

**GENERAL MANAGER'S REPORT** 

# Report on Water System Operations for the Month of: January, 2014

The metering period for this report begins on:						
ecember 13, 2013 through January 08, 2014.						
he billing period for this report is for the:						
ecember 15, 2013 through January 15, 2014.						
The activity period for this report is for the:						
January 1, 2014 through January 31, 2014 period.						
Water pumped from all wells in January	$\_$ 12.0 mg <sup>1</sup>					
Water used by District in January	_ 3.5 mg					
Water sold in January	_ 7.0 mg					
Water lost to leaks in January	1.5 mg					
Percent of water lost in January	13%					
Water pumped from all wells in 2014 to date	_ 12.0 mg					
Water used by the District in 2014 to date	3.5 mg					
Water sold in 2014 to date	7.0 mg					
Water lost to leaks in 2014 to date	_ 1.5 mg					
Percent of water lost in 2014 to date	_ 13%					
Accounts billed for water in January (\$132,4038)	2,682					
Accounts billed a late fee in January (\$3,650)	_365					
Accounts 60 days past due (\$4,272.77)	_99					
Accounts secured with a lien (\$33,770.92)	_ 35					
Accounts locked off for nonpayment in January (\$600)	_24					
Water quality complaints responded to in January	_10					
Locates requests in January	_30					
Number of customer valves installed in January	01					

<sup>&</sup>lt;sup>1</sup> Million Gallons





#### Water Quality Report:

NBWD does not use continuous disinfection on its water supply. Historically the water systems has been very successful at maintaining high quality bacteria free water supply. NBWD did have a "Out of Compliance" "Coliform Bacteria" event in 2012 but the source of the contamination was quickly discovered and remedied.

NBWD tests for coliform bacteria five times a month.

Five coliform bacteria samples were collected from the distribution system submitted to a certified laboratory in January, 2014.

#### Five of the Samples tested satisfactory.

The Environmental Protection Agency (EPA) regulates disinfection byproducts in drinking water. NBWD tests for bromate (BrO<sup>-</sup><sub>3</sub>) every month. The treatment plant uses ozone (O<sub>3</sub>) as on oxidant to remove iron. manganese, and color. One of NBWD's raw water benign constituents is bromide (br<sup>-</sup>). If the dose of ozone is too high then the extra ozone not used to oxidize iron, manganese, and color will convert bromide to bromate (Br<sup>-</sup> + O<sub>3</sub>  $\rightarrow$  BrO<sup>-</sup><sub>3</sub>). According to the EPA, some people who drink water containing bromate in excess of the maximum contaminant level (MCL) of 0.010 mg/l have and increased risk of getting cancer.

NBWD tests for bromate two times a month.

# Test one result <0.005 mg/L (satisfactory)

#### Test two result <0.005 mg/L (satisfactory)

In addition to federal and state mandated water quality tests The Treatment Plant Operator (TPO) monitors the water quality at the treatment plant and in the distribution system. The reasons of the extra water quality monitoring is to monitor the quality of the our source water, verify the treatment plant is operating at peak efficiency, and maintain the highest quality water possible is being delivered to our ratepayers. The water quality monitoring is part of the operation and maintenance plan.

In the treatment plant the raw water (well water) quality is tested regularly to monitor seasonal, inter-annual, and historical fluctuations. The TPO monitors eight constituents of the raw water. They are iron (Fe), manganese(Mn), color (Clr), pH, temperature( $F^{\circ}$ ), tannic acid (Ta), silica (SiO<sub>2</sub>), ammonia (NH<sub>3</sub>). The treatment plant is designed to remove iron, manganese, and color. The TPO monitors iron, manganese, and color to establish a baseline for removal efficiency of the treatment plant and to record raw water historical quality fluctuations. The TPO test for pH, temperature, tannic acid, silica, and ammonia because fluctuations in these constituents require adjustments to the operation protocols in the treatment plant and affect the quality of the finished water.

The TPO tests the finished water (post treatment) before it goes to storage for the same constitutes at the raw water. All of this data is recorded every day. The general manager reviews the data regularly with the TPO to discuss trends and review operation protocols.

In the distribution system the TPO regularly tests for five drinking water constituents but may test for others based on conditions. The TPO regularly tests for color , temperature , pH, taste, and odor,. The TPO bases his need for reactionary water main flushing on the results of these tests.

If the color is between 15hu and 30hu the water main will be scheduled for a flush within the next week. If the color is above 30hu it will be scheduled for a flush within the next 24 hours.

If the temperature is above  $60^{\circ}F$  the water main will be scheduled for a flush within the next week. If the water temperature is above  $65^{\circ}F$  it will be scheduled for a flush within the next 24 hours.

If the pH is below 6.8 or above 8.5 the water main will be scheduled for a flush within the next 24 hours.

If the TPO detects a taste or odor condition the water main will be scheduled for a flush within the next 24 hours.

NBWD is scheduled to test for the following contaminates during 2014:

Arsenic: Raw Water arsenic levels are slightly above the MCL (10  $ug/L^2$ ). The Treatment Plant reduces the residuals to below the MCL as the chart below indicates:



<sup>&</sup>lt;sup>2</sup> Ug/L is microgram per liter or part per billion. There are 100,000 drops of water in a gallon. One drop of Arsenic in 1,000 gallons would be approximately 10 ug/L.

Trea	tment P	lant Water	<sup>.</sup> Quality																																				
	1	Report		ir	on	Mang	anese	Co	lor	р	н	Temp	erature	Tanni	c Acid	Sil	ica	Amn	nonia																				
	Febr	uary, 2014																																					
	Well Source	Status	Gallons Pumped	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished	Raw	Finished																				
s	S03	Back-up	0																																				
d Wel 5, 7	S04	Active	1,846,000	0.2	0.3 0.1	0.1	0.40	0.02	11	11 0	0.7	76	507		1 1	11 05	NI/A	N/A	N/A	NI/A																			
ende 1, 4,	S05	Active	286,800	0.3		0.40 0.02	0.02		. 0	0.2 7.0	7.0	50.7	33.2	1.1	1.1 0.5	N/A	IN/A	IN/A	IN/A																				
	S08	Back-up	0																																				
ded s 6, 8	S07	Active	2,188,300	0.7	0.1	0.20	0.02	6	2	7.0	7.6	56.6		0.6	0.1	NI/A	NI/A	NI / A	NI/A																				
Blen Well	S09	Active	1,886,600	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20	0.03	0	2	7.9	7.0	50.0	55.Z	0.6	0.1	N/A	N/A	N/A	N/A														
ded s 1, 2	S01	Back-up	0		NI/A		NI/A		NI/A	NI/A	NI/A	NI/A	NI/A	NI/A	NI/A	NI/A	NI / A	NI / A																					
Blen Wells	S02	Back-up	0	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																				
outh 2, 4	S10	Off Line	0																																				
ded S ils 1, 2	S11	Off Line	0	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																				
Blen We	S12	Off Line	0																																				















# DWSRF Projects:

**Project 129 - Supply and Treatment Project.** Bison Drilling has completed the drilling and screen installation of Wiegardt well #3 The well development is being completed at this time and the pump test will be started on Monday February 24, 2014. This pump test will run for 72 hours. Data will be collected from Wiegardt wells #1 and #2 as wells as South Wells#1 and #4. When the pump test is complete Robinson and Noble will prepare a detailed report that will evaluate the Wiegardt Wellfield's potential for saltwater intrusion and vulnerability of the aquifer based on the results of the aquifer testing. This will complete the well drilling phase of the project. The next step will be to design the improvements to the South Wellfield and North Wellfield infrastructure.

Fund Beginning	Funds Expended	Fund Balance	30% Forgiveness-
Balance	11/1/13		to-Date Earned
\$2,190,631.00	\$242,126.95	\$1,948,504.05	\$72,638.09

# Project 121 - Water Main Project.

Birch Street is 90% complete. The water main is 100% complete and water is flowing through the main. Road restoration, bollards, and valve markers are all that is left to complete.

Z Street is 90% complete. The water main is 100% complete and water is flowing through the main. Right-of Way restoration, customer property restoration, and valve markers along with the Bay Avenue crossing Change Order need to be completed.

U Street is 40% complete. The water main along the street has been installed and the fire hydrant at the Moose Lodge is complete. The rest of the project needs to be completed.

Fund Beginning Balance	Loan Fee	Funds Expended 11/1/13	Fund Balance
\$891,123.00	8,823.00	\$357,322.52	\$533,800.48

# Water Revenue Bond Project Fund:

The water revenue bond project fund was created to fund three separate expenses. The first was to purchase the Wiegardt property to locate the

new well field. The second was to build an equipment building to house the District's vehicles and equipment. The third is to purchase or build a business office for the District. The district also paid the cost of issuance of the Bonds from the bond fund.

Description of Cost	Funds Expended	Fund Balance
		\$1,162,392.64
Cost of Issuance	\$25,775.00	\$1,136,617.64
Wiegardt Property Purchase	\$121,874.39	\$1,014,742.75
Driftmier Architects	\$6,417.47	\$1,008,325.78

#### 227<sup>th</sup> Lane Customer Generated Infrastructure:

The 227<sup>th</sup> Lane water main is 99% complete. We are waiting on Nacelle Rock to complete the patch on the asphalt at the intersection of 227<sup>th</sup> Lane and Hwy. 103. When that is complete I will prepare a final report and resolution for the Board to accept the project and customers can connect to the water system. I anticipate the Resolution will be presented to the Board at their regular meeting in March, 2014.

# 245<sup>th</sup> Street Water Main Loop Project:

Gray and Osborne prepared a new design for the crossing at 245<sup>th</sup> Street and Hwy. 103 utilizing an open cut about fifteen feet to the north of the original site. Gray and Osborne based the change on an investigation of Washington State Department of Transportation records of previous work completed in the immediate vicinity of the crossing. The general manager has applied for a permit with the Washington State Department of Transpiration for the work. When the permit has been issued the general manager will seek qualified contractors from the small works rooster to complete the 245<sup>th</sup> Street water main loop project.

#### Safety Meeting Minutes:

North Beach Water District staff meet for their monthly Safety meeting on the first Monday of the December.

#### Attachments:

- o Water Sample Results
  - o Coliform Bacteria Sample Results
  - o Bromate
- DOC Vender Distribution Form for 01-03-2014 thru 02-03-2014 DM12-952 129 (Supply and Treatment Project)
- DOC Vender Distribution Form for 01-03-2014 thru 02-03-2014 DM12-952 121 (Water Main Project)
- o Surfside November/December Report

# End of Report

# NORTH BEACH WATER DISTRICT JOB DESCRIPTION

#### BILLING CLERK

DEFINITION

Under the direct supervision of the Office Manager, this position performs work for the collection of information to begin and discontinue water service, answer customer inquiries, processes payments, follows up on delinquent accounts, and processes meter reading data. Performs other tasks as assigned.

JOB RESPONSIBILITIES:

(Any one position may not include all duties listed, nor do the examples listed cover all duties that may be performed.)

Processes accounting, billing, data entry, and office customer service and collection activities; maintains billing and customer service files; assists in the preparation of bookkeeping and accounting work, such as monthly statements of revenue, expense and water sales; prepares, organizes, and completes field service work orders in a timely manner; complies with all safety standards as they pertain to equipment and facility operations; accomplish assigned duties using safe work practices; answer customer service calls; performs other duties as assigned.

DESIRABLE QUALIFICATIONS

# Knowledge of:

Basic theory and methods of data processing systems; modern office practices and procedures and the operation of standard office equipment.

# Ability to:

Operate PCs, business office machines and data entry terminals; deal tactfully and courteously with customer inquiries; establish and maintain cooperative relationships with those contacted during the course of work; may include but not limited to standing, climbing, walking, lifting, bending, pulling and/or pushing, grasping, reaching, stooping and crouching, sitting, typing, walking, reading, writing, color determination, speaking and listening for extended periods of time.

# Education and Experience:

Previous experience in customer service and/or bookkeeping, including the operation and use of relevant equipment or any combination of education and/or experience that could likely provide the required knowledge and abilities; high school diploma or equivalent.

# License:

Possession of an appropriate Washington driver's license with satisfactory driving record as determined by the District.

FLSA STATUS

Non-exempt

Tier	Hourly Wage Rate	Tier	Hourly Wage Rate
1	\$11.63 (24,190)	1	\$12.50 (26,000)
2	\$11.94 (24,835)	2	\$12.85 (26,728)
3	\$12.26 (25,500)	3	\$13.20 (27,456)
4	\$12.56 (26,125)	4	\$13.50 (28,084)
5	\$12.88 (26,790)	5	\$13.90 (28,912)
6	\$13.19 (27,435)	6	\$14.25 (29,640)
7	\$13.51 (28,101)	7	\$14.75 (30,680)
8	\$13.82 (28,745)	8	\$15.00 (31,200)
9	\$14.13 (29,390)	9	\$15.50 (32,240)
10	\$14.80 (30,784)	10	\$16.00 (33,280)

Wage Tier Schedule - Effective January, 1 2014

Current Rate	
Employee Name:	
Employee Tier:	
Date:	
Employee Signature:	
General Manager Signature	:

Proposed Rate

SR# 14000	143-001						
ALS Environmental							
COLIFORM BACTERIA ANALYSIS							
Date Sample Collected	Time Sample	County					
Month Day Year		Pacific					
Type of Water System (check only or	ne box)	ivate Household					
🔀 Group A 🛛 🗍 G	iroup B 🗌 O	her					
Group A and Group B Systems – Pro	vide from Water Faciliti	es Inventory (WFI):					
North	<u>peach</u>	Noter					
Day Phone: 360-665-4	144. G	ell Phone: (360)-244-006%					
Eve. Phone: (360)-244-0	068 F/	•X:( )					
Send results to: (Print full name, address	and zip code)						
PO BOX 618, Ocean Park, WA 98640							
SAM	PLE INFORMATIO	N					
Sample collected by (name):	K Mose	icon					
Specific location where sample colle	cted:	becial instructions or comments:					
3314 2812 St 00	ean Pain Wise	off by 1/27/14					
Type of Sample (MUST CHECK O	NLY ONE BOX OF #1 T	HROUGH #4 LISTED BELOW)					
#1. X Routine Distribution Sample	#2.Repeat Sar	nple (after unsat. routine)					
Chlorinated: YesNo		ion System					
Chlorine Residual: Total Free	LI Source ( Populat	ion of 1,000 or less)					
#3. Raw water Source Sample	Unsatis	factory routine lab number:					
Fecal –Surface, GWI, some sp	orings 0 1 7	<b>10</b> An anti-facture Accordington, anti-contracting <u></u>					
Other	Unsatisfacto	ry routine collect date:					
S	/						
Public systems must provide source number from 1	WFI Chlorinated:	Yes No					
#4 Sample Collected for Inform	ation Only						
Investigative Constru	ction / Repairs	Other					
LAB USE ONLY DRINK	ING WATER RESL	ILTS LAB USE ONLY					
Unsatisfactory Total Coliform P	resent and	Satisfactory					
E.coli present	E.coli absent	3					
Replacement Sample Required:							
Sample too old (>30 hours)							
Improper Container							
Bacterial Density Results: Plate Cou	int/ml.	<i>E.coli/</i> 100ml.					
Total Coliform/1	UUml. Fecal Coliform	1/100ml.					
Method Code: MICR	→3B1	te, Tinte and Temp Received: 23 14 09 40 RV					
Date Analyzed O(23)		te Reported: 012414					
0 1 7 - 044	31	SPIC 1/27/14					

0 1 7 - 064

#### INTERPRETATION OF RESULTS FOR DRINKING WATER

The analysis performed on this drinking water sample is an examination for the presence of colliform organisms in the water and indicates the bacteriological quality of the sample. The presence of coliform organisms is used by health organizations worldwide as an indicator for the possible presence of other disease causing organisms.

#### REPORTING OF RESULTS:

Group A Public Water Systems must report the results of Drinking Water Analysis to the State as specified in WAC 246-290-480

#### SATISFACTORY RESULTS:

The absence of coliforms from any sample is satisfactory. Proper system maintenance and bacteriological monitoring should be continued routinely to insure the safety of the water supply.

#### UNSATISFACTORY RESULTS:

Any coliform presence is unsatisfactory.

The presence of coliforms indicates the system is not properly protected against contamination and may be unsafe for human consumption. Unsatisfactory samples should be investigated IMMEDIATELY and repeat samples submitted. Contact your local health department or DOH Regional Office for assistance in determining the source of contamination and corrective procedures.

When lecal coliforms or E, coli are reported present in a sample, the **IMMEDIATE ACTION REQUIRED** by a Public System is:

- 1. Investigate to determine the cause and correct the situation. Your local health department or DOH Regional Office can assist you.
- 2. Submit repeat samples as specified in WAC 246-290-480.
- 3. Publicly notity the users of public water systems as
- specified in WAC 246-290-480.
- 4. Contact your local health department or DOH Regional Office as specified in WAC 246-290-480.

#### TEST UNSUITABLE: Resample Immediately

"Confluent Growth" means bacteria have grown into a continuous mass which makes counting impossible. "TNC" means bacteria are too numerous to count. "Excess Debris" means that particulates in the water interfere with the interpretation of test results, "Turbid Culture" means overgrowth of other bacteria can interfere with coliform analysis. If any box indicating an unsuitable test is checked, the presence of coliform bacteria could not be determined and a new sample must be obtained for testing.

#### RESAMPLE:

1/27/14 4

Sample too old. (Sample to be tested must be received within 30 hours). Not in proper container. (Bottle to be used for testing must be purchased from a certified lab within 6 months.)

insufficient volume. (Sample must be at least 100 ml)

If not tested, a new sample must be submitted for analysis.

#### FOR ADDITIONAL INFORMATION:

Contact your local health department OR the laboratory where this sample was tested OR the Department of Health, Drinking Water Program Regional Office.

SR# K140064	3-002						
(ALS) Environmental							
COLIFORM BACTERIA ANALYSIS							
Date Sample Collected Time Sample County							
1 122/14 12	SO AM						
Month Day Year	- DO APM Faci Fric						
Type of Water System (check only one box)	Private Household						
Group A Group B	Other						
Group A and Group B Systems – Provide fro	om Water Facilities Inventory (WFI):						
System Name: North Be	each Water						
Contact Person: Bill Neo	In						
Day Phone: (360)-665-414	<u>Cell Phone: (SCC) - 244-00</u> G						
Eve. Phone: (360) - 244 - 006	<b>28</b> FAX: ( )						
Send results to: (Print full name, address and zip	code)						
PU Box 618,	Ocean Partic WA 98640						
SAMDI F I	NFORMATION						
Sample collected by (name):							
- Wick	Morrison						
Specific location where sample collected: Special instructions or comments:							
1/55 H IN	to DOH by 1/27/14.						
Type of Sample (MUST CHECK ONLY OF	Thank 1000						
#1. K Routine Distribution Sample	#2.Repeat Sample (after unsat. routine)						
Chlorinated: YesNoX	Distribution System						
Chlorine Residual: Total Free	Source Groundwater Rule (GWR)						
#3. Raw Water Source Sample	(Population of 1,000 or less)						
E.coli – GWR source sample	Unsatisfactory routine lab number:						
Fecal –Surface, GWI, some springs							
☐ Other	Unsatisfactory routine collect date:						
S	Chloringtod: Voc No						
Public systems must provide source number from WFI	Chlorine Residual: Total						
#4 Sample Collected for Information O	)nly						
Investigative Construction / F	Repairs Other						
	VATER RESULTS LABUSE ONLY						
Unsatisfactory Total Coliform Present a	and Satisfactory						
E.coli present	olí absent						
Parlanement Comple Deguized:							
Sample too old (>30 hours)	rc n						
Improper Container	bid culture						
Bacterial Density Results: Plate Count	/ml. E.coli/100ml.						
7.10 11							
Iotal Coliform/100ml.	Fecal Coliform/100ml.						
Method Code:	B Date, Time and Temp Received:						
Method Code: MICR	B Date, Time and Temp Received:						
Method Code: MICR	B Date, Time and Temp Received: Date, Time and Temp Received: UBS 14 0940 Date Reported: 0124104 Lab Use Only:						

The analysis performed on this drinking water sample is an examination for the presence of collform organisms in the water and indicates the bacteriological quality of the sample. The presence of collform organisms is used by health organizations worldwide as an indicator for the possible presence of other disease causing organisms.

#### REPORTING OF RESULTS:

Group A Public Water Systems must report the results of Drinking Water Analysis to the State as specified in WAC 246-290-480

#### SATISFACTORY RESULTS:

The absence of coliforms from any sample is satisfactory. Proper system maintenance and bacteriological monitoring should be continued routinely to insure the safety of the water supply.

#### UNSATISFACTORY RESULTS:

Any coliform presence is unsatisfactory.

The presence of colliforms indicates the system is not properly protected against contamination and may be unsafe for human consumption. Unsatisfactory samples should be investigated IMMEDIATELY and repeat samples submitted. Contact your local health department or DOH Regional Office for assistance in determining the source of contamination and corrective procedures.

When fecal coliforms or E. coli are reported present in a sample, the IMMEDIATE ACTION REQUIRED by a Public System is:

- Investigate to determine the cause and correct the situation. Your local health department or DOH Regional Office can assist you.
- 2. Submit repeat samples as specified in WAC 246-290-480.
- Publicly notify the users of public water systems as specified in WAC 246-290-480.
- 4. Contact your local health department or DOH Regional Office as specified in WAC 246-290-480.

#### TEST UNSUITABLE: Resample Immediately

"Confluent Growth" means bacteria have grown into a continuous mass which makes counting impossible. "TNC" means bacteria are too numerous to count. "Excess Debris" means that particulates in the water interfere with the interpretation of test results. "Turbid Culture" means overgrowth of other bacteria can interfere with coliform analysis. If any box indicating an unsuitable test is checked, the presence of coliform bacteria could not be determined and a new sample must be obtained for testing.

#### RESAMPLE:

Sample too old. (Sample to be tested must be received within 30 hours). Not in proper container. (Bottle to be used for testing must be purchased from a certified lab within 6 months.)

insufficient volume. (Sample must be at least 100 ml)

If not tested, a new sample must be submitted for analysis.

#### FOR ADDITIONAL INFORMATION:

Contact your local health department OR the laboratory where this sample was tested OR the Department of Health, Drinking Water Program Regional Office.

SR# K140064	13-00%	7			
	lironm	ental			
1317 S. 13th Avenue • Kelso, WA 98626					
COLIFORM BA	CTERIA A	NALYSIS			
Date Sample Collected Tim	e Sample	County			
1 122/14 Month Day Year 12	<u>:30</u> ∎ AM	Pacific			
Type of Water System (check only one box	) 🗌 Pri	vate Household			
🛛 Group A 🗌 Group E	3 🗌 Ot	ner			
Group A and Group B Systems – Provide fr ID# 6 3 0 0	om Water Facilitie	s Inventory (WFI):			
System Name: North Be	ach W	iciter			
Dev Phone: (D(0) - (65 - H)))	, u	I Phone: (21 A)-OUU-C			
Eve. Phone: (360) - 244-006	K FA	X:()			
Send results to: (Print full name, address and zip	code)	/ / /			
Po Box 618, Oce	un Part	<, WA 98646			
SAMPLE	NFORMATIO	V			
Sample collected by (name):	< Mos	rison			
Specific location where sample collected:	Sp Sp	ecial instructions or comments			
NISS # 9)	20	WILLING AGAIN			
Turne of Commiss (MUCT CUITOR ONLY O		Thank You			
#1 1 Rel Routine Distribution Sample	#2.Repeat Sam	ple (after unsat, routine)			
Chlorinated: YesNqX	Distributi	on System			
Chlorine Residual: Total Free	Source G	roundwater Rule (GWR)			
#3. Raw Water Source Sample	- (Populati	on of 1,000 or less)			
E.coli – GWR source sample		actory routine lab number:			
Fecal –Surface, GWI, some springs		······································			
C Other	Unsatisfactor	y routine collect date:			
S	Chlorinated:	Yes No			
Public systems must provide source number from WFI	Chlorine Res	idual: Total Free			
#4. Sample Collected for Information (	 Dnly				
Investigative Construction /	Repairs	Other			
LABUSE ONLY DRINKING	VATER RESU	LTS LAB USE ONLY			
Unsatisfactory Total Coliform Present	and coli absent	Satisfactory			
Replacement Sample Required:					
Sample too old (>30 hours)	тс [	]			
Improper Container Tur	bid culture	x			
Bacterial Density Results: Plate Count	/ml.	E.coli/100ml.			
Total Coliform/100ml.	Fecal Coliform	/100ml.			
Method Code: MICR	B Date	e, Time and Temp Received:			
Date Analyzed 01 33 4	Date	Reported: 0124114			
$\underline{0}  \underline{1}  \underline{7}  -  \underline{0}  \underline{6}  \underline{43}$	<u>3</u>   B	D/C 1/27/14			

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(ALS) Environmental					
1317 S. 13th Avenue • Kelso, WA 98626					
<b>COLIFORM BACTERIA ANALYSIS</b>					
Date Sample Collected Time Sample County					
V 122114 D DD AM					
Month Day Year La and PM Pacific					
Type of Water System (check only one box)					
Group A Group B Other					
Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):					
System Name: North Reach Water					
Contact Person: Bill Neal					
Day Phone: (360) - 66 5 - 4144 Cell Phone: (360)-244	1-00008				
Eve. Phone: B(0)- 244-0068 FAX: ( )					
Send results to: (Print full name, address and zip code)					
PO Box 618, Ocean Park, W4 98640					
SAMPLE INFORMATION					
Sample collected by (name):					
Specific location where sample collected: Special instructions or com	ments:				
719 26454 L Ocean Fark Sence result Te	í4				
SS#8 Thank You					
Iype of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BE 1 Na Routine Distribution Sample #2 Repeat Sample (after upsat routin	LOW)				
Chlorinated: Yes No X Distribution System	~)				
Chlorine Residual: Total Free Source Groundwater Rule (GWR)					
3. Raw Water Source Sample (Population of 1,000 or less)					
E.coli – GWR source sample     Unsatisfactory routine lab number	er:				
Fecal –Surface, GWI, some springs					
Other Unsatisfactory routine collect date:					
S Chlorinated: Yes No					
Public systems must provide source number from WFI Chlorina Red: YesNo Chlorina Red: YesNo					
Public systems must provide source number from WFI Chlorine Residual: TotalFree					
Public systems must provide source number from WFI Chlorine Residual: TotalFree					
Public systems must provide source number from WFI Chlorine Residual: TotalFree					
Public systems must provide source number from WFI Chlorine Residual: TotalFree  4. Sample Collected for Information Only Investigative Construction / Repairs Other LAB USE ONLY DRINKING WATER RESULTS LAB USE OI	VLY				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent	NLY V				
Public systems must provide source number from WFI       Chlorine Residual: Total         4. Sample Collected for Information Only         Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS         Replacement Sample Required:       E.coli absent	VLY V				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent         Replacement Sample Required:       Sample too old (>30 hours)	VLY y				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE O!         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent         Replacement Sample Required:       Sample too old (>30 hours)         Improper Container       Turbid culture	VLY y				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent       Satisfactor         Replacement Sample Required:       TNTC	VLY ,				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent         Sample too old (>30 hours)       TNTC         Improper Container       Turbid culture         Bacterial Density Results: Plate Count/ml. E.coli //100ml.       //100ml.	VLY y 100ml.				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent       Satisfactor         Replacement Sample Required:       Improper Container       Turbid culture         Bacterial Density Results: Plate Count/100ml.       Fecal Coliform/100ml.       Fecal Coliform/100ml.         Method Code:       MICR	VLY y 100ml.				
Public systems must provide source number from WFI       Chlorine Residual: TotalFree         4. Sample Collected for Information Only       Investigative Construction / Repairs Other         LAB USE ONLY       DRINKING WATER RESULTS       LAB USE OI         Unsatisfactory Total Coliform Present and       Satisfactor         E.coli present       E.coli absent         Sample too old (>30 hours)       TNTC         Improper Container       Turbid culture         Bacterial Density Results: Plate Count/100ml.       Fecal Coliform/100ml.         Method Code:       Mag 2-3-3-B123-144         Date Analyzed       O(       3-14         Sample Number (DOH number of bits five didits)       Lab Use Only	VLY y 100ml.				

The analysis performed on this drinking water sample is an examination for the presence of coliform organisms in the water and indicates the bacteriological quality of the sample. The presence of coliform organisms is used by health organizations worldwide as an indicator for the possible presence of other disease causing organisms.

#### REPORTING OF RESULTS:

Group A Public Water Systems must report the results of Drinking Water Analysis to the State as specified in WAC 246-290-480

#### SATISFACTORY RESULTS:

The absence of coliforms from any sample is satisfactory. Proper system maintenance and bacteriological monitoring should be continued routinely to insure the safety of the water supply.

#### UNSATISFACTORY RESULTS:

Any coliform presence is unsatisfactory.

The presence of collforms indicates the system is not properly protected against contamination and may be unsafe for human consumption. Unsatisfactory samples should be investigated IMMEDIATELY and repeat samples submitted. Contact your local health department or DOH Regional Office for assistance in determining the source of contamination and corrective procedures.

When fecal coliforms or E. coli are reported present in a sample, the IMMEDIATE ACTION REQUIRED by a Public System is:

- Investigate to determine the cause and correct the situation. Your local health department or DOH Regional Office can assist you.
- 2. Submit repeat samples as specified in WAC 246-290-480.
- 3. Publicly notify the users of public water systems as
- specified in WAC 246-290-480.
- Contact your local health department or DOH Regional Office as specified in WAC 246-290-480.

# TEST UNSUITABLE: Resample Immediately

"Confluent Growth" means bacteria have grown into a continuous mass which makes counting impossible. "TNC" means bacteria are too numerous to count. "Excess Debris" means that particulates in the water interfere with the interpretation of test results. "Turbid Culture" means overgrowth of other bacteria can interfere with coliform analysis. If any box indicating an unsuitable test is checked, the presence of coliform bacteria could not be determined and a new sample must be obtained for testing.

#### RESAMPLE:

Sample too old. (Sample to be tested must be received within 30 hours). Not in proper container. (Bottle to be used for testing must be purchased from a certified lab within 6 months.)

insufficient volume. (Sample must be at least 100 ml)

If not tested, a new sample must be submitted for analysis.

#### FOR ADDITIONAL INFORMATION:

Contact your local health department **OR** the laboratory where this sample was tested **OR** the Department of Health, Drinking Water Program Regional Office.

SR#	-60 /							
ALS Environmental								
1317 S. 13th Avenue • Kelso, WA 98626								
<b>COLIFORM BACTERIA ANALYSIS</b>								
Date Sample Collected Tir	ne Sample County							
1 122114	1 122114 10 00 AM							
Month Day Year Id: UD APM Kacutvic								
Type of Water System (check only one bo	Type of Water System (check only one box)							
ScGroup A Group	B Other							
Group A and Group B Systems – Provide :	from Water Facilities Inventory (WFI):							
System Name: A /								
Contract Doman (S))	each Water							
Dav Phone: (340)-6(05-4)4	Cell Phone: (360)-244-006							
Eve. Phone: 360-244-00 (	FAX: ( )							
Send results to: (Print full name, address and zi	p code)							
PO Box 618, Oce	PO Box 618, Ocean Park, WA918640							
SAMPIF	INFORMATION							
Sample collected by (name):								
Nict Specific location where sample collected:	Special instructions or comments:							
26200 Sandridg CRE	Ocean Park Send Tesults to							
WSS# 1	Thank You							
Type of Sample (MUST CHECK ONLY (	DNE BOX OF #1 THROUGH #4 LISTED BELOW)							
Chlorinated: Yes No	Distribution System							
Chlorine Residual: Total Free	Source Groundwater Rule (GWR)							
#3. Raw Water Source Sample	(Population of 1,000 or less)							
E.coli – GWR source sample	0 1 7 -							
Fecal –Surface, GWI, some springs	Unsatisfactory routine collect date:							
Public systems must provide source number from WEI	Chlorinated: Yes No							
	Chlorine Residual: TotalFree							
#4  Sample Collected for Information	Only							
LAB USE ONLY DRINKING	WATER RESULTS LAB USE ONLY							
E.coli present     E.coli present     E.coli present	coli absent							
Replacement Sample Required:								
Sample too old (>30 hours)								
Bacterial Density Results: Plate Count	/ml. <i>E.coli/</i> 100ml.							
Total Coliform/100ml.	Fecal Coliform/100ml.							
Method Code: MICR	Date. Time and Temp Received:							
Date Analyzed 012314 Sample Number (DOH number plus five digits)	Lab Use Only							
$0 \ 1 \ 7 = 0(043)$	5 BDC 1/2-7/1V 8							

The analysis performed on this drinking water sample is an examination for the presence of collform organisms in the water and indicates the bacteriological quality of the sample. The presence of coliform organisms is used by health organizations worldwide as an indicator for the possible presence of other disease causing organisms.

#### REPORTING OF RESULTS:

Group A Public Water Systems must report the results of Drinking Water Analysis to the State as specified in WAC 246-290-480

#### SATISFACTORY RESULTS:

The absence of coliforms from any sample is satisfactory. Proper system maintenance and bacteriological monitoring should be continued routinely to insure the safety of the water supply.

#### UNSATISFACTORY RESULTS:

Any collform presence is unsatisfactory.

The presence of collforms indicates the system is not properly protected against contamination and may be unsafe for human consumption. Unsatisfactory samples should be investigated IMMEDIATELY and repeat samples submitted. Contact your local health department or DOH Regional Office for assistance in determining the source of contamination and corrective procedures.

When fecal collforms or E. coll are reported present in a sample, the IMMEDIATE ACTION REQUIRED by a Public System is:

- Investigate to determine the cause and correct the situation. Your local health department or DOH Regional Office can assist you.
- 2. Submit repeat samples as specified in WAC 246-290-480.
- Publicly notify the users of public water systems as specified in WAC 246-290-480.
- 4. Contact your local health department or DOH Regional Office as specified in WAC 246-290-480.

#### TEST UNSUITABLE: Resample Immediately

"Confluent Growth" means bacteria have grown into a continuous mass which makes counting impossible. "TNC" means bacteria are too numerous to count. "Excess Debris" means that particulates in the water interfere with the interpretation of test results, "Turbid Culture" means overgrowth of other bacteria can interfere with coliform analysis. If any box indicating an unsuitable test is checked, the presence of coliform bacteria could not be determined and a new sample must be obtained for testing.

#### RESAMPLE:

Sample too old. (Sample to be tested must be received within 30 hours). Not in proper container. (Bottle to be used for testing must be purchased from a certified lab within 6 months.)

insufficient volume. (Sample must be at least 100 ml)

If not tested, a new sample must be submitted for analysis.

#### EOR ADDITIONAL INFORMATION:

Contact your local health department **OR** the laboratory where this sample was tested **OR** the Department of Health, Drinking Water Program Regional Office.



# ALS Environmental 1317 South 13th Avenue Kelso, WA 98626 BROMATE TEST PANEL (Bromate by EPA Methods 300.1) for the State of Washington

REPORT OF ANALYSIS

Date Collected: (MM/DD/YY) 01/22/14		System Gro	oup Type: (A	A,B,Other): A		
Water System ID Number:	63000C	System Nat	me:	North Beach Water		
Lab Sample Number:	01706841	County:		Pacific		
Sample Location:	2212 272nd St. Ocean Park WA	Source Nur	nber(s):	S06		
Sample Purpose:		Date Receiv	ved:	01/23/14		
Select One		Date Analy	zed:	02/03/14		
X RC- Routine/Complian	ce	Date Repor	ted:	02/06/14		
C- Confirmation		Comments:		K1400684-001		
Investigative						
Other(specify)						
Sample Composition:		Sample Type: (Select One)				
Select One			Pre-Treatm	nent/Raw		
X S- Single Source		X	Post-Treati	ment/Finished		
B- Blended (List multiple	source numbers)		Unknown			
C- Composite		Sample Col	llected by:	Nick Morrison		
D- Distribution sample		Phone Num	iber:	360-244-0068		
Send Report to: North Bea	ch Water District	Bill to:	Same			

DOH #	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	Method	Analyst
0419	BROMATE	<0.005	mg/L	0.005	0.005	0.010	300.1	BH

# NOTES:

SRL (State Reporting Level): indicates the minimum reporting level required by the Washington Department of Health (DOH).

**Trigger Level:** DOH Drinking Water Response Level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples. Contact your regional DOH office for further information.

MCL (Maximum Contaminant Level): If the contaminant amount exceeds the MCL, immediately contact your regional DOH office.

NA (Not Analyzed): in the results column indicates this compound was not included in the current analysis.

ND (Not Detected): in the results column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

<(0.00X): indicates the compound was not detected in the sample at or above the concentration indicated. (lab mdl) lower than the SRL.

# Comments:



# ALS Environmental 1317 South 13th Avenue Kelso, WA 98626 BROMATE TEST PANEL (Bromate by EPA Methods 300.1) for the State of Washington

REPORT OF ANALYSIS

Date Collected: (MM/DD/YY)	01/22/14	System Gro	oup Type: (A	A,B,Other): A		
Water System ID Number:	63000C	System Nat	me:	North Beach Water		
Lab Sample Number:	01706842	County:		Pacific		
Sample Location:	25600 Ash Pl Ocean Park WA	Source Nur	nber(s):	S11		
Sample Purpose:		Date Receiv	ved:	01/23/14		
Select One		Date Analy	zed:	02/03/14		
X RC- Routine/Compliance	ce	Date Repor	ted:	02/06/14		
C- Confirmation		Comments:		K1400684-002		
Investigative						
Other(specify)						
Sample Composition:		Sample Type: (Select One)				
Select One			Pre-Treatm	nent/Raw		
X S- Single Source		Х	Post-Treatr	nent/Finished		
B- Blended (List multiple	source numbers)		Unknown			
C- Composite		Sample Col	llected by:	Nick Morrison		
D- Distribution sample		Phone Num	nber:	360-244-0068		
Send Report to: North Bead	ch Water District	Bill to:	Same			

DOH #	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	Ν	<b>Iethod</b>	Analyst
0419	BROMATE	<0.005	mg/L	0.005	0.005	0.010		300.1	BH

# NOTES:

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MCL (Maximum Contaminant Level): If the contaminant amount exceeds the MCL, immediately contact your regional DOH office.

NA (Not Analyzed): in the results column indicates this compound was not included in the current analysis.

ND (Not Detected): in the results column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

<(0.00X): indicates the compound was not detected in the sample at or above the concentration indicated. (lab mdl) lower than the SRL.

# Comments:

		WASHINGTON STATE DEPARTMENT OF COMMERCE								
Form A19-1A		VOUCHER DISTRIBUTION DEPARTMENT OF COMMERCE PO BOX 42525 OLYMPIA, WA 98504-2525	AGENCY NUMBER	30	DM12-	952-129				
	VEN	IDOR OR CLAIMANT (Warrant is to be payable to:)	INSTRUCTIO Submit this fo Show comple	INSTRUCTIONS TO VENDOR OR CLAIMANT: Submit this form to claim payment for materials, merchandise, or services.						
	North Bead PO Box 613 Ocean Par	ch Water District 3 k WA, 98640	Vendor's Cert authorized an under penalty services furnis provided with religion or Vie	Vendor's Certificate: The individual signing this voucher below warrants they have the authority to do so as authorized and on the behalf of the entity identified in the Vendor/Client section. The individual signing below under penalty of perjury that the items and totals listed herein are proper charges for materials, merchandiss services furnished to the State of Washington, and that all goods furnished and/or services rendered have b provided without discrimination because of age, sex, marital status, race creed, color, national origin, handic religion or Vietnam era or disabled veterans status.						
Contact Persor Phone: Contract Perio Report Period	d	Jack McCarty (360) 665-4144 11/29/2012 - 11/29/2036 01/07/2014 - 02/03/2014	By:	5	(SIGN IN BLUE INK)	2/2/2014				
	Original Contr	act Amount	\$2,190,631	(TITLE)		(DATE)				
	Loan Fee (if a	ny)	\$0							
Date		DESCRIPTION	Budget	Previously Requested	Amount of This Invoice	Award Remaining Balance				
	Net Contract /	Amount	\$2,190,631	\$203,568.99		\$1,987,062				
		Request #9								
1/7/2014	Robinson Not	le / Invoice #14-048 / New Well Design			\$932.00					
1/7/2014	Gray & Osbor	ne / Invoice #13224.01-10 / Drilling & Testing			\$695.13					
1/7/2014	Gray & Osbor	ne / Invoice #13224.02-11 / Drilling & Testing			\$230.23					
2/3/2014	Bison Well Dri	lling / Progress Estimate #5 / Well Drilling			\$36,700.60					
		Totals			\$38,557.96	\$1,948,504				

Match: Year / Dollars / Coding			PROGRAM APPROVAL (the individual signing this voucher warrants they have the authority to sign this voucher)							
DOC DATE CURRENT DOC. NO. ACCOUNT NO.			REFERENCE DOC NO. VEN ASD NUMBER VEN 27010			VENDOR NUMBER and SUFFIX SWV0110176 00 VENDOR MESSAGE				
										TRANS CODE
										DM12-952-129
SIGNATURE	OF ACCOUNTING PR	REPARER FOR	PAYMENT				DATE		WARRANT TOTAL	
ACCOUNTING APPROVAL FOR PAYMENT							DATE			

-												
		WASHINGTON STAT	E									
See.	DEPARTMENT OF COMMERCE		TMENT OF COMMERCE		AGENCY NUMBER	Short Code	Commerce	Contract Num	iber			
Form A19-1A	VOUCHER DISTRIBUTION DEPARTMENT OF COMMERCE PO BOX 42525 OLYMPIA, WA 98504-2525					30	DM12-952-121		-121			
	VENDOR C	R CLAIMANT (Warrant is to be payable	to:)		INSTRUCTIONS TO VENDOR OR CLAIMANT: Submit this form to claim payment for materials, merchandise, or services.							
	North Beach Water District PO Box 618 Ocean Park WA, 98640					Vendor's Certificate: The individual signing this voucher below warrants they have the authority to do so as authorized and on the behalf of the entity identified in the Vendor/Client section. The individual signing below cert under penalty of perjury that the items and totals listed herein are proper charges for materials, merchandise or services furnished to the State of Washington, and that all goods furnished and/or services rendered have been provided without discrimination because of age, sex, marital status, race creed, color, national origin, handicap, religion of Vetnam era or disabled veterans status.						
Contact Person	n:	Jack McCarty	У									
Phone:		(360) 665-414	44		6	1111						
Contract Perio	od	11-29-2012 thru 11-	29-2036		By:	pr q		_				
REPORT PERIO	D	01/03/2014 - 02/0	3/2014		Ge	neral Manager	(SIGN IN BLUE INK)	2/3/2014 (DATE)				
	Original Contract Am	oupl			\$801 122	T						
	Loan Fee (if any)	ount			\$8,823							
Date	Date DESCRIPTION			Bu		Previously Requested	Amount of This Invoice	Award	Remaining Balance			
	Net Contract Amoun		\$882	2,300	\$170,997.19			\$711,303				
	Request #7											
1/7/2014	Gray & Osborne / Inv	oice #13223.01-2 / Water Main Project					\$15,295.38					
	_											
1/3/2014	Big River Construction	on / Progress Estimate #1 / Retainage					\$4,042.71					
2/3/2014	Big River Construction	Big River Construction / Progress Estimate #2 / Water Main Project					\$158,164.24					
				-								
			Totals				\$177,502.33		\$533,800			
Match: Year / Dolla	ars / Coding		PROGRA	AM APPROVAL (the	individual signing th	is voucher warrants they have the author	ly to sign this voucher)		DATE			
DOC DATE		CURRENT DOC. NO.	REFERE	NCE DOC NO.		VENDOR NUMBER and SUFFIX	SWV0110176 00					
				ASD NUMBER		VENDOR MESSAGE						

							VENDOR NUMBER and SUFFIX OTT VOT 10110 00				
ACCOUNT NO.			ASD NUMBE	R		VENDOR MESSAGE					
TRANS	MASTER	INDEX	SUB OBJ	SUB SUB OBJ	OL.	ACCT	SUBSID	AMOUN	ят	INVOICE	
										DM12-952-121	
_											
	1						alestan di			- 1 - 1	
SIGNATURI	OF ACCOUNTIN	G PREPARER FO	R PAYMENT		l		DATE		WARRANT TOTAL		
ACCOUNTI	IG APPROVAL FO	OR PAYMENT					DATE				



Surfside Water Department Water System Manager's Report

# Report on water system operations for the month of January, 2014

# Water production and use report:

The metering period for January, 2014 is from **December 31, 2014** to **January 31, 2014**.

The water department pumped **4.6** million gallons from the J-Well field in the January metering period.

The water department used **0.1** million gallons of water backwashing the filter and flushing water mains in the January metering period.

The water department read **796** service meters on January 31, 2014. Those service meters recorded **0.1** million gallons of water use in the January metering period.

The water department recorded **4.4** million gallons of water as unmetered water use in the January metering period.









Page 2 of 13

# Raw and finished water quality report:

The Surfside water department operates a water treatment plant that is designed to reduce the iron and manganese levels in the raw water (well water). The Environmental Protection Agencies (EPA) has set Secondary Maximum Contaminant Levels (SMCL) for iron (Fe) at .3 mg/L and manganese (Mn) at .05 mg/L. The J-Wells raw water exceed the EPA SMCL for both iron and manganese.

The EPA has set an SMCL for color at 15 HU. The J-Wells raw water exceed the EPA SMCL for color. The treatment plant was not designed to reduce color in the raw water. The water department is able to reduce the color slightly and inconstantly with the current treatment plant but the equipment will not reduce the color to below the SMCL.

Factors such as pH and water temperature affect the effectiveness of the treatment plant. The water department closely monitors all of these water quality constituents and makes adjustments to the chemical feeds and treatment plant protocols throughout the year.





# J-Wellfield Report:

The J-Wellfield is located at 33104 J Place. The J-Wellfield, treatment plant, storage reservoirs, and booster station are all located together on five contiguous parcels of land that total 20.12 acres. There are seven wells in the J-Wellfield. They are designated as J-1, J-2A, J-3, J-4, J-5, J-6, and J-7.

J-1 was drilled in 1977. The well is constructed with 8" diameter casing to a depth of 223'. The well is screened from 193' to 223' with a 10 slot screen. Due to very poor water quality and the completion of wells J-6 and J-7 the water



Well Screen & Sand Pack Cross Section Image

department designated J-1 as an emergency only well in 2000. J-1 was taken off line in 2009 and is no longer identified as a water source in Surfside's water facilities inventory. The water department uses J-1 as an observation well only.

J-2A was drilled in 1991. The well is constructed with 8" diameter casing to a depth of 225'. The well is screened from 192' to 223' with a 9 and 8 slot screen. J-2A replaces J-2 which was drilled in 1983. J-2 was drilled to a depth of 360' before the casing broke. That well was decommissioned and a second attempt was made. The second J-2 was drilled to 346'. For reasons not preserved in the record the well was not accepted. The well was decommissioned in 1991 just before the construction of J-2A. J-2A produces 175 GPM.

J-3 was drilled in 1991. The well is constructed with 8" diameter casing to a depth of 223'. The well is screened from 192' to 222' with a 9 and 8 slot screen. J-3 produces 175 GPM.

J-4 was drilled in 1994. The well is constructed with 8" diameter casing to a depth of 220'. The well is screened from 182' to 203' with an 8 slot screen. J-4 produces 175 GPM.

J-5 was drilled in 1994. The well is constructed with 8" diameter casing to a depth of 208'. The well is screened from 182' to 203' with an 8 slot screen. J-5 produces 175 GPM.

J-6 was drilled in 1996. The well is constructed with 8" diameter casing to a depth of 204'. The well is screened from 180' to 200' with an 8 slot screen. J-6 produces 175 GPM.

J-7 was drilled in 1996. The well is constructed with 8" diameter casing to a depth of 200'. The well is screened from 180' to 200' with an 8 slot screen. J-7 produces 175 GPM.

# Water Rights:

On August 16, 1999 the Department of Ecology issued Surfside Homeowners Association an Amended Groundwater Permit No. G2-24260. The permit has a priority date of August 9, 1976. The priority date is used to set the seniority of our Water Right compared to other Water Rights in the same basin. Groundwater Permit No. G2-24260 authorizes Surfside to construct up to ten (10) active water wells<sup>1</sup> within the boundaries of the 20 acre J-Wellfield site. The permit authorizes Surfside to pump a Maximum Instantaneous Flow Rate ( $Q_i$ ) of 1900 gallons per minute (gpm) and a Maximum Annual Volume ( $Q_a$ ) of 1,143 acre feet<sup>2</sup>.

Surfside Homeowners Association conveyed 40 gpm  $(Q_i)$  and 30 Acre feet a year  $(Q_a)$  of Groundwater Permit No. G2-24260 to Oysterville Water Company by motion of the Board on March 17, 2001.

Groundwater Permit No. G2-24260 permit has conditions that Surfside must meet. When Surfside reaches build out the Permit must be perfected<sup>3</sup>. At that time the Department of Ecology will issue Surfside a Groundwater Certificate. Surfside will relinquish its earlier water rights associated with the three shallow Wellfields and establish a final Maximum Instantaneous Flow Rate ( $Q_i$ ) and Maximum Annual Volume ( $Q_a$ ) based on historical use.

Surfside has the authority to construct up to ten (10) operational production water wells at the J-Wellfield if needed and increase production by approximately 800 gpm under Groundwater Permit No. G2-

<sup>&</sup>lt;sup>1</sup> Observation, test, and monitoring wells are not considered water wells.

<sup>&</sup>lt;sup>2</sup> One acre feet of water equals 325,851 gallons of water. (2 acre feet fill 1 Olympic Size Swimming Pool)

 $<sup>^3</sup>$  A Water Right Permit is considered perfected when it is put to full beneficial use. When the permit is perfected the DOE will issue a Water Right Certificate for the Q<sub>i</sub> and Q<sub>a</sub> that the owner can prove he has put to full beneficial use not to exceed the amount stated on the Water Right Permit. The final Q<sub>i</sub> and Q<sub>a</sub> can be less than the amount identified on the Water Right Permit.

24260. That is more water than is currently projected to meet Surfside's needs for build out.

The J-Wellfield groundwater geology is coastal marine sand aquifers. The Pacific Ocean is to the west of the J-Wellfield and Willapa Bay is to the east. The aquifer Surfside relies on for its water is hydraulically connected to these saltwater bodies. Although the Peninsula is blessed with nearly 6.5 feet of rain a year it is important to monitor our wells for any indication of saltwater intrusion. The water department monitors the wells two ways.

The first way is mechanically. We take water level readings of the well depths while the wells are pumping and at rest. We record those readings and compare them with previous reading. We watch for trends that would indicate seasonal year over year drop in water levels.



The second way is chemically. We test the raw well water each month for chloride (CL<sup>-</sup>). Chloride is a simple inexpensive test that is one of the best indicators of increased landward movement of the "zone of dispersion". Most hydrogeologist agree that a chloride residual of 100 mg/L is an indicator that action is needed. Most people will notice a salty taste in the drinking water when the chloride residual exceeds 250 mg/L. The EPA has set a SMCL<sup>4</sup> for chloride at 250 mg/L.



<sup>&</sup>lt;sup>4</sup> Secondary maximum contaminant (SMCL) were established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL.



During the pumping cycles the water in the aquifer draws down in a cone around each of the wells. These cones of depression will overlap each other during the pumping cycles. During rest the cones of depression will reverse or recover to the static level. The above illustration is a bit misleading.

The water department measures and records the water levels of all of the wells including well J-1 during the pumping and resting cycles. These readings reveal the condition of the well, loss of efficiency, and the aquifer storage condition, loss of capacity or head. In the three years I have been taking regular measurements the wells and aquifer have shown no signs of decline.









Wells J-5 and J-6 are two of the production wells. When the wells are not pumping the static water level in all of the wells is the same as  $\left(\frac{1}{2}\right)^{1/2}$ 

J-1 at idle. During the pumping cycle the production wells will drawdown<sup>5</sup> to different levels. The different drawdown levels have more to do with individual well efficiency rates and well head elevations than aquifer characteristics. During the pumping cycle we are able to measure the edge of the cone of depression at the J-1 observation well. J-1 is approximately 350' from the center of the J-Wellfield. There is consistently 2 to 3 feet of drawdown on J-1 during the pumping cycle. The static water level has a very predictable lowing during the dry summer season and raising in the wetter fall and winter season. September of 2013 was a very wet month but since then rainfall has been well below normal. The aquifer is slow to recover this year too low rainfall.

"All water is off on a journey unless it's in the sea, and it's homesick, and bound to make its way home someday" zora Neale Hurston

Although the J-Wellfield has not been tested by a hydrogeologist to quantify the aquifers storage properties and transmissivity<sup>6</sup> the data collected by the water department does document that the aquifer has consistent seasonal water table fluctuations and stable drawdown rates during pumping cycles throughout the year indicating the amount of water Surfside pumps from the aquifer each year is less than the annual recharge. The water system manager recommends the board consider authorizing an aquifer study be performed by professional hydrogeologist as part of the long term planning.

# Distribution Water Quality Report:

The water in the distribution system is tested more frequently than the raw, treated and finished water at the treatment plant. The water department has over twenty miles of water main to manage and keeping the water in the distribution system of the highest possible quality is our highest priority.

Maintaining chlorine residuals that will effectively disinfect the water and yet keep a balance where the smell and taste of chlorine are at low levels requires constant vigilance. The water department also tests for other water constituents.

<sup>&</sup>lt;sup>5</sup> Drawdown is the drop in the level of water in a well when water is being pumped either from that well or nearby wells.

<sup>&</sup>lt;sup>6</sup> Transmissivity is the measurement of water flowing through an aquifer. All groundwater is moving toward a surface water body. Transmissivity is the rate or speed that the water moves through the aquifer on that journey.

The water department tests the water for  $pH^7$  and temperature regularly in the distribution system. Fluctuations in pH and temperature can have a significant effect on the effectivity of chlorine as a disinfectant.

The water department also tests the water for color regularly in the distribution system. Color in the water is the most common member compliant received by the water department. The water department will perform a reactive flush of water mains for members when the color gets above 50 HU





<sup>&</sup>lt;sup>7</sup> The pH value is the indicator for acidity, alkalinity, or basic condition of a substance. A pH value of 7 means a substance is neutral (basic). A pH value higher than 7 indicates alkalinity and a pH value lower than 7 indicates acidity.





Monitoring for pH is one of the most common tests conducted in drinking water distribution systems. The EPA recommends pH monitoring to establish a baseline water quality in the distribution system. The pH should remain fairly constant throughout the distribution system, as long as the water has come into equilibrium with the pipes (pipes are not new) and there are no significant corrosion problems. The EPA has set a SMCL for pH at >6.5 - <8.5. Washington State does not monitor pH in drinking water at this time.

Significant changes in the base line pH (greater than 1 point higher or lower than the average) may be an early indicator of contamination in the distribution system. A reduction in pH can be an indication of problematic biofilm growth. For example, a decrease in pH can result from growth of sulfurreducing bacteria such as Thiobacillus. These bacteria generate hydrogen ions which lowers the ph. A growth in



Thiobacillus in a Water Main

nitrifying bacteria may also decrease the pH by oxidizing ammonium in nitrate and other nitrogen compounds.

Monitoring pH is one way the water department monitors for problems that can be corrected before they become catastrophic requiring intervention by the DOH.

#### Operations and Maintenance:

#### Main Breaks:

There was no water main break in January.

#### Services:

The Water Department installed two new services in January.

- 🖊 One at 35312 G Street
- ♣ One at 34804 J Place.

#### Service Calls:

The Water Department responded to no service calls in January.

#### Requests for Water Main Locates:

The Water Department responded to thirteen (13) requests for water main locates in January.

#### Water Main Replacement (WMR) -

WMR work was on 306th Street between J Place and N Place in January. The crew installed 532' of 8" water main. Work on 306th is going slow. There is a cross at each intersection (K Place, L Place, M Place, and N Place). The work will pick up once all of the crosses have been installed at those intersections. The crew is also dealing with a maze of existing underground infrastructure in the area.

#### Meter Installation Project -

The crew installed the Surfcrest Condominiums Meter Setter in January. The 2" meter will be ordered later this year and installed with the 2014 MIP project.

#### Water System Plan -

The water system manager has a meeting in Olympia with the Southwest Reginal Office of the Office of Drinking Water on February 19, 2014 at1:30 PM. The meeting is a preplanning meeting for the Water System Plan. Mike Johnson, Gray and Osborne will be also be attending the meeting.

The Water Planning Committee will need to start meeting twice a month in April to work on the Water System Plan.

#### 2014 Inventory -

The crew completed the 2014 annual inventory in January. The inventory report is attached.

In 2011 Surfside performed a Physical Inventory<sup>8</sup> for the first time on record. The inventory report was:

- **4** \$108,000
- \$38,000 in Materials and Supplies Stock
- \$70,000 in WMR Stock. The WMR for 2010 was complete and these were parts that had been ordered for 2010 and not used in 2010.

In 2012 the inventory was:

- **4** \$139,638
- \$21,000 in Materials and Supplies Stock
- \$92,087 in WMR Stock. The 2012 order was delivered in early January before inventory was taken.
- \$26,551 in Materials for the J Wellfield Project.

# In 2013 the inventory was:

- **4** \$52,134
- \$14,574 in Materials and Supplies Stock
- ♣ \$33,892 in WMR Stock
- ♣ \$ 3,668 in MIP Stock

#### In 2014 the inventory was:

- \$45,392
- \$10,319 in Materials and Supplies Stock
- ♣ \$32,540 in WMR Stock
- ♣ \$ 2,532 in MIP Stock
- ♣ 2014 inventory is reduced by 58%.

Materials and Supplies Stock is reduced by 73%

WMR Stock is reduced by 54%

The water department has saved \$27,700 in Materials and Supplies Stock since 2011.

The water department has saved \$65,160 in WMR Stock since 2011.

End of Report

<sup>&</sup>lt;sup>8</sup> Actual count, weight, volume, measure, or sighting of items in an inventory.