

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: 02/2025

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	12PM (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	0.28	0.27	0.27	0.27	0.26	0.26	0.28
2	0.26	0.27	0.26	0.26	0.26	0.26	0.27
3	0.26	0.26	0.27	0.26	0.26	0.27	0.27
4	0.27	0.27	0.27	0.26	0.27	0.26	0.27
5	0.26	0.26	0.26	0.26	0.26	0.26	0.26
6	0.26	0.26	0.26	0.26	0.26	0.28	0.28
7	0.26	0.26	0.26	0.26	0.26	0.27	0.27
8	0.26	0.27	0.26	0.27	0.27	0.26	0.27
9	0.26	0.26	0.25	0.25	0.26	0.26	0.26
10	0.25	0.27	0.25	0.27	0.27	0.27	0.27
11	0.26	0.27	0.26	0.26	0.26	0.26	0.27
12	0.27	0.26	0.26	0.26	0.27	0.27	0.27
13	0.28	0.28	0.31	0.33	0.32	0.33	0.33
14	0.35	0.36	0.38	0.41	0.37	0.35	0.41
15	0.35	0.35	0.33	0.33	0.35	0.35	0.35
16	0.35	0.36	0.33	0.33	0.36	0.35	0.36
17	0.34	0.35	0.33	0.32	0.33	0.34	0.35
18	0.32	0.32	0.30	0.30	0.31	0.31	0.32
19	0.31	0.32	0.33	0.33	0.34	0.34	0.34
20	0.33	0.34	0.32	0.32	0.33	0.32	0.34
21	0.33	0.33	0.32	0.31	0.33	0.31	0.33
22	0.32	0.31	0.32	0.31	0.31	0.31	0.32
23	0.31	0.32	0.31	0.31	0.31	0.39	0.39
24	0.60	1.03	1.33	1.15	1.49	1.90	1.90
25	1.44	1.34	1.42	1.37	1.35	1.38	1.44
26	1.33	1.35	1.38	1.42	1.50	1.56	1.56
27	1.56	1.53	1.51	1.64	1.82	1.94	1.94
28	1.93	2.06	2.13	2.21	2.54	2.57	2.57

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

¹Filtered systems only

Signature: Anna Vosa
Anna Vosa, P.E.

Date: 3/6/25

OHA - Drinking Water Services

Surface Water Quality Data Conduit 2

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 02/2025

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 / 12	23.99	2.21	241.0	531.9	4.5	6.59	152.2	Y	2.17
2 / 11	23.79	2.20	244.1	537.2	4.5	6.59	153.1	Y	2.16
3 / 10	23.76	2.20	244.4	538.2	4.4	6.61	154.7	Y	2.16
4 / 5	23.79	2.20	244.3	537.8	4.4	6.60	154.4	Y	2.07
5 / 4	23.59	2.20	245.6	540.1	4.4	6.59	154.0	Y	2.01
6 / 22	26.31	2.24	221.6	495.4	4.3	6.60	157.0	Y	2.17
7 / 5	26.35	2.18	221.3	482.8	4.2	6.61	156.9	Y	2.18
8 / 6	26.15	2.22	223.0	494.4	4.2	6.60	158.1	Y	2.19
9 / 11	26.15	2.22	223.0	494.6	4.2	6.62	159.5	Y	2.29
10 / 3	26.15	2.20	223.0	489.9	4.1	6.61	158.5	Y	1.93
11 / 4	24.02	2.21	242.0	534.8	4.0	6.62	161.8	Y	2.25
12 / 21	23.93	2.20	243.0	533.6	3.7	6.64	166.8	Y	2.22
13 / 8	23.92	2.20	243.0	534.9	3.5	6.65	171.2	Y	2.22
14 / 20	23.96	2.21	242.3	536.1	3.2	6.66	176.1	Y	2.23
15 / 7	24.00	2.18	242.3	529.3	3.2	6.66	175.8	Y	2.22
16 / 14	24.10	2.16	241.0	519.7	3.1	6.69	177.3	Y	2.20
17 / 4	23.99	2.18	241.3	525.6	3.1	6.68	177.5	Y	2.21
18 / 9	23.49	2.19	247.0	540.5	3.2	6.67	176.2	Y	2.25
19 / 3	23.49	2.15	247.0	530.2	3.2	6.68	175.5	Y	2.25
20 / 4	23.53	2.20	246.7	543.5	3.3	6.65	173.4	Y	2.23
21 / 5	23.52	2.19	246.7	540.7	3.4	6.66	172.1	Y	2.20
22 / 6	23.50	2.20	246.9	542.7	3.6	6.66	169.4	Y	2.22
23 / 22	23.47	2.20	247.1	543.7	4.0	6.64	162.4	Y	2.21
24 / 5	23.48	2.12	247.0	523.8	4.0	6.61	159.5	Y	2.10
25 / 18	28.11	2.18	207.9	453.5	4.3	6.53	151.5	Y	2.12
26 / 4	28.13	2.19	207.9	454.7	4.3	6.53	150.8	Y	2.17
27 / 1	27.39	2.17	210.0	456.0	4.7	6.47	142.6	Y	2.16
28 / 20	23.57	2.19	246.0	537.8	4.9	6.40	137.0	Y	2.18

Notes for Conduit 2 (C2):

February 1 to 28, 2025: 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: 3/6/25

OHA - Drinking Water Services

Surface Water Quality Data Conduit 3

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 02/2025

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 / 15	17.64	2.16	557.8	1205.8	4.5	6.49	145.7	Y	2.14
2 / 5	17.62	2.17	558.9	1215.1	4.5	6.49	146.7	Y	2.18
3 / 11	17.31	2.24	569.0	1275.4	4.4	6.52	150.0	Y	2.21
4 / 12	17.29	2.20	569.3	1251.5	4.4	6.61	154.5	Y	2.23
5 / 0	17.24	2.19	571.3	1249.8	4.4	6.56	151.8	Y	2.10
6 / 9	17.20	2.21	572.5	1266.0	4.3	6.56	154.0	Y	2.22
7 / 1	17.18	2.18	573.1	1250.0	4.2	6.56	154.2	Y	2.17
8 / 2	17.11	2.16	576.2	1246.9	4.2	6.58	155.8	Y	2.15
9 / 2	17.09	2.22	576.1	1276.3	4.2	6.57	156.2	Y	2.21
10 / 9	17.10	2.22	576.0	1278.5	4.1	6.56	155.8	Y	1.65
11 / 8	17.73	2.18	555.7	1211.8	4.0	6.57	158.3	Y	2.20
12 / 19	17.68	2.18	556.9	1213.5	3.7	6.59	163.3	Y	2.17
13 / 23	17.70	2.17	556.9	1211.0	3.5	6.61	167.8	Y	2.17
14 / 11	17.72	2.18	555.7	1212.9	3.2	6.63	173.6	Y	2.17
15 / 20	17.70	2.25	556.4	1250.2	3.2	6.61	173.5	Y	2.20
16 / 16	18.03	2.23	546.9	1221.0	3.1	6.63	175.0	Y	2.19
17 / 23	18.56	2.18	531.1	1160.3	3.1	6.63	174.5	Y	2.15
18 / 21	18.56	2.22	531.0	1179.0	3.2	6.63	174.1	Y	2.20
19 / 10	18.57	1.91	530.8	1014.3	3.2	6.65	169.9	Y	2.18
20 / 20	18.57	2.23	530.4	1181.2	3.3	6.59	169.7	Y	2.19
21 / 1	18.58	2.21	530.2	1171.5	3.4	6.59	168.0	Y	2.18
22 / 4	18.57	2.27	530.4	1205.4	3.6	6.60	167.2	Y	2.20
23 / 12	18.56	2.23	531.0	1185.1	4.0	6.59	159.6	Y	2.18
24 / 21	18.56	2.11	530.6	1119.0	4.0	6.53	154.1	Y	2.07
25 / 9	18.60	2.08	529.9	1104.0	4.3	6.53	149.9	Y	2.09
26 / 7	18.58	2.17	530.0	1150.4	4.3	6.47	147.4	Y	2.17
27 / 19	34.49	2.17	287.1	622.6	4.7	6.39	139.0	Y	2.11
28 / 20	19.01	2.18	518.1	1131.2	4.9	6.35	134.6	Y	2.14

Notes for Conduit 3 (C3):

February 1 to 28, 2025: Conduit 3 in service from Headworks through Lusted and on to town.

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

Date: 3/6/25

OHA - Drinking Water Services

Surface Water Quality Data Conduit 4

Portland Water Bureau

ID#: OR 4100657

WTP-A

Month/Year: 02/2025

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 / 12	36.28	2.21	248.7	548.8	4.5	6.59	152.6	Y	2.13
2 / 22	36.09	2.20	251.5	553.1	4.5	6.60	153.3	Y	2.14
3 / 20	36.10	2.18	251.7	548.0	4.4	6.69	159.4	Y	2.16
4 / 3	36.10	2.19	251.7	552.1	4.4	6.63	155.8	Y	2.18
5 / 16	35.89	2.19	252.8	553.5	4.4	6.65	157.0	Y	2.20
6 / 22	39.59	2.23	229.0	511.7	4.3	6.61	157.5	Y	2.19
7 / 6	39.56	2.18	228.9	499.1	4.2	6.63	158.0	Y	2.16
8 / 20	39.36	2.23	230.4	513.7	4.2	6.61	158.9	Y	2.19
9 / 19	39.39	2.23	230.4	514.0	4.2	6.61	159.3	Y	2.19
10 / 3	39.27	2.21	230.7	510.3	4.1	6.62	159.5	Y	1.84
11 / 7	36.45	2.21	249.4	552.3	4.0	6.64	162.9	Y	2.16
12 / 14	36.29	2.20	250.4	551.3	3.7	6.68	169.6	Y	2.15
13 / 10	36.30	2.20	250.4	551.8	3.5	6.68	172.6	Y	2.17
14 / 11	36.38	2.21	249.6	551.6	3.2	6.70	178.8	Y	2.17
15 / 11	36.36	2.19	249.9	548.3	3.2	6.70	178.4	Y	2.16
16 / 14	36.54	2.18	248.4	541.0	3.1	6.71	179.6	Y	2.14
17 / 3	36.34	2.19	248.9	545.1	3.1	6.70	179.1	Y	2.14
18 / 22	35.70	2.20	254.4	560.1	3.2	6.70	178.4	Y	2.19
19 / 12	35.79	1.95	254.1	496.7	3.2	6.71	174.7	Y	2.27
20 / 12	35.84	2.22	253.9	563.8	3.3	6.71	177.4	Y	2.24
21 / 13	35.81	2.22	253.9	563.2	3.4	6.73	177.0	Y	2.20
22 / 12	35.71	2.24	254.3	569.1	3.6	6.69	172.5	Y	2.23
23 / 22	35.71	2.24	254.4	569.3	4.0	6.67	164.9	Y	2.23
24 / 13	35.77	2.13	254.2	540.2	4.0	6.63	160.3	Y	2.15
25 / 21	42.01	2.15	215.5	463.0	4.3	6.54	151.5	Y	2.18
26 / 6	42.06	2.17	215.4	467.8	4.3	6.55	151.7	Y	2.20
27 / 1	41.01	2.15	217.6	468.7	4.7	6.49	143.1	Y	2.17
28 / 20	35.80	2.19	253.3	553.8	4.9	6.41	137.4	Y	2.22

Notes for Conduit 4 (C4):

February 1 to 28, 2025: 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: 3/6/25

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 2/2025

Date	Fecal Coliform (CFU/100mL)	Comments
2/1/2025	<1	
2/2/2025	<1	
2/3/2025	<1	
2/4/2025	1	
2/5/2025	<1	
2/6/2025	2	
2/7/2025	<1	
2/8/2025	1	
2/9/2025	<1	
2/10/2025	<1	
2/11/2025	1	
2/12/2025	<1	
2/13/2025	<1	
2/14/2025	<1	
2/15/2025	1	
2/16/2025	<1	
2/17/2025	1	
2/18/2025	<1	
2/19/2025	1	
2/20/2025	1	
2/21/2025	<1	
2/22/2025	<1	
2/23/2025	1	
2/24/2025	1	
2/25/2025	1	
2/26/2025	1	
2/27/2025	2	
2/28/2025	2	

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:	1
Percent:	0.6%

DATE: March 6, 2025

TO: Oregon Health Authority
Drinking Water Services

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

**SUBJECT: Monthly Report for February 2025
Surface Water Treatment Rule
PWS # OR 4100657**

This monthly report includes the following information:

Description	Number of Pages
Transmittal Memorandum	1 page
Raw water turbidity data (OHA form)	1 page
Raw water coliform data (OHA form)	1 page
CT reports for conduits 2, 3, and 4 (OHA form)	3 pages
Transmitted	Total of 6 pages, including this transmittal memo

Remarks:

Portland Water Bureau (PWB) initially disinfects using free chlorine added to three individual conduits. There are two active conduit interties (Larsons and Hudsons) between chlorination at Headworks and the secondary treatment plant (chloramination, pH and alkalinity adjustment) at Lusted Hill. This potentially divides the conduits into three segments since water can be diverted between conduits at the interties.

Per OHA request, to calculate CT for each of the three individual conduits PWB uses the daily maximum hourly average individual conduit flow rates for each conduit segment and the daily minimum hourly average free chlorine concentrations from the Lusted Inlet free chlorine analyzers.

In February 2025 three First User TCR samples were collected on February 25, 27 and 28, in response to turbidity readings greater than 1.49 NTU at the raw water intake on February 24, 26 and 27. These three samples are included in the TCR EDD for February 2025, along with the rest of the routine TCR samples for February. Turbidity also exceeded 1.49 NTU on February 28, 2025; the First User sample collected on March 1, 2025, in response to the February 28 turbidity exceedance, will be reported in the March 2025 TCR EDD.

Please contact me at 503-312-7043 if additional information is required.