

BEFORE THE  
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

UW-240151

CASCADIA WATER, LLC

September 26, 2024

**Direct Exhibit of Culley J. Lehman**

**CAL WATERWORKS SANITARY SURVEY 2023**

**Exh. CJL-6**



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

**Significant Deficiencies** – *potential significant public health risks.*

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

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

- None

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

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

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

- Consider replacing the reservoir to prevent water loss.

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

- **None**

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

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

If you have any questions or need additional information, please call me at (253) 395-6752 or email to [nwro.sanitarysurveys@doh.wa.gov](mailto: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:	<b>CAL Waterworks</b>	Survey Date:	<b>3/28/23</b>
PWS ID#:	<b>31040</b>	County:	<b>Island</b>
Persons Attending Inspection:	<b>Culley Lehman – Cascadia Water, Operator</b>		
	<b>Alexis Medina – Drinking Water Office, Washington State Department of Health</b>		
Inspector's Name:	<b>Aneta Hupfauer – Island County Public Health</b>		

**PART A: SUMMARY OF SIGNIFICANT DEFICIENCIES AND SIGNIFICANT FINDINGS**

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

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

Significant deficiencies and significant findings identified during this sanitary survey:

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

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

Observations and recommendations identified during this survey

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

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

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

**Consider replacing the reservoir to prevent water loss.**

**PART B: GENERAL WATER SYSTEM DESCRIPTION**

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

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

**PART C: OPERATIONS and MANAGEMENT**

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

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

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

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

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

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

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

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

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

**Item 28: Source meters are read monthly.**

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

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

**PART F: TREATMENT**

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

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

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

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



a	<input type="checkbox"/> Reviewed and discussed maintenance records and recent photos		
b	<input checked="" type="checkbox"/> Photos will be taken and mailed by purveyor; additional follow-up required by DOH		
c	<input type="checkbox"/> Purveyor unable or unwilling to document; additional follow-up required by DOH		
	Insert Tank Names	41,200	
71.	Is the storage tank protected from unauthorized entry or vandalism? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
72.	Is the reservoir roof free of any unprotected openings? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
73.	Is the access hatch constructed and sealed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
74.	If able to open hatch, is the stored water free of visible contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75.	Is there a dedicated air vent on the storage tank?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
75a.	If yes, is the air vent constructed to prevent the entry of contaminants? If no, explain below	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
76.	Is the overflow line constructed to prevent contaminants from entering the tank? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
77.	Does the overflow line discharge near ground level?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
78.	Is the overflow line discharge area protected from potential erosion?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79.	Does the overflow line discharge into a storm drain or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
79a.	If yes, is there an air gap at the discharge of the overflow OR does the overflow drop at least 34 vertical feet measured from the overflow connection to the reservoir down to the receiving water body?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
80.	Does the overflow line discharge directly into a sanitary sewer without an air gap?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
81.	Can the reservoir be isolated from the rest of the water system and be drained through a dedicated drain line?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
82.	When was the tank inspected last? Explain below if necessary	2020	
83.	What is the tank cleaning frequency? Explain below if necessary	Every 2-3 years or as needed	
84.	Does the tank size, operation, and internal piping configuration appear to provide adequate water turnover (i.e. separate inlet/outlet, baffling or mixing to reduce stagnant water)? If no, explain below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> unk
85.	Does the tank show signs of excessive leakage, significant structural cracking, or an advanced concrete spalling?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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:</p> <ul style="list-style-type: none"> <li>• <b>41,200 gallons, above-ground octagonal concrete reservoir;</b></li> <li>• <b>The overflow outlet and the reservoir drain outlet are both screened;</b></li> <li>• <b>Floats in the reservoir control pumps in SO1 and SO2;</b></li> <li>• <b>Reservoir is filled from the top;</b></li> <li>• <b>Reservoir and a pump house will be upgraded in a near future;</b></li> </ul> <p><b>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.</b></p> <p><b>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.</b></p>			

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

88. Are proper procedures followed for disinfection of new construction or repairs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
89. Are there any air relief or vacuum relief valves subject to submersion?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
90. Does the purveyor seasonally or annually flush the distribution system? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
91. Does the purveyor exercise its distribution system valves? If yes, describe below	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe and evaluate the distribution system including maintenance, operational, sanitary and security observations:	
<ul style="list-style-type: none"> <li>• <b>Two pressure zones;</b></li> <li>• <b>The higher pressure zone serves about 90% of customers with remaining 10% served by the lower distribution zone;</b></li> <li>• <b>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;</b></li> <li>• <b>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;</b></li> <li>• <b>Water meters are read every two month, and water use efficiency is calculated;</b></li> <li>• <b>There is an intertie with the Goss Lakeridge Acres Association to provide wholesale water to that development;</b></li> </ul> <p><b>Item 90 and 91: System is flushed as deemed necessary and distribution valves are exercised at that time.</b></p>	

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

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

Additional operator comments:

**Culley Lehman is the Certified Operator of record.**

**PART M: FIELD NOTES AND OTHER**

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

**WFI has been updated and is attached to this survey.**

**PART N: SUPPLEMENTAL NOTES AND SAFETY CONCERNS**

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

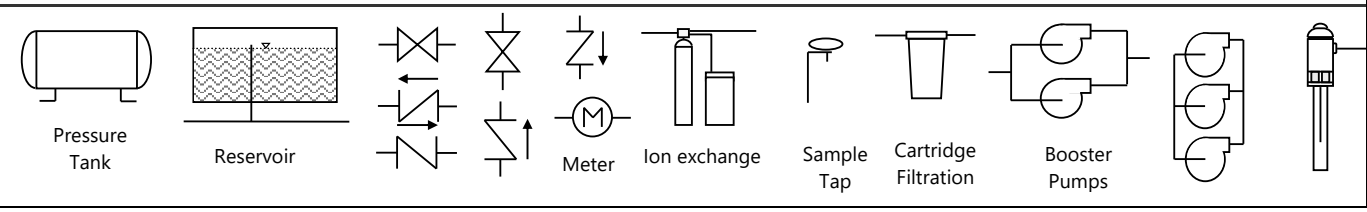
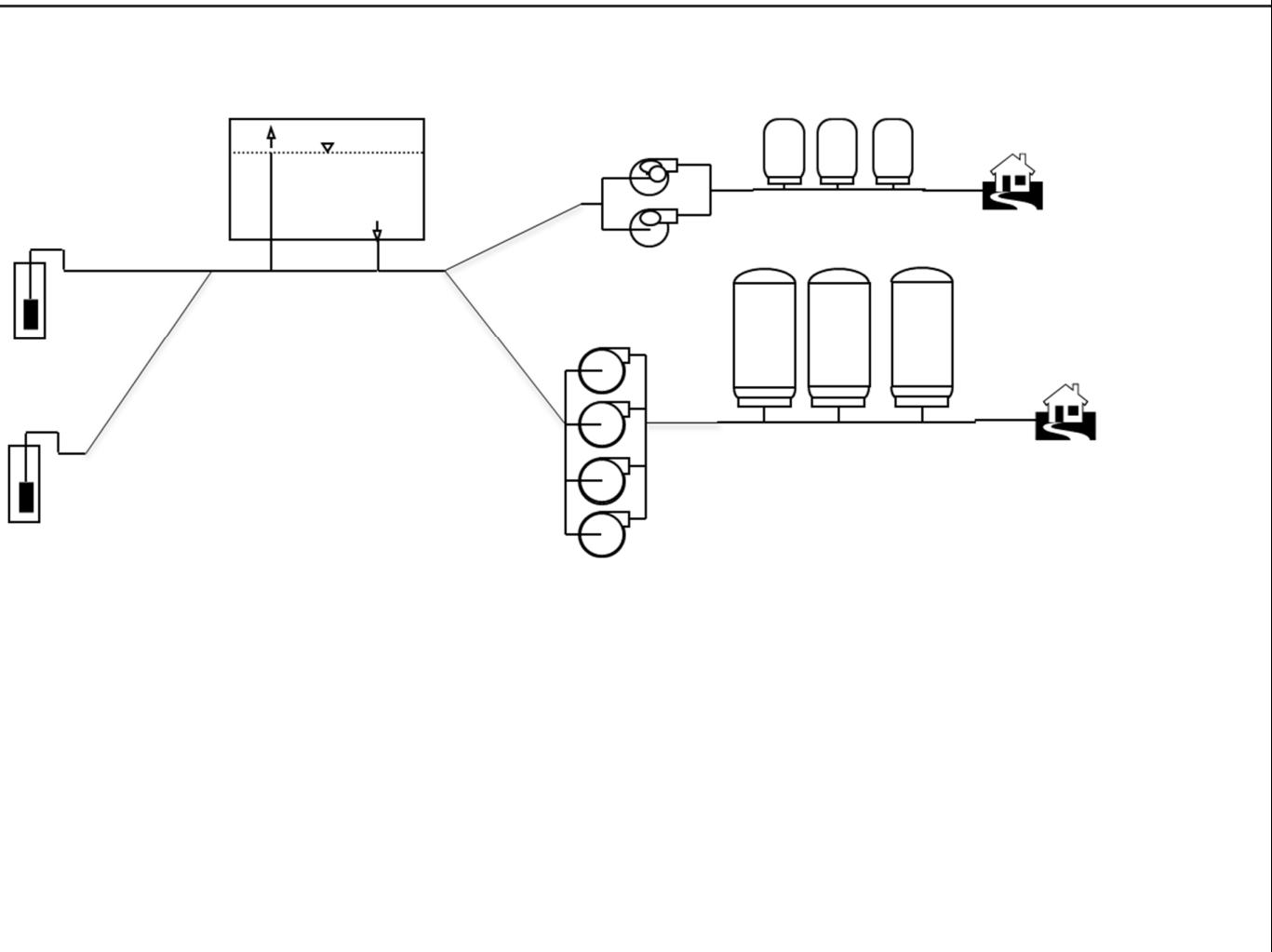
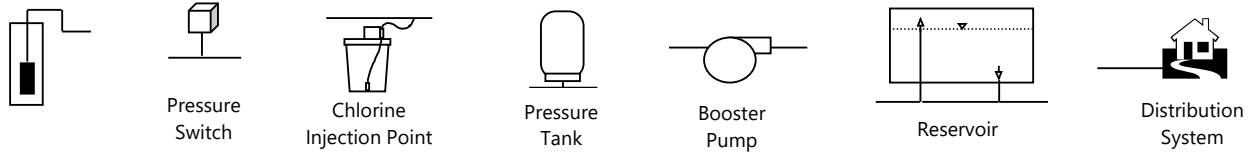
If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at [www.doh.wa.gov/drinkingwater](http://www.doh.wa.gov/drinkingwater).

**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:	<b>Well 1 and well 2</b>	Source Number:	<b>SO1 and SO2</b>
--------------	--------------------------	----------------	--------------------

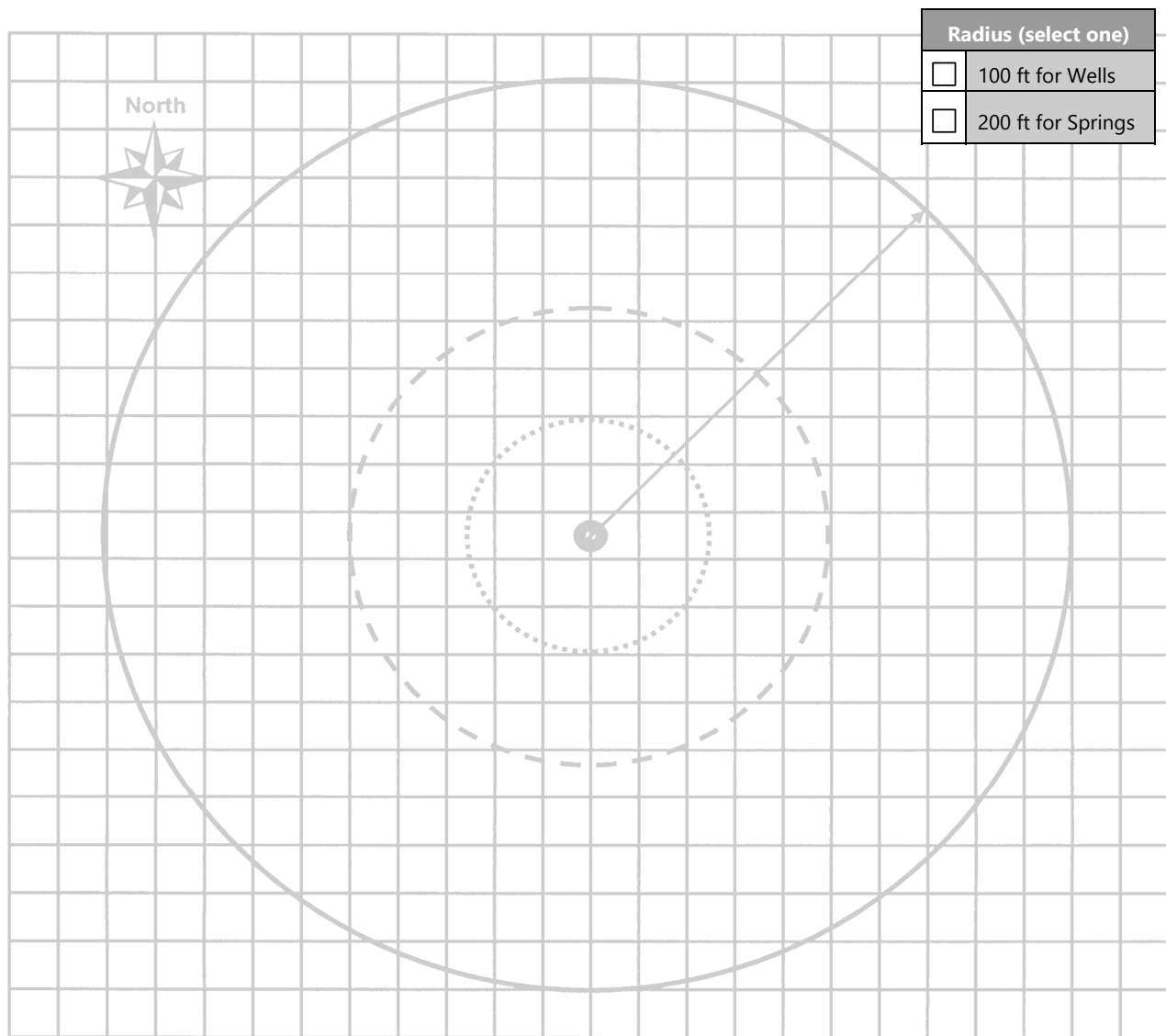
Example templates you can use to build your schematic:



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

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

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



**Description of Features Shown on the SCA Schematic**

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

**Waterworks**



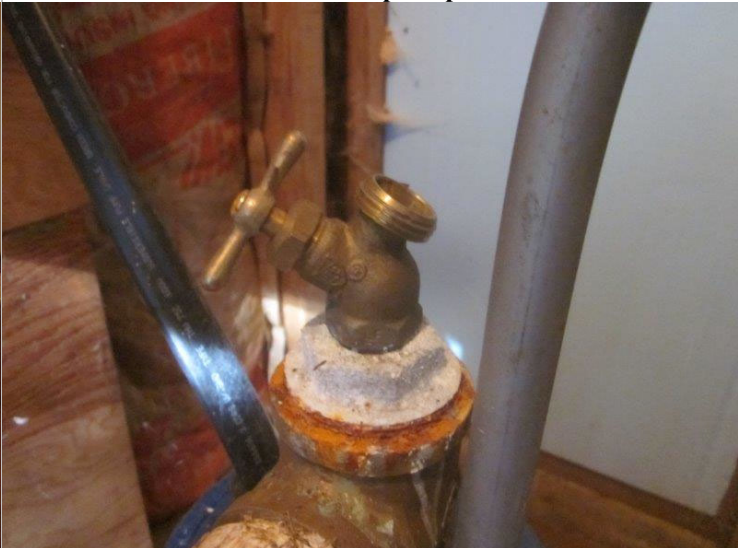
**SO1 wellhead**



**SO1 well tag**



**SO1 sample tap**



**SO1 electrical**



**SO1 water meter**



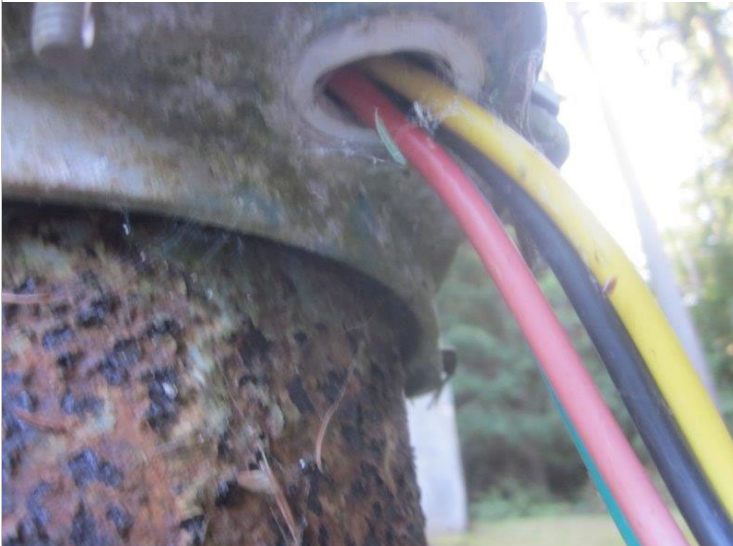
SO2 wellhead



SO2 well tag



SO2 electrical



SO2 sample tap



SO2 vent



SO2 vent close-up



**SO2 water meter**



**Lower zone booster pumps**



**Lower zone pressure tanks**



**Pressure relief valve**



**Upper zone booster pumps**



**Figure 1**





**Upper zone pressure tank**



**Pump house interior**



**Water reservoir**



**Water tank overflow**



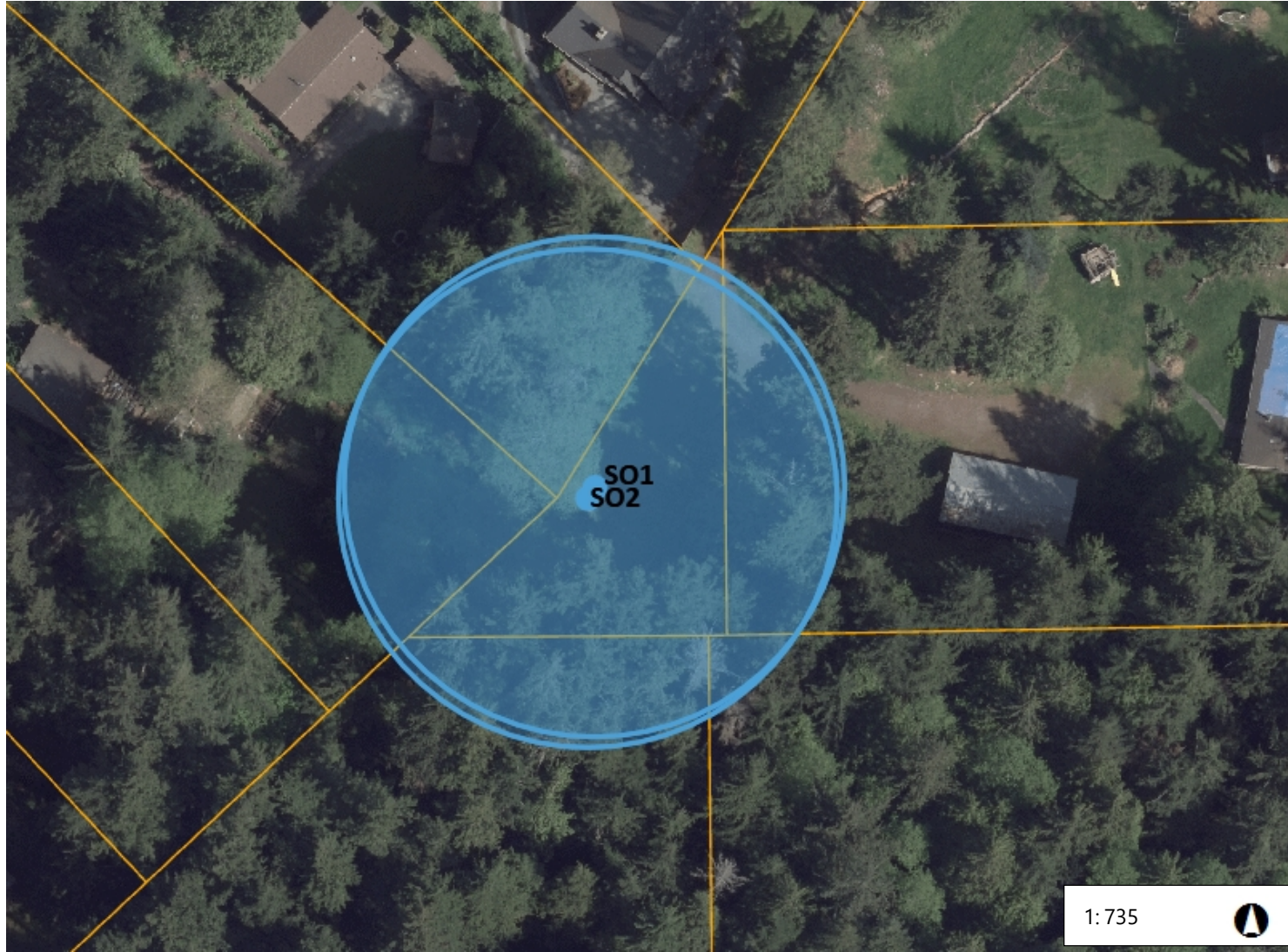
**Leaking reservoir corner**



**Figure 2**



# ICGeoMap



## Legend

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

1: 735



## Notes

122.5 0 61.24 122.5 Feet

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
© Latitude Geographics Group Ltd.

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



# WATER FACILITIES INVENTORY (WFI) FORM

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

<b>1. SYSTEM ID NO.</b> 31040 6	<b>2. SYSTEM NAME</b> CAL WATERWORKS	<b>3. COUNTY</b> ISLAND	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm																
<b>6. PRIMARY CONTACT NAME &amp; MAILING ADDRESS</b>  CULLEY J. LEHMAN [MANAGER] PO BOX 549 FREELAND, WA 98249		<b>7. OWNER NAME &amp; MAILING ADDRESS</b>  CASCADIA WATER, LLC CULLEY J. LEHMAN PO BOX 549 FREELAND, WA 98249  GENERAL MANAGER																		
<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN ADDRESS 18181 SR 525 CITY FREELAND STATE WA ZIP 98249		<b>STREET ADDRESS IF DIFFERENT FROM ABOVE</b> ATTN ADDRESS CITY STATE ZIP																		
<b>9. 24 HOUR PRIMARY CONTACT INFORMATION</b> Primary Contact Daytime Phone: (360) 661-7781 Primary Contact Mobile/Cell Phone: (360) 661-7781 Primary Contact Evening Phone: (xxx)-xxx-xxxx Fax: E-mail: cxxxxy@cascadiawater.com		<b>10. OWNER CONTACT INFORMATION</b> Owner Daytime Phone: (360) 661-7781 Owner Mobile/Cell Phone: (360) 661-7781 Owner Evening Phone: (xxx)-xxx-xxxx Fax: E-mail: cxxxxy@cascadiawater.com																		
<b>11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)</b> <input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: Cascadia Water, LLC SMA Number: 168 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only																				
<b>12. WATER SYSTEM CHARACTERISTICS (mark all that apply)</b> <input type="checkbox"/> Agricultural <input type="checkbox"/> Commercial / Business <input type="checkbox"/> Day Care <input type="checkbox"/> Food Service/Food Permit <input type="checkbox"/> 1,000 or more person event for 2 or more days per year <input type="checkbox"/> Hospital/Clinic <input type="checkbox"/> Industrial <input type="checkbox"/> Licensed Residential Facility <input type="checkbox"/> Lodging <input type="checkbox"/> Recreational / RV Park <input checked="" type="checkbox"/> Residential <input type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input type="checkbox"/> Other (church, fire station, etc.):																				
<b>13. WATER SYSTEM OWNERSHIP (mark only one)</b> <input type="checkbox"/> Association <input type="checkbox"/> City / Town <input type="checkbox"/> County <input type="checkbox"/> Federal <input checked="" type="checkbox"/> Investor <input type="checkbox"/> Private <input type="checkbox"/> Special District <input type="checkbox"/> State			<b>14. STORAGE CAPACITY (gallons)</b> 41,200																	
Source Number	<b>15</b>	<b>16</b> SOURCE NAME	<b>17</b> INTERTIE	<b>18</b> SOURCE CATEGORY					<b>19</b> USE	<b>20</b> TREATMENT			<b>22</b> DEPTH	<b>23</b>	<b>24</b> SOURCE LOCATION					
		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 IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	WELL IN A WELL FIELD	
	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

<b>1. SYSTEM ID NO.</b> 31040 6	<b>2. SYSTEM NAME</b> CAL WATERWORKS	<b>3. COUNTY</b> ISLAND	<b>4. GROUP</b> A	<b>5. TYPE</b> Comm								
			ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS							
<b>25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)</b>				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									
<b>26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)</b>												
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									
<b>27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)</b>												
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							
<b>28. TOTAL SERVICE CONNECTIONS</b>				100	121							
<b>29. FULL-TIME RESIDENTIAL POPULATION</b>												
A. How many residents are served by this system 180 or more days per year? <span style="float: right;">235</span>												
<b>30. PART-TIME RESIDENTIAL POPULATION</b>	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?												
<b>31. TEMPORARY &amp; TRANSIENT USERS</b>	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?												
<b>32. REGULAR NON-RESIDENTIAL USERS</b>	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?												
<b>33. ROUTINE COLIFORM SCHEDULE</b>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1
<b>34. NITRATE SCHEDULE</b>	QUARTERLY			ANNUALLY			ONCE EVERY 3 YEARS					
(One Sample per source by time period)												
<b>35. Reason for Submitting WFI:</b>												
<input type="checkbox"/> Update - Change <input checked="" type="checkbox"/> Update - No Change <input type="checkbox"/> Inactivate <input type="checkbox"/> Re-Activate <input type="checkbox"/> Name Change <input type="checkbox"/> New System <input type="checkbox"/> Other _____												
<b>36. I certify that the information stated on this WFI form is correct to the best of my knowledge.</b>												
SIGNATURE: <u>Aneta Hupf</u>						DATE: <u>4/14/23</u>						
PRINT NAME: <u>ANETA HUPFAUER</u>						TITLE: <u>EHS III</u>						