



DATE: February 14, 2019

WQ 0.10.14.4

TO: Oregon Health Authority, Drinking Water Services

**SUBJECT: Monthly Report for January 2019
Bilateral Compliance Agreement
Intake *Cryptosporidium* Results
PWS # 4100657**

To Whom It May Concern:

Enclosed are results of laboratory analyses for *Cryptosporidium* from the Bull Run raw water intake for January. Monitoring for *Cryptosporidium* at the Bull Run intake is done to comply with the interim measures of the Bilateral Compliance Agreement (Oregon Health Authority, December 18, 2017).

All analyses for *Cryptosporidium* and *Giardia* were performed by the PWB Laboratory (see attached report). Please note that PWB's in-house laboratory received ORELAP accreditation for EPA Method 1623.1 on November 7, 2018 and began using EPA Method 1623.1 for intake samples on January 6, 2019. Also attached are copies of the monthly turbidity and raw coliform reports previously submitted to OHA in compliance with the SWTR. Results for the reporting month are summarized below:

***Cryptosporidium*, *Giardia*, Turbidity and Fecal Coliforms Data Summary for the Reporting Month**

<i>Cryptosporidium</i> and <i>Giardia</i> Field Samples				<i>Cryptosporidium</i> Recoveries		Fecal Coliforms	Turbidity
No. of Samples	Total Volume (L)	Total No. <i>Cryptosporidium</i> Oocysts	Total No. <i>Giardia</i> Cysts	No. of Matrix Spikes	Average Matrix Spike Recovery (%)	Highest Count (CFU/100 mL)	Highest Reading (NTU)
18	900	14	4	1	55.6	4	0.51

If you have any questions regarding these results, please contact me at 503-823-6135.

Sincerely,



Ann Levy
Sr. Environmental Program Manager

Transmitted: Four pages (including this transmittal memo) emailed to dwp.dmce@state.or.us on this date.



Portland Water Bureau Laboratory
2010 N Interstate Ave, Portland, OR 97227

Cryptosporidium and Giardia Laboratory Analysis Report

<u>Water System Information</u>			<u>Sample Information</u>		
PWS ID:	OR4100657		Collection Month & Year:	Jan. 2019	
PWS Name:	Portland Water Bureau 1900 N Interstate Avenue Portland, Oregon 97227		Report Date:	February 7, 2019	
County:	Multnomah		Monitoring Regime:	Bilateral Compliance Agreement	
			Source Water:	Bull Run Intake - WTP-A	

PWB Sample ID	Loc ID	Sample Collection Date	Sample Type	Sample Volume Filtered (L)	Analysis Method	<u>Cryptosporidium</u>			<u>Giardia</u>		
						No. of Oocysts Spiked	No. of Oocysts Counted	Oocyst Matrix Spike Recovery (%)	No. of Cysts Spiked	No. of Cysts Counted	Cyst Matrix Spike Recovery (%)
BC17185	Intake 2PIS	1/1/2019	Field	50	1623	0	0		0	0	
BC17186	Intake 2PIS	1/2/2019	Field	50	1623	0	2		0	0	
BC17435	Intake 2PIS	1/6/2019	Field	50	1623.1	0	0		0	0	
BC17436	Intake 2PIS	1/7/2019	Field	50	1623.1	0	3		0	0	
BC17437	Intake 2PIS	1/7/2019	MS	50	1623.1	99	58	55.6	99	80	80.8
BC17438	Intake 2PIS	1/8/2019	Field	50	1623.1	0	1		0	1	
BC17439	Intake 2PIS	1/9/2019	Field	50	1623.1	0	0		0	1	
BC17719	Intake 2PIS	1/13/2019	Field	50	1623.1	0	0		0	0	
BC17720	Intake 2PIS	1/14/2019	Field	50	1623.1	0	1		0	0	
BC17721	Intake 2PIS	1/15/2019	Field	50	1623.1	0	0		0	0	
BC17722	Intake 2PIS	1/16/2019	Field	50	1623.1	0	0		0	0	
BC17988	Intake 2PIS	1/20/2019	Field	50	1623.1	0	1		0	0	
BC17989	Intake 2PIS	1/21/2019	Field	50	1623.1	0	0		0	0	
BC17990	Intake 2PIS	1/22/2019	Field	50	1623.1	0	0		0	1	
BC17991	Intake 2PIS	1/23/2019	Field	50	1623.1	0	1		0	0	
BC18218	Intake 2PIS	1/27/2019	Field	50	1623.1	0	0		0	0	
BC18219	Intake 2PIS	1/28/2019	Field	50	1623.1	0	0		0	0	
BC18220	Intake 2PIS	1/29/2019	Field	50	1623.1	0	2		0	0	
BC18221	Intake 2PIS	1/30/2019	Field	50	1623.1	0	3		0	1	

Unless otherwise noted, all data were generated in accordance with EPA Method 1623 and 100% of the filtered volume was examined for each sample.

Reviewed by Mark Long

Date Reviewed: 2/7/19

OHA - Drinking Water Services - Turbidity Monitoring Report Form

County: **Multnomah**

Slow Sand, Membrane, Diatomaceous Earth Filtration, or Unfiltered Systems

System Name: **Portland Water Bureau**

ID #: **OR 4100657**

WTP: **WTP- A**

Month/Year: **01/2019**

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)	Peak Hourly Flow (GPM)		
								Cond 2	Cond 3	Cond 4
1	0.51	0.51	0.51	0.45	0.44	0.46	0.51	16385	25003	18594
2	0.45	0.44	0.44	0.45	0.44	0.43	0.45	15816	21285	18229
3	0.44	0.43	0.43	0.43	0.42	0.41	0.44	15698	20750	17792
4	0.41	0.40	0.40	0.39	0.39	0.38	0.41	15944	20927	18047
5	0.38	0.39	0.37	0.40	0.38	0.39	0.40	15781	25139	18135
6	0.39	0.44	0.42	0.39	0.40	0.38	0.44	15809	25201	17885
7	0.38	0.39	0.38	0.37	0.37	0.37	0.39	15500	24712	17641
8	0.35	0.36	0.39	0.37	0.38	0.38	0.39	15347	24493	17474
9	0.37	0.38	0.37	0.36	0.34	0.35	0.38	15372	24476	17448
10	0.35	0.35	0.35	0.35	0.34	0.34	0.35	15340	24469	17490
11	0.35	0.33	0.34	0.35	0.34	0.34	0.35	16840	25326	19000
12	0.35	0.35	0.35	0.34	0.35	0.35	0.35	17219	21455	19156
13	0.34	0.34	0.34	0.35	0.36	0.34	0.36	16764	22476	18953
14	0.35	0.34	0.35	0.35	0.34	0.34	0.35	16490	22590	18734
15	0.35	0.34	0.35	0.34	0.36	0.36	0.36	18146	26809	20130
16	0.35	0.37	0.38	0.35	0.35	0.35	0.38	16264	26747	18297
17	0.35	0.35	0.35	0.34	0.35	0.34	0.35	16024	26278	18208
18	0.35	0.34	0.35	0.34	0.33	0.34	0.35	17069	24045	19089
19	0.35	0.35	0.33	0.33	0.34	0.33	0.35	17563	24476	19604
20	0.32	0.32	0.33	0.32	0.32	0.32	0.33	17566	20767	19677
21	0.34	0.33	0.34	0.35	0.34	0.35	0.35	17545	20771	19734
22	0.33	0.33	0.33	0.33	0.34	0.33	0.34	18399	20365	20484
23	0.33	0.34	0.32	0.32	0.32	0.30	0.34	18354	20347	20536
24	0.30	0.31	0.32	0.30	0.29	0.29	0.32	18340	20052	20391
25	0.28	0.28	0.28	0.28	0.29	0.28	0.29	17719	20059	20000
26	0.28	0.27	0.29	0.27	0.27	0.27	0.29	15722	19590	17969
27	0.27	0.25	0.25	0.25	0.27	0.28	0.28	15347	25465	17427
28	0.28	0.26	0.28	0.29	0.28	0.27	0.29	15247	25337	17391
29	0.27	0.28	0.27	0.27	0.27	0.28	0.28	17264	25274	19010
30	0.27	0.30	0.25	0.27	0.27	0.28	0.30	17042	24882	19120
31	0.28	0.25	0.27	0.27	0.27	0.25	0.28	17021	24858	19130

Slow Sand/Membrane/DE Filtration/Unfiltered		Monthly summary	
95% of daily turbidity readings ≤ 1 NTU? ¹	CT's met everyday?	Chlorine residual at entry point always ≥ 0.2 mg/L?	Chlorine residual measured in 95% of distribution samples?
N/A		Yes	Yes
All daily turb readings ≤ 5 NTU?	Yes	Yes	Yes

¹Filtered systems only

Printed Name: Anna Vosa, P.E.

Phone: (503) 823-7598

Signature: 

Date: 2/7/19

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

PWS Name: Portland Water Bureau

PWS ID#: OR 4100657

Month/Year: 1/2019

Date	Fecal Coliform (CFU/100mL)	Comments
1/1/2019	4	
1/2/2019	4	
1/3/2019	2	
1/4/2019	2	
1/5/2019	1	
1/6/2019	1	
1/7/2019	2	
1/8/2019	<1	
1/9/2019	3	
1/10/2019	<1	
1/11/2019	2	
1/12/2019	<1	
1/13/2019	<1	
1/14/2019	1	
1/15/2019	1	
1/16/2019	<1	
1/17/2019	1	
1/18/2019	1	
1/19/2019	<1	
1/20/2019	<1	
1/21/2019	3	
1/22/2019	2	
1/23/2019	2	
1/24/2019	2	
1/25/2019	1	
1/26/2019	2	
1/27/2019	2	
1/28/2019	1	
1/29/2019	1	
1/30/2019	1	
1/31/2019	<1	

Note: Fecal Coliform sampled at active Headworks Raw Water Intake (either 2P or 2PIS)

Six Month Summary:

# of Samples For Fecal Coliform:	183
# of Samples > 20 CFU/100mL:	0
Percent:	0.0%