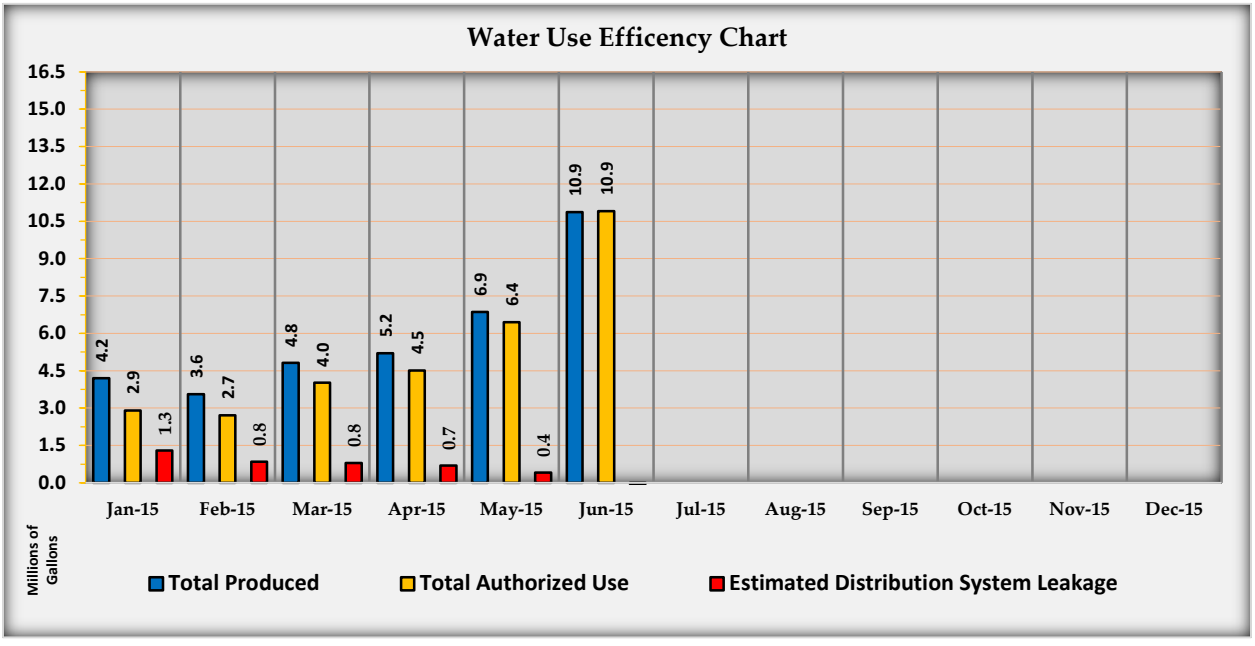
Surfside Water Department
Water System Manager's Report

Report On Water System Operations For The Month Of:	**June 2015**

Meter Reading Period For This Report:	**June 1, 2015**	through	**June 30, 2015**

Total Water Pumped From Wells	**10.862**	mg[1]
Total Estimated Authorized Water Use	**10.905**	mg
Total Estimated Distribution System Leakage (DSL) Gallons	**-0.043**	mg
Total Estimated DSL (Percentage of Total Water Pumped)	**-0.40%**	pct
Total Water Use by Water Department	**0.425**	mg
Full Time Residential Metered Water Use	**3.640**	mg
Part-Time Residential Metered Water Use	**2.529**	mg
Estimated Full Time Residential Unmetered Water Use	**2.490**	mg
Estimated Part Time Residential Unmetered Water Use	**1.200**	mg
Commercial Metered Water Use	**0.572**	mg

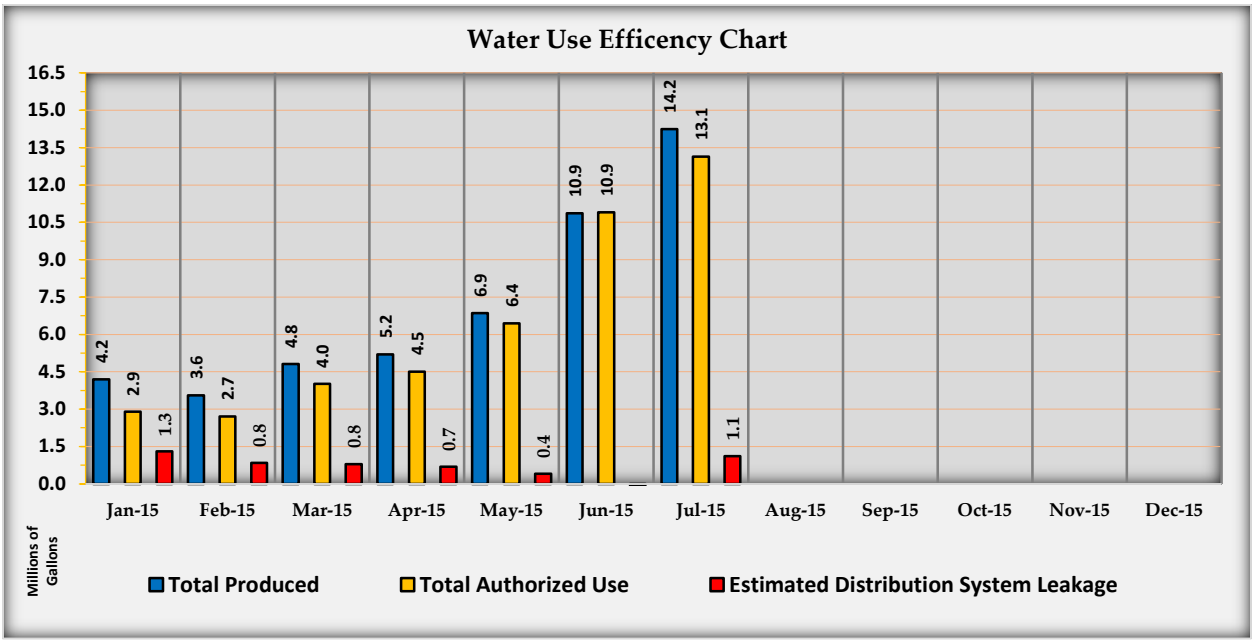


[1] Million Gallons

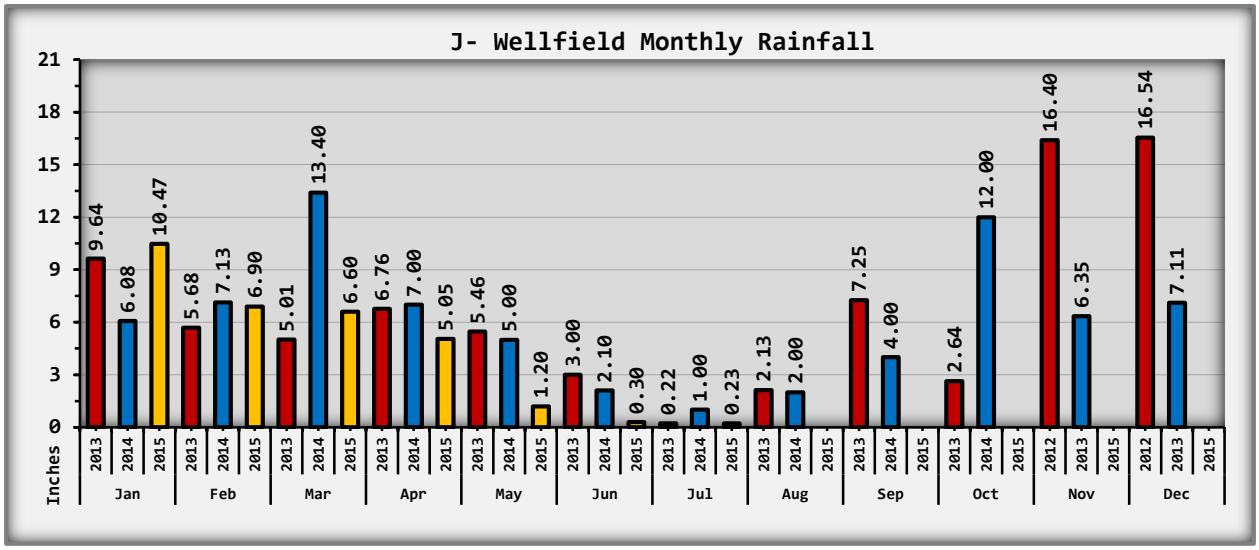
Report On Water System Operations For The Month Of:	**July 2015**

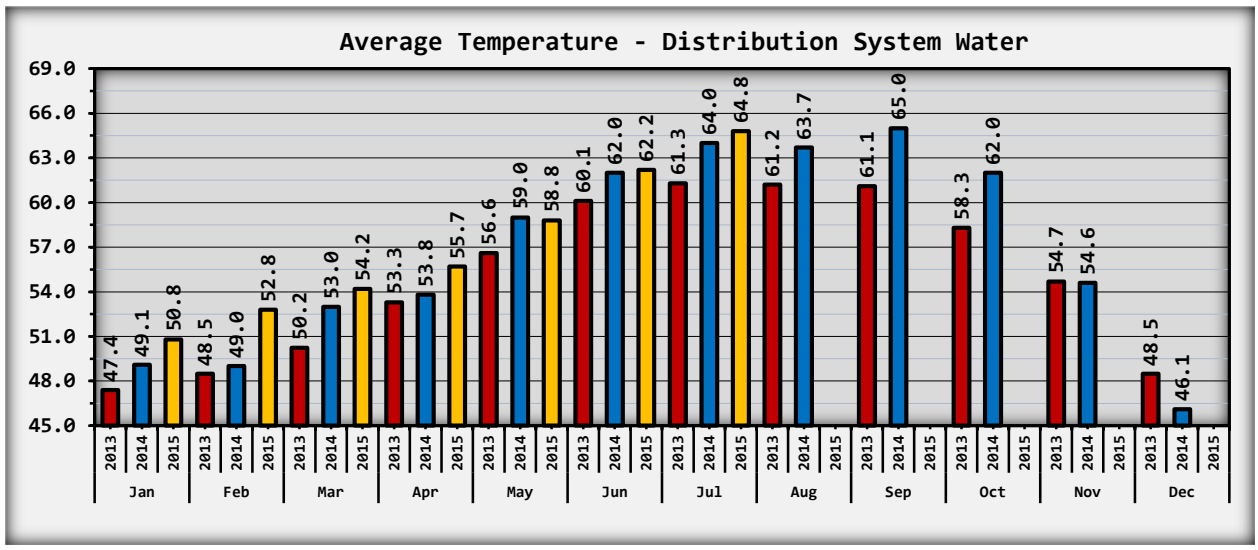
Meter Reading Period For This Report:	**June 30, 2015**	through	**July 31, 2015**

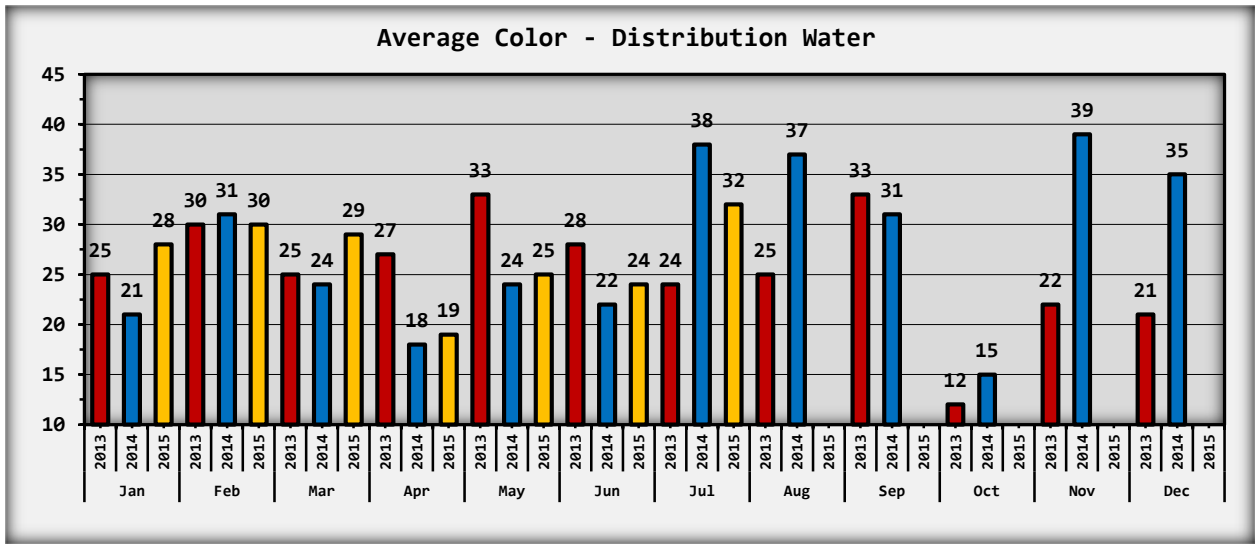
Total Water Pumped From Wells	**14.242**	mg[2]
Total Estimated Authorized Water Use	**13.136**	mg
Total Estimated Distribution System Leakage (DSL) Gallons	**1.106**	mg
Total Estimated DSL (Percentage of Total Water Pumped)	**7.8%**	pct
Total Water Use by Water Department	**0.616**	mg
Full Time Residential Metered Water Use	**4.543**	mg
Part-Time Residential Metered Water Use	**3.492**	mg
Estimated Full Time Residential Unmetered Water Use	**2.328**	mg
Estimated Part Time Residential Unmetered Water Use	**1.385**	mg
Commercial Metered Water Use	**0.771**	mg



[2] Million Gallons


J- Wellfield Monthly Rainfall
Inches
Jan 9.64 6.08 10.47
Feb 5.68 7.13 6.90
Mar 5.01 13.40 6.60
Apr 6.76 7.00 5.05
May 5.46 5.00 1.20
Jun 3.00 2.10 0.30
Jul 0.22 1.00 0.23
Aug 2.13 2.00
Sep 7.25 4.00
Oct 2.64 12.00
Nov 16.40 6.35
Dec 16.54 7.11


Average Temperature - Distribution System Water
Jan 47.4 49.1 50.8
Feb 48.5 49.0 52.8
Mar 50.2 53.0 54.2
Apr 53.3 53.8 55.7
May 56.6 59.0 58.8
Jun 60.1 62.0 62.2
Jul 61.3 64.0 64.8
Aug 61.2 63.7
Sep 61.1 65.0
Oct 58.3 62.0
Nov 54.7 54.6
Dec 48.5 46.1


Average Color - Distribution Water
Jan 25 21 28
Feb 30 31 30
Mar 25 24 29
Apr 27 18 19
May 33 24 25
Jun 28 22 24
Jul 24 38 32
Aug 25 37
Sep 33 31
Oct 12 15
Nov 22 39
Dec 21 35

Chloroform Reduction Pilot Test:

Gray and Osborne completed the chloroform reduction pilot test in June, 2015. The completed report (Surfside DBP Pilot Study Report) has been submitted to the Department of Health for review and approval. A copy of the report is attached to this report.

Surfside water samples exceeded the Maximum Contaminant Level (MCL) for Trihalomethanes (TTHM) May, 2015. The exceedance was a violation of WAC 246-290-310(4). The Department of Health Office of Drinking Water (ODW) required Surfside to: *"submit an action plan that outlines the steps Surfside Homeowners is committed to taking to come into compliance with the TTHM MCL."* I prepared the Action Plan based on the Board approved 2015 Water System Plan. A copy of the Action Plan is attached to this report.

Water Main Replacement (WMR):

No work on WMR in June or July, 2015.

Meter Installation Project (MIP):

Installed 66 meters in Divisions 14 & 15 in June, 2015.

Installed 87 meters in Divisions 14 & 15 and Division 4 in July, 2015.

Metering Project to Date by Division:

Complete:

Division: 01

Division: 02

Division: 04

Division: 06

Division: 10

Division: 11

Division: 12

Division: 14

Division: 15

Division: ..... Ocean Crest

Division: ..... Seadunes

Division: ..... Sunny Slopes

Division: ..... Surfview

Working In:

Division: 03

Pending:

Division: 07

Division: 08

Division: 13

Division: 16

Division: ..... Ocean Woods

Division: ..... Ocean Villa

Water Main Breaks:

There were no water main breaks in June or July, 2015.

Water Main Leaks:

The Crew, with the assistance of attentive members, have found and repaired 14 water main leaks in 2015. They are listed below:

Date	Near	Gallon per Minute	Gallons per Year
February 26, 2015	1609 320th	10 gpm	5,256,000
March 6, 2015	30711 M Place	20 gpm	10,512,000
March 10, 2015	32011 K Place	20 gpm	10,512,000
March 17, 2015	31902 J Place	10 gpm	5,256,000
April 1, 2015	31305 N Place	15 gpm	7,884,000
April 6, 2015	33006 G Place	5 gpm	2,628,000
April 9, 2015	32217 R Place	15 gpm	7,884,000
April 27, 2015	30514 L Place	10 gpm	5,256,000
May 22, 2015	1106 309th	15 gpm	7,884,000
May 29, 2015	802 346th	1 gpm	525,600
June 2, 2015	1413 324th	10 gpm	5,256,000
June 10, 2015	1607 324th Place	10 gpm	5,256,000
June 10, 2015	30905 G Street	4 gpm	2,102,400
June 29, 2015	30209 O Place	10 gpm	5,256,000
July 8, 2015	33205 I Street	6 gpm	3,153,600
July 31, 2015	31400 I Street	7.5 gpm	3,942,000
	Totals	168.5 gpm	88,564,200

June 29, 2015 - 10 GPM

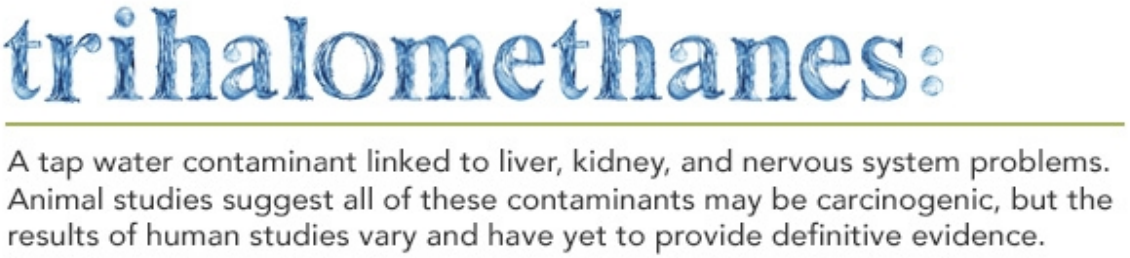
June 10, 2015 - 4 GPM

Water Quality Tests:

In June, the water department submitted four water samples for compliance coliform bacteria testing in May. All four samples tested negative for coliform bacteria. The water department also received the results of water samples submitted in May, 2015 for radionuclides. The Environmental Protection Agency (EPA) requires water system test for radiation contamination (Gross Alpha & Radium-228) once every three years. The samples tested "not detected" (ND) for any contamination.

In July, the water department submitted four water samples for compliance coliform bacteria testing in May. All four samples tested negative for coliform bacteria. The water department also received the results of second quarter disinfection by-products samples. As expected, the HAA5 results were well below the maximum contaminant level (MCL) and the TTHM results were above the MCL. Required public notifications were mailed to all members with a water connection on August 3, 2015. Below is a chart showing the current local running annual average (LRAA) for each of our sample sites:

Sample Site ID		DBP Sample Site - 01				DBP Sample Site - 02			
		MCL:	80 Ug/L	MCL:	60 Ug/L	MCL:	80 Ug/L	MCL:	60 Ug/L
QTR	YEAR	TTHM	LRAA	HAA5	LRAA	TTHM	LRAA	HAA5	LRAA
3	2014					58.36		19.6	
4	2014	54.43		35		68.5		35	
1	2015	117.26		45.1		119.61		5.1	
2	2015	103.54	91.7	14.3	31.5	85.35	83	1	15.2



Public Notice Requirements for Disinfection Byproduct (DBP) Maximum Contamination Level (MCL) Violation is considered a Tier 2 Public Notice Requirement as outlined in federal regulations (40 CFR 141.203(a)).

Tier 2 violations are considered less urgent than Tier 1 violations or situations because there is little immediate risk to consumers, or because the system may have already returned to compliance by the time the notice is issued.

Tier 2 Notices must be issued as soon as is practical but within 30 days after a violation is discovered (40 CFR 141.203(b)).

For any unresolved violation (i.e. successive quarterly TTHM MCL violations), following an initial Tier 2 notice, you must repeat the notice every three months for as long as the violation persists. Posted notices must remain posted for as long as the violation persists, but in no case less than seven days, even if the violation is resolved (40 CFR 141.203(b)). Generally a violation or situation is considered resolved when the system has returned to compliance as defined by the regulation in question; however, you may wish to contact your state to determine whether a violation or situation is considered resolved.

You must notify new billing customers or units of any ongoing violations for which you have previously provided notice prior to or at the time their service begins (40 CFR 141.206).

Remember to send a copy of the notice and a certification statement to your primacy agency within ten days after providing the initial and any repeat notice to the public (40 CFR 141.31(d)).

Required Elements of a Public Notice: (40 CFR 141.205(a))

1. A description of the violation.
2. When the violation occurred.
3. Potential adverse health effects, using required language in Appendix B to Subpart Q or language for monitoring and testing procedure violations (40 CFR 141.205(d)(2)).
4. Population(s) at risk.
5. Whether alternative water supplies should be used.
6. Actions consumers should take, including when they should seek medical help, if known.
7. What you are doing to correct the violation.
8. When you expect to return to compliance.
9. Name, business address, and phone number for additional information.
10. Standard language encouraging distribution to all persons served, where applicable [40 CFR 141.205(d)(3).

Which methods of delivery must be used for a Tier 2 Public Notice?

Unless directed otherwise by the primacy agency, if you operate a community water system, you must provide a Tier 2 notice by the following methods (40 CFR 141.203(c)):

1. Mail or other direct delivery to each customer receiving a bill and other service connections to which water is delivered; and
2. Any other method reasonably calculated to reach others regularly served, if they would not normally be reached by the method above.

Such people include those who do not pay water bills or do not have service connection addresses, (e.g., tenants, college students, nursing home patients, prison inmates). Methods may include publication in a local newspaper, posting in public places, delivery of multiple copies to landlords or office building managers, or delivery to community organizations.

What should the layout of the Notice be?

Tier 2 notices should answer the most common questions people will have about the violation:

1. What does this mean to me?
2. What should I do?
3. What happened and why?
4. What is the water system doing?

The tone of a Tier 2 notice is less urgent than that of a Tier 1 notice. A question and answer format that anticipates consumers' concerns is recommended for each section. Templates from the Environmental Protection Agency (EPA and the Washington State Department of Health (WSDOH) for DBP MCL violations are attached to this report

Title – The notice should have a descriptive title but should not be overly alarming. The title "Drinking Water Notice" or "Important Information about Your Drinking Water" would be more appropriate than "Drinking Water Alert." Follow with a subtitle describing the situation, such as: "Tests Show Levels of [Contaminant] Above Drinking Water Standards."

Describe What Happened – The notice should briefly describe what happened and give some background as to how the violation was discovered. For example, if you routinely test the water and the most recent samples showed a violation, provide a context for the exceedance by giving the applicable drinking water standard and whether the exceedance is a monthly, quarterly, or other type of average. If the problem has already been corrected, be sure to communicate this clearly. If this is a repeat notice, explain why the violation continues (e.g., you are in the process of installing new treatment).

If the violation is intermittent, explain that the water is in and out of compliance with standards, or if appropriate, that the contamination levels are only slightly above allowable standards. The message should also vary depending on the contaminant. For instance, several inorganic and radioactive chemicals, such as arsenic and radium, are naturally occurring. This fact can help in explaining the options for treatment. For example, it may be difficult to drill a new well if high contaminant levels occur throughout an aquifer. Disinfection byproducts, on the other hand, form when naturally occurring organic matter combines with disinfectants added to kill microorganisms. You should explain that the risk of disease from drinking water that is not disinfected is more immediate than that of getting cancer from drinking water containing disinfection byproducts. For turbidity exceedances, discuss the possible causes of high turbidity. A frequent cause is heavy rain, which

washes large amounts of soil into rivers and lakes. The rain may also wash animal wastes into the water supply.

Explain What Consumers Should Do – Next, the notice should tell customers what they need to do, even if no action is necessary. This will usually be: "You do/do not need to seek other sources of drinking water." Since people's first reaction may be to boil their water, explain the effect of boiling (i.e., whether boiling is necessary, has no effect, or is harmful). Tell consumers that if they have specific health concerns, especially for the young or old, pregnant women, or people with compromised immune systems (undergoing chemotherapy, HIV-positive, or other immune system problems), they may wish to consult their doctors.

Explain How the Violation Affects Consumers – Be clear that the situation is not an emergency and that consumers would have been notified immediately if it had been. Consumers may wonder why they are getting a notice, especially if the problem is resolved or not serious. It may help to explain that you are informing them because you are required to do so and that they have the right to know about problems with their water even if there is no immediate (or any) health threat. In the case of filtration treatment technique violations, explain that treatment is important in preventing disease outbreaks but that there is no evidence of disease or bacteria in the water. For turbidity exceedances, explain how high turbidity levels may be related to the presence of organisms in drinking water.

Describe What You Are Doing to Correct the Problem – Inform consumers of the steps you are taking to correct the problem, such as the installation of new treatment, increased frequency or type of monitoring, or your collaboration with the appropriate state agency. Tell them when you expect the drinking water to again meet the standard. Although you probably will be unable to give an exact date, you can give your customers a general idea of how long it will take (e.g., a few days for a coliform MCL violation to several months for a chemical MCL violation). Provide the name, address, and telephone number of someone who can answer any questions.

Optional Elements – If you know the source of the contamination, include it in the notice. This helps reassure consumers that you have investigated the problem and are taking steps to address it. It also reinforces the fact that drinking water is a vulnerable resource that must be protected. If you do not know the actual source, you should at least provide common or possible sources such as those listed in the guidance for the Consumer Confidence Report[3] (EPA 816-R-09-011).

Public Water System ID Number/Date of Distribution– You should include your PWS ID number at the bottom of the notice. This will help your primacy agency track compliance and prevent tracking errors among systems with similar names. Include the date you distributed the notice.

[3] available at http://www.epa. gov/safewater/ccr/compliancehelp.html.

Cross Connection Control Activity in June & July:

CCC Questionnaires Mailed	June: 0	July: 0
CCC Questionnaires Received	June: 2	July: 4
Cross Connection Service Calls	June: 6	July: 14
Backflow Assemblies Installed	June: 2	July: 3
Backflow Assemblies Tested	June: 21	July: 12
Compliance Letters Mailed	June: 18	July: 23
Investigation of Meters/Backflow Assemblies	June: 13	July: 11

Cross Connection Control Activity for 2015 to Date:

CCC Questionnaires Mailed	0
CCC Questionnaires Received	428
Cross Connection Service Calls	98
Backflow Assemblies Installed	9
Backflow Assemblies Tested	40
Compliance Letters Mailed	116
Investigation of Meters/Backflow Assemblies	52

Cross Connection Control Totals:

Installed Backflow Assemblies	66
Backflow Assemblies To Be Installed (based on returned questionnaires)	105
Compliant Backflow Assemblies (testing complete)	55
Non-Compliant Backflow Assemblies (scheduled to be tested)	11
Questionnaires Mailed (first and second notices)	4000
Members Who Have Not Responded to Questionnaires	640

Water System Activity June and July:

Member Potential Leak Letters	June: 18	July: 0
Member Leaks New and Unresolved	June: 73	July: 97
Member Leaks Repaired	June: 6	July: 33
Service Calls	June: 11	July: 7
Locates	June: 11	July: 11
New Services	June: 0	July: 1
Main Breaks	June: 0	July: 0

--END OF REPORT --

JUNE 2015 HIGH AND MEDIAN WATER USE

EXCLUDES COMMERCIAL AND ZERO USE

ADDRESS	WATER USE CU. FT.	WATER USE GALLONS	DAILY WATER USE	LEAK STATUS	NO. OF DAYS
35210 F PLACE	240	1795	62		
902 324TH PLACE	242	1810	62		
31813 J PLACE	244	1825	63		
32004 G STREET	245	1833	63		
710 340TH PLACE	247	1848	64		
2204 304TH PLACE	247	1848	64		
35008 J PLACE	247	1848	64		
34706 G STREET	248	1855	64		
705 352ND PLACE	253	1892	65		
30205 I STREET	253	1892	65		
34600 F PLACE	255	1907	66		
30801 I STREET	255	1907	66		
31201 J PLACE	255	1907	66		
30715 M PLACE	255	1907	66		
35207 F PLACE	256	1915	66		
34306 I STREET	256	1915	66		
30511 G STREET	258	1930	67		
33308 H PLACE	259	1937	67		
32907 G STREET	260	1945	67		
35014 H PLACE	261	1952	67		
33609 G STREET	261	1952	67		
34311 I STREET	262	1960	68		
33400 J PLACE	264	1975	68		
34709 G STREET	271	2027	70		
34802 G STREET	271	2027	70		
708 348TH PLACE	5455	40803	1407	No Leak	8-14 Days
33711 I STREET	5471	40923	1411	No Leak	8-14 Days
30514 H STREET	6111	45710	1576	No Leak	3-7 Days
30701 G STREET	6115	45740	1577	Intermittent Leak	15-21 Days
30403 G STREET	6463	48343	1667	Intermittent Leak	15-21 Days
806 338TH PLACE	6525	48807	1683		
31305 H STREET	6837	51141	1763	No Leak	3-7 Days
31714 G STREET	7152	53497	1845	Continuous Leak	15-21 Days
32501 J PLACE	7352	54993	1896	No Leak	15-21 Days
707 347TH PLACE	7471	55883	1927	No Leak	3-7 Days
30706 H STREET	7598	56833	1960	No Leak	15-21 Days
30904 O PLACE	7736	57865	1995	No Leak	15-21 Days
30715 G STREET	7805	58381	2013	Continuous Leak	35 Days
30806 O PLACE	8011	59922	2066	No Leak	8-14 Days
34212 G STREET	8732	65315	2252	Intermittent Leak	8-14 Days
1607 324TH PLACE	8919	66714	2300	Continuous Leak	22-34 Days
35503 J PLACE	9464	70791	2441	Intermittent Leak	35 Days
30409 H STREET	10833	81031	2794	No Leak	15-21 Days
35506 G STREET	11426	85466	2947	Continuous Leak	22-34 Days
30710 O PLACE	12332	92243	3181	No Leak	22-34 Days
30709 H STREET	13021	97397	3359	Continuous Leak	22-34 Days
707 340TH PLACE	14252	106605	3676	Continuous Leak	15-21 Days
(S of 34716 I St)	15298	114429	3946	No Leak	22-34 Days
29504 G STREET	18036	134909	4652	No Leak	22-34 Days
712 347TH PLACE	23590	176453	6085	Intermittent Leak	35 Days

JUNE 2015 LEAK REPORT

METER NO.	ADDRESS	LEAK STATUS	NO. OF DAYS	WTR USE CU. FT.	WTR USE GALLONS	DAILY WTR USE	STATUS
1852210792	703 325TH PLACE	Continuous Leak	3-7 Days	85	636	22	
1834790505	30011 I STREET	Continuous Leak	35 Days	117	875	30	
1834811025	32912 G PLACE	Continuous Leak	8-14 Days	145	1085	37	
1834820540	35405 J PLACE	Continuous Leak	35 Days	172	1287	44	
1834081799	34609 I PLACE	Continuous Leak	3-7 Days	184	1376	47	
1852212160	2204 304TH PLACE	Continuous Leak	35 Days	247	1848	64	
1852201738	1411 324TH PLACE	Continuous Leak	35 Days	279	2087	72	
1834079198	35604 G STREET	Continuous Leak	35 Days	301	2251	78	
1834806122	32404 G STREET	Continuous Leak	35 Days	335	2506	86	
1852267431	35401 G STREET	Continuous Leak	35 Days	352	2633	91	
1834825104	29507 G STREET	Continuous Leak	35 Days	371	2775	96	REPAIRED 6/30/15
1834075613	812 347TH PLACE	Continuous Leak	35 Days	376	2812	97	
1852211384	33600 I STREET	Continuous Leak	35 Days	382	2857	99	
1852973698	30506 N PLACE	Continuous Leak	35 Days	412	3082	106	
1834076402	506 352ND PLACE	Continuous Leak	3-7 Days	417	3119	108	
1834817819	30910 G STREET	Continuous Leak	35 Days	456	3411	118	
1834075644	35410 G STREET	Continuous Leak	15-21 Days	462	3456	119	
1852213429	32311 I STREET	Continuous Leak	35 Days	604	4518	156	RESPONSE DUE 7/15/215
1852206815	33612 J PLACE	Continuous Leak	35 Days	664	4967	171	CAN'T FIND
1834079032	30209 H STREET	Continuous Leak	22-34 Days	1088	8138	281	
1852210382	33205 I STREET	Continuous Leak	35 Days	1358	10158	350	REPAIRED IN MARCH
1834075424	34709 J PLACE	Continuous Leak	35 Days	1385	10360	357	RESPONSE DUE 7/15/215
1834075697	35301 G STREET	Continuous Leak	22-34 Days	1599	11961	412	
1852212615	1405 324TH PLACE	Continuous Leak	35 Days	1672	12507	431	CAN'T FIND
1852208963	31102 O PLACE	Continuous Leak	35 Days	1912	14302	493	NO RESPONSE
1852210400	32708 H PLACE	Continuous Leak	35 Days	2318	17339	598	NO RESPONSE
1834806342	30103 H STREET	Continuous Leak	22-34 Days	2329	17421	601	
1834806743	30517 I STREET	Continuous Leak	3-7 Days	2386	17847	615	
1834081230	35313 I PLACE	Continuous Leak	35 Days	2454	18356	633	RESPONSE DUE 7/15/215
1834816344	33406 G STREET	Continuous Leak	35 Days	2761	20652	712	NO RESPONSE
1834081993	707 354TH PLACE	Continuous Leak	15-21 Days	2814	21049	726	
1852210301	33101 J PLACE	Continuous Leak	35 Days	3202	23951	826	RESPONSE DUE 7/15/215

JUNE 2015 LEAK REPORT

1834075533	516 354TH PLACE	Continuous Leak	8-14 Days	3419	25574	882	
1834074282	35302 G STREET	Continuous Leak	22-34 Days	3840	28723	990	
1852219823	32210 K PLACE	Continuous Leak	35 Days	4462	33376	1151	RESPONSE DUE 7/15/215
1834826168	30200 H STREET	Continuous Leak	22-34 Days	5247	39248	1353	RESPONSE DUE 7/15/215
1834820376	30104 G STREET	Continuous Leak	22-34 Days	5335	39906	1376	
1834790232	31714 G STREET	Continuous Leak	15-21 Days	7152	53497	1845	
1834806215	30715 G STREET	Continuous Leak	35 Days	7805	58381	2013	
1852210361	1607 324TH PLACE	Continuous Leak	22-34 Days	8919	66714	2300	
1834071873	35506 G STREET	Continuous Leak	22-34 Days	11426	85466	2947	RESPONSE DUE 7/15/215
1834826055	30709 H STREET	Continuous Leak	22-34 Days	13021	97397	3359	
1834071876	707 340TH PLACE	Continuous Leak	15-21 Days	14252	106605	3676	
1852265984	MINI MALL 31605 I ST	Continuous Leak	22-34 Days	39221	293373	10116	

METER NO.	ADDRESS	LEAK STATUS	NO. OF DAYS	WTR USE CU. FT.	WTR USE GALLONS	DAILY WTR USE	
1834809929	32011 G PLACE	Intermittent Leak	1-2 Days	18	135	5	
1850533906	35205 F PLACE	Intermittent Leak	8-14 Days	94	703	24	
1834821406	29503 G STREET	Intermittent Leak	8-14 Days	122	913	31	
1834803113	32917 G STREET	Intermittent Leak	8-14 Days	136	1017	35	
1852210764	32311 H PLACE	Intermittent Leak	35 Days	165	1234	43	
1852207849	32218 T PLACE	Intermittent Leak	22-34 Days	182	1361	47	
1852209489	32702 J PLACE	Intermittent Leak	3-7 Days	192	1436	50	
1834801113	32903 G STREET	Intermittent Leak	1-2 Days	202	1511	52	
1853006380	30507 L PLACE	Intermittent Leak	22-34 Days	205	1533	53	
1834826169	30000 G STREET	Intermittent Leak	1-2 Days	236	1765	61	
1852209270	32207 J PLACE	Intermittent Leak	3-7 Days	236	1765	61	
1834810645	30801 I STREET	Intermittent Leak	22-34 Days	255	1907	66	
1834824591	32105 G STREET	Intermittent Leak	8-14 Days	281	2102	72	
1852212103	31708 H PLACE	Intermittent Leak	3-7 Days	287	2147	74	
1852208850	1712 324TH PLACE	Intermittent Leak	3-7 Days	326	2438	84	
1852209876	33304 J PLACE	Intermittent Leak	35 Days	328	2453	85	
1834802194	30815 G STREET	Intermittent Leak	3-7 Days	338	2528	87	
1852205488	33415 I STREET	Intermittent Leak	22-34 Days	349	2611	90	PENDING REPAIR 7/1/2015
1852211411	1813 324TH PLACE	Intermittent Leak	15-21 Days	354	2648	91	

JUNE 2015 LEAK REPORT

1834809938	31108 H STREET	Intermittent Leak	1-2 Days	386	2887	100	
1834823537	30011 G STREET	Intermittent Leak	15-21 Days	437	3269	113	
1834824603	32201 G STREET	Intermittent Leak	15-21 Days	475	3553	123	
1852220076	31905 I STREET	Intermittent Leak	15-21 Days	536	4009	138	
1834075623	35004 H PLACE	Intermittent Leak	15-21 Days	589	4406	152	
1834078999	600 357TH STREET	Intermittent Leak	3-7 Days	669	5004	173	
1852207285	33210 I STREET	Intermittent Leak	35 Days	680	5086	175	CAN'T FIND
1852203612	32209 K PLACE	Intermittent Leak	22-34 Days	694	5191	179	
1834803358	32709 G STREET	Intermittent Leak	35 Days	788	5894	203	
1853008249	30505 L PLACE	Intermittent Leak	35 Days	832	6223	215	
1834824443	31000 H STREET	Intermittent Leak	8-14 Days	843	6306	217	RESPONSE DUE 7/15/215
1834079127	34405 J PLACE	Intermittent Leak	22-34 Days	849	6351	219	RESPONSE DUE 7/15/215
1852220092	32310 J PLACE	Intermittent Leak	3-7 Days	874	6538	225	
1852204993	33408 J PLACE	Intermittent Leak	35 Days	879	6575	227	
1834076103	510 345TH PLACE	Intermittent Leak	8-14 Days	904	6762	233	
1834810994	30804 G ST	Intermittent Leak	15-21 Days	927	6934	239	
1852211175	33311 J PLACE	Intermittent Leak	8-14 Days	942	7046	243	
1834820815	32400 G STREET	Intermittent Leak	1-2 Days	1016	7600	262	
1852204584	33704 J PLACE	Intermittent Leak	22-34 Days	1028	7689	265	
1852206819	809 OYSTERVILLE RD	Intermittent Leak	1-2 Days	1077	8056	278	
1852207854	33015 J PLACE	Intermittent Leak	35 Days	1154	8632	298	RESPONSE DUE 7/15/215
1834804144	32611 G STREET	Intermittent Leak	15-21 Days	1251	9357	323	
1834080950	35108 H PLACE	Intermittent Leak	22-34 Days	1296	9694	334	
1852208882	33211 J PLACE	Intermittent Leak	35 Days	1377	10300	355	RESPONSE DUE 7/15/215
1852207408	33105 H PLACE	Intermittent Leak	22-34 Days	1413	10569	364	
1834079092	34907 G STREET	Intermittent Leak	22-34 Days	1503	11242	388	
1834079197	30210 H STREET	Intermittent Leak	1-2 Days	1539	11512	397	
1852210236	31902 J PLACE	Intermittent Leak	15-21 Days	1808	13524	466	
1852210130	30517 K PLACE	Intermittent Leak	35 Days	1866	13958	481	FOUNTAIN
1834081921	35404 I PLACE	Intermittent Leak	35 Days	1922	14377	496	
1834820811	32101 G STREET	Intermittent Leak	15-21 Days	2221	16613	573	
1834809942	30705 G STREET	Intermittent Leak	22-34 Days	2255	16867	582	
1834806791	31206 G STREET	Intermittent Leak	22-34 Days	2321	17361	599	
1834075494	35305 G STREET	Intermittent Leak	3-7 Days	2452	18341	632	

JUNE 2015 LEAK REPORT

1834076440	32306 H PLACE	Intermittent Leak	22-34 Days	2965	22178	765	RESPONSE DUE 7/15/215
1852207647	31805 J PLACE	Intermittent Leak	22-34 Days	3131	23420	808	
1834079091	35409 J PLACE	Intermittent Leak	22-34 Days	3137	23465	809	
1834075621	33405 G STREET	Intermittent Leak	8-14 Days	3416	25552	881	
1834804180	35312 G STREET	Intermittent Leak	15-21 Days	3553	26576	916	
1834075110	30211 O PLACE	Intermittent Leak	22-34 Days	3790	28349	978	REPAIRED 5/22/15
1852203127	32909 J PLACE	Intermittent Leak	22-34 Days	4290	32089	1107	
1834801101	30520 G STREET	Intermittent Leak	8-14 Days	4532	33899	1169	
1834811201	30707 G STREET	Intermittent Leak	22-34 Days	4692	35096	1210	
1834821410	30411 G STREET	Intermittent Leak	35 Days	4854	36308	1252	RESPONSE DUE 7/15/215
1852209872	806 325TH PLACE	Intermittent Leak	15-21 Days	5224	39076	1347	DATALOGGED METER 6/23/15 - NO LEAK
1834810922	30701 G STREET	Intermittent Leak	15-21 Days	6115	45740	1577	
1834804164	30403 G STREET	Intermittent Leak	15-21 Days	6463	48343	1667	
1834078806	34212 G STREET	Intermittent Leak	8-14 Days	8732	65315	2252	
1834075011	35503 J PLACE	Intermittent Leak	35 Days	9464	70791	2441	RESPONSE DUE 7/15/215
1834081096	712 347TH PLACE	Intermittent Leak	35 Days	23590	176453	6085	RESPONSE DUE 7/15/215

Monthly Water Use Data Report

Month/Year	Name of Operator Reporting
JUNE 2015	APRIL GARCIA

Description	Cu. Ft.
Total Metered Water (TMW)	901,199
Total Metered Commercial (TMC)	76,445
Total Metered Residential① (TMR)	824,754
Total Continuous Leak (TCL)	49
Total Intermittent Leak (TIL)	73
Total Serious Leak (Meter reports both abnormal water use pattern and high water use) (TSL)	74

Commercial Water Use Detail	Cu. Ft.	Rate	Charge
Washington State Parks (Great Day Deli)	98	0.0180	$ 1.76
Washington State Parks (Surfside Golf Shop)	3,017	0.0180	$ 54.31
Kaino Holdings Inc. (Lighthouse Reality)	81	0.0180	$ 1.46
Surfside Mini Mall	39,221	0.0180	$ 705.98
Surfside Condo #1 Owners (Surfside Inn Pool and Irrigation)	19,215	0.0180	$ 345.87
Worldmark® by Wyndham (Surfside Inn Condominiums)	14,813	0.0180	$ 266.63

Residential Water Use Detail	%TM②	TSIC③	TCF④	%TMR①
Total Unmetered Connections (estimated) (less estimated DSL⑤)		705		
Total Metered Connections② (TM)		1254	824,754	
Total Registered – 0 Cu. Ft. (0 gpd)	28.2%	353	0	0.0%
Total Registered - 1 to 150 Cu. Ft. (0-37 gpd) Very Low Water Use	29.7%	373	18,600	2.3%
Total Registered - 151 to 300 Cu. Ft. (37-75 gpd) Low Average Water Use	9.1%	114	25,671	3.1%
Total Registered - 301 to 600 Cu. Ft. (75-150 gpd) Average Water Use	10.2%	128	54,491	6.6%
Total Registered - 601 to 900 Cu. Ft. (150-225 gpd) High Average Use	4.9%	61	46,471	5.6%
Total Registered - 901 to 1200 Cu. Ft. (225-300 gpd) High Water Use	3.3%	42	43,422	5.3%
Total Registered - 1201 to 2400 Cu. Ft. (300-600 gpd) Very High Use	7.2%	90	154,952	18.8%
Total Registered – ≥ Than 2401 Cu. Ft. (≥ 601 gpd) Extreme High Use	7.4%	93	481,147	58.3%

Operator Signature _____ **Date** _____

Field Superintendent Signature _____ **Date** _____

Water System Manager Signature _____ **Date** _____

③-TSIC, means total services in the category. ④-TCF means total cubic feet. ⑤-DSL means Distribution System Leakage.

Monthly Water Use Efficiency Report

Month/Year

Name of Operator Reporting

From:	6-1-15	To:	6-30-15		APRIL GARCIA	
Well	Total (Gal.)	Well	Total (Gal.)	Well	Total (Gal.)	Total
J-2	28,000	J-3	25,000	J-4	2,497,000	2,550,000
J-5	3,067,000	J-6	2,608,000	J-7	2,637,000	8,312,000

J-Well Field Total Water Pumped (TP)	TP	10,862,000
Water Used to Backwash Filters	BWW	370,759
Water Used for Unidirectional Flushing	UDF	0
Water Used for Reactionary Flushing	RAF	0
Water Used for Water Main Replacement Flushing	WMR	0
Water Used or Lost for Water Main Breaks	WMB	0
Residential Water Use	MRU	9,860,501
Commercial Water Use	MCU	571,809
Other Authorized Water Use	OAU	54,026
Total Authorized Water Use (AU)	TAU	10,905,246

FT-Metered[1]	361	PT-Metered[2]	893	FT-Unmetered[3]	247	PT-Unmetered[4]	424

Total Water Use This Month by Full Time Metered Members	TFTM	3,639,804
Average Water Use This Month per Full Time Metered Member	FTM	10,083
Total Water Use This Month by Part Time Metered Members	TPTM	2,529,356
Average Use This Month per Part Time Metered Member	PTM	2,832
Estimated Total Use This Month by Full Time Unmetered Members	TFTU	2,490,392
Estimated Average Use This Month per Full Time Unmetered Member	FTU	10,083
Estimated Total Use This Month by Part Time Unmetered Members	TPTU	1,200,948
Estimated Average Use This Month per Part Time Unmetered Member	PTU	2,832
Estimated Distribution System Leakage (DSL) This Month (Gallons)	DSLG	-43,246
Estimated DSL (Percentage of Total Water Pumped)	DSLP	-0.4%

Operator Signature _____ Date _____

Operator Signature _____ Date _____

Operator Signature _____ Date _____

[1] Water use more than 1,500 gallons per month – Considered Full-Time
[2] Water use less than 1,500 gallons per month – Considered Part-Time
[3] Water Service without a meter that has a local address – Considered Full-Time
[4] Water Service without a meter that does not have a local address – Considered Part-Time

Monthly Water System Data Report

Month/Year	Name of Operator Reporting
JUNE 2015	APRIL GARCIA

Data	Reading	Unit	Target
Avg. Raw Water Iron (Fe)	0.28	mg/L	N/A
Avg. Finished Water Iron (Fe)	0.11	mg/L	≤ 0.3
Avg. Raw Water Manganese (Mn)	0.092	mg/L	N/A
Avg. Finished Water Manganese (Mn)	0.007	mg/L	≤ 0.05
Avg. Raw Water pH	8.3	pH	7.5-8.5
Avg. Finished Water pH	7.7	pH	7.2-7.8
Avg. Raw Water Color (HU)	57	HU	≤ 60
Avg. Finished Water Color (HU)	32	HU	≤ 15
Avg. Raw Water Temperature (°F)	54.3	°F	N/A
Avg. Finished Water Temperature (°F)	56.2	°F	N/A
Avg. Raw Water Ammonia (NH3)	0.22	mg/L	≤ 30
Avg. Finished Ammonia (NH3)	0.02	mg/L	≤ 15
Avg. Raw Water Silica (Sio2)	17.1	mg/L	≤ 70
Avg. Finished Silica (Sio2)	37.4	mg/L	≤ 70
Avg. Raw Water Tannin	0.8	mg/L	≤ 1
Avg. Finished Tannin	0.2	mg/L	≤ 0.5
Avg. Raw Water Conductivity (µhos/cm)	448	µhos/cm	≤ 800
Avg. Raw Water TDS	318	mg/L	≤ 400
Avg. Raw Water Chloride (Cl)	36	mg/L	≤ 250
Avg. Green Pipe Water Total Chlorine (CL2) (Treated Water)	1.89	mg/L	≤ 2.50 ≥ 1.70
Avg. Green Pipe Water Free Chlorine (CL2) (Treated Water)	0.89	mg/L	≤ 1.50 ≥ 0.50
Avg. Blue Pipe Water Total Chlorine (CL2) (Finished Water)	0.91	mg/L	≤ 1.20 ≥ 0.50
Avg. Blue Pipe Water Free Chlorine (CL2) (Finished Water)	0.35	mg/L	≤ 0.75 ≥ 0.20
Avg. Reservoir Water Total Chlorine (CL2) (Stored Water)	0.44	mg/L	≤ 0.80 ≥ 0.30
Avg. Reservoir Water Free Chlorine (CL2) (Stored Water)	0.05	mg/L	≤ 0.20 ≥ 0.05

Continued on Reverse Side

Avg. Rechlorinated Water Total Chlorine (CL2)	0.73	mg/L	≤ 1.00 ≥ 0.50
Avg. Rechlorinated Water Free Chlorine (CL2)	0.37	mg/L	≤ 0.50 ≥ 0.30
Avg. Distribution Water Total Chlorine (CL2)	0.07	mg/L	≤ 0.80 ≥ 0.20
Avg. Distribution Water Free Chlorine (CL2)	0.02	mg/L	≤ 0.50 ≥ 0.05
Avg. Distribution Water Color (HU)	24	HU	≤ 15
Avg. Distribution Water Temperature (°F)	62.2	°F	N/A
Avg. Distribution Water pH	8.4	pH	7.2-7.8
Jar Test	1.40	mg/L	≤ 1.80 ≥ 1.20
J-1 Idle Measure from TOP	14	Ft/In.	N/A
J-1 Measure from TOP	15.8	Ft/In.	N/A
J-2 Measure from TOP	19.6	Ft/In.	N/A
J-3 Measure from TOP	21.1	Ft/In.	N/A
J-4 Measure from TOP	49.8	Ft/In.	N/A
J-5 Measure from TOP	53.9	Ft/In.	N/A
J-6 Measure from TOP	45.4	Ft/In.	N/A
J-7 Measure from TOP	44.3	Ft/In.	N/A
Rainfall	0.30	In.	N/A
Locates	11	N/A	N/A
Service Calls (contacts with members about water concerns)	11	N/A	N/A
New Service(s)	0	N/A	N/A
Water Main Breaks	0	N/A	N/A
		N/A	N/A
		N/A	N/A
		N/A	N/A
		N/A	N/A

Operator Signature _____ Date _____

Field Superintendent Signature _____ Date _____

Water System Manager Signature _____ Date _____

Monthly Activity Data Report

Month/Year	Name of Operator Reporting
JUNE 2015	APRIL GARCIA

Maintenance & Operation (M&O)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	R-Hrs/Comp-Hrs	155.5 / 10.0
5-27-15 A ROUND 2 IT SERVICES #9562	$ 1,209.03	Gil	6.0
6-2-15 WILCOX & FLEGEL #0672725	$ 564.97	Aaron	47.5
6-4-15 ALL RENTS TOOL & EQUIPMENT #1-502099	$ 80.00		8.0
6-16-15 FEDEX #773841292390	$ 24.35	Larry	170.0
5-18-15 TO 5-31-15 ALS #51-300418,419,452,1036,2035,2525	$ 1,180.00		9.0
6-10-15 PAPE #7454457	$ 171.94	April	176.0
5-29-15 FORD ELECTRIC #42855	$ 315.59		0.0
5-6-15 INGERSOLL RAND #30451801	$ 957.75	Chris	51.5
6-11-15 EMCNW -2015 CCR	$ 129.00		4.0
5-30, 6-2, 6-11 CASCADE COLUMBIA #506856,643136,641855	$ 2,251.31	Caleb	27.5
6-16-15 HD FOWLER #O4891984	$ 186.67		0.0
		John	0.0
			0.0
		Total R Hrs.	638.0
Total	$ 7,070.61	Total OT Hrs.	27.0

Water Main Replacement (WMR)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	0.0
6-8-15 WIRKKALA #2015-379	$ 484.22		0.0
		Aaron	24.0
			0.0
		Larry	0.0
			0.0
		April	0.0
			0.0
		Chris	28.0
			0.0
		Caleb	24.0
			0.0
		John	0.0
			0.0
		Total R Hrs.	76.0
Total	$ 484.22	Total OT Hrs.	0.0

Meter Installation Project (MIP)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	0.0
			0.0
		Aaron	98.5
			0.0
		Larry	4.0
			0.0
		April	0.0
			0.0
		Chris	94.5
			0.0
		Caleb	98.5
			0.0
		John	0.0
			0.0
		Total R Hrs.	295.5
Total	$ 0.00	Total OT Hrs.	0.0

Lands and Buildings (L&B)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	10.5
6-2-15 A&A PEST CONTROL #199650-5	$ 155.30		0.0
5-29-15 WALTER E. NELSON CO. OF ASTORIA #387546	$ 250.76	Aaron	6.0
			0.0
		Larry	2.0
			0.0
		April	0.0
			0.0
		Chris	2.0
			0.0
		Caleb	2.0
			0.0
		John	135.0
			0.0
		Total R Hrs.	157.5
Total	$ 406.06	Total OT Hrs.	0.0

Surfside — Monthly Activity Data Report

Special Project: No Special Projects in JUNE, 2015		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	0.0
			0.0
		Aaron	0.0
			0.0
		Larry	0.0
			0.0
		April	0.0
			0.0
		Chris	0.0
			0.0
		Caleb	0.0
			0.0
		John	0.0
			0.0
		Total R Hrs.	0.0
Total	$ 0.00	Total OT Hrs.	0.0

Description of Materials Used By Crew During Month	Amount	For
YARDS OF GRAVEL	37	WMR
CONCRETE BLOCKS 16 X 16	4	WMR
6" GRADELOCK	1	WMR
FIRE HYDRANT	1	WMR
3/4" MIP SERVICES W/ METERS	66	MIP
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Reporting Operator Signature **Date**

Field Superintendent Signature **Date**

Water System Manager Signature **Date**

Surfside Water Department
Cross Connection Control Report

Cross Connection Control Activity in the Month of June:

CCC Questionnaires Mailed	0
CCC Questionnaires Received	2
Cross Connection Service Calls	6
Backflow Assemblies Installed	2
Backflow Assemblies Tested	21
Compliance Letters Mailed	18
Investigation of Meters/Backflow Assemblies	13

Cross Connection Control Activity for **2015 January - June:**

CCC Questionnaires Mailed	0
CCC Questionnaires Received	424
Cross Connection Service Calls	84
Backflow Assemblies Installed	6
Backflow Assemblies Tested	28
Compliance Letters Mailed	93
Investigation of Meters/Backflow Assemblies	41

Cross Connection Control **Totals** (All Years)

Installed Backflow Assemblies	55
Backflow Assemblies To Be Installed (based on returned questionnaires)	108
Compliant Backflow Assemblies (testing complete)	43
Non-Compliant Backflow Assemblies (scheduled to be tested)	17
Questionnaires Mailed (first and second notices)	4000
Members Who Have Not Responded to Questionnaires	644

Cross Connection Coordinator — Date: 06-30-2015

Water System Manager — Date

5640 BRUNSWICK PRESS (713) 462-0600

NatureSolv™ the environmentally responsible carbonless capsule

S [redacted]

PLEASE RUSH. CALL REGARDLESS OF RESULTS 360.783.2393

(ALS) Environmental

K150 5870-002 1317 S. 13th Avenue • Kelso, WA 98626

COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
6 / 1 / 15 (Month / Day / Year)	☐ AM 12:03 ☒ PM	Pacific

Type of Water System (check only one box) ☐ Private Household

☒ Group A ☐ Group B ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):

ID# 8 6 4 7 0 Y

System Name: Surfside Homeowners Assn.

Contact Person: Gail Gonzalez

Day Phone: 360 665-4971 Cell Phone: ( )

Eve. Phone: 360 783-2393 FAX: ( )

Email:

Send results to: (Print full name, address and zip code)

Surfside Homeowners
31402 H st.
Ocean Park WA 98640

SAMPLE INFORMATION

Sample collected by (name): Larry Hampton

Specific location where sample collected: 33612 J place - Main break

Special instructions or comments: Rainy/Breeze

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☐ **Routine Distribution Sample**
Chlorinated: Yes_____ No_____
Chlorine Residual: Total____ Free____

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number:
0 1 7 - _ _ _ _ _
Unsatisfactory routine collect date:
____/____/____
Chlorinated: Yes _____ No _____
Chlorine Residual: Total____ Free____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☒ **Sample Collected for Information Only**
Investigative _____ Construction / Repairs X Other _____

LAB USE ONLY	DRINKING WATER RESULTS	LAB USE ONLY
☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent		☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml.

Method Code: SM9223B MICR-	Date,Time and Temp Received: NM 6/2/15 0920
Date Analyzed 6/2/15 BR	Date Reported: 6/3/15
Sample Number (DOH number plus five digits) 0 1 7 - 5 2 4 0 2	Lab Use Only: AJ 6/3/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

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SR# K150 6241-001

ALS Environmental
1317 S. 13th Avenue • Kelso, WA 98626

COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
6 / 9 / 15 (Month / Day / Year)	1:06 ☐ AM ☑ PM	pacific

Type of Water System (check only one box) ☐ Private Household
☒ Group A ☐ Group B ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):
ID# 8 6 4 7 0 Y
System Name: Surfside Homeowners
Contact Person:

Day Phone: (360) 665-4171 Cell Phone: 360 783-2393
Eve. Phone: (360) 783-2393 FAX: ( )
Email: water@surfsideonline.org
Send results to: (Print full name, address and zip code)
Surfside HOA
31402 H St.
Ocean Park WA 98640

SAMPLE INFORMATION

Sample collected by (name): LAWRENCE HAMPTON
Specific location where sample collected: 1310 300
Special instructions or comments: SUNNY & WINDY

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes ☒ No ☐
Chlorine Residual: Total .07 Free 0.0

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number: 0 1 7 - _ _ _ _ _
Unsatisfactory routine collect date: _____/_____/_____
Chlorinated: Yes _____ No _____
Chlorine Residual: Total _____ Free _____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S | | |
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative _____ Construction / Repairs _____ Other _____

LAB USE ONLY **DRINKING WATER RESULTS** LAB USE ONLY

☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent
☑ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count _____/ml. *E.coli* _____/100ml.
Total Coliform _____/100ml. Fecal Coliform _____/100ml.

Method Code: MICR-5 M 9 2 2 3b
Date Analyzed 6.10.15 mb
Sample Number (DOH number plus five digits) 0 1 7 - 6 2 4 1 1
Date,Time and Temp Received: 6/10/15 1020
Date Reported 6.11.15
Lab Use Only: 06/11/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

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SR# K1506517-001

SHORT HOLD OPEN FIRST

COLIFORM BACTERIA ANALYSIS

Date Sample Collected (Month / Day / Year)	Time Sample Collected	County
6 / 16 / 15	☐ AM 12:50 ☒ PM	Pacific

Type of Water System (check only one box): ☒ Group A ☐ Group B ☐ Private Household ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):

ID# 8 6 4 7 0 Y

System Name: Surfside HOA

Contact Person: Gil Gonzalez

Day Phone: 360 665-4171 Cell Phone: 360 783-2393

Eve. Phone: 360) 66 783-2393 FAX: ( )

Email: water@surfsideonline.org

Send results to: (Print full name, address and zip code)

Surfside Homeowners
31402 H st.
Ocean Park WA 98640

SAMPLE INFORMATION

Sample collected by (name): Gil Gonzalez

Specific location where sample collected: 30316 X place faucet in W. Center of lot.

Special instructions or comments:

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes X No ____
Chlorine Residual: Total .10 Free .03

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number: 0 1 7 - _ _ _ _ _
Unsatisfactory routine collect date: ____/____/____
Chlorinated: Yes ____ No ____
Chlorine Residual: Total____ Free____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative ____ Construction / Repairs ____ Other ____

LAB USE ONLY	**DRINKING WATER RESULTS**	LAB USE ONLY
☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent		☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml. NN

Method Code: MICR- 5 M 9 2 2 36	Date/Time and Temp Received: 6/17/15 1010
Date Analyzed 6.17.15 mb	Date Reported: 6.18.15
Sample Number (DOH number plus five digits) 0 1 7 - 6 5 1 7 1	Lab Use Only: 06/18/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

INTERPRETATION OF RESULTS
FOR DRINKING WATER

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 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 fecal 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 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.

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SR# K1506813-001

ALS Environmental
1317 S. 13th Avenue • Kelso, WA 98626

COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
6/23/15 (Month / Day / Year)	12:53 ☐ AM ☒ PM	Pacific

Type of Water System (check only one box) ☐ Private Household
☒ Group A ☐ Group B ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):
ID# 8 6 4 7 0 Y
System Name: Surfside Homeowners Assoc.
Contact Person: Gail Gonzalez
Day Phone: (360) 783-2393 Cell Phone: (360) 783-2393
Eve. Phone: (360) 783-2393 FAX: ( )
Email: Water@Surfsideonline.org
Send results to: (Print full name, address and zip code)
Surfside Homeowners Assoc.
31402 H St.
Ocean Park WA 98640

SAMPLE INFORMATION

Sample collected by (name): April Reynolds

Specific location where sample collected: 30703 N place faucet on S. side of house

Special instructions or comments:

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes ☒ No ☐
Chlorine Residual: Total .08 Free .04

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number: 0 1 7 - _ _ _ _ _ _
Unsatisfactory routine collect date: ___/___/___
Chlorinated: Yes ____ No ____
Chlorine Residual: Total____ Free____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative ____ Construction / Repairs ____ Other ____

LAB USE ONLY **DRINKING WATER RESULTS** LAB USE ONLY

☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent
☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml.

Method Code: MICR- S M 9 2 2 3B
Date/Time and Temp Received: 6/24/15 0945
Date Analyzed 6/24/15 AH
Date Reported: 6/25/15
Sample Number (DOH number plus five digits) 0 1 7 - 6 8 1 3 1
Lab Use Only: 6/25/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

Thursday, June 11, 2015

Chris Leaf
ALS Environmental
1317 South 13th Ave
Kelso, WA 98626

Re: ALS Workorder: 1505422
Project Name:
Project Number: K1505364

Dear Ms. Leaf:

One water sample was received from ALS Environmental, on 5/22/2015. The sample was scheduled for the following analyses:

Gross Alpha
Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Jeff R. Kujawa
Project Manager

1505422

Gross Alpha:
The samples were analyzed for gross alpha activity by gas flow proportional counting according to the current revision of SOP 724. Gross alpha results are referenced to ^{241}Am.

All acceptance criteria were met.

Radium-228:
The sample was analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac, which is the ingrown progeny of ^{228}Ra, according to the current revision of SOP 724.

All acceptance criteria were met.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1505422
Client Name: ALS Environmental
Client Project Name:
Client Project Number: K1505364
Client PO Number: K1505364

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
S-11/faucet in SW corner of boos	1505422-1		WATER	19-May-15	8:51

Client:	ALS Environmental	**Date:**	*11-Jun-15*
Project:	K1505364	**Work Order:**	1505422
Sample ID:	S-11/faucet in SW corner of booster	**Lab ID:**	1505422-1
Legal Location:		**Matrix:**	WATER
Collection Date:	5/19/2015 08:51	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Gross Alpha by GFPC			**PAI 724**		Prep Date: **6/1/2015**	PrepBy: **DKL**
GROSS ALPHA	ND (+/- 1.1)	U	2.5	pCi/l	NA	6/3/2015 09:31
Radium-228 Analysis by GFPC			**PAI 724**		Prep Date: **5/27/2015**	PrepBy: **DKL**
Ra-228	ND (+/- 0.2)	U	0.46	pCi/l	NA	6/3/2015 12:54
Carr: BARIUM	*89.6*		*40-110*	*%REC*	DL = NA	6/3/2015 12:54

Batch ID: **AB150601-2-3** Instrument ID **LB4100-A** Method: **Gross Alpha by GFPC**

LCS Sample ID: **AB150601-2** Units: **pCi/l** Analysis Date: **6/3/2015 09:31**

Client ID: Run ID: **AB150601-2A** Prep Date: **6/1/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
GROSS ALPHA	191 (+/- 32)	3	224.2		85.3	70-130					P

MB Sample ID: **AB150601-2** Units: **pCi/l** Analysis Date: **6/3/2015 15:29**

Client ID: Run ID: **AB150601-2A** Prep Date: **6/1/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
GROSS ALPHA	ND	0.64									U

The following samples were analyzed in this batch: 1505422-1

Client: ALS Environmental
Work Order: 1505422
Project: K1505364

QC BATCH REPORT

Batch ID: **RA150527-2-2** Instrument ID **LB4100-A** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA150527-2** Units: **pCi/l** Analysis Date: **6/3/2015 12:43**

Client ID: Run ID: **RA150527-2A** Prep Date: **5/27/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	9.4 (+/- 2.4)	1.1	7.74		121	70-130					P,M3
Carr: BARIUM	31550		34940		90.3	40-110					

MB Sample ID: **RA150527-2** Units: **pCi/l** Analysis Date: **6/3/2015 12:54**

Client ID: Run ID: **RA150527-2A** Prep Date: **5/27/2015** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.46									U
Carr: BARIUM	31590		34920		90.5	40-110					

The following samples were analyzed in this batch: 1505443-1 1505422-1

ALS Environmental
225 Commerce Drive
Fort Collins, CO 80524
CO 00078

RADIONUCLIDES

REPORT OF ANALYSIS

Date Collected: (MM/DD/YY) 05/19/15	System Group Type: (Circle one) (A) ( ) B Other: (Specify)
Water System ID Number: 86470Y	System Name: Surfside Homeowners Assoc.
Lab -- Sample Number: 216 -- 42201	County: Pacific
Sample Location: Faucet in SW corner of booster	Source Number(s): S11 , _____ , _____, _____ , _____
Sample Purpose: (Check Appropriate Box) [X] RC – Routine/Compliance (satisfies monitoring requirements) [ ] C – Confirmation (confirmation of chemical result) [ ] I – Investigative (does not satisfy monitoring requirements) [ ] O – Other (specify)	Date Received: (MM/DD/YY) 05/22/15 Date Reported: (MM/DD/YY) 06/12/15 COMMENTS: 1505422-01
Sample Composition: (Check Appropriate Box) [X] S - Single Source [ ] B - Blended (List Multiple Source Numbers in Source Nos. field) [ ] C - Composite (Specify in Comments field) [ ] D - Distribution sample	Sample Type: (Check one) [ ] Pre-Treatment/Raw [X] Post-Treatment/Finished [ ] Unknown Sample Collected by: (Name) April Reynolds Phone Number: (360) 783-2393
Send Report to:	Bill to: (Client Name)

DOH #	ANALYTES	LAB MDA	RESULTS	UNITS	DATE ANALYZED	MCL	(ANALYST'S INITIALS) & METHOD USED
EPA/STATE REGULATED (These analyses should be performed in order as listed)							
165	Gross Alpha	2.5	ND	pCi/L	6/3/2015	--	900.0 - DKL
166	Radium 228	0.46	ND	pCi/L	6/3/2015		904.0 - DKL
*Determine Radium 226 activity only if Gross Alpha is greater than 5.0 pCi/L**							
39	Radium 226*			pCi/L		--	
*Determine Uranium activity only if Gross Alpha is greater than 15.0 pCi/L **							
105	Uranium** (mass)			µg/L		30	
105	Uranium** (activity)			pCi/L		20**	
Depending on the foregoing data determine the following:							
40	Radium 226 + 228			pCi/L		5	
40	Gross Alpha*** + Radium 228			pCi/L		5	
41	Gross Alpha minus Uranium			pCi/L		15	
Do the following only if specifically requested by the client or the state							
42	Gross Beta****			pCi/L		50	
43	Tritium****			pCi/L		20,000	
44	Strontium 90****			pCi/L		8	
107	Cesium 134****			pCi/L		***	
108	Iodine 131****			pCi/L		***	

MCL (Maximum Contaminant Level): If the contaminant amount exceeds the MCL, immediately contact your regional DOH office.
MDA: Minimum Detectable Amount.
NA (Not Analyzed): use in the results column for compounds not included in the current analysis.
ND (Not Detected): use in the results column for compounds analyzed and not detected at a level greater than or equal to the MDA.
*** If Gross Alpha is less than , or equal to, 5 pCi/L**, it may be assumed that the Alpha activity is entirely due to Radium 226 (i.e., Radium 226 would not need to be run). The Alpha activity is then added to the Radium 228 activity (i.e., Beta activity) for MCL determinations. If the sum of the Alpha activity plus the Radium 228 activity is greater than 5 pCi/L, Radium 226 activity must then be determined for water system compliance purposes (i.e., Radium 226 + Radium 228 activity)
****Uranium's (U) MCL is given in mass terms (µg/L).** When U is determined by mass methods, it must be converted to activity levels (pCi/L) for calculation of the MCL (Gross Alpha less U). A conversion factor of 0.67 pCi/l per µg/L should be used. U needs to be determined only when the Gross Alpha exceeds 15 pCi/L.
*** Use Gross Alpha in lieu of Radium 226 when the Gross Alpha is less than, or equal to, 5.0 pCi/L
****** The MCL for beta particle and photon radioactivity from man-made radionuclides** is the average annual concentration which shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/yr.

ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

INORGANIC CHEMICALS (IOCs) REPORT: TOTAL ORGANIC CARBON (TOC)
for the State of Washington

REPORT *OF* ANALYSIS

Date Collected:(MM/DD/YY) **5/12/2015**		System Group: (Select A, B, Other):	**A**
Water System ID Numb **86470Y**		System Name:	**Surfside Homeowners Assoc.**
Lab Sample Number: **01750511**		County:	**Pacific**
Sample Location: **Raw Water Post Calgon**		Source Number(s):	**S11**
Sample Purpose:		Date Received:	**05/12/15**
Select One		Date Analyzed:	**05/15/15**
	RC- Routine/Compliance	Date Reported:	**06/03/15**
	C- Confirmation	Comments:	**K1505051-001**
X	Investigative		
	Other(specify)		
Sample Composition:		**Sample Type: (Select One)**	
Select One			Pre-Treatment/Raw
X	S- Single Source	**X**	Post-Treatment/Finished
	B- Blended (List multiple source numbers)		Unknown
	C- Composite	Sample Collected by:	**April Reynolds**
	D- Distribution sample	Phone Number:	**360-783-2037**
Send Report to: **Surfside Homeowners Assoc.**		Bill to:	

DOH #	ANALYTES	RESULTS	UNITS	SRL	MCL	Method	Analyst
EPA REGULATED							
421	Total Organic Carbon	**2.33**	mg/l	0.7	N/A	SM5310-C	CES

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

INORGANIC CHEMICALS (IOCs) REPORT: TOTAL ORGANIC CARBON (TOC)
for the State of Washington

REPORT *OF* ANALYSIS

Date Collected:(MM/DD/YY) **5/12/2015**		System Group: (Select A, B, Other):	**A**
Water System ID Numb **86470Y**		System Name:	**Surfside Homeowners Assoc.**
Lab Sample Number: **01750512**		County:	**Pacific**
Sample Location: Chlorinated Post Atec Post Calgon		Source Number(s):	**S11**
Sample Purpose:		Date Received:	**05/12/15**
Select One		Date Analyzed:	**05/15/15**
	RC- Routine/Compliance	Date Reported:	**06/03/15**
	C- Confirmation	Comments:	**K1505051-002**
X	Investigative		
	Other(specify)		
Sample Composition:		**Sample Type: (Select One)**	
Select One			Pre-Treatment/Raw
X	S- Single Source	**X**	Post-Treatment/Finished
	B- Blended (List multiple source numbers)		Unknown
	C- Composite	Sample Collected by:	**April Reynolds**
	D- Distribution sample	Phone Number:	**360-783-2037**
Send Report to: **Surfside Homeowners Assoc.**		Bill to:	

DOH #	ANALYTES	RESULTS	UNITS	SRL	MCL	Method	Analyst
EPA REGULATED							
421	Total Organic Carbon	**2.62**	mg/l	0.7	N/A	SM5310-C	CES

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

for theState of Washington

TTHM TEST PANEL

(Total Trihalomethanes by EPA METHOD - 524.2)

Distribution System - Report of Analyses

TRIHALOMETHANE ANALYSIS		System Group Type :	☑ A ☐ B ☐ C ☐ Other (Specify):
Water System ID Number : **86470Y**		System Name :	**Surfside Homeowners Assoc.**
Source: S92 (Distribution samples)		County :	**Pacific**
Sample Purpose		Date Received (MM/DD/YY) :	**5/12/2015**
	RC – Routine/Compliance	Date Analyzed (MM/DD/YY) :	**5/20/2015**
	C-Confirmation	Date Reported (MM/DD/YY) :	**6/5/2015**
X	I – Investigative	COMMENTS :	**K1505051 THM Formation Potential**
	O – Other		
Send Report to : **Surfside Homeowners Assoc.**		Bill to (Client Name) :	

(DOH #) ANALYTE	(0027) Chloroform	(0028) Bromo-dichloro-methane	(0029) Chlorodi-bromo-methane	(0030) Bromoform	(0031) Total THMS
SRL,ug/L	0.25	0.5	0.5	0.5	
Trigger Level, ug/L					60 *
MCL. Ug/L					80 *
Analytical Method	524.2				
Analysts Initials	GH				

Results

Lab Sample # 017+ 5 digit Lab ID	Date Collected	Sample Location	Chloro-form	Bromo-dichloro-methane	Chlorodi-bromo-methane	Bromo-form	Total THMs
01750511	**5/12/2015**	**Raw Water Post Calgon @ Manifold**	**140**	**62**	**15**	**0.52**	**217.52**
01750512	**5/12/2015**	**Chlorinated Post Atec Post Calgon @Filter**	**210**	**54**	**9.5**	**ND**	**273.5**

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

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) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

***:** Value listed is for the sum of the five trihalomethanes.

Additional Comments:

for theState of Washington

TTHM TEST PANEL

(Total Trihalomethanes by EPA METHOD - 524.2)

Distribution System - Report of Analyses

TRIHALOMETHANE ANALYSIS		System Group Type :	☑ A ☐ B ☐ C ☐ Other (Specify):
Water System ID Number : **86470Y**		System Name :	**Surfside Homeowners Assoc.**
Source: S92 (Distribution samples)		County :	**Pacific**
Sample Purpose		Date Received (MM/DD/YY) :	**5/12/2015**
	RC – Routine/Compliance	Date Analyzed (MM/DD/YY) :	**5/14/2015**
	C-Confirmation	Date Reported (MM/DD/YY) :	**6/5/2015**
X	I – Investigative	COMMENTS :	**K1505051-002 Baseline THM**
	O – Other		
Send Report to :	**Surfside Homeowners Assoc.**	Bill to (Client Name) :	

(DOH #) ANALYTE	(0027) Chloroform	(0028) Bromo-dichloro-methane	(0029) Chlorodi-bromo-methane	(0030) Bromoform	(0031) Total THMS
SRL,ug/L	0.25	0.5	0.5	0.5	
Trigger Level, ug/L					60 *
MCL. Ug/L					80 *
Analytical Method	524.2				
Analysts Initials	GH				

Results

Lab Sample # 017+ 5 digit Lab ID	Date Collected	Sample Location	Chloro-form	Bromo-dichloro-methane	Chlorodi-bromo-methane	Bromo-form	Total THMs
01750512	**5/12/2015**	**Chlorinated Post Atec Post Calgon @Filter**	**10**	**ND**	**ND**	**ND**	**10**

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

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) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

***:** Value listed is for the sum of the five trihalomethanes.

Additional Comments:

Trihalomethane Compounds by EPA Method 524.2

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client:	Surfside Homeowners Association	**Service Request:**	K1505051
Project:	Surfside Homeowners Assoc./86470Y	**Date Collected:**	05/12/2015
Sample Matrix:	Drinking water	**Date Received:**	05/12/2015

Volatile Organic Compounds

Sample Name:	Raw Water Post Calgon@ Manifold/S-11	**Units:**	ug/L
Lab Code:	K1505051-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	524.2		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroform	**140**	D	5.0	10	05/20/15	05/20/15	KWG1504524	
Dibromochloromethane	**15**		0.50	1	05/20/15	05/20/15	KWG1504524	
Bromodichloromethane	**62**		0.50	1	05/20/15	05/20/15	KWG1504524	
Bromoform	**0.52**		0.50	1	05/20/15	05/20/15	KWG1504524	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	82-124	05/20/15	Acceptable
Toluene-d8	102	82-124	05/20/15	Acceptable
4-Bromofluorobenzene	88	70-130	05/20/15	Acceptable

Comments:

Analytical Results

Client:	Surfside Homeowners Association	**Service Request:**	K1505051
Project:	Surfside Homeowners Assoc./86470Y	**Date Collected:**	05/12/2015
Sample Matrix:	Drinking water	**Date Received:**	05/12/2015

Volatile Organic Compounds

Sample Name:	Chlorinated Post Atec Post Calgon @ filt	**Units:**	ug/L
Lab Code:	K1505051-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	524.2		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroform	**210**	D	5.0	10	05/20/15	05/20/15	KWG1504524	
Dibromochloromethane	**9.5**		0.50	1	05/20/15	05/20/15	KWG1504524	
Bromodichloromethane	**54**		0.50	1	05/20/15	05/20/15	KWG1504524	
Bromoform	ND	U	0.50	1	05/20/15	05/20/15	KWG1504524	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	106	82-124	05/20/15	Acceptable
Toluene-d8	102	82-124	05/20/15	Acceptable
4-Bromofluorobenzene	87	70-130	05/20/15	Acceptable

Comments:

Analytical Results

Client:	Surfside Homeowners Association	**Service Request:**	K1505051
Project:	Surfside Homeowners Assoc./86470Y	**Date Collected:**	NA
Sample Matrix:	Drinking water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1504524-3	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	524.2		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroform	ND	U	0.50	1	05/20/15	05/20/15	KWG1504524	
Dibromochloromethane	ND	U	0.50	1	05/20/15	05/20/15	KWG1504524	
Bromodichloromethane	ND	U	0.50	1	05/20/15	05/20/15	KWG1504524	
Bromoform	ND	U	0.50	1	05/20/15	05/20/15	KWG1504524	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	82-124	05/20/15	Acceptable
Toluene-d8	103	82-124	05/20/15	Acceptable
4-Bromofluorobenzene	92	70-130	05/20/15	Acceptable

Comments:

Analytical Results

Client:	Surfside Homeowners Association	**Service Request:**	K1505051
Project:	Surfside Homeowners Assoc./86470Y	**Date Collected:**	05/12/2015
Sample Matrix:	Drinking water	**Date Received:**	05/12/2015

Volatile Organic Compounds

Sample Name:	Chlorinated Post Atec Post Calgon @ filt	**Units:**	ug/L
Lab Code:	K1505051-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	524.2		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroform	**10**		0.50	1	05/14/15	05/14/15	KWG1504334	
Dibromochloromethane	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	
Bromodichloromethane	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	
Bromoform	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	82-124	05/14/15	Acceptable
Toluene-d8	101	82-124	05/14/15	Acceptable
4-Bromofluorobenzene	91	70-130	05/14/15	Acceptable

Comments:

Analytical Results

Client:	Surfside Homeowners Association	**Service Request:**	K1505051
Project:	Surfside Homeowners Assoc./86470Y	**Date Collected:**	NA
Sample Matrix:	Drinking water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1504334-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	524.2		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroform	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	
Dibromochloromethane	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	
Bromodichloromethane	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	
Bromoform	ND	U	0.50	1	05/14/15	05/14/15	KWG1504334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	82-124	05/14/15	Acceptable
Toluene-d8	101	82-124	05/14/15	Acceptable
4-Bromofluorobenzene	93	70-130	05/14/15	Acceptable

Comments:

JULY 2015 HIGH-MEDIAN WATER USE REPORT

EXCLUDES COMMERCIAL AND ZERO USE ACCOUNTS

ADDRESS	WATER USE CU. FT.	WATER USE GALLONS	DAILY WATER USE	LEAK STATUS
35111 I STREET	65	486	16	
34501 F PLACE	65	486	16	
33401 I STREET	65	486	16	
33010 I STREET	65	486	16	
33510 J PLACE	67	501	16	
30515 G STREET	67	501	16	
35601 I STREET	68	509	16	
30517 G STREET	68	509	16	
1307 321ST PLACE	69	516	17	
33011 I STREET	70	524	17	
34208 I PLACE	70	524	17	
713 338TH PLACE	70	524	17	
33312 G STREET	70	524	17	
35015 H PLACE	71	531	17	
34043 G STREET	71	531	17	
33407 J PLACE	72	539	17	
33013 J PLACE	72	539	17	
32007 I STREET	73	546	18	
1204 306TH PLACE	73	546	18	
35115 H PLACE	74	554	18	
34500 G STREET	74	554	18	
35208 I STREET	75	561	18	
30405 H STREET	75	561	18	
1906 324TH PLACE	76	569	18	
30516 M PLACE	77	576	19	
30104 G STREET	7107	53164	1715	Continuous Leak 35 Days
30700 L PLACE	7404	55386	1787	Intermittent Leak 22-34 Days
35212 G STREET	7534	56358	1818	Intermittent Leak 22-34 Days
31309 H STREET	7684	57480	1854	
35210 G STREET	7822	58513	1888	Intermittent Leak 22-34 Days
30514 H STREET	7828	58558	1889	Intermittent Leak 3-7 Days
30701 G STREET	7869	58864	1899	Intermittent Leak 22-34 Days
35302 G STREET	7889	59014	1904	
30411 G STREET	7907	59148	1908	Intermittent Leak 35 Days
1501 322ND PLACE	8106	60637	1956	
912 338TH PLACE	8508	63644	2053	
30715 G STREET	8607	64385	2077	Continuous Leak 35 Days
34423 I STREET	8846	66173	2135	Intermittent Leak 22-34 Days
30706 H STREET	9117	68200	2200	Intermittent Leak 22-34 Days
31305 H STREET	9387	70220	2265	
30200 H STREET	9729	72778	2348	Intermittent Leak 22-34 Days
33802 I STREET	9879	73900	2384	Continuous Leak 8-14 Days
31714 G STREET	10071	75336	2430	Continuous Leak 35 Days
34212 G STREET	10873	81336	2624	
35506 G STREET	11082	82899	2674	
35503 J PLACE	11225	83969	2709	Intermittent Leak 35 Days
1506 320TH PLACE	11630	86998	2806	Continuous Leak 22-34 Days
(S of 34716 I St)	12120	90664	2925	Intermittent Leak 22-34 Days
30409 H STREET	12216	91382	2948	Intermittent Leak 22-34 Days
712 347TH PLACE	22571	168843	5447	Intermittent Leak 22-34 Days

JULY 2015 LEAK REPORT

Continuous Leaks

Address	Days of Leak	Cu Ft Use	Gallon Use	Per Day Gallon Use	Leak Status
1506 320TH PLACE	22-34 Days	11630	86998	2806	
31714 G STREET	35 Days	10071	75336	2430	
33802 I STREET	8-14 Days	9879	73900	2384	
30715 G STREET	35 Days	8607	64385	2077	
30104 G STREET	35 Days	7107	53164	1715	
32909 J PLACE	35 Days	6694	50075	1615	
32210 K PLACE	35 Days	5239	39190	1264	RESPONSE DUE 7-15-15
35313 I PLACE	35 Days	4699	35151	1134	
30517 K PLACE	35 Days	3603	26952	869	
32310 K PLACE	22-34 Days	3533	26429	853	
906 324TH PLACE	3-7 Days	3307	24738	798	
32708 H PLACE	35 Days	3111	23272	751	RESPONSE DUE 6-22-15
34609 I PLACE	22-34 Days	2974	22247	718	
1405 324TH PLACE	35 Days	2362	17669	570	RESPONSE DUE 7-15-15
30505 L PLACE	35 Days	2307	17258	557	
33406 G STREET	35 Days	1835	13727	443	RESPONSE DUE 6-22-15
30209 H STREET	35 Days	1515	11333	366	REPAIRED
32418 I STREET	22-34 Days	1415	10585	341	
31905 I STREET	35 Days	1377	10301	332	
32600 G STREET	22-34 Days	1253	9373	302	
33411 H PLACE	8-14 Days	1227	9179	296	
33015 J PLACE	22-34 Days	1086	8124	262	
30214 H STREET	3-7 Days	1014	7585	245	
35604 G STREET	35 Days	1010	7555	244	
32311 I STREET	35 Days	902	6747	218	PENDING REPAIR
2006 320TH PLACE	35 Days	894	6688	216	
31102 O PLACE	35 Days	841	6291	203	RESPONSE DUE 7-15-15
35401 G STREET	35 Days	824	6164	199	
1412 322ND PLACE	22-34 Days	793	5932	191	
30000 G STREET	22-34 Days	721	5393	174	
33612 J PLACE	35 Days	690	5162	167	PENDING REPAIR
32218 T PLACE	35 Days	602	4503	145	
32201 G STREET	35 Days	599	4481	145	
1100 322ND STREET	35 Days	592	4428	143	
2005 324TH PLACE	22-34 Days	546	4084	132	
33210 I STREET	22-34 Days	519	3882	125	
33404 G STREET	8-14 Days	512	3830	124	
33304 J PLACE	22-34 Days	483	3613	117	
30506 N PLACE	35 Days	472	3531	114	
33600 I STREET	35 Days	433	3239	104	
812 347TH PLACE	35 Days	375	2805	90	
1411 324TH PLACE	35 Days	332	2484	80	
34709 G STREET	3-7 Days	313	2341	76	
1813 324TH PLACE	35 Days	294	2199	71	
1604 320TH PLACE	35 Days	284	2124	69	

JULY 2015 LEAK REPORT

32404 G STREET	35 Days	124	928	30	
30910 G STREET	35 Days	103	770	25	

Intermittent Leaks

Address	Days of Leak	Cu Ft Use	Gallon Use	Per Day Gallon Use	Leak Status
712 347TH PLACE	22-34 Days	22571	168843	5447	
30409 H STREET	22-34 Days	12216	91382	2948	
(S of 34716 I St)	22-34 Days	12120	90664	2925	
35503 J PLACE	35 Days	11225	83969	2709	
30200 H STREET	22-34 Days	9729	72778	2348	
30706 H STREET	22-34 Days	9117	68200	2200	
34423 I STREET	22-34 Days	8846	66173	2135	
30411 G STREET	35 Days	7907	59148	1908	
30701 G STREET	22-34 Days	7869	58864	1899	
30514 H STREET	3-7 Days	7828	58558	1889	
35210 G STREET	22-34 Days	7822	58513	1888	
35212 G STREET	22-34 Days	7534	56358	1818	
30700 L PLACE	22-34 Days	7404	55386	1787	
30707 G STREET	22-34 Days	6081	45489	1467	
31006 O PLACE	15-21 Days	5967	44636	1440	
708 348TH PLACE	22-34 Days	5446	40739	1314	
33609 G STREET	22-34 Days	5121	38308	1236	
35217 I STREET	15-21 Days	4498	33647	1085	
35208 I PLACE	15-21 Days	4267	31919	1030	
810 353RD PLACE	8-14 Days	4104	30700	990	
35412 I PLACE	3-7 Days	3833	28673	925	
32709 G STREET	35 Days	3787	28329	914	
33101 J PLACE	15-21 Days	3507	26234	846	
33705 J PLACE	15-21 Days	3488	26092	842	
30103 H STREET	35 Days	3243	24259	783	
34412 G STREET	22-34 Days	2960	22142	714	
30705 G STREET	22-34 Days	2767	20699	668	
35301 G STREET	22-34 Days	2597	19427	627	
1212 320TH PLACE	22-34 Days	2330	17430	562	
31710 H PLACE	15-21 Days	2316	17325	559	
31206 G STREET	22-34 Days	2162	16173	522	
30311 G STREET	35 Days	2132	15948	514	
32101 G STREET	35 Days	2132	15948	514	
34709 J PLACE	22-34 Days	2101	15717	507	
32807 G STREET	22-34 Days	2079	15552	502	
35404 I PLACE	35 Days	2030	15185	490	
34409 J PLACE	22-34 Days	2029	15178	490	
33211 J PLACE	35 Days	1904	14243	459	
33105 H PLACE	35 Days	1878	14048	453	
35108 H PLACE	35 Days	1867	13966	451	
1301 321ST PLACE	22-34 Days	1800	13465	434	
33102 G PLACE	3-7 Days	1555	11632	375	

JULY 2015 LEAK REPORT

33609 G STREET	22-34 Days	1379	10316	333	
30804 G ST	35 Days	1320	9874	319	
1904 320TH PLACE	22-34 Days	1202	8992	290	
34801 J PLACE	22-34 Days	1189	8894	287	
1602 320TH PLACE	35 Days	1156	8647	279	
32901 G PLACE	15-21 Days	1068	7989	258	
32902 G STREET	22-34 Days	988	7391	238	
30815 G STREET	22-34 Days	922	6897	222	
800 357TH STREET	8-14 Days	907	6785	219	
31405 G STREET	8-14 Days	892	6673	215	
30800 H STREET	3-7 Days	856	6403	207	
33704 J PLACE	35 Days	731	5468	176	
32209 K PLACE	35 Days	720	5386	174	
609 357TH STREET	22-34 Days	670	5012	162	
30511 L PLACE	3-7 Days	658	4922	159	
33408 J PLACE	35 Days	650	4862	157	
32108 J PLACE	15-21 Days	571	4271	138	
32606 H PLACE	3-7 Days	526	3935	127	
34015 G STREET	8-14 Days	467	3493	113	
33000 G STREET	3-7 Days	465	3478	112	
31300 O PLACE	8-14 Days	423	3164	102	
34810 G STREET	3-7 Days	419	3134	101	
30510 G STREET	3-7 Days	406	3037	98	
803 324TH PLACE	3-7 Days	366	2738	88	
30801 I STREET	35 Days	345	2581	83	
29507 G STREET	35 Days	330	2469	80	
35405 J PLACE	35 Days	309	2311	75	
34003 J PLACE	22-34 Days	309	2311	75	
30205 G STREET	15-21 Days	281	2102	68	
35205 F PLACE	22-34 Days	273	2042	66	
30507 L PLACE	35 Days	251	1878	61	
2204 304TH PLACE	22-34 Days	227	1698	55	
34309 G STREET	15-21 Days	220	1646	53	
35505 I PLACE	8-14 Days	204	1526	49	
32008 G STREET	3-7 Days	193	1444	47	
33401 J PLACE	22-34 Days	145	1085	35	
30311 I STREET	1-2 Days	130	972	31	
809 340TH PLACE	3-7 Days	121	905	29	
34303 G STREET	15-21 Days	83	621	20	
1605 320TH PLACE	3-7 Days	39	292	9	
33108 J PLACE	22-34 Days	35	262	8	

May water leaks: 16/18 (continuous/intermittent*)

June leak letters sent: 18

June leak inspections: 1

Repairs made in June: 6

MAY UNRESOLVED LEAKS

2 MONTHS OLD: 3

3 MONTHS OLD: 2

4 MONTHS OLD: 6

June water leaks: 26/47 (continuous/intermittent*)

July leak letters sent: 0

July leak inspections: 5

Repairs made in July: 33

JUNE UNRESOLVED LEAKS

2 MONTHS OLD: 17

3 MONTHS OLD: 2

4 MONTHS OLD: 4

5 MONTHS OLD: 3

July water leaks: 37/60 (continuous/intermittent*)

August leak letters sent: Pending inspections

August leak inspections: 32 and counting

Repairs made in August: 4 and counting

JULY UNRESOLVED LEAKS

2 MONTHS OLD: 29

3 MONTHS OLD: 11

4 MONTHS OLD: 2

5 MONTHS OLD: 2

6 MONTH OLD: 3

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* > 500 Cu. Ft.

Monthly Water Use Efficiency Report

Month/Year

Name of Operator Reporting

From:	6-30-15	To:	7-31-15	APRIL GARCIA		
Well	Total (Gal.)	Well	Total (Gal.)	Well	Total (Gal.)	Total
J-2	33,000	J-3	200,000	J-4	3,540,000	3,773,000
J-5	3,404,000	J-6	3,519,000	J-7	3,546,000	10,469,000

J-Well Field Total Water Pumped (TP)	TP	14,242,000
Water Used to Backwash Filters	BWW	554,487
Water Used for Unidirectional Flushing	UDF	0
Water Used for Reactionary Flushing	RAF	0
Water Used for Water Main Replacement Flushing	WMR	0
Water Used or Lost for Water Main Breaks	WMB	0
Residential Water Use	MRU	11,748,429
Commercial Water Use	MCU	771,227
Other Authorized Water Use	OAU	62,000
Total Authorized Water Use (AU)	TAU	13,136,142

FT-Metered[1]	402	PT-Metered[2]	943	FT-Unmetered[3]	206	PT-Unmetered[4]	374

Total Water Use This Month by Full Time Metered Members	TFTM	4,543,047
Average Water Use This Month per Full Time Metered Member	FTM	11,301
Total Water Use This Month by Part Time Metered Members	TPTM	3,492,288
Average Use This Month per Part Time Metered Member	PTM	3,703
Estimated Total Use This Month by Full Time Unmetered Members	TFTU	2,328,029
Estimated Average Use This Month per Full Time Unmetered Member	FTU	11,301
Estimated Total Use This Month by Part Time Unmetered Members	TPTU	1,385,064
Estimated Average Use This Month per Part Time Unmetered Member	PTU	3,703
Estimated Distribution System Leakage (DSL) This Month (Gallons)	DSLG	1,105,858
Estimated DSL (Percentage of Total Water Pumped)	DSLP	7.8%

Operator Signature _____ Date _____

Operator Signature _____ Date _____

Operator Signature _____ Date _____

[1] Water use more than 1,500 gallons per month – Considered Full-Time
[2] Water use less than 1,500 gallons per month – Considered Part-Time
[3] Water Service without a meter that has a local address – Considered Full-Time
[4] Water Service without a meter that does not have a local address – Considered Part-Time

Monthly Water System Data Report

Month/Year	Name of Operator Reporting
July-2015	APRIL GARCIA

Data	Reading	Unit	Target
Avg. Raw Water Iron (Fe)	0.32	mg/L	N/A
Avg. Finished Water Iron (Fe)	0.11	mg/L	≤ 0.3
Avg. Raw Water Manganese (Mn)	0.095	mg/L	N/A
Avg. Finished Water Manganese (Mn)	0.016	mg/L	≤ 0.05
Avg. Raw Water pH	8.9	pH	7.5-8.5
Avg. Finished Water pH	8.3	pH	7.2-7.8
Avg. Raw Water Color (HU)	44	HU	≤ 60
Avg. Finished Water Color (HU)	30	HU	≤ 15
Avg. Raw Water Temperature (°F)	54.4	°F	N/A
Avg. Finished Water Temperature (°F)	55.1	°F	N/A
Avg. Raw Water Ammonia (NH3)	0.20	mg/L	≤ 30
Avg. Finished Ammonia (NH3)	0.00	mg/L	≤ 15
Avg. Raw Water Silica (Sio2)	18.3	mg/L	≤ 70
Avg. Finished Silica (Sio2)	17.9	mg/L	≤ 70
Avg. Raw Water Tannin	0.8	mg/L	≤ 1
Avg. Finished Tannin	0.4	mg/L	≤ 0.5
Avg. Raw Water Conductivity (µhos/cm)	442	µhos/cm	≤ 800
Avg. Raw Water TDS	314	mg/L	≤ 400
Avg. Raw Water Chloride (Cl)	36	mg/L	≤ 250
Avg. Green Pipe Water Total Chlorine (CL2) (Treated Water)	1.94	mg/L	≤ 2.50 ≥ 1.70
Avg. Green Pipe Water Free Chlorine (CL2) (Treated Water)	1.08	mg/L	≤ 1.50 ≥ 0.50
Avg. Blue Pipe Water Total Chlorine (CL2) (Finished Water)	0.87	mg/L	≤ 1.20 ≥ 0.50
Avg. Blue Pipe Water Free Chlorine (CL2) (Finished Water)	0.44	mg/L	≤ 0.75 ≥ 0.20
Avg. Reservoir Water Total Chlorine (CL2) (Stored Water)	0.40	mg/L	≤ 0.80 ≥ 0.30
Avg. Reservoir Water Free Chlorine (CL2) (Stored Water)	0.05	mg/L	≤ 0.20 ≥ 0.05

Continued on Reverse Side

Avg. Rechlorinated Water Total Chlorine (CL2)	0.67	mg/L	≤ 1.00 ≥ 0.50
Avg. Rechlorinated Water Free Chlorine (CL2)	0.38	mg/L	≤ 0.50 ≥ 0.30
Avg. Distribution Water Total Chlorine (CL2)	0.12	mg/L	≤ 0.80 ≥ 0.20
Avg. Distribution Water Free Chlorine (CL2)	0.02	mg/L	≤ 0.50 ≥ 0.05
Avg. Distribution Water Color (HU)	32	HU	≤ 15
Avg. Distribution Water Temperature (°F)	64.8	°F	N/A
Avg. Distribution Water pH	8.3	pH	7.2-7.8
Jar Test	1.60	mg/L	≤ 1.80 ≥ 1.20
J-1 Idle Measure from TOP	N/A	Ft/In.	N/A
J-1 Measure from TOP	16	Ft/In.	N/A
J-2 Measure from TOP	19.4	Ft/In.	N/A
J-3 Measure from TOP	20.6	Ft/In.	N/A
J-4 Measure from TOP	50.4	Ft/In.	N/A
J-5 Measure from TOP	47.4	Ft/In.	N/A
J-6 Measure from TOP	45.3	Ft/In.	N/A
J-7 Measure from TOP	44	Ft/In.	N/A
Rainfall	0.23	In.	N/A
Locates	11	N/A	N/A
Service Calls (contacts with members about water concerns)	7	N/A	N/A
New Service(s)	0	N/A	N/A
Water Main Breaks	0	N/A	N/A
New Backflow Assemblies Installed		N/A	N/A
Backflow Assemblies Tested		N/A	N/A
Cross Connection Questionnaires Received		N/A	N/A
Cross Connection Calls (contacts with members about CCC)		N/A	N/A

Operator Signature _____ Date _____

Field Superintendent Signature _____ Date _____

Water System Manager Signature _____ Date _____

Monthly Activity Data Report

Month/Year		Name of Operator Reporting	
MONTH	JULY 2015	NAME	APRIL GARCIA

Maintenance & Operation (M&O)

Vender:	Amount
7-1-15 JACK'S	$ 278.67
6-29-15 HACH #313709707	$ 151.06
6-24-15 CASCADE COLUMBIA #644629	$ 1,168.41
6-16,18,25-15 ENGLUND MARINE #503818, 501479, 501042	$ 516.83
6-19-15 TAFT PLUMBING #11753	$ 36.41
7-30-15 CASCADE COLUMBIA DIST. #646516	$ 906.40
8-7-15 CASECADE COLUMBIA DIST. #645869	$ 913.77
Total	$ 3,971.55

Employee	R-Hrs. / OT Hrs.
R-Hrs/Comp-Hrs	143.5 / 4.0
Gil	5.0
Aaron	55.0
	7.5
Larry	180.0
	3.0
April	184.0
	0.0
Chris	81.0
	0.0
Caleb	40.0
	0.0
John	0.0
	0.0
Total R Hrs.	687.5
Total OT Hrs.	15.5

Water Main Replacement (WMR)

Vender:	Amount
Total	$ 0.00

Employee	R-Hrs. / OT Hrs.
Gil	0.0
	0.0
Aaron	0.0
	0.0
Larry	0.0
	0.0
April	0.0
	0.0
Chris	0.0
	0.0
Caleb	0.0
	0.0
John	0.0
	0.0
Total R Hrs.	0.0
Total OT Hrs.	0.0

Meter Installation Project (MIP)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	31.0
			0.0
		Aaron	129.0
			0.0
		Larry	4.0
			0.0
		April	0.0
			0.0
		Chris	97.0
			0.0
		Caleb	120.0
			0.0
		John	0.0
			0.0
		Total R Hrs.	381.0
Total	$ 0.00	Total OT Hrs.	0.0

Lands and Buildings (L&B)		Employee	R-Hrs. / OT Hrs.
Vender:	Amount	Gil	5.5
6-30-15 CLATSOP POWER EQUIPMENT #136002, 136479	$ 205.78		0.0
6-25-15 ALL RENTS #501995	$ 150.00	Aaron	0.0
6-30-15 BAILEY'S SAW SHOP #061015005	$ 134.88		0.0
6-1-15 TO 6-25-15 OMAN & SON #528880,8977, 9740, 9744	$ 133.33	Larry	0.0
7-2-15 ERADIPEST #2322523	$ 1,294.80		0.0
		April	0.0
			0.0
		Chris	6.0
			0.0
		Caleb	0.0
			0.0
		John	104.5
			0.0
		Total R Hrs.	116.0
Total	$ 1,918.79	Total OT Hrs.	0.0

Surfside Monthly Activity Data Report

Special Project: No Special Projects in ___JULY___, 2015		Employee	R-Hrs.
			OT Hrs.
Vender:	Amount	Gil	0.0
			0.0
		Aaron	0.0
			0.0
		Larry	0.0
			0.0
		April	0.0
			0.0
		Chris	0.0
			0.0
		Caleb	0.0
			0.0
		John	0.0
			0.0
		Total R Hrs.	0.0
Total	$ 0.00	Total OT Hrs.	0.0

Description of Materials Used By Crew During Month	Amount	For
3/4" MIP SERVICE W/ METER	87	MIP
6 x 3/4 TAP	1	O&M
		-
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		-

Reporting Operator Signature

Date

Field Superintendent Signature

Date

Water System Manager Signature

Date

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COLIFORM BACTERIA ANALYSIS

Date Sample Collected (Month Day Year)	Time Sample Collected	County
07 10 2015	10:54 ☒ AM ☐ PM	PACIFIC

Type of Water System (check only one box) ☐ Private Household
☒ Group A ☐ Group B ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):
ID# 8 6 4 7 0 Y

System Name: SURFSIDE HOMEOWNERS ASSOCIATION

Contact Person: GIL GONZALEZ

Day Phone: (360) 665-4171 | Cell Phone: (360) 783-2393

Eve. Phone: (360) 783-2393 | FAX: (360) 665-6785

Email:

Send results to: (Print full name, address and zip code)
SHOA
31402 HST.
OCEAN PARK WA. 98640

SAMPLE INFORMATION

Sample collected by (name): LAWRENCE HAMPTON

Specific location where sample collected: 1104 309TH

Special instructions or comments: BREEZY

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes X No _____
Chlorine Residual: Total .11 Free .02

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number: 0 1 7 - _ _ _ _ _ _
Unsatisfactory routine collect date: _____/_____/_____
Chlorinated: Yes _____ No _____
Chlorine Residual: Total_____ Free_____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative _____ Construction / Repairs _____ Other _____

LAB USE ONLY **DRINKING WATER RESULTS** LAB USE ONLY

☐ **Unsatisfactory** Total Coliform Present **and**
☐ *E.coli* present ☐ *E.coli* absent

☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml.

Method Code: MICR- S M 9 2 3 6
Date Analyzed 7 9 15 JL

Date, Time and Temp Received: 7/9/15 1000 AK
Date Reported: 7/10/15

Sample Number (DOH number plus five digits): 0 1 7 - 7 4 0 2 1
Lab Use Only: HR 7/10/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

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ALS Environmental
1317 S. 13th Avenue • Kelso, WA 98626

COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
7 / 15 / 15 (Month / Day / Year)	☐ AM 12:47 ☒ PM	Pacific

Type of Water System (check only one box): ☒ Group A ☐ Group B ☐ Private Household ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):

ID# 8 6 4 7 0 1

System Name: Surfside [illegible] Assoc.

Contact Person: Gil Gonzalez

Day Phone: 360 665-4171 Cell Phone: 360 783-2393

Eve. Phone: 360 783-2393 FAX: ( )

Email: water@surfsideonline.org

Send results to: (Print full name, address and zip code)

31402 H st.
Ocean Park, WA 98640

SAMPLE INFORMATION

Sample collected by (name): Gil Gonzalez

Specific location where sample collected: #1407 314th faucet in Center of lot

Special instructions or comments:

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes ☒ No ☐
Chlorine Residual: Total .13 Free .06

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number: 0 1 7 - _ _ _ _ _
Unsatisfactory routine collect date: ___/___/___
Chlorinated: Yes ____ No ____
Chlorine Residual: Total ____ Free ____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative ____ Construction / Repairs ____ Other ____

LAB USE ONLY **DRINKING WATER RESULTS** LAB USE ONLY

☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent

☑ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count _____/ml. *E.coli* _____/100ml.

Total Coliform _____/100ml. Fecal Coliform _____/100ml.

Method Code: MICR- S M 9 2 2 36
Date Analyzed 7/16/15
Sample Number (DOH number plus five digits) 0 1 7 - 7 6 8 3 1

Date, Time and Temp Received: 7/16/15 940
Date Reported: 7/17/15
Lab Use Only: HG 7/17/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

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COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
Month 7 Day 21 Year 15	☒ AM ☐ PM 10:40	Pacific

Type of Water System (check only one box) ☐ Private Household
☒ Group A ☐ Group B ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):
ID# 8 6 4 7 0 Y
System Name: Surfside Homeowners Assoc.
Contact Person: Gil Gonzalez
Day Phone: 360 783-2393 Cell Phone: 360-783-2393
Eve. Phone: 360 783-2393 FAX: ( )
Email: Water@Surfsideonline.org
Send results to: (Print full name, address and zip code)
Surfside Homeowners Assoc.
31402 A St.
Ocean Park, WA 98640

SAMPLE INFORMATION

Sample collected by (name): Laurence Hayton
Specific location where sample collected: #1911 323rd
Special instructions or comments:

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes X No ____
Chlorine Residual: Total .24 Free .05

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number:
0 1 7 - _ _ _ _ _ _
Unsatisfactory routine collect date:
___/___/___
Chlorinated: Yes ____ No ____
Chlorine Residual: Total____ Free____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative ____ Construction / Repairs ____ Other ____

LAB USE ONLY	**DRINKING WATER RESULTS**	LAB USE ONLY
☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent		☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml.

Method Code: MICR- SM 9223B	Date,Time and Temp Received: 7/22/15 1000
Date Analyzed 7/21/15	Date Reported: 7/23/15
Sample Number (DOH number plus five digits) 0 1 7 - 7 9 0 8 1	Lab Use Only: 7/22/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

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COLIFORM BACTERIA ANALYSIS

Date Sample Collected	Time Sample Collected	County
7 / 28 / 15 (Month / Day / Year)	1:00 ☐ AM ☒ PM	Pacific

Type of Water System (check only one box): ☒ Group A ☐ Group B ☐ Private Household ☐ Other _____

Group A and Group B Systems – Provide from Water Facilities Inventory (WFI):

ID# 8 6 4 7 0 Y

System Name: Surfside Homeowners Assoc.

Contact Person: Gil Gonzalez

Day Phone: (360) 665-4171 Cell Phone: (360) 783-2393

Eve. Phone: (360) 783-2393 FAX: ( )

Email:

Send results to: (Print full name, address and zip code)
Surfside Homeowners
31402 H St.
Ocean Park WA 98640

SAMPLE INFORMATION

Sample collected by (name): April Reynolds

Specific location where sample collected:
32002 G Place
faucet in SW Corner

Special instructions or comments:

Type of Sample (MUST CHECK ONLY ONE BOX OF #1 THROUGH #4 LISTED BELOW)

#1. ☒ **Routine Distribution Sample**
Chlorinated: Yes X No ____
Chlorine Residual: Total .18 Free .02

#2. Repeat Sample (after unsat. routine)
☐ Distribution System
☐ Source Groundwater Rule (GWR) (Population of 1,000 or less)
Unsatisfactory routine lab number:
0 1 7 - _ _ _ _ _
Unsatisfactory routine collect date:
____/____/____
Chlorinated: Yes ____ No ____
Chlorine Residual: Total____ Free____

#3. Raw Water Source Sample
☐ *E.coli* – GWR source sample
☐ Fecal –Surface, GWI, some springs
☐ Other
S
Public systems must provide source number from WFI

#4. ☐ **Sample Collected for Information Only**
Investigative ____ Construction / Repairs ____ Other ____

LAB USE ONLY	**DRINKING WATER RESULTS**	LAB USE ONLY
☐ **Unsatisfactory** Total Coliform Present **and** ☐ *E.coli* present ☐ *E.coli* absent		☒ **Satisfactory**

Replacement Sample Required:
☐ Sample too old (>30 hours) ☐ TNTC ☐ _____
☐ Improper Container ☐ Turbid culture

Bacterial Density Results: Plate Count_____/ml. *E.coli*_____/100ml.
Total Coliform_____/100ml. Fecal Coliform_____/100ml.

Method Code: MICR- SM9223B	Date, Time and Temp Received: 7/29/15 0910
Date Analyzed 7/29/15 CR	Date Reported: 7/30/15 CR
Sample Number (DOH number plus five digits): 0 1 7 - 8 1 7 6 1	Lab Use Only: AN 7/31/15

INTERPRETATION OF RESULTS FOR DRINKING WATER

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 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 fecal 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 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.

for theState of Washington

TTHM TEST PANEL

(Total Trihalomethanes by EPA METHOD - 524.2)

Distribution System - Report of Analyses

TRIHALOMETHANE ANALYSIS		System Group Type : ☑ A ☐ B ☐ Other (Specify):	
Water System ID Number : **86470Y**		System Name : **Surside Homeowners Assoc.**	
Source: S92 (Distribution samples)		County : **Pacific**	
Sample Purpose		Date Received (MM/DD/YY) : **7/1/2015**	
X	RC – Routine/Compliance	Date Analyzed (MM/DD/YY) : **7/10/2015**	
	C-Confirmation	Date Reported (MM/DD/YY) : **7/28/2015**	
	I – Investigative	COMMENTS : **K1507106**	
	O – Other		
Send Report to :	**Gil Gonzalez**	Bill to (Client Name) :	
	WA DOH		

(DOH #) ANALYTE	(0027) Chloroform	(0028) Bromo-dichloro-methane	(0029) Chlorodi-bromo-methane	(0030) Bromoform	(0031) Total THMS
SRL,ug/L	0.25	0.5	0.5	0.5	
Trigger Level, ug/L					60 *
MCL. Ug/L					80 *
Analytical Method	524.2				
Analysts Initials	GH				

Results

Lab Sample # 017+ 5 digit Lab ID	Date Collected	Sample Location	Chloro-form	Bromo-dichloro-methane	Chlorodi-bromo-methane	Bromo-form	Total THMs
01771061	**6/30/2015**	**304th Pl & Stackpole Rd.**	**60**	**21**	**3.2**	**0.15**	**84.35**
01771062	**6/30/2015**	**295th Pl & G St.**	**74**	**26**	**3.4**	**0.14**	**103.54**

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

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) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

***:** Value listed is for the sum of the five trihalomethanes.

Additional Comments:

for theState of Washington

HALOACETIC ACID (HAA5) TEST PANEL

HAA5s by EPA Method 552.2

Distribution System - Report of Analyses

HALOACETIC ACIDS		System Group Type : ☑ A ☐ B ☐ Other (Specify):	
Water System ID Number : **86470Y**		System Name : **Surfside Homeowners Assoc.**	
Source: S92 (Distribution samples)		County : **Pacific**	
Sample Purpose		Date Received (MM/DD/YY) : **7/1/2015**	
X	RC – Routine/Compliance	Date Analyzed (MM/DD/YY) : **7/7/2015**	
	C-Confirmation	Date Reported (MM/DD/YY) : **7/28/2015**	
	I – Investigative	COMMENTS : **K1507106**	
	O – Other		
Send Report to :	**Gil Gonzalez**	Bill to (Client Name) :	
	WA DOH		

Abbreviations: Monochloroacetic Acid="MCCA" Dichloroacetic Acid="DCAA" Trichloroacetic Acid-"TCAA" Monobromoacetic Acid="MBAA" Dibromoacetic Acid="DBAA" Total Haloacetic Acids="HAA5a"

(DOH #) ANALYTE	(0411) MCCA	(0412) DCAA	(0413) TCAA	(0414) MBAA	(0415) DBAA	(0416) HAA5a
SRL,ug/L	2	1	1	1	1	6
Trigger Level, ug/L						45 *
MCL. Ug/L						60 *
Analytical Method	552.2					
Analysts Initials	CH					

Results

Lab Sample # 017+ 5 digit Lab ID	Date Collected	Sample Location	MCCA	DCAA	TCAA	MBAA	DBAA	HAA5s
01771061	**6/30/2015**	**304th Pl & Stackpole Rd.**	**ND**	**ND**	**1**	**ND**	**ND**	**1**
01771062	**6/30/2015**	**295th Pl & G St.**	**ND**	**3.3**	**11**	**ND**	**ND**	**14.3**

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

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) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

*: Value listed is for the sum of the five haloacetic acids (MCCA, DCAA, TCAA, MBAA, and DBAA).

Additional Comments:

SURFSIDE HOMEOWNERS ASSOCIATION

PACIFIC COUNTY **WASHINGTON**

DBP PILOT STUDY REPORT

G&O #13546
JUNE 2015

Gray & Osborne, Inc.
CONSULTING ENGINEERS

SURFSIDE HOMEOWNERS ASSOCIATION

PACIFIC COUNTY **WASHINGTON**

DBP PILOT STUDY REPORT

G&O #13546
JUNE 2015

Gray & Osborne, Inc.
CONSULTING ENGINEERS

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CHAPTER 1

BACKGROUND

This report documents the results of pilot testing for investigating the use of activated carbon to remove disinfection byproduct (DBP) precursors and reduce the levels of DBP seen in the Surfside Homeowners Association (Surfside) distribution system. This chapter provides a background of DBP regulations and Surfside DBP data, and a summary of the pilot study goals.

BACKGROUND

REGULATIONS

Surfside is currently governed under the Stage 2 Disinfection Byproduct Rule. For Surfside, this rule went into effect in July 2014. Under the Stage 2 Rule, Surfside is required to take one sample each for Total Trihalomethanes (TTHM) and five Haloacetic Acids (HAA5) each quarter with compliance measured by the average of the last four quarters at each site where sampling occurs, called the locational running annual average (LRAA). Because Surfside only collects one sample the locational running annual average is no different than the running annual average (RAA) by which compliance was measured under the Stage 1 Rule. The LRAA for TTHM and HAA5 must be below the MCLs of 80 μg/L and 60 μg/L, respectively.

SURFSIDE TTHM AND HAA5 DATA

Surfside began taking quarterly DBP samples starting in 2009 including trihalomethane (THM) samples. The four THM constituents are chloroform ($CHCl_3$), bromochloroform ($CHBrCl_2$), chlorodibromoform ($CHBr_2Cl$), and bromoform ($CHBr_3$). Figure 1 shows the quarterly sampling results and the running annual average.

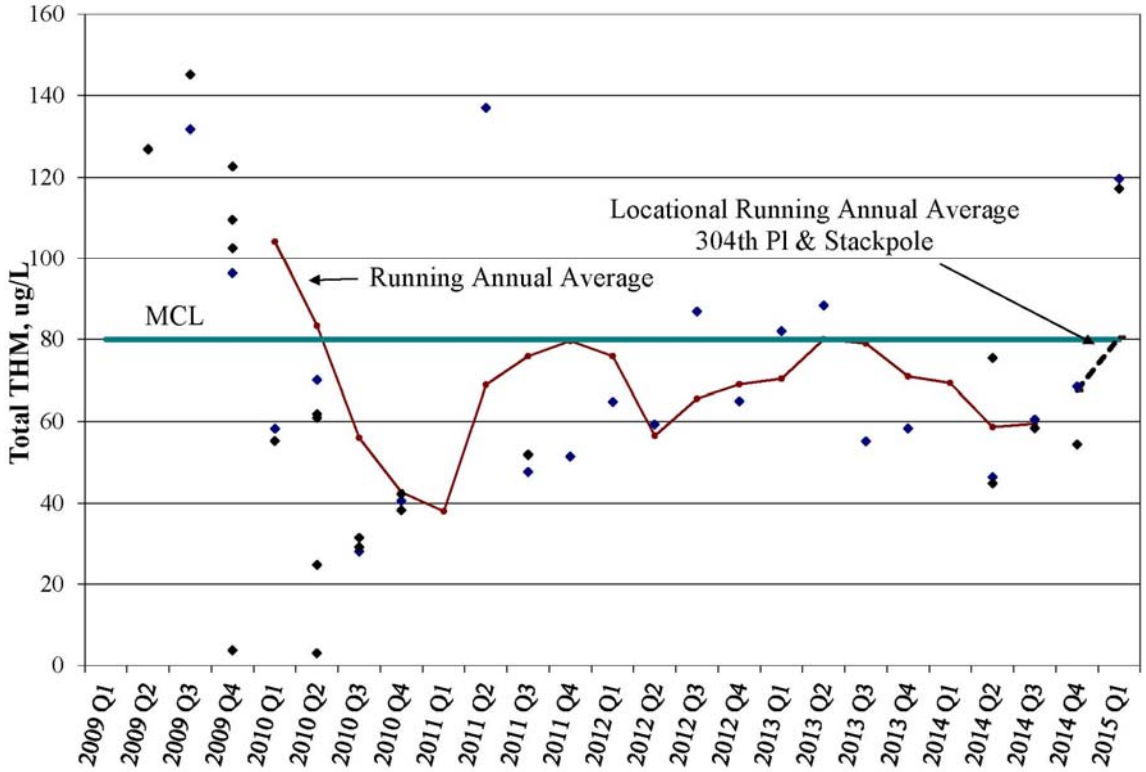

FIGURE 1-1

THM Data for Surfside Homeowners Association

The data in Figure 1 indicate that in 2009, THM values were well above the 80 µg/L MCL. The values decreased and since 2010 the RAA, the value that is used for MCL compliance, has been below the MCL but there have been occasions when the RAA was equal to or just below the MCL. The quarterly samples appear to have been at a minimum in mid-2010 and have generally been increasing since then. The high initial samples shown in the figure were likely due to the influence of the shallow wellfield sources which were discontinued and abandoned in 2010 leaving the deep wells as the source for Surfside.

Stage 2 D/DBP Rule went into effect for Surfside at the end of 2013. Stage 2 measured compliance using a LRAA with compliance staring in Quarter 4, 2014. The graph shows the LRAA for 304th Place and Stackpole Drive exceeded the 80 µg/L MCL in Quarter 1, 2015. The LRAA value in Quarter 1, 2015 was 80.5 µg/L.

A review of the THM data for the period indicates that a large majority of the THMs present are chloroform at 70 percent of the total, followed by dichlorobromoform at 24 percent of the total, with dibromoform and bromoform making up only 6 percent and less than 1 percent, respectively. This indicates that bromine is not present in large

concentrations and that the principal contributor to the THMs is the chlorine added for disinfection.

Figure 2 shows the historical haloacetic acid (HAA5) sampling for the same period. The five haloacetic acids that are included in the analysis are monochloro-, dichloro-. trichloro-, monobromo-. and dibromoacetic acid.

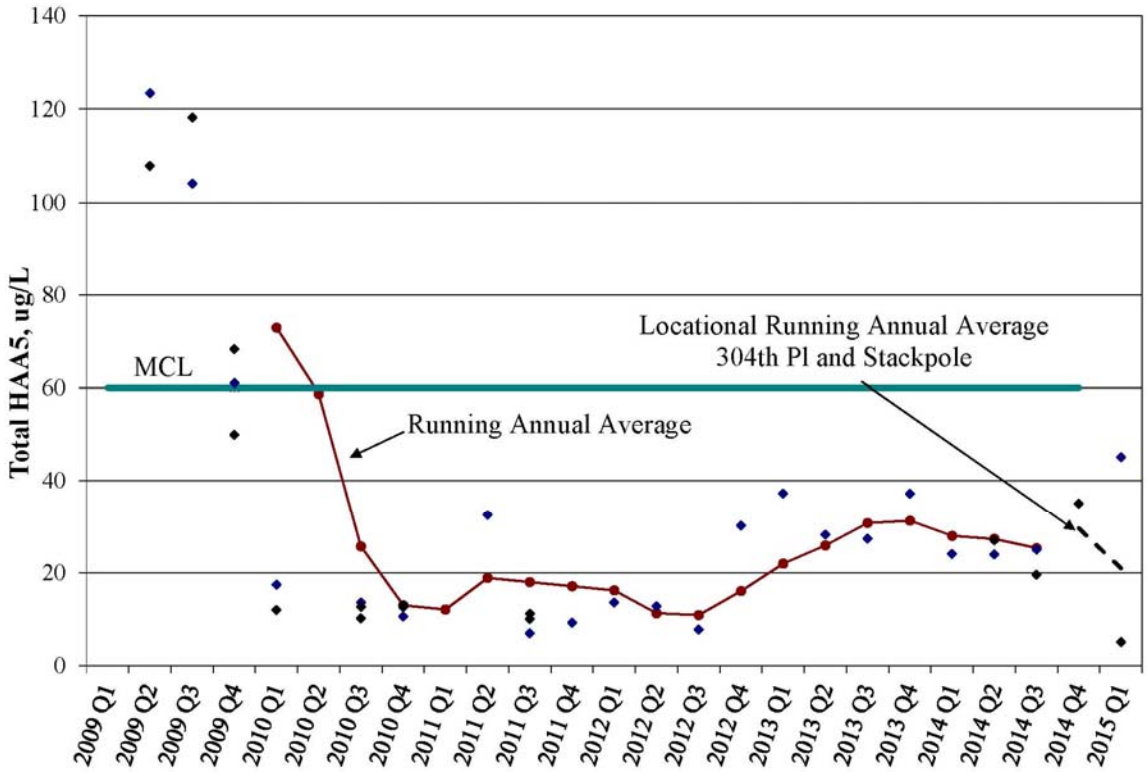

FIGURE 1-2

HAA5 Data for Surfside Homeowners Association

The HAA5 data shown in Figure is similar to the THM data in that the initial quarterly samples in 2009 are above the 60 µg/L MCL. The values decrease in 2010, afterwhich the RAA is below the MCL. Unlike the THM data, the HAA5 average has been well below the MCL since 2010. Like the THMs, the majority of the HAA5 constituents are chlorinated acids rather than brominated acids.

Surfside also sampled for total organic carbon (TOC) in 2007 and 2009 in the deep wells. The raw water samples for the various wells ranged from a high of 10.6 mg/L from a combined water sample from Wells 4 and 5 in September 2007 to a low value of 3.3 mg/L from Well 5 in July 2009. The average TOC value for raw water samples from all the wells during the period was 5.5 mg/L, a value significantly higher than what is normally seen in western Washington groundwater. The data showed high variability

between wells and over time as evident in the Well 5 data described earlier where a composite Well 4 and 5 sample had a TOC concentration of 10.6 mg/L in 2007 and a sample from Well 5 had a TOC concentration of 3.3 mg/L in 2009. Well 4 had a TOC concentration of 4.4 mg/L in 2009 indicating that both wells had a TOC decrease between the two periods.

Surfside also sampled the reservoirs and the distribution system for TOC. The average for samples in 2009 and 2011 was 4.1 mg/L suggesting that a portion of TOC may be removed in the treatment process for the wellfield. Because the raw water and finished water datasets do not correspond to the same time periods, this conclusion is not definitive.

Gray & Osborne completed an initial screening evaluation of treatment technologies that could be used to reduce disinfection byproducts in the Surfside distribution system. Activated carbon and aeration were identified as the technologies with the greatest likelihood of success. Surfside decided to evaluate activate carbon alternatives first due to aesthetic benefits of carbon treatment and the results of the pilot study are presented in this report.

PILOT STUDY GOALS

The primary goal of the pilot column test was to investigate the possibility of using granular activated carbon to remove DBP precursors. More specifically, the goals are outlined below.

- To determine if activated carbon can be an effective treatment for reducing DBPs and possibly other water quality issues such as color.
- To determine the estimated carbon usage over time.
- To verify the design parameters for a carbon system including loading rates, expected removal efficiency, and possible blending of treated and untreated water for optimal carbon life.
- To develop a simple surrogate measurement for DBPs that can be used by Surfside personnel to ascertain carbon performance.
- To compare the effectiveness of the two different carbon media: Calgon Filtrasorb 400 with Seimens 1240AW.
- To determine if the placement of activated carbon before or after the existing ATEC iron and manganese treatment is optimal.

CHAPTER 2

METHODS AND MATERIALS

The objective of the pilot study was to determine the optimal way to reduce the DBPs in the Surfside system using granular activated carbon. The pilot investigation methods that were employed are described below.

ACTIVATED CARBON INVESTIGATION

The pilot study strategy was to install test columns to simulate, as closely as possible, full scale operation of a carbon contactor. Since most carbon contact systems are composed of two units operated in series, the pilot apparatus included two units operated in series. Each type of carbon was tested in its own apparatus

The pilot columns used a small sidestream through two 4-inch test columns in series to approximate full scale installation as shown in Figure 2-1. The parameters for the columns are given below in Table 2-1.

TABLE 2-1

Pilot Column Parameters

Parameter	Value
Columns per Carbon Type	2
Operation	Lead/Lag
Carbon Types Proposed	Calgon Filtrasorb 400 Seimens AC 1230 CX
Column Diameter	4 inch
Column Height	5 feet
Media Support	3 inches pea gravel
Depth of Carbon Media	48 inches
Column Freeboard	9 inches
Column Material	Clear PVC
Hydraulic Loading (EBCT = 8 minutes)	3.4 gpm/ft^2
Flow Rate	0.33 gpm (20 gph)
Backwash Rate	10 - 15 gpm/ft^2
Backwash Flow	0.9 - 1.3 gpm

The test column was constructed of 4-PVC Schedule 40 piping. The two columns in series provided a total EBCT of 8 minutes. The EBCT was not adjusted during the pilot because it did not appear to be necessary after the pilot study was started.

A protocol of water quality sampling is shown in Table 2-2.

TABLE 2-2

Pilot Study Monitoring Schedule

Parameter	Method	Raw Water	Carbon Media Sample Ports	Post-Carbon
UV 254 Transmittance	Onsite Analyzer	Daily(1)	Daily(1)	Daily(1)
Color	Onsite Analyzer	Weekly	Weekly	Weekly
Iron, mg/L	Onsite Analyzer	Weekly	NA	Weekly
Manganese, mg/L	Onsite Analyzer	Weekly	NA	Weekly
Maximum TTHM Formation Potential	Commercial Lab	NA	NA	Periodically(2)
TOC	Commercial Lab	Periodically	NA	Periodically(2)
Tannin, mg/L	Onsite Analyzer	Periodically	NA	Periodically

(1) Daily sampling occurred initially daily but was reduced to twice per week.
(2) TOC and TTHM samples were taken in April 2014 to check correlation with UV 254 measurements.

Initially, columns with Calgon and Siemens carbon were installed in the wellhouse to treat sidestreams of raw well water. After five months of pilot study, the Siemens carbon columns were removed for reasons described later in Chapter 3, refilled with Calgon carbon, and installed on a sidestream after the ATEC units to allow a comparison of treating raw versus treated water.

The UV 254 transmittance was measured using a Trojan P254C UV 254 transmittance meter. UV absorbance is calculated from UV transmittance using the following equation.

$$\text{UV absorbance} = -\log(\text{UV transmittance})$$

Total Organic Carbon (TOC) and Maximum Total Trihalo Methane Formation Potential (MTTFP) measurement were measured using a commercial lab.

Color was measured using a Hach DR 890 portable meter. To verify that the color measurements were qualitatively valid, surfside staff also did a qualitative color check by visually examining the color of the sample when viewed against a white paper background and compared with distilled water.

Tannins were measured using tyrosine reagents and a Hach DR 890 colorimeter.

Iron was measured with a Hach DR 890 colorimeter and Ferrover reagents.

Manganese was measured with a Hach DR 890 colorimeter using the PAN indicator.

CHAPTER 3

PILOT STUDY RESULTS

This chapter presents the results of the pilot study including a review of the usefulness of UV 254 as a surrogate for measuring DBPs, and a presentation of the data obtained from the carbon pilot and ozone studies.

UV 254 AS MONITORING TOOL

As indicated in the previous chapter, UV 254 measurements were taken throughout the pilot study. During the pilot study, the UV 254 measurements were compared to other variables to assess the usefulness of UV 254 as a tool for monitoring disinfection byproducts, their precursors, or related compounds.

Figure 3-1 shows the correlation of UV 254 absorbance and TOC levels. A best-fit, linear, regression line has been added and suggests that TOC concentration increases with increased UV absorbance.

Several samples were sent to a commercial laboratory for maximum trihalomethane formation potential analysis (MTTFP). These included samples from both the pilot columns and the water directly from the ATEC filter unit. Figure 3-2 shows the correlation between UV 254 absorbance and the MTTFP. There is a definite linear correlation between UV 254 absorbance and MTTFP. The data indicate that UV 254 absorbance is a better predictor of MTTFP than TOC. The regression relationship determined in Figure 3-2 will be used throughout this analysis to show a predicted MTTFP.

It has been Gray & Osborne's experience that the level of THMs seen in distribution system compliance sampling are generally well below the MTTFP level, although the MTTFP is still a qualitative indicator of DBP potential. For Surfside, A comparison of UV data and THM levels is shown in Table 3-1. The average ratio of the THM compliance sample over the predicted MTTFP calculated from UV data was 18 percent and it ranged from 14 to 22 percent.

TABLE 3-1

Comparison of UV Data and Distribution System THM Compliance Data

Date	UV %T[(1)]	UV Abs.	Calc. MTTFP[(2)], µgL	Measured THM, µgL	Measured/Calc. MTTFP
Apr 2014	73.0	0.137	339	75.5	22%
Jun 2014	73.5	0.134	332	46.4	14%
Jun 2014	73.5	0.134	332	44.86	14%
Aug 2014	73.5	0.134	332	58.36	18%
Sep 2014	74.3	0.129	320	60.5	19%
Dec 2014	73.8	0.132	328	54.43	17%
Dec 2014	73.8	0.132	328	68.5	21%

(1) Measured after ATEC treatment.
(2) Calculated using the linear regression MTTFP (µg/L) = 2473.4* UV Abs + 9.66 from Figure 3-2.

The data in Table 3-1 indicate that the average calculated MTTFP for the water from the ATEC treatment plan is 330 µg/L. The average measured THM value for the same period is 58 µg/L.

During the pilot study, UV absorbance data was collected on the raw water from the wells prior to any treatment. The average MTTFP for the raw water calculated from these data was 427 µg/L. Comparing this value with the 330 µg/L average calculated for the water post-ATEC indicates that the existing treatment system removes approximately one quarter of THM precursors as determined by a comparison of the MTTFP averages.

GRANULAR ACTIVATED CARBON

COMPARISON BETWEEN CALGON FILTRASORB 400 AND SIEMENS-US FILTER 1240AW

One of the goals of the pilot study was to determine if one of the two commercial carbons would perform better in this application than the other. This assessment was made by comparing the UV 254 absorbance readings for the two carbons sampled at sample port 8, the outlet of the lag column, for each column system.

Figure 3-3 shows the results of the comparison of the two carbons as well as a second Calgon carbon installed post-ATEC further described below. The y-axis is the ratio of the UV absorbance of the treated water over the UV absorbance of the raw water. Since the correlation of UV absorbance to MTTFP is very good, the y-axis is analogous to concentration of THM precursors in the treated water over concentration of THM precursors in the raw water (C/C_o). The data show that a difference in performance was apparent almost immediately. The Siemens carbon showed a rapid decrease in performance starting with almost complete removal of THM precursors but them

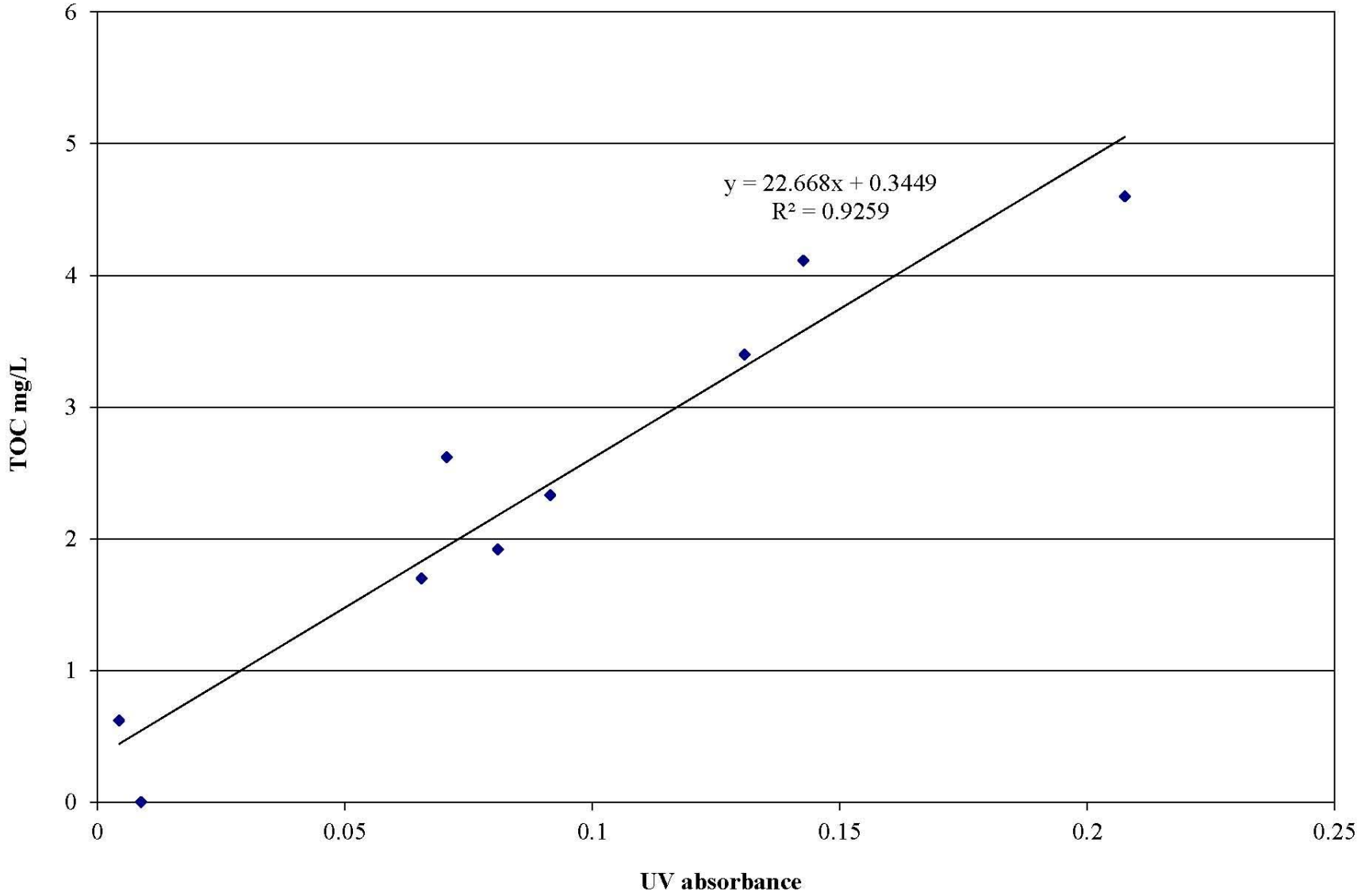

FIGURE 3-1

Correlation of UV Absorbance Data and Total Organic Carbon Levels

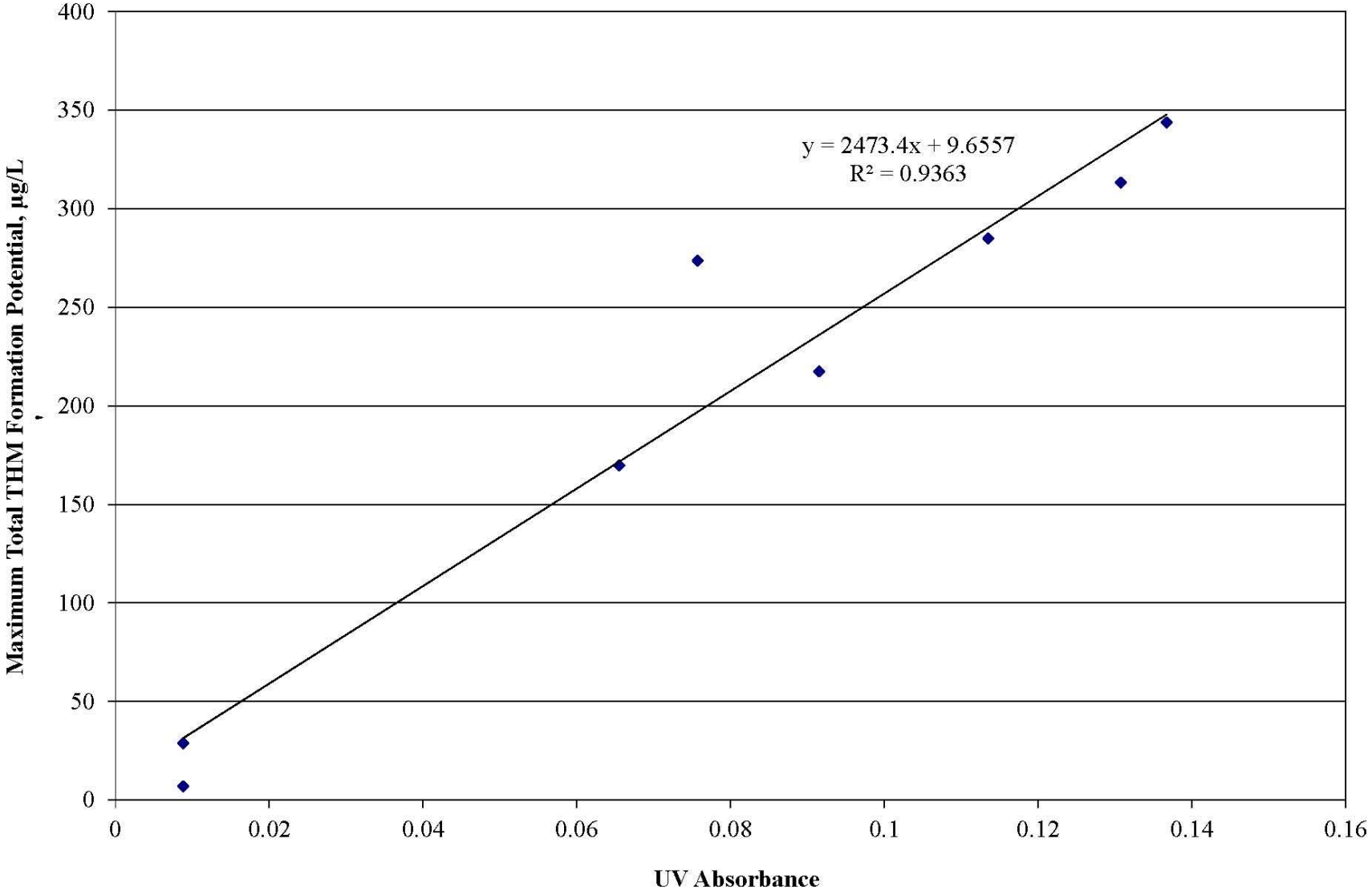

FIGURE 3-2

Correlation of UV Absorbance Data and Maximum Total Trihalomethane Formation Potential

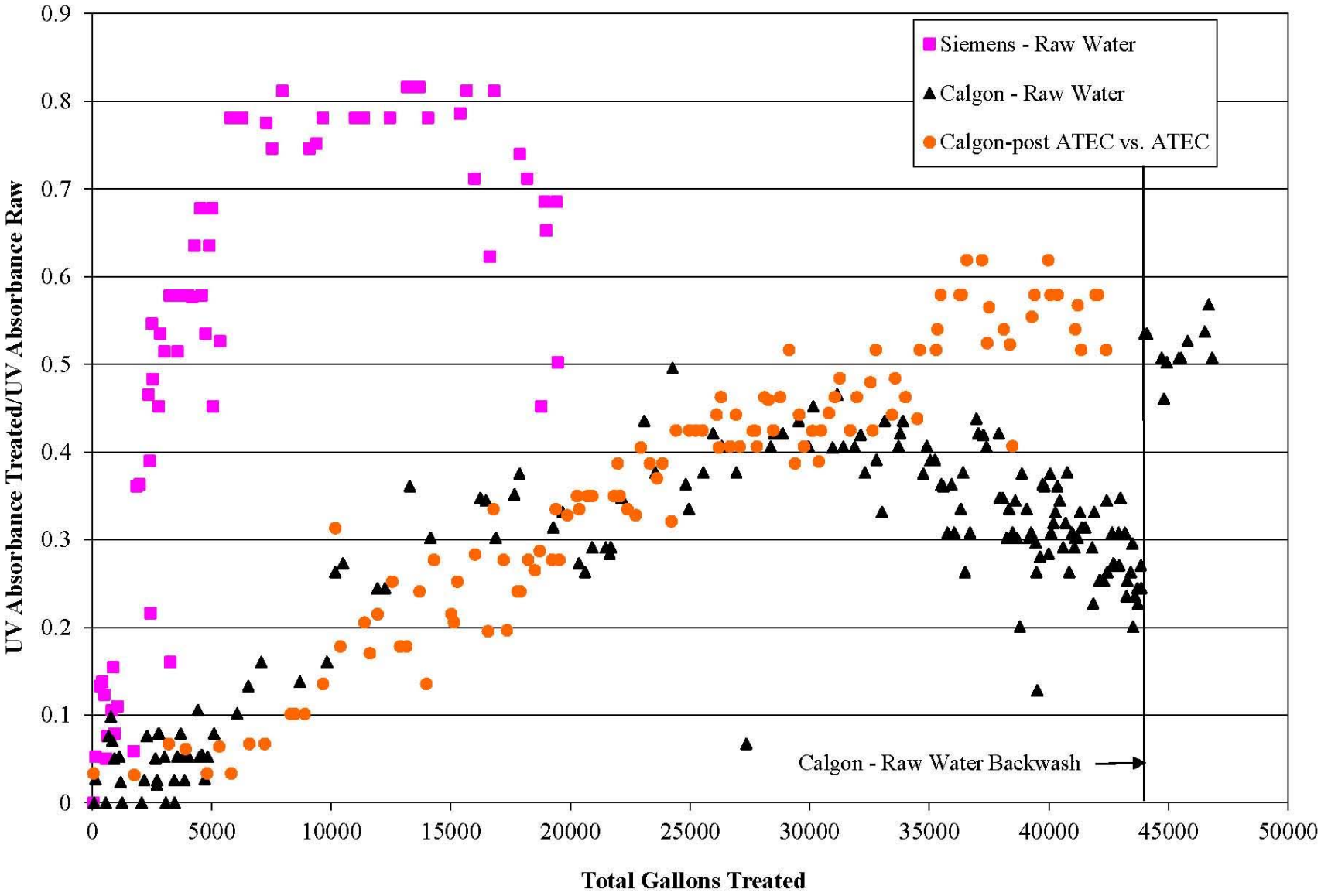

FIGURE 3-3

Comparison of Carbon Performance as Measured by UV Absorbance
Comparison Between Treated and Raw Water Over Treated Volume

removing only approximately 20 percent of precursors after 8,000 gallons treated (UV_{ab} treated/UV_{ab} raw = 0.8).

In comparison, the decrease in performance for the Calgon carbon over time was much slower. After treating approximately 25,000 gallons, the data indicate that UV_{ab} treated/UV_{ab} raw reached a maximum at 0.5 indicating that the carbon was removing about half of the THM precursors.

Both the Siemens and the Calgon carbons showed improved performance after reaching maximum level of UV absorbance. The improved performance is likely due to biological activity, a condition where a biofilm grows on the carbon and the accumulated biofilm absorb and metabolize organic material in the water.

The Siemens unit was removed in July 2014 because the Calgon carbon unit appeared to provide better removal. The test columns that had held the Siemens carbon were emptied and the columns refilled with Calgon Filtrasorb 400 carbon, then they were installed downstream of Surfside's ATEC treatment system to provide a comparison between treating raw well water and post-ATEC treated water. The UV data from the post-ATEC carbon column is also presented in Figure 3-3. Similar to the Calgon carbon installed on the raw water, the post-ATEC columns showed a decrease in removal over time. Unlike the carbon units installed with the raw water source, the post-ATEC unit did not appear to have any biological activity and the performance continued to decrease over the entire test period.

It is logical that biological growth would be more likely on the carbon treating the raw water since it has not yet been disinfected. On the other hand, the water coming from the ATEC unit has received chlorine that could kill any potential biological agents. Surfside staff did investigate the chlorine levels for the carbon units installed post-ATEC and found that the chlorine residual present was neutralized by the carbon in the first section of the filter. Chlorine was present at the filter inlet but was completely absent by the first sample port.

After the Calgon column had treated approximately 44,000 gallons, Surfside personnel vigorously backwashed the columns for approximately 30 minutes. The backwash appeared to have removed the accumulated biota and decreased the removal efficiency of the column. Prior to the backwash, the ratio of UV absorbance measured after and before the columns was approximately 0.2 to 0.3, while after backwash the ratio increased to approximately 0.5, indicating that the columns were not removing as much UV absorbing organic material.

Since the pilot study relies so heavily on the use of UV 254 and its relationship to MTTFP, a correlation between MTTFP and the amount of actual DBPs, seen either in the distribution system or in the pilot study, is necessary to ascertain both the effectiveness of the pilot and the future use of UV 254 as a tool for monitoring potential DBPs.

Figure 3-4 shows a comparison of the average MTTFP calculated from the UV absorbance data. Included on the graph for comparison is the MTTFP calculated from the UV data taken from the post-ATEC treated water as a comparison with existing distribution system conditions. These data represent the historical average water quality in the existing distribution system. The data in the graph show that the Siemens carbon degraded quickly in performance until after about 5,000 gallons of treated water, the outflow from the Siemens unit was essentially providing no removal conveyed to the MTTFP from the existing full-scale treatment plant, presented above at 340 µg/L. The Calgon carbon performance, both on the raw and post-ATEC, showed removal to where the MTTFP was always approximately 200 µg/L or below. This would suggest that the maximum THM value produced by either Calgon installed at either location would be about 60 percent of what is currently measured in compliance sampling in the distribution system. With the presumed biological element in the Calgon carbon on the raw water, the calculated MTTFP near the end of the pilot study was between 100 and 150 µg/L, a range corresponding to 30 to 45 percent of the MTTFP for the existing plant. The exact level of THMs in the distribution system based on MTTFP is difficult to predict as shown in Table 3-1 but the data in Figure 3-4 suggests that a significant reduction in THMs is likely using carbon.

The effect of backwashing the carbon column treating raw water is evident in Figure 3-4. The MTTFP calculated from UV data had decreased to approximately 100-150 µg/L prior to backwash but after backwash was approximately 200 to 250 µg/L.

COLOR

Surfside personnel took color samples during the duration of the pilot study, the results of which are shown in Table 3-2. The data show that the raw water had an average color of 50 units over the entire test period. The raw water color during initial portion of the test period during which the Calgon and Siemens carbons were being compared had an average value of 40 color units. During the latter phase from July 2014 onward when the Calgon carbon was tested before and after the ATEC unit, the raw water color had an average value of 56 color units indicating an increase in color for raw water over the period.

TABLE 3-2

Results of Color Analysis (Values in Average Pt/Co Color Units)

Period	Raw Water	Calgon	Siemens	Post-Atec	Calgon Post-Atec
Feb 2014–June 2014	40	7.5	14	-	-
July 2014–Apr 2015	56	18	-	36	16
Feb 2014–Apr 2015 Entire Period	50	14	-	-	-

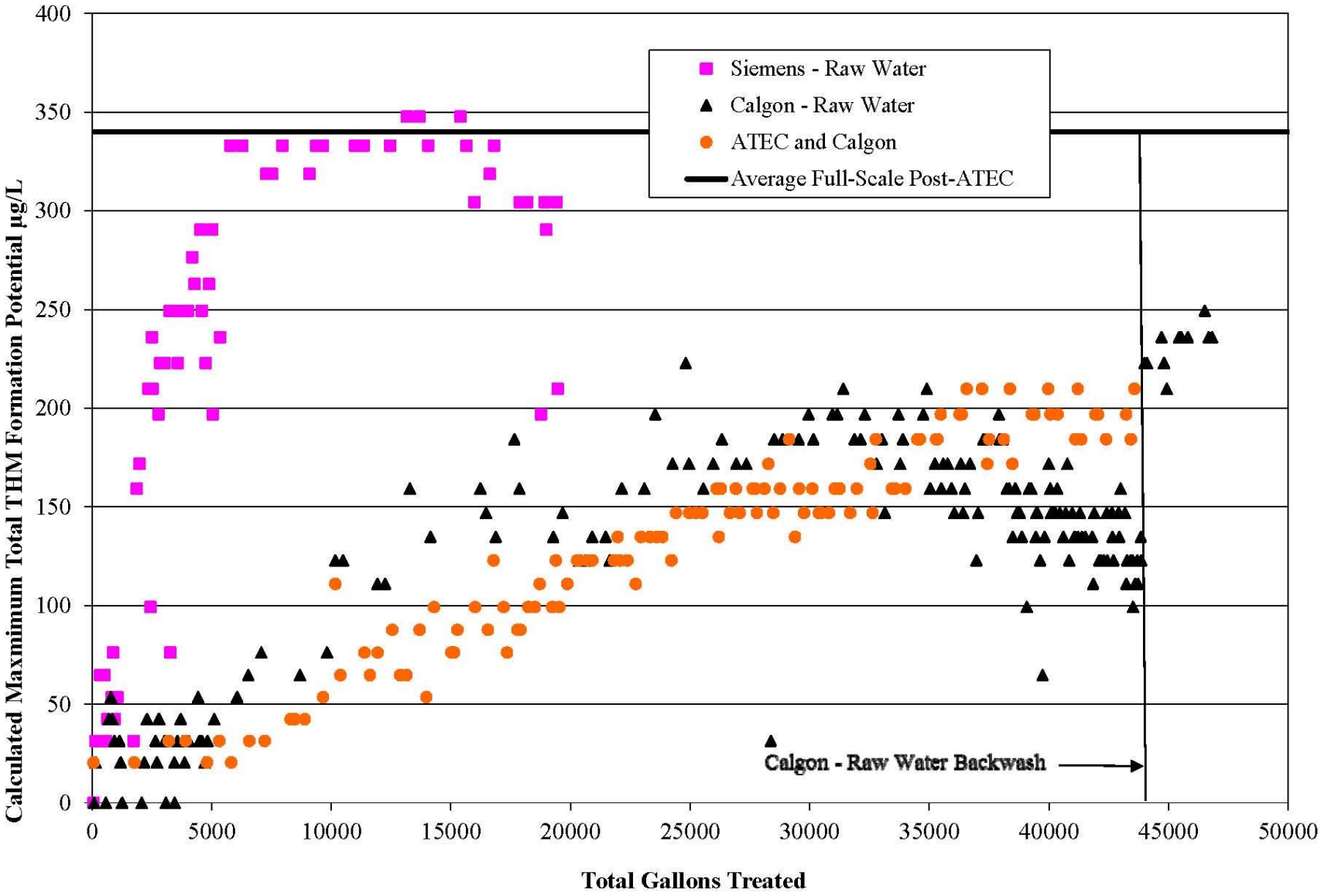

FIGURE 3-4

Calculated Maximum Total THM Formation Potential (from UV Data)
Over Treated Volume for the Three Carbons Tested

Both the Calgon and Siemens carbons removed color during the pilot. During the period when the two were compared, the Calgon unit produced water with an average color reading of 7.5 units while the Siemens carbon produced water with an average reading of 14 units indicating that the Calgon carbon removed color-producing compounds more effectively.

Color measurements were sampled during the second phase of the pilot study from the existing full-scale ATEC unit. The ATEC unit removed some color causing compounds since the average color reading after ATEC treatment was 36 units compared with 56 units for raw water. The post-ATEC Calgon carbon provided further removal bringing the average color value after carbon treatment down to 16 units.

During the second phase of the pilot when Calgon carbon was installed before and after ATEC treatment, the Calgon carbon installed directly on the raw water reduced color from 55 units down to 18 units. In comparison to the first phase of the pilot when the Calgon carbon produced water with an average color of 7.5 units, the water quality was not as good. The raw water color increased during that period but it is also possible that the effectiveness of the carbon at removing color causing compounds was diminished with prolonged exposure, a standard response of carbon.

When the data for Calgon carbon before and after the ATEC unit are compared, the carbon installed after ATEC treatment produced water with an average color lower than the carbon treating the raw water with average values of 16 versus 18 units, respectively. It is possible that this difference is due to the reduced color of the water leaving the ATEC units and the relative age of the carbon installed post-ATEC.

It should be noted that the color data likely represent a trend rather than a definite quantitative measure. Color measurement can be difficult with portable units and the color measurement was apparent color since the samples were not filtered first. Consequently, color from iron oxide and other particulate can influence the measurement. As a qualitative check on the measurement, Surfside personnel did a visual check on color during the final few months of the study. The visual check was done by viewing the sample vial against a white background and comparing it to distilled water. The check was done to provide a verification of the visual appearance of the water as the customer would see it. In general, the high color measurements seen by analysis correlated with visual color, especially in the raw water. There were a few high color (> 15 units) samples that did not have a corresponding visual response indicating some high false positives. Consequently, the trend indicating carbon removal of color is likely true but the absolute level of removal, as indicated by the data, is likely not as certain as the data indicate.

IRON AND MANGANESE

Both iron and manganese removal were monitored throughout the pilot for the various carbons. It is not the primary function of the carbon system to remove these metals but it is possible that carbon can do so. Iron and manganese sampling was included in the protocol to investigate if the removal of these metals by carbon could be detrimental to carbon's ability to remove organics.

During the period when the Siemens and Calgon carbons were tested on raw water, both carbons removed similar amounts of iron and manganese. During that period, the raw water iron concentration was 0.41 mg/L, a level above the 0.3 mg/L MCL. Both carbon units removed iron to an average level of 0.06 mg/L or approximately 85 percent iron removal. The amount of raw water iron and its removal by the Calgon carbon were similar for the remainder of the pilot.

The Calgon unit installed after the ATEC unit also removed some iron but the amount of iron entering the unit was not as great since most of the iron was removed by the ATEC unit. The average level of iron in water leaving the ATEC unit was approximately 0.1 mg/L and the level leaving the Calgon carbon pilot apparatus was 0.04 mg/L for approximately 60 percent removal. Both the iron levels exiting the ATEC unit and the pilot column were well below the MCL of 0.3 mg/L.

The effect of iron removal on the Calgon carbon column installed on the raw water was evident in the carbon bed. A reddish layer formed in the top six inches of the column but the remainder of the first and the entire second column did not show evidence of iron solids accumulation. The rusty layer was removed with vigorous backwashing.

None of the carbon columns provided appreciable manganese removal. Both the Calgon and Siemens columns had average levels of manganese entering and leaving that were equal. The Calgon column after the ATEC unit received water with an average manganese level of 0.02 mg/L while the average level after carbon treatment was 0.01 mg/L. These values are near the detection limit of 0.01 for the method so the difference is negligible. It is not surprising that manganese was not removed since manganese removal is dependent upon the manganese being first oxidized to a +4 state prior to forming manganese dioxide particles that are removable. The oxidation requires a strong oxidant or catalysis, neither of which is present in the carbon process.

CONCLUSIONS

The pilot study provided useful data to conclude several important things about the reduction of DBPs in the Surfside system. Conclusions from these data are as follows.

- Granular activated carbon is effective at reducing DBP precursors as measured using UV 254 absorbance.

- Calgon activated carbon in the pilot was more effective at reducing DBP precursors than the Siemens product when comparing the results from carbons treating raw water. Both carbon products appear to develop biological treatment after some exposure. The Siemens carbon was exhausted to where it was removing only approximately 20 percent of the UV absorbing compounds after about 5,000 gallons and began to show biological activity after about 15,000 gallons. The Calgon unit had a minimum treatment level of approximately 50 percent removal after 25,000 gallons treated before biological activity started to occur. After biological activity started, the Calgon units removed 70 percent or more of the UV absorbance.

- Both the Calgon carbon treating raw water and the Calgon unit treating post-ATEC water showed a similar decline in performance while treating the first 30,000 gallons of water. At that point, both carbons were removing about 50 to 60 percent of UV absorbance. In contrast to the Calgon unit treating raw water, which demonstrated biological activity, the Calgon unit installed post-ATEC continued to show declining performance until it was removing only approximately 40 percent of UV absorbance after almost 40,000 gallons. This difference is due to the water coming from the ATEC units having a chlorine residual inhibiting biological activity.

- UV 254 appears to provide an effective and easy way to ascertain the expected levels of DBPs. A very good linear correlation between UV 254 absorbance and maximum total trihalomethane formation potential (MTTFP) was noted. The data indicated that the distribution system THM concentrations were approximately one fifth of the predicted MTTFP. It seems likely that the UV 254 absorbance measurements could easily be incorporated into an operational strategy for a full-scale carbon plant with some comparative analysis of UV absorbance and distribution DBP data.

- The vigorous backwashing of the Calgon unit treating raw water appeared to remove the biota and iron solids that had formed as shown by the decrease in organics removal. The biota had not started to appreciably regrow by the end of the pilot study.

- The removal of organic material, as shown by UV data, at either the raw water or post-ATEC location was similar in efficiency and carbon life, excluding the biological activity seen in the carbon treating raw water. Consequently, the raw water location is preferable to post-ATEC because of the following:

    - The raw water installation has the potential for biological activity, which could potentially extend the life of the carbon substantially.

- The post-ATEC installation removes the chlorine residual after the ATEC units and would require rechlorination.

CHAPTER 4

FULL SCALE DESIGN PARAMETERS

This chapter provides the full scale design parameters for the installation of the carbon system at the Surfside water plant.

CORRELATION OF PILOT DATA TO FULL SCALE

The data obtained so far can be used to estimate the amount of carbon used on an annual basis for a full scale facility. Conversations with Calgon representatives indicate that either a pair of 10 foot or 12 foot vessels would be appropriate for treating Surfside full scale. The data described assumes that the carbon life would be to the extent of the duration of the pilot test without any biological activity. The data presented in Chapter 3 indicated that the carbon may have had biological activity, which increased removal performance and appeared to extend carbon life, perhaps indefinitely. Given the data described above, it is possible that the Calgon column will continue to provide treatment for some additional time beyond what was seen in the pilot. Consequently, the estimates given below may overestimate the amount of carbon used. All costs are shown in May 2015 dollars.

TABLE 4-1

Analysis for Full Scale Application

Parameter	Pilot Column	Installation w/(2) 10-ft vessels – no blending	Installation w/(2) 12-ft vessels – no blending
Diameter	4 inches	10 feet	12 feet
Media Depth	48 inches	8 feet	15 feet
Total Carbon Volume, ft^3	0.70	1,170	2,370
Total Carbon Weight, lbs	23.6	40,000	80,000
Total Volume Treated	45,000 gal	75 MG	150 MG
Surfside Annual Water Requirement	NA	100 MG	100 MG
Number of Carbon Exchanges, per year	NA	1.3	0.7
Approximate Frequency of Carbon Delivery	NA	290 days	550 days
Annual Carbon Requirement, ft^3	NA	1,560	1,560
Annual Carbon Requirement, lbs	NA	52,600	52,600
Capital Project Cost	NA	$375,000	$500,000
Carbon Delivery, lbs	NA	40,000	80,000
Per Delivery Cost	NA	$58,000	$128,000
Annual Carbon Cost	**NA**	**$76,300**	**$84,200**

The data in Table 4-1 assume a ratio for UV_{ab} treated/UV_{ab} raw of 0.5 to 0.6 or a calculated level of 200 µg/L for the MTTFP from UV data as a working limit for carbon

replacement. At these limits, it is assumed that distribution system THM levels will be approximately 40 to 50 μg/L based on applying those ratios to the average THM level from historical compliance data. This limit was reached by both carbons at approximately 40,000 to 45,000 gallons of treatment. For this analysis, the effect of the biological treatment that was apparent in the unit treating raw water is ignored. Consequently, if biological activity were to develop, the lifespan of the carbon would be extended.

PROPOSED CARBON UNIT

The proposed carbon unit is the Model-10 manufactured by Calgon Carbon composed of two vessels operated in series. This unit has been chosen due to the better performance of the Calgon Filtrasorb carbon. Table 4-2 contains a summary of the design parameters.

TABLE 4-2

Carbon System Design Parameters

Parameter	Value
Number of Carbon Vessels	2
Operation	Lead/Lag in Series
Carbon Type Proposed	Calgon Filtrasorb 400
Column Diameter	10 feet
Total Treatment Vessel Height	22 feet
Depth of Carbon Media	~ 8 feet
Flow Rate (Plant Capacity)	550 gpm
Flow Rate (Normal Operation)	300 gpm
Hydraulic Loading (550 gpm)	7.3 gpm/ft^2
Hydraulic Loading (300 gpm)	4.0 gpm/ft^2
Empty Bed Contact Time (EBCT) - 2 vessels – 550 gpm	16 minutes
Empty Bed Contact Time (EBCT) - 2 vessels – 300 gpm	30 minutes

The exact location for the carbon units has not been determined at this time. Final plans for the installation will be submitted to DOH prior to installation.

PROPOSED CARBON SYSTEM OPERATION

There are several parameters that Surfside will need to be aware of to ensure that the addition of a full-scale carbon system is optimized. These parameters include both those associated with the performance of the carbon unit and how it affects other treatment processes. Specifically, monitoring of the following parameters will be required.

CARBON UNIT PERFORMANCE

The data from the pilot study indicate that UV 254 will provide a simple method for assessing carbon performance. A comparison of UV absorbance between the raw water and the carbon-treated water will indicate the effect of the carbon. It is apparent from the pilot study that this method will provide an excellent qualitative tool. It is also possible that it could provide a predictive quantitative tool, but this cannot be proven until full-scale application can be correlated with distribution system DBP data. The pilot results indicated that the UV 254 absorbance correlated very well with maximum trihalomethane formation potential (MTTFP) and that MTTFP correlated fairly well with a range of values seen for distribution system DBPs. It is expected that after full-scale installation and a period of operation and data gathering, the relationship between distribution system DBPs and UV absorbance will identified and used predictively.

Ultimately, the level of DBPs in the distribution system will determine the effectiveness of the carbon unit. The use of simple laboratory means for assessing carbon effectiveness provides Surfside with the ability of identifying carbon performance issues prior to finding non-compliance in routine distribution system sampling.

CARBON MEDIA LIFE

An associated parameter that Surfside will need to monitor is the life of the carbon. In essence, the measurement of carbon effectiveness should provide an indication of when the carbon has reached the end of its usefulness and requires replacement. As with the discussion of carbon effectiveness above, the use of a predictive tool, such as UV 254 absorbance, will allow Surfside to determine when the media is spent prior to making that determination through a non-compliant distribution system sample. The key to this factor's effectiveness will be correlating the data obtained after full-scale installation.

The development of biological activity similar to what was seen in the pilot study has the potential to significantly extend the carbon life. The use of UV data would indicate if the carbon was deviating from the standard isotherm model with more positive performance than what would be predicted by a standard isotherm model indicating biological activity. Additional testing, such as dissolved oxygen testing could also be employed to verify biological activity.

Table 4-1 uses a carbon life of 290 days for a 10-foot filter system and 550 days for a 12-foot filter system. The pilot study was conducted over 15 months and the unit appeared to still have some capacity for treating DBP precursors. While the exact carbon life for a full scale system is difficult to predict, a one year carbon life is a reasonable assumption based on the pilot study data.

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

April 30, 2015

William Neal
Surfside Homeowners Association
31402 H Street
Ocean Park, Washington 98640

Subject: Surfside Homeowners Water System, ID #86470Y, Pacific County; Disinfection Byproduct Rule Violation - TTHM MCL Exceedance

Dear Mr. Neal:

As of March 26, 2015, the Surfside Homeowners water system has exceeded the Total Trihalomethanes (TTHM) Maximum Contaminant Level (MCL). This is a violation of the Stage 2 Disinfection Byproducts (DBP) Rule.

Compliance was determined per WAC 246-290-310(5) by calculating the Location Running Annual Average over four consecutive quarters. The exceedance has occurred at the monitoring location named "304th Pl & Stackpole Rd, which is one of the required monitoring locations under the Stage 2 Disinfection Byproduct (DBP) Rule. Below is a summary of the calculated running annual averages.

Sample Location	Monitoring Period	Sample Date	TTHM (MCL 80.0 ug/l)
304th Pl & Stackpole Rd	2nd Qtr 2014	4/2/2014	75.5 ug/l
304th Pl & Stackpole Rd	3rd Qtr 2014	8/20/2014	58.36 ug/l
304th Pl & Stackpole Rd	4th Qtr 2014	12/16/2014	68.5 ug/l
304th Pl & Stackpole Rd	1st Qtr 2015	3/26/2015	119.6 ug/l
		Locational Running Annual Average:	**80.5** ug/l

Notification Requirements:

Surfside Homeowners water system is required to notify their users about this MCL violation and what steps you are taking or intend to take to correct the problem. The notification also needs to let customers know what steps they should take and must include any mandatory language required by the regulations. See the enclosed sample notification form. If you would like an electronic copy of the form to edit, please contact me for a copy.

Please send a copy of the completed notice to our office along with a signed certification indicating that consumers were properly notified within thirty (30) days from the date of this letter.

The notification has to be re-distributed to your consumers every three months until your monitoring results demonstrate that the locational running annual average no longer exceeds the MCL. When providing the required public notification it is your responsibility to ensure that non-English speaking consumers get information in the appropriate language. For technical assistance contact the Office of Drinking Water (ODW) or access ODW's website at http://www.doh.wa.gov/ehp/dw.

We will notify you of your system's TTHM running annual averages on an annual basis for as long as they exceed the MCL and track your compliance with the public notification requirements of this rule on a quarterly basis. You must send a certified copy of your public notice or a copy of the sample results that reduce your running annual average to at or below the MCL prior to the end of the second month in each quarter.

Action Plan for MCL Compliance

You are required to submit an action plan that outlines the steps that Surfside Homeowners is committed to taking to come into compliance with the TTHM MCL. It is my understanding that you are currently working toward this goal because you have submitted an alternatives analysis and you are currently piloting the selected treatment option. To solidify your commitment to address the violations please submit an action plan with timelines that outline the steps you will be taking to bring the water system back into compliance. The action plan must list specific activities that will be done and indicate the dates of completion. Our office will develop a Bilateral Compliance Agreement based on your action plan. **The deadline for submitting the action plan is July 1, 2015.** If this deadline is missed, further compliance action may be taken by ODW.

Monitoring Frequency Reminder

As a reminder, the water system is required to monitor quarterly for both TTHM and HAA5s. This is an increased monitoring frequency that was required because of high disinfection byproduct results. Also, please remember that the monitoring must be done at the approved locations, which are at the intersections named "304th Pl & Stackpole Rd" and "295th Pl & G St." If quarterly samples are not collected at these locations, it is considered a monitoring violation.

If you have questions or need technical assistance, please contact me at (360) 236-3035 or by e-mail at regina.grimm@doh.wa.gov.

Sincerely,

Regina Nicole Grimm

Regina N. Grimm, P.E.
Office of Drinking Water, Regional Engineer

Enclosure

cc: Gael Kantz, ODW
Teresa Walker, ODW

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
Disinfection Byproduct Levels Above Drinking Water Standards
Surfside Homeowners Water System (ID #86470) – Pacific County

Our water system recently violated a drinking water standard. Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct the situation.

We routinely monitor for the presence of drinking water contaminants. After four (4) quarters of sampling in 2014 and 2015, our system exceeds the maximum contaminant level (MCL) for Total Trihalomethanes (TTHMs). The MCL for TTHMs is 80 micrograms per liter (ug/L), while the average level of TTHMs in our water system over the last year was 80.5 ug/L.

What should I do?

- **You do not need to use an alternate (e.g., bottled) water supply.** However, if you have specific health concerns, consult your doctor.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. However, you must consider the following health risks:

Total Trihalomethanes (TTHMs) – Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What happened? What is being done?

[Describe corrective action.] We anticipate resolving the problem within [estimated time frame].

For more information, please contact _____ [*Name*] at _____ *[Phone]* or _____ *[Mailing Address]*.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Certification of PN Requirements

(To be completed by Water System)

This notice was:

- ☐ Mailed to all water users on _____(date).
- ☐ Hand delivered to all water users on _____(date).
- ☐ Published in newspaper. (copy attached).
- ☐ Posted at_____ on _____(date). *(BY DEPARTMENT APPROVAL ONLY.)*
- ☐ Other_____

SIGNATURE_____ DATED_____.

(SEND A COPY OF THIS COMPLETED PUBLIC NOTIFICATION TO: Regina Grimm, DRINKING WATER OPERATIONS;
PO Box 47823, Olympia, WA 98504-7823)

From:	Bill Neal
To:	"Grimm, Regina (DOH)"; Teresa Walker, Reginal Engineer
Cc:	"Water Dept"; "Laura Frazier"; James Flood (james.flood@pacificorp.com); Kirby Smith, Surfside BOT
Subject:	RE: K1507106 RE: 86470Y
Date:	Monday, August 03, 2015 2:29:00 PM
Attachments:	DBP MCL Viloation.pdf DBP Pilot Study Report.pdf Action Plan 7-31-15 Surfside HOA.pdf

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Regina & Teresa,

Regina's Letter of April 30, 2015 required Surfside Homeowners Association to submit an action plan that outlines the steps that Surfside has taken and will take to come into compliance with the TTHM MCL requirements.

As you are aware, Gray and Osborne had performed and extensive pilot study on the feasibility of utilizing activated carbon to reduce the TOC's, or DBP precursors, in the raw water prior injection with chlorine at the ATEC filtration plant.

Although the pilot study did not fully answer all questions and did raise some new questions, as all pilot studies do, the conclusions we can draw is that the Calgon carbon does a fine job in adsorbing TOC and the load rate is sufficient to suggest implementation of a full scale system will bring the bring Surfside into compliance with the TTHM MCL regulations, Provide long term reliable service (with regular carbon exchange), and is economically feasible for the Surfside Homeowners Association.

Thank-you for granting an extension on the due date for the action plan. Please let me know if you need anything else.

William "Bill" Neal
Water System Manager, Surfside HOA
General Manager
North Beach Water District
bneal@northbeachwater.com
360.665.4144

From: Grimm, Regina (DOH) [mailto:Regina.Grimm@DOH.WA.GOV]
Sent: Wednesday, July 29, 2015 1:59 PM
To: Bill Neal <bneal@northbeachwater.com>; 'John Williams' <jwilliams@surfsideonline.org>

Cc: 'Water Dept' <water@surfsideonline.org>; Laura Frazier <laura@surfsideonline.org>
Subject: RE: K1507106 RE: 86470Y

Thank you, Bill. Please send us a copy of the notice and the certification form after it is delivered.

Regards,

Regina Grimm, P.E.
Regional Engineer, DOH Division of Environmental Health
Office of Drinking Water, Southwest Regional Office
Ph: 360-236-3035 Fax: 360-664-8058
Physical Address: 243 Israel Road Southeast, Tumwater
Mailing Address: PO Box 47823, Olympia 98504-7823
http://www.doh.wa.gov/ehp/dw/

From: Bill Neal [mailto:bneal@northbeachwater.com]
Sent: Wednesday, July 29, 2015 12:20 PM
To: 'John Williams'
Cc: 'Water Dept'; Laura Frazier; Grimm, Regina (DOH)
Subject: FW: K1507106 RE: 86470Y

Greetings,

The results of the 2nd quarter TTHM samples arrived yesterday at 4:12 PM. They are attached to this email. As expected, the results are above the MCL. I will be preparing a notification for mailing to members later this week.

William "Bill" Neal
General Manager
North Beach Water District
bneal@northbeachwater.com
360.665.4144

From: ALKLS Data [mailto:ALKLS.Data@alsglobal.com]
Sent: Tuesday, July 28, 2015 4:12 PM
To: water@surfsideonline.org; generalmanager@northbeachwater.com
Cc: Chris Leaf <Chris.Leaf@alsglobal.com>
Subject: K1507106 RE: 86470Y

1317 S. 13th Avenue
Kelso, WA 98626 USA

Phone 360.577.7222
Fax 360.636.1068
www.alsglobal.com

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Action Plan for Disinfection By-Product MCL Compliance

Date: ----------July 31, 2015

By: ----------William Neal, Water System Manager

Background:

Surfside's water source consists of a wellfield with 6 active wells. The wellfield is identified as the J Wellfield due to its location on J Street. The active wells are identified by Surfside as J-2 through J-7.

Surfside sampled J-2 through J-7 in 2007, 2009, and 2011 for total organic carbon (TOC). The raw water samples for the different wells ranged from a high of 10.6 mg/L from a combined water sample from wells J-4 and J-5 in September 2007 to a low of 3.3 mg/L for well J-5 in July 2009. These TOC values are not generally seen in aquifers not in direct continuity with surface water. Considering all of the J wells are completed at approximately 200 feet deep it is unlikely they are in direct continuity with surface water. The results of the TOC samples indicates there is a variability in the TOC value between wells and over time in the same wells. Although there does not appear to be significant variabilities in TOC values, there are significant gaps in the sampling datasets that makes it impossible to determine, with any degree of accuracy, the exact range of variability in TOC values. TOC samples were not collected during the pilot study. Surfside water department will develop a plan to collect TOC samples in 2016 through 2018 to accurately record the variability range of TOC values in individual wells in the J Wellfield.

Surfside began testing for disinfection byproducts in 2009 (stage 1). The first round of water samples collected in June had residuals significantly[1] above the MCL for TTHM and HAA5. The initial elevated residuals were no doubt due to a several contributing several factors. The chief contributing factor being unconventional operation protocols. Surfside water department experienced a large number of water main breaks in 2006 and 2007. Consequently, the Operator increased the chlorine residual in the water mains as a safety precaution due to the numerous low/no pressure events in the distribution system. Records indicate the total chlorine residuals in the distribution system averaged 2.15 mg/L in 2009. Additionally, the Operator had ill-advisedly reduced the backflow rate to the ATEC Iron and Manganese removal filters to half of the required flow. As the performance of the filter dropped off the operator increased the duration of the backwash and the chlorine dose in an effort to improve the ATEC filters performance. Records show that by June, 2009 the average total chlorine residual in the finished water was 3.75 mg/L and the average free chlorine was 2.55 mg/L. The total chlorine residual in the finished water at times exceeded 4.0 mg/l. ATEC recommends a residual of 0.5 mg/L of free

[1] 6/23/2009 Site 01 – TTHM 123.4 Ug/L HAA5 127.0 Ug/L, Site 02 – TTHM 107.9 Ug/L HAA5 128.8 Ug/L
7/21/2009 Site-01 - TTHM 131.7 Ug/L HAA5 104.1 Ug/L, Site 02 – TTHM 145.2 Ug/L HAA5 118.2 Ug/L

chlorine in the finished water.

The reduction in DBP residuals from 2009 through 2014 was achieved by the following:

- Operate the ATEC filtration plant, including backwash rates and chlorine residuals in finished water, within manufactures recommendations.
- Installation of a potassium permanganate saturator to reduce the chlorine demand for the ATEC filtration plant.
- Flush water mains in the vicinity of the sampling sites (i.e. dead ends, long loops, and oversized pipe) weekly.

Flushing water mains weekly is the primary procedure that has allowed Surfside to achieve a Local Running Annual Average (LRAA) below the MCL.

On February 17, 2015, Regina Grimm, Office of Drinking Water Regional Engineer Southwest Regional Office, informed Surfside Water Department that *"flushing weekly was not a sustainable solution"* to disinfection byproduct MCL compliance. Regina recommended Surfside Water Department wait four weeks after flushing the system before grabbing disinfection byproduct samples from the sampling sites.

Surfside Water Department stopped weekly flushing before grabbing 2015 first quarter DBP water samples. The TTHM residuals for 2015 first quarter were 117.2 Ug/L for site DBP-01 and 119.61 Ug/L for site DBP-02. The TTHM residual for 2015 second quarter were 103.54 Ug/L for site DBP-01 and 85.35 Ug/L for site DBP-02.

Surfside Homeowners Association's Board of Trustees contracted Gray and Osborne to perform a DBP pilot study. The study investigated the feasibility of using activated carbon to reduce disinfection byproduct precursors (total organic carbons) prior to the introduction of chlorine.

Gray and Osborne completed the DBP Pilot Study in June, 2015 and submitted a report to the Office of Drinking Water (ODW) for their review and approval.

On the Surfside Homeowners Association's Board of Trustees by motion and majority vote approved the 2015 revised Water System Plan and authorized submitting it to the ODW for review and approval.

In chapter three, Stage 2 DBP Rule compliance issues are discussed and MCL compliance for DBP is identified as a System Deficiency.

In chapter 8, Capital Improvement Project T-01 "Treatment for DBP/Color Removal" as an approved project scheduled for completion in 2017 at an estimated cost of $500,000.

In Chapter 9, Total Annual Capital and Non-Capital Projects for 2017 are projected to be $866,000. Surfside historically pays for all capital and non-capital improvements by special assessment of members on a per lot basis. There are currently 2,853 lots in Surfside. The Projected Special Assessment for the Capital and Non-Capital Improvements in 2017 will be $304.00 per lot.

The Gray and Osborne DBP Pilot Study Report completed in June, 2015 estimates the

cost of the water treatment plant at between $375,000 and $500,000 dollars.

Action Plan:

Milestones

December 1, 2015:

Select and negotiate a contract with an engineering firm for to design a treatment plant including, preparing a predesign report, project report meeting the requirements of WAC 246-290-110, plans (civil, structural, mechanical, and electrical), specifications, cost estimates, permitting (DOH project approval, SEPA, Pacific County Building Permit), bid and award services, and construction management, start-up and training.

January 1, 2015: Engineer Notice to Proceed

March 1 2016: Predesign Report Complete.

May 1 2016: 50% Submittal

September 1 2016: 90% Submittal and Project Report submittal to ODW

November 1, 2016: Final Submittal and (Board Approval at November Board Meeting)

January 15, 2017: Advertise for bids

March 20, 2017: Award bid and contract for construction.

September 1, 2017: Carbon Treatment Plant on-line.