

# 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: 03/2022**

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	0.45	0.38	0.33	0.33	0.30	0.35	<b>0.45</b>
2	0.35	0.37	0.39	0.44	0.57	0.46	<b>0.57</b>
3	0.40	0.39	0.39	0.39	0.48	0.38	<b>0.48</b>
4	0.37	0.39	0.38	0.38	0.38	0.45	<b>0.45</b>
5	0.46	0.51	0.53	0.45	0.45	0.56	<b>0.56</b>
6	0.61	0.61	0.65	0.60	0.59	0.59	<b>0.65</b>
7	0.65	0.66	0.65	0.63	0.60	0.60	<b>0.66</b>
8	0.62	0.59	0.57	0.59	0.58	0.57	<b>0.62</b>
9	0.59	0.58	0.61	0.62	0.66	0.66	<b>0.66</b>
10	0.62	0.60	0.61	0.70	0.75	0.56	<b>0.75</b>
11	0.58	0.59	0.55	0.59	0.56	0.55	<b>0.59</b>
12	0.55	0.54	0.53	0.53	0.51	0.50	<b>0.55</b>
13	0.50	0.51	0.48	0.50	0.50	0.49	<b>0.51</b>
14	0.48	0.47	0.48	0.48	0.49	0.51	<b>0.51</b>
15	0.49	0.49	0.45	0.45	0.43	0.40	<b>0.49</b>
16	0.40	0.41	0.40	0.43	0.45	0.46	<b>0.46</b>
17	0.53	0.44	0.44	0.43	0.48	0.42	<b>0.53</b>
18	0.43	0.40	0.39	0.45	0.38	0.40	<b>0.45</b>
19	0.42	0.40	0.40	0.37	0.37	0.37	<b>0.42</b>
20	0.39	0.39	0.38	0.37	0.38	0.44	<b>0.44</b>
21	0.52	0.40	0.35	0.38	0.39	0.39	<b>0.52</b>
22	0.41	0.39	0.36	0.35	0.38	0.38	<b>0.41</b>
23	0.38	0.39	0.36	0.34	0.37	0.43	<b>0.43</b>
24	0.35	0.38	0.38	0.39	0.41	0.37	<b>0.41</b>
25	0.37	0.38	0.35	0.36	0.34	0.37	<b>0.38</b>
26	0.34	0.34	0.35	0.34	0.38	0.36	<b>0.38</b>
27	0.33	0.36	0.34	0.35	0.34	0.33	<b>0.36</b>
28	0.33	0.34	0.33	0.33	0.33	0.30	<b>0.34</b>
29	0.32	0.31	0.32	0.31	0.30	0.30	<b>0.32</b>
30	0.30	0.31	0.30	0.29	0.34	0.44	<b>0.44</b>
31	0.44	0.38	0.33	0.38	0.33	0.35	<b>0.44</b>

Slow Sand/Membrane/DE Filtration/Unfiltered			Monthly summary	
95% of daily turbidity readings ≤ 1 NTU? <sup>1</sup>	<b>N/A</b>	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?	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

<sup>1</sup>Filtered systems only

Signature: *Anna Vosa*  
 Anna Vosa, P.E.

Date: 4/6/22

# OHA - Drinking Water Services

## Surface Water Quality Data Conduit 2

Portland Water Bureau

ID#: OR 4100657


WTP-A

Month/Year: 03/2022

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 / 13	22.85	2.25	294.9	664.1	4.4	6.55	152.8	Y	2.21
2 / 20	22.87	2.19	294.8	646.9	4.4	6.50	148.1	Y	2.16
3 / 13	22.91	2.20	294.6	648.1	4.5	6.62	154.5	Y	2.20
4 / 17	22.96	2.19	294.1	643.6	4.5	6.58	151.6	Y	2.19
5 / 5	22.83	2.16	294.8	636.7	4.5	6.54	148.5	Y	2.16
6 / 6	22.26	2.18	301.5	656.4	4.7	6.50	144.8	Y	2.18
7 / 8	21.67	2.23	310.5	692.8	4.8	6.47	142.2	Y	2.22
8 / 17	28.32	2.19	241.8	528.9	4.7	6.51	144.1	Y	2.07
9 / 10	39.25	2.14	176.1	376.9	4.9	6.51	141.7	Y	2.12
10 / 8	38.73	2.11	178.6	377.1	5.0	6.51	140.1	Y	2.14
11 / 6	23.48	2.17	288.1	626.0	5.0	6.50	140.1	Y	2.18
12 / 8	22.47	2.21	299.9	662.3	5.1	6.51	139.8	Y	2.20
13 / 19	23.56	2.20	286.6	631.9	5.1	6.52	141.0	Y	2.19
14 / 7	23.65	2.18	286.2	622.9	5.1	6.54	141.2	Y	2.17
15 / 19	23.84	2.17	283.6	615.9	5.1	6.56	142.5	Y	2.16
16 / 6	23.83	2.23	283.7	633.0	5.3	6.54	141.3	Y	2.18
17 / 8	23.86	2.19	283.6	622.1	5.4	6.54	139.3	Y	2.15
18 / 14	23.82	2.25	283.9	639.1	5.3	6.52	139.9	Y	2.20
19 / 8	23.82	2.23	284.0	634.7	5.5	6.52	138.6	Y	2.18
20 / 13	23.84	2.26	283.9	642.1	5.4	6.54	140.2	Y	2.22
21 / 17	23.66	2.18	285.0	621.7	5.7	6.50	134.7	Y	2.16
22 / 10	23.65	2.20	285.7	629.2	5.6	6.53	137.7	Y	2.18
23 / 14	23.61	2.16	285.9	617.6	5.6	6.49	135.0	Y	2.12
24 / 21	23.66	2.19	285.6	624.1	6.2	6.52	132.9	Y	2.19
25 / 11	23.46	2.19	286.6	628.2	6.2	6.48	130.6	Y	2.19
26 / 10	22.91	2.21	294.1	651.4	6.1	6.47	131.2	Y	2.21
27 / 10	22.96	2.18	294.0	641.0	6.3	6.50	131.1	Y	2.19
28 / 14	25.83	2.21	262.9	581.2	6.1	6.50	132.4	Y	2.18
29 / 7	26.12	2.22	260.0	576.5	6.2	6.50	131.5	Y	2.28
30 / 9	25.83	2.20	262.9	579.2	6.0	6.49	132.9	Y	2.15
31 / 15	25.58	2.20	265.2	582.1	6.3	6.48	130.5	Y	2.20

**Notes for Conduit 2 (C2):**

March 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, P.E., Water Quality Engineer

Date: 4/6/22

# OHA - Drinking Water Services

## Surface Water Quality Data Conduit 3

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 03/2022

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 / 10	32.99	2.20	297.8	654.5	4.4	6.53	151.0	Y	2.21
2 / 18	33.00	2.15	297.9	641.5	4.4	6.50	147.6	Y	2.19
3 / 9	33.03	2.20	297.6	655.5	4.5	6.48	146.9	Y	2.20
4 / 17	33.05	2.19	297.4	650.7	4.5	6.51	146.9	Y	2.19
5 / 2	33.07	2.13	297.4	633.8	4.5	6.48	144.6	Y	2.11
6 / 0	27.64	2.16	355.9	770.2	4.7	6.48	143.7	Y	2.14
7 / 23	31.33	2.20	310.6	682.9	4.8	6.45	140.9	Y	2.17
8 / 0	31.11	2.19	309.7	678.0	4.7	6.45	141.5	Y	2.16
9 / 2	22.10	2.13	427.6	910.7	4.8	6.47	140.0	Y	2.08
10 / 23	29.66	0.89	331.0	293.1	5.0	6.40	119.7	Y	0.62
11 / 8	29.73	2.06	330.6	682.6	5.0	6.46	137.1	Y	2.10
12 / 6	29.46	2.20	333.4	732.0	5.1	6.45	137.4	Y	2.22
13 / 23	30.73	2.22	319.6	709.2	5.1	6.48	138.9	Y	2.23
14 / 6	30.75	2.17	319.3	693.7	5.1	6.49	138.5	Y	2.18
15 / 20	25.59	2.21	384.1	847.2	5.1	6.48	138.8	Y	2.21
16 / 2	25.60	2.23	383.9	856.6	5.3	6.48	138.0	Y	2.25
17 / 1	25.62	2.19	383.8	840.0	5.4	6.48	136.3	Y	2.22
18 / 4	25.57	2.22	384.3	852.9	5.3	6.47	136.7	Y	2.23
19 / 12	25.57	2.21	384.2	850.5	5.5	6.47	135.6	Y	2.22
20 / 7	25.58	2.22	384.2	851.1	5.4	6.50	137.1	Y	2.24
21 / 0	25.53	2.12	384.9	815.2	5.7	6.49	133.7	Y	2.14
22 / 1	25.41	2.22	386.5	857.5	5.6	6.49	135.5	Y	2.22
23 / 23	31.12	2.18	315.7	687.8	5.6	6.48	134.9	Y	2.16
24 / 6	31.16	2.20	315.1	693.4	6.2	6.49	131.6	Y	2.22
25 / 0	31.08	2.21	315.5	698.3	6.2	6.49	131.4	Y	2.24
26 / 11	30.33	2.22	323.5	719.7	6.1	6.47	131.2	Y	2.24
27 / 7	30.34	2.20	323.5	713.1	6.3	6.52	132.5	Y	1.58
28 / 4	30.37	1.97	323.1	635.1	6.1	6.52	130.7	Y	2.07
29 / 21	35.80	2.20	274.3	602.1	6.2	6.50	131.6	Y	2.22
30 / 5	35.77	2.22	274.4	608.2	6.0	6.49	132.9	Y	2.23
31 / 4	35.50	2.18	276.4	603.1	6.3	6.52	132.1	Y	2.19

**Notes for Conduit 3 (C3):**

March 1 to 31, 2022: Conduit 3 in service from Headworks through Lusted and on to town (except between approximately 3/9 9:00 and 3/10 17:00, when Conduit 3 was out of service for maintenance).

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

Date: 4/6/22

# OHA - Drinking Water Services

## Surface Water Quality Data Conduit 4

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 03/2022

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	22.94	2.23	353.5	789.2	4.4	6.50	149.4	Y	2.19
2 / 18	22.93	2.17	353.5	766.8	4.4	6.52	149.0	Y	2.15
3 / 16	22.97	2.21	353.2	779.3	4.5	6.52	148.7	Y	2.20
4 / 13	23.00	2.19	352.7	773.0	4.5	6.51	147.0	Y	2.19
5 / 5	22.93	2.17	353.3	765.2	4.5	6.49	145.6	Y	2.16
6 / 6	22.46	2.20	360.9	793.1	4.7	6.49	144.5	Y	2.17
7 / 5	21.92	2.22	371.1	824.8	4.8	6.45	141.3	Y	2.16
8 / 17	27.37	2.19	293.8	644.0	4.7	6.48	143.1	Y	1.96
9 / 10	36.45	2.16	217.2	468.4	4.9	6.52	142.4	Y	2.08
10 / 8	35.95	2.10	220.4	462.2	5.0	6.49	138.9	Y	2.10
11 / 8	23.38	2.16	346.3	749.0	5.0	6.50	140.0	Y	2.11
12 / 6	22.54	2.20	359.7	792.0	5.1	6.47	138.2	Y	2.14
13 / 20	23.52	2.20	344.3	757.9	5.1	6.49	139.3	Y	2.13
14 / 6	23.51	2.17	344.2	745.7	5.1	6.50	139.1	Y	2.12
15 / 19	23.66	2.16	341.5	738.6	5.1	6.52	140.5	Y	2.10
16 / 6	23.68	2.19	341.4	749.2	5.3	6.51	138.9	Y	2.19
17 / 11	23.69	2.16	341.4	737.6	5.4	6.51	137.2	Y	2.16
18 / 21	23.67	2.23	341.6	762.2	5.3	6.49	138.0	Y	2.21
19 / 16	23.64	2.22	341.9	760.7	5.5	6.49	136.5	Y	2.20
20 / 20	23.64	2.25	341.8	768.1	5.4	6.50	137.7	Y	2.22
21 / 21	23.48	2.17	343.2	743.6	5.7	6.50	134.9	Y	2.16
22 / 6	23.47	2.19	344.0	753.5	5.6	6.50	135.8	Y	2.18
23 / 9	23.50	2.15	343.9	740.9	5.6	6.51	135.8	Y	2.12
24 / 7	23.50	2.16	343.8	743.8	6.2	6.48	130.7	Y	2.17
25 / 8	23.35	2.17	345.0	750.1	6.2	6.49	130.8	Y	2.17
26 / 9	22.96	2.20	352.8	774.9	6.1	6.49	131.6	Y	2.17
27 / 6	22.92	2.16	353.1	763.8	6.3	6.49	130.3	Y	2.15
28 / 21	25.28	2.19	318.1	697.7	6.1	6.48	131.2	Y	2.03
29 / 8	25.57	2.20	314.6	692.6	6.2	6.47	130.3	Y	2.19
30 / 7	25.25	2.19	318.3	697.2	6.0	6.48	132.0	Y	2.19
31 / 9	25.14	2.17	320.4	696.5	6.3	6.49	130.5	Y	2.17

**Notes for Conduit 4 (C4):**

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

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

Date: 4/6/22

## OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 03/2022

Date	Fecal Coliform (CFU/100mL)	Comments
3/1/2022	<1	
3/2/2022	<1	
3/3/2022	<1	
3/4/2022	<1	
3/5/2022	1	
3/6/2022	1	
3/7/2022	<1	
3/8/2022	<1	
3/9/2022	<1	
3/10/2022	<1	
3/11/2022	<1	
3/12/2022	<1	
3/13/2022	<1	
3/14/2022	<1	
3/15/2022	<1	
3/16/2022	<1	
3/17/2022	<1	
3/18/2022	<1	
3/19/2022	<1	
3/20/2022	<1	
3/21/2022	<1	
3/22/2022	<1	
3/23/2022	<1	
3/24/2022	<1	
3/25/2022	<1	
3/26/2022	<1	
3/27/2022	<1	
3/28/2022	<1	
3/29/2022	<1	
3/30/2022	<1	
3/31/2022	1	

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

**Six Month Summary:**

# of Samples For Fecal Coliform:	177
# of Samples > 20 CFU/100mL:	0
Percent:	0.0%