yes ☒No	☐Yes ☒No
21. Is the wellhead at risk of submergence?	☐**Yes** ☒No	☐**Yes** ☒No
22. Is the well cap sealed, watertight, and free of unprotected openings?	☒Yes ☐**No**	☒Yes ☐**No**
23. Is the well casing free of any unprotected openings?	☒Yes ☐**No**	☒Yes ☐**No**
24. Is there a vent on the well?	☒Yes ☐No	☐Yes ☒No
24a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)	☒Yes ☐**No**	☒Yes ☐**No**
25. Are conduits and junction boxes sealed to prevent contaminant entry?	☒Yes ☐**No**	☒Yes ☐**No**
26. Is the well unreasonably at risk to physical damage?	☐Yes ☒No	☐Yes ☒No
27. Is there a raw water source sample tap?	☒Yes ☐No	☒Yes ☐No
28. Is the source metered?	☒Yes ☐No	☒Yes ☐No
28a. If yes, is the source meter read at least monthly?	☒Yes ☐No	☒Yes ☐No
28b. If yes, are the water production records maintained?	☒Yes ☐No	☒Yes ☐No
29. Is the wellhouse properly constructed and maintained? If no, explain below	☒Yes ☐No	☒Yes ☐No
30. Is there any evidence of infestation by rodents or other pests?	☐Yes ☒No	☐Yes ☒No
31. Is the wellhouse and well adequately protected from unauthorized access and tampering?	☒Yes ☐No	☒Yes ☐No
32**. Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?**	☐**Yes** ☐No ☒NA	☐**Yes** ☐No ☒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	☒Yes ☐**No**	☒Yes ☐**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.	☐Yes ☐**No**	☐Yes ☐**No**
35. Is there a raw water source sample tap?	☐Yes ☐No	☐Yes ☐No
36. Is the source metered?	☐Yes ☐No	☐Yes ☐No
36a. If yes, is the source meter read at least monthly?	☐Yes ☐No	☐Yes ☐No
36b. If yes, are the water production records maintained?	☐Yes ☐No	☐Yes ☐No
37. Is the springhouse properly constructed and maintained? If no, explain below	☐Yes ☐No	☐Yes ☐No

38. Is there any evidence of infestation by rodents or other pests?	☐Yes ☐No	☐Yes ☐No
39. Is the springhouse and spring box adequately protected from unauthorized access?	☐Yes ☐No	☐Yes ☐No
40. **Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?**	☐Yes ☐**No**	☐Yes ☐**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

(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.*	☐*Yes* ☒*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	☐Yes ☒No
43. Is ultraviolet light (UV) used for disinfecting a drinking water source? If no, skip to question 46.	☐Yes ☒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?	☐Yes ☐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	☐Yes ☒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?**	☐**Yes** ☐No
48. Is there a post-treatment sample tap?	☐Yes ☐No
49. Does the chlorine compound meet NSF/ANSI Standard 60? - household bleach is exempted	☐Yes ☐No
50. Is a backup chemical feed pump or spare parts for the operating chemical feed pump available onsite?	☐Yes ☐No
51. According to the operator, is there a DOH requirement for Chlorine Contact Time? If no, skip to Part F	☐Yes ☐No

51a. *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.

52. *Is the chlorine pump and pump controls constructed and maintained to provide uninterrupted, reliable CT6 treatment? If no, describe below.*	☐*Yes* ☐*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.	☐Yes ☒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.	☐Yes ☐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?**	☐**Yes** ☐No ☐NA
56. Are primary contaminant treatment facilities (e.g., nitrate, corrosion control, arsenic) operating properly? If no, describe below	☐Yes ☐**No**
57. Do the water treatment chemicals meet NSF/ANSI Standard 60?	☐Yes ☐No ☐NA
58. Is there a post-treatment sample tap?	☐Yes ☐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	☒Yes ☐No
60. Are the booster pumps in good working condition? If no, explain below	☒Yes ☐No
61. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	☒Yes ☐**No**
62. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	☒Yes ☐**No** ☐NA
63. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	☒Yes ☐No

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

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

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

- **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	☒Yes ☐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	☐ Reviewed and discussed maintenance records and recent photos	
b	☒ Photos will be taken and mailed by purveyor; additional follow-up required by DOH	
c	☐ 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	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
72. Is the reservoir roof free of any unprotected openings? If no, explain below	☐Yes ☐**No** ☒unk	☐Yes ☐**No** ☐unk
73. Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	☐Yes ☐**No** ☒unk	☐Yes ☐**No** ☐unk
74. If able to open hatch, is the stored water free of visible contaminants? If no, explain below	☐Yes ☐No ☒unk	☐Yes ☐No ☐unk
75. Is there a dedicated air vent on the storage tank?	☐Yes ☐No ☒unk	☐Yes ☐No ☐unk
75a. If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	☐Yes ☐**No** ☐unk	☐Yes ☐**No** ☐unk
76. Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	☒Yes ☐**No** ☐unk	☐Yes ☐**No** ☐unk
77. Does the overflow line discharge near ground level?	☐Yes ☒No ☐unk	☐Yes ☐No ☐unk
78. Is the overflow line discharge area protected from potential erosion?	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
79. Does the overflow line discharge into a storm drain or surface water?	☐Yes ☒No ☐unk	☐Yes ☐No ☐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?	☐Yes ☐**No** ☐unk	☐Yes ☐**No** ☐unk
80. Does the overflow line discharge directly into a sanitary sewer without an air gap?	☐**Yes** ☒No ☐unk	☐**Yes** ☐No ☐unk
81. Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	☒Yes ☐No ☐unk	☐Yes ☐No ☐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	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
85. Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	☒Yes ☐No	☐Yes ☐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:

- **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?	☒Yes ☐No
87. *Does the system provide adequate pressure throughout the distribution system? If no, explain below.*	☒Yes ☐No

88. Are proper procedures followed for disinfection of new construction or repairs?	☒Yes ☐No
89. *Are there any air relief or vacuum relief valves subject to submersion?*	☐Yes ☒No
90. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	☒Yes ☐No
91. Does the purveyor exercise its distribution system valves? If yes, describe below	☒Yes ☐No

Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations:

- **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	☐Yes ☒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.	☐Yes ☒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)?	☐Yes ☒No
95. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	☐Yes ☒No
95a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	☐Yes ☐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?	☐Yes ☐No ☐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?	☐Yes ☐No ☐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?	☐**Yes** ☐No
98. <u>This question only applies to a facility operating a sewage dump station</u>: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	☐**Yes** ☐No ☐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?	☒Yes ☐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.	☒Yes ☐No
102. *Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.*	☐Yes ☐No ☒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.*	☐Yes ☐No ☒NA
104. *Does the operator take compliance water quality samples at the proper location? If no, describe below.*	☒Yes ☐No ☐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:

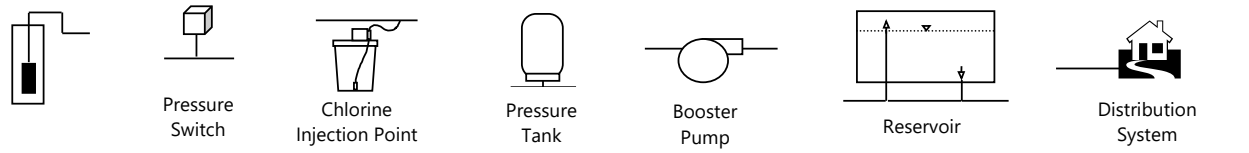
If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

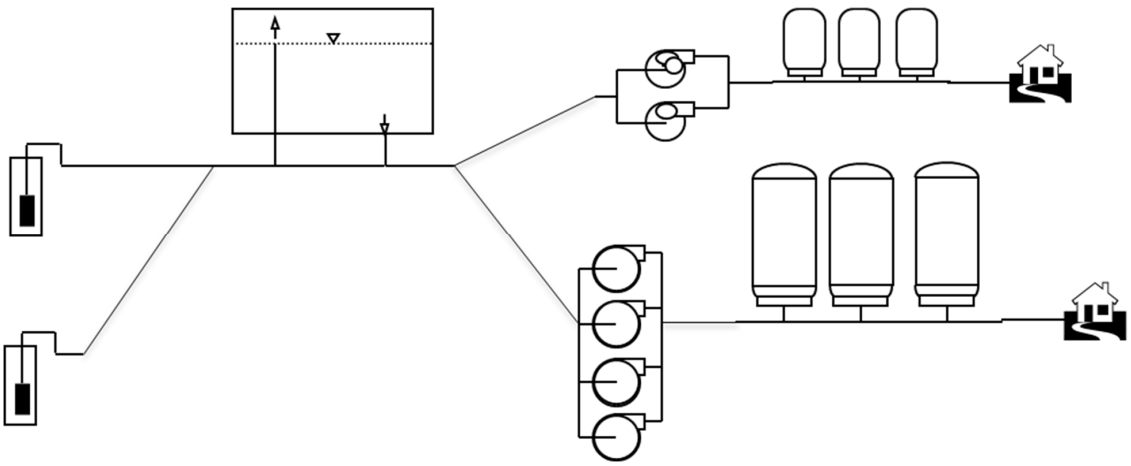
PART O: WATER SYSTEM FACILITIES FIELD SCHEMATIC

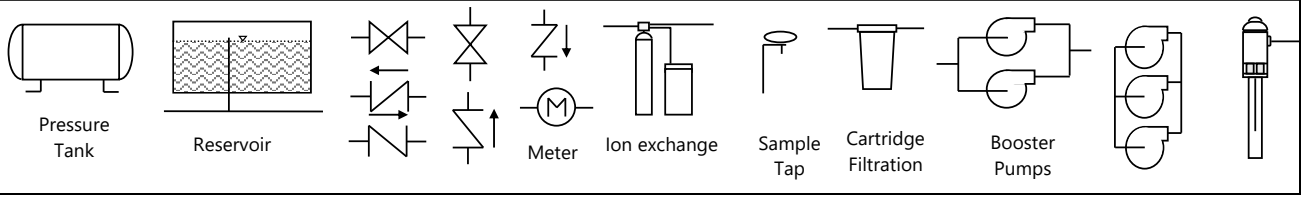
Use the space below to sketch a simple schematic of the water system facilities. You may use the templates shown below to help build your schematic. The sketch should show location of sources, treatment, pressure tanks, booster pumps, storage tanks, and a simple representation of the distribution system. 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:

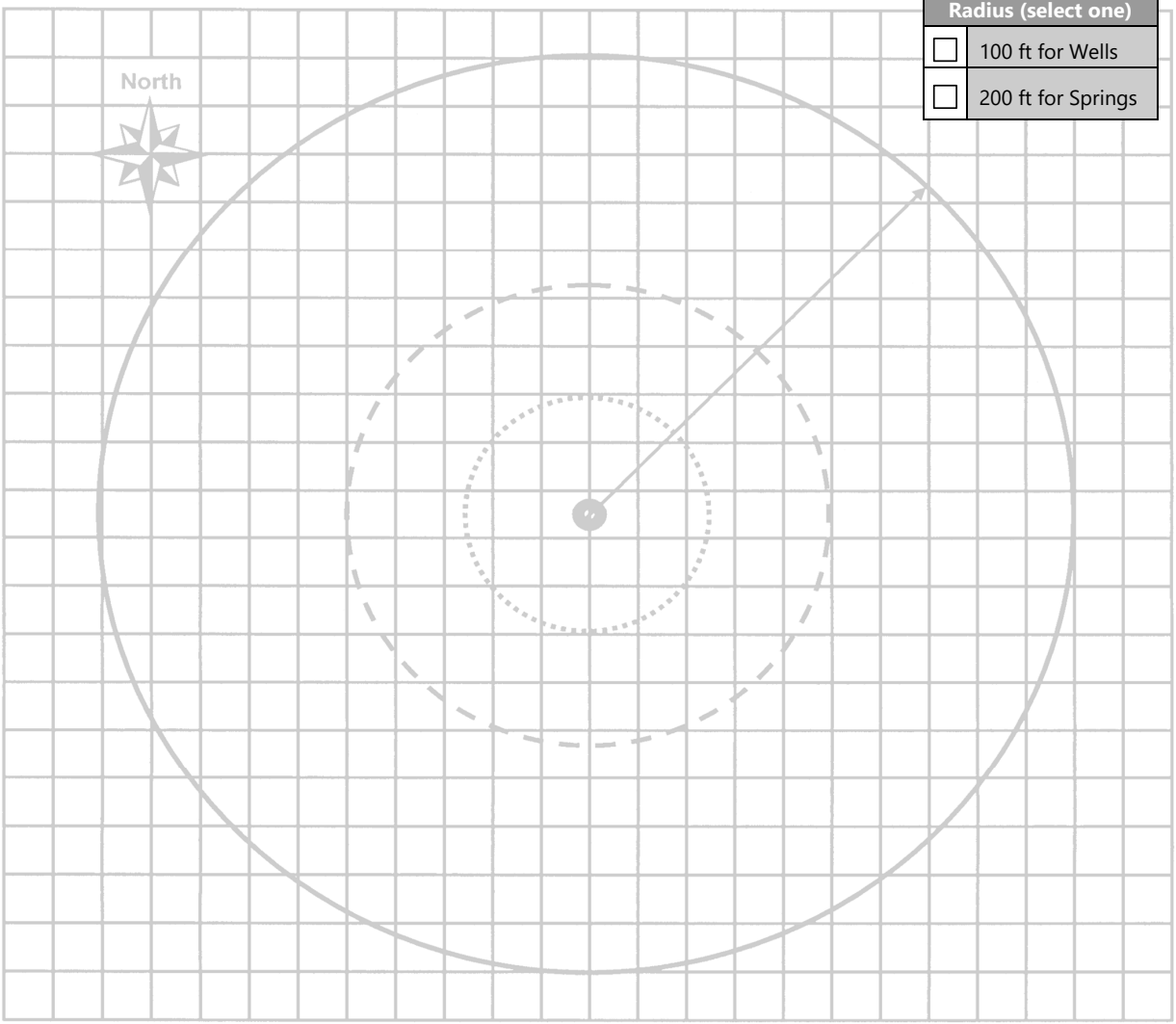






PART P: INVENTORY OF POTENTIAL SOURCES OF CONTAMINANTS WITHIN THE SANITARY CONTROL AREA			
Use the graph below to locate any potential biological and chemical contaminants found within the source's Sanitary Control Area (SCA). The SCA is the protective area within 100 feet of wells or 200 feet of springs.			
Source Name:		Source Number:	

Radius (select one)	
☐	100 ft for Wells
☐	200 ft for Springs



Description of Features Shown on the SCA Schematic					
A.		C.		E.	
B.		D.		F.	

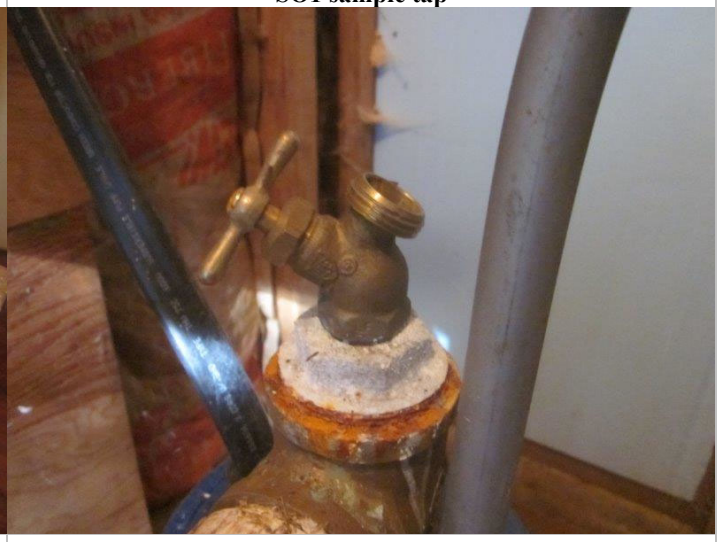
Sources of Contamination	Feet	Sources of Contamination	Feet	Sources of Contamination	Feet
Abandoned water wells		Dumpsters		Pesticide storage	
Animal burial		Fuel tanks (above or below ground)		Roads and parking lots	
Biological contaminants		Graveyards		Sewer lines, gravity or pressure	
Buildings		Hazardous 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



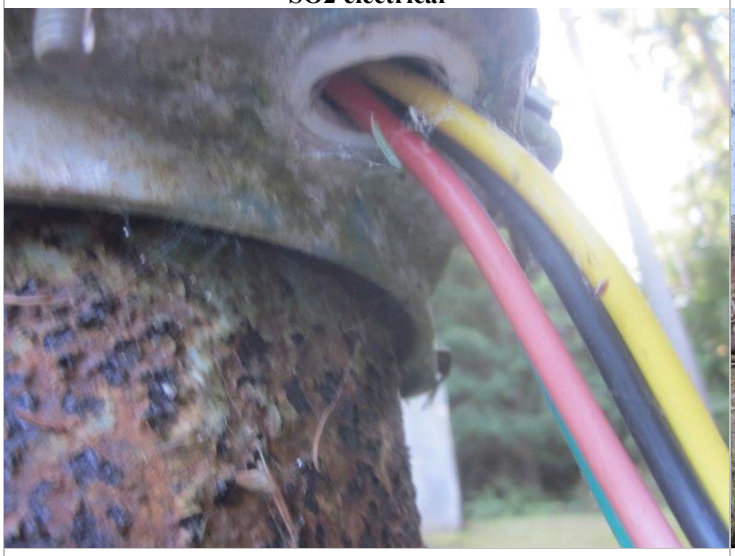
SO1 electrical

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

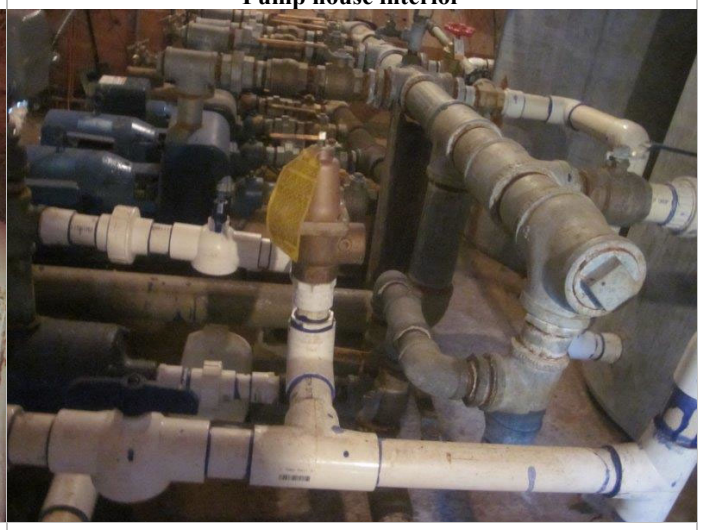
Pressure relief valve

Upper zone booster pumps

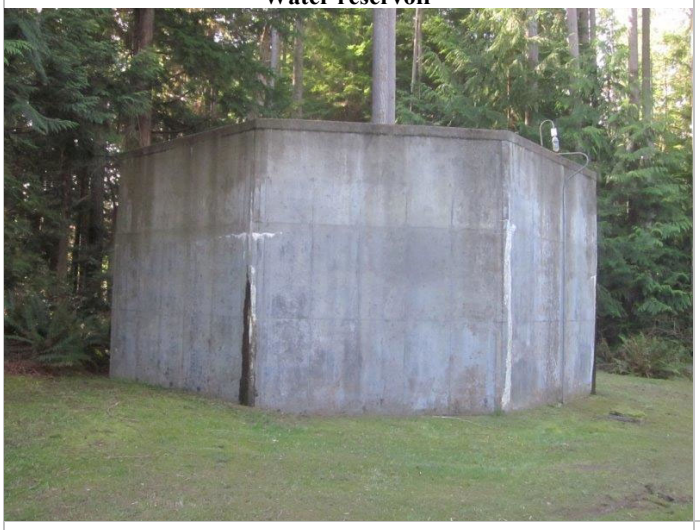
Figure 1

Upper zone pressure tank

Pump house interior



Water reservoir



Water tank overflow

Leaking reservoir corner

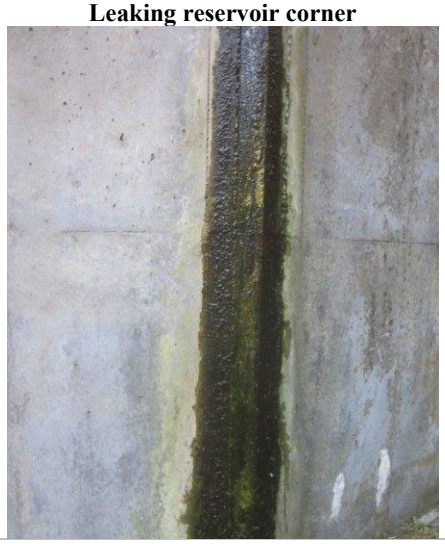


Figure 2

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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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.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 2
Updated: 05/05/2020
Printed: 4/14/2023
WFI Printed For: On-Demand
Submission Reason: Owner Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

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

6. PRIMARY CONTACT NAME & MAILING ADDRESS

CULLEY J. LEHMAN [MANAGER]
PO BOX 549
FREELAND, WA 98249

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS 18181 SR 525
CITY FREELAND STATE WA ZIP 98249

7. OWNER NAME & MAILING ADDRESS

CASCADIA WATER, LLC
CULLEY J. LEHMAN
PO BOX 549
FREELAND, WA 98249

GENERAL MANAGER

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 661-7781		Owner Daytime Phone: (360) 661-7781	
Primary Contact Mobile/Cell Phone: (360) 661-7781		Owner Mobile/Cell Phone: (360) 661-7781	
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx	
Fax:	E-mail: cxxxxy@cascadiawater.com	Fax:	E-mail: cxxxxy@cascadiawater.com

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

☐ Not applicable (Skip to #12)
☒ Owned and Managed
☐ Managed Only
☐ Owned Only

SMA NAME: Cascadia Water, LLC SMA Number: 168

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

☐ Agricultural
☐ Commercial / Business
☐ Day Care
☐ Food Service/Food Permit
☐ 1,000 or more person event for 2 or more days per year
☐ Hospital/Clinic
☐ Industrial
☐ Licensed Residential Facility
☐ Lodging
☐ Recreational / RV Park
☒ Residential
☐ School
☐ Temporary Farm Worker
☐ Other (church, fire station, etc.):

13. WATER SYSTEM OWNERSHIP (mark only one)

☐ Association ☐ County ☒ Investor ☐ Special District
☐ City / Town ☐ Federal ☐ Private ☐ State

14. STORAGE CAPACITY (gallons)

41,200

15	16	17	18									19			20	21						22	23	24			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	AGA928 WELL 1		X									X			Y	X						173	45	NW SW	01	29N	02E
S02	AGA927 WELL 2		X									X			Y	X						174	45	NE SE	02	29N	02E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
31040 6	CAL WATERWORKS	ISLAND	A	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? 235

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:

☐ 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 Hupf DATE: 4/14/23

PRINT NAME: ANETA HUPFAUER TITLE: EHS III

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 **S*ignificant Deficiencies*** or **S*ignificant 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.

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?		☒Yes ☐No ☐NA
2. Were water system records available for your review?		☒Yes ☐No ☐Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?		☐Yes ☒No
3a. If no, are the following planning documents complete and up to date:		
	Service Area and Facility Map	☒Yes ☐No ☐Partial
	Cross-Connection Control Program	☐Yes ☒No ☐Partial
	Source Water Protection Program	☒Yes ☐No ☐Partial
	Emergency Response Plan	☒Yes ☐No ☐Partial
	Operation and Maintenance Program	☒Yes ☐No ☐Partial
	Coliform Monitoring Plan	☒Yes ☐No ☐Partial
	Component Inventory and Assessment	☒Yes ☐No ☐Partial
	Asset Replacement and Other System Improvements	☐Yes ☐No ☒Partial
	Budget	☐Yes ☐No ☒Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below		☐Yes ☒No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below		☒Yes ☐No
6. Were the water system's current and future water quality monitoring requirements reviewed?		☒Yes ☐No
7. Was water quality sample results and trends reviewed with the purveyor?		☒Yes ☐No
8. Does the system have emergency power?		☒Yes ☐No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below		☐Yes ☒No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below		☐Yes ☒No
11. Does there appear to be adequate reliability provided for this system? If no, explain below		☒Yes ☐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?				☐Yes ☐No	
12a. If so, has the source received written DOH approval? (confirm with DOH post-survey)				☐Yes ☐**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:	P - Permanent	S - Seasonal	E - Emergency	P	
17. **If this is an emergency source, should it be disconnected?**				☐**Yes** ☐No ☐NA	☐**Yes** ☐No ☐NA
18. *Is the source a potential GWI source?*				☐*Yes* ☒*No*	☐*Yes* ☐*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?				☒Yes ☐**No**	☐Yes ☐**No**
20. Is the wellhead located in a pit or vault?				☐Yes ☒No	☐Yes ☐No
21. Is the wellhead at risk of submergence?				☐**Yes** ☒No	☐**Yes** ☐No
22. Is the well cap sealed, watertight, and free of unprotected openings?				☒Yes ☐**No**	☐Yes ☐**No**
23. Is the well casing free of any unprotected openings?				☒Yes ☐**No**	☐Yes ☐**No**
24. Is there a vent on the well?				☒Yes ☐No	☐Yes ☐No
24a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)				☒Yes ☐**No**	☐Yes ☐**No**
25. Are conduits and junction boxes sealed to prevent contaminant entry?				☒Yes ☐**No**	☐Yes ☐**No**
26. Is the well unreasonably at risk to physical damage?				☐Yes ☒No	☐Yes ☐No
27. Is there a raw water source sample tap?				☒Yes ☐No	☐Yes ☐No
28. Is the source metered?				☒Yes ☐No	☐Yes ☐No
28a. If yes, is the source meter read at least monthly?				☒Yes ☐No	☐Yes ☐No
28b. If yes, are the water production records maintained?				☒Yes ☐No	☐Yes ☐No
29. Is the wellhouse properly constructed and maintained? If no, explain below				☒Yes ☐No	☐Yes ☐No
30. Is there any evidence of infestation by rodents or other pests?				☐Yes ☒No	☐Yes ☐No
31. Is the wellhouse and well adequately protected from unauthorized access and tampering?				☒Yes ☐No	☐Yes ☐No
32. **Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?**				☐**Yes** ☐No ☒NA	☐**Yes** ☐No ☐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				☒Yes ☐**No**	☐Yes ☐**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.				☐Yes ☐**No**	☐Yes ☐**No**
35. Is there a raw water source sample tap?				☐Yes ☐No	☐Yes ☐No
36. Is the source metered?				☐Yes ☐No	☐Yes ☐No
36a. If yes, is the source meter read at least monthly?				☐Yes ☐No	☐Yes ☐No
36b. If yes, are the water production records maintained?				☐Yes ☐No	☐Yes ☐No
37. Is the springhouse properly constructed and maintained? If no, explain below				☐Yes ☐No	☐Yes ☐No
38. Is there any evidence of infestation by rodents or other pests?				☐Yes ☐No	☐Yes ☐No
39. Is the springhouse and spring box adequately protected from unauthorized access?				☐Yes ☐No	☐Yes ☐No
40. **Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?**				☐Yes ☐**No**	☐Yes ☐**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.*	☐*Yes* ☒*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	☐Yes ☒No
43. Is ultraviolet light (UV) used for disinfecting a drinking water source? If no, skip to question 46.	☐Yes ☒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?	☐Yes ☐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	☒Yes ☐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?**	☐**Yes** ☒No
48. Is there a post-treatment sample tap?	☒Yes ☐No
49. Does the chlorine compound meet NSF/ANSI Standard 60? - household bleach is exempted	☒Yes ☐No
50. Is a backup chemical feed pump or spare parts for the operating chemical feed pump available onsite?	☐Yes ☒No
51. According to the operator, is there a DOH requirement for Chlorine Contact Time? If no, skip to Part F	☐Yes ☒No
51a. *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.*	
52. *Is the chlorine pump and pump controls constructed and maintained to provide uninterrupted, reliable CT6 treatment? If no, describe below.*	☐*Yes* ☐*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: • **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.	☐Yes ☒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.	☐Yes ☐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?**	☐**Yes** ☐No ☐NA
56. Are primary contaminant treatment facilities (e.g., nitrate, corrosion control, arsenic) operating properly? If no, describe below	☐Yes ☐**No**

57. Do the water treatment chemicals meet NSF/ANSI Standard 60?	☐Yes ☐No ☐NA
58. Is there a post-treatment sample tap?	☐Yes ☐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	☒Yes ☐No
60. Are the booster pumps in good working condition? If no, explain below	☒Yes ☐No
61. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	☒Yes ☐**No**
62. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	☒Yes ☐**No** ☐NA
63. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	☒Yes ☐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	☒Yes ☐No
65. For systems using an air compressor, is the compressor an oil-free type or does it use food-grade oil?	☐Yes ☐No ☒NA
66. Are valves present to isolate pressure tanks for maintenance or repair?	☒Yes ☐No
67. Is there an ASME pressure relief valve installed between each pressure tank and any shutoff valve? (see DOH publication #331-429)	☒Yes ☐No
68. Are the pressure tanks in good working condition? If no, explain below	☒Yes ☐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	☒Yes ☐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 ☐ Reviewed and discussed maintenance records and recent photos

b ☒ Photos will be taken and mailed by purveyor; additional follow-up required by DOH

c ☐ 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	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
72. Is the reservoir roof free of any unprotected openings? If no, explain below	☐Yes ☐**No** ☒unk	☐Yes ☐**No** ☐unk
73. Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	☐Yes ☐**No** ☒unk	☐Yes ☐**No** ☐unk
74. If able to open hatch, is the stored water free of visible contaminants? If no, explain below	☐Yes ☐No ☒unk	☐Yes ☐No ☐unk
75. Is there a dedicated air vent on the storage tank?	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
75a. If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	☐Yes ☐**No** ☒unk	☐Yes ☐**No** ☐unk

76. Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	☒Yes ☐**No** ☐unk	☐Yes ☐**No** ☐unk
77. Does the overflow line discharge near ground level?	☒Yes ☐No ☐unk	☐Yes ☐No ☐unk
78. Is the overflow line discharge area protected from potential erosion?	☐Yes ☐No ☒unk	☐Yes ☐No ☐unk
79. Does the overflow line discharge into a storm drain or surface water?	☐Yes ☒No ☐unk	☐Yes ☐No ☐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?	☐Yes ☐**No** ☐unk	☐Yes ☐**No** ☐unk
80. Does the overflow line discharge directly into a sanitary sewer without an air gap?	☐**Yes** ☒No ☐unk	☐**Yes** ☐No ☐unk
81. Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	☒Yes ☐No ☐unk	☐Yes ☐No ☐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	☐Yes ☒No ☐unk	☐Yes ☐No ☐unk
85. Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	☐Yes ☒No	☐Yes ☐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:

- **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?	☒Yes ☐No
87. *Does the system provide adequate pressure throughout the distribution system? If no, explain below.*	☒Yes ☐No
88. Are proper procedures followed for disinfection of new construction or repairs?	☒Yes ☐No
89. *Are there any air relief or vacuum relief valves subject to submersion?*	☐Yes ☒No
90. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	☒Yes ☐No
91. Does the purveyor exercise its distribution system valves? If yes, describe below	☒Yes ☐No

Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations:

- **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	☐Yes ☒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.	☐Yes ☒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)?	☒Yes ☐No
95. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	☒Yes ☐No
95a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	☐Yes ☒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?	☐Yes ☐No ☐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?	☐Yes ☐No ☒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?	☐**Yes** ☒No
98. <u>This question only applies to a facility operating a sewage dump station</u>: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	☐**Yes** ☐No ☒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?	☒Yes ☐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.	☒Yes ☐No
102. *Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.*	☐Yes ☐No ☒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.*	☐Yes ☐No ☒NA
104. *Does the operator take compliance water quality samples at the proper location? If no, describe below.*	☒Yes ☐No ☐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:

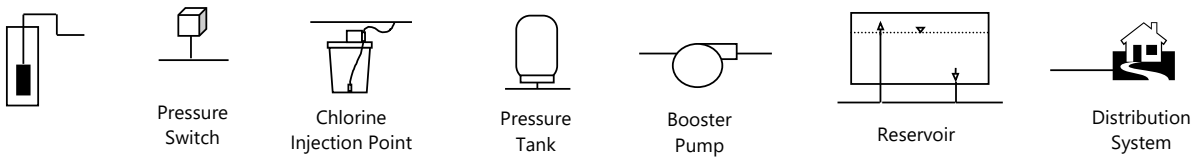
If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

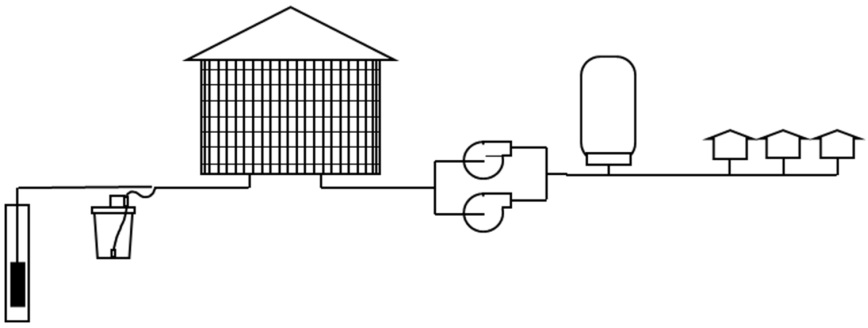
PART O: WATER SYSTEM FACILITIES FIELD SCHEMATIC

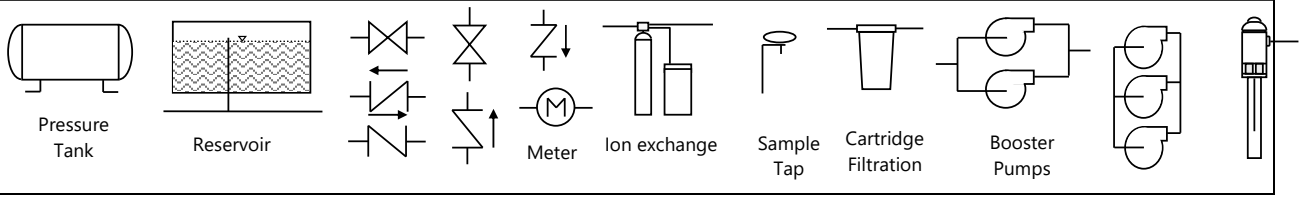
Use the space below to sketch a simple schematic of the water system facilities. You may use the templates shown below to help build your schematic. The sketch should show location of sources, treatment, pressure tanks, booster pumps, storage tanks, and a simple representation of the distribution system. 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:

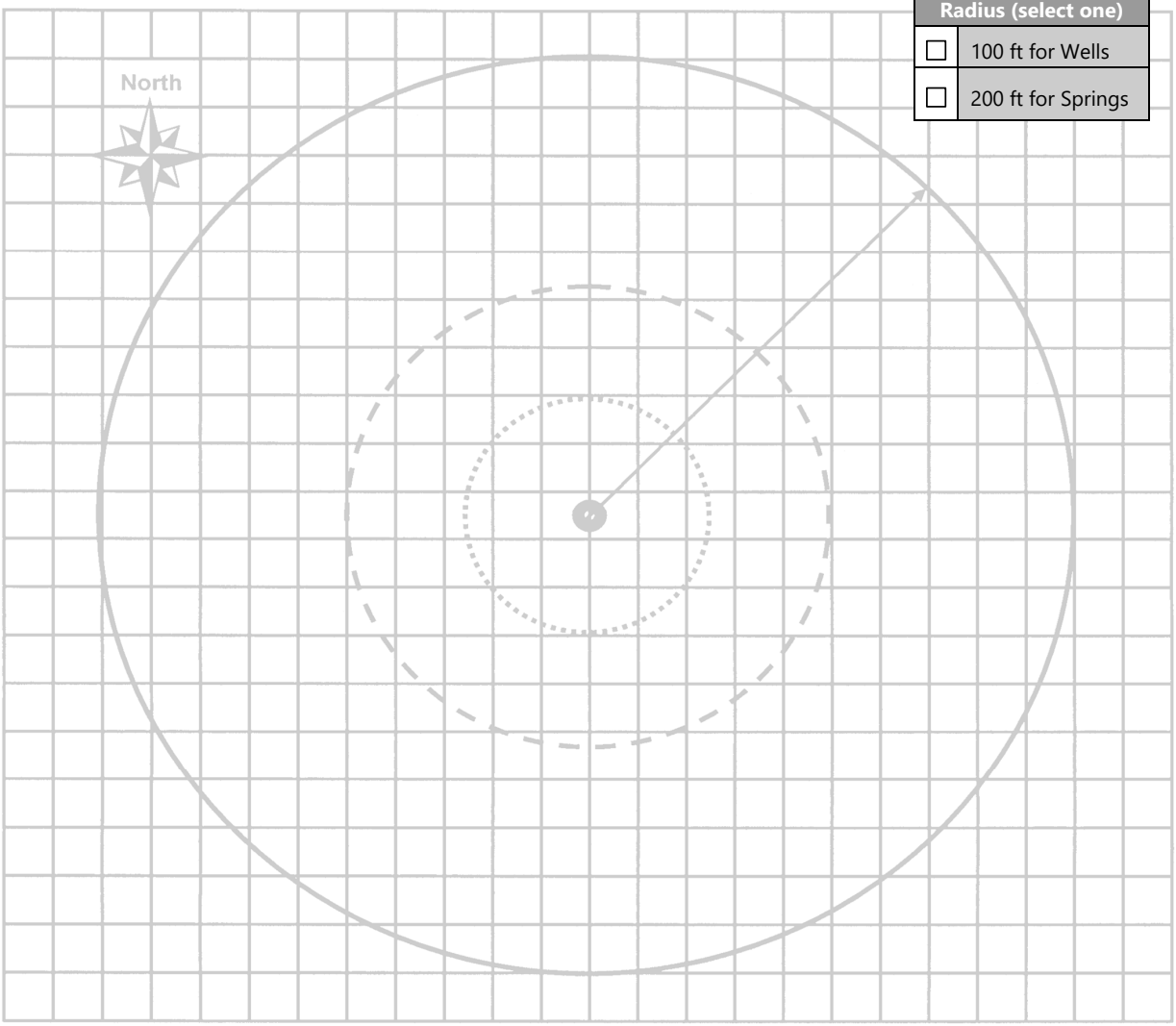






PART P: INVENTORY OF POTENTIAL SOURCES OF CONTAMINANTS WITHIN THE SANITARY CONTROL AREA			
Use the graph below to locate any potential biological and chemical contaminants found within the source's Sanitary Control Area (SCA). The SCA is the protective area within 100 feet of wells or 200 feet of springs.			
Source Name:		Source Number:	

Radius (select one)	
☐	100 ft for Wells
☐	200 ft for Springs



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

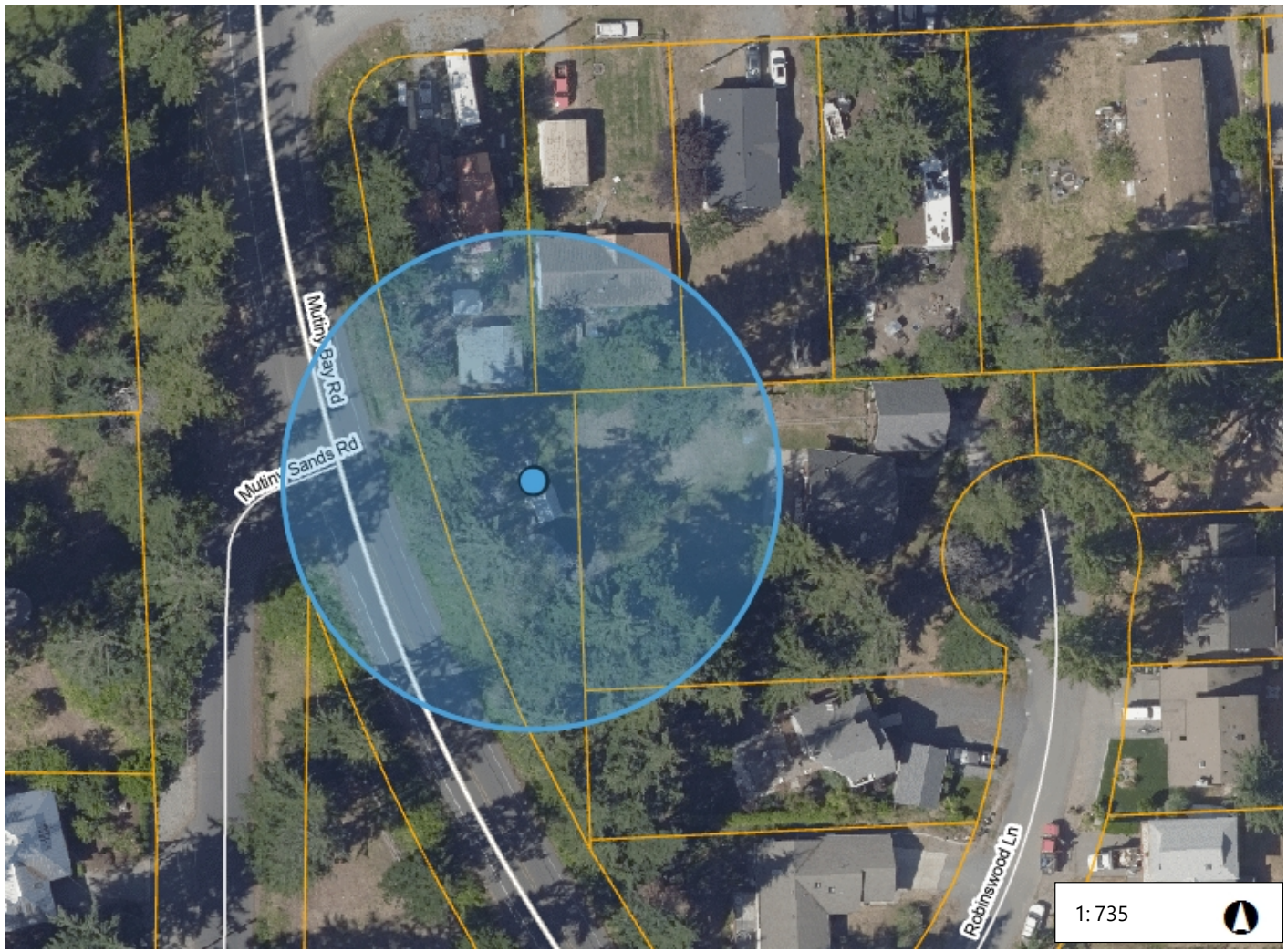
Booster pumps

Pressure tank

Pump controls

Water reservoir

ICGeoMap



Legend

- Wells
  - Private
  - Public Water System
- 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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Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 1
Updated: 08/08/2022
Printed: 12/6/2023
WFI Printed For: On-Demand
Submission Reason: Owner Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
18575 K	DEL BAY	ISLAND	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS

CULLEY J. LEHMAN [MANAGER]
PO BOX 549
FREELAND, WA 98249

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS 18181 STATE ROUTE 525
CITY FREELAND STATE WA ZIP 98249

7. OWNER NAME & MAILING ADDRESS

CASCADIA WATER, LLC
CULLEY J. LEHMAN GENERAL MANAGER
PO BOX 549
FREELAND, WA 98249

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 331-7388		Owner Daytime Phone: (360) 661-7781	
Primary Contact Mobile/Cell Phone: (360) 661-7781		Owner Mobile/Cell Phone: (360) 661-7781	
Primary Contact Evening Phone: (360) 661-7781		Owner Evening Phone: (xxx)-xxx-xxxx	
Fax:	E-mail: cxxxxy@cascadiawater.com	Fax:	E-mail: cxxxxy@cascadiawater.com

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

☐ Not applicable (Skip to #12)
☒ Owned and Managed
☐ Managed Only
☐ Owned Only

SMA NAME: Cascadia Water, LLC SMA Number: 168

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

☐ Agricultural
☐ Commercial / Business
☐ Day Care
☐ Food Service/Food Permit
☐ 1,000 or more person event for 2 or more days per year
☐ Hospital/Clinic
☐ Industrial
☐ Licensed Residential Facility
☐ Lodging
☐ Recreational / RV Park
☒ Residential
☐ School
☐ Temporary Farm Worker
☐ Other (church, fire station, etc.):

13. WATER SYSTEM OWNERSHIP (mark only one)

☐ Association ☐ County ☒ Investor ☐ Special District
☐ City / Town ☐ Federal ☐ Private ☐ State

14. STORAGE CAPACITY (gallons)

68,000

15	16	17	18 SOURCE CATEGORY									19 USE			20	21 TREATMENT					22	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	AGA812 WELL 1		X									X			Y		X					214	38	SW SE	09	29N	02E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
18575 K	DEL BAY	ISLAND	A	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	43
A. Full Time Single Family Residences (Occupied 180 days or more per year)	37		
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.	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	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

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 Hlupf DATE: 12/20/23

PRINT NAME: ANETA HLUPFAUER TITLE: EHS 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 Yes No	Approved by ODW Yes No
01	Well #1	393 ft deep, 373 ft doi, 150 gpm pump replaced 2004	AGP297	☒ ☐	☒ ☐
02	Well #2	392 ft deep, 372 ft doi, 150 gpm pump replaced 2004	AGP298	☒ ☐	☒ ☐

WELLHEAD	Source ID #01	Source ID #02
	Yes No	Yes No
*Wellcap sealed	☒ ☐	☒ ☐
*Openings sealed	☒ ☐	☒ ☐
*Vent screened	☒ ☐	☒ ☐
*Protected from flooding	☒ ☐	☒ ☐
**Raw water sample tap	☒ ☐	☒ ☐
**Protected from unauthorized access	☒ ☐	☒ ☐
Structure in good condition	☒ ☐	☒ ☐

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	☒ ☐	☒ ☐

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	☒ ☐	☒ ☐
Generator has automatic startup	☐ ☒	☐ ☒

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 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.

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	☒	☐
Service meters (reading frequency monthly)	☒	☐
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	☒	☐
High hazards identified	☐	☒
High hazards protected	n/a	
Annual testing	n/a	
CCS on staff or under contract	☒	☐
Cross connections observed have been eliminated	☒	☐

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	☒	☐	☒	☐	☒	☐
*Hatch: Watertight seal or gasket	☒	☐	☒	☐	☒	☐
Hatch: Over-lapping cover	☒	☐	☒	☐	☒	☐
*Screened air vent	☒	☐	☒	☐	☒	☐
*Openings sealed/protected	☒	☐	☒	☐	☒	☐

FEATURES	Res #1		Res #2		Res #3	
	Yes	No	Yes	No	Yes	No
Protected drain outlet	☒	☐	☐	☒	☒	☐
*Protected overflow outlet	☒	☐	☐	☒	☒	☐
*Overflow line discharges into a sanitary sewer with an air gap	n/a		n/a		n/a	
**Protected from unauthorized entry	☒	☐	☒	☐	☒	☐

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	☒	☐	☒	☐	☒	☐

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	☒	☐
Pressure relief valve	☒*	☐
Pressure gauge	☒	☐
In good condition	☒	☐

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	☒	☐
Structure in good condition	☒	☐

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	☒	☐	☐	☒
*Functional pump and pump controls	☒	☐	☒	☐
Equipment in good condition	☒	☐	☒	☐
Generator available	☐	☒	☐	☒
Generator has automatic startup	☐	☒	☐	☒

BUILDINGS/ ENCLOSURE	Facility 1		Facility 2	
	Yes	No	Yes	No
**Facility secure	☒	☐	☒	☐
Structure in good condition	☒	☐	☒	☐

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	☒	☐	☒	☐
ODW WQ data reviewed	☒	☐	☒	☐
Sample collection sites correct	☒	☐	☒	☐
System has prior: ☐ Nitrate results above 5 mg/L ☐ Nitrite results above 0.5 mg/L ☐ Primary MCL ☐ Secondary MCL exceedance(s) ☐ Organic detections ☐ Other Enter Other				

COLIFORM	Yes	No
Monitoring adequate	☒	☐

COLIFORM	Yes	No
Monitoring plan adequate	☒	☐
Monitoring plan followed	☒	☐
# of Treatment Technique Violations (TTV)	0	
# of *E. coli* MCL Violations	1	

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

LEAD & COPPER	Yes	No
Monitoring adequate	☒	☐
Monitoring plan adequate	☐	☒
Monitoring plan followed	n/a	
Results below action level	☒	☐

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	☒	☐
Current WSP/SWSMP	☐	☒
Year WSP/SWSMP approved	2008	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	☒	☐	---
Consumer confidence report (Community only)	☒	☐	☐
Water use efficiency report (Municipal Water Suppliers)	☒	☐	☐
Cross connection control annual report (> 1000 conn)	☐	☐	☒

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	☒

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	☐	☐
Current survey has significant deficiencies identified	☐	☐
Previous survey deficiencies/findings corrected, if no list below	☐	☐

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,

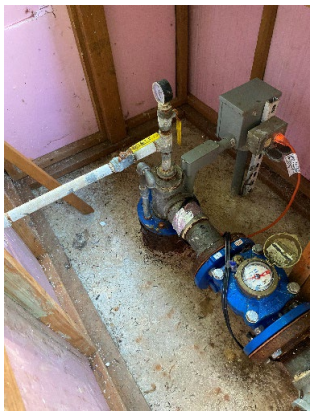
Charese Gainor

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

9DWA10597240700 SS0001921 0X09302300043350

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			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)	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 Yes	Listed on WFI No	Approved by ODW Yes	Approved by ODW No
01	Well #1 WW	4-inch Casing Drilled In 1982 to 607 Feet, 180 GPM, Wellfield S03	ACA573	☒	☐	☒	☐
02	Well #2 WW	6-inch Casing Drilled In 1974, Deepened In 1983 to 436 Feet, 180 GPM, Wellfield S03, 7.5 HP	ACA574	☒	☐	☒	☐

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

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

WELL PUMP EQUIPMENT	Source ID #01 Yes	Source ID #01 No	Source ID #02 Yes	Source ID #02 No
*Pump control valve or vacuum relief valve with a protected air gap at discharge	☒	☐	☒	☐
Generator available	☒	☐	☒	☐
Generator has automatic startup	☐	☒	☐	☒

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	☒	☐
Service meters (reading frequency)	☒	☐
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	☒	☐
High hazards identified	☐	☒
High hazards protected	☐	☒
Annual testing	☐	☒
CCS on staff or under contract	☒	☐
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	☒	☐	☒	☐
*Hatch: Watertight seal or gasket	☒	☐	☒	☐
Hatch: Over-lapping cover	☒	☐	☒	☐
*Screened air vent	☒	☐	☒	☐
*Openings sealed/protected	☒	☐	☒	☐

FEATURES	Res #1		Res #2	
	Yes	No	Yes	No
Protected drain outlet	None		None	
*Protected overflow outlet	☒	☐	☒	☐
*Overflow line discharges into a sanitary sewer with an air gap	NA		NA	
**Protected from unauthorized entry	☒	☐	☒	☐

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	☒	☐	☐	☒

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	☒	☐
Pressure gauge	☒	☐
Water level sight glass	☐	☒
**Oilless Air compressor	☒	☐

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	☒	☐
Structure in good condition	☒	☐

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	☒	☐
*Functional pump and pump controls	☒	☐
Equipment in good condition	☒	☐
Generator available	☒	☐
Generator has automatic startup	☒	☐

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

BUILDINGS/ ENCLOSURE	Facility 1	
	Yes	No
**Facility secure	☒	☐
Structure in good condition	☒	☐

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	☒	☐
ODW WQ data reviewed	☒	☐
Sample collection sites correct	☒	☐
System has prior: ☐ Nitrate results above 5 mg/L ☐ Nitrite results above 0.5 mg/L ☐ Primary MCL ☐ Secondary MCL exceedance(s) ☐ Organic detections ☐ Other		

COLIFORM	Yes	No
Monitoring adequate	☒	☐
Monitoring plan adequate	☐	☒
Monitoring plan followed	☒	☐
# of Treatment Technique Violations (TTV)	0	
# of *E. coli* 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	☒	☐
Monitoring plan adequate	☒	☐
Monitoring plan followed	☒	☐
Results below action level	☒	☐

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	☒	☐
Current WSP	☐	☒
Year WSP approved	1994	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	☒	☐	---
Consumer confidence report (Community only)	☒	☐	☐
Water use efficiency report (Municipal Water Suppliers)	☒	☐	☐
Cross connection control annual report (> 1000 conn)	☐	☐	☒

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	☒

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	☒	☐

OPERATIONS	Yes	No
Current survey has significant deficiencies identified	☒	☐
Previous survey deficiencies/findings corrected, if no list below	☒	☐

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,

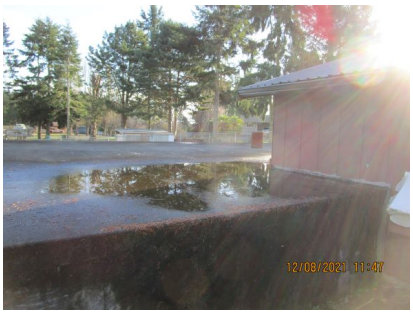
Jocelyne Gray

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

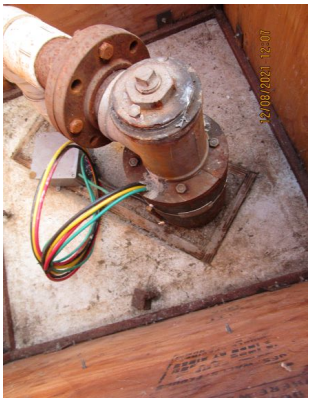

Large Storage Tank - Ponding


Large Storage Tank Vent


East Side Large Storage Tank


North Side Large Storage Tank


North Side Large Storage Tank

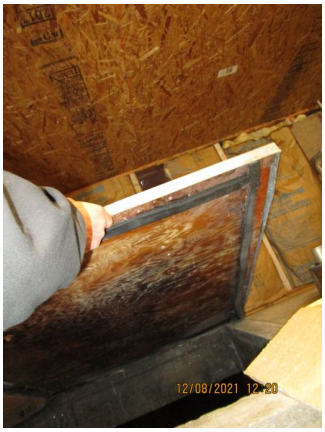


Well 1 With Sealed Wires

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 Date: 01/12/2022
INVOICE AMOUNT: $714.00 **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

9DWA10597240700 SS0000081166X02262200071400

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**

D|C|G
civil structural

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.

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

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 Yes	Listed on WFI No	Approved by ODW Yes	Approved by ODW No
01	Well #1 WW North	Drilled In 1979 to 221 Feet, 180 GPM, Wellfield S03		☒	☐	☐	☐
02	Well #2 WW South	Drilled In 1979 to 221 Feet, 180 GPM, Wellfield S03	No Tag	☒	☐	☐	☐

WELLHEAD	Source ID #01 Yes	Source ID #01 No	Source ID #02 Yes	Source ID #02 No
*Wellcap sealed	☒	☐	☒	☐
*Openings sealed	☐	☒	☒	☐
*Vent screened	☒	☐	☒	☐
*Protected from flooding	☒	☐	☒	☐
**Raw water sample tap	☒	☐	☒	☐
**Protected from unauthorized access	☒	☐	☒	☐

WELLHEAD	Source ID #01		Source ID #02	
	Yes	No	Yes	No
Structure in good condition	☒	☐	☒	☐
Sanitary control area free of contaminants (*If no, is there an approved mitigation plan for the contaminant identified)	☒	☐	☒	☐
**Protected from physical damage	☒	☐	☒	☐

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	☐	☐	☒	☐
Generator available	☒	☐	☒	☐
Generator has automatic startup	☐	☒	☐	☒

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	☒	☐
Service meters (reading frequency #)	☒	☐
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	☒	☐
High hazards identified	☒	☐
High hazards protected	NA	
Annual testing	NA	
CCS on staff or under contract	☒	☐
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	☒	☐
*Hatch: Watertight seal or gasket	☒	☐
Hatch: Over-lapping cover	☒	☐
*Screened air vent	☒	☐
*Openings sealed/protected	☒	☐

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	☒	☐
*Protected overflow outlet	☒	☐
*Overflow line discharges into a sanitary sewer with an air gap	NA	
**Protected from unauthorized entry	☒	☐

MAINTENANCE	Res #1	
	Yes	No
Frequency of cleaning	9 Years	
Frequency of routine site visit	Weekly	
**Structure in good condition	☒	☐

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	☒	☐
Pressure gauge	☒	☐
Water level sight glass	☐	☒
**Oilless Air compressor	☒	☐

BUILDINGS/ENCLOSURE	Site: 1	
	Yes	No
**Facility secure	☒	☐
Structure in good condition	☒	☐

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	☒	☐
*Functional pump and pump controls	☒	☐
Equipment in good condition	☒	☐
Generator available	☒	☐
Generator has automatic startup	☒	☐

BUILDINGS/ ENCLOSURE	Facility 1	
	Yes	No
**Facility secure	☒	☐
Structure in good condition	☒	☐

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	☒	☐
ODW WQ data reviewed	☒	☐
Sample collection sites correct	☒	☐
System has prior: ☐ Nitrate results above 5 mg/L ☐ Nitrite results above 0.5 mg/L ☐ Primary MCL ☒ Secondary MCL exceedance(s) ☐ Organic detections ☐ Other Enter Other		

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	☒	☐
Monitoring plan adequate	☐	☒
Monitoring plan followed	☒	☐
# of Treatment Technique Violations (TTV)	0	
# of *E. coli* 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	☒	☐
Monitoring plan adequate	☒	☐
Monitoring plan followed	☒	☐
Results below action level	☒	☐

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	☒	☐
Current WSP	☐	☒
Year WSP approved	1994	

REPORTING	Yes	No	N/A
WFI reviewed and updated with purveyor	☒	☐	---
Consumer confidence report (Community only)	☒	☐	☐
Water use efficiency report (Municipal Water Suppliers)	☒	☐	☐
Cross connection control annual report (> 1000 conn)	☐	☐	☒

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	☒

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	☒	☐
Current survey has significant deficiencies identified	☒	☐
Previous survey deficiencies/findings corrected, if no list below	☒	☐

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

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

1DWA10597240700 SS00055990X04162200051000

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			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	$	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 Date: 10/17/2022
INVOICE AMOUNT: $408.00 **Invoice Due Date: 12/01/2022**
Owner Number: 036082 Region: NW
WS Name: ROLF BRUUN 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

4DWA10597240700 SS00008915X12012200040800

Office of Drinking Water
Sanitary Survey Form (Checklist)

System Name:	**Rolf Bruun**			Survey Date:	**October 13, 2022**
PWS ID#:	**08915**	County:	**Skagit**	System Type:	**Group A, Comm**
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?		☒Yes ☐No ☐NA
2. Were water system records available for your review?		☒Yes ☐No ☐Partial
3. Has the purveyor developed and implemented either a Small Water System Management Program or a Water System Plan?		☐Yes ☒No
3a. If no, are the following planning documents complete and up to date:		
	Service Area and Facility Map	☐Yes ☐No ☒Partial
	Cross-Connection Control Program	☐Yes ☒No ☐Partial
	Source Water Protection Program	☐Yes ☒No ☐Partial
	Emergency Response Plan	☒Yes ☐No ☐Partial
	Operation and Maintenance Program	☒Yes ☐No ☐Partial
	Coliform Monitoring Plan	☒Yes ☐No ☐Partial
	Component Inventory and Assessment	☒Yes ☐No ☐Partial
	Asset Replacement and Other System Improvements	☐Yes ☒No ☐Partial
	Budget	☒Yes ☐No ☐Partial
4. Does the purveyor plan to make capital improvements in the next 1-3 years? If yes, describe below		☐Yes ☒No
5. Is there a backup operator available if the regular one is not available? If yes, provide contact info below		☒Yes ☐No
6. Were the water system's current and future water quality monitoring requirements reviewed?		☒Yes ☐No
7. Was water quality sample results and trends reviewed with the purveyor?		☒Yes ☐No
8. Does the system have emergency power?		☐Yes ☒No
9. Does the system experience frequent power outages (>2 per year)? If yes, explain below		☐Yes ☒No
10. Does the system experience frequent water outages (>2 per year)? If yes, explain below		☐Yes ☒No
11. Does there appear to be adequate reliability provided for this system? If no, explain below		☒Yes ☐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?			☐Yes ☒No
1a. If so, has the source received written DOH approval? (confirm with DOH post-survey)			☒Yes ☐**No** ☐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**		

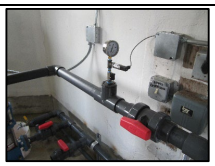
Source Use	Permanent	Seasonal	Emergency	P		
5. **If this is an emergency source, should it be disconnected?**				☐**Yes** ☐No ☒NA		
6. *Is the source a potential GWI source?*				☐*Yes* ☒*No*		
7. Is the Sanitary Control Area (SCA) free of unmitigated potential sources of contamination?				☒Yes ☐**No**		
8. Is the wellhead located in a pit or vault?				☐Yes ☒No		
9. Is the wellhead at risk of submergence?				☐**Yes** ☒No		
10. Is the well cap sealed, watertight, and free of unprotected openings?				☒Yes ☐**No**		
11. Is the well casing free of any unprotected openings?				☒Yes ☐**No**		
12. Is there a vent on the well?				☒Yes ☐No		
12a. If yes, is the vent protected? (24 non-corrodible mesh screen or slots)				☒Yes ☐**No**		
13. Are conduits and junction boxes sealed to prevent contaminant entry?				☒Yes ☐**No**		
14. Is the well unreasonably at risk to physical damage?				☐Yes ☒No		
15. Is there a raw water source sample tap?				☒Yes ☐No		
16. Is the source metered?				☒Yes ☐No		
16a. If yes, is the source meter read at least monthly?				☒Yes ☐No		
16b. If yes, are the water production records maintained?				☒Yes ☐No		
17. Is the wellhouse properly constructed and maintained? If no, explain below				☐Yes ☐No ☒NA		
18. Is there any evidence of infestation by rodents or other pests?				☐Yes ☐No ☒NA		
19. Is the wellhouse and well adequately protected from unauthorized access and tampering?				☐Yes ☐No ☒NA		
20**. Is there a pump control valve or vacuum relief valve without an air gap on the valve discharge pipe?**				☐**Yes** ☐No ☒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				☒Yes ☐**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?	☒Yes ☐No
2. Are the booster pumps in good working condition? If no, explain below	☒Yes ☐No
3. Are pump and pump controls operational and adequate to prevent chronic water outages or premature pump failure? If no explain below	☒Yes ☐**No**
4. If there is a booster pump house/pump station, is it secure against unauthorized entry? If no, explain below	☒Yes ☐**No** ☐NA
5. Is the booster pump house/pump station properly constructed and maintained? If no, explain below	☒Yes ☐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?	☒Yes ☐No
2. For systems using an air compressor, is the compressor an oil-free type or does it use food-grade oil?	☐Yes ☐No ☒NA
3. Are valves present to isolate the pressure tanks for maintenance or repair?	☒Yes ☐No
4. Is there an ASME pressure relief valve installed between each pressure tank and any shutoff valve? (see DOH publication #331-429)	☐Yes ☒No
5. Is the pressure tanks in good working condition? If no, explain below	☒Yes ☐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?	☒Yes ☐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 ☒ Reviewed and discussed maintenance records and recent photos		
b ☐ Photos will be taken and mailed by purveyor; additional follow-up required by DOH		
c ☐ 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	☒Yes ☐No ☐unk	
4. Is the reservoir roof free of any unprotected openings? If no, explain below	☒Yes ☐**No** ☐unk	
5. Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	☒Yes ☐**No** ☐unk	
6. If able to open hatch, is the stored water free of visible contaminants? If no, explain below	☐Yes ☐No ☒unk	
7. Is there a dedicated air vent on the storage tank?	☒Yes ☐No ☐unk	
7a. If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	☒Yes ☐**No** ☐unk	
8. Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	☒Yes ☐**No** ☐unk	
9. Does the overflow line discharge near ground level?	☒Yes ☐No ☐unk	
10. Is the overflow line discharge area protected from potential erosion?	☒Yes ☐No ☐unk	
11. Does the overflow line discharge into a storm drain or surface water?	☐Yes ☒No ☐unk	
12. Does the overflow line discharge directly into a sanitary sewer without an air gap?	☐**Yes** ☒No ☐unk	
13. Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	☒Yes ☐No ☐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	☒Yes ☐No ☐unk	
17. Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	☐Yes ☒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?	☐Yes ☐No ☒Partial
2. *Does the system provide adequate pressure throughout the distribution system? If no, explain below.*	☒Yes ☐No
3. Are proper procedures followed for disinfection of new construction or repairs?	☒Yes ☐No
4. *Are there any air relief or vacuum relief valves subject to submersion?*	☐Yes ☐No ☒NA
5. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	☒Yes ☐No
6. Does the purveyor exercise its distribution system valves? If yes, describe below	☒Yes ☐No ☐unk

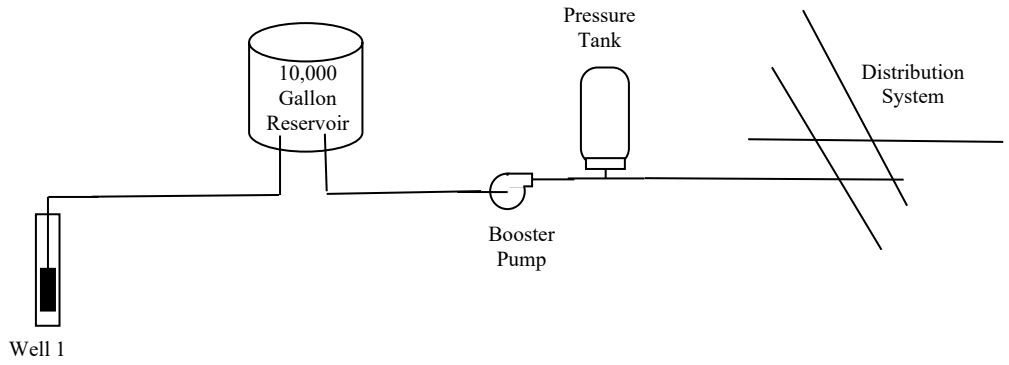
Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations:
Distribution System Leakage – No Report

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.	☐Yes ☒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.	☐Yes ☒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)?	☒Yes ☐No
4. Has the purveyor designated a CCC Specialist (CCS) to be in responsible charge of the CCC program?	☒Yes ☐No
4a. If yes, has the CCS conducted a hazard evaluation to identify high health hazard premises?	☐Yes ☒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?	☐Yes ☐No ☒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?	☐Yes ☐No ☒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?	☐**Yes** ☐No
7. <u>This question only applies to a facility operating a sewage dump station</u>: Is there a sewage dump station without a reduced pressure backflow assembly on the water supply at the dump station?	☐**Yes** ☐No ☐NA
Additional cross connection control program comments:	

PART J: OPERATOR	
1. Is the operator of the water system certified?	☒Yes ☐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.	☒Yes ☐No
4. *Is the operator performing measurements and calibration of water treatment monitoring equipment consistent with manufacturer recommendations? If no, describe below.*	☐Yes ☐No ☒NA
5. *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.*	☐Yes ☐No ☒NA
6. *Does the operator take compliance water quality samples at the proper location? If no, describe below.*	☒Yes ☐No ☐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,

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

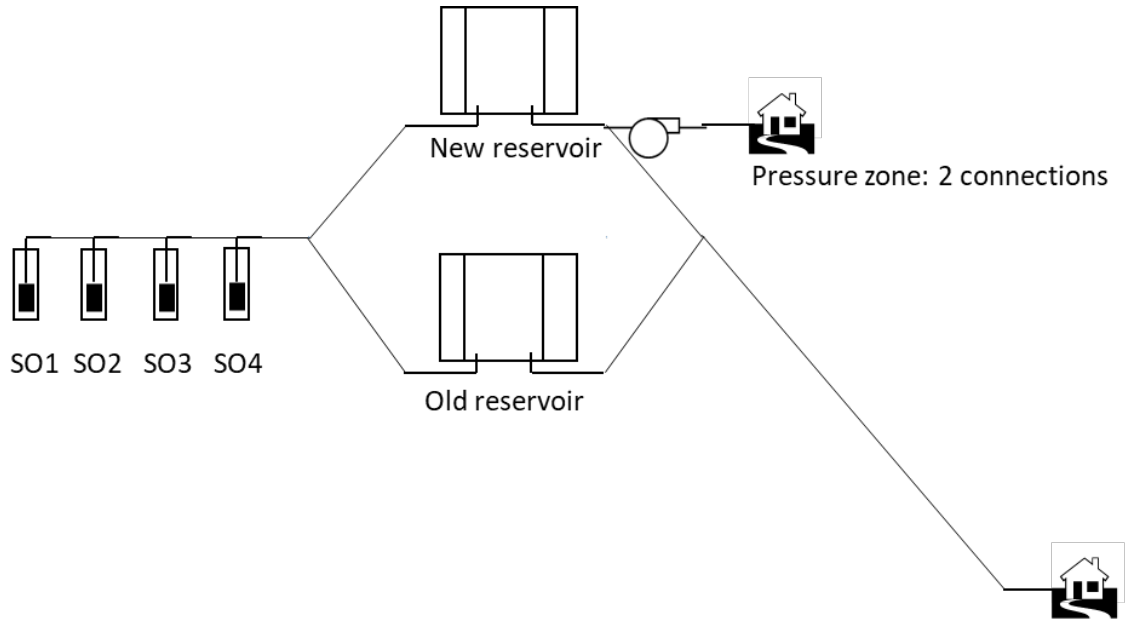
Purpose: Routine Sanitary Survey

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***

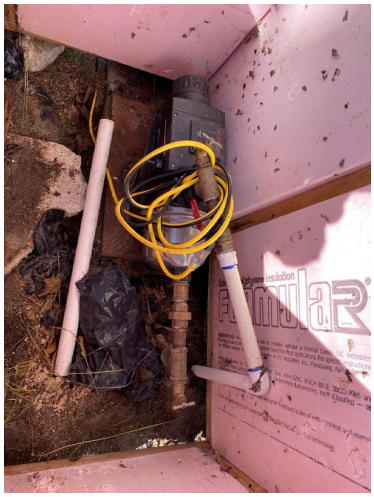
(Above) Construction is underway for the new reservoir

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	☒

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.