



RECEIVED

APR 14 2016

Beacon Hill Water & Sewer District

STATE OF WASHINGTON  
 DEPARTMENT OF HEALTH  
 SOUTHWEST DRINKING WATER REGIONAL OPERATIONS  
 P.O. Box 47823 Olympia, Washington 98504-7823  
 TDD Relay 1-800-833-6388

April 12, 2016  Dell Hilger 1121 Westside Highway Kelso, Washington 98626	<b>Beacon Hill Water and Sewer District          ID #15650D</b>	
	County:	Cowlitz
	System Type:	Group A Community
	Operating Permit Color:	Green
	Surveyor:	Teresa Walker
	Inspection Date:	March 30, 2016

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. Deficiencies that need your attention are summarized below. As you correct the items, send me documentation that demonstrates the items have been completed as directed. Include the system name, ID number, and the date the deficiencies were corrected. You can send them to me by e-mail at [teresa.walker@doh.wa.gov](mailto:teresa.walker@doh.wa.gov) or by mail at PO Box 47823, Olympia, Washington 98504-7823.

**SIGNIFICANT FINDINGS\*\* - BY MAY 30, 2016**

1. **Please provide a watertight seal for the Ostrander reservoir cover.**
2. **Please modify the vent opening and install screens for the Beacon Hill reservoir.**

**RECOMMENDATIONS**

3. **Please confirm that the Beacon Hill tank support structure is structurally sound, following the inspection.**
4. **The Lexington tank is in need of exterior pressure washing.**
5. **This system should plan for installing small booster pump stations for areas where the pressure is below 30 psi.**
6. **The system should investigate adding mixing to the reservoirs to lower trihalomethane levels (THMs).**

**SYSTEM INFORMATION**

In 2010, Beacon Hill Water and Sewer District (Beacon Hill) assumed ownership of the Cowlitz County PUD system. They had managed the system from 2008-2010 and transferred ownership in 2010. Prior to managing the system, they were only a Sewer District. They have had a steep learning curve and have been very proactive about addressing deficiencies and planning for the future of the system.

The system is 15% owner of the Longview Mint Farm treatment facility and obtains all its water from this facility. Surprisingly, they have not had the same level of water quality issues that Longview has had since the Mint Farm wells went on line. Beacon Hill has three emergency well sources which are tested and run each year, but they have not been in operation for a very long time. There is a governing Board for the Regional Treatment Plant with both Longview and Beacon Hill as members. The Longview facility is operated by City of Longview employees.

This system consists primarily of single family residences (85 percent), a few apartments and mobile home parks, and very few commercial institutions. Most of the water system resides in unincorporated Cowlitz County.

**SECTION 1: SOURCE**

Beacon Hill receives water through four interties with the City of Longview and two interties with the City of Kelso under water wheeling agreements.

Source ID #	Name:	Description:	Ecology Tag #	Listed on WFI	
				Yes	No
S01	48100/Longview	4 Interties		<input checked="" type="checkbox"/>	<input type="checkbox"/>
02	38000/Kelso	Intertie		<input checked="" type="checkbox"/>	<input type="checkbox"/>
03	Woodbrook County Park	3 emergency wells		<input checked="" type="checkbox"/>	<input type="checkbox"/>
04	48100/Longview/ Curtis Drive	Intertie, 500 gpm		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Kelso has two interties at Williams/Finney reservoir and Cowlitz Gardens.

**EMERGENCY SOURCES**

ID #	Name:	Description:	Ecology Tag #	Listed on WFI		Disconnected		Inspected	
				Yes	No*	Yes	No*	Yes	No*
03	Woodbrook	3 groundwater wells		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

There are three wells in Woodbrook County Park belonging to Beacon Hill. They are physically disconnected and low producers.

**SECTION 2: DISINFECTION**

Beacon Hill has one chlorination system approved for the Ostrander area in 2013. With that exception there are no rechlorination facilities on the system, and they rely on Longview to provide a residual in the distribution system.

Monthly reports are submitted to DOH and they measure 5 days per week.

#	Site or Location	Treatment type and Chemical Used	Listed on WFI		CT Provided	
			Yes	No	Yes	No
1	Ostrander	Hypochlorite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CHEMICAL TREATMENT	1	
	Yes	No
Operated and maintained properly	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*RPBA or air gap between the chemical tank and fill waterline	NA	
**Post treatment sample tap	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Redundant equipment available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schematic of treatment facilities available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adequate chlorine residual test kit available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Test kit calibrated and maintained properly	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chemical feed proportional to flow	NA	
**Approved chemicals used	<input checked="" type="checkbox"/>	<input type="checkbox"/>

HYPOCHLORITE ADDITION	1
	Hypochlorite concentration %
Feed solution concentration	1:10
Hypochlorite solution located in separate room	NA

Hypochlorite is fed directly into the Ostrander reservoir, although CT is not required. An average residual of 0.5 to 0.8mg/l is maintained.

DISINFECTION COMPLIANCE	1	
	Yes	No
Disinfection required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CT required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monthly report submitted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Residuals maintained in distribution system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Daily residuals recorded	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**SECTION 3: OTHER TREATMENTS**

There are no other treatment facilities on the system.

**SECTION 4: DISTRIBUTION SYSTEM**

FEATURES	Yes	No
Service area and facility map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum pressure requirements met	<input type="checkbox"/>	<input checked="" type="checkbox"/>

FEATURES	Yes	No
Service meters (reading frequency <u>monthly</u> )	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Leak detection program	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water system leakage (%)	7%	
Adequate valving for flushing and pipe repair	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Blow-offs on dead ends	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Routine flushing (frequency <u>annually</u> )	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Routine valve exercise (frequency <u>annually</u> )	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Approximately 40 percent of pipe is AC. There are some dead ends without blow-offs, but most do have them. Problem areas are flushed monthly. There are a few areas where pressure is less than 30 psi at the meter in the Cedar Gates area. **This system should plan for installing small booster pump stations for areas where the pressure is below 30 psi.**

We discussed water main break procedures and notification to ODW, and guidelines were handed out. The majority of breaks are on service saddles. They have started a unidirectional flushing program. They contract out meter reading.

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 checked="" type="checkbox"/>	<input type="checkbox"/>
High hazards protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Annual testing	<input checked="" 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"/>

The cross connection program has improved significantly since Beacon Hill assumed ownership of the system. The system has 300 assemblies. They have BMI on contract to update their ordinance, provide SOPs, and educational materials. Jennifer uses a tracking program to track devices and send out notifications. Troy is BAT certified.

## SECTION 5: FINISHED WATER STORAGE

The system has eight reservoirs total (nine if Woodbrook is counted as two).

RESERVOIR	RESERVOIR NAME	DESCRIPTION	YEAR BUILT	TOTAL VOLUME (GAL)
1	Skyline View	Concrete-Ground Level		280,000
2	Cedar Gates	Steel stand pipe	1968	150,000
3	Lone Oak Road	Steel stand pipe		200,000
4	Beacon Hill Reservoir	Elevated Steel Tank	1927	70,000
5	Williams-Finney	hydro pneumatic tank		2,000
6	Ostrander	Concrete-Ground Level		160,000
7	Lexington	Steel Above Ground		1,000,000
8	Woodbrook	Concrete, two separate compartments		90,000/30,000

The Grandview Terrace reservoir was demolished in 2014. Five reservoirs were inspected during this survey.

TOP OF RESERVOIR	Woodbrook	Ostrander	Lexington	Beacon Hill	Skyline View
	Yes No	Yes No	Yes No	Yes No	Yes No
**Hatch: Locked	NA	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Hatch: Watertight seal or gasket	NA	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	NA
Hatch: Over-lapping cover	NA	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
*Screened air vent	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
*Openings sealed/protected	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>

Woodbrook is a rectangular reservoir that is accessed from a ground level door. It has an aluminum roof in good condition. There is a concrete wall between two compartments.

Ostrander does not have a gasketed hatch, as it is a manhole cover to an at-grade reservoir. **Please provide a watertight seal for this cover.** Ostrander and Skyline are below grade reservoirs and have at grade vents which are screened. Beacon Hill is an elevated steel tank supported by a steel truss. Beacon Hill will have a structural inspection performed next month. The vent for Beacon Hill does not have a screen. **Please modify the vent opening and install screens for Beacon Hill reservoir. Please confirm that the Beacon Hill tank support structure is structurally sound, following the inspection.**

**The Lexington tank is in need of exterior pressure washing.**

FEATURES	Woodbrook	Ostrander	Lexington	Beacon Hill	Skyline
	Yes No	Yes No	Yes No	Yes No	Yes No
Separate inlet/outlet	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
Protected drain outlet	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>

FEATURES	Woodbrook	Ostrander	Lexington	Beacon Hill	Skyline
	Yes No	Yes No	Yes No	Yes No	Yes No
*Overflow line discharges into a sanitary sewer with an air gap	NA	NA	NA	NA	NA
Operational water level gauge	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
Bypass piping or isolation possibility	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<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"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
Sample tap at outlet	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>

MAINTENANCE	Woodbrook	Ostrander	Lexington	Beacon Hill	Skyline
	Yes No	Yes No	Yes No	Yes No	Yes No
Frequency of structural and coating inspection	NA	NA		5 years	NA
Frequency of cleaning	2011	2009	2011	2012	2011
Frequency of appurtenance inspection	qweekly	weekly	weekly	weekly	weekly
Frequency of routine site visit	weekly	weekly	weekly	weekly	weekly
**Structure in good condition	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input 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"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>

**SECTION 7: BOOSTER PUMPS AND FACILITIES**

The system has six booster pump stations. A new SCADA system was installed in 2015 which relies on cellular providers and transmits reservoir levels, pump status, and alarms over the internet to operators' cell phones and the administrative building. This has been a big improvement and allows operators to see real time conditions and make operational changes remotely.

Facility	Name	Description	Total Capacity (gpm)
1	Hillside BPS	2-75 HP pumps, 1-50 HP pump, pumps to Skyline	1100 gpm
2	Skyline Terrace PS	2-40 HP pumps, pumps to Grandview	375 gpm
3	Grandview Pump Station	2-40 HP pumps, pumps to Cedar Gates	375 gpm
4	Williams Finney PS	2-15 HP pumps, pumps to Williams Finney	100 gpm
5	Ostrander PS	2-50 HP pumps, pumps to Woodbrook	265 gpm
6	Beacon Hill PS	2-25 HP pumps, 1-60 HP pump, pumps to Beacon Hill reservoir	250 gpm

BOOSTER PUMPS	Ostrander		Beacon Hill		Grandview		Skyline	
	Yes	No	Yes	No	Yes	No	Yes	No
Number of pumps	2		3		2		2	
Frequency of routine site visit	daily		weekly		weekly		weekly	
Isolation valves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure gauge(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pressure relief valve	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pump failure alarm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Functional pump and pump controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protected from flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Redundant pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equipment in good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generator transfer switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Generator has automatic startup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generator fuel source								

There are transfer switches for portable generators at some pump stations. However, the pump stations are of too large capacity to be operated by portable generators. Power outages are usually short in duration and Beacon Hill relies on gravity storage during these times.

The Grandview pump station was finished in 2015. System hydraulics are unique for this pump station design and it must operate in conjunction with Skyline pump station as it has no reservoir for surging. Pressure reducing stations were added as water hammer was an initial problem. The pumps are VFDs, and operation is prone to problems according to the operator.

BUILDINGS/ENCLOSURE	Ostrander		Beacon Hill		Grandview		Skyline	
	Yes	No	Yes	No	Yes	No	Yes	No
**Facility secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structure in good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grandview and Beacon Hill are very new pump stations in excellent condition. Skyline pump station has difficult access and one of the pumps is about 20 feet down in an underground vault.

New pump stations are planned for Hillside and Skyline.

### SECTION 8: WATER QUALITY MONITORING AND REPORTING

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

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

The system takes 10 coliform samples per month. The system has had a few unconfirmed total coliform samples since the last survey. Taking coliform samples following main breaks is recommended.

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

With the change to groundwater, the system went back to standard sampling, taking 60 samples for two sets. The results were below the action limits.

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"/>

Beacon Hill is considered a consecutive system under DBP Stage 2. HAA5s average around 20 mg/l. THMs are higher and average around 30-40 mg/l. There are some large residence times in the extended distribution system.

The system is now on quarterly monitoring. HAA5s meet reduction levels but THMs have been increasing. **The system should investigate adding mixing to the reservoirs with water age problems, which may help lower these values.** Please review specific total trihalomethanes, volatile ones will decrease with aeration or mixing.

**SECTION 9: SYSTEM MANAGEMENT AND OPERATIONS**

PROJECT/PLANNING	Yes	No
System approved	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current WSP/SWSMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Year WSP/SWSMP approved	2011	
Emergency response plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The WSP was approved in 2012 for 7286 (15%) of RWTP. ERUs is unspecified. Limiting factor is source capacity. However some areas are storage limited and certain areas are under a moratorium for new connections, including William Finney and Columbia Heights



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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### OPERATOR CERTIFICATION

This system is required to have two certified operators.

Dell and Rick were present for the survey. Rick is the lead operator and Dell is the General Manager.

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
Dell Hillger, PE	10949	WDM3, CCS	<input checked="" type="checkbox"/>
Rick Bartel	8158	WDM3, WTPO2, CCS, WDS	<input checked="" type="checkbox"/>
Troy Smith	12494	WDM2, CCS, BAT	<input type="checkbox"/>
Tom Austin	11824	WDS, CCS	<input type="checkbox"/>
Mike Smith	11790	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	<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"/>
# of complaints recorded at ODW (since last survey)	2	
Operation and maintenance program	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Previous survey deficiencies/findings corrected, if no list below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Beacon Hill does receive complaints about silica fouling since the new Longview wells went online in 2013, but not nearly as many as Longview. Also they didn't have the pipe scaling problems that Longview had. Primary complaints are silica and black slime (manganese). Complaints are noted and addressed with operator follow up and flushing as needed.

### CLOSING

Your system has no total coliform MCL violation, no more than one total coliform monitoring violation since the last survey, and no significant deficiencies were identified during the survey. Your system qualifies for the reduced frequency of Sanitary Surveys under WAC 246-290-416 (1).

Your next survey is due in 5 years.

Regulations establishing a schedule of fees, including fees for sanitary surveys, were adopted April 30, 2012 (WAC 246-290-990). The amount due is \$1,734. An itemized worksheet is enclosed with the invoice.

If you have any questions, please contact me at (360) 236-3032 or by e-mail at [teresa.walker@doh.wa.gov](mailto:teresa.walker@doh.wa.gov).

Sincerely,

A handwritten signature in black ink that reads "Teresa A. Walker". The signature is written in a cursive style with a large initial 'T'.

Teresa Walker  
Office of Drinking Water, Regional Engineer

Enclosures

cc: Jesse Smith, Cowlitz County Environmental Health



**Woodbrook reservoir (roof reflection)**



**Ventilation at Woodbrook reservoir**



**Woodbrook Drain**



**Ostrander pump station**



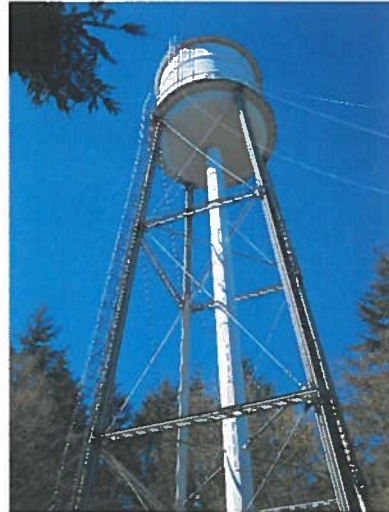
**Ostrander reservoir hatches**



**Lexington Reservoir**



**Beacon Hill PS**



**Beacon Hill reservoir**



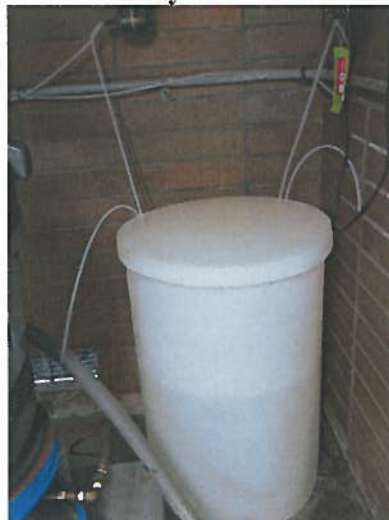
**Grandview PS**



**Skyline PS**



**Skyline reservoir vents**



**Chlorination at Ostrander**



# SANITARY SURVEY FEE WORKSHEET

**Department of Health**  
**Office of Drinking Water**  
**Sanitary Survey Time Tracking**

System Name **Beacon Hill Water and Sewer District** PWS ID # 15650  
 County **Cowlitz County**  
 Surveyor **Walker**

Date: \_\_\_\_\_

System over 10,000 Connections?	NO
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Department of Health Paid Costs	Quantity Hours/Miles	Cost
Survey program RO Coordination	1 \$	102 \$ 102.00
Survey Program Administrative Support	1 \$	102 \$ 102.00
Travel expenses (Mileage)	0	(# Miles) x (\$.56/Mile) \$ -
Technical Assistance	0 \$	102 \$ -
Travel Time <10,000	0	102 \$ -
<b>Total Department of Health Costs to Perform All Surveys</b>		<b>\$ 204.00</b>

Water System Paid Costs	Hours	Cost
Scheduling, research, prep	4 \$	102 \$ 408.00
Survey Field Work	5 \$	102 \$ 510.00

Survey documentation – preparation of survey report to the purveyor

	8 \$	102 \$ 816.00
<b>Additional Water System Paid Costs for systems serving 10,000 or more connections</b>		
	0 \$	-

NOTES:

Total Cost of Survey		\$ 1,938.00
Costs Covered by DOH		\$ 204.00
Invoice amount due (Less than 10,000 Connections)		<b>\$ 1,734.00</b>



Office of Drinking Water  
**INVOICE**

Engineering, Planning, and Sanitary Survey Review Form

TO: DELL HILLGER  
BEACON HILL WATER & SEWER DISTRICT  
1121 WEST SIDE HWY.  
KELSO WA 98626

ATTN: ACCOUNTS PAYABLE DEPT

Invoice Number	SW1558
Invoice Date	April 12, 2016
Billing Period	30 days SW

DATE	DESCRIPTION	QTY	COST	AMOUNT
4/12/2016	SURVEY FEE BEACON HILL WATER & SEWER DISTRICT COWLITZ COUNTY PWS ID 15650 DATE OF SURVEY: 3/30/2016	1	1	\$1,734.00
	DOH Share			<u>0</u>
	Total			\$1,734.00
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	BEACON HILL WATER & SEWER DISTRICT	
INVOICE NUMBER	SW1558	
INVOICE DATE	April 12, 2016	SW
AMOUNT	\$1,734.00	

**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).