

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: 11/2021

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	0.65	0.66	0.67	0.71	0.69	0.69	0.71
2	0.70	0.70	0.68	0.69	0.69	0.69	0.70
3	0.67	0.69	0.65	0.71	0.77	0.79	0.79
4	1.57	0.91	0.85	0.97	0.84	0.86	1.57
5	0.80	0.73	0.72	0.71	0.70	0.71	0.80
6	0.70	0.71	0.71	0.71	0.71	0.74	0.74
7	0.72	0.74	0.72	0.71	0.70	0.70	0.74
8	0.69	0.70	0.67	0.69	0.67	0.66	0.70
9	0.66	0.64	0.66	0.58	0.57	0.57	0.66
10	0.68	0.61	0.59	0.58	0.80	0.56	0.80
11	0.55	0.59	0.59	0.55	0.55	0.54	0.59
12	0.53	0.70	0.79	0.86	1.02	1.06	1.06
13	1.31	1.70	1.89	2.07	2.22	2.20	2.07
14	2.10	2.07	2.15	2.12	2.13	2.81	2.81
15	2.05	2.01	2.00	2.01			2.05
16	100% Groundwater from 11/15 16:00 to 11/17 10:00						
17				1.87	1.79	1.69	1.87
18	1.68	1.63	1.59	1.58	1.59	1.55	1.68
19	1.54	1.52	1.52	1.56	1.52	1.50	1.56
20	1.49	1.47	1.45	1.43	1.39	1.37	1.49
21	1.37	1.35	1.30	1.28	1.23	1.20	1.37
22	1.17	1.17	1.17	1.15	1.12	1.11	1.17
23	1.14	1.07	1.06	1.01	1.04	1.04	1.14
24	1.03	1.04	1.02	1.02	1.29	1.06	1.29
25	1.04	1.15	1.00	0.98	0.97	0.93	1.15
26	0.92	0.91	0.92	0.92	0.90	0.91	0.92
27	0.87	0.85	0.84	0.81	0.82	0.86	0.87
28	0.85	1.23	0.92	0.86	0.85	0.82	1.23
29	0.81	0.93	0.85	0.81	0.79	0.79	0.93
30	0.79	0.77	0.77	0.77	0.75	0.76	0.79

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
 Anna Vosa, P.E.

Date: 12/9/21

OHA - Drinking Water Services

Surface Water Quality Data Conduit 2

Portland Water Bureau

ID#: OR 4100657


WTP-A

Month/Year: 11/2021

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 / 18	25.47	2.54	270.3	687.5	11.9	6.71	106.2	Y	2.49
2 / 18	25.37	2.50	271.5	678.5	11.7	6.69	100.8	Y	2.46
3 / 21	25.88	2.49	265.9	663.3	11.7	6.69	101.1	Y	2.43
4 / 11	26.14	2.47	259.9	642.0	11.5	6.74	105.0	Y	2.42
5 / 1	25.36	2.48	276.1	685.5	11.4	6.71	102.5	Y	2.44
6 / 20	23.72	2.47	288.8	713.7	10.9	6.65	108.5	Y	2.22
7 / 5	23.70	2.50	288.9	722.5	10.9	6.64	114.7	Y	2.44
8 / 12	34.63	2.53	202.8	512.1	10.6	6.64	112.6	Y	2.25
9 / 6	22.45	2.51	302.9	760.2	10.5	6.66	114.7	Y	2.38
10 / 20	23.76	2.45	289.4	708.8	9.8	6.63	116.5	Y	2.36
11 / 8	24.51	2.49	281.7	702.2	9.7	6.58	111.8	Y	2.40
12 / 13	24.62	2.37	280.3	664.3	9.3	6.54	110.3	Y	2.36
13 / 7	24.68	2.46	280.0	689.8	9.2	6.43	107.4	Y	2.36
14 / 5	24.69	2.48	279.8	695.2	9.1	6.31	101.6	Y	2.39
15 / 10	24.65	1.55	280.0	434.0	9.3	6.26	93.8	Y	1.98
16	100% Groundwater, No Surface Water in Use								
17 / 15	24.04	0.43	280.2	120.5	9.2	6.15	81.0	Y	0.43
18 / 5	21.05	2.53	312.8	792.1	9.0	6.26	104.6	Y	2.47
19 / 18	22.15	2.53	302.9	767.3	8.7	6.27	111.9	Y	2.46
20 / 6	21.85	2.52	306.4	771.3	8.6	6.26	112.5	Y	2.44
21 / 9	21.58	2.55	310.9	793.4	8.5	6.23	109.1	Y	2.46
22 / 14	20.78	2.51	321.5	806.3	8.4	6.27	113.1	Y	2.48
23 / 19	21.22	2.54	315.7	803.2	8.2	6.27	111.2	Y	2.50
24 / 6	21.24	2.55	315.5	805.1	8.2	6.27	110.6	Y	2.49
25 / 5	20.93	2.56	319.0	816.3	8.2	6.26	109.9	Y	2.48
26 / 19	21.56	2.49	310.7	773.7	8.0	6.30	114.5	Y	2.43
27 / 20	21.99	2.52	303.6	764.1	7.9	6.29	120.3	Y	2.44
28 / 17	22.21	2.48	301.9	749.8	7.9	6.31	115.6	Y	2.32
29 / 17	22.12	2.60	302.5	786.0	8.0	6.30	115.1	Y	2.46
30 / 8	22.14	2.53	302.6	766.6	8.0	6.30	119.6	Y	2.49

Notes for Conduit 2 (C2):

November 1 to 30, 2021: 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 (except between 11/15 16:00 and 11/17 13:00 during which groundwater was in use and no flow from Conduit 2 was provided).

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

Date: 12/9/21

OHA - Drinking Water Services

Surface Water Quality Data Conduit 3

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 11/2021

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	35.49	2.47	276.7	683.1	11.9	6.69	102.9	Y	2.40
2 / 2	25.29	2.43	387.9	942.0	11.7	6.69	105.6	Y	2.40
3 / 22	31.84	2.46	308.1	759.1	11.7	6.68	102.9	Y	2.48
4 / 8	31.98	2.44	302.7	738.6	11.5	6.73	106.8	Y	2.37
5 / 0	28.44	2.48	344.8	855.4	11.4	6.71	102.7	Y	2.41
6 / 6	28.43	2.46	345.3	848.2	10.9	6.67	110.4	Y	2.39
7 / 23	28.44	2.49	344.9	858.8	10.9	6.65	107.2	Y	2.41
8 / 23	35.90	0.91	273.5	247.7	10.6	6.67	98.8	Y	0.71
9 / 23	36.34	2.54	270.3	686.1	10.5	6.64	111.5	Y	2.46
10 / 23	37.85	2.47	259.8	641.6	9.8	6.61	113.8	Y	2.41
11 / 7	38.78	2.33	253.4	591.4	9.7	6.61	115.5	Y	2.32
12 / 4	32.80	2.40	299.5	717.9	9.3	6.59	110.9	Y	2.27
13 / 20	28.23	2.41	347.8	836.9	9.2	6.34	108.1	Y	2.29
14 / 1	28.22	2.49	347.3	865.6	9.1	6.32	101.5	Y	2.36
15 / 9	28.25	2.55	347.5	887.6	9.3	6.27	103.3	Y	2.10
16	100% Groundwater, No Surface Water in Use								
17 / 12	34.69	1.56	282.6	440.3	9.2	6.01	84.7	Y	0.54
18 / 5	34.90	2.45	281.6	690.7	9.0	6.20	99.2	Y	2.47
19 / 19	36.41	2.48	269.8	669.2	8.7	6.19	104.9	Y	2.47
20 / 0	36.02	2.44	272.9	666.7	8.6	6.18	106.6	Y	2.43
21 / 0	35.57	2.51	276.4	694.3	8.5	6.22	111.2	Y	2.48
22 / 22	34.49	2.49	284.8	708.5	8.4	6.28	107.2	Y	2.43
23 / 17	35.03	2.52	280.4	707.7	8.2	6.28	112.8	Y	2.45
24 / 23	39.95	2.51	246.0	618.4	8.2	6.30	114.1	Y	2.40
25 / 0	39.85	2.52	247.1	623.5	8.2	6.31	113.6	Y	2.39
26 / 14	40.75	2.48	241.4	598.3	8.0	6.31	115.7	Y	2.34
27 / 23	35.92	2.42	273.7	663.4	7.9	6.32	119.5	Y	2.38
28 / 0	35.93	2.39	273.4	653.7	7.9	6.32	114.3	Y	2.32
29 / 18	31.27	2.48	313.9	778.6	8.0	6.33	116.3	Y	2.39
30 / 7	31.30	2.45	313.9	769.1	8.0	6.31	117.4	Y	2.39

Notes for Conduit 3 (C3):

November 1 to 30, 2021: Conduit 3 in service from Headworks through Lusted and on to town (except between 11/15 15:00 and 11/17 10:00 during which groundwater was in use and no flow from Conduit 3 was provided).

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

Date: 12/9/21

OHA - Drinking Water Services

Surface Water Quality Data Conduit 4

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 11/2021

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 / 21	23.92	2.47	332.1	821.8	11.9	6.70	102.6	Y	2.33
2 / 18	23.87	2.47	333.4	823.2	11.7	6.68	102.3	Y	2.33
3 / 20	24.31	2.47	326.7	805.9	11.7	6.68	102.5	Y	2.23
4 / 12	24.49	2.43	320.6	779.0	11.5	6.73	107.0	Y	2.27
5 / 0	23.91	2.45	337.7	827.3	11.4	6.70	104.4	Y	2.23
6 / 6	22.64	2.44	352.8	860.2	10.9	6.66	111.5	Y	2.27
7 / 11	22.64	2.46	352.8	869.2	10.9	6.63	107.9	Y	2.32
8 / 12	30.70	2.50	254.6	636.8	10.6	6.63	114.1	Y	1.89
9 / 15	21.37	2.51	370.9	931.7	10.5	6.62	112.7	Y	2.35
10 / 20	22.26	2.44	356.2	868.5	9.8	6.62	116.8	Y	2.30
11 / 7	22.82	2.45	347.3	851.3	9.7	6.59	114.7	Y	2.31
12 / 13	22.89	2.39	345.8	825.0	9.3	6.54	108.9	Y	2.24
13 / 8	22.92	2.11	345.5	727.8	9.2	6.42	108.1	Y	2.06
14 / 6	22.96	2.44	345.2	840.6	9.1	6.30	104.7	Y	2.30
15 / 7	22.92	1.61	345.4	556.4	9.3	6.25	96.8	Y	2.06
16			100% Groundwater, No Surface Water in Use						
17 / 15	23.98	1.39	336.9	467.5	9.2	6.11	85.1	Y	0.60
18 / 6	21.54	2.51	373.3	935.4	9.0	6.22	105.2	Y	2.49
19 / 20	22.44	2.50	362.0	905.3	8.7	6.23	112.1	Y	2.40
20 / 6	22.23	2.49	365.5	908.3	8.6	6.22	105.0	Y	2.39
21 / 8	21.98	2.47	370.7	913.8	8.5	6.22	106.1	Y	2.38
22 / 8	21.38	2.47	381.9	942.1	8.4	6.22	106.1	Y	2.42
23 / 16	21.68	2.50	376.0	938.8	8.2	6.25	105.3	Y	2.46
24 / 9	21.73	2.52	375.5	944.6	8.2	6.26	112.5	Y	2.43
25 / 5	21.43	2.52	379.8	957.5	8.2	6.26	112.0	Y	2.41
26 / 20	21.94	2.46	370.6	912.6	8.0	6.28	115.4	Y	2.38
27 / 20	22.32	2.47	362.7	897.0	7.9	6.28	114.9	Y	2.40
28 / 18	22.47	2.40	361.0	866.3	7.9	6.31	113.4	Y	2.38
29 / 18	22.44	2.54	361.5	917.8	8.0	6.29	119.0	Y	2.42
30 / 8	22.44	2.50	361.6	903.6	8.0	6.27	112.9	Y	2.39

Notes for Conduit 4 (C4):

November 1 to 30, 2021: Conduit 4 in service from Hudsons Intertie through Lusted and on to town; Conduit 4 feeding Conduit 2 at Hudsons Intertie (except between 11/15 16:00 and 11/17 13:00 during which groundwater was in use and no flow from Conduit 4 was provided).

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

Date: 12/9/21

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 11/2021

Date	Fecal Coliform (CFU/100mL)	Comments
11/1/2021	1	
11/2/2021	2	
11/3/2021	1	
11/4/2021	1	
11/5/2021	1	
11/6/2021	<1	
11/7/2021	1	
11/8/2021	2	
11/9/2021	3	
11/10/2021	2	
11/11/2021	4	
11/12/2021	2	
11/13/2021	6	
11/14/2021	7	
11/15/2021	8	
11/17/2021	4	
11/18/2021	3	
11/19/2021	2	
11/20/2021	7	
11/21/2021	2	
11/22/2021	4	
11/23/2021	1	
11/24/2021	1	
11/25/2021	1	
11/26/2021	2	
11/27/2021	1	
11/28/2021	1	
11/29/2021	1	
11/30/2021	1	

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

Six Month Summary:

# of Samples For Fecal Coliform:	181
# of Samples > 20 CFU/100mL:	0
Percent:	0.0%