Water Quality Monitoring Program - Turbidity Data for the Upper Harbor (except where indicated)
New Bedford Harbor Superfund Site
October 2017 through July 2, 2019

This table shows the highest recorded measurements of turbidity, or movement of sediment in the water, at locations far from the dredge (Up-current Reference) as well as near the dredge (300-ft down current from dredge). EPA measures turbidity to ensure that PCB sediment is not being distributed beyond the dredge areas during work. Currents in the harbor are often changing, which is why EPA measures in many places around the dredge. PCBs like to attach to sediment and do not like to stay in the water. Therefore, if we know where the sediment is moving, we can monitor the movement of PCBs. Plans are in place to ensure proper action is taken in the event of high turbidity levels. If the turbidity levels are greater than 50 NTU* (above the reference level measured) at 300 feet down current of the dredging activities, EPA may stop or slow work and/or collect water samples.

Turbidity levels are also measured during sediment disposal into the Confined Aquatic Disposal (CAD) cell. While the silt curtain hinders sediment movement, measurements are still taken 25 feet from the silt curtain during disposal to ensure its effectiveness as a barrier. If the turbidity levels are greater than 50 NTU (above the reference level) 25 feet from the silt curtain, EPA will assess potential causes.

Monitoring Date	Turbidity (*NTU) Readings at Monitoring Stations:			Activity
		Compliance (50 NTU above reference level)		
	Up-current Reference	Debris Removal/ Dredging (300-ft down-current from dredge area boundary)	Disposal at EPA CAD cell (25-ft from silt curtain)	
26-Oct-17	3.2	4.3		Hybrid dredging at Upper Harbor CCA, flood tide
	2.7	3.1		Hybrid dredging at Upper Harbor CCA, ebb tide
31-Oct-17	2.2	10.9		Hybrid dredging at Upper Harbor CCA, ebb tide
	4.4	-		Hybrid dredging at Upper Harbor CCA, flood tide, broken shaker, no dredging
9-Nov-17	1.1	6.4		Hybrid dredging at Upper Harbor CCA, flood tide
	0.7	0.7		Hybrid dredging at Upper Harbor CCA, ebb tide
17-Nov-17	1.5	10.8		Hybrid dredging at Upper Harbor CCA, ebb tide
	3.2	2.4		Hybrid dredging at Upper Harbor CCA, flood tide
28-Nov-17	1.4	4.0		Hybrid dredging at Upper Harbor CCA, flood tide
	2.0	11.5		Hybrid dredging at Upper Harbor CCA, ebb tide
8-Dec-17	2.6	8.9		Hybrid dredging at Upper Harbor CCA, flood tide
	2.8	17.1		Hybrid dredging at Upper Harbor CCA, ebb tide
13-Dec-17	1.8	2.2		Hybrid dredging at Upper Harbor CCA, ebb tide
	1.6	9.2		Hybrid dredging at Upper Harbor CCA, flood tide
20-Dec-17	1.7	1.9		Hybrid dredging at Upper Harbor CCA, flood tide
	1.8	16.0		Hybrid dredging at Upper Harbor CCA, ebb tide
12-Mar-18	2.1	2.4		Hybrid dredging at Upper Harbor CCA, ebb tide
	3.5	3.9		Hybrid dredging at Upper Harbor CCA, flood tide
19-Mar-18	2.3	2.7		Hybrid dredging at Upper Harbor CCA, flood tide
	2.1	4.7		Hybrid dredging at Upper Harbor CCA, ebb tide
27-Mar-18	1.2	3.0		Hybrid dredging at Upper Harbor CCA, ebb tide
	1.8	2.2		Hybrid dredging at Upper Harbor CCA, flood tide
2-Apr-18	0.9	3.3		Hybrid dredging at Upper Harbor CCA, flood tide
	2.7	11.7, 3.8		Hybrid dredging at Upper Harbor CCA, ebb tide, 11.7 at low tide in very shallow water - may have been caused by prop wash
10-Apr-18	2.4	7.5		Hybrid dredging at Upper Harbor CCA, ebb tide
	5.7	3.8		Hybrid dredging at Upper Harbor CCA, flood tide
18-Apr-18	2.2	7.8		Hybrid dredging at Upper Harbor CCA, flood tide
	1.9	9.9		Hybrid dredging at Upper Harbor CCA, ebb tide
25-Apr-18	1.8	5.3		Hybrid dredging at Upper Harbor CCA, ebb tide
	1.9	15.7		Hybrid dredging at Upper Harbor CCA, flood tide
2-May-18	2.3	2.4		Hybrid dredging at Upper Harbor CCA, flood tide
	2.2	5.4		Hybrid dredging at Upper Harbor CCA, ebb tide
7-May-18	1.5	8.4		Hybrid dredging at Upper Harbor CCA, flood tide
	2.4	3.1		Hybrid dredging at Upper Harbor CCA, ebb tide
8-May-18	1.8	2.8		Mechanical dredging at Upper Harbor MU-31, flood tide
	1.4	1.9		Mechanical dredging at Upper Harbor MU-29, flood tide
	1.8	5.5		Mechanical dredging at Upper Harbor MU-29, ebb tide
15-May-18	4.6	16.5		Hybrid dredging at Upper Harbor CCA, flood tide
	2.2	13.6		Hybrid dredging at Upper Harbor CCA, ebb tide
16-May-18	2.4	4.8		Mechanical dredging at Upper Harbor MU-26, flood tide
	1.9	8.8		Mechanical dredging at Upper Harbor MU-26, ebb tide
21-May-18	2.3	6.2		Hybrid dredging at Upper Harbor CCA, flood tide
	3.0	5.2		Hybrid dredging at Upper Harbor CCA, ebb tide
22-May-18	2.2			No active dredging during this tide cycle
	1.8	8.9	10.9	Mechanical dredging at Upper Harbor MU-29, flood tide
29-May-18	1.1	1.6		Mechanical dredging at Upper Harbor MU-26, flood tide
	1.2	8.1		Mechanical dredging at Upper Harbor MU-26 and MU-29, ebb tide
	2.3	6.0		Mechanical dredging at Upper Harbor MU-26, flood tide

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Monitoring Date	Turbidity (*NTU) Readings at Monitoring Stations:			Activity
		Compliance (50 NTU above reference level)		
	Up-current Reference	Debris Removal/ Dredging (300-ft down-current from dredge area boundary)	Disposal at EPA CAD cell (25-ft from silt curtain)	
5-Jun-18	1.4	8.3		Mechanical dredging at Upper Harbor MU-29, flood tide
	3.8	15.9		Mechanical dredging at Upper Harbor MU-29, ebb tide
11-Jun-18	1.6	7.9		Mechanical dredging at Upper Harbor MU-29, ebb tide
	2.3	13.9		Mechanical dredging at Upper Harbor MU-29, flood tide
13-Jul-18	2.9	3.7		Mechanical dredging at Upper Harbor IN, flood tide
	4.3	7.6		Mechanical dredging at Upper Harbor IN, ebb tide
19-Jul-18	4.7	12.6		Mechanical dredging at Upper Harbor O, flood tide
	4.1	4.8		Mechanical dredging at Upper Harbor IN, flood tide
	4.2	4.5		Mechanical dredging at Upper Harbor IN, ebb tide
27-Jul-18	2.8	4.1		Mechanical dredging at Upper Harbor O, flood tide
	3.5	4.1		Mechanical dredging at Upper Harbor O, ebb tide
2-Aug-18	3.3	13.0		Mechanical dredging at Upper Harbor O, flood tide
	4.2	4.1		Mechanical dredging at Upper Harbor O, ebb tide
8-Aug-18	5.8	4.7		Mechanical dredging at Upper Harbor O, ebb tide
	4.0	17.0		Mechanical dredging at Upper Harbor O, flood tide
	4.0	4.3		Mechanical dredging at Upper Harbor IN, flood tide
15-Aug-18	3.9	4.6		Mechanical dredging at Upper Harbor O, flood tide
	4.5	2.7		Mechanical dredging at Upper Harbor O, ebb tide
23-Aug-18	1.4	2.1		Mechanical dredging at Upper Harbor IN, ebb tide
	1.6	3.8		Mechanical dredging at Upper Harbor O, flood tide
29-Aug-18	1.8	2.8		Mechanical dredging at Upper Harbor IN, flood tide
	2.3	6.8		Mechanical dredging at Upper Harbor IN, ebb tide
	2.3	5.2		Mechanical dredging at Upper Harbor O, ebb tide
6-Sep-18	4.3	24.8		Mechanical dredging at Upper Harbor IN, ebb tide
	2.9	6.1		Mechanical dredging at Upper Harbor O, flood tide
12-Sep-18	1.4	2.5		Mechanical dredging at Upper Harbor O, flood tide
	2.0	3.5		Mechanical dredging at Upper Harbor O, ebb tide
19-Sep-18	6.0	6.3		Mechanical dredging at Upper Harbor O, ebb tide
	6.3	7.7		Mechanical dredging at Upper Harbor O, flood tide
26-Sep-18	3.6	4.5		Mechanical dredging at Upper Harbor IN, flood tide
	3.6	5.2		Mechanical dredging at Upper Harbor IN, ebb tide
3-Oct-18	2.3	1.7		Mechanical dredging at Upper Harbor IN, ebb tide
	1.8	13.0		Mechanical dredging at Upper Harbor IN, flood tide
11-Oct-18	1.7	1.9		Mechanical dredging at Upper Harbor O, flood tide
	1.3	5.1		Mechanical dredging at Upper Harbor O, ebb tide
17-Oct-18	1.7	2.5		Mechanical dredging at Upper Harbor O, flood tide
	1.8	2.3		Mechanical dredging at Upper Harbor IN, ebb tide
24-Oct-18	1.6	1.6		Mechanical dredging at Upper Harbor IN, flood tide
	1.6	1.6		Mechanical dredging at Upper Harbor IN, ebb tide
	1.6	8.8		Mechanical dredging at Upper Harbor O, ebb tide
	2.8	2.2		Mechanical dredging at Upper Harbor O, flood tide
31-Oct-18	0.4	5.7		Mechanical dredging at Upper Harbor O, flood tide
	0.4	0.3		Mechanical dredging at Upper Harbor IN, flood tide
	0.3	0.3		Mechanical dredging at Upper Harbor IN, ebb tide
6-Nov-18	0.9	1.6		Mechanical dredging at Upper Harbor IN, ebb tide
	3.7	4.9		Mechanical dredging at Upper Harbor O, flood tide
14-Nov-18	2.8	2.4		Mechanical dredging at Upper Harbor O, flood tide
	4.4	1.6		Mechanical dredging at Upper Harbor O, ebb tide
29-Nov-18	2.7	14.8		Mechanical dredging at Upper Harbor O, ebb tide
	5.2	4.8		Mechanical dredging at Upper Harbor O, ebb tide

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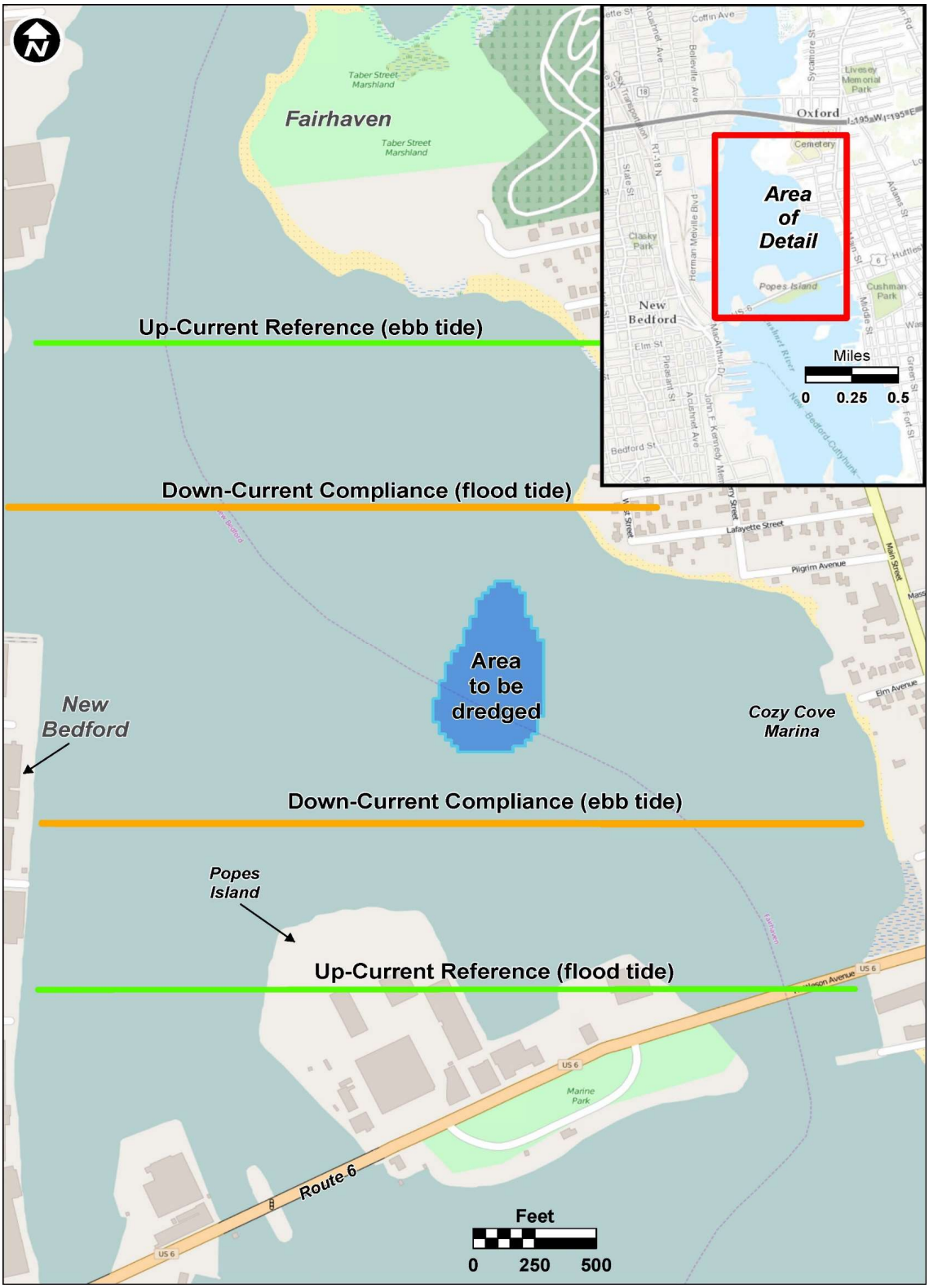
7-Dec-18	2.5	3.7		Mechanical dredging at Upper Harbor O, ebb tide
	2.4	1.4		Mechanical dredging at Upper Harbor O, flood tide
10-Dec-18	1.4	5.8		Mechanical dredging at Upper Harbor O, ebb tide
	3.8	2.9		Mechanical dredging at Upper Harbor O, flood tide
20-Dec-18	2.3	20.8		Mechanical dredging at Upper Harbor O, ebb tide
	6.8	8.1		Mechanical dredging at Upper Harbor O, flood tide
10-Jan-19	2.8	2.7		Mechanical dredging at Upper Harbor O, flood tide
	1.7	4.7		Mechanical dredging at Upper Harbor O, ebb tide
20-Mar-19	2.8	8.0		Mechanical dredging at Upper Harbor IN, ebb tide
	2.8	9.6		Mechanical dredging at Upper Harbor O, ebb tide
	2.7	6.6		Mechanical dredging at Upper Harbor O, flood tide
26-Mar-19	0.9	3.7		Hybrid dredging at Upper Harbor H, flood tide
	3.6	3.2		Mechanical dredging at Upper Harbor IN, ebb tide
4-Apr-19	1.5	1.7		Hybrid dredging at Upper Harbor H, flood tide
	1.9	5.0		Hybrid dredging at Upper Harbor H, ebb tide
	2.4	2.6		Hybrid dredging at Upper Harbor H, flood tide
10-Apr-19	0.4	10.6		Hybrid dredging at Upper Harbor H, flood tide
	1.6	0.8		Hybrid dredging at Upper Harbor H, ebb tide
16-Apr-19	1.3	4.5		Hybrid dredging at Upper Harbor H, ebb tide
	0.3	8.4		Hybrid dredging at Upper Harbor H, flood tide
23-Apr-19	1.2	1.3		Hybrid dredging at Upper Harbor H, flood tide
	1.1	1.2		Hybrid dredging at Upper Harbor H, ebb tide
30-Apr-19	2.2	1.7		Hybrid dredging at Upper Harbor H, ebb tide
	0.2	5.5		Hybrid dredging at Upper Harbor H, flood tide
6-May-19	1.5	4.5		Hybrid dredging at Upper Harbor L, flood tide
	1.6	4.6		Hybrid dredging at Upper Harbor L, ebb tide
14-May-19	3.2	9.0		Hybrid dredging at Upper Harbor L, ebb tide
	1.2	1.9		Hybrid dredging at Upper Harbor L, flood tide
21-May-19	1.6	1.8		Hybrid dredging at Upper Harbor L, flood tide
	1.6	4.7		Hybrid dredging at Upper Harbor L, ebb tide
	1.6	1.3		Mechanical dredging at Upper Harbor IN, flood tide
	1.6	1.3		Mechanical dredging at Upper Harbor IN, ebb tide
29-May-19	1.9	6.1		Hybrid dredging at Upper Harbor L, ebb tide
	3.1	4.4		Hybrid dredging at Upper Harbor L, flood tide
5-Jun-19	2.6	8.3		Hybrid dredging at Upper Harbor L, flood tide
	2.9	6.9		Hybrid dredging at Upper Harbor L, ebb tide
	2.9	3.5		Mechanical dredging at Upper Harbor IN, ebb tide
12-Jun-19	1.9	5.0		Mechanical dredging at Upper Harbor CCA, ebb tide
	1.9	5.3		Hybrid dredging at Upper Harbor P, ebb tide
	1.3	11.8		Mechanical dredging at Upper Harbor CCA, flood tide
	1.3	7.9		Hybrid dredging at Upper Harbor P, flood tide
19-Jun-19	4.3	2.6		Hybrid dredging at Upper Harbor P, flood tide
	1.3	14.2		Hybrid dredging at Upper Harbor P, ebb tide
24-Jun-19	1.5	4.5		Hybrid dredging at Upper Harbor P, flood tide
	2.2	5.2		Hybrid dredging at Upper Harbor P, ebb tide
2-Jul-19	1.9	11.5		Hybrid dredging at Upper Harbor P, flood tide
	5.0	6.3		Hybrid dredging at Upper Harbor P, ebb tide

*NTU - The instrument we use to measure turbidity levels with reports data as NTU, which are Nephlometric Turbidity Units.

The map below is an example of where we collect sediment level data, or turbidity, around a dredging area. Action is taken if the turbidity levels are greater than 50 NTU* (above the reference level measured) 300 feet down current from the dredge area.



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