



State of Washington
DEPARTMENT OF HEALTH
 NORTHWEST DRINKING WATER REGIONAL OPERATIONS
 20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

June 27, 2018 Members of the Board 370 N East Camano Dr Suite 5 P Camano Island WA 98282	Driftwood Heights Association	
	ID #19948	
	County:	Island
	System Type:	Community
	Operating Permit Color:	Green
	Surveyor:	Denis Mehinagic
	Inspection Date:	May 21, 2018

Thank you for meeting with me to conduct a survey of this water system. Sanitary surveys are the Office of Drinking Water's (ODW) way to inspect public water systems through a field visit. ODW is also able to offer technical assistance to help utilities improve their system operations and ensure that public health is protected.

This report documents the findings of this survey. In general, your water system is in fair condition. Deficiencies that need your attention are summarized below. **Please respond to all the identified observations and findings within 30 days from the date of this report and provide documentation demonstrating the findings addressed or your plan for addressing them.**

SIGNIFICANT DEFICIENCIES

None

SIGNIFICANT FINDINGS

None

OBSERVATIONS

1. The modifications to the booster pump station are considered to be a change in the system design that requires DOH approval. The systems Operating Permit could be changed from Green to Blue. You will need to work with your engineer to submit a project report to our office.
2. All Group A – Community Water systems are required to have a Cross Connection Control Program in accordance with WAC 246-290-490. It is the Board's responsibility to ensure the water system complies with this requirement. Please develop and implement a Cross Connection Control Program. An example program and guidance about how to develop one is available on website at: <http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/WaterSystemDesignandPlanning/CrossConnectionControlBackflowPrevention/CrossConnectionControlforSmallWaterSystems.aspx>
3. Update your Coliform Monitoring Plan to reflect changes made to the rule. A template can be found on our website. Please send a copy to this office for review.

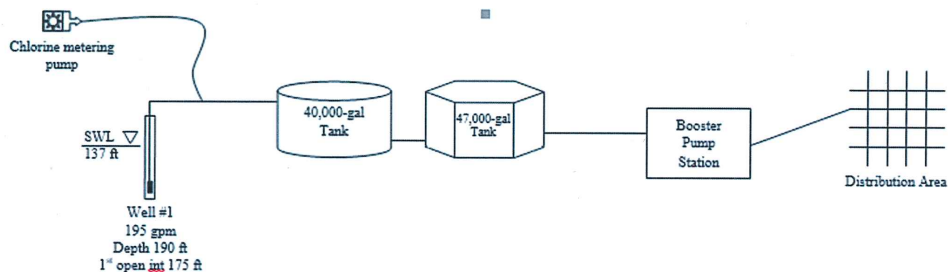


OBSERVATIONS FROM THE PREVIOUS DECEMBER 9, 2013 SURVEY:

1. The modifications to the booster pump station are considered to be a change in the system design that requires DOH approval. You will need to work with your regional engineer, Erika Lindsey, to determine how she would like you to address this issue. Please contact Erika to discuss the next steps. **(On-going)**
2. Even though your system is all residential, you should still have a cross connection control program. The first step can be to send out a questionnaire to all of the customers to determine the extent of the other program components that would be needed. **(On-going)**
3. All water systems are required to have some type of planning document. For your size/type system, our "small water system management program" (swsmp) is likely the appropriate document. Regulatory requirements aside, the document is a useful tool to organize water system information and serves as a good guide for what the drinking water regulations expect of a small water system purveyor. It is also a document that the board members themselves can put together and may find it a very useful exercise to do. Completion of the swsmp is required, but submittal of the completed document is not required at this time. It will be requested at your next sanitary survey. **(On-going)**

SYSTEM INFORMATION

Driftwood Heights Association water system serves single-family homes in a residential community on Camano Island. It has approved capacity for 116 residential connections, currently serving 114 connections with a population of 201 people. System facilities are located on a fenced lot that shares the site with facilities for the Driftwood Heights #2 water system. Its single source is a well with a submersible pump that pumps, with continuous hypochlorination to two reservoirs (operate in series) that have a total capacity of about 80,000 gallons.



SECTION 1: SOURCE

S01 – Well#1: Observed = gpm; Qdesign = 195 gpm (WFI says 300 gpm); WR = gpm

The area around the well head is currently dug up as part of the pressure system changes underway. The casing extends at least 24 inches above grade. The well pumps directly to the round tank and is controlled by level controls in the tank. There is a source meter, sample tap, and screened vent. The well site is fenced. There is a house on the lot adjacent to the well site on the south side that falls partially within the 100' radius. Hawthorne Lane runs along the east side of the well site with another lot that falls partially within the 100' radius.

S02 – Emergency Intertie with Driftwood Heights #2

Gravity feed only from Driftwood Heights #2. Intertie must be manually opened and tanks for both systems managed to avoid overflowing or emptying them due to difference in system head. But in an emergency, water can be made to flow either direction.

Source ID #	Name:	Description:	Ecology Tag #	SWI* classification
01	AGA708 Well 1	Ground Water Well	AGA709	Low

* SWI classification based on Island County Seawater Intrusion Code.

WELLHEAD	Source ID # 01	
	Yes	No
System has well log	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Wellcap sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Openings sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Vent screened	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Terminates 6" above grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected from flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Source meter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Raw water sample tap	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from unauthorized access	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Sanitary control area has no unmitigated contaminants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from physical damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Frequency of routine site visit	2/week	
Frequency of source meter reading	2/week	

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

EMERGENCY SOURCES

ID #	Name:	Description:	Ecology Tag #	Listed on WFI		Disconnected		Inspected	
				Yes	No*	Yes	No*	Yes	No*
S02	22871/Driftwood Heights #2	Emergency Well	BAA981	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SECTION 2: DISINFECTION

12.5% chlorine solution is used, diluted 1:10. The solution tank and metering pump are located in a shed next to the pump house and located near the well head. Chlorine is injected in a meter box between the well head and chlorine shed. A system operator visits the system at least twice/week and measures chlorine residual in the pump house and in the distribution system. A community member also measures chlorine residual on an occasional basis.

#	Site or Location	Treatment type, Chemical Used	CT Provided	
			Yes	No
1	Pump House	Chlorination Disinfection	<input type="checkbox"/>	<input checked="" type="checkbox"/>

HYPOCHLORITE ADDITION	1	
	Yes	No
Hypochlorite concentration %	12.5%	
Feed solution concentration	1:10	
Hypochlorite solution located in separate room	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISINFECTION COMPLIANCE	1	
	Yes	No
Disinfection required	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CT required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
**Minimum CT met at all times	<input type="checkbox"/>	<input type="checkbox"/>
Peak flow used to calculate CT	<input type="checkbox"/>	<input type="checkbox"/>
**Monthly report submitted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Residuals maintained in distribution system	<input type="checkbox"/>	<input type="checkbox"/>
Daily residuals recorded	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Your system is required to hold a detectable chlorine residual in the distribution system. A detectable residual is defined as 0.2 mg/L free chlorine. Please make sure that all reading meet the standard.

SECTION 3: OTHER TREATMENTS

The system does not have any other treatment.

SECTION 4: DISTRIBUTION SYSTEM

FEATURES	Yes	No
Service area and facility map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum pressure requirements met	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Service meters (reading frequency _____)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FEATURES	Yes	No
Leak detection program	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water system leakage (%)	N/A	
Number of breaks within last year	0	
Main break response protocol	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adequate valving for flushing and pipe repair	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Blow-offs on dead ends	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Routine flushing (frequency <u>As Needed</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Routine valve exercise (frequency <u>As Needed</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

No formal program, residential connections only, questionnaire has not been sent out

SECTION 5: FINISHED WATER STORAGE

40,000 gal Circular Concrete Storage Tank and 47,000-gal Hexagonal Concrete Storage Tank. The circular tank is the first tank filled directly by the well. It has a dedicated inlet and separate outlet that then feeds the hexagonal tank. The hexagonal tank has a dedicated inlet and separate outlet that then feeds the booster pumps. There is a bypass that allows one or both tanks to be bypassed. There is also an annual inspection of the tanks. We only climbed and looked into the circular tank. The overflow and vent are adequately screened. The access hatch on the circular tank appeared to be in good condition and water clarity was good.

RESERVOIR	RESERVOIR NAME	DESCRIPTION	YEAR BUILT	TOTAL VOLUME (GAL)
1	Tank 1	Hexagonal Concrete Storage Tank		40,000
2	Tank 2	Hexagonal Concrete Storage Tank		47,000

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

FEATURES	Res #1		Res #2	
	Yes	No	Yes	No
Separate inlet/outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accessible drain outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Protected overflow outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Overflow line discharges into a sanitary sewer with an air gap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational water level gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bypass piping or isolation possibility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Protected from unauthorized entry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low level alarms	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample tap at outlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MAINTENANCE	Res #1		Res #2	
	Yes	No	Yes	No
Frequency of interior cleaning and inspection	3- 5 Years		3-5 Years	
Frequency of appurtenance inspection	Weekly		Weekly	
Frequency of routine site visit	Weekly		Weekly	
**Structure in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Clear of excessive vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 6: PRESSURE TANKS

This system has 1 large hydroneumatic tank.

Site	Location	# and size of Hydropneumatic Tanks	# and size of Bladder Tanks
1	Main Structure	1	

HYDROPNEUMATIC	Site: 1	
	Yes	No
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water level sight glass	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Can be isolated	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Oilless Air compressor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
**Structurally in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

SECTION 7: BOOSTER PUMPS AND FACILITIES

Facility	Name	Description	Total Capacity (gpm)
1		Main Building next to Storage Tanks and Well	Unk

BOOSTER PUMPS	Facility 1	
	Yes	No
Number of pumps	2	
Frequency of routine site visit	weekly	
Isolation valves	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure gauge(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure relief valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pump failure alarm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*Functional pump and pump controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protected from flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Redundant pumps	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Equipment in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator has automatic startup	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Generator fuel source	propane	

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 Steve Hulsman at (253) 395-6777.

CHEMICAL	
Sample Point	Description
1	Nitrate = 1.6 mg/L
2	HAA5 = 1.1 ug/L
3	TTHM's = 21.8 ug/L

CHEMICAL	Sample Point 1		Sample Point 2		Sample Point 3	
	Yes	No	Yes	No	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ODW WQ data reviewed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample collection sites correct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
System has prior:						
<input type="checkbox"/> Nitrate results above 5 mg/L						
<input type="checkbox"/> Nitrite results above 0.5 mg/L						
<input type="checkbox"/> Primary MCL						
<input type="checkbox"/> Secondary MCL exceedance(s)						
<input type="checkbox"/> Organic detections						
<input type="checkbox"/> Other _____						

COLIFORM	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
# of violations since last survey	0	

LEAD & COPPER	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Results below action level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Optimal Water Quality Parameters achieved	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISINFECTION BYPRODUCTS	Yes	No
Monitoring adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Monitoring plan followed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Results satisfactory	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SECTION 9: SYSTEM MANAGEMENT AND OPERATIONS

There is no current planning document or an asset inventory for the water system. Please download Small Water System Management Program Guidebook and start gathering the water system information in one package. Building an asset inventory and understanding when things are due for replacement is needed for the board to understand what the rate structure should be in order to cover the current and future cost of owning and operating the water system. Evaluating the true cost of water service would benefit the association.

PROJECT/PLANNING	Yes	No
System approved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current WSP/SWSMP	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Year WSP/SWSMP approved		
Emergency response plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Financial plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

OPERATOR CERTIFICATION

This system is required to have WDS certified operators.

Name of Operator	Certification Number	Certifications	Mandatory Operator
Sandra King	013082	WDM2, WTPO2, CCS	<input checked="" type="checkbox"/>

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

OPERATIONS	Yes	No
Operational records maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Complaints followed up	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Complaints documented	<input checked="" type="checkbox"/>	<input type="checkbox"/>

June 27, 2018

OPERATIONS	Yes	No
# of complaints recorded at ODW (since last survey)		0
Operation and maintenance program	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Previous survey deficiencies/findings corrected	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CLOSING

The Drinking Water Regulations require that all Group A public water systems have a sanitary survey every 3-5 years. In order to receive credit for the survey, a sanitary survey fee must be paid. Enclosed is an invoice for \$459. Please remit your 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 send payment to: **DOH, Revenue Section, P.O. Box 1099, Olympia, WA 98507-1099.**

Your next survey is due in 2023.

If you have any questions, please contact me at (253) 395-6764 or by e-mail at denis.mehinagic@doh.wa.gov



Denis Mehinagic, M.S.
Office of Drinking Water, Regional Engineer

cc: Sandra Bodamer, King Water
Aneta Hupfauer, PhD., Island County Public Health
Brian Boye, DOH



Office of Drinking Water
INVOICE
Engineering, Planning, and Sanitary Survey Review Form

TO: SANDRA BODAMER
DRIFTWOOD HEIGHTS ASSOCIATION
PO BOX 2243
OAK HARBOR WA 98277

ATTN: ACCOUNTS PAYABLE DEPT

Invoice Number	N03040	
Invoice Date	June 27, 2018	
Billing Period	30 days	NW

DATE	DESCRIPTION	QTY	COST	AMOUNT
6/27/2018	SURVEY FEE DRIFTWOOD HEIGHTS ASSOCIATION ISLAND COUNTY PWS ID 19948 DATE OF SURVEY: 5/21/2018	1	1	\$459.00
	Total			\$459.00
Payment due within 30 days. Interest shall accrue at 1% per month after 30 days.				

Make Checks Payable to Department of Health

Return Lower Portion to:

Department of Health
PO Box 1099
Olympia, WA 98507-1099

Office of Drinking Water
Engineering, Planning, and Sanitary Survey Review Form

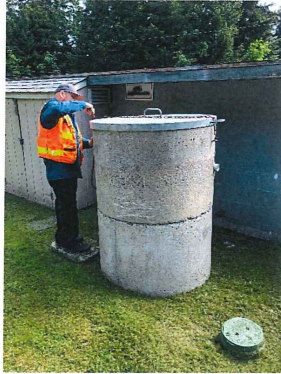
NAME	DRIFTWOOD HEIGHTS ASSOCIATION	
INVOICE NUMBER	N03040	
INVOICE DATE	June 27, 2018	NW
AMOUNT	\$459.00	

DOH Form #331-332

Return to:
Department of Health
Revenue Section
PO Box 1099
Olympia, WA 98507-1099

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY 1-800-833-6388).

2 044129 00878



Source 1



Source 1



Chlorine Tank



Chlorine Injection



Booster Pump



Booster Pump



Emergency Generator



Storage tank 1 Vent



Storage Tank 1 Hatch



Storage Tank 1 Hatch Seal



Float Level Gage



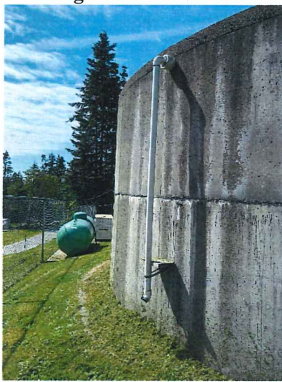
Storage Tank 2 Hatch



Storage Tank 2 Hatch Seal



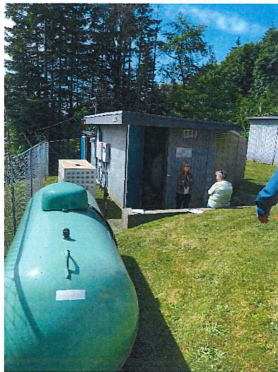
Storage Tank 2 Vent



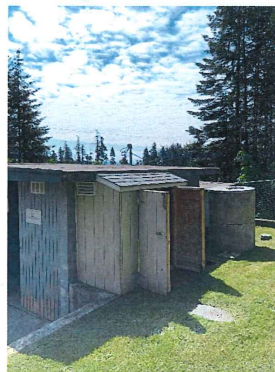
Storage Tank 1 Overflow



Storage Tank 2 Overflow



Overview of Facilities



Overview of Facilities