



Amanda Fritz, Commissioner
Michael Stuhr, P.E., Administrator

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www.portlandoregon.gov/water



DATE: June 13, 2019 WQ 0.10.14.4

TO: Oregon Health Authority, Drinking Water Services

SUBJECT: **Monthly Report for May 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 May. 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). 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)
17	850	1	5	1	60.0	2	0.46

If you have any questions regarding these results, please contact me at 503-823-7168.

Sincerely,

Ann Levy
Senior 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:	May 2019		
PWS Name:	Portland Water Bureau 1900 N Interstate Avenue Portland, Oregon 97227			Report Date:	June 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 (%)
BC22322	Intake 2PIS	5/1/2019	Field	50	1623.1	0	0		0.0	0	
BC22613	Intake 2PIS	5/5/2019	Field	50	1623.1	0	0		0.0	1	
BC22614	Intake 2PIS	5/6/2019	Field	50	1623.1	0	0		0.0	1	
BC22615	Intake 2PIS	5/7/2019	Field	50	1623.1	0	0		0.0	1	
BC22616	Intake 2PIS	5/8/2019	Field	50	1623.1	0	0		0.0	0	
BC22888	Intake 2PIS	5/12/2019	Field	50	1623.1	0	1		0.0	0	
BC22889	Intake 2PIS	5/13/2019	Field	50	1623.1	0	0		0.0	1	
BC22890	Intake 2PIS	5/14/2019	Field	50	1623.1	0	0		0.0	0	
BC22891	Intake 2PIS	5/15/2019	Field	50	1623.1	0	0		0.0	0	
BC23112	Intake 2PIS	5/19/2019	Field	50	1623.1	0	0		0.0	0	
BC23113	Intake 2PIS	5/20/2019	Field	50	1623.1	0	0		0.0	1	
BC23114	Intake 2PIS	5/21/2019	Field	50	1623.1	0	0		0.0	0	
BC23115	Intake 2PIS	5/21/2019	MS	50.5	1623.1	100	60	60.0	100	78	78.0
BC23116	Intake 2PIS	5/22/2019	Field	50	1623.1	0	0		0.0	0	
BC23351	Intake 2PIS	5/26/2019	Field	50	1623.1	0	0		0.0	0	
BC23352	Intake 2PIS	5/27/2019	Field	50	1623.1	0	0		0.0	0	
BC23353	Intake 2PIS	5/28/2019	Field	50	1623.1	0	0		0.0	0	
BC23354	Intake 2PIS	5/29/2019	Field	50	1623.1	0	0		0.0	0	

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 Lang

Date Reviewed: 06/07/19

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: **05/2019**

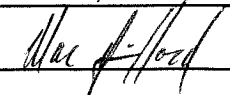
DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)	Peak Hourly Flow (GPM)		
								Cond 2	Cond 3	Cond 4
1	0.46	0.46	0.43	0.43	0.44	0.44	0.46	19049	31267	20984
2	0.44	0.44	0.43	0.43	0.43	0.41	0.44	18983	30444	20927
3	0.42	0.43	0.43	0.41	0.40	0.40	0.43	18837	26385	20839
4	0.42	0.40	0.41	0.40	0.41	0.41	0.42	18840	30170	20781
5	0.41	0.41	0.40	0.39	0.41	0.40	0.41	21444	34285	22969
6	0.40	0.40	0.40	0.40	0.39	0.38	0.40	21135	33719	22818
7	0.39	0.39	0.38	0.39	0.38	0.38	0.39	20962	33608	22745
8	0.38	0.37	0.37	0.37	0.37	0.37	0.38	20899	33493	22854
9	0.38	0.35	0.35	0.35	0.38	0.38	0.38	20944	33434	22625
10	0.37	0.35	0.35	0.38	0.41	0.39	0.41	24833	37792	26370
11	0.38	0.35	0.34	0.35	0.36	0.36	0.38	24969	36972	26589
12	0.35	0.33	0.35	0.38	0.37	0.35	0.38	24958	30010	26411
13	0.38	0.34	0.34	0.34	0.33	0.33	0.38	23160	29993	24849
14	0.35	0.33	0.33	0.33	0.33	0.33	0.35	23003	29882	24667
15	0.34	0.32	0.34	0.33	0.32	0.33	0.34	21083	29799	22932
16	0.34	0.32	0.32	0.33	0.33	0.33	0.34	20951	26219	22594
17	0.39	0.33	0.33	0.30	0.31	0.30	0.39	19160	26264	20906
18	0.30	0.30	0.29	0.30	0.30	0.31	0.31	19191	26271	21094
19	0.30	0.30	0.29	0.29	0.30	0.29	0.30	19149	30899	21026
20	0.30	0.29	0.35	0.27	0.28	0.29	0.35	19153	30222	21031
21	0.29	0.28	0.28	0.28	0.29	0.29	0.29	19142	30267	21083
22	0.28	0.28	0.28	0.27	0.27	0.28	0.28	19142	30212	21151
23	0.27	0.26	0.25	0.27	0.28	0.27	0.28	19139	30142	21083
24	0.25	0.25	0.26	0.25	0.26	0.25	0.26	19163	30333	21318
25	0.25	0.25	0.25	0.24	0.25	0.24	0.25	19215	30229	20995
26	0.24	0.23	0.24	0.23	0.23	0.24	0.24	19187	30198	21021
27	0.23	0.27	0.22	0.23	0.23	0.24	0.27	19142	30229	21094
28	0.24	0.24	0.22	0.23	0.25	0.27	0.27	21052	26750	22417
29	0.27	0.26	0.23	0.22	0.22	0.22	0.27	20708	31781	22594
30	0.23	0.23	0.22	0.24	0.22	0.23	0.24	23184	31128	24568
31	0.23	0.22	0.22	0.23	0.25	0.23	0.25	22812	31056	24495

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			
All daily turb readings ≤ 5 NTU? Yes	Yes	Yes	Yes

¹Filtered systems only

Printed Name: Mac Gifford, P.E.

Phone: (503) 823-1507

Signature: 

Date: 6-7-19

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

PWS Name: Portland Water Bureau

PWS ID#: OR 4100657

Month/Year: 5/2019

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

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

Six Month Summary:

# of Samples For Fecal Coliform:	179
# of Samples > 20 CFU/100mL:	0
Percent:	0.0%