Water Quality Monitoring Program - Turbidity Data for the Lower Harbor (except where indicated)
New Bedford Harbor Superfund Site
September 14, 2017 through April 17, 2018

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)	
14-Sep-17	1.8	3.9	2.2	Mechanical dredging at Lower Harbor DMU 33B and scow to scow transfers at EPA CAD cell, flood tide
15-Sep-17	2.2	2.8	-	Mechanical dredging at Lower Harbor DMU 33B, flood tide
27-Sep-17	2.8	3.4	-	Mechanical dredging at Lower Harbor DMU 33B, flood tide
	2.8	2.9	-	Mechanical dredging at Lower Harbor DMU 33B, ebb tide
28-Sep-17	2.3	2.9	-	Mechanical dredging at Lower Harbor DMU 33B, flood tide
	3.2	4.3	-	Mechanical dredging at Lower Harbor DMU 33B, ebb tide
29-Sep-17	2.1	-	19.2	Disposal event at EPA CAD cell (0850), flood tide
	2.3	2.8	-	Mechanical dredging at Lower Harbor DMU 33B, flood tide
	3.1	2.1	-	Mechanical dredging at Lower Harbor DMU 33B, ebb tide
4-Oct-17	3.2	5.4		Mechanical dredging at Lower Harbor DMU 33C, ebb tide
	4.0	10.9		Mechanical dredging at Lower Harbor DMU 33C, flood tide
5-Oct-17	3.4	5.6		Mechanical dredging at Lower Harbor DMU 33C, ebb tide
	5.2	6.7	4.1	Disposal event at EPA CAD cell; Mechanical dredging at Lower Harbor DMU 33C, flood tide
11-Oct-17	3.9	4.3		Mechanical dredging at Lower Harbor DMU 33C, ebb tide
	2.3	5.0	4.7	Disposal event at EPA CAD cell; Mechanical dredging at Lower Harbor DMU 33C, flood tide
16-Nov-17	2.4	11.1	2.7	Disposal event at EPA CAD cell at 1022; Mechanical dredging at Lower Harbor DMU 34B, ebb tide
	3.2	3.8		Mechanical dredging at Lower Harbor DMU 34B, flood tide
29-Nov-17	2.5	5.0	2.2	Disposal event at EPA CAD cell at 0927; Mechanical dredging at Lower Harbor DMU 35F, ebb tide
	2.6	11.6	2.5	Disposal event at EPA CAD cell at 1556; Mechanical dredging at Lower Harbor DMU 35F, flood tide
4-Dec-17	2.3	4.9	1.2	Disposal event at EPA CAD cell at 1026; Mechanical dredging at Lower Harbor DMU 35F, ebb tide
	2.2	5.5	1.3	Disposal event at EPA CAD cell at 1456; Mechanical dredging at Lower Harbor DMU 35F, flood tide
12-Dec-17	1.7	2.3		Mechanical dredging at Lower Harbor DMU 37A, ebb tide
	1.5	3.3		Mechanical dredging at Lower Harbor DMU 37A, flood tide
19-Dec-17	2.4	5.6		Mechanical dredging at Lower Harbor DMU 37D, ebb tide
	2.1	6.5		Mechanical dredging at Lower Harbor DMU 37D, flood tide
17-Jan-18	3.4	5.0	7.4	Disposal event at EPA CAD cell at 1054; Mechanical dredging at Lower Harbor DMU 35E, ebb tide
	3.5	4.4		Mechanical dredging at Lower Harbor DMU 35E, flood tide
24-Jan-18	4.0	13.7	12.2	Disposal event at EPA CAD cell at 0952; Mechanical dredging at Lower Harbor DMU 35C, flood tide
	6.2	8.1		Mechanical dredging at Lower Harbor DMU 35C, ebb tide
26-Jan-18	3.6	4.1		Mechanical dredging at Lower Harbor DMU 35C, flood tide
31-Jan-18	3.8	5.2		Mechanical dredging at Lower Harbor DMU 35C, flood tide
	4.2	10.6		Mechanical dredging at Lower Harbor DMU 37B, ebb tide
7-Feb-18	4.1	6.4		Mechanical dredging at Lower Harbor DMU 34B, flood tide
	6.6	8.8	6.3	Disposal event at EPA CAD cell at 1510, Mechanical dredging at Lower Harbor DMU 34B, ebb tide
14-Feb-18	3.0	10.0		Mechanical dredging at Lower Harbor DMU 33C, ebb tide
	4.2	8.6		Mechanical dredging at Lower Harbor DMU 33C, flood tide
	4.2	4.6		Mechanical dredging at Lower Harbor DMU 33B, flood tide
21-Feb-18	2.4	2.9		Mechanical dredging at Lower Harbor DMU 35C, flood tide
	1.8	5.3	1.5	Disposal event at EPA CAD cell at 1205, Mechanical dredging at Lower Harbor DMU 35C, ebb tide

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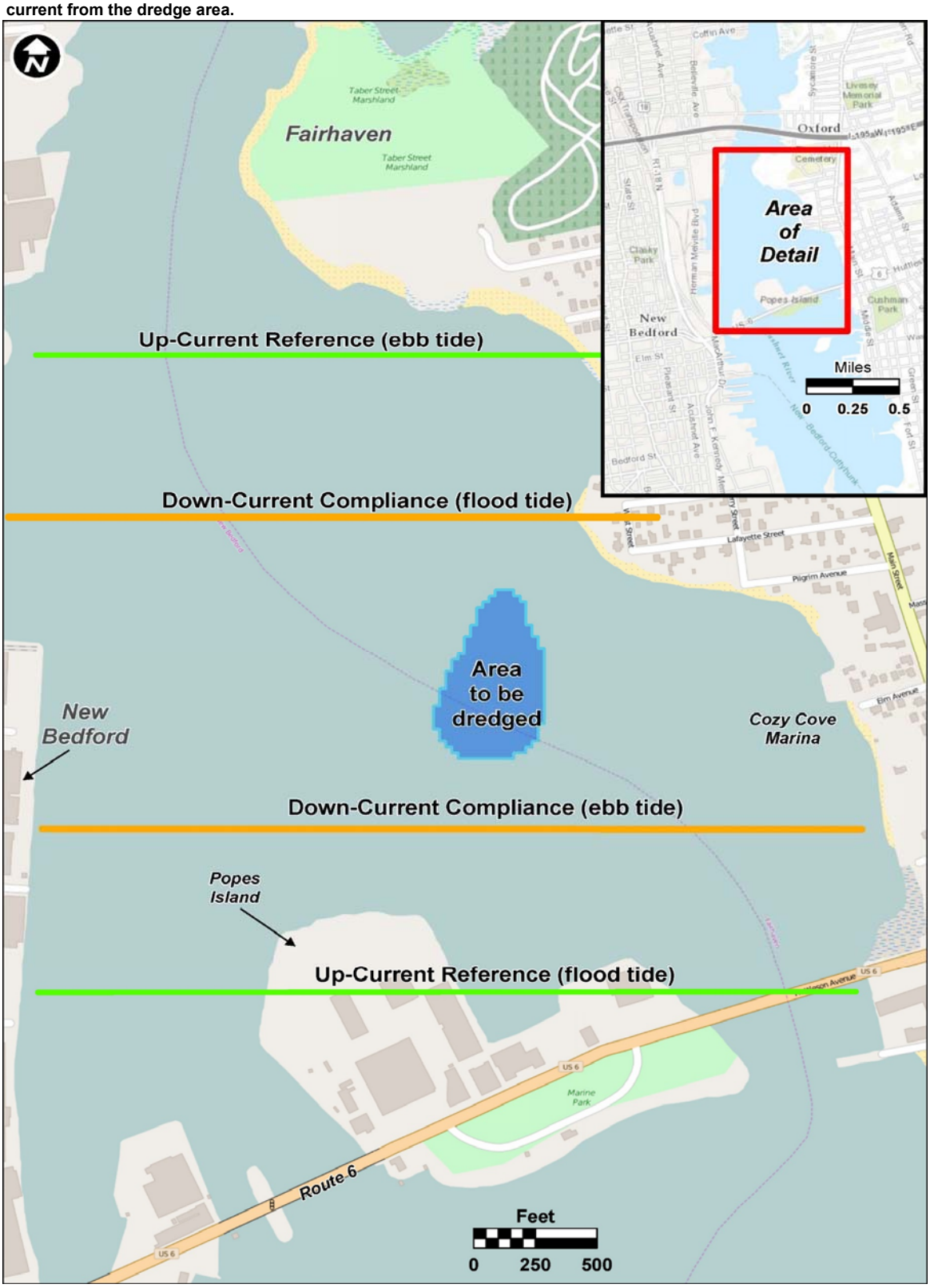
Turbidity levels are also measured during sediment disposal into the Confined Aquatic Disposal (CAD) cell. While the silt curtain hinders sediment movement, measurements are still taken 25 feet from the silt curtain during disposal to ensure its effectiveness as a barrier. If the turbidity levels are 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
	Up-current Reference	Compliance (50 NTU above reference level)		
		Debris Removal/ Dredging (300-ft down-current from dredge area boundary)	Disposal at EPA CAD cell (25-ft from silt curtain)	
28-Feb-18	1.4	5.0		Mechanical dredging at Lower Harbor DMU 35F, ebb tide
	2.4	3.3		Mechanical dredging at Lower Harbor DMU 35F, flood tide
6-Mar-18	2.1	5.2		Mechanical dredging at Lower Harbor DMU 35F, flood tide
	2.1	3.5	1.9	Disposal event at EPA CAD cell at 1508, Mechanical dredging at Lower Harbor DMU 35F, ebb tide
	2.0	3.3		Mechanical dredging at Lower Harbor DMU 33B, ebb tide
15-Mar-18	1.5	2.2		Mechanical dredging at Lower Harbor DMU 35E, ebb tide
	1.3	2.1		Mechanical dredging at Lower Harbor DMU 35E, flood tide
23-Mar-18	1.6	8.8	1.8	Disposal event at EPA CAD cell at 0837, Mechanical dredging at Lower Harbor DMU 35C, flood tide
	2.2	1.9		Mechanical dredging at Lower Harbor DMU BTBC, ebb tide
28-Mar-18	1.0	4.8	1.7	Disposal event at EPA CAD cell at 1008, Mechanical dredging at Lower Harbor BTBC, ebb tide
	1.6	4.5		Mechanical dredging at Lower Harbor DMU BTBC, flood tide
9-Apr-18	2.3	6.0		Mechanical dredging at Lower Harbor DMU BTBC, ebb tide
	2.6	5.4		Mechanical dredging at Lower Harbor DMU BTBC, flood tide
17-Apr-18	5.1	5.1		Mechanical dredging at Lower Harbor DMU BTBA, flood tide
	4.9	4.0		Mechanical dredging at Lower Harbor DMU BTBA, 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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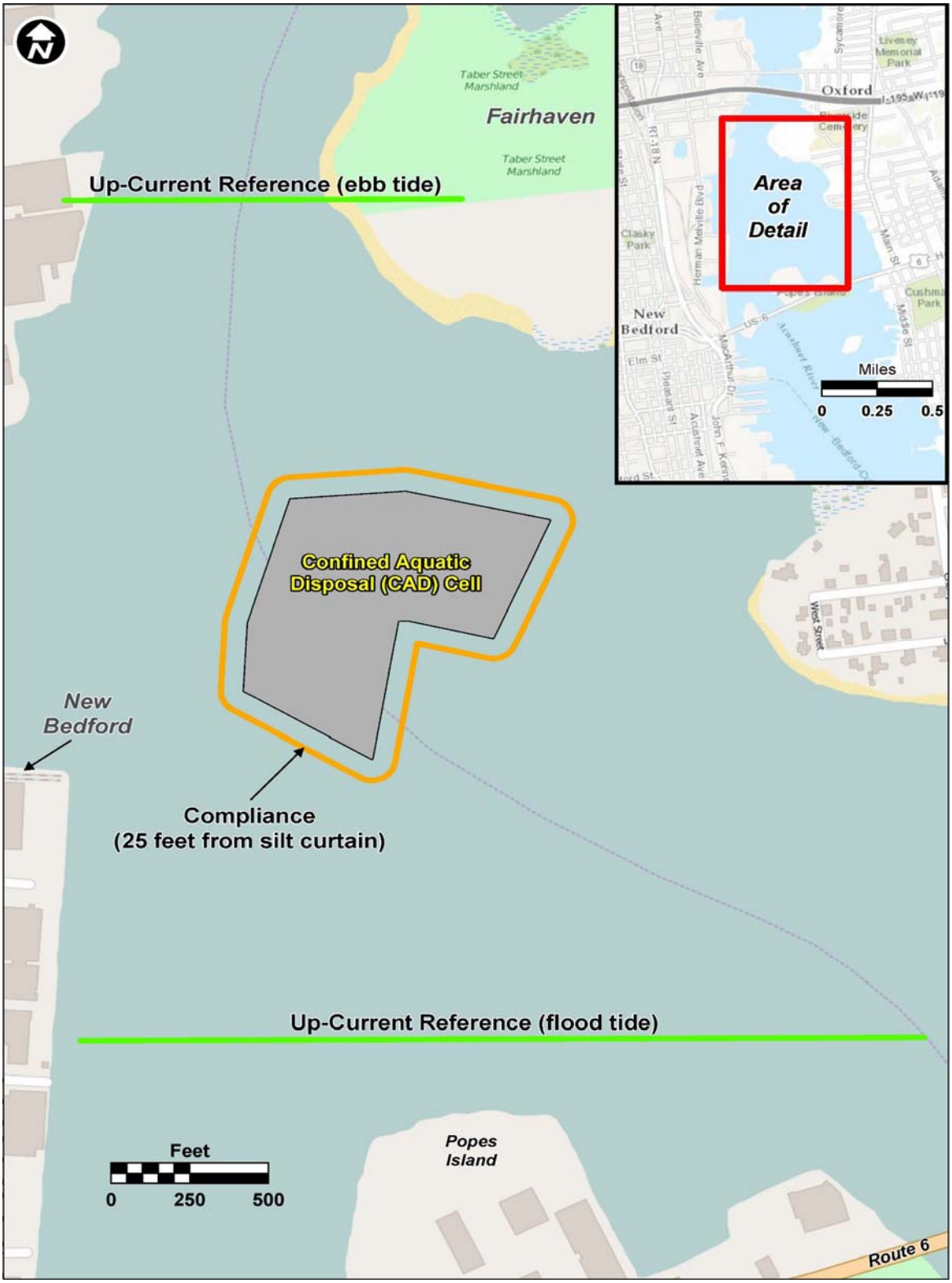
The map below shows where turbidity monitoring takes place in the water when mud is disposed of into the Confined Aquatic Disposal (CAD) cell. Action is taken if the turbidity levels are greater than 50 NTU* (above the reference level measured) 25 feet from the silt curtain. The silt curtain is intended to hinder sediment movement.



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