FINAL

Appendix D
Sampling Location Details

This appendix provides detailed information regarding sediment sampling locations. The tables included in this appendix are:

- Table D-1. Overview of Grid Cells
- Table D-2. Sample Location Rationale and Analytes
- Table D-3. Rationale for Selected Tier 1 Dioxin/Furan Samples
- Table D-4. Sample Location Details
- Table D-5. Under-Structure Sample Location Details
- Table D-6. Summary of Shoreline Reconnaissance Survey
- Table D-7. Summary of Under-structure Reconnaissance Survey

In Table D-1, which provides an overview of the sampling decisions for each grid cell, gray shading indicates that no sample is needed. Rationale for when no sample is needed in a given grid is discussed in Section 4.1.3 in the main Quality Assurance Project Plan (QAPP) document to which this is an appendix.

For grids where a sample will be collected, Table D-1 provides information regarding the samples to be collected to satisfy grid coverage, as well as information regarding other samples to be collected (e.g., reoccupations and bounding).

Table D-1
Overview of Grid Cells

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
RM 1.6 to 1.8																						
1	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	no RAL[1]	centroid	no RAL in most of grid	shift to target shoal	co-locate with SS (shoal)	centroid (RC1)	co-locate with SS	shift to target subtidal/RC1 (no sampleable intertidal)	co-locate with SS	-	-	-	-
2	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	no RAL[1]	centroid	co-locate with SS (shoal)	shift to target shoal	co-locate with SS (shoal)	centroid (RC1)	co-locate with SS	covered by existing data[2]	centroid (no sampleable intertidal)	-	-	-	-
3	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	no RAL[1]	centroid	co-locate with SS (shoal)	shift to target shoal	co-locate with SS (shoal)	centroid (RC1)	co-locate with SS	centroid (no sampleable intertidal)	co-locate with SS	-	-	-	-
4	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	no RAL[1]	centroid	co-locate with SS (shoal)	shift to target shoal	co-locate with SS (shoal)	centroid (RC1)	co-locate with SS	covered by existing data[2]	centroid	shift to target RC1/ subtidal	co-locate with SS	-	-
5	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	no RAL[1]	centroid	co-locate with SS (shoal)	centroid	co-locate with SS (shoal)	shift to target RC1	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS	covered by existing data	shift to target intertidal
Slip 2																						
6	-	-	-	-	-	-	covered by existing data	shift to target subtidal/RC1	shift to target subtidal/RC1	co-locate with SS	centroid	co-locate with SS	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	shift to target RC1	covered by existing data	shift to target RC1	co-locate with SS	shift to target subtidal (no sampleable intertidal)	co-locate with SS	-	`	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	shift to target intertidal	co-locate with SS	centroid (intertidal)	co-locate with SS	-	-	-	-	-	-	-	-	-	-	-	-
RM 1.8 to RM 2.1																						
9	-	-	-	-	-	-	centroid (existing has limited analytes)	co-locate with SS	shift to target potential vessel scour area	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	co-locate with SS (shoal)	covered by existing data[2]	centroid	shift to target intertidal and sample (T2) adjacent to possible upland source[4]	co-locate with both SS (2 samples)[4]	centroid	co-locate with SS	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
10	-	-	-	-	-	-	centroid (existing has limited analytes)	co-locate with SS	centroid	co-locate with SS	covered by existing data[2]	centroid (shoal)	centroid	co-locate with SS (shoal)	centroid	co-locate with SS	shift to target sampleable intertidal and sample (T2) adjacent to possible upland source[4]	co-locate with both SS (2 samples)[4]	-	-	-	-
11	-	-	-	-	-	-	shift to target sampleable intertidal	co-locate with SS	shift offshore of structure	co-locate with SS	no (subsurface exceedances; assume active remedy)	covered by existing data (LDW07)	centroid	co-locate with SS (shoal)	centroid	co-locate with SS	shift to target intertidal; reoccupy LDW-SS2022-D (T2)	co-locate with SS closer to centroid	-	-	-	-
12	-	-	-	-	-	-	covered by existing data	shift to target subtidal (no sampleable intertidal)	covered by existing data[2]	centroid	centroid	co-locate with SS (shoal)	centroid	co-locate with SS (shoal)	shift SE to bound bank area	co-locate with SS	-	-	-	-	-	-
13	-	-	-	-	-	-	shift to target sampleable intertidal[3]	co-locate with SS	covered by existing data; reoccupy LDW-SSPSF-U (T2)	covered by existing data	centroid	co-locate with SS (shoal)	co-locate with subsurface	shift upstream to bound LDW08 (shoal)	shift to S to bound exceedance in 13F (in marina) and sample (T2) adjacent to possible upland source[4]	co-locate with both SS (2 samples)	covered by existing data; assume active remedy	assume active remedy (collect vertical in Phase II)	-	-	-	-
14	-	-	-	-	-	-	shift to target sampleable intertidal[3]	co-locate with SS	covered by existing data[2]	centroid	shift to target RC1	co-locate with SS (shoal)	covered by existing data	no (collect vertical in Phase II)	covered by existing data	covered by existing data	shift to target intertidal	co-locate with SS	-	-	-	-
15	-	-	-	-	-	-	shift E to sampleable intertidal, bound exceedances to south	co-locate with SS	shift N away from bridge footing	co-locate with SS	shift to target RC1	co-locate with SS	covered by existing data[2]	centroid (RC1)	shift to NE away from bridge footing	co-locate with SS	centroid	co-locate with SS	shift S to avoid boat ramp and riprap (intertidal)[3]	co-locate with SS	-	-
16	-	-	-	-	shift to target intertidal	co-locate with SS	covered by existing data	centroid	shift to target intertidal	co-locate with SS	shift to target RC1	co-locate with SS	centroid	co-locate with SS	shift to target RC1	co-locate with SS	centroid	co-locate with SS	-	-	-	-
17	centroid (target center of inlet)	co-locate with SS	covered by existing data	centroid (target center of inlet)	centroid (bounding PCB exceed-ances in this area)	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	covered by existing data[2]	no RAL	centroid	shift to target potential vessel scour area	centroid	co-locate with SS	-	-	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
Slip 3																						
18	-	-	-	-	-	-	-	-	shift to avoid covered boat house (subtidal)	co-locate with SS	shift off of riprap slope (subtidal)	co-locate with SS	covered by existing data; assume active remedy to north; add bounding sample in intertidal	covered by existing data; assume active remedy to north; add bounding sample co-located with SS	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	centroid	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS	covered by existing data[2]	centroid	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	centroid	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS	centroid	covered by existing data	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	centroid	co-locate with SS	centroid	co-locate with SS	-	-	-	-	-	-	-	-	-	-
RM 2.1 to 2.9																						
22	-	-	-	-	-	-	covered by under-structure sampling (Table D-5)	covered by under-structure sampling (Table D-5)	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	shift to target potential vessel scour area	co-locate with SS	centroid and reoccupy LDW-SSBRSTSD-A (T2)	covered by existing data	-	-	-	-
23	-	-	-	-	-	-	shift to target sampleable intertidal	co-locate with SS	covered by existing data[2]	centroid	no (subsurface exceedances; assume active remedy)	covered by existing data (LDW09); assume active remedy	centroid	no RAL	centroid (potential vessel scour area)	co-locate with SS	centroid and reoccupy SSBRSTSD-U (T2) for cPAHs	co-locate with SS at centroid	-	-	-	-
24	-	-	-	-	-	-	shift to target sampleable intertidal	co-locate with SS and sample adjacent to possible upland source[4]	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	centroid	co-locate with SS[1]	shift to target intertidal	co-locate with SS	-	-	-	-
25	-	-	-	-	assume active remedy	assume active remedy	assume active remedy (mouth of inlet); target intertidal to north to bound remedy area	co-locate with SS	centroid and reoccupy LDW18-SS-098	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	centroid	co-locate with SS[1]	shift to target intertidal and sample adjacent to possible upland source[4]	co-locate with both SS[4]	-	-	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
26	-	-	-	-	-	-	shift to target sampleable intertidal and bound active remedy area[3]	co-locate with SS	shift to target intertidal and bound active remedy area/ bank-area samples	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	centroid	co-locate with SS	shift to target intertidal (bounding for PCB exceedance) and sample adjacent to possible upland source[4]	co-locate with both SS[4]	-	-	-	-
27	-	-	-	-	-	-	-	-	shift to target intertidal	co-locate with SS	centroid	co-locate with SS (shoal), bounding sample to south	centroid	no RAL	centroid	co-locate with SS	shift to target intertidal	co-locate with SS	-	-	-	-
28	-	-	-	-	-	-	shift to target intertidal/BP area	co-locate with SS	reoccupy LDW-SSUNK-D for grid coverage	shift south (off of structure)	centroid	co-locate with SS (shoal)	covered by existing data	no RAL	centroid	co-locate with SS	centroid	co-locate with SS	covered by existing data; reoccupy LDW-SS2029-D (T2)	centroid	assume active remedy to south; reoccupy LDW-SS2030-U for grid coverage and bounding	co-locate with SS
29	-	-	-	-	-	-	-	-	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	centroid	co-locate with SS	shift NW (keep target close to structure)	co-locate with SS	shift N to target intertidal/ RC1 and bound assumed active remedy area to east	co-locate with SS	-	-
30	-	-	-	-	-	-	-	-	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	centroid	no RAL	centroid	co-locate with SS	reoccupy (LDW-SS2034-D, 2011) for grid coverage in area with > 1.5 ft of deepening	centroid	-	-	-	-
31	-	-	-	-	-	-	shift to target BP/ intertidal, bounding sample to south	co-locate with SS	centroid	co-locate with SS	covered by existing data[2]	centroid (shoal)[1]	shift to target shoal	co-locate w/ SS	centroid and reoccupy SD-PER101	co-locate with SS at centroid	centroid and reoccupy LDW-SS2035-U and sample adjacent to possible upland source[4]	co-locate with SS at centroid	-	-	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
32	-	-	-	-	-	-	-	-	assume active remedy to north; collect centroid (subtidal[1]), for bounding	co-locate with SS	centroid	co-locate with SS (shoal)	covered by existing data; assume active remedy (no need to reoccupy of PCB 0.9 EF)	covered by existing data (LDW11)	centroid	co-locate with SS	shift to target sample along structure	co-locate with SS	-	-	-	-
33	-	-	-	-	-	-	shift to target sampleable intertidal	co-locate with SS	centroid	co-locate with SS	shift to avoid sunken barge	shift to avoid sunken barge and target shoal[3]	centroid	co-locate with SS (shoal)	centroid	co-locate with SS	covered by existing data; sample adjacent to possible upland source[4] and reoccupy LDW-SS2307-A/D (T2) (also bounding exceedances to west)	centroid and co-located with sample adjacent to possible upland source[4]	-	-	-	-
34	-	-	-	-	-	-	-	-	centroid (intertidal)	co-locate with SS	covered by existing data[2]	centroid (structure smaller than shown)	centroid	co-locate with SS (shoal)	covered by existing data;[2] reoccupy PILOT8A-SS1[5] in area with > 1.5 ft of deepening	centroid	covered by existing data; reoccupy PILOT8A-SS2 (T2) and LDW-SS2039-D (T2)	centroid	-	-	-	-
35	-	-	-	-	-	-	-	-	covered by existing data	centroid	covered by existing data[2]	centroid	centroid	co-locate with SS (shoal)	centroid	co-locate w/ SS	covered by existing data	centroid	-	-	-	-
36	-	-	-	-	-	-	shift to target intertidal	co-locate with SS	centroid (along structure)	co-locate with SS	centroid	co-locate with SS	centroid	co-locate with SS (shoal)	reoccupy PILOT8B-SS4[5] for grid coverage and LDW-SS89[5] (RI/FS sample, PCB EF of 29) in area with > 1.5 ft of deepening	centroid	centroid (existing just PCBs)	co-locate with SS and sample adjacent to possible upland source[4]	-	-	-	-
37	-	-	-	-	-	-	reoccupy SS530 (2009) RI/FS sample with higher EFs and bounding assumed active remedy area to south	assume active remedy (collect vertical in Phase II)	centroid	co-locate with SS	centroid	co-locate with SS[1]	centroid	co-locate with SS (shoal)	centroid	co-locate with SS	covered by existing data; collect bank sample adjacent to assumed remedy area	centroid, co-locate with SS in bank area, and sample adjacent to possible upland source[4]	-	-	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
38	-	-	-	-	-	-	-	-	centroid (and bounding exceedance to north)	covered by existing data; assume active remedy	centroid	co-locate with SS[1]	centroid	co-locate with SS (shoal), bounding sample to north	centroid	co-locate with SS	covered by existing data; assume active remedy; collect bank sample adjacent to assumed remedy area	assume active remedy (collect vertical in Phase II); co-locate with SS in bank area	-	-	-	-
39	-	-	-	-	-	-	-	-	centroid (intertidal, RC1)	co-locate with SS	shift to target RC1	co-locate with SS[1]	centroid	co-locate with SS (shoal)	reoccupy SSED-15A[5] for grid coverage, SSED-13A[5] in area with > 1.5 ft of deepening, and SSED-18A[5] (T2)	centroid	centroid, collect bank sample adjacent to assumed remedy area, and reoccupy SSED-09	co-locate with SS at centroid and in bank area; collect additional bounding sample in subtidal	-	-	-	-
40	-	-	-	-	-	-	-	-	centroid (intertidal) [2]	co-locate with SS	centroid and reoccupy LDW-SS2106-D	co-locate with SS at centroid[1]	reoccupy SD-PER201 for grid coverage	no RAL in most of grid	centroid and reoccupy SSED-17A	co-locate with SS	reoccupy SSED-11 for grid coverage and SSED-10 (T2)	centroid	reoccupy PER518 (T1, PCBs only) to evaluate trends in Slip 4[6]	shift out from under pier area (pending results of surface sediment sample)[6]	-	-
41	-	-	-	-	-	-	-	-	covered by existing data; assume active remedy	shift to target BP/ intertidal area	shift to target RC1 (and bounding exceedances to west)	co-locate with SS	shift to target potential vessel scour area	co-locate with SS	shift to target RC1	co-locate with SS	centroid (target RC1) and reoccupy PER507	co-locate with SS at centroid	-	-	-	-
Slip 4																						
42	-	-	-	-	-	-	reoccupy PER515, PER516, and PER517 to evaluate trends in Slip 4[6] (all T1, PCBs only); grid covered by existing data	centroid (pending results of surface sediment samples)[6]	reoccupy PER510, PER511, PER513, and PER514 to evaluate trends in Slip 4[6] (all T1, PCBs only); grid covered by existing data	centroid (pending results of surface sediment samples)[6]	reoccupy PER508 and PER509 to evaluate trends in Slip 4[6] (both T1, PCBs only); grid covered by existing data	centroid (pending results of surface sediment samples)[6]	-	-	-	-	-	-	-	-	-	-
RM 2.9 to 3.0																						
43	-	-	-	-	-	-	-	-	shift to target intertidal/BP area	co-locate with SS	centroid	co-locate with SS	shift to target RC1 and reoccupy PER202	co-locate with SS	-	-	-	-	-	-	-	-

Row	A'''		A''		A'		A		B		C		D		E		F		G		H	
	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface	Surface	Sub-surface
44	-	-	-	-	-	-	-	-	covered by existing data; sample (T2) adjacent to possible upland source[4]	centroid (intertidal) and co-locate with SS adjacent to possible upland source[4]	centroid	co-locate with SS	shift to target RC1	co-locate with SS	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	centroid, sample (T2) adjacent to possible upland source,[4] and reoccupy LDW18-SS-118 (T2) and PER206 (T2)	co-locate with SS at centroid (intertidal) and co-locate with SS adjacent to possible upland source[4]	centroid	co-locate with SS	centroid	co-locate with SS	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	analyze upper reach archive sample (SS507)	covered by existing data (IT507 from upper reach)	covered by existing data; assume active remedy	covered by existing data; assume active remedy	covered by existing data (PCB-only); assume active remedy	covered by existing data; assume active remedy	-	-	-	-	-	-	-	-

Notes:

Gray shading indicates that no sample is needed for that interval in a given grid cell. A dash (-) indicates that the particular grid cell is not applicable for that row.

1. No bathymetry information is available in this area. Assumption regarding RAL area designation is based on nearby bathymetry data, information gathered during the April 19, 2022, reconnaissance survey, and aerial imagery. RAL-application area will be confirmed as part of the bathymetry survey to be conducted as part of the Phase I PDI.
2. The analyte list for this existing sample in the design dataset is limited to PCBs, a subset of metals (arsenic, chromium, lead, and mercury), and PAHs.
3. The target location is outside of the 50-ft radius circle at this location because of limited sampleable area in this grid (e.g., the majority of the grid is above MHHW and thus outside of the site boundary).
4. Sample added adjacent to possible upland source (including listed MTCA sites or sites considered potential sources) per Ecology request.
5. These locations will be reoccupied to evaluate current conditions; existing data at these locations are not part of the design dataset based on the relative bathymetry elevations between 2003 and 2021, as discussed in Section 3.1 of the PDIWP.
6. To assess current conditions in Slip 4 (grids 40G and 42ABC), 10 Boeing Plant 2 perimeter monitoring stations (508, 509, 510, 511, 513, 514, 515, 516, 517, and 518) will be re-occupied early in the Phase I field effort (Map 4c). At these stations, 0- to 10-cm samples will be collected and analyzed for PCBs. Based on the results, either additional Phase I sampling and analysis will be conducted in these four grid cells, or the area will be designated as an active remedy area for further characterization during Phase II.

BP: Beach Play area
EF: exceedance factor
MHHW: mean higher high water
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl
PDI: Pre-Design Investigation
RAL: remedial action level
RC1: Recovery Category 1
RM: river mile
SS: surface sediment sample
T1: Tier 1 sample
T2: Tier 2 archive sample

Table D-2
Sample Location Rationale and Analytes

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1000	1B	1.6	subtidal	x				2	No	-	No	-34.3	2003	x				x	x	a	x	-	-	-	-	-
1001	1C	1.6	subtidal	x				3	Yes	No	No	-30.3	2021	x				x	x	a	x	-	-	-	-	-
1002	1D	1.6	subtidal	x			x	3	Yes	Yes	No	-27.8	2021	x				x	x	a	x	x	x	-	a	x
1003	1E	1.6	subtidal	x		x		1	No	-	No	-24.1	2021	x				x	x	a	x	x	x	-	a	x
1004	1F	1.6	subtidal	x		x		1	No	-	Yes	-7.1	2021	x				x	x	x	x	x	x	-	x	x
1005	2B	1.6	subtidal	x				2	No	-	No	-33.6	2003	x				x	x	a	x	-	-	-	-	-
1006	2C	1.6	subtidal	x			x	3	Yes	Yes	No	-29.4	2021	x				x	x	a	x	x	x	-	a	x
1007	2D	1.6	subtidal	x			x	3	Yes	Yes	No	-27.3	2021	x				x	x	a	x	x	x	-	a	x
1008	2E	1.6	subtidal	x		x		1	No	-	No	-25.0	2021	x				x	x	a	x	x	x	-	a	x
1009	2F	1.6	subtidal			x		3	No	-	Yes	-11.4	2021	x				-	-	-	-	x	-	-	-	-
1010	3B	1.7	subtidal	x				2	No	-	No	-32.9	2003	x				x	x	a	x	-	-	-	-	-
1011	3C	1.7	subtidal	x			x	3	Yes	Yes	No	-29.3	2021	x				x	x	a	x	x	x	-	a	x
1012	3D	1.7	subtidal	x			x	3	Yes	Yes	No	-28.1	2021	x				x	x	a	x	x	x	-	a	x
1013	3E	1.7	subtidal	x		x		1	No	-	No	-32.7	2003	x				x	x	a	x	x	x	-	a	x
1014	3F	1.7	subtidal	x		x		3	No	-	Yes	no data	-	x				x	x	a	x	x	-	-	-	-
1015	4B	1.7	subtidal	x				2	No	-	No	-33.0	2003	x				x	x	a	x	-	-	-	-	-
1016	4C	1.7	subtidal	x			x	3	Yes	Yes	No	-29.7	2021	x				x	x	a	x	x	x	-	a	x
1017	4D	1.7	subtidal	x			x	3	Yes	Yes	No	-28.3	2021	x				x	x	a	x	x	x	-	a	x
1018	4E	1.7	subtidal	x		x		1	No	-	No	-33.4	2003	x				x	x	a	x	x	x	-	a	x
1019	4F	1.7	subtidal			x		1	No	-	Yes	-12.1	2021	x				-	-	-	-	x	x	-	a	x
1020	4G	1.7	subtidal	x		x		1	No	-	Yes	-10.3	2021	x				x	x	a	x	x	x	-	a	x
1021	5B	1.7	subtidal	x				2	No	-	No	-31.0	2003	x				x	x	a	x	-	-	-	-	-
1022	5C	1.7	subtidal	x			x	3	Yes	Yes	No	-29.2	2021	x				x	x	a	x	x	x	-	a	x
1023	5D	1.7	subtidal	x			x	3	Yes	Yes	No	-28.6	2021	x				x	x	x	x	x	x	-	x	x
1024	5E	1.7	subtidal	x		x		1	No	-	Yes	-22.7	2021	x				x	x	a	x	x	x	-	a	x
1025	5F	1.7	subtidal	x		x		1	No	-	Yes	-17.3	2021	x				x	x	a	x	x	x	-	a	x
1026	5G	1.7	subtidal	x		x		1	No	-	Yes	-11.6	2021	x				x	x	a	x	x	x	-	a	x
1027	5H	1.8	intertidal		x			3	No	-	No	no data	-	x				-	-	-	-	x	x	x	a	-
1028	6A	1.7	subtidal			x		1	No	-	Yes	-13.4	2021	x				-	-	-	-	x	x	-	x	x
1029	6B	1.7	subtidal	x		x		1	No	-	Yes	-12.6	2021	x				x	x	a	x	x	x	-	a	x
1030	6C	1.7	subtidal	x		x		3	No	-	Yes	-9.7	2021	x				x	x	a	x	x	-	-	-	-
1031	7A	1.7	subtidal	x				1	No	-	Yes	-17.8	2021	x				x	x	x	x	-	-	-	-	-
1032	7B	1.7	subtidal	x		x		1	No	-	Yes	-15.0	2021	x				x	x	a	x	x	x	-	a	x
1033	7C	1.7	subtidal	x		x		3	No	-	Yes	-6.0	2021	x				x	x	a	x	x	-	-	-	-
1034	8A	1.7	intertidal	x	x			3	No	-	No	0.1	2021	x				x	x	a	x	x	x	x	a	-
1035	8B	1.7	intertidal	x	x			3	No	-	No	3.3	2021	x				x	x	x	x	x	x	x	x	-
1036	9A	1.8	subtidal	x		x		3	No	-	Yes	-19.5	2003	x				x	x	a	x	x	-	-	-	-
1037	9B	1.8	subtidal	x		x		2	No	-	Yes	-21.8	2021	x				x	x	x	x	x	-	-	-	-
1038	9C	1.8	subtidal	x			x	3	Yes	Yes	No	-28.6	2021	x				x	x	a	x	x	x	-	a	x
1039	9D	1.8	subtidal	x			x	3	Yes	Yes	No	-26.7	2021	x				x	x	a	x	x	x	-	a	x
1040	9E	1.8	subtidal			x		3	No	-	Yes	-21.9	2021	x				-	-	-	-	x	-	-	-	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1041	9F	1.8	intertidal	x	x			1	No	-	No	-2.2	2021	x				x	x	a	x	x	x	x	a	x
1042	9F	1.8	intertidal	a	x			3	No	-	No	no data	-		x		Additional sample adjacent to possible upland source; Tier 2 surface sediment sample will be analyzed if 0-45 cm samples is below RALs	a	a	a	a	x	x	x	a	-
1043	9G	1.8	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	x	-
1044	10A	1.8	subtidal	x		x		1	No	-	Yes	-15.7	2003	x				x	x	a	x	x	x	-	a	x
1045	10B	1.8	subtidal	x		x		1	No	-	Yes	-19.8	2021	x				x	x	x	x	x	x	-	x	x
1046	10C	1.8	subtidal				x	3	Yes	Yes	No	-25.2	2021	x				-	-	-	-	x	x	-	x	x
1047	10D	1.8	subtidal	x			x	3	Yes	Yes	No	-24.1	2021	x				x	x	a	x	x	x	-	a	x
1048	10E	1.8	subtidal	x		x		3	No	-	Yes	-15.4	2021	x				x	x	a	x	x	-	-	-	-
1049	10F	1.8	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	a	-
1050	10F	1.8	intertidal	a	x			3	No	-	No	no data	-		x		Additional sample adjacent to possible upland source; Tier 2 surface sediment sample will be analyzed if 0-45 cm samples is below RALs	a	a	a	a	x	x	x	a	-
1051	11A	1.9	intertidal	x	x			3	No	-	No	-2.4	2021	x			Based on the April 2022 reconnaissance survey, the sampleability of the target location in the intertidal area is uncertain; if an intertidal sample cannot be collected, samples to be collected in the nearby Recovery Category 1 subtidal area (analytes would be updated to reflect this change)	x	x	x	x	x	x	x	x	-
1052	11B	1.9	subtidal	x		x		2	No	-	Yes	-18.0	2003	x				x	x	x	x	x	-	-	-	-
1053	11D	1.9	subtidal	x			x	3	Yes	Yes	No	-26.1	2021	x				x	x	x	x	x	x	-	x	x
1054	11E	1.9	subtidal	x		x		2	No	-	Yes	-16.9	2021	x				x	x	a	x	x	-	-	-	-
1055	11F	1.9	intertidal	x	x			3	No	-	No	0.1	2021	x				x	x	a	x	x	x	x	a	-
1056	11F	1.9	subtidal	a				2	No	-	Yes	no data	-			x	Reoccupy LDW-SS2022-D (2011); total PCB EF of 1.4; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1057	12A	1.9	subtidal			x		3	No	-	Yes	-6.8	2021	x				-	-	-	-	x	-	-	-	-
1058	12B	1.9	subtidal			x		2	No	-	Yes	-14.6	2021	x				-	-	-	-	x	-	-	-	-
1059	12C	1.9	subtidal	x			x	3	Yes	Yes	No	-24.0	2021	x				x	x	x	x	x	x	-	x	x
1060	12D	1.9	subtidal	x			x	3	Yes	Yes	No	-22.2	2021	x				x	x	x	x	x	x	-	x	x
1061	12E	1.9	subtidal	x		x		3	No	-	Yes	no data	-	x				x	x	a	x	x	-	-	-	-
1062	13A	2	intertidal	x	x			3	No	-	No	3.2	2021	x			Sample outside 50 ft circle to target sampleable intertidal	x	x	a	x	x	x	x	a	-
1063	13B	1.9	subtidal	a				2	No	-	Yes	-11.8	2021			x	Reoccupy LDW-SSPSF-U (2011); PAH EFs up to 2.8; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1064	13C	1.9	subtidal	x			x	3	Yes	Yes	No	-25.4	2021	x				x	x	x	x	x	x	-	x	x
1065	13D	1.9	subtidal	x			x	3	Yes	Yes	No	-23.6	2021	x	x			x	x	x	x	x	x	-	x	x

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1066	13E	1.9	subtidal	x		x		3	No	-	Yes	no data	-	x	x		Sample located within boat slip at marina	x	x	x	x	x	-	-	-	-
1067	13E	1.9	intertidal	a	x			3	No	-	No	no data	-		x		Additional sample adjacent to possible upland source (note that sampleability of this location is uncertain and will be determined in the field); Tier 2 surface sediment sample will be analyzed if 0-45 cm samples is below RALs	a	a	a	a	x	x	x	a	-
1068	14A	2	intertidal	x	x			3	No	-	No	4.0	2003	x			Sample outside 50 ft circle to target sampleable intertidal	x	x	a	x	x	x	x	a	-
1069	14B	2	subtidal			x		3	No	-	Yes	-7.2	2021	x				-	-	-	-	x	-	-	-	-
1070	14C	2	subtidal	x			x	1	Yes	Yes	No	-27.8	2021	x				x	x	x	x	x	x	-	x	x
1071	14F	2	intertidal	x	x			3	No	-	No	no data	-	x				x	x	x	x	x	x	x	x	-
1072	15A	2	intertidal	x	x			3	No	-	No	1.5	2021	x	x			x	x	a	x	x	x	x	a	-
1073	15B	2	subtidal	x		x		3	No	-	Yes	-6.5	2021	x				x	x	a	x	x	-	-	-	-
1074	15C	2	subtidal	x		x		1	Yes	No	No	-26.9	2021	x				x	x	a	x	x	x	-	a	x
1075	15D	2	subtidal			x		1	Yes	No	No	-28.1	2021	x				-	-	-	-	x	x	-	x	x
1076	15E	2	subtidal	x		x		3	No	-	Yes	-12.7	2021	x				x	x	a	x	x	-	-	-	-
1077	15F	2	subtidal	x		x		3	No	-	Yes	-6.8	2021	x				x	x	x	x	x	-	-	-	-
1078	15G	2	intertidal	x	x			3	No	-	No	1.2	2003	x			Sample outside 50 ft circle to target sampleable intertidal	x	x	a	x	x	x	x	a	-
1079	16A'	2.1	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	a	-
1080	16A	2.1	intertidal		x			3	No	-	No	no data	-	x				-	-	-	-	x	x	x	a	-
1081	16B	2.1	intertidal	x	x			3	No	-	No	-2.5	2021	x				x	x	a	x	x	x	x	a	-
1082	16C	2.1	subtidal	x		x		1	Yes	No	No	-25.1	2021	x				x	x	a	x	x	x	-	a	x
1083	16D	2.1	subtidal	x		x		1	Yes	No	No	-27.4	2021	x				x	x	a	x	x	x	-	a	x
1084	16E	2.1	subtidal	x		x		1	No	-	No	-21.9	2021	x				x	x	a	x	x	x	-	a	x
1085	16F	2.1	subtidal	x		x		3	No	-	Yes	-14.5	2021	x				x	x	a	x	x	-	-	-	-
1086	17A'''	2.1	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	x	-
1087	17A''	2.1	intertidal		x			3	No	-	No	no data	-	x				-	-	-	-	x	x	x	a	-
1088	17A'	2.1	intertidal	x	x			3	No	-	No	no data	-	x	x			x	x	a	x	x	x	x	a	-
1089	17A	2.1	intertidal	x	x			3	No	-	No	3.2	2003	x				x	x	x	x	x	x	x	x	-
1090	17B	2.1	subtidal	x		x		3	No	-	Yes	-10.2	2021	x				x	x	a	x	x	-	-	-	-
1091	17C	2.1	subtidal	x			x	3	Yes	Yes	No	-18.0	2021	x				x	x	a	x	x	x	-	a	x
1092	17E	2.1	subtidal	x				3	No	-	No	-19.4	2021	x				x	x	a	x	-	-	-	-	-
1093	17E	2.1	subtidal			x		3	No	-	Yes	-17.3	2021	x				-	-	-	-	x	-	-	-	-
1094	17F	2.1	subtidal	x		x		3	No	-	Yes	-15.3	2021	x				x	x	a	x	x	-	-	-	-
1095	18B	2.1	subtidal	x		x		3	No	-	Yes	-8.5	2021	x				x	x	x	x	x	-	-	-	-
1096	18C	2.1	subtidal	x		x		3	No	-	Yes	-5.0	2021	x				x	x	a	x	x	-	-	-	-
1097	18D	2.1	intertidal	x	x			2	No	-	No	3.2	2003		x			x	x	x	x	x	x	x	x	-
1098	19A	2.1	subtidal	x		x		2	No	-	Yes	-9.0	2021	x				x	x	a	x	x	-	-	-	-
1099	19B	2.1	subtidal	x		x		3	No	-	Yes	-12.0	2021	x				x	x	a	x	x	-	-	-	-
1100	19C	2.1	subtidal	x		x		2	No	-	Yes	-13.9	2021	x				x	x	a	x	x	-	-	-	-
1101	19D	2.1	subtidal			x		2	No	-	Yes	-11.5	2021	x				-	-	-	-	x	-	-	-	-
1102	20A	2.1	subtidal	x		x		3	No	-	Yes	-13.7	2021	x				x	x	a	x	x	-	-	-	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1103	20B	2.1	subtidal	x		x		2	No	-	Yes	-13.0	2021	x				x	x	a	x	x	-	-	-	-
1104	20C	2.1	subtidal	x		x		2	No	-	Yes	-16.2	2003	x				x	x	a	x	x	-	-	-	-
1105	20D	2.1	subtidal	x				2	No	-	Yes	-15.8	2003	x				x	x	x	x	-	-	-	-	-
1106	21B	2.1	subtidal	x		x		2	No	-	Yes	-14.2	2021	x				x	x	a	x	x	-	-	-	-
1107	21C	2.1	subtidal	x		x		2	No	-	Yes	-15.0	2021	x				x	x	a	x	x	-	-	-	-
1108	22B	2.1	subtidal	x		x		2	No	-	Yes	no data	-	x				x	x	a	x	x	-	-	-	-
1109	22C	2.1	subtidal	x			x	3	Yes	Yes	No	-18.1	2021	x				x	x	a	x	x	x	-	a	x
1110	22D	2.1	subtidal	x				3	Yes	No	No	-24.7	2021	x				x	x	a	x	-	-	-	-	-
1111	22E	2.1	subtidal	x		x		2	No	-	Yes	-18.7	2003	x				x	x	a	x	x	-	-	-	-
1112	22F	2.1	subtidal	x				2	No	-	Yes	-15.2	2003	x				x	x	a	x	-	-	-	-	-
1113	22F	2.1	subtidal	a				2	No	-	Yes	no data	-			x	Reoccupy LDW-SSBRSTSD-A (2011); hexachlorobenzene EF of 1.6; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1114	23A	2.2	intertidal	x	x			3	No	-	No	-1.5	2003	x				x	x	x	x	x	x	x	a	-
1115	23B	2.2	subtidal			x		3	No	-	Yes	-14.4	2003	x				-	-	-	-	x	-	-	-	-
1116	23D	2.2	subtidal	x				3	Yes	No	No	-23.5	2021	x				x	x	a	x	-	-	-	-	-
1117	23E	2.2	subtidal	x		x		2	No	-	Yes	-17.6	2021	x				x	x	a	x	x	-	-	-	-
1118	23F	2.2	subtidal	x		x		2	No	-	Yes	no data	-	x				x	x	a	x	x	-	-	-	-
1119	23F	2.2	subtidal	a				2	No	-	Yes	no data	-			x	Reoccupy LDW-SSBRSTSD-U (2011); sample with cPAH ROD RAL exceedance (and no other exceedances); analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1120	24A	2.2	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	a	-
1121	24A	2.2	intertidal		x			3	No	-	No	no data	-		x		Additional sample adjacent to possible upland source	-	-	-	-	x	x	x	a	-
1122	24B	2.2	subtidal	x		x		3	No	-	Yes	-11.7	2003	x				x	x	a	x	x	-	-	-	-
1123	24C	2.2	subtidal	x			x	3	Yes	Yes	No	-17.5	2021	x				x	x	a	x	x	x	-	a	x
1124	24D	2.2	subtidal	x				3	Yes	No	No	-22.4	2021	x				x	x	a	x	-	-	-	-	-
1125	24E	2.2	subtidal	x		x		2	No	-	Yes	-15.5	2003	x				x	x	a	x	x	-	-	-	-
1126	24F	2.2	intertidal	x	x			3	No	-	No	-1.7	2021	x				x	x	a	x	x	x	x	a	-
1127	25A	2.2	intertidal	x	x			2	No	-	No	-2.9	2003	x	x			x	x	x	x	x	x	x	x	-
1128	25B	2.2	subtidal	x		x		2	No	-	Yes	-12.2	2003	x				x	x	a	x	x	-	-	-	-
1129	25B	2.3	subtidal	x				2	No	-	Yes	-7.9	2021			x	Reoccupy LDW18-SS-098 (2018); total PCB EF of 0.98	x	x	a	x	-	-	-	-	-
1130	25C	2.2	subtidal	x			x	3	Yes	Yes	No	-17.7	2021	x				x	x	a	x	x	x	-	a	x
1131	25D	2.2	subtidal	x				3	Yes	No	No	-22.1	2021	x				x	x	a	x	-	-	-	-	-
1132	25E	2.2	subtidal	x		x		2	No	-	Yes	-12.7	2003	x				x	x	a	x	x	-	-	-	-
1133	25F	2.2	intertidal	x	x			3	No	-	No	-2.7	2021	x				x	x	a	x	x	x	x	a	-
1134	25F	2.2	intertidal	x	x			3	No	-	No	-2.3	2021		x		Additional sample adjacent to possible upland source	x	x	a	x	x	x	x	a	-
1135	26A	2.3	intertidal	x	x			2	No	-	No	3.4	2021	x	x		sample outside 50 ft circle to target sampleable intertidal	x	x	x	x	x	x	x	x	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1136	26B	2.3	intertidal	x	x			2	No	-	No	-1.5	2021	x	x			x	x	x	x	x	x	x	x	-
1137	26C	2.3	subtidal	x			x	3	Yes	Yes	No	-15.8	2021	x				x	x	a	x	x	x	-	a	x
1138	26D	2.3	subtidal	x				3	Yes	No	No	-21.7	2021	x				x	x	a	x	-	-	-	-	-
1139	26E	2.3	subtidal	x		x		2	No	-	Yes	-12.5	2021	x				x	x	a	x	x	-	-	-	-
1140	26F	2.3	intertidal	x	x			3	No	-	No	-1.8	2021	x	x			x	x	a	x	x	x	x	a	-
1141	26F	2.3	intertidal	x	x			3	No	-	No	-2.1	2021		x		Additional sample adjacent to possible upland source	x	x	a	x	x	x	x	a	-
1142	27B	2.3	intertidal	x	x			2	No	-	No	-0.8	2021	x				x	x	x	x	x	x	x	x	-
1143	27C	2.3	subtidal	x			x	3	Yes	Yes	No	-14.4	2021	x	x			x	x	x	x	x	x	-	x	x
1144	27D	2.3	subtidal	x				3	Yes	No	No	-21.4	2021	x				x	x	a	x	-	-	-	-	-
1145	27E	2.3	subtidal	x		x		2	No	-	Yes	-14.2	2022	x				x	x	a	x	x	-	-	-	-
1146	27F	2.3	intertidal	x	x			3	No	-	No	-1.3	2021	x				x	x	a	x	x	x	x	a	-
1147	28A	2.4	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	a	-
1148	28B	2.4	intertidal		x			2	No	-	No	-1.3	2021	x				-	-	-	-	x	x	x	x	-
1149	28B	2.4	intertidal	x				1	No	-	No	1.1	2021	x		x	Reoccupy LDW-SSUNK-D (2011); total PCB EF of 0.92	x	x	a	x	-	-	-	-	-
1150	28C	2.4	subtidal	x			x	3	Yes	Yes	No	-14.7	2021	x				x	x	a	x	x	x	-	a	x
1151	28E	2.4	subtidal	x		x		1	No	-	Yes	-14.7	2021	x				x	x	a	x	x	x	-	a	x
1152	28F	2.4	subtidal	x		x		1	No	-	Yes	-8.4	2021	x				x	x	a	x	x	x	-	a	x
1153	28G	2.4	subtidal			x		1	No	-	Yes	-5.2	2021	x				-	-	-	-	x	x	-	a	x
1154	28H	2.4	intertidal	x	x			3	No	-	No	-2.5	2021	x	x	x	Reoccupy LDW-SS2030-U (2011); Efs > 1 for zinc, HCB, and benzoic acid and total PCB EF of 0.92	x	x	x	x	x	x	x	x	-
1155	29B	2.4	subtidal	x		x		1	No	-	Yes	no data	-	x				x	x	a	x	x	x	-	a	x
1156	29C	2.4	subtidal	x			x	3	Yes	Yes	No	-17.1	2021	x				x	x	a	x	x	x	-	a	x
1157	29D	2.4	subtidal	x				3	Yes	No	No	-21.0	2021	x				x	x	a	x	-	-	-	-	-
1158	29E	2.4	subtidal	x		x		1	No	-	Yes	-16.2	2021	x				x	x	a	x	x	x	-	a	x
1159	29F	2.4	subtidal	x		x		1	No	-	Yes	-9.7	2022	x				x	x	a	x	x	x	-	a	x
1160	29G	2.4	intertidal	x	x			1	No	-	No	-3.7	2021	x	x			x	x	x	x	x	x	x	x	x
1161	30B	2.4	subtidal	x		x		1	No	-	Yes	no data	-	x				x	x	a	x	x	x	-	a	x
1162	30C	2.4	subtidal	x			x	3	Yes	Yes	No	-18.5	2021	x				x	x	x	x	x	x	-	x	x
1163	30D	2.4	subtidal	x				3	Yes	No	No	-20.5	2021	x				x	x	a	x	-	-	-	-	-
1164	30E	2.4	subtidal	x		x		1	No	-	Yes	-16.9	2021	x				x	x	a	x	x	x	-	a	x
1165	30F	2.4	subtidal			x		1	No	-	Yes	-9.2	2021	x				-	-	-	-	x	x	-	a	x
1166	30F	2.4	subtidal	x				1	No	-	Yes	-6.5	2021	x		x	Reoccupy LDW-SS2034-D (2011); total PCB and arsenic EFs of 1.1 in area with > 1.5 ft of deepening	x	x	a	x	-	-	-	-	-
1167	31A	2.5	intertidal	x	x			3	No	-	No	no data	-	x	x			x	x	x	x	x	x	x	x	-
1168	31B	2.5	subtidal	x		x		2	No	-	Yes	no data	-	x				x	x	x	x	x	-	-	-	-
1169	31C	2.5	subtidal				x	3	Yes	Yes	No	-15.9	2022	x				-	-	-	-	x	x	-	a	x
1170	31D	2.5	subtidal	x			x	3	Yes	Yes	No	-19.9	2022	x				x	x	a	x	x	x	-	a	x
1171	31E	2.5	subtidal	x		x		1	No	-	No	-20.0	2021	x				x	x	a	x	x	x	-	a	x
1172	31E	2.5	subtidal	x				1	No	-	Yes	-14.3	2021			x	Reoccupy SD-PER101 (2015); total PCB EF of 1.3	x	x	a	x	-	-	-	-	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1173	31F	2.5	subtidal	x		x		1	No	-	Yes	-9.7	2021	x				x	x	a	x	x	x	-	a	x
1174	31F	2.5	subtidal	x				1	No	-	Yes	-11.1	2021			x	Reoccupy LDW-SS2035-U (2011); PAH EFs up to 1.3	x	x	a	x	-	-	-	-	-
1175	31F	2.5	subtidal	x				1	No	-	Yes	-7.9	2021		x		Additional sample adjacent to possible upland source	x	x	a	x	-	-	-	-	-
1176	32B	2.5	subtidal	x		x		3	No	-	Yes	no data	-	x	x			x	x	x	x	x	-	-	-	-
1177	32C	2.5	subtidal	x			x	3	Yes	Yes	No	-15.6	2003	x				x	x	a	x	x	x	-	a	x
1178	32E	2.5	subtidal	x		x		1	No	-	Yes	-16.9	2021	x				x	x	a	x	x	x	-	a	x
1179	32F	2.5	subtidal	x		x		1	No	-	Yes	-9.1	2021	x				x	x	a	x	x	x	-	a	x
1180	33A	2.5	intertidal	x	x			3	No	-	No	no data	-	x				x	x	a	x	x	x	x	a	-
1181	33B	2.5	intertidal	x	x			2	No	-	No	-1.7	2021	x				x	x	a	x	x	x	x	a	-
1182	33C	2.5	subtidal	x				2	No	-	Yes	-9.8	2021	x				x	x	a	x	-	-	-	-	-
1183	33C	2.5	subtidal				x	3	Yes	Yes	No	-11.3	2021	x			Subsurface sample outside 50 ft circle to avoid sunken barge and target shoal	-	-	-	-	x	x	-	a	x
1184	33D	2.5	subtidal	x			x	3	Yes	Yes	No	-19.3	2021	x				x	x	a	x	x	x	-	a	x
1185	33E	2.6	subtidal	x		x		1	No	-	Yes	-16.1	2021	x				x	x	a	x	x	x	-	a	x
1186	33F	2.6	subtidal			x		1	No	-	Yes	-5.4	2021	x				-	-	-	-	x	x	-	x	x
1187	33F	2.6	subtidal	a				1	No	-	Yes	-5.8	2021		x	x	Reoccupy LDW-SS2037-A/LDW-SS2037-D (2011); benzoic acid EFs of 1.4 and 1.5 (samples located approximately 12 ft apart, so a single sample will be collected at the midpoint between these 2011 samples); analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1188	33F	2.5	subtidal	x		x		1	No	-	Yes	-7.2	2021		x		Additional sample adjacent to possible upland source; collect as close as possible to the pier face	x	x	a	x	x	x	-	a	x
1189	34B	2.6	intertidal	x	x			3	No	-	No	2.7	2021	x				x	x	a	x	x	x	x	a	-
1190	34C	2.6	subtidal			x		3	No	-	Yes	-8.8	2021	x				-	-	-	-	x	-	-	-	-
1191	34D	2.6	subtidal	x			x	3	Yes	Yes	No	-17.7	2021	x				x	x	x	x	x	x	-	x	x
1192	34E	2.6	subtidal			x		1	No	-	Yes	-16.3	2021	x				-	-	-	-	x	x	-	a	x
1193	34E	2.6	subtidal	x				1	No	-	Yes	-8.2	2021			x	Reoccupy LDW-PILOT8A-SS1 (2014) in area with > 1.5 ft of deepening	x	x	a	x	-	-	-	-	-
1194	34F	2.6	intertidal		x			3	No	-	No	-2.1	2021	x				-	-	-	-	x	x	x	x	-
1195	34F	2.6	intertidal	a				3	No	-	No	-1.2	2021			x	Reoccupy LDW-SS2039-D (2011); total PCB EF of 1.1; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1196	34F	2.6	intertidal	a				3	No	-	No	1.3	2021			x	Reoccupy LDW-PILOT8A-SS2 (2014); total PCB EF of 1.2; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1197	35B	2.6	intertidal		x			3	No	-	No	1.1	2003	x				-	-	-	-	x	x	x	a	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1198	35C	2.6	subtidal			x		3	No	-	Yes	-11.3	2021	x				-	-	-	-	x	-	-	-	-
1199	35D	2.6	subtidal	x			x	3	Yes	Yes	No	-18.8	2021	x				x	x	a	x	x	x	-	a	x
1200	35E	2.6	subtidal	x		x		1	No	-	Yes	-14.5	2021	x				x	x	a	x	x	x	-	a	x
1201	35F	2.6	intertidal		x			3	No	-	No	2.5	2021	x				-	-	-	-	x	x	x	a	-
1202	36A	2.7	intertidal	x	x			3	No	-	No	no data	-	x				x	x	x	x	x	x	x	x	-
1203	36B	2.7	subtidal	x		x		2	No	-	Yes	-5.3	2021	x				x	x	x	x	x	-	-	-	-
1204	36C	2.7	subtidal	x		x		3	No	-	Yes	-13.4	2021	x				x	x	a	x	x	-	-	-	-
1205	36D	2.7	subtidal	x			x	3	Yes	Yes	No	-19.2	2021	x				x	x	a	x	x	x	-	a	x
1206	36E	2.7	subtidal			x		1	No	-	Yes	-13.1	2021	x				-	-	-	-	x	x	-	a	x
1207	36E	2.7	subtidal	x				1	No	-	Yes	-10.8	2021	x		x	Reoccupy LDW-PILOT8B-SS4 (2014) in area with > 1.5 ft of deepening	x	x	a	x	-	-	-	-	-
1208	36E	2.6	subtidal	x				1	No	-	Yes	-13.2	2021			x	Reoccupy LDW-SS89 (2005 RI/FS sample with PCB EF of 29) in area with > 1.5 ft of deepening	x	x	a	x	-	-	-	-	-
1209	36F	2.7	intertidal	x	x			3	No	-	No	2.1	2021	x				x	x	a	x	x	x	x	x	-
1210	36F	2.7	intertidal		x			1	No	-	No	-2.2	2021		x		Additional sample adjacent to possible upland source	-	-	-	-	x	x	x	a	x
1211	37A	2.7	intertidal	x				3	No	-	No	no data	-		x	x	Reoccupy LDW-SS530 (2009 RI/FS sample); total PCB EF of 4.6 and PAH EFs up to 2.4	x	x	x	x	-	-	-	-	-
1212	37B	2.7	subtidal	x		x		1	No	-	Yes	-8.3	2003	x				x	x	x	x	x	x	-	x	x
1213	37C	2.7	subtidal	x		x		1	No	-	Yes	-14.2	2003	x				x	x	a	x	x	x	-	a	x
1214	37D	2.7	subtidal	x			x	3	Yes	Yes	No	-19.0	2021	x				x	x	a	x	x	x	-	a	x
1215	37E	2.7	subtidal	x		x		1	No	-	Yes	-13.0	2021	x				x	x	x	x	x	x	-	x	x
1216	37F	2.7	intertidal		x			3	No	-	No	2.6	2021	x	x			-	-	-	-	x	x	x	a	-
1217	37F	2.7	intertidal		x			1	No	-	No	-3.0	2021		x		Additional sample adjacent to possible upland source	-	-	-	-	x	x	x	x	x
1218	37F	2.7	intertidal	x	x			3	No	-	No	no data	-		x		Additional sample in bank area adjacent to assumed active remedy	x	x	a	x	x	x	x	a	-
1219	38B	2.7	subtidal	x				1	No	-	Yes	-9.8	2003	x	x			x	x	a	x	-	-	-	-	-
1220	38C	2.7	subtidal	x		x		1	No	-	Yes	-13.4	2022	x				x	x	a	x	x	x	-	a	x
1221	38D	2.7	subtidal	x			x	3	Yes	Yes	No	-18.5	2021	x	x			x	x	a	x	x	x	-	a	x
1222	38E	2.7	subtidal	x		x		1	No	-	Yes	-12.9	2021	x				x	x	x	x	x	x	-	x	x
1223	38F	2.8	intertidal	x	x			2	No	-	No	no data	-		x		Additional sample in bank area adjacent to assumed active remedy	x	x	x	x	x	x	x	x	-
1224	39B	2.8	intertidal	x	x			1	No	-	No	0.1	2021	x				x	x	a	x	x	x	x	a	x
1225	39C	2.8	subtidal	x		x		1	No	-	Yes	-13.0	2022	x				x	x	a	x	x	x	-	a	x
1226	39D	2.8	subtidal	x			x	3	Yes	Yes	No	-18.7	2021	x				x	x	x	x	x	x	-	x	x
1227	39E	2.8	subtidal			x		1	No	-	Yes	-13.9	2021	x				-	-	-	-	x	x	-	a	x
1228	39E	2.8	subtidal	x				1	No	-	Yes	-14.1	2021	x		x	Reoccupy DENW6721-SSED-15A-2014 (2014) in area with > 1.5 ft of deepening	x	x	x	x	-	-	-	-	-
1229	39E	2.8	subtidal	x				1	No	-	Yes	-5.1	2021			x	Reoccupy DENW6721-SSED-13A-2014 (2014) in area with > 1.5 ft of deepening	x	x	a	x	-	-	-	-	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1230	39E	2.8	subtidal	a				3	Yes	Yes	No	-18.6	2021			x	Reoccupy DENW6721-SSED-18A-2014 (2014); analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1231	39F	2.8	intertidal	x	x			2	No	-	No	3.9	2003	x				x	x	a	x	x	x	x	x	-
1232	39F	2.8	intertidal	x				2	No	-	No	-2.0	2021			x	Reoccupy DENW6721-SSED-09-2014 (2014); total PCB EF of 1.0	x	x	a	x	-	-	-	-	-
1233	39F	2.8	intertidal	x	x			2	No	-	No	no data	-		x		Additional sample in bank area adjacent to assumed active remedy	x	x	a	x	x	x	x	a	-
1234	39F	2.8	subtidal			x		1	No	-	Yes	-8.6	2021		x		Additional bounding sample near assumed active remedy	-	-	-	-	x	x	-	a	x
1235	40B	2.8	intertidal	x	x			3	No	-	No	1.9	2021	x				x	x	a	x	x	x	x	x	-
1236	40C	2.8	subtidal	x		x		3	No	-	Yes	-12.0	2022	x				x	x	a	x	x	-	-	-	-
1237	40C	2.8	subtidal	x				3	No	-	Yes	-9.6	2003			x	Reoccupy LDW-SS2106-D (2011); 1,4-dichlorobenzene EF of 1.1	x	x	a	x	-	-	-	-	-
1238	40D	2.8	subtidal	x				3	Yes	No	Yes	-17.6	2022	x		x	Reoccupy SD-PER201 (2015); total PCB EF of 1.4	x	x	a	x	-	-	-	-	-
1239	40E	2.8	subtidal	x		x		1	No	-	Yes	-17.5	2021	x				x	x	a	x	x	x	-	a	x
1240	40E	2.8	subtidal	x				1	No	-	Yes	-14.6	2021			x	Reoccupy DENW6721-SSED-17A-2014 (2014); total PCB EF of 0.92	x	x	a	x					
1241	40F	2.8	subtidal			x		1	No	-	Yes	-12.1	2021	x				-	-	-	-	x	x	-	x	x
1242	40F	2.8	subtidal	x				1	No	-	Yes	-13.1	2021	x		x	Reoccupy DENW6721-SSED-11-2014 (2014); total PCB EF of 1.3	x	x	a	x	-	-	-	-	-
1243	40F	2.8	subtidal	a				1	No	-	Yes	-9.6	2021			x	Reoccupy DENW6721-SSED-10-2014 (2014); total PCB EF of 1.1; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1244	40G	2.8	subtidal			x		2	No	-	Yes	-8.9	2021	x				-	-	-	-	x	-	-	-	-
1245	40G	2.8	subtidal	x				2	No	-	Yes	-9.6	2021			x	Reoccupy SD-PER518 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 1.8[4]	x	a	a	a	-	-	-	-	-
1246	41B	2.8	intertidal		x			3	No	-	No	-0.7	2021	x				-	-	-	-	x	x	x	a	-
1247	41C	2.9	subtidal	x		x		1	No	-	Yes	-10.9	2022	x	x			x	x	a	x	x	x	-	a	x
1248	41D	2.9	subtidal	x		x		3	Yes	No	Yes	-17.5	2021	x				x	x	a	x	x	-	-	-	-
1249	41E	2.9	subtidal	x		x		1	No	-	Yes	-12.8	2021	x				x	x	a	x	x	x	-	a	x
1250	41F	2.9	subtidal	x		x		1	No	-	Yes	-12.2	2021	x				x	x	a	x	x	x	-	a	x
1251	41F	2.8	subtidal	x				1	No	-	Yes	-14.0	2021			x	Reoccupy SD-PER507 (2015); total PCB EF of 1.7	x	x	a	x	-	-	-	-	-
1252	42A	2.8	subtidal			x		2	No	-	Yes	-14.2	2021	x				-	-	-	-	x	-	-	-	-
1253	42A	2.8	subtidal	x				2	No	-	Yes	-12.1	2021			x	Reoccupy SD-PER515 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 0.92[4]	x	a	a	a	-	-	-	-	-
1254	42A	2.8	subtidal	x				2	No	-	Yes	-14.6	2021			x	Reoccupy SD-PER516 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 0.58[4]	x	a	a	a	-	-	-	-	-
1255	42A	2.8	subtidal	x				2	No	-	Yes	-14.5	2021			x	Reoccupy SD-PER517 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 0.73[4]	x	a	a	a	-	-	-	-	-

Location ID	Grid Cell	RM	Tidal Category	Interval Type[1]				Recovery Category	In FNC?	Shoaling Area	Potential Vessel Scour Area	Mudline Elevation (ft MLLW)	Bathy-metry Survey Year[2]	Rationale			Notes	Analytes for Surface Sample[3]				Analytes for Subsurface Sample[3]				
				0-10 cm	0-45 cm	0-60 cm	Shoal							Grid Coverage	Bounding	Reoccupation		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	cPAHs	Dioxins/ Furans	Other Benthic Risk Drivers
1256	42B	2.8	subtidal			x		2	No	-	Yes	-11.2	2021	x				-	-	-	-	x	-	-	-	-
1257	42B	2.8	subtidal	x				2	No	-	Yes	-11.5	2021			x	Reoccupy SD-PER513 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 4.2[4]	x	a	a	a	-	-	-	-	-
1258	42B	2.8	subtidal	x				2	No	-	Yes	-11.0	2021			x	Reoccupy SD-PER510 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 2.3[4]	x	a	a	a	-	-	-	-	-
1259	42B	2.9	subtidal	x				2	No	-	Yes	-10.8	2021			x	Reoccupy SD-PER511 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 1.3[4]	x	a	a	a	-	-	-	-	-
1260	42B	2.9	subtidal	x				2	No	-	Yes	-11.4	2021			x	Reoccupy SD-PER514 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 0.83[4]	x	a	a	a	-	-	-	-	-
1261	42C	2.8	subtidal			x		2	No	-	Yes	-10.6	2021	x				-	-	-	-	x	-	-	-	-
1262	42C	2.8	subtidal	x				2	No	-	Yes	-10.3	2021			x	Reoccupy SD-PER509 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 2.3[4]	x	a	a	a	-	-	-	-	-
1263	42C	2.8	subtidal	x				2	No	-	Yes	-8.9	2021			x	Reoccupy SD-PER508 (2015) to evaluate PCB trends in Slip 4; total PCB EF of 0.83[4]	x	a	a	a	-	-	-	-	-
1264	43B	2.9	intertidal	x	x			3	No	-	No	-1.6	2021	x				x	x	x	x	x	x	x	x	-
1265	43C	2.9	subtidal	x		x		1	No	-	Yes	-14.3	2022	x				x	x	a	x	x	x	-	a	x
1266	43D	2.9	subtidal	x		x		1	Yes	No	Yes	-17.9	2022	x				x	x	a	x	x	x	-	a	x
1267	43D	2.9	subtidal	x				3	Yes	No	Yes	-16.8	2021			x	Reoccupy SD-PER202 (2015); total PCB EF of 1.0	x	x	a	x	-	-	-	-	-
1268	44B	2.9	intertidal		x			3	No	-	No	-1.3	2021	x				-	-	-	-	x	x	x	a	-
1269	44B	2.9	intertidal	a	x			3	No	-	No	-0.1	2021		x		Additional sample adjacent to possible upland source; Tier 2 surface sediment sample will be analyzed if 0-45 cm samples is below RALs. A split sample from the 0-10 cm interval will also be collected (one 8-oz jar).	a	a	a	a	x	x	x	a	-
1270	44C	2.9	subtidal	x		x		1	No	-	Yes	-14.4	2022	x				x	x	a	x	x	x	-	a	x
1271	44D	2.9	subtidal	x		x		1	Yes	No	Yes	-16.8	2021	x				x	x	a	x	x	x	-	a	x
1272	45B	3	intertidal	x	x			3	No	-	No	0.2	2021	x				x	x	a	x	x	x	x	x	-
1273	45B	3	subtidal	a				3	No	-	Yes	-8.3	2003			x	Reoccupy LDW18-SS-118 (2018); total PCB EF of 1.0; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1274	45B	3	intertidal	a				3	No	-	No	-3.0	2021			x	Reoccupy SD-PER206 (2015); total PCB EF of 1.5; analysis of this Tier 2 sample dependent on the results of the adjacent Tier 1 samples	a	a	a	a	-	-	-	-	-
1275	45B	3	intertidal	a	x			3	No	-	No	1.3	2021		x		Additional sample adjacent to possible upland source; Tier 2 surface sediment sample will be analyzed if 0-45 cm samples is below RALs. A split sample from the 0-10 cm interval will also be collected (one 8-oz jar).	a	a	a	a	x	x	x	a	-
1276	45C	3	subtidal	x		x		1	No	-	Yes	-13.9	2022	x				x	x	a	x	x	x	-	a	x
1277	45D	3	subtidal	x		x		1	Yes	No	Yes	-17.7	2021	x				x	x	a	x	x	x	-	a	x

Notes:
1. An "x" indicates Tier 1 samples. An "a" indicates Tier 2 (archive) samples.
2. Bathymetry data from the 2003 survey was used when data from the 2021 survey and 2022 reconnaissance were not available. Mudline elevations based on the 2003 bathymetry have a higher level of uncertainty. For locations for which bathymetry data are not available (i.e., data were not collected in 2003, 2021, or 2022 because of obstructions), information—including tidal category and whether a location is a shoaling area or potential vessel scour area—was estimated based on surrounding areas.
3. The columns indicating analytes by sample type use green shading to show that sample intervals will be collected. In green-shaded cells, an x indicates a Tier 1 analysis, an "a" indicates an archive sample for potential tier 2 analysis, and a dash (-) indicates that the RAL is not applicable for that sample (e.g., for cPAHs in the subsurface sample for location 1259 in grid 45C). A single dash (-) without green shading indicates that a sample will not be collected in a given interval (e.g., no subsurface sample will be collected at location 1258 in grid 45B). The analytes in this table reflect applicable RALs for each sample; however, sediment will be archived to allow for potential analysis of additional RC1 analytes at all locations that may be affected by the recovery category review following the resolution of the bathymetry data gaps. See Table D-3 for rationale regarding samples selected for Tier 1 dioxin/furan analysis.
4. To assess current conditions in Slip 4 (grids 40G and 42ABC), 10 Boeing Plant 2 perimeter monitoring stations (508, 509, 510, 511, 513, 514, 515, 516, 517, and 518) will be re-occupied early in the Phase I field effort (Map 4c). At these stations, 0- to 10-cm samples will be collected and analyzed for PCBs. Based on the results, either additional Phase I sampling and analysis will be conducted in these four grid cells, or the area will be designated as an active remedy area for further characterization during Phase II

a: archive (Tier 2 sample to be collected and archived for potential analysis)
BEHP: bis(2-ethylhexyl) phthalate
COC: contaminant of concern
cPAH: carcinogenic polycyclic aromatic hydrocarbon
EF: exceedance factor
FNC: Federal Navigation Channel
MLLW: mean lower low water
PAH: polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl
RAL: remedial action level
RM: river mile
x: Tier 1 sample to be collected and analyzed

Table D-3
Rationale for Selected Tier 1 Dioxin/Furan Samples

Location ID	Grid Cell	RM	Tidal Category	Recovery Category	Dioxin/Furan Sample Interval Type[1]				Rationale for Selected Tier 1 Dioxin/Furan Sample
					0–10 cm	0–45 cm	0–60 cm	Shoal	
1004	1F	1.6	subtidal	1	x		x		spatial coverage
1023	5D	1.7	subtidal	3	x			x	spatial coverage
1028	6A	1.7	subtidal	1			x		spatial coverage
1031	7A	1.7	subtidal	1	x				spatial coverage
1035	8B	1.7	intertidal	3	x	x			spatial coverage
1037	9B	1.8	subtidal	2	x		na (no RAL)[2]		targeted sampling – adjacent to area with pre-dredging dioxin/furan RAL exceedances (no subsurface dioxin/furan RAL)
1043	9G	1.8	intertidal	3	a (Tier 2)	x			spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in grid 5H)
1045	10B	1.8	subtidal	1	x		x		targeted sampling – adjacent to area with pre-dredging dioxin/furan RAL exceedances
1046	10C	1.8	subtidal	3				x	targeted sampling – adjacent to area with dioxin/furans > 20 ng/kg
1051	11A	1.9	intertidal	3	x	x			targeted sampling – adjacent to area with pre-dredging dioxin/furan RAL exceedances
1052	11B	1.9	subtidal	2	x		na (no RAL)[2]		targeted sampling – adjacent to area with pre-dredging dioxin/furan RAL exceedances and dioxin/furans > 20 ng/kg (no subsurface dioxin/furan RAL)
1053	11D	1.9	subtidal	3	x			x	targeted sampling – adjacent to area with dioxin/furans > 20 ng/kg
1059	12C	1.9	subtidal	3	x			x	targeted sampling – adjacent to area with dioxin/furans > RAL
1060	12D	1.9	subtidal	3	x			x	targeted sampling – adjacent to area with dioxin/furans > RAL
1064	13C	1.9	subtidal	3	x			x	targeted sampling – adjacent to area with dioxin/furans > RAL
1065	13D	1.9	subtidal	3	x			x	targeted sampling – adjacent to area with dioxin/furans > RAL
1066	13E	1.9	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (no subsurface dioxin/furan RAL)
1070	14C	2	subtidal	1	x			x	targeted sampling – adjacent to area with dioxin/furans > RAL
1071	14F	2	intertidal	3	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1075	15D	2	subtidal	1			x		targeted sampling – adjacent to area with dioxin/furans > RAL
1077	15F	2	subtidal	3	x		na (no RAL)[2]		spatial coverage (surface only; no subsurface dioxin/furan RAL)
1086	17A‴	2.1	intertidal	3	a (Tier 2)	x			spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in grid 17A‴)
1089	17A	2.1	intertidal	3	x	x			spatial coverage
1095	18B	2.1	subtidal	3	x		na (no RAL)[2]		spatial coverage (no subsurface dioxin/furan RAL)
1097	18D	2.1	intertidal	2	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1105	20D	2.1	subtidal	2	x				targeted sampling – adjacent to area with dioxin/furans > RAL
1114	23A	2.2	intertidal	3	x	a (Tier 2)			spatial coverage (surface only; have existing dioxin/furan subsurface sediment data in this grid)
1127	25A	2.2	intertidal	2	x	x			spatial coverage
1135	26A	2.3	intertidal	2	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1136	26B	2.3	intertidal	2	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1142	27B	2.3	intertidal	2	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1143	27C	2.3	subtidal	3	x			x	spatial coverage
1148	28B	2.4	intertidal	2		x			targeted sampling – adjacent to area with dioxin/furans > RAL
1154	28H	2.4	intertidal	3	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL (2005 RI/FS sample)
1160	29G	2.4	intertidal	1	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL (2005 RI/FS sample)
1162	30C	2.4	subtidal	3	x			x	spatial coverage
1167	31A	2.5	intertidal	3	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL
1168	31B	2.5	subtidal	2	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (no subsurface dioxin/furan RAL)
1176	32B	2.5	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (no subsurface dioxin/furan RAL)

Location ID	Grid Cell	RM	Tidal Category	Recovery Category	Dioxin/Furan Sample Interval Type[1]				Rationale for Selected Tier 1 Dioxin/Furan Sample
					0–10 cm	0–45 cm	0–60 cm	Shoal	
1186	33F	2.6	subtidal	1			x		spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in this grid)
1191	34D	2.6	subtidal	3	x			x	spatial coverage
1194	34F	2.6	intertidal	3		x			spatial coverage
1202	36A	2.7	intertidal	3	x	x			targeted sampling – adjacent to area with dioxin/furans > RAL (2009 RI/FS sample)
1203	36B	2.7	subtidal	2	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (2009 RI/FS sample) (no subsurface dioxin/furan RAL)
1209	36F	2.7	intertidal	3	a (Tier 2)	x			spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in this grid)
1211	37A	2.7	intertidal	3	x				targeted sampling – reoccupying 2009 RI/FS sample with dioxin/furans > RAL
1212	37B	2.7	subtidal	1	x		x		targeted sampling – adjacent to area with dioxin/furans > RAL (2009 RI/FS sample)
1215	37E	2.7	subtidal	1	x		x		targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL
1217	37F	2.7	intertidal	1		x			targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL (subsurface only; have existing dioxin/furan surface sediment data in this grid)
1222	38E	2.7	subtidal	1	x		x		targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL
1223	38F	2.8	intertidal	2	x	x			targeted sampling (bank area sample) – adjacent to Beach 6 area with dioxin/furans > RAL
1226	39D	2.8	subtidal	1	x			x	targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL
1228	39E	2.8	subtidal	1	x				targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL
1231	39F	2.8	intertidal	2	a (Tier 2)	x			targeted sampling – adjacent to Beach 6 area with dioxin/furans > RAL (subsurface only; have existing dioxin/furan surface sediment data in this grid)
1235	40B	2.8	intertidal	3	a (Tier 2)	x			spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in grid 41B)
1241	40F	2.8	subtidal	1			x		targeted sampling – south of Beach 6 area and Slip 4 structure with dioxin/furans > RAL
1264	43B	2.9	intertidal	3	x	x			spatial coverage
1272	45B	3	intertidal	3	a (Tier 2)	x			spatial coverage (subsurface only; have existing dioxin/furan surface sediment data in grid 44B)
Under-structure samples									
1804	-	1.7	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with pre-dredging dioxin/furan RAL exceedances (no subsurface dioxin/furan RAL)
1815	-	2.7	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (no subsurface dioxin/furan RAL)
1816	-	2.8	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > 20 ng/kg (no subsurface dioxin/furan RAL)
1818	-	2.8	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans > RAL (no subsurface dioxin/furan RAL)
1819	-	2.8	subtidal	3	x		na (no RAL)[2]		targeted sampling – adjacent to area with dioxin/furans of approximately 20 ng/kg (no subsurface dioxin/furan RAL)

Notes:
1. An "x" indicates Tier 1 dioxin/furan samples. An "a" indicates Tier 2 (archive) dioxin/furan samples.
2. A Tier 1 sample is being collected at this location for PCBs analysis, but there is no applicable RAL for dioxins/furans at this location.
a: archive (Tier 2 sample to be collected and archived for potential analysis)
FS: feasibility study
ID: identification
na: not applicable
PCB: polychlorinated biphenyl
RAL: remedial action level
RI: remedial investigation
RM: river mile
x: Tier 1 sample to be collected and analyzed

Table D-4
Sample Location Details

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1000	1B	1.6	subtidal	x				-	No	-	-34.3	2003			1268493	203320	-122.339406	47.547414
1001	1C	1.6	subtidal	x				-	Yes	-30	-30.3	2021			1268588	203352	-122.339024	47.547506
1002	1D	1.6	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-27.8	2021	2.2 ft (66 cm)	-30 to -32 ft (3)	1268704	203391	-122.338558	47.547621
1003	1E	1.6	subtidal	x		x		RC1 in subtidal area	No	-	-24.1	2021			1268778	203415	-122.338261	47.547691
1004	1F	1.6	subtidal	x		x		RC1 in subtidal area	No	-	-7.1	2021			1268873	203447	-122.337879	47.547783
1005	2B	1.6	subtidal	x				-	No	-	-33.6	2003			1268557	203130	-122.339134	47.546898
1006	2C	1.6	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-29.4	2021	0.6 ft (17 cm)	surface to -32 ft (2)	1268652	203162	-122.338752	47.546990
1007	2D	1.6	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-27.3	2021	2.7 ft (82 cm)	-30 to -32 ft (3)	1268767	203201	-122.338287	47.547104
1008	2E	1.6	subtidal	x		x		RC1 in subtidal area	No	-	-25.0	2021			1268841	203225	-122.337990	47.547174
1009	2F	1.6	subtidal			x		potential vessel scour area	No	-	-11.4	2021			1268936	203257	-122.337608	47.547266
1010	3B	1.7	subtidal	x				-	No	-	-32.9	2003			1268620	202941	-122.338862	47.546382
1011	3C	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-29.3	2021	0.8 ft (23 cm)	surface to -32 ft (2)	1268715	202972	-122.338481	47.546474
1012	3D	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-28.1	2021	1.9 ft (58 cm)	-30 to -32 ft (3)	1268831	203012	-122.338015	47.546588
1013	3E	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-32.7	2003			1268905	203036	-122.337718	47.546658
1014	3F	1.7	subtidal	x		x		potential vessel scour area	No	-	no data	-			1269000	203068	-122.337336	47.546750
1015	4B	1.7	subtidal	x				-	No	-	-33.0	2003			1268684	202751	-122.338590	47.545865
1016	4C	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-29.7	2021	0.4 ft (11 cm)	surface to -32 ft (2)	1268778	202783	-122.338209	47.545957
1017	4D	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-28.3	2021	1.7 ft (51 cm)	-30 to -32 ft (3)	1268894	202822	-122.337743	47.546071
1018	4E	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-33.4	2003			1268968	202846	-122.337446	47.546141
1019	4F	1.7	subtidal			x		RC1 in subtidal area	No	-	-12.1	2021			1269063	202878	-122.337065	47.546233
1020	4G	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-10.3	2021			1269166	202901	-122.336649	47.546302
1021	5B	1.7	subtidal	x				-	No	-	-31.0	2003			1268747	202561	-122.338318	47.545349
1022	5C	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-29.2	2021	0.8 ft (25 cm)	surface to -32 ft (2)	1268842	202593	-122.337937	47.545441
1023	5D	1.7	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-28.6	2021	1.4 ft (42 cm)	-30 to -32 ft (3)	1268937	202625	-122.337555	47.545533
1024	5E	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-22.7	2021			1269050	202663	-122.337100	47.545644
1025	5F	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-17.3	2021			1269126	202688	-122.336793	47.545717
1026	5G	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-11.6	2021			1269221	202720	-122.336411	47.545809
1027	5H	1.8	intertidal		x			intertidal	No	-	no data	-			1269318	202721	-122.336021	47.545816
1028	6A	1.7	subtidal			x		RC1 in subtidal area	No	-	-13.4	2021			1269277	202996	-122.336207	47.546570
1029	6B	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-12.6	2021			1269376	203125	-122.335816	47.546928
1030	6C	1.7	subtidal	x		x		potential vessel scour area	No	-	-9.7	2021			1269523	203309	-122.335236	47.547439
1031	7A	1.7	subtidal	x				-	No	-	-17.8	2021			1269332	202961	-122.335984	47.546477
1032	7B	1.7	subtidal	x		x		RC1 in subtidal area	No	-	-15.0	2021			1269426	203097	-122.335613	47.546854
1033	7C	1.7	subtidal	x		x		potential vessel scour area	No	-	-6.0	2021			1269586	203247	-122.334977	47.547275
1034	8A	1.7	intertidal	x	x			intertidal	No	-	0.1	2021			1269436	202879	-122.335556	47.546255
1035	8B	1.7	intertidal	x	x			intertidal	No	-	3.3	2021			1269542	203046	-122.335140	47.546720
1036	9A	1.8	subtidal	x		x		potential vessel scour area	No	-	-19.5	2003			1268716	202340	-122.338428	47.544740
1037	9B	1.8	subtidal	x		x		potential vessel scour area	No	-	-21.8	2021			1268790	202364	-122.338128	47.544811
1038	9C	1.8	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-28.6	2021	1.4 ft (44 cm)	-30 to -32 ft (3)	1268905	202403	-122.337665	47.544925
1039	9D	1.8	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-26.7	2021	3.3 ft (100 cm)	-30 to -32 ft (4)	1269000	202435	-122.337284	47.545017
1040	9E	1.8	subtidal			x		potential vessel scour area	No	-	-21.9	2021			1269095	202467	-122.336902	47.545109
1041	9F	1.8	intertidal	x	x			intertidal	No	-	-2.2	2021			1269203	202488	-122.336469	47.545173
1042	9F	1.8	intertidal	a	x			intertidal	No	-	no data	-			1269252	202429	-122.336262	47.545013
1043	9G	1.8	intertidal	x	x			intertidal	No	-	no data	-			1269285	202530	-122.336139	47.545293

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1044	10A	1.8	subtidal	x		x		RC1 in subtidal area	No	-	-15.7	2003			1268779	202150	-122.338156	47.544224
1045	10B	1.8	subtidal	x		x		RC1 in subtidal area	No	-	-19.8	2021			1268874	202182	-122.337774	47.544316
1046	10C	1.8	subtidal				x	shoal (elevation above -30 ft MLLW)	Yes	-30	-25.2	2021	4.8 ft (145 cm)	-30 to -32 ft (4)	1268969	202214	-122.337393	47.544408
1047	10D	1.8	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-24.1	2021	5.9 ft (181 cm)	-30 to -32 ft (4)	1269064	202245	-122.337012	47.544500
1048	10E	1.8	subtidal	x		x		potential vessel scour area	No	-	-15.4	2021			1269159	202277	-122.336630	47.544592
1049	10F	1.8	intertidal	x	x			intertidal	No	-	no data	-			1269246	202314	-122.336281	47.544698
1050	10F	1.8	intertidal	a	x			intertidal	No	-	no data	-			1269238	202232	-122.336307	47.544473
1051	11A	1.9	intertidal	x	x			intertidal (or RC1 in subtidal area if intertidal is not sampleable)	No	-	no data	-			1268818	201974	-122.337985	47.543744
1052	11B	1.9	subtidal	x		x		potential vessel scour area	No	-	-18.0	2003			1268946	201998	-122.337468	47.543815
1053	11D	1.9	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-26.1	2021	3.9 ft (120 cm)	-30 to -32 ft (4)	1269127	202056	-122.336740	47.543984
1054	11E	1.9	subtidal	x		x		potential vessel scour area	No	-	-16.9	2021			1269222	202088	-122.336358	47.544076
1055	11F	1.9	intertidal	x	x			intertidal	No	-	0.1	2021			1269288	202132	-122.336094	47.544200
1056	11F	1.9	subtidal	a				reoccupation	No	-	no data	-			1269292	202053	-122.336072	47.543985
1057	12A	1.9	subtidal			x		potential vessel scour area	No	-	-6.8	2021			1269040	201818	-122.337072	47.543328
1058	12B	1.9	subtidal			x		potential vessel scour area	No	-	-14.6	2021			1269131	201762	-122.336701	47.543179
1059	12C	1.9	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-24.0	2021	6 ft (183 cm)	-30 to -32 ft (4)	1269205	201830	-122.336408	47.543368
1060	12D	1.9	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-22.2	2021	7.8 ft (237 cm)	-30 to -32 ft (4)	1269278	201897	-122.336115	47.543557
1061	12E	1.9	subtidal	x		x		potential vessel scour area	No	-	no data	-			1269370	201953	-122.335750	47.543716
1062	13A	2	intertidal	x	x			intertidal	No	-	3.2	2021			1269259	201531	-122.336163	47.542551
1063	13B	1.9	subtidal	a				reoccupation	No	-	-11.8	2021			1269191	201668	-122.336451	47.542924
1064	13C	1.9	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-25.4	2021	4.6 ft (141 cm)	-30 to -32 ft (4)	1269340	201682	-122.335849	47.542971
1065	13D	1.9	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-23.6	2021	6.4 ft (195 cm)	-30 to -32 ft (4)	1269422	201720	-122.335520	47.543079
1066	13E	1.9	subtidal	x		x		potential vessel scour area	No	-	no data	-			1269499	201803	-122.335214	47.543311
1067	13E	1.9	intertidal	a	x			intertidal	No	-	no data	-			1269446	201909	-122.335436	47.543598
1068	14A	2	intertidal	x	x			intertidal	No	-	4.0	2003			1269321	201457	-122.335909	47.542353
1069	14B	2	subtidal			x		potential vessel scour area	No	-	-7.2	2021			1269401	201467	-122.335584	47.542385
1070	14C	2	subtidal	x			x	shoal (elevation above -30 ft MLLW)	Yes	-30	-27.8	2021	2.2 ft (68 cm)	-30 to -32 ft (3)	1269484	201543	-122.335256	47.542598
1071	14F	2	intertidal	x	x			intertidal	No	-	no data	-			1269674	201718	-122.334499	47.543086
1072	15A	2	intertidal	x	x			intertidal	No	-	1.5	2021			1269495	201275	-122.335187	47.541864
1073	15B	2	subtidal	x		x		potential vessel scour area	No	-	-6.5	2021			1269518	201337	-122.335101	47.542035
1074	15C	2	subtidal	x		x		RC1 in subtidal area	Yes	-20	-26.9	2021			1269619	201396	-122.334698	47.542201
1075	15D	2	subtidal			x		RC1 in subtidal area	Yes	-20	-28.1	2021			1269684	201455	-122.334439	47.542366
1076	15E	2	subtidal	x		x		potential vessel scour area	No	-	-12.7	2021			1269758	201552	-122.334148	47.542636
1077	15F	2	subtidal	x		x		potential vessel scour area	No	-	-6.8	2021			1269831	201590	-122.333853	47.542744
1078	15G	2	intertidal	x	x			intertidal	No	-	1.2	2003			1269930	201603	-122.333453	47.542785
1079	16A'	2.1	intertidal	x	x			intertidal	No	-	no data	-			1269538	201037	-122.334996	47.541212
1080	16A	2.1	intertidal		x			intertidal	No	-	no data	-			1269598	201105	-122.334760	47.541402
1081	16B	2.1	intertidal	x	x			intertidal	No	-	-2.5	2021			1269647	201144	-122.334564	47.541511
1082	16C	2.1	subtidal	x		x		RC1 in subtidal area	Yes	-20	-25.1	2021			1269761	201256	-122.334111	47.541825
1083	16D	2.1	subtidal	x		x		RC1 in subtidal area	Yes	-20	-27.4	2021			1269819	201307	-122.333880	47.541969
1084	16E	2.1	subtidal	x		x		RC1 in subtidal area	No	-	-21.9	2021			1269867	201348	-122.333690	47.542083
1085	16F	2.1	subtidal	x		x		potential vessel scour area	No	-	-14.5	2021			1269966	201442	-122.333294	47.542347
1086	17A'''	2.1	intertidal	x	x			intertidal	No	-	no data	-			1269571	200635	-122.334831	47.540112
1087	17A''	2.1	intertidal		x			intertidal	No	-	no data	-			1269585	200822	-122.334787	47.540627
1088	17A'	2.1	intertidal	x	x			intertidal	No	-	no data	-			1269659	200890	-122.334494	47.540816
1089	17A	2.1	intertidal	x	x			intertidal	No	-	3.2	2003			1269733	200957	-122.334201	47.541005

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1090	17B	2.1	subtidal	x		x		potential vessel scour area	No	-	-10.2	2021			1269807	201025	-122.333908	47.541194
1091	17C	2.1	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.0	2021	2 ft (62 cm)	-20 to -22 ft (3)	1269880	201092	-122.333615	47.541383
1092	17E	2.1	subtidal	x				-	No	-	-19.4	2021			1270028	201227	-122.333029	47.541761
1093	17E	2.1	subtidal			x		potential vessel scour area	No	-	-19.4	2021			1270052	201248	-122.332932	47.541818
1094	17F	2.1	subtidal	x		x		potential vessel scour area	No	-	-15.3	2021			1270102	201295	-122.332735	47.541951
1095	18B	2.1	subtidal	x		x		potential vessel scour area	No	-	-8.5	2021			1270314	201633	-122.331902	47.542888
1096	18C	2.1	subtidal	x		x		potential vessel scour area	No	-	-5.0	2021			1270498	201654	-122.331158	47.542955
1097	18D	2.1	intertidal	x	x			intertidal	No	-	3.2	2003			1270750	201632	-122.330137	47.542909
1098	19A	2.1	subtidal	x		x		potential vessel scour area	No	-	-9.0	2021			1270097	201571	-122.332777	47.542707
1099	19B	2.1	subtidal	x		x		potential vessel scour area	No	-	-12.0	2021			1270297	201569	-122.331968	47.542713
1100	19C	2.1	subtidal	x		x		potential vessel scour area	No	-	-13.9	2021			1270497	201568	-122.331158	47.542719
1101	19D	2.1	subtidal			x		potential vessel scour area	No	-	-11.5	2021			1270696	201566	-122.330350	47.542726
1102	20A	2.1	subtidal	x		x		potential vessel scour area	No	-	-13.7	2021			1270096	201471	-122.332773	47.542433
1103	20B	2.1	subtidal	x		x		potential vessel scour area	No	-	-13.0	2021			1270296	201470	-122.331963	47.542439
1104	20C	2.1	subtidal	x		x		potential vessel scour area	No	-	-16.2	2003			1270496	201468	-122.331154	47.542445
1105	20D	2.1	subtidal	x				-	No	-	-15.8	2003			1270695	201466	-122.330346	47.542452
1106	21B	2.1	subtidal	x		x		potential vessel scour area	No	-	-14.2	2021			1270256	201348	-122.332113	47.542105
1107	21C	2.1	subtidal	x		x		potential vessel scour area	No	-	-15.0	2021			1270456	201343	-122.331304	47.542101
1108	22B	2.1	subtidal	x		x		potential vessel scour area	No	-	no data	-			1269942	200877	-122.333349	47.540797
1109	22C	2.1	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.1	2021	1.9 ft (57 cm)	-20 to -22 ft (3)	1270015	200945	-122.333056	47.540986
1110	22D	2.1	subtidal	x				-	Yes	-20	-24.7	2021			1270089	201012	-122.332763	47.541175
1111	22E	2.1	subtidal	x		x		potential vessel scour area	No	-	-18.7	2003			1270184	201098	-122.332385	47.541415
1112	22F	2.1	subtidal	x				-	No	-	-15.2	2003			1270237	201148	-122.332177	47.541554
1113	22F	2.1	subtidal	a				reoccupation	No	-	no data	-			1270299	201075	-122.331919	47.541358
1114	23A	2.2	intertidal	x	x			intertidal	No	-	-1.5	2003			1270016	200683	-122.333034	47.540269
1115	23B	2.2	subtidal			x		potential vessel scour area	No	-	-14.4	2003			1270077	200730	-122.332791	47.540400
1116	23D	2.2	subtidal	x				-	Yes	-20	-23.5	2021			1270224	200865	-122.332205	47.540778
1117	23E	2.2	subtidal	x		x		potential vessel scour area	No	-	-17.6	2021			1270298	200933	-122.331911	47.540968
1118	23F	2.2	subtidal	x		x		potential vessel scour area	No	-	no data	-			1270372	201000	-122.331618	47.541157
1119	23F	2.2	subtidal	a				reoccupation	No	-	no data	-			1270315	201060	-122.331853	47.541318
1120	24A	2.2	intertidal	x	x			intertidal	No	-	no data	-			1270142	200543	-122.332513	47.539891
1121	24A	2.2	intertidal		x			intertidal	No	-	no data	-			1270220	200469	-122.332191	47.539692
1122	24B	2.2	subtidal	x		x		potential vessel scour area	No	-	-11.7	2003			1270212	200582	-122.332232	47.540003
1123	24C	2.2	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-17.5	2021	2.5 ft (75 cm)	-20 to -22 ft (3)	1270286	200650	-122.331939	47.540192
1124	24D	2.2	subtidal	x				-	Yes	-20	-22.4	2021			1270359	200718	-122.331646	47.540381
1125	24E	2.2	subtidal	x		x		potential vessel scour area	No	-	-15.5	2003			1270433	200785	-122.331353	47.540571
1126	24F	2.2	intertidal	x	x			intertidal	No	-	-1.7	2021			1270491	200823	-122.331121	47.540677
1127	25A	2.2	intertidal	x	x			intertidal	No	-	-2.9	2003			1270270	200394	-122.331981	47.539490
1128	25B	2.2	subtidal	x		x		potential vessel scour area	No	-	-12.2	2003			1270347	200435	-122.331674	47.539606
1129	25B	2.3	subtidal	x				reoccupation	No	-	-7.9	2021			1270418	200366	-122.331381	47.539421
1130	25C	2.2	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-17.7	2021	2.3 ft (69 cm)	-20 to -22 ft (3)	1270421	200503	-122.331381	47.539795
1131	25D	2.2	subtidal	x				-	Yes	-20	-22.1	2021			1270495	200570	-122.331087	47.539984
1132	25E	2.2	subtidal	x		x		potential vessel scour area	No	-	-12.7	2003			1270568	200638	-122.330794	47.540174
1133	25F	2.2	intertidal	x	x			intertidal	No	-	-2.7	2021			1270616	200683	-122.330606	47.540301
1134	25F	2.2	intertidal	x	x			intertidal	No	-	-2.3	2021			1270560	200750	-122.330837	47.540482
1135	26A	2.3	intertidal	x	x			intertidal	No	-	3.4	2021			1270397	200278	-122.331460	47.539178
1136	26B	2.3	intertidal	x	x			intertidal	No	-	-1.5	2021			1270480	200257	-122.331123	47.539126

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1137	26C	2.3	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-15.8	2021	4.2 ft (127 cm)	-20 to -22 ft (4)	1270556	200355	-122.330822	47.539398
1138	26D	2.3	subtidal	x				-	Yes	-20	-21.7	2021			1270630	200423	-122.330529	47.539588
1139	26E	2.3	subtidal	x		x		potential vessel scour area	No	-	-12.5	2021			1270703	200490	-122.330236	47.539777
1140	26F	2.3	intertidal	x	x			intertidal	No	-	-1.8	2021			1270757	200536	-122.330024	47.539905
1141	26F	2.3	intertidal	x	x			intertidal	No	-	-2.1	2021			1270693	200602	-122.330286	47.540083
1142	27B	2.3	intertidal	x	x			intertidal	No	-	-0.8	2021			1270602	200127	-122.330617	47.538776
1143	27C	2.3	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-14.4	2021	5.6 ft (171 cm)	-20 to -22 ft (4)	1270691	200208	-122.330263	47.539001
1144	27D	2.3	subtidal	x				-	Yes	-20	-21.4	2021			1270765	200275	-122.329970	47.539191
1145	27E	2.3	subtidal	x		x		potential vessel scour area	No	-	-14.2	2022			1270838	200343	-122.329677	47.539380
1146	27F	2.3	intertidal	x	x			intertidal	No	-	-1.3	2021			1270912	200396	-122.329385	47.539529
1147	28A	2.4	intertidal	x	x			intertidal	No	-	no data	-			1270705	199947	-122.330188	47.538287
1148	28B	2.4	intertidal		x			intertidal	No	-	-1.3	2021			1270757	199988	-122.329981	47.538402
1149	28B	2.4	intertidal	x				reoccupation	No	-	1.1	2021			1270730	199950	-122.330085	47.538297
1150	28C	2.4	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-14.7	2021	5.3 ft (162 cm)	-20 to -22 ft (4)	1270826	200060	-122.329705	47.538604
1151	28E	2.4	subtidal	x		x		RC1 in subtidal area	No	-	-14.7	2021			1270974	200195	-122.329119	47.538983
1152	28F	2.4	subtidal	x		x		RC1 in subtidal area	No	-	-8.4	2021			1271047	200263	-122.328826	47.539172
1153	28G	2.4	subtidal			x		RC1 in subtidal area	No	-	-5.2	2021			1271121	200330	-122.328532	47.539361
1154	28H	2.4	intertidal	x	x			reoccupation	No	-	-2.5	2021			1271173	200382	-122.328326	47.539505
1155	29B	2.4	subtidal	x		x		RC1 in subtidal area	No	-	no data	-			1270888	199845	-122.329439	47.538018
1156	29C	2.4	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-17.1	2021	2.9 ft (87 cm)	-20 to -22 ft (3)	1270961	199913	-122.329146	47.538207
1157	29D	2.4	subtidal	x				-	Yes	-20	-21.0	2021			1271035	199980	-122.328853	47.538397
1158	29E	2.4	subtidal	x		x		RC1 in subtidal area	No	-	-16.2	2021			1271109	200048	-122.328560	47.538586
1159	29F	2.4	subtidal	x		x		RC1 in subtidal area	No	-	-9.7	2022			1271173	200116	-122.328307	47.538777
1160	29G	2.4	intertidal	x	x			intertidal	No	-	-3.7	2021			1271247	200292	-122.328022	47.539262
1161	30B	2.4	subtidal	x		x		RC1 in subtidal area	No	-	no data	-			1271023	199698	-122.328881	47.537621
1162	30C	2.4	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.5	2021	1.5 ft (45 cm)	-20 to -22 ft (3)	1271096	199765	-122.328588	47.537811
1163	30D	2.4	subtidal	x				-	Yes	-20	-20.5	2021			1271170	199833	-122.328295	47.538000
1164	30E	2.4	subtidal	x		x		RC1 in subtidal area	No	-	-16.9	2021			1271244	199900	-122.328002	47.538189
1165	30F	2.4	subtidal			x		RC1 in subtidal area	No	-	-9.2	2021			1271318	199968	-122.327709	47.538378
1166	30F	2.4	subtidal	x				reoccupation	No	-	-6.5	2021			1271354	199962	-122.327561	47.538364
1167	31A	2.5	intertidal	x	x			intertidal	No	-	no data	-			1271132	199470	-122.328419	47.537003
1168	31B	2.5	subtidal	x		x		potential vessel scour area	No	-	no data	-			1271158	199550	-122.328322	47.537224
1169	31C	2.5	subtidal				x	shoal (elevation above -20 ft MLLW)	Yes	-20	-15.9	2022	4.1 ft (125 cm)	-20 to -22 ft (4)	1271231	199618	-122.328029	47.537414
1170	31D	2.5	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-19.9	2022	0.1 ft (4 cm)	surface to -22 ft (2)	1271289	199672	-122.327800	47.537565
1171	31E	2.5	subtidal	x		x		RC1 in subtidal area	No	-	-20.0	2021			1271379	199753	-122.327443	47.537792
1172	31E	2.5	subtidal	x				reoccupation	No	-	-14.3	2021			1271449	199742	-122.327159	47.537766
1173	31F	2.5	subtidal	x		x		RC1 in subtidal area	No	-	-9.7	2021			1271453	199820	-122.327150	47.537981
1174	31F	2.5	subtidal	x				reoccupation	No	-	-11.1	2021			1271507	199743	-122.326924	47.537771
1175	31F	2.5	subtidal	x				-	No	-	-7.9	2021			1271397	199895	-122.327383	47.538182
1176	32B	2.5	subtidal	x		x		potential vessel scour area	No	-	no data	-			1271286	199410	-122.327792	47.536846
1177	32C	2.5	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-15.6	2003	4.4 ft (134 cm)	-20 to -22 ft (4)	1271367	199470	-122.327471	47.537017
1178	32E	2.5	subtidal	x		x		RC1 in subtidal area	No	-	-16.9	2021			1271514	199605	-122.326885	47.537395
1179	32F	2.5	subtidal	x		x		RC1 in subtidal area	No	-	-9.1	2021			1271581	199665	-122.326619	47.537562
1180	33A	2.5	intertidal	x	x			intertidal	No	-	no data	-			1271393	199202	-122.327345	47.536282
1181	33B	2.5	intertidal	x	x			intertidal	No	-	-1.7	2021			1271428	199255	-122.327205	47.536430
1182	33C	2.5	subtidal	x				-	No	-20	-9.8	2021			1271480	199302	-122.326999	47.536561
1183	33C	2.5	subtidal				x	shoal (elevation above -20 ft MLLW)	Yes	-20	-11.3	2021	8.7 ft (264 cm)	-20 to -22 ft (5)	1271457	199390	-122.327099	47.536801

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1184	33D	2.5	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-19.3	2021	0.7 ft (21 cm)	surface to -22 ft (2)	1271575	199390	-122.326619	47.536809
1185	33E	2.6	subtidal	x		x		RC1 in subtidal area	No	-	-16.1	2021			1271649	199458	-122.326326	47.536998
1186	33F	2.6	subtidal			x		RC1 in subtidal area	No	-	-5.4	2021			1271723	199526	-122.326033	47.537187
1187	33F	2.6	subtidal	a				reoccupation	No	-	-5.8	2021			1271755	199471	-122.325898	47.537039
1188	33F	2.6	subtidal	x		x		RC1 in subtidal area (located as close to structure as possible)	No	-	-7.2	2021			1271657	199593	-122.326306	47.537369
1189	34B	2.6	intertidal	x	x			intertidal	No	-	2.7	2021			1271560	199094	-122.326659	47.535995
1190	34C	2.6	subtidal			x		potential vessel scour area	No	-	-8.8	2021			1271627	199153	-122.326391	47.536160
1191	34D	2.6	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-17.7	2021	2.3 ft (71 cm)	-20 to -22 ft (3)	1271694	199227	-122.326125	47.536366
1192	34E	2.6	subtidal			x		RC1 in subtidal area	No	-	-16.3	2021			1271762	199301	-122.325859	47.536573
1193	34E	2.6	subtidal	x				reoccupation	No	-	-8.2	2021			1271862	199274	-122.325450	47.536505
1194	34F	2.6	intertidal		x			intertidal	No	-	-2.1	2021			1271829	199375	-122.325593	47.536780
1195	34F	2.6	intertidal	a				reoccupation	No	-	-1.2	2021			1271829	199405	-122.325594	47.536862
1196	34F	2.6	intertidal	a				reoccupation	No	-	1.3	2021			1271902	199313	-122.325292	47.536614
1197	35B	2.6	intertidal		x			intertidal	No	-	1.1	2003			1271708	198944	-122.326047	47.535593
1198	35C	2.6	subtidal			x		potential vessel scour area	No	-	-11.3	2021			1271775	199018	-122.325781	47.535799
1199	35D	2.6	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.8	2021	1.2 ft (37 cm)	-20 to -22 ft (3)	1271842	199092	-122.325515	47.536006
1200	35E	2.6	subtidal	x		x		RC1 in subtidal area	No	-	-14.5	2021			1271910	199167	-122.325249	47.536213
1201	35F	2.6	intertidal		x			intertidal	No	-	2.5	2021			1271977	199241	-122.324983	47.536419
1202	36A	2.7	intertidal	x	x			intertidal	No	-	no data	-			1271826	198752	-122.325555	47.535071
1203	36B	2.7	subtidal	x		x		potential vessel scour area	No	-	-5.3	2021			1271856	198810	-122.325437	47.535233
1204	36C	2.7	subtidal	x		x		potential vessel scour area	No	-	-13.4	2021			1271923	198884	-122.325171	47.535439
1205	36D	2.7	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-19.2	2021	0.8 ft (24 cm)	surface to -22 ft (2)	1271991	198958	-122.324905	47.535646
1206	36E	2.7	subtidal			x		RC1 in subtidal area	No	-	-13.1	2021			1272058	199032	-122.324639	47.535852
1207	36E	2.7	subtidal	x				reoccupation	No	-	-10.8	2021			1272062	199059	-122.324624	47.535926
1208	36E	2.6	subtidal	x				reoccupation	No	-	-13.2	2021			1272011	199091	-122.324833	47.536011
1209	36F	2.7	intertidal	x	x			intertidal	No	-	2.1	2021			1272125	199106	-122.324373	47.536059
1210	36F	2.7	intertidal		x			intertidal (in RC1 area)	No	-	-2.2	2021			1272166	199015	-122.324201	47.535812
1211	37A	2.7	intertidal	x				reoccupation	No	-	no data	-			1271917	198658	-122.325179	47.534819
1212	37B	2.7	subtidal	x		x		RC1 in subtidal area	No	-	-8.3	2003			1272004	198676	-122.324827	47.534872
1213	37C	2.7	subtidal	x		x		RC1 in subtidal area	No	-	-14.2	2003			1272072	198750	-122.324561	47.535079
1214	37D	2.7	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-19.0	2021	1 ft (29 cm)	surface to -22 ft (2)	1272139	198824	-122.324295	47.535285
1215	37E	2.7	subtidal	x		x		RC1 in subtidal area	No	-	-13.0	2021			1272206	198898	-122.324029	47.535492
1216	37F	2.7	intertidal		x			intertidal	No	-	2.6	2021			1272273	198972	-122.323762	47.535699
1217	37F	2.7	intertidal		x			intertidal (in RC1 area)	No	-	-3.0	2021			1272314	198880	-122.323591	47.535448
1218	37F	2.7	intertidal	x	x			intertidal (bank)	No	-	no data	-			1272335	198950	-122.323509	47.535641
1219	38B	2.7	subtidal	x				-	No	-	-9.8	2003			1272153	198541	-122.324217	47.534512
1220	38C	2.7	subtidal	x		x		RC1 in subtidal area	No	-	-13.4	2022			1272220	198615	-122.323950	47.534718
1221	38D	2.7	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.5	2021	1.5 ft (46 cm)	-20 to -22 ft (3)	1272287	198689	-122.323684	47.534925
1222	38E	2.7	subtidal	x		x		RC1 in subtidal area	No	-	-12.9	2021			1272354	198764	-122.323418	47.535132
1223	38F	2.8	intertidal	x	x			intertidal (bank)	No	-	no data	-			1272515	198811	-122.322771	47.535272
1224	39B	2.8	intertidal	x	x			intertidal	No	-	0.1	2021			1272301	198407	-122.323606	47.534151
1225	39C	2.8	subtidal	x		x		RC1 in subtidal area	No	-	-13.0	2022			1272354	198495	-122.323396	47.534394
1226	39D	2.8	subtidal	x			x	shoal (elevation above -20 ft MLLW)	Yes	-20	-18.7	2021	1.3 ft (38 cm)	-20 to -22 ft (3)	1272435	198555	-122.323074	47.534565
1227	39E	2.8	subtidal			x		RC1 in subtidal area	No	-	-13.9	2021			1272502	198629	-122.322808	47.534771
1228	39E	2.8	subtidal	x				reoccupation	No	-	-14.1	2021			1272475	198647	-122.322920	47.534819
1229	39E	2.8	subtidal	x				reoccupation	No	-	-5.1	2021			1272481	198703	-122.322900	47.534973

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1230	39E	2.8	subtidal	a				reoccupation	Yes	-20	-18.6	2021			1272468	198598	-122.322945	47.534684
1231	39F	2.8	intertidal	x	x			intertidal	No	-	3.9	2003			1272569	198703	-122.322542	47.534978
1232	39F	2.8	intertidal	x				reoccupation	No	-	-2.0	2021			1272634	198649	-122.322277	47.534833
1233	39F	2.8	intertidal	x	x			intertidal (bank)	No	-	no data	-			1272535	198750	-122.322684	47.535104
1234	39F	2.8	subtidal			x		RC1 in subtidal area	No	-	-8.6	2021			1272595	198619	-122.322433	47.534749
1235	40B	2.8	intertidal	x	x			intertidal	No	-	1.9	2021			1272449	198273	-122.322996	47.533792
1236	40C	2.8	subtidal	x		x		potential vessel scour area	No	-	-12.0	2022			1272516	198347	-122.322729	47.533998
1237	40C	2.8	subtidal	x				reoccupation	No	-	-9.6	2003			1272554	198261	-122.322570	47.533765
1238	40D	2.8	subtidal	x				reoccupation	Yes	-15	-17.6	2022			1272557	198392	-122.322568	47.534124
1239	40E	2.8	subtidal	x		x		RC1 in subtidal area	No	-	-17.5	2021			1272651	198495	-122.322197	47.534411
1240	40E	2.8	subtidal	x				reoccupation	No	-	-14.6	2021			1272617	198546	-122.322337	47.534549
1241	40F	2.8	subtidal			x		RC1 in subtidal area	No	-	-12.1	2021			1272718	198569	-122.321931	47.534618
1242	40F	2.8	subtidal	x				reoccupation	No	-	-13.1	2021			1272739	198546	-122.321844	47.534556
1243	40F	2.8	subtidal	a				reoccupation	No	-	-9.6	2021			1272735	198600	-122.321864	47.534704
1244	40G	2.8	subtidal			x		potential vessel scour area	No	-	-8.9	2021			1272785	198615	-122.321663	47.534746
1245	40G	2.8	subtidal	x				reoccupation	No	-	-9.6	2021			1272812	198601	-122.321552	47.534710
1246	41B	2.8	intertidal		x			intertidal	No	-	-0.7	2021			1272579	198149	-122.322462	47.533459
1247	41C	2.9	subtidal	x		x		RC1 in subtidal area	No	-	-10.9	2022			1272656	198180	-122.322149	47.533548
1248	41D	2.9	subtidal	x		x		potential vessel scour area	Yes	-15	-17.5	2021			1272739	198294	-122.321824	47.533865
1249	41E	2.9	subtidal	x		x		RC1 in subtidal area	No	-	-12.8	2021			1272811	198373	-122.321538	47.534085
1250	41F	2.9	subtidal	x		x		RC1 in subtidal area	No	-	-12.2	2021			1272866	198435	-122.321321	47.534258
1251	41F	2.8	subtidal	x				reoccupation	No	-	-14.0	2021			1272779	198477	-122.321676	47.534369
1252	42A	2.8	subtidal			x		potential vessel scour area	No	-	-14.2	2021			1272935	198576	-122.321054	47.534649
1253	42A	2.8	subtidal	x				reoccupation	No	-	-12.1	2021			1272977	198642	-122.320888	47.534832
1254	42A	2.8	subtidal	x				reoccupation	No	-	-14.6	2021			1272915	198572	-122.321133	47.534636
1255	42A	2.8	subtidal	x				reoccupation	No	-	-14.5	2021			1272881	198541	-122.321269	47.534550
1256	42B	2.8	subtidal			x		potential vessel scour area	No	-	-11.2	2021			1273081	198712	-122.320471	47.535030
1257	42B	2.8	subtidal	x				reoccupation	No	-	-11.5	2021			1273052	198705	-122.320589	47.535008
1258	42B	2.8	subtidal	x				reoccupation	No	-	-11.0	2021			1273120	198769	-122.320319	47.535187
1259	42B	2.9	subtidal	x				reoccupation	No	-	-10.8	2021			1273145	198697	-122.320212	47.534991
1260	42B	2.9	subtidal	x				reoccupation	No	-	-11.4	2021			1273065	198632	-122.320531	47.534809
1261	42C	2.8	subtidal			x		potential vessel scour area	No	-	-10.6	2021			1273228	198848	-122.319887	47.535410
1262	42C	2.8	subtidal	x				reoccupation	No	-	-10.3	2021			1273228	198834	-122.319887	47.535371
1263	42C	2.8	subtidal	x				reoccupation	No	-	-8.9	2021			1273194	198870	-122.320027	47.535468
1264	43B	2.9	intertidal	x	x			intertidal	No	-	-1.6	2021			1272747	197991	-122.321767	47.533036
1265	43C	2.9	subtidal	x		x		RC1 in subtidal area	No	-	-14.3	2022			1272813	198078	-122.321509	47.533277
1266	43D	2.9	subtidal	x		x		RC1 in subtidal area	Yes	-15	-17.9	2022			1272877	198149	-122.321255	47.533475
1267	43D	2.9	subtidal	x				reoccupation	Yes	-15	-16.8	2021			1272926	198121	-122.321054	47.533401
1268	44B	2.9	intertidal		x			intertidal	No	-	-1.3	2021			1272894	197870	-122.321165	47.532710
1269	44B	2.9	intertidal	a	x			intertidal	No	-	-0.1	2021			1272813	197913	-122.321495	47.532826
1270	44C	2.9	subtidal	x		x		RC1 in subtidal area	No	-	-14.4	2022			1272961	197944	-122.320899	47.532917
1271	44D	2.9	subtidal	x		x		RC1 in subtidal area	Yes	-15	-16.8	2021			1273025	198015	-122.320645	47.533115
1272	45B	3	intertidal	x	x			intertidal	No	-	0.2	2021			1273042	197735	-122.320555	47.532350
1273	45B	3	subtidal	a				reoccupation	No	-	-8.3	2003			1273061	197784	-122.320481	47.532484
1274	45B	3	intertidal	a				reoccupation	No	-	-3.0	2021			1273136	197707	-122.320171	47.532277
1275	45B	3	intertidal	a	x			intertidal			1.3	2021			1272963	197782	-122.320876	47.532475
1276	45C	3	subtidal	x		x		RC1 in subtidal area	No	-	-13.9	2022			1273109	197809	-122.320289	47.532557

Location ID	Grid Cell	RM	Tidal Category	Interval Type				Sample Notes (Reoccupation for Surface Sample or Target RAL Area for Subsurface Sample)	In the FNC?	Authorized FNC Depth (ft MLLW)	Mudline Elevation (ft MLLW)	Bathymetry Survey Year[1]	Est. Shoal Thickness	Expected Tier 1 Shoaling Interval (Total No. of Intervals[2])	Target Coordinates			
				0-10 cm	0-45 cm	0-60 cm	Shoal								X	Y	Longitude	Latitude
1277	45D	3	subtidal	x		x		RC1 in subtidal area	Yes	-15	-17.7	2021			1273176	197884	-122.320023	47.532763

Notes:
1. Bathymetry data from the 2003 survey were used when data from the 2021 survey and 2022 reconnaissance were not available. Mudline elevations based on the 2003 bathymetry survey have a higher level of uncertainty.
2. The estimated total number of intervals is based on the estimated mudline elevation (Figure 4-1 of the QAPP). The count of samples includes samples containing shoaled material, over-dredge material, and the z-layer interval.
a: archive (Tier 2 sample to be collected and archived for potential analysis)
FNC: Federal Navigation Channel
MLLW: mean lower low water
QAPP: quality assurance project plan
RAL: remedial action level
RC1: Recovery Category 1
RM: river mile
x: Tier 1 sample to be collected and analyzed

Table D-5
Details Regarding Under-structure Samples

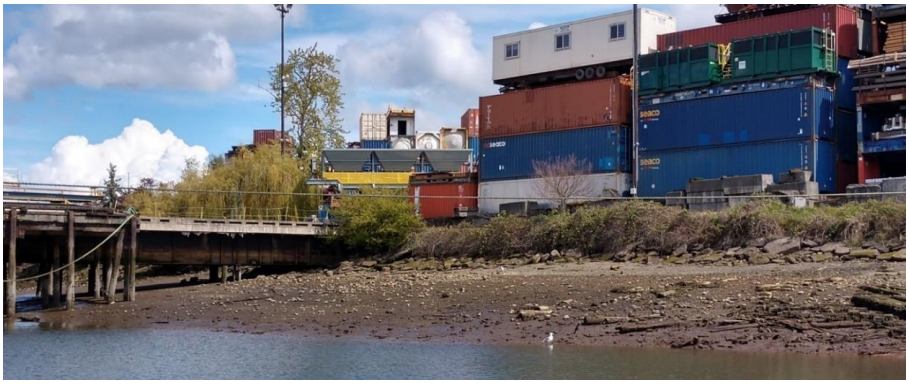
Structure	Location ID	RM	Expected Tidal Category[1]	Interval Type			Recovery Category	Surface Sample Analytes[1]				Subsurface Sample Analytes[1]					Target Coordinates			
				0–10 cm	0–45 cm	0–60 cm		PCBs	Arsenic	Dioxins/ Furans	Other Benthic Risk Drivers	PCBs	Arsenic	Dioxins/ Furans	cPAHs	Other Benthic Risk Drivers	X	Y	Longitude	Latitude
Northland North Wharf (Terminal 115)	1800	1.6	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1268399	203288	-122.339787	47.547323
	1801	1.6	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1268456	203083	-122.339539	47.546762
	1802	1.7	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1268516	202906	-122.339283	47.546282
	1803	1.7	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1268589	202719	-122.338972	47.545773
	1804	1.7	subtidal	x		x	3	x	x	x	x	x	-	-	-	-	1268652	202529	-122.338699	47.545257
Certainteed Wharf	1805	1.7	intertidal	x	x		3	x	x	a	x	x	x	a	x	x	1268997	203168	-122.337356	47.547024
Samson Tug	1806	1.8	intertidal	x	x		3	x	x	a	x	x	x	a	x	x	1269258	202625	-122.336253	47.545551
Muckleshoot Tribes Marina	1807	2.0	intertidal	x	x		3	x	x	a	x	x	x	a	x	x	1270049	201579	-122.332972	47.542725
SeaTac Marine	1808	2.1	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1270183	201232	-122.332402	47.541781
	1809	2.1	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1270306	201101	-122.331891	47.541430
	1810	2.2	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1270431	200967	-122.331375	47.541068
Alaska Marine Lines Yard No 2	1811	2.1	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1269893	200813	-122.333540	47.540618
Seattle Iron & Metals Wharves	1812	2.4	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1271224	200119	-122.328101	47.538787
	1813	2.4	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1271284	200051	-122.327851	47.538603
Boyer Alaska Barge Line Seattle Main Wharf	1814	2.5	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1271090	199548	-122.328598	47.537214
Pacific Pile and Marine Wharf	1815	2.7	subtidal	x		x	3	x	x	x	x	x	-	-	-	-	1271990	198568	-122.324878	47.534575
8th Avenue Terminal Wharf	1816	2.8	subtidal	x		x	3	x	x	x	x	x	-	-	-	-	1272814	198631	-122.321547	47.534792
	1817	2.8	subtidal	x		x	3	x	x	a	x	x	-	-	-	-	1272940	198669	-122.321040	47.534903
	1818	2.8	subtidal	x		x	3	x	x	x	x	x	-	-	-	-	1273060	198777	-122.320564	47.535207
	1819	2.8	subtidal	x		x	3	x	x	x	x	x	-	-	-	-	1273160	198867	-122.320165	47.535458
Silver Bay Logging 8th Ave Wharf	1820	2.9	intertidal	x	x		3	x	x	a	x	x	x	a	x	x	1272673	198057	-122.322071	47.533212

Notes:
1. Selected analytes are based on whether there is an applicable RAL for a given sample. See Table D-3 for rationale regarding samples selected for Tier 1 dioxin/furan analysis. All RAL categories will be verified once the bathymetric surveys are completed and at the time of sampling.
a: archive (Tier 2 sample to be collected and archived for potential analysis)
cPAH: carcinogenic polycyclic aromatic hydrocarbon
PCB: polychlorinated biphenyl
RAL: remedial action level
RM: river mile
.
x: Tier 1 sample to be collected and analyzed

Table D-6
Summary of Shoreline Reconnaissance Survey Conducted on April 19, 2022

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
East Shoreline Survey		
1F	No exposed intertidal sediment observed during April 19 survey; steep riprap bank. First area of exposed intertidal observed during the survey is located north of grid 1F boundary. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
2F	No exposed intertidal sediment observed during April 19 survey; steep riprap bank. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
3F, 4F	No exposed intertidal sediment observed during April 19 survey. May be some pockets of sediment between riprap, but area is primarily a steep riprap slope. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
4G, 6A, 6B	North side of Slip 2 is a steep riprap bank. No exposed intertidal sediment observed during April 19 survey. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
6C	Head of Slip 2 (NE corner). Small band of exposed sediment at the head of the slip in this grid, but area primarily appears to be subtidal.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
7C	Head of Slip 2 (SE corner). Bank is made up of riprap/concrete slabs; no sampleable intertidal was observed during the April 19 survey.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
8A, 8B, 5H	South side of Slip 2. Exposed intertidal mudflats observed during survey. No concerns with sampleability of intertidal in this area.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
9F, 9G, 10F	South side of Slip 2. Exposed intertidal mudflats observed during survey. No concerns with sampleability of intertidal in this area.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
11F	Reconnaissance limited by barge blocking view of this area. Significant amounts of riprap observed, but aerial photograph indicates that there is likely some sampleable intertidal. Target location placed based on review of aerial photo.	Intertidal
14F	No concerns with sampleability of intertidal in this area; exact placement of sample relative to riprap bank is uncertain and may need to be adjusted in the field.	Intertidal
15G	The majority of this grid is not sampleable, because of either the boat ramp or riprap slope along both sides of the boat ramp. The best target sample location is to the south of boat ramp in lower elevation portion of intertidal (outside of the 50-ft radius circle).	Intertidal

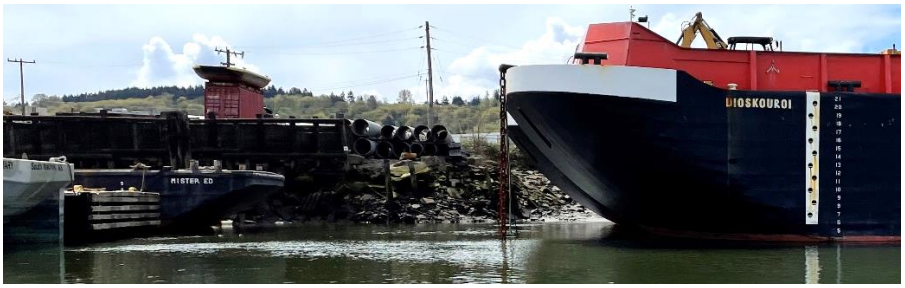
Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
18B, 18C	North side of Slip 3 is a steep riprap bank; no intertidal exposed intertidal sediment observed during April 19 survey. Review of bathymetry layer supports these observations. For grid 18B, target collection of subtidal sample in front of covered slip/boat house.   Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
18D, 19D, 20D	Head of Slip 3 is a riprap slope. April 19 survey indicates that there may be limited pockets of sediment in some areas between rocks and there may be sampleable intertidal in the lower portion of intertidal, but minimal exposed sediment was observed.    Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal or Intertidal
24F, 25F	This area to the south of Slip 3 is a riprap slope. No exposed intertidal was observed during April 19 survey, but bathymetry indicates that lower elevation intertidal may be sampleable (this is consistent with observations just south of this stretch).   Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
26F, 27F	A thin band of exposed intertidal sediment below the riprap slope was observed during the April 19 survey. Bathymetry and observed sediment support collection of intertidal samples in these grids.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
28H	Areas of exposed sediment (particularly toward the head of the embayment) were observed at lower elevations below the riprap slope during the April 19 survey. Review of bathymetry layer supports the conclusion that the intertidal should be sampleable.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
29G	No exposed intertidal was observed during April 19 survey; riprap slope. However, review of the bathymetry layer indicates that lower elevation intertidal may be sampleable. See right side of photo for grid 28H.	Intertidal
30F	Shoreline is primarily riprap slope. Only area where exposed sediment was observed was a small area immediately south of wharf.	Subtidal
31F	No exposed intertidal was observed during April 19 survey; riprap slope. Review of bathymetry layer supports these observations.	Subtidal
34F-38F	No concerns with sampleability of intertidal in this area.	Intertidal
39F	Riprap slope and rocks at higher elevation; sampleable intertidal observed at lower elevation during the April 19 survey.  Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Intertidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
40G	Shoreline at the mouth of Slip 4 (north side) is a steep riprap slope; may be some intertidal here at lower elevation. Sampleable area is primarily subtidal.  Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Subtidal
South side of Slip 4	South side of slip is mostly riprap slope. Area south of grid 42C with RI/FS samples with exceedances appears to be located at higher elevation on riprap slope. No exposed sediment observed during April 19 survey.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	No samples in this area.
West Shoreline Survey		
1B to 5B	No intertidal in front of Terminal 115 wharfs. 	Subtidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
11A	Minimal exposed intertidal observed during April 19 survey; steep riprap bank. May be small amount of intertidal sediment in SW corner of grid near outfalls. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal (although sampleability is uncertain)
12A	Steep riprap bank; no sampleable intertidal observed during the April 19 survey. Review of bathymetry layer supports these observations.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Subtidal
13A	Shoreline transitions from sampleable intertidal (south) to steep riprap slope (north). Target collection of sample in intertidal (outside of 50-ft circle).	Intertidal
14A	Riprap along most of shoreline in this area; target sample collection in northern half of grid with sampleable intertidal (outside of 50-ft circle).	Intertidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
15A	Significant amounts of cobble/riprap observed during April 19 survey, but appear to be sampleable portions of the intertidal. Exact placement of sample relative to riprap bank is uncertain and may need to be adjusted in the field.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
16A-17A	Area under the 1st Ave S Bridge (includes 16A', 17A''', 17A'', and 17A'). No concerns with sampleability of intertidal in this area.	Intertidal
23A-25A	Numerous barges located in this area during reconnaissance. Based on the area that was visible during the April 19 survey, there appears to be a thin strip of intertidal that can be sampled in this area. Review of the bathymetry layer supports the conclusion there is sampleable intertidal in this area.	Intertidal
26A	A large portion of this grid is above MHHW and/or is a riprap bank. No concerns with sampleability of the lower elevation portion of the intertidal in this area (target sample collection outside of 50-ft circle based on sampleability).  Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Intertidal
26B, 27B	No concerns with sampleability of intertidal in this area.	Intertidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
28A, 28B	No concerns with sampleability of intertidal in this area. Target location for grid 28A has been shifted east to avoid riprap slope.  Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Intertidal
29B, 30B	No reconnaissance possible during the April 19 survey because of numerous barges in this area. Area is not expected to have sampleable intertidal. No bathymetry information along the shoreline in this area, but aerial indicates that bank is a steep riprap slope.	Subtidal
31A	Area mostly blocked by a barge during the April 19 survey, but there appears to be sampleable intertidal. No bathymetry information along the shoreline in this area, but aerial supports the conclusion that there is sampleable intertidal.   Tidal elevation of approximately -2 ft MLLW when photographs were taken.	Intertidal
32B	Area mostly blocked by a barge during the April 19 survey. Shoreline is a riprap slope; no sampleable intertidal was observed.	Subtidal
33A	Appears to be mostly above MHHW and/or unsampleable because of the riprap slope. Target sample collection to the east in area with exposed sediment.	Intertidal
33B	No concerns with sampleability of intertidal in this area.	Intertidal
34B, 35B	No concerns with sampleability of intertidal in this area.	Intertidal

Grid(s)	Notes from April 19 Reconnaissance Survey	Recommended Sample Type to Target
36A, 37A	No concerns with sampleability of intertidal in this area.	Intertidal
39B, 40B	No concerns with sampleability of intertidal in this area.  Tidal elevation of approximately -2 ft MLLW when photograph was taken.	Intertidal
41B	No concerns with sampleability of intertidal in this area.	Intertidal
43B	No concerns with sampleability of intertidal in this area.   Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Intertidal
44B, 45B, 46B	No concerns with sampleability of intertidal in this area.  Tidal elevation of approximately -1.5 ft MLLW when photograph was taken.	Intertidal

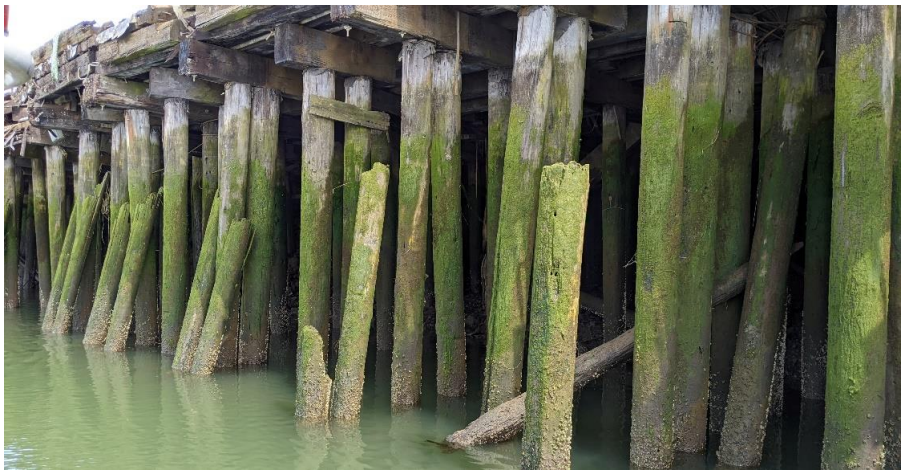
Notes:
MHHW: mean higher high water
MLLW: mean lower low water
RI/FS: remedial investigation/feasibility study

Table D-7
Summary of Under-Structure Reconnaissance Survey Conducted on April 29, 2022

Structure	Notes from April 29 Reconnaissance Survey[1]
West Shoreline	
RM 1.6–RM 1.75 Northland North Wharf (Terminal 115)	No access issues are anticipated beyond coordination with site operations. Subtidal conditions are expected. 
RM 1.8 Northland South Pier (Terminal 115)	No Phase I sampling proposed at this location as structure is smaller than minimum target width for Phase I sampling.
RM 1.9 Seafreeze Pier (Terminal 115)	No Phase I sampling proposed at this location as structure is smaller than minimum target width for Phase I sampling.
RM 2.1 Alaska Marine Lines Yard No. 2	No access issues are anticipated beyond coordination with site operations. Surveys will be required to determine if water depth conditions are intertidal or subtidal.
RM 2.35 Boyer Alaska Barge Line North Lay Berth	No Phase I sampling proposed at this location as structure is smaller than minimum target width for Phase I sampling.
RM 2.45 Boyer Alaska Barge Line Seattle Main Wharf	No access issues are anticipated beyond coordination with site operations. Surveys will be required to determine if water depth conditions are intertidal or subtidal.
RM 2.6 Pacific Pile and Marine Mooring	No Phase I sampling proposed at this location as structure is smaller than minimum target width for Phase I sampling.

Structure	Notes from April 29 Reconnaissance Survey[1]
RM 2.75 Pacific Pile and Marine Wharf	The slope under the waterway side of the wharf is heavily armored and was observed to extend to within about 10 ft of the face of the structure. The distance between the toe of slope and north face of the wharf is assumed to be greater than 20 ft and can be accessed. Dive inspection will be required to confirm. 
RM 2.9 Silver Bay Logging Wharf	No access issues are anticipated beyond coordination with site operations. Surveys will be required to determine if water depth conditions are intertidal or subtidal.
East Shoreline	
RM 1.65 Certainteed Pier	No access issues are anticipated beyond coordination with site operations. Surveys will be required to determine if water depth conditions are intertidal or subtidal.
RM 1.7 Glacier Northwest Slip 2 Pier	No Phase I sampling proposed at this location as is smaller than minimum target width for Phase I sampling.
RM 1.8–RM 1.9 Samson Tug	No access issues are anticipated beyond coordination with site operations. Intertidal conditions are expected. 

Structure	Notes from April 29 Reconnaissance Survey[1]
RM 1.9–RM 2.0 Duwamish Marine Center	Sampling will occur as part of the primary grid plan described in Section 4.1.3. No access issues anticipated.
RM 2.05 Muckleshoot Tribe Marina	Intertidal area observed under southwest corner of main pier. May require sampling by foot or diver. No other access issues are anticipated beyond coordination with site operations. 
RM 2.1–RM 2.2 SeaTac Marine	The finger pier located in Slip 3 is narrow and covered by a precast concrete deck. The finger pier falls within the standard grid and sampling locations are located on both sides of the pier. Conditions under the finger pier are subtidal. Surveys will be required to determine if water depth conditions are intertidal or subtidal under the wharf located on the main waterway. No access issues are anticipated beyond coordination with site operations. 

Structure	Notes from April 29 Reconnaissance Survey[1]
RM 2.4–RM 2.55 Seattle Iron & Metals Wharves	Slope under north pier is armored and diver inspection is required to determine the location of the toe of armor. The south pier is in poor condition and is not safe to access (see photo). 
RM 2.8 8th Avenue Terminal Wharf	No access issues are anticipated beyond coordination with site operations. Surveys will be required to determine if water depth conditions are intertidal or subtidal.

Notes:

1. Tide elevations ranged from approximately +3 ft MLLW to +0.5 ft MLLW during the April 29 reconnaissance survey.

MHHW: mean higher high water

MLLW: mean lower low water

RM: river mile