

OHA - Drinking Water Services - Turbidity Monitoring Report Form

County: Multnomah

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

Portland Water Bureau

ID #: OR 4100657


WTP-A

Month/Year: 12/2022

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	2.15	2.15	2.11	2.10	2.05	2.01	2.15
2	2.02	1.99	2.00	1.98	1.97	1.97	2.02
3	1.98	1.97	2.00	1.97	1.95	1.94	2.00
4	1.90	1.93	1.92	1.90	1.91	1.95	1.95
5	1.88	1.85	1.86	1.85	1.85	1.84	1.88
6	1.83	1.83	1.81	1.81	1.83	1.81	1.83
7	1.78	1.77	1.74	1.71	1.70	1.71	1.78
8	1.80	1.69	1.73	1.74	1.71	1.70	1.80
9	1.69	1.69	1.65	1.61	1.61	1.61	1.69
10	1.64	1.63	1.60	1.61	1.61	1.58	1.64
11	1.57	1.54	1.53	1.49	1.52	1.49	1.57
12	1.47	1.45	1.44	1.47	1.44	1.44	1.47
13	1.48	1.44	1.43	1.42	1.40	1.42	1.48
14	1.39	1.38	1.37	1.36	1.36	1.38	1.39
15	1.36	1.36	1.34	1.34	1.32	1.33	1.36
16	1.30	1.27	1.27	1.25	1.24	1.25	1.30
17	1.26	1.24	1.24	1.25	1.24	1.23	1.26
18	1.22	1.22	1.23	1.22	1.22	1.22	1.23
19	1.22	1.23	1.21	1.20	1.17	1.17	1.23
20	1.16	1.18	1.16	1.17	1.18	1.18	1.18
21	1.22	1.21	1.16	1.15	1.13	1.18	1.22
22	1.11	1.31	1.23	1.22	1.30	1.34	1.34
23	1.44	1.45	1.49	1.51	1.53	1.42	1.53
24	1.40	1.38	1.37	1.34	1.33	1.32	1.40
25	1.31	1.28	1.23	1.24	1.20	1.22	1.31
26	1.21	1.17	1.12	1.07	1.04	1.01	1.21
27	1.00	0.95	1.07	1.02	1.00	0.93	1.07
28	0.91	0.98	1.00	1.01	1.03	1.03	1.03
29	1.02	0.98	0.98	1.01	1.00	1.00	1.02
30	1.02	1.01	1.00	0.98	0.98	1.08	1.08
31	0.98	0.97	0.98	0.98	1.03	1.06	1.06

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

¹Filtered systems only

Signature: 
 Anna Vosa, P.E.

Date: 1/6/23

OHA - Drinking Water Services

Surface Water Quality Data Conduit 2

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 12/2022

Date / Time	Peak Hourly Flow	Minimum Hourly Average Free Chlorine (C)	Contact Time (T)	Actual CT	Temp	pH	Req'd CT	CT Met?	Min. Hourly Average Total Chlorine at First User
	MGD	ppm or mg/L	min.	C x T	°C		Tables	Y/N	ppm or mg/L
1 / 0	24.33	2.58	273.0	705.5	6.0	6.37	134.2	Y	2.57
2 / 8	24.85	2.58	267.5	689.2	5.7	6.35	134.9	Y	2.56
3 / 0	24.48	2.58	271.2	698.7	5.8	6.36	134.8	Y	2.57
4 / 17	27.21	2.52	246.3	620.7	5.4	6.40	138.2	Y	2.49
5 / 8	26.98	2.58	235.2	607.4	5.2	6.38	139.7	Y	2.58
6 / 0	25.18	2.55	240.8	613.5	5.3	6.41	140.4	Y	2.59
7 / 17	25.41	2.54	238.7	605.8	5.2	6.41	141.1	Y	2.55
8 / 10	25.97	2.48	233.9	580.7	5.2	6.41	139.5	Y	2.53
9 / 23	24.80	2.37	244.1	579.2	5.2	6.41	137.0	Y	2.40
10 / 10	24.91	2.54	242.7	615.4	5.1	6.41	141.4	Y	2.39
11 / 8	24.73	2.61	244.5	637.1	5.1	6.41	142.7	Y	2.54
12 / 0	24.56	2.59	246.2	638.9	5.0	6.39	142.4	Y	2.42
13 / 14	24.87	2.53	243.5	615.0	5.1	6.41	141.7	Y	2.34
14 / 16	25.33	2.50	239.2	598.3	5.1	6.42	141.5	Y	2.33
15 / 0	24.94	2.50	242.4	605.1	5.0	6.42	141.7	Y	2.33
16 / 6	24.62	2.57	246.3	632.7	4.9	6.43	145.0	Y	2.40
17 / 0	24.33	2.55	248.6	634.4	4.8	6.42	145.4	Y	2.53
18 / 1	24.20	2.55	250.3	638.8	4.7	6.58	154.7	Y	2.61
19 / 18	24.14	2.47	250.7	619.7	4.7	6.58	153.1	Y	2.61
20 / 22	25.63	2.50	233.1	582.0	4.7	6.59	154.8	Y	2.26
21 / 2	25.63	2.48	236.5	585.6	4.7	6.59	154.7	Y	2.26
22 / 1	24.79	2.54	243.5	618.0	4.5	6.60	159.6	Y	2.34
23 / 1	24.28	2.54	249.7	634.4	3.8	6.67	174.1	Y	2.51
24 / 23	27.15	2.61	219.9	573.9	3.6	6.54	169.8	Y	2.55
25 / 16	38.67	2.55	159.1	405.7	3.6	6.58	170.2	Y	2.55
26 / 11	38.50	2.54	159.3	404.6	3.7	6.56	168.6	Y	2.51
27 / 5	38.44	2.53	159.4	403.3	3.8	6.56	167.2	Y	2.41
28 / 13	24.60	2.50	235.8	589.6	4.0	6.55	161.8	Y	2.44
29 / 10	24.56	2.52	236.0	594.8	4.1	6.54	161.5	Y	2.44
30 / 21	22.30	2.53	258.7	654.6	4.1	6.50	157.9	Y	2.46
31 / 22	23.68	2.53	240.5	608.6	4.6	6.41	146.7	Y	2.48

Notes for Conduit 2 (C2):

December 1 to 31, 2022: Conduit 2 out of service from Headworks to Hudsons Intertie, Conduit 4 feeding Conduit 2 at Hudsons Intertie, Conduit 2 in service from Hudsons through Lusted and on to town.

Signature: Anna Vosa
 Anna Vosa, P.E., Water Quality Engineer

Date: 1/9/23

OHA - Drinking Water Services

Surface Water Quality Data Conduit 3

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 12/2022

Date / Time	Peak Hourly Flow	Minimum Hourly Average Free Chlorine (C)	Contact Time (T)	Actual CT	Temp	pH	Req'd CT	CT Met?	Min. Hourly Average Total Chlorine at First User
	MGD	ppm or mg/L	min.	C x T	°C		Tables	Y/N	ppm or mg/L
1 / 5	21.96	2.50	448.6	1123.0	6.0	6.35	131.3	Y	2.49
2 / 8	22.20	2.53	443.9	1121.5	5.7	6.31	132.4	Y	2.51
3 / 0	21.96	2.53	449.1	1134.4	5.8	6.34	132.4	Y	2.50
4 / 17	21.64	2.49	455.0	1134.1	5.4	6.36	136.0	Y	2.47
5 / 8	21.49	2.40	458.5	1099.6	5.2	6.37	135.2	Y	2.38
6 / 1	21.47	2.58	459.1	1182.3	5.3	6.37	139.0	Y	2.61
7 / 2	21.43	2.58	459.5	1185.2	5.2	6.37	139.9	Y	2.62
8 / 18	21.94	2.52	449.5	1133.2	5.2	6.40	140.1	Y	2.57
9 / 23	22.21	2.42	443.6	1072.4	5.2	6.39	137.2	Y	2.43
10 / 10	22.57	2.47	436.7	1077.6	5.1	6.41	139.4	Y	2.46
11 / 1	22.43	2.51	439.4	1102.4	5.1	6.39	140.2	Y	2.52
12 / 1	22.30	2.60	442.1	1148.0	5.0	6.39	142.4	Y	2.57
13 / 14	24.50	2.25	402.0	905.7	5.1	6.39	135.8	Y	2.23
14 / 20	23.36	2.44	421.6	1027.3	5.1	6.40	138.8	Y	2.46
15 / 0	23.14	2.43	426.1	1034.7	5.0	6.40	138.9	Y	2.45
16 / 0	22.83	2.48	432.0	1071.4	4.9	6.40	141.6	Y	2.49
17 / 3	22.68	2.53	434.8	1099.8	4.8	6.39	143.3	Y	2.54
18 / 5	22.51	2.56	438.1	1119.9	4.7	6.66	159.4	Y	2.56
19 / 19	22.48	2.47	438.4	1084.3	4.7	6.67	158.5	Y	2.48
20 / 23	24.18	2.54	407.1	1033.9	4.7	6.69	162.1	Y	2.54
21 / 0	24.41	2.49	403.9	1005.6	4.7	6.70	161.7	Y	2.49
22 / 0	23.60	2.54	417.9	1061.1	4.5	6.71	166.7	Y	2.52
23 / 1	23.11	2.52	428.2	1079.1	3.8	6.78	180.3	Y	2.51
24 / 23	27.09	2.55	362.5	924.4	3.6	6.56	169.8	Y	2.53
25 / 17	45.91	2.55	203.2	518.1	3.6	6.58	170.5	Y	2.52
26 / 5	43.83	2.61	169.1	441.3	3.7	6.57	171.2	Y	2.60
27 / 2	43.81	2.49	169.1	421.1	3.8	6.59	167.7	Y	2.42
28 / 10	27.75	2.37	355.7	843.0	4.0	6.57	160.4	Y	2.35
29 / 10	22.77	2.44	434.2	1059.4	4.1	6.57	161.3	Y	2.31
30 / 19	23.25	2.47	425.6	1051.1	4.1	6.52	157.9	Y	2.44
31 / 19	22.28	2.43	443.9	1078.7	4.6	6.46	146.7	Y	2.41

Notes for Conduit 3 (C3):

December 1 to 31, 2022: Conduit 3 in service from Headworks through Lusted and on to town.

Signature: Anna Vosa
 Anna Vosa, P.E., Water Quality Engineer

Date: 1/9/23

OHA - Drinking Water Services

Surface Water Quality Data Conduit 4

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 12/2022

Date / Time	Peak Hourly Flow	Minimum Hourly Average Free Chlorine (C)	Contact Time (T)	Actual CT	Temp	pH	Req'd CT	CT Met?	Min. Hourly Average Total Chlorine at First User
	MGD	ppm or mg/L	min.	C x T	°C		Tables	Y/N	ppm or mg/L
1 / 5	25.50	2.54	322.1	817.8	6.0	6.38	133.5	Y	2.48
2 / 6	25.98	2.53	315.9	799.5	5.7	6.37	134.8	Y	2.50
3 / 0	25.66	2.53	320.0	810.1	5.8	6.38	134.6	Y	2.51
4 / 17	27.80	2.47	293.3	724.4	5.4	6.42	138.0	Y	2.43
5 / 19	33.90	2.56	259.2	662.8	5.2	6.42	141.3	Y	2.50
6 / 1	33.91	2.53	259.3	655.0	5.3	6.41	140.1	Y	2.55
7 / 23	34.17	2.51	257.1	646.3	5.2	6.44	141.9	Y	2.53
8 / 10	34.76	2.46	252.4	619.7	5.2	6.44	140.2	Y	2.47
9 / 22	33.43	2.42	262.8	636.0	5.2	6.43	139.2	Y	2.33
10 / 10	33.61	2.51	261.2	656.8	5.1	6.44	142.1	Y	2.48
11 / 0	33.39	2.58	263.0	679.1	5.1	6.42	143.1	Y	2.48
12 / 0	33.20	2.57	264.8	681.2	5.0	6.42	143.3	Y	2.43
13 / 15	33.48	2.51	262.2	659.2	5.1	6.44	142.9	Y	2.42
14 / 16	34.04	2.49	257.8	642.0	5.1	6.44	142.2	Y	2.38
15 / 0	33.64	2.49	260.9	649.7	5.0	6.44	142.7	Y	2.39
16 / 0	33.18	2.57	265.1	681.5	4.9	6.42	144.6	Y	2.37
17 / 4	32.92	2.55	267.2	681.3	4.8	6.45	146.6	Y	2.46
18 / 5	32.66	2.55	269.2	685.9	4.7	6.56	153.8	Y	2.44
19 / 22	32.65	2.48	269.5	668.1	4.7	6.59	153.9	Y	2.40
20 / 22	34.36	2.50	251.7	627.9	4.7	6.60	155.8	Y	2.43
21 / 1	34.49	2.48	254.7	631.8	4.7	6.62	156.4	Y	2.32
22 / 1	33.40	2.54	262.2	664.7	4.5	6.63	161.3	Y	2.41
23 / 2	32.82	2.54	268.5	682.0	3.8	6.71	176.6	Y	2.42
24 / 23	36.30	2.58	237.7	613.2	3.6	6.56	170.3	Y	2.44
25 / 21	55.91	2.52	166.6	419.7	3.6	6.59	170.4	Y	2.20
26 / 8	55.88	2.51	166.6	418.1	3.7	6.59	169.6	Y	2.44
27 / 2	55.83	2.50	166.6	416.6	3.8	6.58	167.5	Y	2.40
28 / 8	37.17	2.47	243.4	601.2	4.0	6.55	161.3	Y	2.40
29 / 7	37.16	2.49	243.5	606.3	4.1	6.54	160.5	Y	2.44
30 / 21	34.15	2.50	265.7	664.2	4.1	6.51	158.0	Y	2.44
31 / 22	36.08	2.52	247.6	624.0	4.6	6.42	147.1	Y	2.47

Notes for Conduit 4 (C4):

December 1 to 31, 2022: Conduit 4 in service from Headworks through Lusted and on to town. Conduit 4 feeding Conduit 2 at Hudsons Interite.

Signature: Anna Vosa
 Anna Vosa, P.E., Water Quality Engineer

Date: 1/9/23

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 12/2022

Date	Fecal Coliform (CFU/100mL)	Comments
12/1/2022	4	
12/2/2022	1	
12/3/2022	1	
12/4/2022	5	
12/5/2022	2	
12/6/2022	2	
12/7/2022	1	
12/8/2022	2	
12/9/2022	2	
12/10/2022	2	
12/11/2022	2	
12/12/2022	2	
12/13/2022	1	
12/14/2022	1	
12/15/2022		Analytical results did not meet Lab QA/QC
12/16/2022	<1	
12/17/2022	<1	
12/18/2022	1	
12/19/2022	<1	
12/20/2022	1	
12/21/2022	2	
12/22/2022	1	
12/23/2022	1	
12/24/2022	1	
12/25/2022	1	
12/26/2022	<1	
12/27/2022	2	
12/28/2022	1	
12/29/2022	2	
12/30/2022	2	
12/31/2022	2	

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

Six Month Summary:

# of Samples For Fecal Coliform:	168
# of Samples > 20 CFU/100mL:	1
Percent:	0.6%