



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

December 20, 2013

CLIVE DEFTY  
DRIFTWOOD HEIGHTS ASSOCIATION  
PO BOX 2243  
OAK HARBOR WA 98277

Subject: Driftwood Heights Association (ID #19948)  
Island County  
Routine Sanitary Survey

Dear Mr. Defty:

This letter is written in follow up to my routine sanitary survey of the Driftwood Heights Association on December 9, 2013. Thank you to Fernando for meeting with me and showing me around the water system.

The purpose of a routine survey is to identify any immediate health concerns and to assess the operation, maintenance and management of the water system. I did not identify any significant deficiencies. In general, your water system is in good sanitary condition and you should be commended for your efforts and diligence on the water system. Enclosed is a copy of the sanitary survey report – you should review it for content and accuracy.

It is also evident that system improvements have been made when they are needed, even at a sometimes high cost to customers. It's this kind of proactive work that will help keep your system viable many years into the future.

The Drinking Water Regulations require that all Group A water systems have routine sanitary surveys conducted. In order to receive credit for the survey, a sanitary survey fee must be paid. The total cost is \$1,020. The Office of Drinking Water has used state and federal funds to pay \$510 of this amount. An itemized invoice showing the remaining amount due of \$510 is enclosed. Please send your complete payment in the form of a check or money order within thirty days of the date of this letter to: **DOH, Revenue Section, P.O. Box 1099, Olympia, WA 98507-1099.**

Please note that satisfying the conditions of this sanitary survey does not necessarily mean that your water system is fully compliant with other applicable requirements that may be found under other federal, state, or local statutes, ordinances, or regulations. These and other departmental requirements should be addressed separately from the sanitary survey process.

Please give me a call at 253/395-6762 if you have any questions or concerns. Let me know if there are any significant inaccuracies in the enclosed documents and I will make the necessary corrections.

Sincerely,

Jolyn Leslie  
Regional Engineer  
NW Drinking Water Operations

Enclosures

cc: Island County Public Health  
Erika Lindsey – DOH





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

TO: CLIVE DEFTY  
DRIFTWOOD HEIGHTS ASSOCIATION  
PO BOX 2243  
OAK HARBOR WA 98277

ATTN: ACCOUNTS PAYABLE DEPT

Invoice Number	N01537	
Invoice Date	December 20, 2013	
Billing Period	30 days	NW

DATE	DESCRIPTION	QTY	COST	AMOUNT
12/20/2013	SURVEY FEE	1	1	\$1020.00
	DRIFTWOOD HEIGHTS ASSOCIATION ISLAND COUNTY PWS ID 19948 DATE OF SURVEY: 12/9/2013 Engineer			
	DOH Share			<u>\$510.00</u>
	Total			<b>\$510.00</b>
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	N01537	
INVOICE DATE	December 20, 2013	NW
AMOUNT	<b>\$510.00</b>	

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

DOH Form #331-332

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).



STATE OF WASHINGTON  
 DEPARTMENT OF HEALTH  
 NORTHWEST DRINKING WATER REGIONAL OPERATIONS  
 20425 72nd Avenue South, Suite 310, Kent Washington 98032-2388  
**SYSTEM INSPECTION / SANITARY SURVEY REPORT**  
 Date: December 9, 2013

**DRIFTWOOD HEIGHTS ASSOCIATION** Island County (ID #19948)

Persons Attending:  
 Fernando Pedroza – King Water  
 Jolyn Leslie – DOH

Purpose: Routine Sanitary Survey

**SYSTEM SUMMARY / FINDINGS**

Last surveyed: 5/11/10

Issues from last survey:

- Consider installing a liner in the North (octagonal) reservoir to control the leak and improve water security; **Status: Still remains, should still consider for future action.**
- Read meters on a regular basis and begin calculating water use efficiency; **Status: Still remains,** install all service meters by January 2017 deadline.
- A water system this large with a single source should consider drilling a second well to provide redundancy and a back-up well for when the existing well eventually fails; **Status: Still remains,** though there is some level of reliability with intertie.

Approval status: Existing Connects = 114  
 Eng Capacity = 116  
 Total Lots =

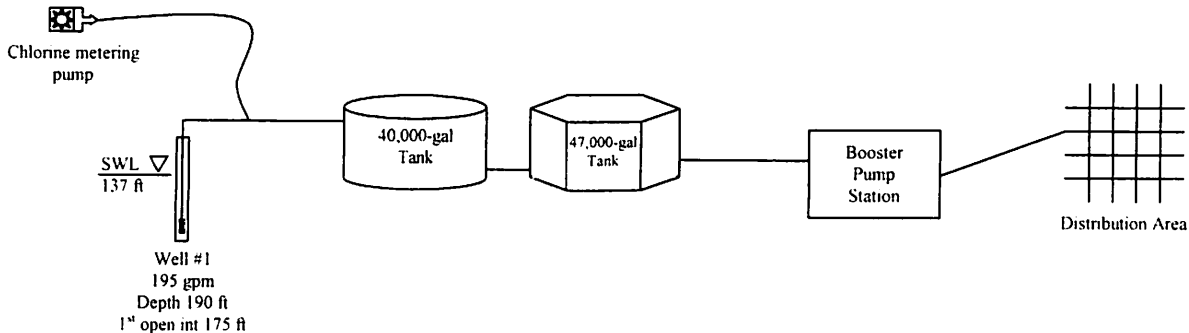
System Type: Group A – Community

**WATER QUALITY HISTORY:**

Bacteriological : Satisfactory for past 2+ years (occasional TC+ samples, but not confirmed)  
 Nitrate : ND-1.6 mg/l  
 Exceed MCL? : None

**SYSTEM SCHEMATIC**

System is currently modifying pressure system so a detailed pressure schematic is not included here.



#### GENERAL SYSTEM DESCRIPTION

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. The distribution system is currently being modified that will result in two separate pressure zones being served from a single booster pump station.

#### SOURCES:

S01 – Well#1:  $Q_{\text{observed}} = \text{gpm}$ ;  $Q_{\text{design}} = 195 \text{ gpm}$  (WFI says 300 gpm);  $WR = \text{gpm}$

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.

#### TREATMENT:

Purpose: Disinfection

Facilities: 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.

#### 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. The tanks were last cleaned about 2 years ago and are on a triennial cleaning schedule. 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.

#### DISTRIBUTION:

Current Set-up (currently under modification)

The system is currently only running on part of the total pressure system and has installed a PRV to reduce pressure to the lower zone. The system has been having problems with the smaller pressure tank so it is currently bypassed and is scheduled to be removed. There is a propane generator on-site; automatic testing occurs once/week.

MANAGEMENT & OPERATIONS:

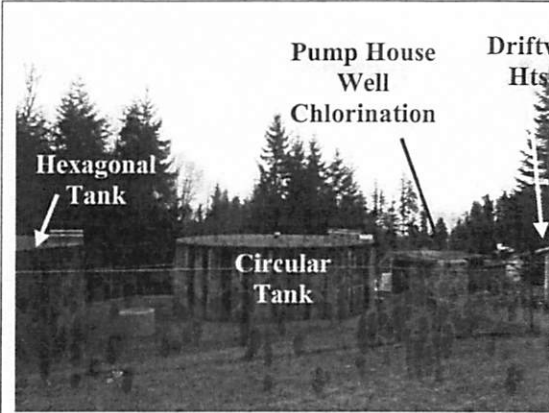
Water System Plan	Clive is not sure if a Small Water System Management Program has been completed.
WFI Update	No changes needed.
Water Quality Monitoring Report	All monitoring on schedule
Coliform Monitoring Plan	Rotate between 6 or 7 routine sites
DBP Monitoring Plan	Reduced triennial, last samples in 2012. Need to start Stage 2 monitoring in 2014.
Consumer Confidence Report	Yes, submitted for 2012, King Water develops
Last Sanitary Survey	5/11/10
Operating Permit	Green
Overall Design Approval	Yes, but need to get approval of booster pump modifications
Certified Operator	Yes, Sandra Bodamer (operator of record)
O&M Manual	King Water has standard O&M Manual
Flushing Program	Annual or twice/year, depending on need
Valve Exercise	Yes, same time as flushing
Routine practice for main repair	King Water does repairs, if it's a small fix, they generally maintain positive pressure and isolate the break; larger breaks may require shutting down part/all of the system.
Water Use Efficiency Program	Annual reports submitted 2010, 2011, 2012
Individual Customer Meters	Not all customer meters have been installed, plan to have meters installed by January 2017 deadline
Distribution System Leakage	Not calculated
Cross Connect Program	No formal program, residential connections only, questionnaire has not been sent out
Wellhead Protection Program	No formal program
Emergency Response Plan	King Water has standard plan – Fernando is usually first responder as he lives nearby.
Financial Viability Program	Financial viability may be limited; system has spent a good sum of money in recent years on installing chlorination, redoing piping for tanks, expanding pressure system, and will need to spend more money on current pressure system changes and meter installation.
Management Structure	Association Board oversees administrative side; King Water manages/operates with input from Board
Complaints	None on file since last survey

RECOMMENDATIONS AND OBSERVATIONS

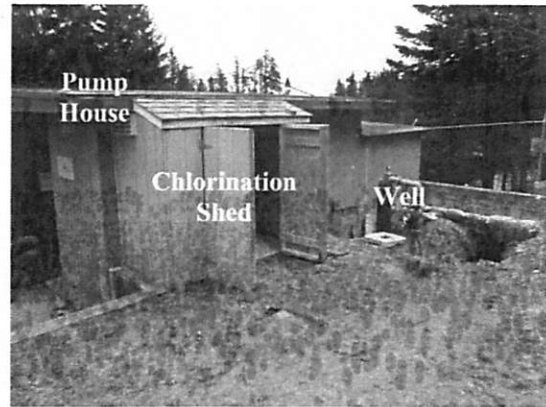
1. The modifications to the booster pump station are considered to be a change in the system design that requires DOH approval. You will need to work with your regional engineer, Erika Lindsey, to determine how she would like you to address this issue. Please contact Erika to discuss the next steps.
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.

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.

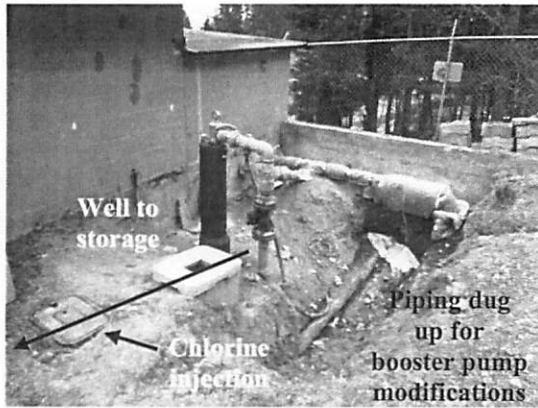
Driftwood Heights Association Water System; ID #19948; December 9, 2013  
Routine Sanitary Survey



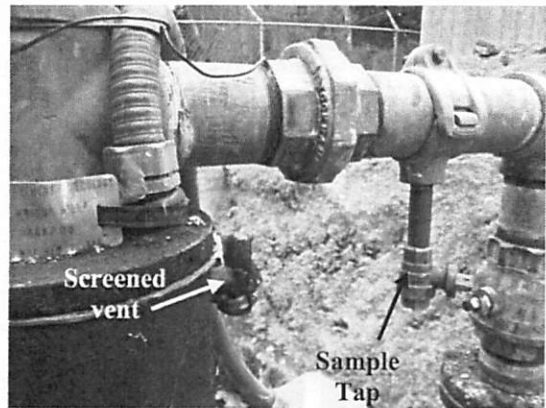
Well/tank site



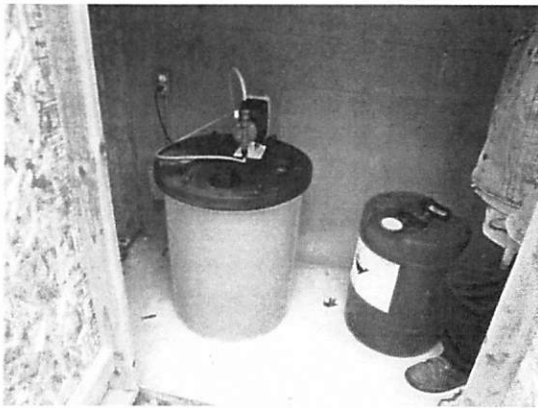
Well and pump house



Well #1



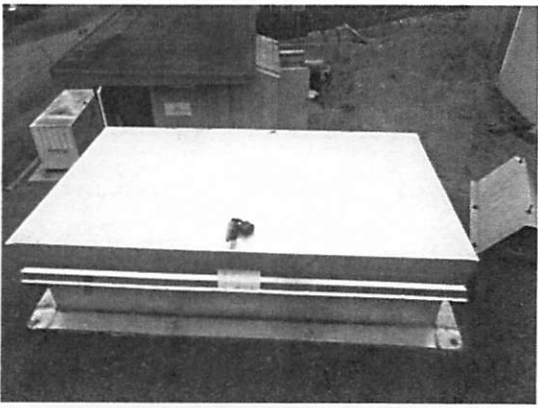
Well #1



Chlorination equipment



Looking at hexagonal tank

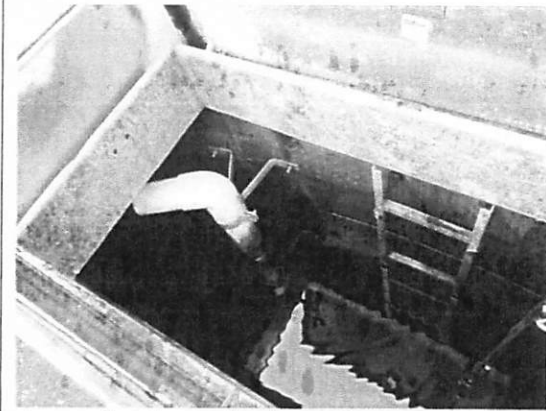


Access hatch on circular tank

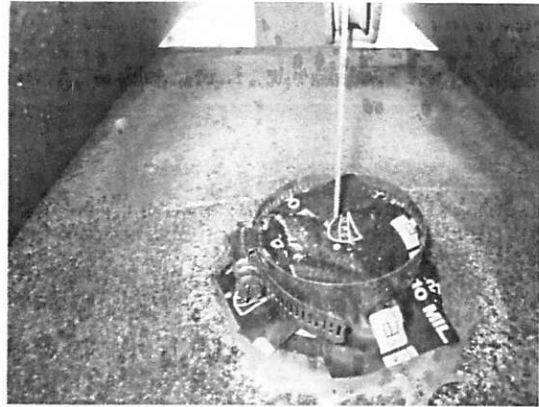


Access hatch on circular tank

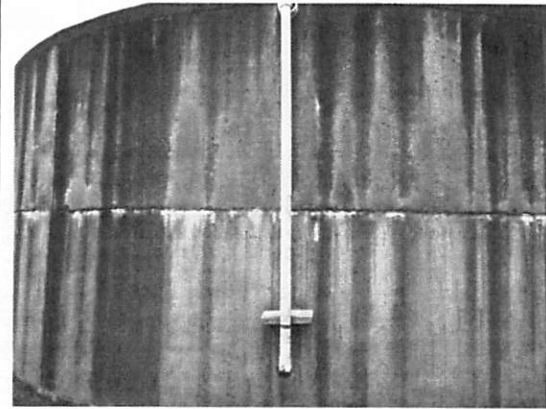
Driftwood Heights Association Water System; ID #19948; December 9, 2013  
Routine Sanitary Survey



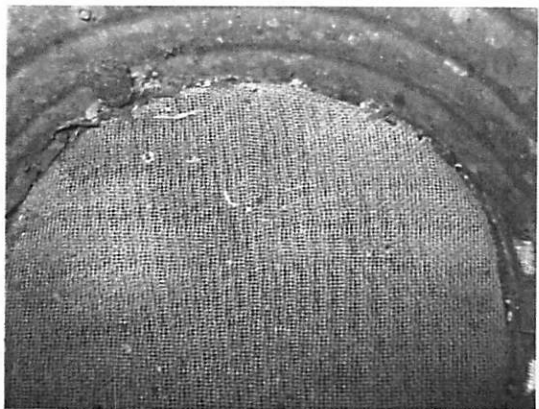
Access hatch on circular tank



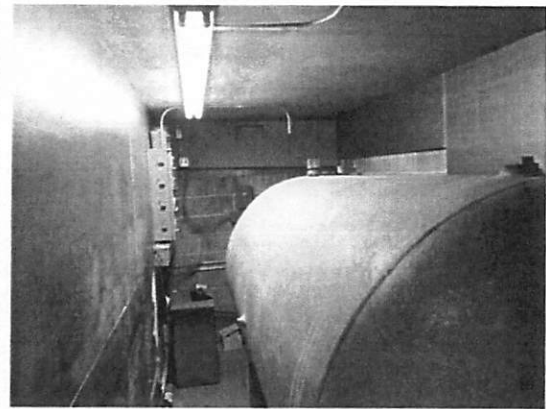
Level indicator wire on circular tank



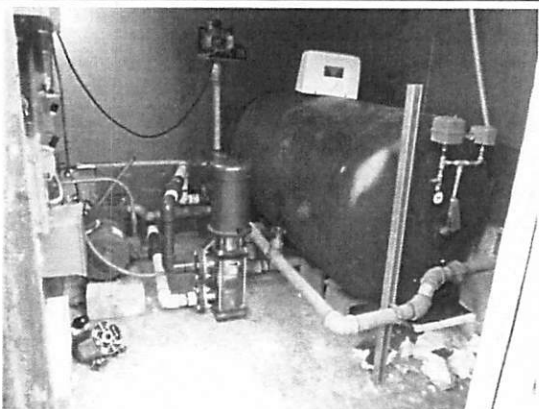
Screened overflow (typical of both tanks)



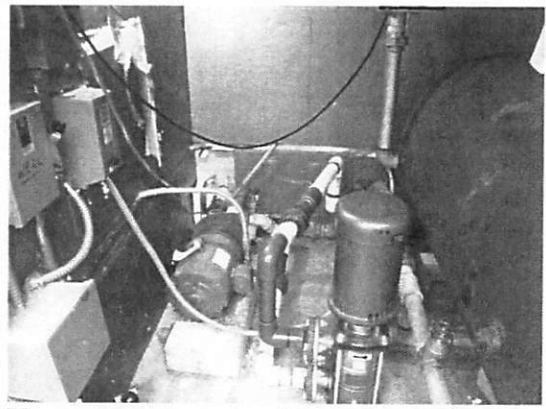
Screened vent on circular tank



Lower pressure system (larger pressure tank)



Upper pressure system (to be removed)



Upper pressure system (to be removed)