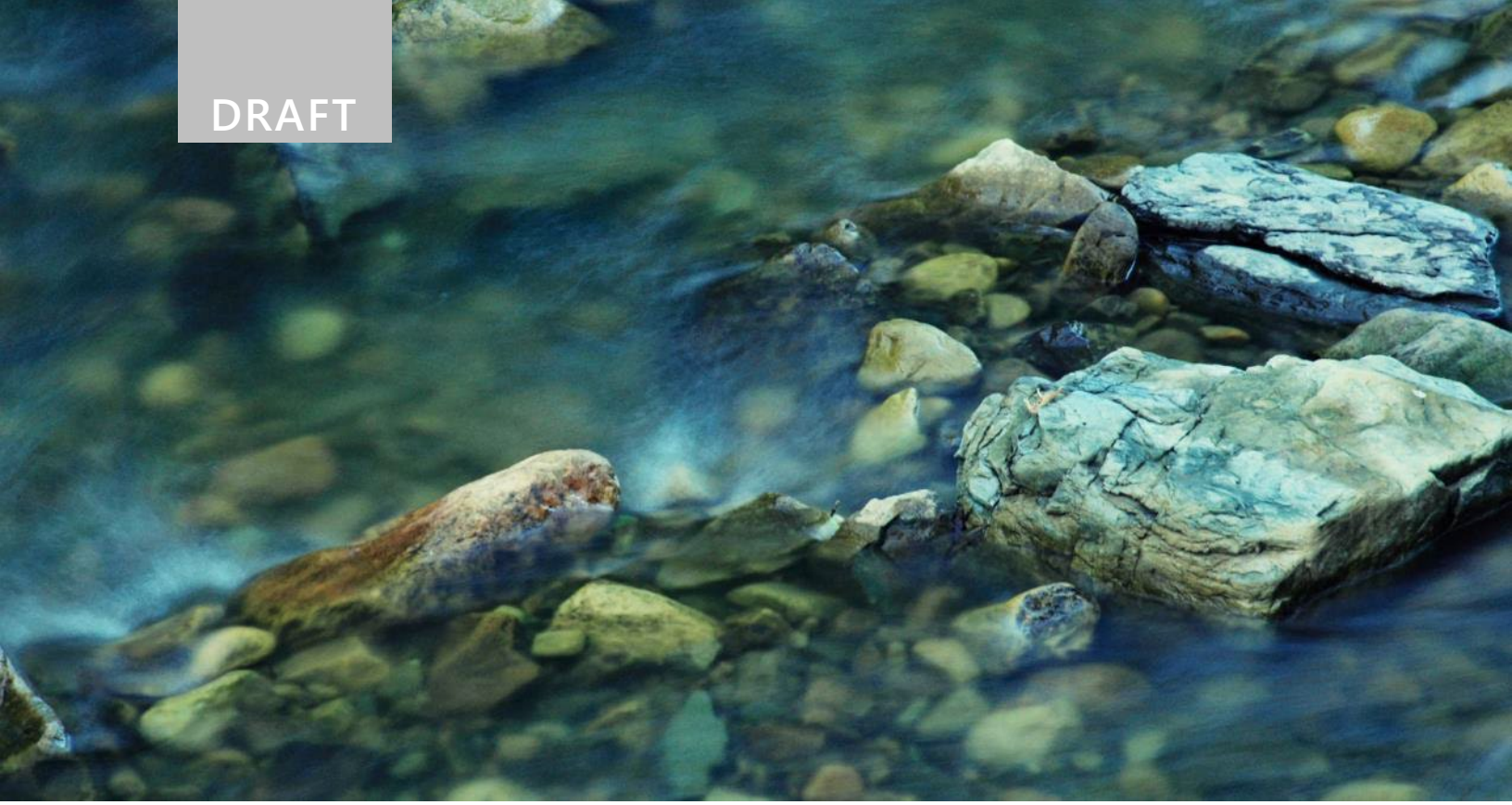
DRAFT



June 2026
Whatcom Waterway Cleanup in Phase 2 Site Areas

ANCHOR QEA

As-Built Report for Unit 1C Dredging

Prepared for Port of Bellingham

DRAFT

June 2026
Whatcom Waterway Cleanup in Phase 2 Site Areas

As-Built Report for Unit 1C Dredging

Prepared for
Port of Bellingham
1801 Roeder Avenue
Bellingham, Washington 98225

Prepared by
Anchor QEA
20 Bellwether Way, STE 101
Bellingham, Washington 98225

Project Number: 190007-01.01
Revised EDR for Unit 1C Dredging

DRAFT

TABLE OF CONTENTS

1 Introduction 1

2 Background 2

3 Completed Construction Activities 3

3.1 Dredging Activities 3

3.2 Residuals Management 3

3.3 Protection of Cultural Resources 4

3.4 Water Quality Monitoring 4

4 Sediment Quality Monitoring 5

4.1 Monitoring Methods 5

4.2 Quality Assurance and Quality Control 6

4.3 Performance Monitoring Results 7

5 References 8

FIGURES

Figure 1-1 Site Location and Vicinity

Figure 4-1 Proposed and Actual Sampling Locations

TABLES

Table 4-1 Sampling Summary

Table 4-2 Sediment Analytical Results

APPENDICES

Appendix A Disposal Tickets

Appendix B Surveys

Appendix C Water Quality Monitoring

Appendix D Field Documentation

Appendix E Analytical Chemistry Results

Appendix F Data Validation Reports

ABBREVIATIONS

µg/kg	microgram per kilogram
ACC	American Construction Company
BMP	best management practice
BST	Bellingham Shipping Terminal
CD	Consent Decree No. 07-2-02257-7
cm	centimeter
cPAH	carcinogenic polycyclic aromatic hydrocarbon
D/F	dioxin/furan
Ecology	Washington State Department of Ecology
EDR	*Revised Engineering Design Report for Unite 1C Dredging*
GP West	Georgia-Pacific West, Inc.
mg/kg	milligram per kilogram
MTCA	Model Toxics Control Act
ng/kg	nanogram per kilogram
PAH	polycyclic aromatic hydrocarbon
Port	Port of Bellingham
Report	*As-Built Report for Unit 1C Dredging*
RMC	residuals management cover
SCO	sediment cleanup objective
Site	Whatcom Waterway Site
SMS	Sediment Management Standards
TEQ	toxic equivalency quotient
WAC	Washington Administrative Code
WQMP	water quality monitoring plan

1 Introduction

This *As-Built Report for Unit 1C Dredging* (Report) has been prepared as a requirement following the completion of cleanup work performed within a portion of Site Unit 1C, located within the Whatcom Waterway Cleanup Site (Site). Figure 1-1 shows the Site location and vicinity along with the location of the Unit 1C dredging.

Cleanup of the Site is being performed consistent with the cleanup requirements of the Model Toxics Control Act (MTCA), Chapter 70.105D in the Revised Code of Washington, as administered by the Washington State Department of Ecology (Ecology) under the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC). The cleanup also complies with Sediment Management Standards (SMS; WAC 173-204).

Site cleanup is being led by the Port of Bellingham (Port) and other cooperating potentially liable parties under Ecology oversight, in accordance with Consent Decree No. 07-2-02257-7 (CD; Ecology 2007), as amended by the First Amendment to the CD (Ecology 2011) and the Second Amendment to the CD (Ecology 2024).

The cleanup of the Site is being phased to address different Site areas. Figure 1-1 shows the locations of the cleanup completed in Phase 1 Site Areas in 2016, the location of the Unit 1C dredging, and the remaining Phase 2 Site cleanup areas. The cleanup in the remaining Phase 2 Site areas is expected to begin in 2028 following completion of engineering design and issuance of project permits.

The dredging work described in this Report addresses areas of sediment sloughing beneath the Bellingham Shipping Terminal (BST) pier structure and high-spots located in adjacent open-water areas. Expedited dredging of these areas was specified in the Second Amendment to the CD to protect against potential vessel-related redistribution of contaminated sediment and ensure continued navigational safety pending the future cleanup of remaining Phase 2 Site areas. The design for the Unit 1C dredging is defined in the *Revised Engineering Design Report for Unit 1C Dredging* (EDR; Anchor QEA, 2025).

2 Background

The primary contaminants of concern at the Site, as determined in the remedial investigation and feasibility study (RETEC 2006), include mercury, phenol, 4-methylphenol compounds and dioxins and furans (D/F; Ecology 2007). Other contaminants including polycyclic aromatic hydrocarbon (PAH) compounds are also known to be present within the Site areas.

The Site boundary was defined by the extent of surface and subsurface sediment impacted by mercury discharges from the former Georgia-Pacific West, Inc. (GP West), chlor-alkali plant. GP West wastewater facilities were updated in the 1970s, and the chlor-alkali plant has been demolished, eliminating the plant as a source of mercury to the Site and to Bellingham Bay. Sources of phenolic compounds within the Site boundary include wood waste and degradation products from historical log rafting activities and phenolic compounds from pulp and tissue mill wastewater discharges. The pulp and tissue mills have both been discontinued and demolished, eliminating them as potential ongoing sources of these contaminants.

In addition to Site-specific sources, Ecology completed a bay-wide evaluation of bioaccumulative chemicals in surface sediment throughout Bellingham Bay in 2015. The evaluation identified elevated regional background concentrations of carcinogenic polycyclic aromatic hydrocarbon (cPAH) and D/F compounds throughout the inner portions of Bellingham Bay associated with multiple legacy and ongoing sources (Ecology 2015).

Site cleanup levels and points of compliance include cleanup levels for the protection of the benthic community and human health and are presented in Section 2.2 of the EDR (Anchor QEA 2025). Further discussion regarding cleanup levels is discussed in Section 4.1 of this report.

Requirements for Unit 1C dredging were defined in the EDR (Anchor QEA 2025) and included the following:

- Dredge up to 30,000 cubic yards from BST underpier and adjacent high-spot areas consistent with the dredge prism defined in the EDR.
- Manage dredged sediments and debris by upland landfill disposal.
- Place residuals management cover material in the open-water areas in front of the BST pier.
- Maintain acceptable water quality during performance of the work, and document water quality pursuant to the approved water quality monitoring plan (WQMP).
- Document completion of the dredging and residuals management cover (RMC) placement work through bathymetric surveys.
- Conduct post-project sediment quality monitoring in both the open-water and underpier areas
- Document completion of the work within an As-Built Report.

3 Completed Construction Activities

This section provides a summary of construction activities completed during the project.

3.1 Dredging Activities

Prior to initiation of construction, site controls were established to manage safety and environmental risks of construction.

Dredging activities were completed in accordance with the requirements of the EDR (Anchor QEA 2025). Dredging occurred in the vicinity of the BST to remove contaminated sediments from the federal navigation channel and berth areas adjacent to the BST pier. The work included removal of sloughed sediment from the face of the BST pier and underpier areas and open-water dredging within portions of the BST berthing area and the federal navigation channel.

Dredging was conducted during the 2023 to 2024, 2024 to 2025, and 2025 to 2026 in-water dredging seasons. The progress of dredging was initially slowed by the need to remove debris and broken pilings from within the dredge prism. Dredging activities were also restricted at certain times to avoid interfering with fishing activities conducted by the Lummi Tribe.

The total quantity of sediment removed during the dredging (including the permitted overdredge allowance) was approximately 22,750 cubic yards. Sediment removed during dredging was transported to Waste Management's transload facility on the Duwamish River where it was offloaded, dewatered, and then transported by rail to the Columbia Ridge subtitle D landfill in Arlington, Oregon. The total tonnage of sediment and debris disposed at the landfill was approximately 29,445 tons. Sediment disposal tickets are provided in Appendix A.

The completeness of dredging with respect to design requirements was verified with multi-beam bathymetric surveys completed after dredging activities were complete and prior to the placement of RMC material. The final post-dredge survey is provided in Appendix B.

3.2 Residuals Management

Following completion of dredging activities, a nominal 6-inch layer of RMC material (i.e., clean sand with cobbles) was placed in accessible areas within the dredge footprint. Consistent with the EDR (Anchor QEA 2025) no RMC material was placed beneath the existing BST pier.

The total quantity of RMC material placed was approximately 5,750 tons (approximately 3,678 cubic yards). The material was placed using mechanical dredging equipment and copies of the "bucket maps" for RMC material placement locations are included in Appendix B.

The placement of RMC material was documented with a post-RMC material placement survey (included in Appendix B), with supplemental material placement verification conducted by diver

surveys. The supplemental testing and inspections were performed to evaluate sediment consolidation that occurred following RMC material placement. The sediment consolidation resulted in bathymetric surveys that underrepresented the total placed thickness of RMC material. The diver probing and inspection effort indicated that the average placed RMC material thickness was approximately 12 inches, with a range between approximately 6 and 24 inches for the specific locations inspected by the divers.

The average RMC material placement thickness was also calculated based on the dry density of the material (laboratory results), the assumed density of the material as placed (likely loose compaction), and the total tons of material placed at the Site. This information was used to estimate the average RMC material placement thickness placed over the dredge area as a whole. The calculations resulted in an average RMC material placement thickness of approximately 8 inches throughout the Site. The Port provided the calculation and rationale information summarized above to the Ecology Whatcom Waterway Cleanup Site Manager as evidence supporting the acceptable placement thickness for RMC material throughout the dredge prism. Following review of this information, Ecology concurred that the information provided by the Port demonstrated that the RMC material placement at the site meets the specification requirements of the project engineering design and construction design as described in the EDR

3.3 Protection of Cultural Resources

As noted in Appendix A of the EDR, the contractor was required to have an Inadvertent Discovery Plan on Site describing the actions taken if potential cultural resources (e.g., archaeological artifacts or human remains) were identified during the dredging. No cultural resources were encountered during completion of the work.

3.4 Water Quality Monitoring

Environmental monitoring was conducted during construction activities to document protection of water quality and provide feedback to the contractor regarding the effectiveness of their employed BMPs.

Water quality monitoring was conducted by the American Construction Company (ACC, dredging contractor) in accordance with the project WQMP, a copy of which is attached to the EDR (Anchor QEA 2025). Monitoring data demonstrated that project construction activities were completed in accordance with applicable water quality requirements and that implemented best management practices (BMPs) were effective at protecting water quality during completion of construction activities. Detailed water quality monitoring reports prepared by ACC are provided in Appendix C.

4 Sediment Quality Monitoring

Sediment quality monitoring was conducted following completion of dredging and RMC placement activities.

4.1 Monitoring Methods

The sediment quality monitoring was performed consistent with the requirements of the EDR (Anchor QEA 2025).

Sediment monitoring locations are shown on Figure 4-1 and are described as follows:

- Open-Water Areas: Samples WW-1CPM-01 and WW-1CPM-02 were collected in open-water areas following completion of RMC material placement. As described in the EDR, sediment quality at these two sample locations was expected to comply with Site cleanup levels.
- BST Under-Dock Areas: Samples WW-1CPM-03 and WW-1CPM-04 were collected in BST under-dock areas. As described in the EDR, these two sample locations were expected to contain contaminated sediment because the under-dock slope areas were too steep for RMC material placement. Additional cleanup will be conducted in these under-dock areas as part of the final cleanup of the Whatcom Waterway Phase 2 Site areas.

The sediment sampling was performed on March 4, 2026, which was within approximately 1 month of completion of the RMC material placement. The sediment samples were collected from an approximate depth of 0 to 12 centimeters (cm), which is consistent with the sediment bioactive zone within the Site.

Samples from the open-water areas were initially collected using a Van Veen grab sediment sampler. Samples were collected by divers in the BST under-dock areas. Due to repeated interference from the cobbles present in the RMC materials (i.e., rocks becoming lodged in the sampler jaws; see Appendix D for field notes), divers were also used to collect the open-water sediment sample at location WW-1CPM-01.

Chemical analyses performed for the collected samples included mercury, semi volatile organic compounds, and D/F. Samples were submitted to Analytical Resources LLC for analysis of mercury and semi volatile organic compounds, and submitted to Onterris (formerly Enthalpy Analytical) for analysis of D/F. Archives were collected for contingent bioassay testing at each open-water sample location (WW-1CPM-01 and WW-1CPM-02), but based on the chemical testing results, no bioassay testing was required.

Results of testing were compared to the sediment cleanup levels and associated points of compliance for the Site are defined in the Second Amendment to the CD (Ecology 2024). The cleanup levels include those for protection of the benthic community as well as those for protection

of human and ecological health. These cleanup levels apply to the sediment bioactive zone, which is 0 to 12 cm below the existing mudline, and are as follows:

- Cleanup levels for protection of the benthic community (i.e., sediment-dwelling organisms) are based on the current sediment cleanup objectives (SCOs) benthic criteria defined in the SMS rule (Ecology 2013). Compliance with benthic cleanup levels is evaluated on a point-by-point basis using a combination of measured chemical concentrations and contingent biological testing (performed only if the SCO values are exceeded).
- Cleanup levels for protection of human and ecological health were established for bioaccumulative compounds, including mercury, cPAH compounds, and D/F compounds (Anchor QEA 2025).
  - The Site-specific bioaccumulation screening level for mercury was established at 1.2 milligrams per kilogram (mg/kg), with compliance evaluated on a point-by-point basis.
  - Cleanup levels for D/F compounds were established at 9.8 nanograms per kilogram (ng/kg) toxic equivalency quotient (TEQ) based on reflecting technical feasibility considerations in the presence of ongoing recontamination sources. Compliance with this cleanup level is evaluated based on the surface-weighted average concentrations throughout the Site.
  - Risk-based screening levels for cPAH compounds were also established in the Second Amendment to the CD (Ecology 2024) at 229 micrograms per kilogram (µg/kg) TEQ. The surface-weighted average concentrations of cPAH compounds are already well below this value.

4.2 Quality Assurance and Quality Control

Sample IDs, coordinates, mudline elevations, number of attempts, sample intervals, and analytical parameters tested are summarized in Table 4-1. Field forms, including daily logs, collection and processing logs, health and safety forms, and field photographs are included in Appendix D.

Anchor QEA personnel labeled samples in a consistent manner to ensure that field samples were traceable. Chain-of-custody forms were appropriately populated to provide all information necessary for the laboratories to conduct the required analyses properly. Samples were placed in coolers with ice and received at the laboratory within the recommended temperature range.

Data validation was conducted by Laboratory Data Consultants Inc following completion of laboratory testing. All chemistry data were validated and found to be suitable for use. Analytical chemistry data were validated at a Stage 2B (EPA 2009) level following procedures and requirements listed in the Sampling and Quality Assurance Project Plan. The laboratory followed the specified analytical methods, all requested sample analyses were completed, and quality assurance/quality

control samples and procedures were analyzed at required frequencies. Chain-of-custody forms and laboratory reports are included in Appendix E. Data validation reports are included in Appendix F.

4.3 Performance Monitoring Results

Sediment sampling analytical results are summarized in Table 4-2 and as follows:

- Open-Water Area Samples: Consistent with the expectations defined in the EDR, sediments in the open-water RMC placement areas (WW-1CPM-01 and WW-1CPM-02) were found to comply with all sediment cleanup levels. Mercury, D/F, and cPAH concentrations in these samples were all below the sediment cleanup levels and were also below Ecology's estimates of natural background concentrations for Puget Sound sediments (0.2 mg/kg, 4 ng/kg and 21 µg /kg, respectively; Ecology 2025).
- BST Under-Dock Samples: Samples WW-1CPM-03 and WW-1CPM-04 were collected in BST under-dock areas, where contaminant concentrations were expected to remain above sediment cleanup levels. Cleanup levels for protection of benthic organisms were exceeded for mercury and 4-methylphenol in sample WW-1CPM-03 but not sample WW-1CPM-04. Concentrations of D/F compounds and cPAH compounds were elevated in both samples. D/F concentrations ranged between 22 and 48 µg /kg, and cPAH TEQ concentrations ranged between 230 and 550 µg /kg. The detected concentrations in samples from the BST under-dock areas are consistent with previous remedial investigation/feasibility study and Pre-Remedial Design Investigation sediment sampling results, and these areas will be addressed for cleanup when the cleanup in Whatcom Waterway Phase 2 Site areas is conducted.

5 References

Anchor QEA, 2025. *Revised Engineering Design Report for Unit 1C Dredging*. Whatcom Waterway Cleanup in Phase 2 Site Areas. August 2025.

Ecology (Washington State Department of Ecology), 2007. *Consent Decree No. 07-2-022577-7 for the Whatcom Waterway Site* (with Exhibits).

Ecology, 2011. *First Amendment to the Consent Decree 07-2-022577-7 for the Whatcom Waterway Site* (with Exhibits).

Ecology, 2013. *Sediment Management Standards (WAC 173-204)*. Updated February 2013.

Ecology, 2015. *Bellingham Bay Regional Background Sediment Characterization Final Data Evaluation and Summary Report*. Publication No. 15-09-044. February 2015.

Ecology, 2024. *Second Amendment to the Consent Decree 07-2-022577-7 for the Whatcom Waterway Site* (with Exhibits). Filed March 2024.

Ecology, 2025. *Sediment Cleanup Users Manual*. Ecology Publication No. 12-09-057. December 2025.

EPA (U.S. Environmental Protection Agency), 2009. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use*. EPA Office of Solid Waste and Emergency Response. USEPA 540-R-08-005. January 2009.

RETEC (The RETEC Group), 2006. *Supplemental Remedial Investigation and Feasibility Study for the Whatcom Waterway Site*. Prepared for the Port of Bellingham.

Tables

Table 4-1
Sampling Summary

Location ID	Total Number of Attempts	Accepted Attempt Numbers[1]	Date Collected	Coordinates[2]		Sampled Interval (cm)	Tide Height[3] (feet)	Water Depth (feet)	Mudline Elevation[4] (feet MLLW)	Sampling Method	Chemical Analysis[6]	Biological Analysis[7]	Lithology
				Easting	Northing								
WW-1CPM-01	10	7, 9, 10	3/4/2026	122.495584	48.7447687	0–12	4.1[4]	45.0	-40.9	Diver/Van Veen Grab[5]	Mercury, SVOCs, Dioxins/Furans	Bioassay Archive	80% sand (medium to fine), 20% gravel (subrounded), gray to black, wet, loose, trace organics (wood debris), non-plastic, no odor, no sheen
WW-1CPM-02	14	3, 8, 10, 11, 12, 14		122.494883	48.7452159	0–12	3.9[4]	42.5	-38.6	Van Veen Grab	Mercury, SVOCs, Dioxins/Furans	Bioassay Archive	90% sand (medium to fine), 10% gravel (rounded, subangular), gray to black, wet, loose, non-plastic, no odor, no sheen
WW-1CPM-03	1	1		122.49367	48.7456228	0–12	3.5	--[8]	-17.2[8]	Diver	Mercury, SVOCs, Dioxins/Furans	--	90% silt, 10% biota (shell fragments), black, wet, soft (soupy), non-plastic, moderate H_2S-like odor, sheen present (rainbow)
WW-1CPM-04	1	1		122.493031	48.7460651	0–12	3.0	--[8]	-19.8[8]	Diver	Mercury, SVOCs, Dioxins/Furans		55% silt, 30% gravel (angular, subangular), 15% biota (shell fragments), black, wet, soft (soupy), non-plastic, moderate H_2S-like odor, no sheen

Notes:
1. Reported coordinates for WW-1CPM-01 and WW-1CPM-02 reflect the initial sampling location. Each sample represents a composite of material collected from multiple locations.
2. Coordinates are reported in NAD83 Washington State Plane North, U.S. feet.
3. Tide heights were obtained from National Oceanographic and Atmospheric Association tidal predictions at Station 9449211.
4. Tidal measurements were taken near the start of the first collection attempt.
5. Attempt 7 was collected by divers and consisted of roughly 90% of the sample material collected at WW-1CPM-01. Attempts 9 and 10 were collected by Van Veen grab sampler.
6. Site COCs include the SVOCs phenol and 4-methylphenol.
7. Sediment volume for potential bioassay testing was collected. However, since chemical results were within criteria for Site COCs, subsequent bioassay testing was not needed.
8. Direct water depth and elevation measurements were not collected at the underpier sampling locations due to access limitations beneath the pier. Elevations for both locations were derived from existing bathymetry provided by NW Hydro (October 2019) and Wilson Engineering (September 25, 202

--: not applicable
COC: contaminant of concern
cm: centimeter
H_2S: hydrogen sulfide
MLLW: mean lower low water
NAD83: North American Datum of 1983
Site: Whatcom Waterway Site
SVOC: semivolatile organic compound

Table 4-2
Sediment Analytical Results

		Task	BST_MARAD_Dock2026	BST_MARAD_Dock2026	BST_MARAD_Dock2026	BST_MARAD_Dock2026
		Location ID	WW-1CPM-01	WW-1CPM-02	WW-1CPM-03	WW-1CPM-04
		Sample ID	WW-1CPM-01	WW-1CPM-02	WW-1CPM-03	WW-1CPM-04
		Sample Date	3/4/2026	3/4/2026	3/4/2026	3/4/2026
		Depth	0–12 cm	0–12 cm	0–12 cm	0–12 cm
		Sample Type	N	N	N	N
		Matrix	SE	SE	SE	SE
		X	122.49558414	122.49488253	122.49366967	122.49303075
		Y	48.74476872	48.74521592	48.74562278	48.74606506
	Benthic Protection[1]	Other				
Metals (mg/kg)						
Mercury	0.41	1.2[2]	**0.0248 J**	**0.0651**	**1.16**	**0.194**
Semivolatile Organics (µg/kg)						
2,4-Dimethylphenol	29		18.9 U	19.3 U	71.5 U	19.0 U
2-Methylphenol (o-Cresol)	63		4.7 U	4.8 U	17.9 U	**8.1**
4-Methylphenol (p-Cresol)	670		**11.7 J**	**3.1 J**	**1100 J**	**127 J**
Pentachlorophenol			19.1 U	19.1 U	**108**	**64.2**
Phenol	420		**4.1 J**	**3.4 J**	**45.2**	**11.4**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene			0.98 U	**1.38**	**47.1**	**14.8**
2-Methylnaphthalene	670		**0.50 J**	**2.61**	**46.1**	**32.0**
Acenaphthene	500		0.98 U	**3.55**	**100**	**58.2**
Acenaphthylene	560		0.98 U	**1.34**	**20.4**	**60.9**
Anthracene	960		**3.05**	**5.89**	**71.4**	**149**
Benzo(a)anthracene	1300		**16.6**	**23.1**	**243**	**475**
Benzo(a)pyrene	1600		**5.13**	**10.7**	**174**	**411**
Benzo(b)fluoranthene			**5.93**	**13.6**	**190**	**521**
Benzo(g,h,i)perylene	670		**0.85 J**	**2.59 J**	**45.3 J**	**85.2 J**
Benzo(j)fluoranthene			**2.50**	**7.00**	**90.4**	**222**
Benzo(k)fluoranthene			**3.90**	**7.89**	**89.7**	**230**
Chrysene	1400		**11.9 J**	**26.1**	**218**	**605**
Dibenzo(a,h)anthracene	230		0.98 U	**0.75 J**	**12.2**	**27.2**
Dibenzofuran			0.98 U	**4.75**	**67.2**	**55.9**
Fluoranthene	1700		**12.4**	**63.2**	**446**	**531**
Fluorene	540		**1.05**	**4.68**	**66.5**	**69.6**
Indeno(1,2,3-c,d)pyrene	600		**0.90 J**	**2.36**	**45.3**	**91.9**
Naphthalene	2100		1.17 U	6.21 U	**221**	**71.5**
Phenanthrene	1500		6.55 U	**12.0**	**132**	**217**
Pyrene	2600		**9.68**	**55.8**	**438**	**1020**
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	3200		**12.3**	**28.5**	**370**	**970**
Total cPAH TEQ (7 minimum CAEPA 2005) (U = 0 max limit)		229[3]	**8.0 J**	**16 J**	**230**	**550**
Total cPAH TEQ (7 minimum CAEPA 2005) (U = 1/2 max limit)		229[3]	**8.0 J**	**16 J**	**230**	**550**
Total HPAH (SMS) (U = 0 max limit)	12000		**70 J**	**210 J**	**2000 J**	**4200 J**
Total LPAH (SMS) (U = 0 max limit)	5200		**4.10**	**27.5**	**610**	**626**

Table 4-2
Sediment Analytical Results

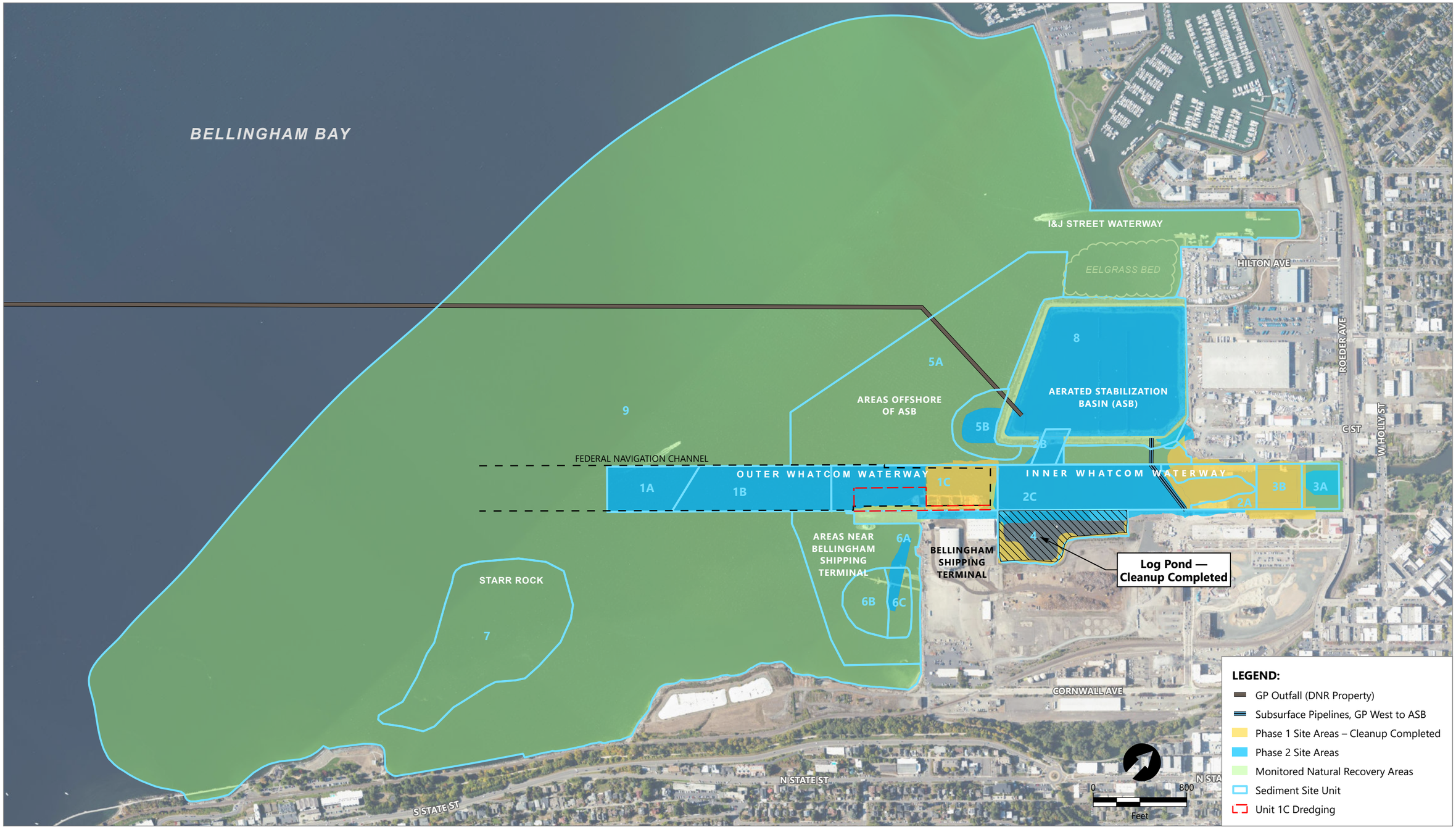
		Task	BST_MARAD_Dock2026	BST_MARAD_Dock2026	BST_MARAD_Dock2026	BST_MARAD_Dock2026
		Location ID	WW-1CPM-01	WW-1CPM-02	WW-1CPM-03	WW-1CPM-04
		Sample ID	WW-1CPM-01	WW-1CPM-02	WW-1CPM-03	WW-1CPM-04
		Sample Date	3/4/2026	3/4/2026	3/4/2026	3/4/2026
		Depth	0–12 cm	0–12 cm	0–12 cm	0–12 cm
		Sample Type	N	N	N	N
		Matrix	SE	SE	SE	SE
		X	122.49558414	122.49488253	122.49366967	122.49303075
		Y	48.74476872	48.74521592	48.74562278	48.74606506
	Benthic Protection[1]	Other				
Dioxin Furans (ng/kg)						
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)			0.147 U	0.149 U	0.480 U	0.905 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)			0.388 U	0.309 U	**2.44 J**	**0.867 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)			0.611 U	0.499 U	**5.65**	**3.34 J**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)			0.601 U	**1.01 J**	**95.3**	**40.1**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)			0.737 U	**0.392 J**	**14.6**	**7.02 J**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)			**2.89 J**	**26.8**	**1730**	**1050**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)			**26.7**	**269**	**20900**	**9070**
Total Tetrachlorodibenzo-p-dioxin (TCDD)			0.147 U	**3.36 J**	**42.3 J**	**17.3 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)			0.388 U	**4.90 J**	**65.4 J**	**33.4 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)			**0.271 J**	**12.0 J**	**420**	**368 J**
Total Heptachlorodibenzo-p-dioxin (HpCDD)			**5.90 J**	**69.5**	**3840**	**3760**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)			0.237 U	**0.175 J**	**4.08**	**1.54 J**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)			**0.0880 J**	0.262 U	**4.98**	**1.36 J**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)			**0.127 J**	0.260 U	**8.46**	**1.81 J**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)			0.305 U	**0.378 J**	**20.1**	**6.03**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)			0.325 U	0.297 U	**8.45 J**	**2.20 J**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)			0.502 U	0.491 U	**9.03**	**2.13 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)			0.332 U	0.302 U	**10.6**	**2.14 J**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)			0.410 U	**3.44**	**248**	**76.2**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)			0.341 U	0.388 U	**10.7 J**	**3.31 J**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)			1.29 U	**8.44**	**294**	**181**
Total Tetrachlorodibenzofuran (TCDF)			**0.723 J**	**0.590 J**	**22.2 J**	**5.61 J**
Total Pentachlorodibenzofuran (PeCDF)			**0.327 J**	**1.61 J**	**126 J**	**40.5 J**
Total Hexachlorodibenzofuran (HxCDF)			**0.176 J**	**5.25 J**	**566 J**	**144 J**
Total Heptachlorodibenzofuran (HpCDF)			0.341 U	**12.2**	**880 J**	**279 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit)		9.8[3]	**0.0777 J**	**0.581 J**	**48.2 J**	**22.0 J**
Total Dioxin/Furan TEQ 2005 (Mammal) (U = 1/2 max limit)		9.8[3]	**0.532 J**	**0.934 J**	**48.4 J**	**22.4 J**

Notes:
Detected concentration is greater than WhatcomWW_BenthicProtect screening level
Detected concentration is greater than WhatcomWW_Other_BSL screening level
Bold: Detected result
Calculated values have been rounded to laboratory-reported significant digits
1. These criteria were defined based on the Sediment Quality Standards. Exceedances of these values are subject to confirmational bioassay testing provisions.
2. Site-specific bioaccumulation screening level (1.2 mg mercury/kg dry weight) for mercury in the Site, applied on a point-by-point basis.
3. Bioaccumulation Screening Levels are Site-specific for human and ecological health protection and are applied using a Site-wide surface-weighted average concentration.

µg/kg: microgram per kilogram
cm: centimeter
cPAH: carcinogenic polyglycolic aromatic hydrocarbon
HPAH: high-molecular-weight polycyclic aromatic hydrocarbon
J: Estimated value
LPAH: low-molecular-weight polycyclic aromatic hydrocarbon
mg/kg: milligram per kilogram
N: Normal
ng/kg: nanogram per kilogram
SE: Sediment
Site: Whatcom Waterway Site
SMS: Sediment Management Standards
TEQ: toxic equivalency quotient
U: Compound analyzed for, but not detected above detection limit

Figures

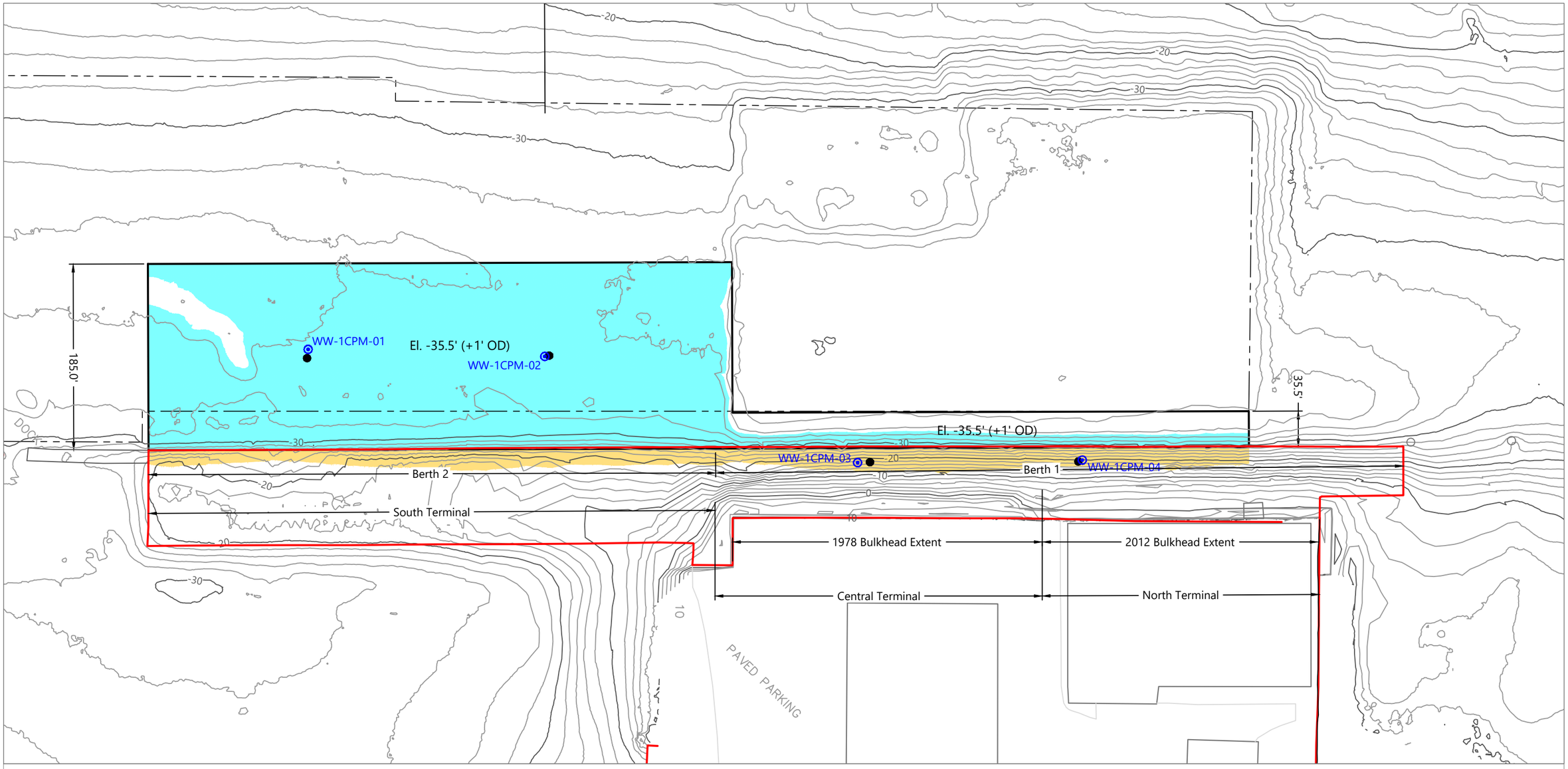
DRAFT



Publish Date: 2026/05/05, 4:49 PM | User: emueller
Filepath: \\GSTFile01\GIS\Jobs\PortofBellingham_0007\Whatcom_Waterway_Ph2\Maps\Reports\DraftAsBuiltReport\DraftAsBuiltReport.aprx

ANCHOR QEA

Figure 1-1
Site Location and Vicinity
As-Built Report for Unit 1C Dredging
Whatcom Waterway Cleanup in Phase 2 Site Areas



SOURCE: Existing bathymetry provided by NW Hydro, dated October, 2019, and Wilson Engineering, dated September 25, 2020.
HORIZONTAL DATUM: Washington State Plane North Zone, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: Mean Lower Low Water (MLLW)
NOTE: Reported coordinates for WW-1CPM-01 and WW-1CPM-02 reflect the initial sampling location. Each sample represents a composite of material collected from multiple locations.

LEGEND:

- Open Water dredging Area
- Under-Pier Dredging Area
- Contours (2' and 10' Intervals)
- Federal Navigation Channel
- BST Dock
- Proposed Performance Monitoring Sample Location
- Actual Performance Monitoring Sample Location

0 100 Feet

Publish Date: 2026/05/21 2:36 PM | User: psciaba
Filepath: K:\Projects\0090-Moffatt and Nichol\MARAD Dock Environmental Support\0090-BST-001 (BST ALT-1).dwg Figure 4-1

ANCHOR QEA

Figure 4-1
Proposed and Actual Sampling Locations

As-Built Report for Unit 1C Dredging
Whatcom Waterway Cleanup in Phase 2 Site Areas