Jacobs

Project Notes

103 Sawyer Street
New Bedford, MA 02746
www.jacobs.com

Client	NAE	**Date**	23 October 2024
Project	New Bedford Harbor Superfund Site	**Project No.**	35BG7000
Prepared By	Anita Rigassio Smith/Environmental Engineer	**DCN**	ACE-J23-35BG7000-P1-0083
Issued By	Lonnie Fallin/Project Manager		
Subject	Revised Final New Bedford Harbor Upper Harbor Subtidal Surface Weighted Average Concentration Update October 2024		

Distribution	**See below**			
USACE-NAE	**EPA**	**Sevenson**	**Jacobs**	
Kerwin Donato	Dave Dickerson	Joe Mahoney	Josh Cummings	
Lisa Belisle	Natalie Burgo		Patrick Curran	
Marie Esten			Lonnie Fallin	
Tim Pickering				

1	**Purpose & Scope**
	Update the New Bedford Harbor (NBH) Upper Harbor (UH) subtidal dredge area Surface Weighted Average Concentration (SWAC) calculation to include the North of Wood Street (NWS) area.
2	**Background**
	The NBH UH SWAC was calculated in 2020 following the conclusion of the UH subtidal dredging program. The NBH UH SWAC approach and calculated value is documented in the *Final Remedial Action Report for Operable Unit 1 Subtidal Dredging* (Final RA Report) (Jacobs 2020). In summary, confirmatory samples were collected after the completion of dredging at predetermined locations to determine the 2020 UH SWAC calculation. The confirmatory sampling grid (Figure 1) followed the *Draft Final Upper Harbor Confirmatory Sampling Plan* (Jacobs 2019). Dredge Management Units (MU) MU25 and MU28 were dredged in 2017, and confirmatory samples for those MUs were collected prior to the development of the confirmatory sampling plan. The SWACs for MU25 and MU28 were calculated separately from the confirmatory grid and the results were combined, on an area weighted basis, with the SWAC calculated for the rest of the UH subtidal zone. Attachment 1 contains Tables 4 and 5 from the Final RA Report (Jacobs 2020). In 2023, U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE) requested the subtidal area north of the Slocum/Wood Street bridge and South of the Main Street bridge be incorporated into the Operable Unit 1 (OU1) SWAC. This area is referred to as the North of Wood Street (NWS) area. To include NWS area in the updated NBH UH SWAC, a weighting approach similar to that which was previously used for MU25 and MU28 was followed.
3	**Method**
	The NWS area was originally remediated from 2001 to 2003 with removal of approximately 15,619 cubic yards (CY) of contaminated sediment (Jacobs 2020). Due to observed elevated PCB levels, approximately 94 CY of sediment were additionally removed in August 2023, and approximately 3,163 CY were removed in June-September 2024 (Figure 2). Subtidal and mudflat data collected during multiple monitoring events in the NWS area from 2010 to 2023 were compiled to develop Thiessen polygons for the NWS area and calculate the NWS SWAC (Figures 2, 3). Attachment 2 contains the NWS data set; the concentrations used in the NWS SWAC

calculation are highlighted green. The most recent monitoring result at each location was used, with a few exceptions:

- For locations NWS-05 and NWS-12, which were dredged in 2023, a value of 0.1 parts per million (ppm) was assigned because these areas were subsequently backfilled with clean material. The 0.1 ppm is the same value assigned to the capped area locations for the 2020 UH SWAC. Therefore, polygons NWS10 and NWS19, represented by sample locations NWS-12 and NWS-05, respectively (Figure 3), were assigned a concentration value of 0.1 ppm.
- For the 2024 dredge areas, the June 2023 congener data from the intervals at or below the dredge cut elevations were used to represent the post-dredge riverbed surface and PCB concentrations. Polygons NWS6 and NWS17, represented by C015-039 and NWS-10, respectively, were conservatively assigned a concentration value of 30 ppm PCBs, the design remedial action level (RAL), since no samples were available at the corresponding dredge cut elevation.

The NWS SWAC calculation is shown in Attachment 3.

The NWS dredge area is 2.7 acres, and the UH area used in the 2020 SWAC (i.e., excluding NWS) is 172.0 acres. Therefore, NWS represents 1.6% of the updated area. As shown in Table 1, NWS SWAC = 8.25 ppm, 2020 UH SWAC = 2.67 ppm., and updated 2024 UH SWAC = 2.76 ppm.

Table 1

Dredge Area	Area (acres)	Weighting (Percent of Total Area)	PCB SWAC by Dredge Area (ppm)	Normalized to Entire UH Area PCB SWAC (ppm)
2020 Upper Harbor	172.0	98.45%	2.67	2.63
NWS Area	2.70	1.55%	8.25	0.13
2024 UH SWAC Area	174.7	100%		2.76

An additional round of sediment sampling is planned for spring 2025 within the NWS area. The results from this 2025 sampling will be reviewed to determine if this 2024 UH SWAC assessment needs to be updated.

4 **Figures**

Figure 1: Upper Harbor Subtidal Confirmatory Sample Locations

Figure 2: North of Wood Street Subtidal Sample Locations

Figure 3: North of Wood Street Subtidal Thiessen Polygons

5 **Attachments**

Attachment 1: NBH Subtidal RA Report Tables 4 and 5

Attachment 2: NWS Sampling Data

Attachment 3: NWS Area Calculated SWAC

6 **References**

Jacobs 2020. *Final Remedial Action Report for Operable Unit 1 Subtidal Dredging, New Bedford Harbor Superfund Site, New Bedford Harbor, MA.* September 2020.

——— 2019. *Draft-Final Upper Harbor Confirmatory Sampling Plan*, *New Bedford Harbor Superfund Site, New Bedford Harbor, MA*. February 2019, updated December 2019.

Figures

Legend

- Dredging Complete
- No Remediation Required
- Completed Aerovox Interim Sediment Cap
- Currently Proposed Sediment Cover/Capping Areas
- Actual Confirmatory Sample Location
- Mass Removal Dredging 1998 - 2015

N

0 300 600 Feet

1:8,400

Aerial Photography MASSGIS 2021

Jacobs

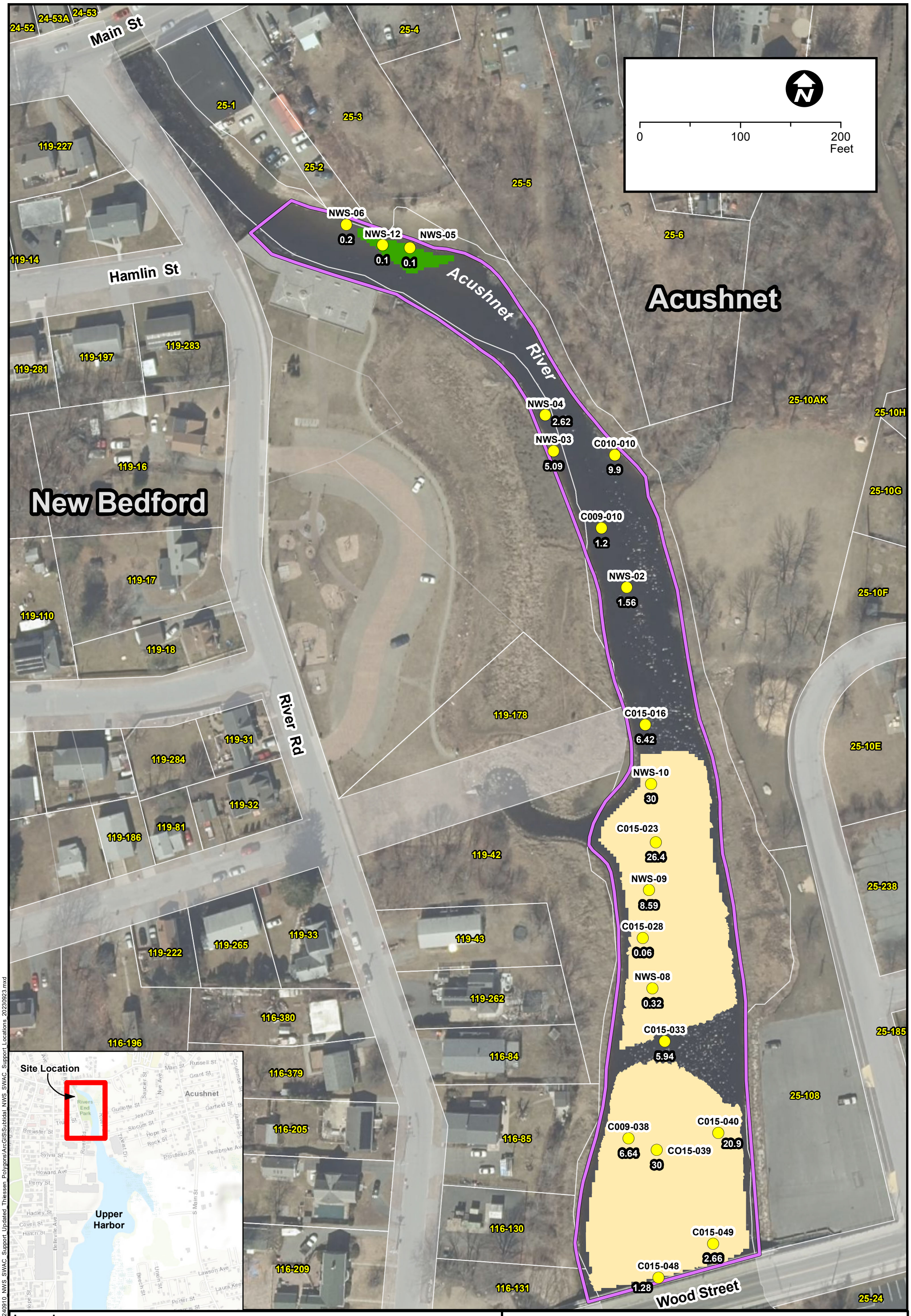
New Bedford Harbor Upper Harbor Subtidal Dredge Area Compliance Sample Locations

New Bedford Harbor Superfund Site

NAME: jpiccuito Date: 10/23/2024

Figure 1

Path: Y:\NBH\Projects\35BG10011\20240910_NWS_SWAC_Support_Updated_Thiessen_Polygons\ArcGIS\Subtidal_Dredge_Areas_Capping_Location_Map_NWS_20240910.mxd



Legend

- Subtidal/Mudflat Extent
- North of Wood Street 2023 Excavated Area
- North of Wood Street 2024 Excavated Area
- Sample Location
- Parcel (ID)
- Road/ROW

Note:
Sample IDs and concentrations presented on the map are from the most recent sampling event at that location.

Basemap Data Source: MassGIS 2021

Datum Info:
Horizontal - NAD83 StatePlane MA, feet

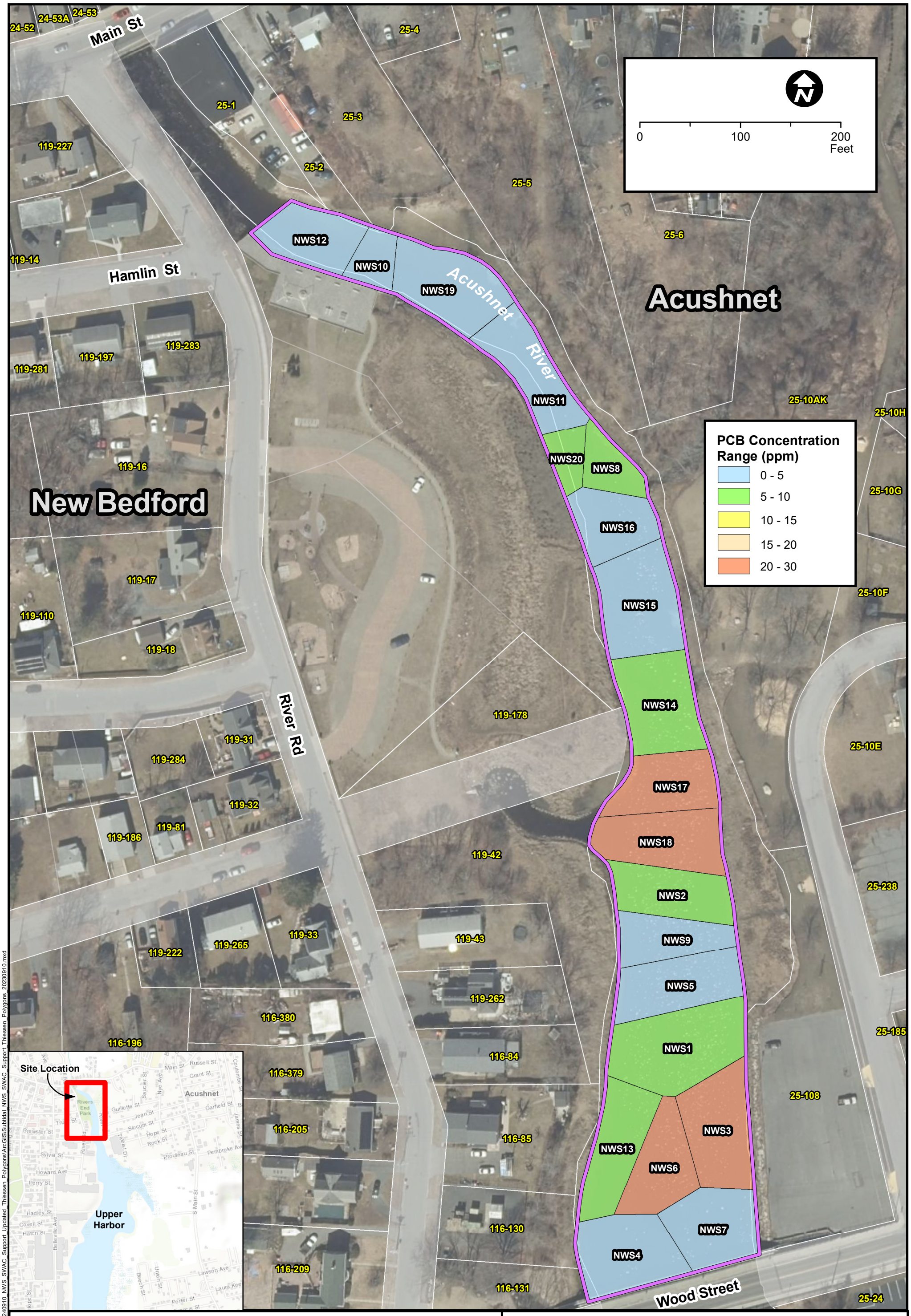
North of Wood Street Subtidal Area Sample Locations

New Bedford Harbor Superfund Site

Jacobs

Figure 2

Path: Y:\NBH\Projects\35BG\00\20240910_NWS_SWAC_Support_Updated_Thiessen_Polygons\ArcGIS\Subtidal_NWS_SWAC_Support_Locations_20230923.mxd



Legend

Subtidal/Mudflat Extent

Parcel (ID)

Road/ROW

Basemap Data Source: MassGIS 2021

Datum Info: Horizontal - NAD83 StatePlane MA, feet

North of Wood Street Subtidal Thiessen Polygons

New Bedford Harbor Superfund Site

Jacobs

Figure 3

Path: Y:\NBH\Projects\35BG10012\20240910_NWS_SWAC_Support_Updated_Thiessen_Polygons\ArcGIS\Subtidal_NWS_SWAC_Support_Thiessen_Polygons_20230910.mxd

Attachment 1

NBH Subtidal RA Report Tables 4 and 5

Table 4
Upper Harbor Confirmatory Sample Results

Confirmatory Grid ID	Confirmatory Sample Location ID	Confirmatory PCB Concentration (ppm) For UH Locations Outside of MU25 and MU28
131	IN436	0.21
129	IN459	17.90
130	IN463	0.12
126	IN486	0.44
127	IN490B	0.93
128	IN495	0.25
122	IN567	0.16
123	IN572	0.03
124	IN577	0.02
125	IN582	1.90
118	IN650	2.02
119	IN655	1.83
120	IN660	1.93
116	IN693	0.86
117	IN698	1.07
114	IN724C	0.05
108	O479C	0.86
109	O484 Rep	0.3
110	O489	0.70
111	O494	0.11
103	O577	0.09
104	O582	4.50
105	O587	0.64
106	O592 Rep	0.041
107	O597 Rep	0.575
101	O674B	0.01
102	O679	0.04
98	CCA-014	4.67
99	CCA-019B	0.69
100	CCA-024	12.40
95	CCA-079B	0.05
96	CCA-084	2.32
97	CCA-089	0.29
92	CCA-158	0.60
93	CCA-163B	1.45
94	CCA-168B	0.05
89	CCA-242	0.20
90	CCA-247	0.03
91	CCA-252D	4.47
85	CCA-315B	0.10
86	CCA-320 Rep	11.155
87	CCA-325	0.18
80	H-114V Rep	0.0725
81	H-030VC	19.6
82	H-035V	0.054
83	H-040	0.068
78	H-104	0.87
79	H-109VB	0.18
76	S-L019V	1.44

MU25 Confirmatory Sample Location	Confirmatory PCB Concentrations (ppm) for MU25
MU25-02 Rep	4.50
MU25-05	3.70
MU25-08	0.87
MU25-29	0.37
MU25-32	2.50
MU25-35	1.10
MU25-55	0.34
MU25-58	0.45
MU25-61	0.96
MU25-85	10.00
MU25-88	2.80
MU25-090	6.39
MU25-111	17.00
MU25-114	12.00
MU25-117	0.50
MU25 SWAC	**4.23**

MU28 Confirmatory Sample Location	Confirmatory PCB Concentrations (ppm) for MU28
MU28-01	0.70
MU28-03	1.90
MU28-14	0.89
MU28-16	0.00
MU28-29	1.30
MU28-31	0.08
MU28-33	0.10
MU28-35	0.09
MU28-53	0.00
MU28-55	5.40
MU28-57	1.70
MU28-69	0.00
MU28-71	0.09
MU28-73	1.40
MU28 SWAC	**0.98**

Table 4
Upper Harbor Confirmatory Sample Results

Confirmatory Grid ID	Confirmatory Sample Location ID	Confirmatory PCB Concentration (ppm) For UH Locations Outside of MU25 and MU28
77	S-L024V	5.67
72	S-L080VB Rep	1.5
73	S-L085V Rep	2.117
74	S-L090V	0.002
69	S-L138V	0.011
70	S-L143V	4.68
44	S-PMC039V	4.21
43	S-PMC034VB Rep	2.368
35	S-PMC117V	0.393
36	S-PMC122V	0.148
37	S-PMC127VC Rep	0.081
32	S-PMC193V Rep	0.058
33	S-PMC198V	0.217
27	S-PMC241V	4.53
45	S-PMC244V Rep	0.162
66	S-P045V	1.89
67	S-P050V	3.53
62	S-P111V	0.131
63	S-P116V	0.2
64	S-P121VB	0.152
59	S-R042V Rep	2.097
60	S-R047V	2.45
56	S-R108V	0.001
57	S-R113V	0.00951
58	S-R118VB	0.23
53	S-R176V	5.83
54	S-R181V	0.007
50	S-R225V Rep	3.31
51	S-R230V	1.12
46	S-060V Rep	0.101
47	S-065V	0.197
38	S-141V Rep	0.0432
39	S-144V	0.0136
40	S-S146V	0.000402
41	S-S151V	0.067
48	S-S070VB	0.0002
21	MU2601	0.01
22	MU2602	0.09
15	MU2607	5.28
30	MU2903	0.52
25	MU2908	0.90
26	MU2910	0.03
19	MU2916	0.65
14	MU2925 Rep	2.185
5	MU3101	3.47
16	NRRA03	2.48
10	NRRA04	11.40
11	NRRA05	2.68
12	NRRA06	12.10
13	U002V (Formerly NRRA07)	0.98
7	NRRA08	2.82

Table 4
Upper Harbor Confirmatory Sample Results

Confirmatory Grid ID	Confirmatory Sample Location ID	Confirmatory PCB Concentration (ppm) For UH Locations Outside of MU25 and MU28
8	NRRA09	1.77
9	NRRA10	2.34
4	V003V (Formerly NRRA11)	0.00
6	NRRA12	1.42
2	NRRA13	3.97
17	NRRA14	8.76
18	NRRA15	9.87
20	NRRA16	25.30
34	W008V Rep (Formerly NRRA17)	3.76
29	NRRA18	2.64
23	NRRA19	5.57
24	NRRA20	10.90
84	NRRA21	4.96
42	NRRA22	1.61
49	NRRA23	12.1
52	NRRA24	11.76
55	NRRA25	3.45
61	NRRA26	18.1
65	NRRA27	7.45
68	NRRA28	6.04
71	NRRA29	0.776
132	SWS08V	13.80
31	S-V1054	0.58
1	Cogg West Cap (Formerly TG4)	0.05
3	CogE-3	0.05
28	Area C Cap (Formerly S-PMC244)	0.05
88	CCA-237	0.05
75	S-L014V	0.05
115	115	0.05
112	112	0.05
113	113	0.05
	Partial UH SWAC	**2.67**

Color Codes

	Locations with replicate analysis; location assigned PCB concentration value that is the average of the sample and replicate
	Cap Areas; location assigned PCB concentration value of 0.05 ppm
	Average and SWAC values in ppm

Table 5
Final Upper Harbor SWAC

Regions of Upper Harbor Subtidal with Separate SWAC Calculations	SWAC by Region	Area by Region (sq ft)	Total UH Subtidal Area (sq ft)	SWAC Normailzed to Total UH Subtidal Area
All UH Excluding MU25 and MU28	2.67	6907410	7521034	2.5
MU25	4.23	378130	7521034	0.2
MU28	0.98	235494	7521034	0.03
			Total UH SWAC	2.7

Attachment 2

NWS Sampling Data

Attachment 2
NWS Sampling Data

Sample Location	Easting (ft) (NAD83)	Northing (ft) (NAD83)	Date Collected	Interval (tenths of foot)	Total PCB (ppm)	Data Source
NWS-08	815405.38	2708667.65	6/14/2023	00-05	78.8	AECOM - Preliminary 2023 Data
NWS-08	815405.38	2708667.65	6/14/2023	05-10	64.6	AECOM - Preliminary 2023 Data
NWS-08	815405.38	2708667.65	6/14/2023	10-15	83.2	AECOM - Preliminary 2023 Data
NWS-08	815405.38	2708667.65	6/14/2023	15-22	0.318	AECOM - Preliminary 2023 Data
NWS-09	815401.89	2708765.17	6/14/2023	00-05	37.3	AECOM - Preliminary 2023 Data
NWS-09	815401.89	2708765.17	6/14/2023	00-10	8.59	AECOM - Preliminary 2023 Data
NWS-10	815403.95	2708871.10	6/14/2023	00-05	36.2	AECOM - Preliminary 2023 Data
NWS-10	815403.95	2708871.10	6/14/2023	05-10	7.36	AECOM - Preliminary 2023 Data
NWS-10	815403.95	2708871.10	6/14/2023	10-15	32.7	AECOM - Preliminary 2023 Data
NWS-10	815403.95	2708871.10	6/14/2023	15-20	21.3	AECOM - Preliminary 2023 Data
NWS-10	815403.95	2708871.10	6/14/2023	20-23	31.4	AECOM - Preliminary 2023 Data
C015-016	815398.16	2708929.93	6/14/2023	00-05	6.42	AECOM - Preliminary 2023 Data
C015-023	815408.60	2708812.86	6/14/2023	00-05	48.2	AECOM - Preliminary 2023 Data
C015-023	815408.60	2708812.86	6/14/2023	05-10	31.9	AECOM - Preliminary 2023 Data
C015-023	815408.60	2708812.86	6/14/2023	10-15	26.4	AECOM - Preliminary 2023 Data
C015-028	815395.68	2708717.80	6/14/2023	00-05	140	AECOM - Preliminary 2023 Data
C015-028	815395.68	2708717.80	6/14/2023	05-10	30.3	AECOM - Preliminary 2023 Data
C015-028	815395.68	2708717.80	6/14/2023	10-15	0.0566	AECOM - Preliminary 2023 Data
C015-033	815417.44	2708614.84	6/14/2023	00-05	5.94	AECOM - Preliminary 2023 Data
C015-039	815409.40	2708506.81	6/14/2023	00-05	97.4	AECOM - Preliminary 2023 Data
C015-039	815409.40	2708506.81	6/14/2023	05-10	35.2	AECOM - Preliminary 2023 Data
C015-039	815409.40	2708506.81	6/14/2023	10-15	59.5	AECOM - Preliminary 2023 Data
C015-039	815409.40	2708506.81	6/14/2023	15-20	131	AECOM - Preliminary 2023 Data
C015-039	815409.40	2708506.81	6/14/2023	20-25	39.8	AECOM - Preliminary 2023 Data
C015-040	815470.09	2708523.96	6/14/2023	00-05	56.7	AECOM - Preliminary 2023 Data
C015-040	815470.09	2708523.96	6/14/2023	05-10	20.9	AECOM - Preliminary 2023 Data
C015-048	815411.32	2708379.62	6/14/2023	00-05	58	AECOM - Preliminary 2023 Data
C015-048	815411.32	2708379.62	6/14/2023	05-10	56.6	AECOM - Preliminary 2023 Data
C015-048	815411.32	2708379.62	6/14/2023	10-15	39.6	AECOM - Preliminary 2023 Data
C015-048	815411.32	2708379.62	6/14/2023	15-20	1.28	AECOM - Preliminary 2023 Data
C015-049	815465.71	2708413.70	6/14/2023	00-05	188	AECOM - Preliminary 2023 Data
C015-049	815465.71	2708413.70	6/14/2023	05-10	2.66	AECOM - Preliminary 2023 Data
NWS-02	815379.71	2709066.33	8/6/2020	00-05	1.56	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-03	815306.99	2709202.06	8/6/2020	00-05	5.09	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-04	815298.57	2709237.74	8/7/2020	00-01	2.62	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-05	815164.19	2709404.22	8/7/2020	00-05	306	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-05	815164.19	2709404.22	8/7/2020	00-05 (rerun)	297	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-05	815164.19	2709404.22	8/7/2020	05-09	22.4	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-06	815101.00	2709427.20	8/7/2020	00-05	0.201	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-12	815136.88	2709406.94	11/19/2020	00-05	32.4	AECOM - North of Wood Street Sampling [memorandum] (AECOM, 2021)
NWS-08	815404.43	2708669.60	11/19/2020	00-05	33.7	AECOM - 20FSP19, Addendum 1 (AECOM, 2020a as cited in AECOM, 2022)
NWS-09	815402.92	2708766.83	11/19/2020	00-05	18.9	AECOM - 20FSP19, Addendum 1 (AECOM, 2020a as cited in AECOM, 2022)
NWS-10	815405.26	2708872.70	11/19/2020	00-05	4.61	AECOM - 20FSP19, Addendum 1 (AECOM, 2020a as cited in AECOM, 2022)
C015-016	815399.88	2708931.92	8/6/2020	00-05	6.14	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-023	815409.12	2708813.88	8/6/2020	00-05	55.3	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-023	815409.12	2708813.88	8/6/2020	05-10	4.97	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-023	815409.12	2708813.88	8/6/2020	10-15	0.0375	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-028	815395.05	2708716.09	8/6/2020	00-05	73.6	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-028	815395.05	2708716.09	8/6/2020	05-10	22.1	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-028	815395.05	2708716.09	8/6/2020	10-16	0.105	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-033	815416.93	2708616.17	8/5/2020	00-05	44.9	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-033	815416.93	2708616.17	8/5/2020	05-10	71.8	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-033	815416.93	2708616.17	8/5/2020	10-15	22.1	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-039	815409.61	2708504.46	8/5/2020	00-05	47.2	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-039	815409.61	2708504.46	8/5/2020	05-10	38.2	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-039	815409.61	2708504.46	8/5/2020	10-15	48.5	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-040	815470.82	2708524.51	8/5/2020	00-05	38.2	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-040	815470.82	2708524.51	8/5/2020	05-10	25.7	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-040	815470.82	2708524.51	8/5/2020	10-16	0.0513	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-048	815412.54	2708378.82	8/6/2020	00-05	50.4	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-048	815412.54	2708378.82	8/6/2020	05-10	43.9	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-048	815412.54	2708378.82	8/6/2020	10-15	1.07	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-048-REP	815412.58	2708379.09	8/6/2020	00-05	59.4	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-049	815465.46	2708413.94	8/5/2020	00-05	17	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-049	815465.46	2708413.94	8/5/2020	05-10	0.005	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
C015-049	815465.46	2708413.94	8/5/2020	10-17	0.361	AECOM - 20FSP19 (AECOM, 2020a as cited in in AECOM, 2022)
15-NWS-30W	815361.40	2708651.70	12/14/2015	00-05	2.42	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-35	815502.77	2708768.29	12/14/2015	00-05	1.09	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-37	815531.37	2708682.99	12/14/2015	00-05	0.696	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-39	815506.84	2708822.50	12/14/2015	00-05	0.152	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-40	815319.24	2708395.93	12/14/2015	00-05	2.5	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-41	815336.02	2708529.43	12/14/2015	00-05	1.08	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
15-NWS-42	815330.67	2708760.52	12/14/2015	00-05	0.296	Battelle - NWS, 2015 (Battelle, 2016 as cited in AECOM, 2022)
C009-010	815354.61	2709125.37	4/7/2010	00-05	1.2	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-016	815401.43	2708937.42	4/7/2010	00-05	4.8	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-023	815411.37	2708816.02	4/7/2010	00-05	4.29	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-028	815403.01	2708706.64	4/7/2010	00-05	11.52	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-030E	815498.78	2708683.00	4/7/2010	00-05	2.98	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-030W	815362.40	2708651.70	4/7/2010	00-05	3.3	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-033	815412.74	2708615.60	4/7/2010	00-05	0.23	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-033 REP	815417.29	2708615.64	4/7/2010	00-05	3.01	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-038	815381.53	2708518.22	4/7/2010	00-05	6.64	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-039	815408.89	2708512.33	4/7/2010	00-05	8.66	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-040	815458.97	2708512.67	4/7/2010	00-05	9.35	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-048	815414.27	2708390.90	4/7/2010	00-05	18.97	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-049	815464.27	2708403.39	4/7/2010	00-05	21.23	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-055	815465.23	2708263.71	4/7/2010	00-05	5.43	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
C009-062	815566.06	2708167.22	4/7/2010	00-05	5.11	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-33	815332.43	2709040.19	4/7/2010	00-05	0.18	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-34	815337.77	2708924.84	4/7/2010	00-05	1.36	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-35	815507.39	2708755.94	4/7/2010	00-05	0.15	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-36	815516.46	2708762.08	4/7/2010	00-05	0.1	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-37	815535.21	2708683.25	4/7/2010	00-05	16.72	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-38	815502.42	2708816.64	4/7/2010	00-05	0.06	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)
09-NWS-39	815506.93	2708822.74	4/7/2010	00-05	0.16	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2010 as cited in AECOM, 2022)

Attachment 2
NWS Sampling Data

Sample Location	Easting (ft) (NAD83)	Northing (ft) (NAD83)	Date Collected	Interval (tenths of foot)	Total PCB (ppm)	Data Source
C010-010	815367.78	2709198.34	4/1/2011	00-05	9.9	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-016	815396.92	2708931.31	4/1/2011	00-05	46.6	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-023	815411.37	2708816.02	4/1/2011	00-05	14.2	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-028	815393.86	2708712.65	4/1/2011	00-05	48.27	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-028REP	815417.29	2708615.64	4/1/2011	00-05	111.9	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-033	815408.93	2708506.26	4/1/2011	00-05	127.6	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-039	815467.99	2708524.88	4/1/2011	00-05	179.2	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C0101-040	815414.35	2708378.75	4/1/2011	00-05	29.9	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-048	815464.19	2708415.53	4/1/2011	00-05	55.8	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-049	815465.18	2708269.78	4/1/2011	00-05	13	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-055	815561.50	2708167.19	4/1/2011	00-05	157.3	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C010-062	815362.40	2708651.70	4/1/2011	00-05	19.9	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-30W	815361.40	2708651.70	4/1/2011	00-05	1.51	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-33	815332.43	2709040.19	4/1/2011	00-05	0.09	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-34	815337.77	2708924.84	4/1/2011	00-05	0.18	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-35	815507.39	2708755.94	4/1/2011	00-05	0.26	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-37	815535.21	2708683.25	4/1/2011	00-05	0.07	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-39	815506.93	2708822.74	4/1/2011	00-05	0.4	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-40	815319.24	2708395.93	4/1/2011	00-05	0.09	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-41	815336.02	2708529.43	4/1/2011	00-05	0.3	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-42	815330.67	2708760.52	4/1/2011	00-05	0.08	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
NWS-43	815455.61	2709004.59	4/1/2011	00-05	0.15	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2011 as cited in AECOM, 2022)
C016	815396.92	2708931.31	4/3/2012	00-05	16.33	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C023	815411.37	2708816.02	4/3/2012	00-05	53.43	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C028	815393.86	2708712.65	4/3/2012	00-05	27.72	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C033	815417.29	2708615.64	4/3/2012	00-05	54.77	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C039	815408.93	2708506.26	4/3/2012	00-05	105.66	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C039-REP	815408.93	2708506.26	4/3/2012	00-05	140.06	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C040	815467.99	2708524.88	4/3/2012	00-05	30.06	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C048	815414.35	2708378.75	4/3/2012	00-05	115.47	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C049	815464.19	2708415.53	4/3/2012	00-05	19.99	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C055	815465.18	2708269.78	4/3/2012	00-05	72.3	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
C062	815561.50	2708167.19	4/3/2012	00-05	9.5	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-30W	825598.70	248524.35	4/4/2012	00-05	0.56	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-33	815332.43	2709040.19	4/4/2012	00-05	0.6	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-34	815337.77	2708924.84	4/4/2012	00-05	7.24	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-35	815507.39	2708755.94	4/4/2012	00-05	0.81	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-37	815535.21	2708683.25	4/4/2012	00-05	15.34	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-39	815506.93	2708822.74	4/4/2012	00-05	0.07	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-40	815319.24	2708395.93	4/4/2012	00-05	3.88	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-41	815336.02	2708529.43	4/4/2012	00-05	1.28	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-42	815330.67	2708760.52	4/4/2012	00-05	0.08	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)
NWS-43	815455.61	2709004.59	4/4/2012	00-05	0.25	Woods Hole Group - NWS Post-Remediation Monitoring (Woods Hole Group, 2012 as cited in AECOM, 2022)

ft	feet
ppm	parts per million
NAD83	North American Datum of 1983
	Data used in SWAC calculation

Attachment 3

NWS Subtidal Calculated SWAC

Attachment 3
NWS Subtidal Calculated SWAC

Polygon ID	Polygon Area (sf)	Percent of Total Area	Sample Assigned to Polygon	Date Sample Collected	Sample Interval (ft)	PCB Concentration (ppm)	Weighted PCB Concentration (ppm)
NWS1	9627.85	0.081	C015-033	6/14/2023	0.0-0.5	5.94	0.48
NWS2	5746.53	0.049	NWS-09	6/14/2023	0.5-1.0	8.59	0.42
NWS3	7226.81	0.061	C015-040	6/14/2023	0.5-1.0	20.90	1.28
NWS4	7150.18	0.060	C015-048	6/14/2023	1.5-2.0	1.28	0.08
NWS5	6597.02	0.056	NWS-08	6/14/2023	1.5-2.2	0.318	0.02
NWS6	5526.07	0.047	C015-039	--	>2.5	30.00	1.40
NWS7	6196.23	0.052	C015-049	6/14/2023	0.5-1.0	2.66	0.14
NWS8	2974.90	0.025	C010-010	4/1/2011	0.0-0.5	9.90	0.25
NWS9	4582.54	0.039	C015-028	6/14/2023	1.0-1.5	0.0566	0.00
NWS10	2356.2499	0.020	NWS-12	11/19/2020	0.0-0.5	0.10	0.00
NWS11	6316.23	0.053	NWS-04	8/7/2020	0.0-0.1	2.62	0.14
NWS12	5222.45	0.044	NWS-06	8/7/2020	0.0-0.5	0.201	0.01
NWS13	6280.78	0.053	C009-038	4/7/2010	0.0-0.5	6.64	0.35
NWS14	7318.43	0.062	C015-016	6/14/2023	0.0-0.5	6.42	0.40
NWS15	7994.49	0.068	NWS-02	8/6/2020	0.0-0.5	1.56	0.11
NWS16	4946.30	0.042	C009-010	4/7/2010	0.0-0.5	1.20	0.05
NWS17	5832.61	0.049	NWS-10	--	>2.5	30.00	1.48
NWS18	6963.00	0.059	C015-023	6/14/2023	1.0-1.5	26.40	1.55
NWS19	7385.86	0.062	NWS-05	8/7/2020	0.0-0.5	0.10	0.01
NWS20	2037.07	0.017	NWS-03	8/6/2020	0.0-0.5	5.09	0.09
Totals	118281.59	1.000					8.25

ID	identification
sf	square feet
ft	feet
ppm	parts per million
--	No sample collected at this interval. Interval was assigned the value of the Remedial Action Level.