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Memorandum

To:	Corey King – Washington State Department of Ecology
From:	Robert Trahan on Behalf of Port of Anacortes
Cc:	Port of Anacortes – Jenkins Dossen Port of Anacortes – Kevin Anderson
Date:	March 23, 2026
Subject:	Proposal for Interim Action Cleanup at the Anacortes Port Log Yard Site Anacortes, Washington FSID No: 21898438 CSID No: 3604

Pursuant to Agreed Order No. DE 10630 (Agreed Order) issued by the Washington State Department of Ecology (Ecology) and in accordance with the Washington State Model Toxics Control Act (MTCA) cleanup regulations (Chapter 173-340 Washington Administrative Code [WAC]), the Port of Anacortes (Port) is proposing an Interim Action for the Anacortes Port Log Yard Site (Site) located along the shoreline of Guemes Channel at the northern terminus of T Avenue in Anacortes, Washington. The Site address is 718 4th Street, Anacortes, Washington 98221. The Interim Action will focus on implementing a partial cleanup of the Site to address sediment contamination within the current and planned future operational area and within areas containing elevated levels of wood waste resulting from historical log haul out operations (i.e., Former Log Haul Out).

The Site currently hosts Pier 61. Pier 61 is used for moorage of commercial drop-framed barges that facilitates daily transit of goods and services to and from the San Juan Islands seven (7) days a week. At present, additional moorage space and deeper navigational depths are required to support the commercial demand for Pier 61. Because of this demand, structural condition of the existing pier and presence of sediment contamination within the operational area surrounding the pier, the Port proposes an Interim Action to demolish Pier 61 and remediate the identified sediment contamination in this portion of the Site to clear environmental encumbrances for the replacement and redevelopment of Pier 61 to meet commercial demands.

The Site is shown relative to the surrounding area in Figure 1. The current Site layout, features and facilities are shown in Figures 2 through 5. Investigation activities completed to date and their results as well as an overview of the proposed Interim Action are discussed below.

PROJECT BACKGROUND

Location and Description

The Site comprises the intertidal and subtidal marine areas within an embayment along Guemes Channel at the northern terminus of T Avenue in the nearshore area northwest of 718 4th Street (Figure 2). The Site is bounded to the west by the Port's Pier 2 Marine Terminal (Pier 2), which is an earth fill structure and pile-supported wharf along the northernmost portion of the facility. The shoreline south and east of the Site includes a mixture of riprap, remnant structures, rock outcroppings, and sand and gravel beaches. A wooden dock (Pier 61) used for commercial transient vessels extending into the marine area from the southern shoreline is located within the Site. Public access to the Port's Pier 2 facility, including the beach

area south of the Site between Pier 2 and Pier 61 (Former Log Haul Out), is currently restricted by fencing and signage that maintains security along the Port's marine terminal eastern flank.

Historically, the Site and surrounding area was used for lumber and wood milling and ship building operations from the early 1900s to 1965. In 1965, the Port purchased the Site and adjacent uplands (the "Property"). Between 1965 and 2004, the Port leased the Property to multiple tenants for log handling and loading operations. Log handling operations ceased after 2004, and the Site has remained largely unchanged since that time. The adjacent upland area is currently used for storing oil spill response booms, and Pier 61 is used for moorage of commercial vessels.

Regulatory Framework

Following the closure of log handling operations in 2004, the Port began working with Ecology to characterize sediment conditions at the Site due to evidence of degraded habitat resulting from wood debris. Initial investigations completed identified up to 75 percent wood waste by volume in shallow intertidal sediment. In addition to wood waste, the initial investigations also identified levels of organic carbon and volatile solids above recommended levels (Ecology 2013) and exceedances per Ecology's Sediment Cleanup Objective (SCO) and Cleanup Screening Level (CSL) criteria for benthic invertebrate community health (Chapter 173-204 WAC).

Based on the results of the initial and follow-up investigations, the Port entered into Agreed Order No. DE 10630 with Ecology on November 3, 2014, pursuant to MTCA. Under the Agreed Order, the Port is required to evaluate the nature and extent of contamination within affected media and develop and evaluate cleanup alternatives for addressing the identified contamination including preparation a Remedial Investigation/Feasibility Study (RI/FS) Report and Draft Cleanup Action Plan (DCAP). Provisions under the Agreed Order allow for completion of an Interim Action to facilitate cleanup activities in advance of the RI/FS and DCAP to address contamination that is an immediate threat to human health and the environment or substantially reduce one or more pathways for exposure.

AGREED ORDER REMEDIAL INVESTIGATION

As required by the Agreed Order, remedial investigation activities were completed by the Port to collect sufficient environmental data to define the nature and extent of Site contaminants (RI) and to develop and evaluate cleanup action alternatives for addressing the identified Site contamination resulting from historical land use (FS). To date, the Port has completed the following investigation activities as required by the Agreed Order and Ecology to evaluate Site conditions and fill data gaps identified by Ecology to complete the characterization of the Site:

- Initial 2015 RI to characterize Site conditions in accordance with the RI/FS Work Plan.
- Additional investigation activities in 2021 under RI/FS Work Plan Addendum No. 1 to further evaluate the nature and extent of Site contaminants in portions of the Site that were not previously identified following sediment investigation activities by the City of Anacortes (City) in 2020 as part of the Nearshore Sediment Investigation to support the City's Wastewater Treatment Outfall Project. The sediment investigation completed by the City was to inform construction decisions within the proposed outfall alignment. As part of the City's investigation, concentrations of carcinogenic polycyclic aromatic hydrocarbons (cPAHs), tributyltins (TBT), polychlorinated biphenyls (PCBs), and dioxins and furans were

found to exceed preliminary cleanup levels (PCULs) in portions of the Site where contamination had not been previously identified.

- Additional investigation activities in 2023 under RI/FS Work Plan Addendum No. 2 to define the northern boundary of the Site as required by Ecology based on their review of the sediment data collected under RI/FS Work Plan Addendum No. 1 and the City's Wastewater Treatment Outfall Project.

Based on review of these sediment data and preliminary cleanup action alternatives developed (GeoEngineers 2023a), Ecology determined that bioassay analysis was required to evaluate potential impacts to the benthic community where monitored natural attenuation (MNA) was proposed in the eastern portion of the Site. Following this determination by Ecology, the City collected additional sediment samples as part of their outfall relocation project in 2024. The new data collected by the City was co-located with previous sample locations where MNR was proposed as a remedial alternative in the eastern portion of the Site and showed that benthic exceedances were no longer present in this area. In recent meetings, Ecology determined that the post-construction sediment data collected by the City is suitable for use to characterize the current Site conditions and that bioassay sampling and analysis was no longer required to evaluate potential impacts to the benthic community.

Sediment investigations completed at the Site and surrounding area are shown in Figure 6. A schedule of analysis for sediment samples collected by the Port and others to characterize Site conditions is presented in Table 1. Sediment data collected by the Port as part of the Agreed Order as well as prior investigations are presented in Data Report Technical Memoranda (GeoEngineers 2017, GeoEngineers 2022 and GeoEngineers 2023b) prepared to document Site conditions as required by Ecology. Sediment investigation activities associated with the City's Wastewater Treatment Outfall Project are presented in the Pre/Post-Construction Perimeter Sampling Report (Geosyntec 2025).

Conceptual Site Model

A preliminary conceptual site model (CSM) was developed for the Site as part of the RI/FS Work Plan. The preliminary CSM summarized potential contaminant sources, release mechanisms, transport processes, and exposure routes by which receptors may be affected by Site contaminants based on existing information. The CSM serves as the basis for the development of the preliminary cleanup levels and point of compliance for which the cleanup levels must be met. The CSM for the Site is shown in Figure 7 and has been revised from the RI/FS Work Plan to incorporate the results of the Agreed Order investigation and environmental investigations completed by others. The CSM is represented as a generalized cross section of the Site to illustrate the range of physical conditions and potential contaminant transport and exposure pathways present.

Preliminary Cleanup Levels

Preliminary screening levels developed during preparation of the RI/FS Work Plan were revised to meet current standards published in Ecology's Sediment Cleanup Users' Manual (SCUM; Ecology 2021) and Ecology's February 2025 Cleanup Levels and Risk Calculation (CLARC) data tables to evaluate contaminant nature and extent. Screening levels for the protection of the benthic community (Benthic PCULs) presented in Table 2 are numeric SCOs from the Sediment Management Standards (SMS; WAC 173-204-562) that correspond to sediment quality that will result in no adverse effects to the benthic community. Screening levels for the protection of human health and higher trophic ecological receptors (Human Health PCULs)

presented in Table 3 are for human health exposure to sediment via ingestion and dermal contact utilizing equations and parameter values from Ecology's SCUM guidance and CLARC data tables. The PCULs based on sediment ingestion and dermal contact were developed for the following potential receptors:

- A child exposed during beach play.
- An adult exposed during clam digging (subsistence harvesting).
- An adult exposed during net fishing (subsistence harvesting).

For evaluating exposure scenarios, the intertidal area is defined as beach above -3 feet mean lower low water (MLLW) and the subtidal area as below -3 feet MLLW. Children exposed to sediment during beach play and adults exposed to sediment during clam digging are assumed to be exposed primarily to intertidal sediment (at elevations greater than -3 feet MLLW). The potential exposure scenario for net fishing relates to both intertidal and subtidal sediment. In accordance with SCUM, area weighted average concentrations within the sediment compliance interval were used to screen bioaccumulative contaminants of potential concern.

Point of Compliance

In accordance with SMS requirements, the point of compliance for protection of benthic organisms and human health is represented by the biologically active zone (BAZ) in sediment. However, SCUM also requires that the point of compliance consider site-specific circumstances such as the potential to be disturbed by beach play and clam digging or by scour due to vessel activity, wave action, anchor drag, etc. which may be deeper than the typical depth for the exposure pathway and receptors of concern. A preliminary evaluation of Site conditions has identified the following sediment compliance intervals for the Site:

- **Intertidal Area** – The compliance interval for the intertidal area is 0 to 45 centimeters (cm). This compliance interval considers the following:
  - **BAZ** – In accordance with SCUM, the typical BAZ for Puget Sound is from 0 to 10 cm.
  - **Potential for Scour by Wave Action and Vessel Activity** – Based empirical evidence from bathymetric survey data (Attached), the depth of scour resulting from wave action and vessel activity is estimated to be up to 1-foot below mudline outside of the current/future operational area.
  - **Burrowing Depth of Potential Harvestable Resources** – A biological evaluation completed during the initial RI did not identify evidence of deep burrowing bivalve species (i.e., horse clams or geoduck) in the intertidal portion of the Site. As a result, a burrowing depth of up to approximately 1-foot is assumed for potential harvestable resources based on the typical burrowing depth of other common indicate bivalve species in Puget Sound (e.g., cockles, manilas and butter clams).
  - **Beach Play** – To ensure protection of human health, potential sediment disturbance up to 45 cm is assumed under the beach play scenario.
- **Subtidal Area** – The compliance interval for the subtidal area is 0 to 1-foot. This compliance interval considers the following:
  - **BAZ** – Assumed to be from 0 to 10 cm for typical Puget Sound sediment.
  - **Net Fishing** – Consistent with SCUM, the BAZ is assumed under the net fishing scenario.

- **Potential for Scour from Anchor Drag and Vessel Activity** – Based empirical evidence from bathymetric survey data (Attached) and discussions with Ecology, a scour depth resulting from anchor drag and vessel activity it estimated to be up to 1-foot below mudline outside of the current/future operational area.

- **Operational Areas** – The compliance interval for the Pier 61 and Wyman's Ramp operational areas is 0 to 2 feet. This compliance interval considers the following:

  - **BAZ** – Assumed to be from 0 to 10 cm for typical Puget Sound sediment.
  - **Net Fishing (Subtidal Area Only)** – Assumed to be from 0 to 10 cm consistent with the BAZ.
  - **Potential for Scour by Wave Action and Vessel Activity** – The operational area includes both intertidal and subtidal areas of the Site that are subject to vessel scour resulting from commercial operations and is estimated to be up to 2 feet based empirical evidence from bathymetric survey data (Attached).
  - **Burrowing Depth of Potential Harvestable Resources (Intertidal Area Only)** – Assumed to be up to 1-foot based on a biological evaluation of the Site during the initial RI and typical burrowing depth of common bivalve species in Puget Sound.
  - **Beach Play (Intertidal Area Only)** – Up to 45 cm is assumed under a typical beach play scenario.

Sediment compliance intervals based on tidal zone and operational area are shown in Figure 8.

Contaminant Nature and Extent

The spatial distribution of wood debris, conventional parameters, and contaminants screened for the protection of benthic organisms and for the protection of human health for the sediment compliance interval and underlying recent sediment deposits are presented in Figures 9 through 86 utilizing inverse distance weighting (IDW) on a point-by-point basis in accordance with SCUM. Table 3 presents the summary statistics for sediment data compared to the Benthic PCULs. Table 4 presents the summary statistics for sediment data compared to the Human Health PCULs. Tables 5 and 6 present the RI data set which provides the basis for the statistical evaluation presented in Tables 3 and 4, respectively. In coordination with Ecology, previously collected sediment data that are co-located with the recent sediment data collected by the City as part of the Wastewater Treatment Outfall Project are not used as part of the RI data set to define contaminant nature and extent.

The estimated thickness of contamination based on observed sediment conditions is shown in Figure 87 and is used as the basis for developing preliminary Interim Action volume estimates further discussed below.

Contaminants of Concern

The following contaminants of concern (COCs) are identified within the sediment compliance interval based on exceedance of the Benthic and Human Health PCULs:

- **Benthic COCs** – Zinc, low molecular weight polycyclic aromatic hydrocarbons (LPAHs) including acenaphthene, fluorene and phenanthrene, high molecular weight polycyclic aromatic hydrocarbons (HPAHs) including total benzofluoranthenes, chrysene, fluoranthene, pyrene and sum of HPAHs, bis(2-ethylhexyl) phthalate and 4-methyphenol are identified as benthic COCs because one or more of these contaminants were detected at a concentration exceeding the Benthic PCUL.

- **Human Health COCs** – Copper, total cPAHs calculated using the toxicity equivalency quotient (TEQ) methodology relative to benzo(a)pyrene, PCBs, total dioxin-like PCB TEQ and total dioxin and furan TEQ.

Additionally, wood debris which may cause or contribute to sediment impacts is managed by Ecology as a deleterious substance under SMS. Based on bioassay test data, visual wood debris greater than approximately 10 percent by volume is identified as a substance of concern (SOCs) requiring cleanup evaluation.

An overview of the Benthic and Human Health PCUL exceedances for the sediment compliance interval is shown in Figures 88 and 89, respectively.

PROPOSED INTERIM ACTION

Overview

Dredging is proposed for the Interim Action to remove identified contaminated sediment and increase navigational access for the replacement and redevelopment of Pier 61. The Interim Action also includes removal of contaminated sediment and sediment containing wood debris greater than 10 percent by volume observed in the Former Log Haul Out Area due to potential access restrictions that would result following replacement and redevelopment of Pier 61 and the limited draft currently observed in this area. Additionally, the Interim Action would include demolition and replacement of the existing Pier 61 structure. A recent survey of the pier structure by PND Engineers, Inc. (PND) concluded that the current condition of the timber piles supporting the pier structure is generally poor with significant section loss visible from deterioration and marine borer damage. Based on this evaluation, dredging to remove contaminated sediment beneath or surrounding the pier would likely cause irreversible damage to the structure necessitating its removal as a component of the proposed Interim Action. Overall, the Interim Action area encompasses approximately 51 percent of the Site and would result in the full removal of Benthic PCUL exceedances and wood waste identified as a SOC.

The conceptual layout for the new Pier 61 structure and operational area requiring deepening to support the future anticipated navigational draft depth is shown in Figure 90. The proposed Interim Action to support the Port's Pier 61 replacement and redevelopment project is shown in Figure 90.

Interim Action Dredging

To assist in the development and evaluation of remedial alternatives, the Site has been divided into six separate sediment management areas (SMA) based on environmental conditions and other factors that could affect the applicability of specific remedial technologies and the feasibility of their implementation. As discussed below, the proposed Interim Action considers the final overall cleanup action for the Site. SMAs developed as part of the preliminary evaluation of remedial technologies and cleanup alternatives for the Site are shown in Figure 91.

Within the operational area portion of the proposed Interim Action (SMA-1c, SMA-2c, SMA-2b, SMA-2d and SMA-2e; Figure 90), an estimated 10,500 cubic yards (CY) of contaminated and 17,800 CY of underlying clean sediment will be removed to meet a navigation depth of -12 feet MLLW with a 1-foot over-dredge allowance. The proposed dredge prism for this area is estimated to be approximately 2.3 acres (99,400 square feet). Based on stable side slopes within the other portions of the Site, a 3-foot horizontal

to 1-foot vertical (3H:1V) slope is anticipated within the operational area to transition from the proposed navigation dredge base to existing mudline elevations east, west and south of the operational area to meet the future navigational draft depths (Figure 90).

Within the other portions of the proposed Interim Action including Former Log Haul Out and shoreline areas (SMA-1a, SMA-1b, SMA-1d and SMA-2a; Figure 91) an estimated 16,200 CY of contaminated sediment will be removed followed by the placement of imported material to resemble existing mudline elevations. Remedial technologies including partial sediment removal and capping in these areas were considered. However, due to the conceptual nature of the Pier 61 replacement and redevelopment design, additional information will be required to verify transitional slope gradients and the actual area requiring deepening to meet the future navigational draft depth needs. Additionally, because the future land use for the Former Log Haul Out area is unknown, full removal and backfill was the only technology considered to prevent limiting the future use of this area by the Port.

Dredged Material Handling, Transport and Disposal

Contaminated dredged material that is unsuitable for open water disposal will be placed on a barge and transported to an upland transload facility using land-based excavation equipment. The dredged material will be offloaded at an appropriate transload facility. The dredged material that is offloaded to a transload facility will be transported via trucks and/or train for disposal at an appropriate permitted upland landfill.

It is assumed that dredged material underlying the contaminated sediment layer will be suitable for open water disposal. Upon verification that the contaminated sediment has been successfully removed from the Site, the open water suitable material will be dredged and placed on a disposal barge (dump scow). The dump scow will be towed to the open water disposal site. Once the dump scow reaches the open water disposal site and is positioned over the site, the bottom of the dump scow will be opened, and the dredged material will be released in accordance with the approved aquatic use authorization. Dredge material that is suitable for open water disposal is expected to be disposed at the Rosario Strait open-water dispersive site.

Environmental Protection During Construction

Proposed Interim Action activities will be performed in compliance with regulatory and permit requirements including implementation of best management practices (BMPs) to protect the environment during construction. The following regulatory and permit requirements are anticipated for Proposed Interim Action construction activities:

- Dredging and other marine work will occur within the permitted, allowed in-water work windows.
- The contractor will be required to prepare a construction Spill Prevention, Control and Countermeasures (SPCC) Plan for the project.
- Work will be performed in accordance with Ecology Water Quality Certification (WQC) requirements.
- Water quality monitoring will be performed during dredging and placement of fill material to ensure compliance with the WQC requirements.
- Work will be performed in compliance with all applicable local, state and federal regulations and restrictions (e.g., Washington Department of Fish and Wildlife [WDFW] Hydraulic Project Approval [HPA],

Department of Ecology Section 401 Clean Water Certification, local Critical Areas Ordinance and land use regulations, Shoreline Master Program, State Environmental Policy Act [SEPA] and U.S. Army Corps of Engineers [USACE] Section 10 [Rivers and Harbors Act]).

Cultural Resources

Potentially significant archaeological materials are not anticipated at the Site based on prior cultural assessments completed and consultations with the Department of Historical Preservation (DAHP). However, it is possible that archaeological materials may be encountered during construction. Procedures for the inadvertent discovery of cultural resources will be developed in consultation with Ecology prior to construction.

Interim Action Work Plan and Completion Reporting

In accordance with the Agreed Order, an Interim Action Work Plan describing the details of the proposed actions will be developed for Ecology acceptance and public review. It is anticipated that additional sampling and analysis will be required to further refine the vertical extent of contamination with the proposed Interim Action area and that the underlying material generated to meet the future navigational depths will be suitable for open-water disposal. Dredged material characterization will be required in accordance with the USACE Dredged Material Management Program (DMMP) to obtain an open-water disposal suitability determination. The details of the additional sampling and analysis, and quality assurance and quality control procedures be incorporated into the Interim Action Work Plan to meet the requirements of the Agreed Order.

Upon completion of the construction activities, an Interim Action Completion Report that describes the construction of the Interim Action will be prepared and submitted to Ecology for review and approval in accordance with the requirements of the Agreed Order. Additionally, the results of the Interim Action, as described in the final Interim Action Completion Report, will be incorporated into the RI/FS for the Site.

Habitat Mitigation

The dredging activity will result in the permanent loss of approximately 1.7 acres of shallow water habitat (area shallower than -10 feet MLLW) and up to approximately 1.1 acres of eelgrass habitat. The Port will evaluate options to mitigate for the loss of this habitat either through the application of habitat credits or potential habitat restoration opportunities in conjunction with the cleanup action on Site, at the nearby Quiet Cove Site (FSID 20859; CSID 12482) or other potential surrounding sites. Habitat mitigation will be further evaluated as part of the project permitting process.

Coordination with Final Cleanup Action

The Port is required to complete the RI/FS and DCAP in accordance with the Agreed Order to identify the appropriate cleanup action for the Site. This proposal for Interim Action cleanup is being presented to support the Port's replacement and redevelopment of Pier 61 to meet commercial demands for drop-framed transit vessels moorage and navigational drafts. The Agreed Order specifies that with congruence with Ecology, the Port may complete an Interim Action to reduce the potential threat to human health and the environment. The Interim Action will be implemented in advance of selecting the final cleanup action for the Site and will not preclude reasonable alternatives for the final cleanup action (WAC 173-340-

430(3)(b)). The action is interim or temporary and will be in place until the final cleanup action is implemented for the Site.

The RI/FS for the Site will identify the completion of the Interim Action as part of the Site conditions. The RI/FS will identify appropriate alternatives for the final cleanup of the Site. The final cleanup action will include integration of the cleanup remedy for the Interim Action area.

SCHEDULE

Dredging and other Interim Action activities will occur within the permitted, allowable in-water work windows. The Port is currently in the preliminary planning stages and will continue to coordinate these efforts with Ecology for approval. It is currently anticipated that construction activities will be completed within the 2027/2028 in-water work window. Specific project milestones will be developed in concert with Ecology to prepare a detailed remedial design, Interim Action Work Plan and project required permits.

REFERENCES

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Attachments:

Tables:

- Table 1. Schedule of Laboratory Analysis for Sediment Investigations
- Table 2. Sediment Cleanup Levels for the Protection of Benthic Organisms
- Table 3. Sediment Cleanup Levels for the Protection of Human Health and Higher Trophic Level Ecological Receptors
- Table 4. Summary Statistics and Evaluation of Contaminants of Concern for the Protection of Benthic Organisms
- Table 5. Summary Statistics and Evaluation of Contaminants of Concern for the Protection of Human Health and Higher Trophic Level Ecological Receptors
- Table 6. Summary of Sediment Analytical Results for the Protection of Benthic Organisms
- Table 7. Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Figures:

- Figure 1. Vicinity Map
- Figure 2. Site Plan
- Figure 3. Parcel Boundaries
- Figure 4. Stormwater Network and Outfalls
- Figure 5. Eelgrass and Macroalgae Habitat
- Figure 6. Sediment Investigations
- Figure 7. Conceptual Site Model
- Figure 8. Sediment Compliance Intervals
- Figure 9-18. Conventional Parameter Results Summary
- Figure 19-48. Benthic Results Summary
- Figure 49-86. Human Health Results Summary
- Figure 87. Contaminated Sediment Thickness
- Figure 88. Compliance Interval Benthic PCUL Exceedances
- Figure 89. Compliance Interval Human Health PCUL Exceedances
- Figure 90. Conceptual Pier 61 Redevelopment and Operations Area Layout
- Figure 91. Proposed Interim Action

Bathymetric Survey

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Tables

Table 1

Schedule of Laboratory Analysis for Sediment Investigations

Anacortes Port Log Yard

Anacortes, Washington

Sample Location[1]	Sample Identification	Date Sampled	Sample Interval	Conventional Analyses[2]								Chemical Analyses[2]														
				TOC	TVS	TS	Porewater Ammonia	Total Ammonia	Porewater Sulfide	Total Sulfide	Grain Size	TBT	Metals	LPAHs	HPAHs	cPAHs	Chlorinated Hydrocarbons	Phthalates	Miscellaneous Extractables	Phenols	Pesticides	PCB Aroclors	PCB Congeners	Dioxins and Furans	Bioassay
2004 Sediment Investigation (Floyd|Snider 2004)																										
LP-1	LP-1	07/13/04	0-10 cm	●	●	●		●		●	●		●	●	●	●	●	●	●	●		●			
LP-2	LP-2	07/13/04	0-10 cm	●	●	●		●		●	●		●	●	●	●	●	●	●	●		●			
2007 Sediment Investigation (SAIC 2008)																										
FB-A4-19	FB-A4-19	09/05/07	0-10 cm	●	●			●		●	●		●	●	●	●	●	●	●	●		●			
FB-A4-20	FB-A4-20	09/05/07	0-10 cm	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	●
FB-A4-21	FB-A4-21	09/05/07	0-10 cm	●	●	●		●		●	●		●	●	●	●	●	●	●	●		●			
2008 Sediment Investigation (GeoEngineers 2008)																										
S-1	S-1	08/28/08	0-10 cm	●		●		●		●			●	●	●	●	●	●	●	●		●			●
S-2	S-2	08/28/08	0-10 cm	●		●		●		●			●	●	●	●	●	●	●	●		●			●
2009 Sediment Investigation (GeoEngineers 2010)																										
S-3	S-3	09/01/09	0-10 cm	●	●	●		●		●			●	●	●	●	●	●	●	●		●		●	●
S-4	S-4	09/01/09	0-10 cm	●	●	●		●		●			●	●	●	●	●	●	●	●		●			●
S-5	S-5	09/01/09	0-10 cm	●	●			●		●			●	●	●	●	●	●	●	●		●			●
S-6	S-6	09/01/09	0-10 cm	●	●	●		●		●			●	●	●	●	●	●	●	●		●			●
S-7	S-7	09/01/09	0-10 cm	●	●	●		●		●			●	●	●	●	●	●	●	●		●			●
2010 Sediment Investigation (GeoEngineers 2011)																										
LHO-REF	LHO-REF	10/14/10	0-10 cm	●		●							●	●	●	●	●	●	●	●		●			
	DUP(LHO-REF)	10/14/10	0-10 cm	●		●							●	●	●	●	●	●	●	●		●			
2012 Pier 2 DMMP Sediment Investigation (GeoEngineers 2013)																										
P2-1/P2-2/ P2-3	P2-1-A-COMP (P2-1/P2-2/P2-3)	11/16/12	0-4 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	
	P2-1-B-COMP (P2-1/P2-2/P2-3)	11/16/12	0-4 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	
	P2-1-Z-COMP (P2-1/P2-2/P2-3)	11/16/12	0-4 ft	●	●			●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	
P2-1	P2-1-A	11/14/12	0-4 ft			●						●														
P2-2	P2-2-A	11/15/12	0-4 ft			●						●														
P2-3	P2-3-A	11/16/12	0-4 ft			●						●														
2015 Sediment Investigation (GeoEngineers 2015)																										
LY-01	LY-SS-01_0-10	11/17/15	0-10 cm	●	●	●					●		●	●	●	●	●	●	●	●				●	
LY-02	LY-SS-02_0-10	11/17/15	0-10 cm	●	●	●					●		●	●	●	●	●	●	●	●					
LY-03	LY-SS-03_0-10	11/17/15	0-10 cm	●	●		●		●		●		●	●	●	●	●	●	●	●			●	●	
	LY-SS-Dup-01 (LY-SS-03_0-10)	11/17/15	0-10 cm	●	●	●	●		●		●		●	●	●	●	●	●	●	●			●	●	
	LY-SC-03_3-4	11/18/15	3-4 ft	●	●	●	●		●		●		●	●	●	●	●	●	●	●			●		
	LY-SC-03_4-5	11/18/15	4-5 ft	●		●									●	●			●	●					
LY-04	LY-SS-04_0-10	11/17/15	0-10 cm	●	●	●	●		●		●		●	●	●	●	●	●	●	●			●		
	LY-SC-04_3-4	11/18/15	3-4 ft	●	●	●					●		●	●	●	●	●	●	●	●					
	LY-SC-Dup-02 (LY-SC-04_3-4)	11/18/15	3-4 ft	●	●		●				●		●	●	●	●	●	●	●	●					
LY-05	LY-SS-05_0-10	11/17/15	0-10 cm	●	●	●	●		●		●		●	●	●	●	●	●	●	●			●		
	LY-SC-05_1-2	11/19/15	1-2 ft	●		●							●	●	●	●									
	LY-SC-05_3-4	11/19/15	3-4 ft			●	●						●												
	LY-SC-05_4-5	11/19/15	4-5 ft			●							●												
LY-06	LY-SS-06_0-10	11/17/15	0-10 cm	●	●	●	●		●		●	●	●	●	●	●	●	●	●	●			●	●	
	LY-SS-Dup-02 (LY-SS-06_0-10)	11/17/15	0-10 cm	●	●	●	●		●		●	●	●	●	●	●	●	●	●	●			●	●	
	LY-SC-06_3-4	11/19/15	3-4 ft			●	●		●			●													
	LY-SC-06_4-5	11/19/15	4-5 ft	●		●							●		●	●				●			●		
LY-07	LY-SS-07_0-10	11/17/15	0-10 cm	●		●					●	●											●		
	LY-SC-07_0-1	11/20/15	0-1 ft	●		●									●	●									
	LY-SC-07_3-4	11/20/15	3-4 ft			●						●													
LY-08	LY-SS-08_0-10	11/17/15	0-10 cm	●	●	●	●		●		●	●	●	●	●	●	●	●	●	●			●	●	
	LY-SC-08_3-4	11/20/15	3-4 ft	●	●		●		●		●	●	●	●	●	●	●	●	●	●					
	LY-SC-08_5-6	11/20/15	5-6 ft	●		●								●	●	●								●	
LY-09	LY-SS-09_0-10	11/17/15	0-10 cm	●	●	●	●		●		●		●	●	●	●	●	●	●	●					
	LY-SC-09_2-3	11/18/15	2-3 ft	●		●							●	●	●	●									
	LY-SC-09_3-4	11/18/15	3-4 ft			●	●		●																
LY-10	LY-SS-10_0-10	11/17/15	0-10 cm	●	●	●	●		●		●		●	●	●	●	●	●	●	●			●	●	
	LY-SC-10_0-1	11/18/15	0-1 ft	●		●									●	●									
LY-11	LY-SS-11_0-10	11/17/15	0-10 cm	●											●	●							●		
	LY-SC-11_0-1	11/19/15	0-1 ft	●		●									●	●									
LY-13	LY-SS-13_0-10	11/17/15	0-10 cm	●											●	●							●		

Sample Location[1]	Sample Identification	Date Sampled	Sample Interval	Conventional Analyses[2]								Chemical Analyses[2]												
				TOC	TVS	TS	Porewater Ammonia	Total Ammonia	Porewater Sulfide	Total Sulfide	Grain Size	TBT	Metals	LPAHs	HPAHs	cPAHs	Chlorinated Hydrocarbons	Phthalates	Miscellaneous Extractables	Phenols	Pesticides	PCB Aroclors	PCB Congeners	Dioxins and Furans	Bioassay
2020 Nearshore Sediment Characterization (DOF 2021)																								
COA-01	COA_01_G_20201120	11/20/20	0-10 cm	●	●			●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-02	COA_02_G_20201119	11/19/20	0-10 cm	●	●			●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-03	COA_03_G_20201118	11/18/20	0-10 cm	●	●			●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-04	COA_04_G_20201118	11/18/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-05	COA_05_G_20201119	11/19/20	0-10 cm	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA_05-D_G_20201119	11/19/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-06	COA_06_G_20201120	11/20/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
	COA_06-D_G_20201120	11/20/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-07	COA_07_G_20201118	11/18/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-08	COA_08_G_20201119	11/19/20	0-10 cm	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
COA-SS-1	COA-SS-1-1-3-20201116	11/16/20	1-3 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-1-3-5-20201116	11/16/20	3-5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-1-6.5-8.5-20201116	11/16/20	6.5-8.5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
COA-SS-2	COA-SS-2-1.5-3.5-20201118	11/18/20	1.5-3.5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-2-3.5-5.5-20201118	11/18/20	3.5-5.5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-2-5.5-7.5-20201118	11/18/20	5.5-7.5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-2-7.5-9.5-20201118	11/18/20	7.5-9.5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
COA-SS-3	COA-SS-3-1-3-20201118	11/18/20	1-3 ft	●	●	●		●		●		●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-3-3-5-20201118	11/18/20	3-5 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-3-5-7-20201118	11/18/20	5-7 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
	COA-SS-3-7-9-20201118	11/18/20	7-9 ft	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	
2021 Supplemental Sediment Investigation (GeoEngineers 2021)																								
LY-14	LY-SS-14_0-10	08/30/21	0-10 cm	●		●										●	●					●			
	LY-SC-14_0-1	08/31/21	0-1 ft	●		●										●	●					●			
	LY-SC-14_1-2	08/31/21	1-2 ft	●																		●			
LY-15	LY-SS-15_0-10	08/30/21	0-10 cm	●												●	●					●			
	LY-SC-15_0-1	09/02/21	0-1 ft	●												●	●					●			
LY-16	LY-SS-16_0-10	08/30/21	0-10 cm	●								●				●	●					●			
	LY-SC-16_1-2	09/02/21	1-2 ft	●								●				●	●					●			
LY-17	LY-SS-17_0-10	08/31/21	0-10 cm	●								●				●	●					●			
	LY-SC-17_1-2	09/01/21	1-2 ft	●		●						●				●	●					●			
LY-18	LY-SS-18_0-10	08/30/21	0-10 cm			●										●	●								
	LY-SC-18_0-1	09/01/21	0-1 ft			●										●	●								
LY-19	LY-SS-19_0-10	08/30/21	0-10 cm	●		●						●				●	●					●			
	LY-SC-19_1-2	08/31/21	1-2 ft	●												●	●					●			
	LY-SC-19_2-3	08/31/21	2-3 ft	●																		●			
LY-20	LY-SS-20_0-10	08/30/21	0-10 cm	●		●						●				●	●					●		●	
	LY-SC-20_1-2	08/31/21	1-2 ft													●	●							●	
	LY-SC-20_2-3	08/31/21	2-3 ft	●												●	●					●			
LY-21	LY-SS-21_0-10	08/30/21	0-10 cm	●		●						●				●	●					●			
	LY-SC-21_1-2	09/02/21	1-2 ft	●								●				●	●					●			
LY-22	LY-SS-22_0-10	08/31/21	0-10 cm	●								●				●	●					●			
	LY-SS-22_Dup-1 (LY-SS-22_0-10)	08/31/21	0-10 cm	●		●						●				●	●					●			
	LY-SC-22_1-2	09/01/21	1-2 ft	●		●						●				●	●					●			
LY-23	LY-SS-23_0-10	08/30/21	0-10 cm			●										●	●								
	LY-SC-23_2-3	08/31/21	2-3 ft	●		●										●	●					●			
	LY-SC-23_5-6	08/31/21	5-6 ft			●										●	●								
LY-24	LY-SS-24_0-10	08/30/21	0-10 cm													●	●								
	LY-SC-24_0-1	08/30/21	0-1 ft	●								●										●			
	LY-SC-24_1-2	09/01/21	1-2 ft													●	●								
LY-25	LY-SS-25_0-10	08/30/21	0-10 cm	●								●				●	●					●		●	
	LY-SC-25_1-2	09/02/21	1-2 ft	●		●						●				●	●					●		●	
	LY-SC-25_3-4	09/02/21	3-4 ft									●				●	●								
LY-26	LY-SS-26_0-10	08/31/21	0-10 cm	●		●						●				●	●					●		●	
	LY-SS-26_Dup-1 (LY-SS-26_0-10)	08/31/21	0-10 cm	●		●						●				●	●					●		●	

Sample Location[1]	Sample Identification	Date Sampled	Sample Interval	Conventional Analyses[2]								Chemical Analyses[2]													
				TOC	TVS	TS	Porewater Ammonia	Total Ammonia	Porewater Sulfide	Total Sulfide	Grain Size	TBT	Metals	LPAHs	HPAHs	cPAHs	Chlorinated Hydrocarbons	Phthalates	Miscellaneous Extractables	Phenols	Pesticides	PCB Aroclors	PCB Congeners	Dioxins and Furans	Bioassay
LY-27	LY-SS-27_0-10	08/31/21	0-10 cm	●		●						●			●	●						●		●	
	LY-SC-27_1-2	09/01/21	1-2 ft			●						●													
2023 Supplemental Sediment Investigation (GeoEngineers 2023)																									
LY-28	LY-28_0-10	01/26/23	0-10 cm			●									●	●						●			
	Dup (LY-28_0-10)	01/26/23	0-10 cm			●									●	●						●			
	LY-28_1-2	01/27/23	1-2 ft												●	●						●			
	LY-28_2-3	01/27/23	2-3 ft												●	●						●			
LY-29	LY-29_0-10	01/26/23	0-10 cm																			●			
	LY-29_1-2	01/27/23	1-2 ft																			●			
LY-30	LY-30_0-10	01/26/23	0-10 cm												●	●						●			
	LY-30_1-2	01/27/23	1-2 ft												●	●									
LY-31	LY-31_0-10	01/26/23	0-10 cm												●	●						●			
	LY-31_1-2	01/27/23	1-2 ft												●	●						●			
LY-32	LY-32_0-10	01/26/23	0-10 cm																			●			
2024 City of Anacortes Pre-Dredge Characterization (DOF 2024)																									
Pre-1	COA_NS-01-PRE-20240730	07/30/24	0-10 cm	●							●	●		●	●	●			●			●		●	
Pre-2	COA_NS-02-PRE-20240730	07/30/24	0-10 cm	●							●	●		●	●	●			●			●		●	
Pre-3	COA_NS-03-PRE-20240730	07/30/24	0-10 cm	●							●	●		●	●	●			●			●		●	
PP-1-Pre	COA_PP-01-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-2-Pre	COA_PP-02-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
	COA_PP-02-PRE_20240730DUP	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-3-Pre	COA_PP-03-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-4-Pre	COA_PP-04-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-5-Pre	COA_PP-05-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-6-Pre	COA_PP-06-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-7-Pre	COA_PP-07-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-8-Pre	COA_PP-08-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-9-Pre	COA_PP-09-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-10-Pre	COA_PP-10-PRE_20240730	07/30/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
2024 City of Anacortes Post-Dredge Characterization (Geosyntec 2024)																									
PP-1-Post	COA_PP-01-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-1-Post	COA_PP-01-POST_20241002DUP	10/02/24	0-10 cm	●		●						●		●	●	●			●			●		●	
PP-2-Post	COA_PP-02-POST_20241002	10/02/24	0-10 cm	●							●	●		●	●	●			●			●		●	
PP-3-Post	COA_PP-03-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-4-Post	COA_PP-04-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-5-Post	COA_PP-05-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-6-Post	COA_PP-06-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-7-Post	COA_PP-07-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-8-Post	COA_PP-08-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-9-Post	COA_PP-09-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	
PP-10-Post	COA_PP-10-POST_20241002	10/02/24	0-10 cm	●		●					●	●		●	●	●			●			●		●	

Notes:

[1] Sediment sampling locations are shown in Figure 6.

[2] Laboratory results are summarized in Tables 6 and 7.

cm = centimeters

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

ft = feet

HPAHs = high molecular weight polycyclic aromatic hydrocarbons

LPAHs = low molecular weight polycyclic aromatic hydrocarbons

PCBs = polychlorinated biphenyls

TBT = tributyltin

TOC = total organic carbon

TS = total solids

TVS = total volatile solids

● = selected sample submitted for chemical analysis.

Table 2

Sediment Cleanup Levels for the Protection of Benthic Organisms

Anacortes Port Log Yard

Anacortes, Washington

Analyte	CAS Number	Units	Criteria for the Protection of Benthic Organisms				Proposed Sediment Cleanup Level[3]
			Sediment Management Standard[1] (SMS)		Apparent Effects Threshold (AET) Criteria[2]		
			Sediment Cleanup Objective (SCO)	Cleanup Screening Level (CSL)	Lowest AET (LAET)	Second Lowest AET (2LAET)	SCO/ LAET
Metals							
Arsenic	7440-38-2	mg/kg	57	93	57	93	57
Cadmium	7440-43-9a	mg/kg	5.1	6.7	5.1	6.7	5.1
Chromium	16065-83-1	mg/kg	260	270	260	270	260
Copper	7440-50-8	mg/kg	390	390	390	390	390
Lead	7439-92-1	mg/kg	450	530	450	530	450
Mercury	7439-97-6	mg/kg	0.41	0.59	0.41	0.59	0.41
Silver	7440-22-4	mg/kg	6.1	6.1	6.1	6.1	6.1
Zinc	7440-66-6	mg/kg	410	960	410	960	410
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (OC Normalized)							
Sum of LPAHs[4]	n/a	mg/kg OC	370	780	--	--	370
2-Methylnaphthalene	91-57-6	mg/kg OC	38	64	--	--	38
Acenaphthene	83-32-9	mg/kg OC	16	57	--	--	16
Acenaphthylene	208-96-8	mg/kg OC	66	66	--	--	66
Anthracene	120-12-7	mg/kg OC	220	1,200	--	--	220
Fluorene	86-73-7	mg/kg OC	23	79	--	--	23
Naphthalene	91-20-3	mg/kg OC	99	170	--	--	99
Phenanthrene	85-01-8	mg/kg OC	100	480	--	--	100
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (Dry Weight)							
Sum of LPAHs[4]	n/a	µg/kg	--	--	5,200	5,200	5,200
2-Methylnaphthalene	91-57-6	µg/kg	--	--	670	670	670
Acenaphthene	83-32-9	µg/kg	--	--	500	500	500
Acenaphthylene	208-96-8	µg/kg	--	--	1,300	1,300	1,300
Anthracene	120-12-7	µg/kg	--	--	960	960	960
Fluorene	86-73-7	µg/kg	--	--	540	540	540
Naphthalene	91-20-3	µg/kg	--	--	2,100	2,100	2,100
Phenanthrene	85-01-8	µg/kg	--	--	1,500	1,500	1,500
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs) (OC Normalized)							
Sum of HPAHs[5]	n/a	mg/kg OC	960	5,300	--	--	960
Benzo(a)anthracene	56-55-3	mg/kg OC	110	270	--	--	110
Benzo(a)pyrene	50-32-8	mg/kg OC	99	210	--	--	99
Benzo[b]fluoranthene	205-99-2	mg/kg OC	--	--	--	--	NE
Benzo[k]fluoranthene	207-08-9	mg/kg OC	--	--	--	--	NE
Benzofluoranthenes[6] (Total)	n/a	mg/kg OC	230	450	--	--	230
Benzo(g,h,i)perylene	191-24-2	mg/kg OC	31	78	--	--	31
Chrysene	218-01-9	mg/kg OC	110	460	--	--	110
Dibenzo(a,h)anthracene	53-70-3	mg/kg OC	12	33	--	--	12
Fluoranthene	206-44-0	mg/kg OC	160	1,200	--	--	160
Indeno(1,2,3-c,d)pyrene	193-39-5	mg/kg OC	34	88	--	--	34
Pyrene	129-00-0	mg/kg OC	1,000	1,400	--	--	1,000
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs) (Dry Weight)							
Sum of HPAHs[5]	n/a	µg/kg	--	--	12,000	17,000	12,000
Benzo(a)anthracene	56-55-3	µg/kg	--	--	1,300	1,600	1,300
Benzo(a)pyrene	50-32-8	µg/kg	--	--	1,600	1,600	1,600
Benzo[b]fluoranthene	205-99-2	µg/kg	--	--	--	--	NE
Benzo[k]fluoranthene	207-08-9	µg/kg	--	--	--	--	NE
Benzofluoranthenes[6] (Total)	n/a	µg/kg	--	--	3,200	3,600	3,200
Benzo(g,h,i)perylene	191-24-2	µg/kg	--	--	670	720	670
Chrysene	218-01-9	µg/kg	--	--	1,400	2,800	1,400
Dibenzo(a,h)anthracene	53-70-3	µg/kg	--	--	230	230	230
Fluoranthene	206-44-0	µg/kg	--	--	1,700	2,500	1,700
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/kg	--	--	600	690	600
Pyrene	129-00-0	µg/kg	--	--	2,600	3,300	2,600
Chlorinated Hydrocarbons (OC Normalized)							
1,2,4-Trichlorobenzene	120-82-1	mg/kg OC	0.81	1.8	--	--	0.81
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	mg/kg OC	2.3	2.3	--	--	2.3
1,3-Dichlorobenzene	541-73-1	mg/kg OC	--	--	--	--	NE
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	mg/kg OC	3.1	9.0	--	--	3.1
Hexachlorobenzene	118-74-1	mg/kg OC	0.38	2.3	--	--	0.38
Chlorinated Hydrocarbons (Dry Weight)							
1,2,4-Trichlorobenzene	120-82-1	µg/kg	--	--	31	51	31
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	µg/kg	--	--	35	50	35
1,3-Dichlorobenzene	541-73-1	µg/kg	--	--	--	--	NE
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	µg/kg	--	--	110	110	110
Hexachlorobenzene	118-74-1	µg/kg	--	--	22	70	22

Analyte	CAS Number	Units	Criteria for the Protection of Benthic Organisms				Proposed Sediment Cleanup Level[3]
			Sediment Management Standard[1] (SMS)		Apparent Effects Threshold (AET) Criteria[2]		
			Sediment Cleanup Objective (SCO)	Cleanup Screening Level (CSL)	Lowest AET (LAET)	Second Lowest AET (2LAET)	SCO/ LAET
Phthalates (OC Normalized)							
Bis(2-Ethylhexyl) Phthalate	117-81-7	mg/kg OC	47	78	--	--	47
Butyl benzyl Phthalate	85-68-7	mg/kg OC	4.9	64	--	--	4.9
Dibutyl Phthalate	84-74-2	mg/kg OC	220	1,700	--	--	220
Diethyl Phthalate	84-66-2	mg/kg OC	61	110	--	--	61
Dimethyl Phthalate	131-11-3	mg/kg OC	53	53	--	--	53
Di-N-Octyl Phthalate	117-84-0	mg/kg OC	58	4,500	--	--	58
Phthalates (Dry Weight)							
Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/kg	--	--	1,300	1,900	1,300
Butyl benzyl Phthalate	85-68-7	µg/kg	--	--	63	900	63
Dibutyl Phthalate	84-74-2	µg/kg	--	--	1,400	1,400	1,400
Diethyl Phthalate	84-66-2	µg/kg	--	--	200	1,200	200
Dimethyl Phthalate	131-11-3	µg/kg	--	--	71	160	71
Di-N-Octyl Phthalate	117-84-0	µg/kg	--	--	6,200	6,200	6,200
Phenols (Dry Weight)							
2,4-Dimethylphenol	105-67-9	µg/kg	29	29	29	29	29
2-methylphenol (o-Cresol)	95-48-7	µg/kg	63	63	63	63	63
4-methylphenol (p-Cresol)	106-44-5	µg/kg	670	670	670	670	670
Pentachlorophenol	87-86-5	µg/kg	360	690	360	690	360
Phenol	108-95-2	µg/kg	420	1,200	420	1,200	420
Miscellaneous Extractables (OC Normalized)							
Dibenzofuran	132-64-9	mg/kg OC	15	58	--	--	15
Hexachlorobutadiene	87-68-3	mg/kg OC	3.9	6.2	--	--	3.9
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	mg/kg OC	11	11	--	--	11
Miscellaneous Extractables (Dry Weight)							
Dibenzofuran	132-64-9	µg/kg	--	--	540	540	540
Hexachlorobutadiene	87-68-3	µg/kg	--	--	11	120	11
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	µg/kg	--	--	28	40	28
Benzoic Acid	65-85-0	µg/kg	--	--	650	650	650
Benzyl Alcohol	100-51-6	µg/kg	--	--	57	73	57
Polychlorinated Biphenyls (PCBs) (OC Normalized)							
Total PCBs (Total for Aroclors or Congeners)	1336-36-3	mg/kg OC	12	65	--	--	12
Polychlorinated Biphenyls (PCBs) (Dry Weight)							
Total PCBs (Total for Aroclors or Congeners)	1336-36-3	µg/kg	--	--	130	1,000	130

Notes:

[1] Sediment Management Standards (SMS; Washington Administrative Code [WAC] Chapter 173-204).

[2] Apparent Effects Threshold (AET) Criteria from Ecology's SCUM guidance (Table 8-1; Ecology 2021).

[3] The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA 1988).

[4] Total LPAHs are the total of naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene and anthracene. The concentraion of 2-methylnapthalene is not included in the sum of LPAHs.

[5] Total HPAHs are the total of fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthenes, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene.

SCO = Sediment Cleanup Objective

CSL = Cleanup Screening Level

LAET = lowest Apparent Effects Threshold

2LAET = second lowest Apparent Effects Threshold

LPAHs = low molecular weight polycyclic aromatic hydrocarbons

HPAHs = high molecular weight polycyclic aromatic hydrocarbons

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

-- = criterion not applicable or not available

n/a = not available

NE = not established

Table 3

Sediment Cleanup Levels for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Analyte	CAS Number	Units	Criteria for the Protection of Human Health								PQL[5]	Proposed Sediment Cleanup Level[6,7,8]	
			Direct Contact via Beach Play[1]		Direct Contact via Clamming[1]		Direct Contact via Net Fishing[1]		Bioaccumulation via Consumption of Aquatic Organisms[2]				
			Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Natural Background[3]	Regional Background[4]		Intertidal Sediment (Above -3 ft MLLW)	Subtidal Sediment (below -3 ft MLLW)
Metals													
Arsenic	7440-38-2	mg/kg	0.09	16	0.040	72	0.090	170	11	--	5.0	11	11
Cadmium	7440-43-9a	mg/kg	--	220	--	1,100	--	2,500	0.8	--	0.2	0.8	0.8
Chromium (as Chromium III)	16065-83-1	mg/kg	--	25,000	--	150,000	--	400,000	62	--	0.5	62	62
Copper	7440-50-8	mg/kg	--	7,600	--	38,000	--	89,000	45	--	0.2	45	45
Lead	7439-92-1	mg/kg	--	--	--	--	--	--	21	--	2.0	21	21
Mercury (as Mercuric Chloride)	7487-94-7	mg/kg	--	--	--	--	--	--	0.2	--	0.05	0.2	0.2
Silver	7440-22-4	mg/kg	--	250	--	1,400	--	3,600	0.24	--	0.3	0.3	0.3
Zinc	7440-66-6	mg/kg	--	57,000	--	280,000	--	670,000	93	--	1.0	93	93
Organometallic Compounds													
Tributyltin Ion (Bulk Sediment)	56-35-9	µg/kg	--	18,000	--	100,000	--	260,000	73[9]	--	3.9	73	73
Tributyltin Ion (Interstitial Water)	56-35-9a	µg/L	--	--	--	--	--	--	0.15[9]	--	0.0052	0.15	0.15
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)													
2-Methylnaphthalene	91-57-6	µg/kg	--	320,000	--	1,800,000	--	4,500,000	--	--	5.0	320,000	4,500,000
Acenaphthene	83-32-9	µg/kg	--	4,800,000	--	27,000,000	--	67,000,000	--	--	5.0	4,800,000	67,000,000
Acenaphthylene	208-96-8	µg/kg	--	4,800,000	--	27,000,000	--	67,000,000	--	--	5.0	4,800,000	67,000,000
Anthracene	120-12-7	µg/kg	--	4,800,000	--	27,000,000	--	67,000,000	--	--	5.0	4,800,000	67,000,000
Fluorene	86-73-7	µg/kg	--	3,200,000	--	18,000,000	--	45,000,000	--	--	5.0	3,200,000	45,000,000
Naphthalene	91-20-3	µg/kg	--	1,600,000	--	8,900,000	--	22,000,000	--	--	5.0	1,600,000	22,000,000
Phenanthrene	85-01-8	µg/kg	--	4,800,000	--	27,000,000	--	67,000,000	--	--	5.0	4,800,000	67,000,000
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)													
Benzo(a)anthracene	56-55-3	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Benzo(a)pyrene	50-32-8	µg/kg	940	24,000	440	130,000	1,100.00	340,000	21	--	5.0	See cPAH TEQ	See cPAH TEQ
Benzofluoranthenes (Total)	n/a	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Benzo(g,h,i)perylene	191-24-2	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Chrysene	218-01-9	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Dibenzo(a,h)anthracene	53-70-3	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Fluoranthene	206-44-0	µg/kg	--	3,200,000	--	18,000,000	--	45,000,000	--	--	5.0	3,200,000	45,000,000
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/kg	--	--	--	--	--	--	--	--	5.0	See cPAH TEQ	See cPAH TEQ
Pyrene	129-00-0	µg/kg	--	2,400,000	--	13,000,000	--	34,000,000	--	--	5.0	2,400,000	34,000,000
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)													
Total cPAHs - TEQ	see Benzo(a)pyrene	µg/kg	--	--	--	--	--	--	21	--	5.0	21	21

Analyte	CAS Number	Units	Criteria for the Protection of Human Health								PQL[5]	Proposed Sediment Cleanup Level[6,7,8]	
			Direct Contact via Beach Play[1]		Direct Contact via Clamming[1]		Direct Contact via Net Fishing[1]		Bioaccumulation via Consumption of Aquatic Organisms[2]				
			Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Carcinogenic (at 10^{-6} risk)	Non-Carcinogenic	Natural Background[3]	Regional Background[4]		Intertidal Sediment (Above -3 ft MLLW)	Subtidal Sediment (below -3 ft MLLW)
Chlorinated Hydrocarbons													
1,2,4-Trichlorobenzene	120-82-1	µg/kg	94,000	2,300,000	38,000	11,000,000	88,000	26,000,000	--	--	20	38,000	88,000
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	µg/kg	--	21,000,000	--	100,000,000	--	230,000,000	--	--	20	21,000,000	230,000,000
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	µg/kg	500,000	16,000,000	200,000	77,000,000	470,000	180,000,000	--	--	20	200,000	470,000
Hexachlorobenzene	118-74-1	µg/kg	1,700	190,000	690	880,000	1,600	2,000,000	--	--	1.0	690	1,600
Phthalates													
Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/kg	51,000	1,200,000	24,000	7,000,000	63,000	18,000,000	--	--	50	24,000	63,000
Butyl benzyl Phthalate	85-68-7	µg/kg	370,000	12,200,000	180,000	68,000,000	460,000	180,000,000	--	--	20	180,000	460,000
Dibutyl Phthalate	84-74-2	µg/kg	--	6,100,000	--	34,000,000	--	88,000,000	--	--	20	6,100,000	88,000,000
Diethyl Phthalate	84-66-2	µg/kg	--	49,000,000	--	270,000,000	--	700,000,000	--	--	20	49,000,000	700,000,000
Dimethyl Phthalate	131-11-3	µg/kg	--	--	--	--	--	--	--	--	20	NE	NE
Di-N-Octyl Phthalate	117-84-0	µg/kg	--	610,000	--	3,400,000	--	8,800,000	--	--	20	610,000	8,800,000
Phenols													
2,4-Dimethylphenol	105-67-9	µg/kg	--	1,200,000	--	6,800,000	--	18,000,000	--	--	25	1,200,000	18,000,000
2-methylphenol (o-Cresol)	95-48-7	µg/kg	--	3,000,000	--	17,000,000	--	44,000,000	--	--	20	3,000,000	44,000,000
4-methylphenol (p-Cresol)	106-44-5	µg/kg	--	6,100,000	--	34,000,000	--	88,000,000	--	--	20	6,100,000	88,000,000
Pentachlorophenol	87-86-5	µg/kg	1,100	190,000	550	1,100,000	1,400	2,900,000	--	--	100	550.00	1,400
Phenol	108-95-2	µg/kg	--	18,000,000	--	100,000,000	--	260,000,000	--	--	100	18,000,000	260,000,000
Miscellaneous Extractables													
Dibenzofuran	132-64-9	µg/kg	--	170,000	--	840,000	--	2,000,000	--	--	20	170,000	2,000,000
Hexachlorobutadiene	87-68-3	µg/kg	35,000	230,000	14,000	1,100,000	33,000	2,600,000	--	--	1.0	14,000	33,000
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	µg/kg	140,000	--	70,000	--	180,000	--	--	--	20	70,000	180,000
Benzoic Acid	65-85-0	µg/kg	--	240,000,000	--	1,400,000,000	--	3,500,000,000	--	--	20	240,000,000	3,500,000,000
Benzyl Alcohol	100-51-6	µg/kg	--	6,100,000	--	34,000,000	--	88,000,000	--	--	2.0	6,100,000	88,000,000
Polychlorinated Biphenyls (PCBs)													
Total PCBs (Aroclors or Congeners)	1336-36-3	µg/kg	400	--	190	--	490	--	3.5	--	2.0	3.5	3.5
Total Dioxin-Like PCB Congeners TEQ	see Total Dioxins/Furans	ng/kg	21	160	9.0	770	20	1,800	0.20	--	0.20	0.20	0.20
Dioxins and Furans													
Total Dioxin/Furan TEQ	1746-01-6	ng/kg	24	190	11.0	960	25	2,300	4.0	--	5[10]	5	5

Notes:

[1] Sediment screening levels for the protection of human health via direct contact are calculated using equations and input parameters provided in Ecology's SCUM guidance (Ecology 2021). The toxicity equivalency factors (TEFs) used to calculate the screening levels are from Table 708-1 (chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans congeners) and Table 708-2 (cPAHs) of the Model Toxics Control Act (MTCA) Cleanup regulation (Chapter 173-340 WAC).

[2] Bioaccumulative chemicals include metals (arsenic, cadmium, chromium, copper, lead, mercury, silver and zinc), cPAHs, PCBs, dioxin-like PCBs and dioxins/furans. Currently site-specific human health and ecological risk-based sediment screening levels have not been developed for bioaccumulative chemicals. Therefore, sediment screening levels for these chemicals are based on the natural background, regional background or the practical quantification limit (PQL), whichever is higher.

[3] Natural background values referenced from Tabel 10-1 of Ecology's SCUM guidance (Ecology 2021).

[4] Regional background values referenced from Tabel 10-2 of Ecology's SCUM guidance (Ecology 2021).

[5] PQL values are from Analytical Resources, Inc. of Tukwila, Washington.

[6] The screening levels presented in this table are to provide a preliminary evaluation of human health and ecological risk for higher trophic level ecological receptors. Human health and higher trophic level ecological receptor screening levels are chosen from lowest of bioaccumulative and direct contact pathways. The risk-based value adjusted for the higher of natural background and PQL is the SCO. The risk-based value adjusted for the higher of regional background and PQL is the CSL. The human health screening level for intertidal areas includes marine areas at elevations higher than -3 feet mean lower low water (MLLW) and the applicable direct contact pathways include beach play, clamming and net fishing. The human health screening levels for subtidal areas include marine areas at elevations below -3 feet MLLW and the applicable direct contact pathway is net fishing.

[7] Natural and regional background (natural background/regional background) concentrations are being applied as preliminary cleanup levels. The SCO is the risk-based value adjusted for natural background and PQL, whichever is higher. The CSL is the risk-based value adjusted for regional background and PQL, whichever is higher. Final cleanup levels will be established in the Cleanup Action Plan.

[8] When natural background is greater than the regional background, the natural background concentration is being applied as the proposed cleanup level. Final cleanup levels will be established in the Cleanup Action Plan.

[9] Dredged Material Management Program (DMMP) Marine Guidelines Bioaccumulation Trigger value; from Dredged Material Evaluation and Disposal Procedures User Manual (DMMP User Manual; Table 8-3; USACE 2021).

[10] PQL for total dioxin/furan TEQ is the programmatic PQL value from Ecology's SCUM guidance (Table 11-1; Ecology 2021).

PQL = practical quantitation limit

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

TEQ = toxic equivalent quotient

-- = Criterion not applicable or not available

Table 4

Summary Statistics and Evaluation of Contaminants of Concern for the Protection of Benthic Organisms

Anacortes Port Log Yard

Anacortes, Washington

Contaminant of Potential Concern[1] (COPC)	CAS Number	Proposed Sediment Cleanup Level[2]	Units	Evaluation of RI Data Results[3]												Contaminant of Concern[7] (COC) (Yes/No)	Comments/Rationale
									Non-Detect PCUL Exceedance Evaluation			PCUL Exceedance Evaluation[6]					
				Number of Samples	Number of Detections	Detection Frequency (%)	Maximum Non-Detect Concentration	Maximum Detected Concentration	Number of Non-detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)	Number of detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)		
Metals																	
Arsenic	7440-38-2	57	mg/kg	39	26	67%	11	14	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Cadmium	7440-43-9a	5.1	mg/kg	41	34	83%	1.1	1.6	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Chromium	16065-83-1	260	mg/kg	36	36	100%	n/a	100	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Copper	7440-50-8	390	mg/kg	36	36	100%	n/a	248	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Lead	7439-92-1	450	mg/kg	36	35	97%	5	23	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Mercury	7439-97-6	0.41	mg/kg	36	29	81%	0.11	0.15	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Silver	7440-22-4	6.1	mg/kg	36	9	25%	1.1	0.50	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No	
Zinc	7440-66-6	410	mg/kg	36	36	100%	n/a	784	0	No Exceedance	No Exceedance	**2**	**5.6%**	**1.9**	**Yes**	Retained as a COC
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																	
Total LPAHs[8]	n/a	370	mg/kg OC	50	45	90%	n/a	164	0	No Exceedance	<0.1	0	No Exceedance	<0.1	**Yes**	LPAHs are retained as a COC based on one or more contaminants detected greater than the PCUL.
	n/a	5,200	µg/kg				32	4,230								
2-Methylnaphthalene	91-57-6	38	mg/kg OC	50	32	64%	1.02	5	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	91-57-6	670	µg/kg				32	140								
Acenaphthene	83-32-9	16	mg/kg OC	50	32	64%	1.02	58	0	No Exceedance	<0.1	**2**	**4.0%**	**3.6**		
	83-32-9	500	µg/kg				32	620								
Acenaphthylene	208-96-8	66	mg/kg OC	50	32	64%	0.85	5	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	208-96-8	1,300	µg/kg				32	100								
Anthracene	120-12-7	220	mg/kg OC	50	36	72%	1.02	86	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	120-12-7	960	µg/kg				32	800								
Fluorene	86-73-7	23	mg/kg OC	50	36	72%	1.02	16	0	No Exceedance	<0.1	**1**	**2.0%**	**1.4**		
	86-73-7	540	µg/kg				32	750								
Naphthalene	91-20-3	99	mg/kg OC	50	32	64%	1.02	25	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	91-20-3	2,100	µg/kg				32	860								
Phenanthrene	85-01-8	100	mg/kg OC	50	45	90%	n/a	102	0	No Exceedance	<0.1	**1**	**2.0%**	**1.0**		
	85-01-8	1,500	µg/kg				32	1,130								
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																	
Sum of HPAHs[9]	n/a	960	mg/kg OC	52	50	96%	n/a	619.5	0	No Exceedance	<0.1	**1**	**1.9%**	**2.97**	**Yes**	HPAHs are retained as a COC based on one or more contaminants detected greater than the PCUL.
	n/a	12,000	µg/kg				40	35,687								
Benzo(a)anthracene	56-55-3	110	mg/kg OC	86	75	87%	0.84	72.4	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	56-55-3	1,300	µg/kg				32	1,030								
Benzo(a)pyrene	50-32-8	99	mg/kg OC	86	77	90%	n/a	55.26	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	50-32-8	1,600	µg/kg				20	933								
Benzofluoranthenes[10] (Total)	n/a	230	mg/kg OC	88	78	89%	n/a	111.84	0	No Exceedance	<0.1	**1**	**1.1%**	**1.31**		
	n/a	3,200	µg/kg				82	4,200								
Benzo(g,h,i)perylene	193-39-5	34	mg/kg OC	86	72	84%	0.54	17.8	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	193-39-5	600	µg/kg				32	444								
Chrysene	218-01-9	110	mg/kg OC	86	77	90%	n/a	118.4	0	No Exceedance	<0.1	**2**	**2.3%**	**1.9**		
	218-01-9	1,400	µg/kg				20	2,670								
Dibenzo(a,h)anthracene	53-70-3	12	mg/kg OC	86	52	60%	5.54	5.72	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	53-70-3	230	µg/kg				32	103.0								
Fluoranthene	206-44-0	160	mg/kg OC	52	47	90%	n/a	161	0	No Exceedance	<0.1	**3**	**5.8%**	**8.5**		
	206-44-0	1,700	µg/kg				20	14,500								
Indeno(1,2,3-c,d)pyrene	193-39-5	34	mg/kg OC	86	72	84%	0.54	17.8	0	No Exceedance	<0.1	0	No Exceedance	<0.1		
	193-39-5	600	µg/kg				32	444								
Pyrene	129-00-0	1,000	mg/kg OC	52	48	92%	n/a	108	0	No Exceedance	<0.1	**1**	**1.9%**	**4.38**		
	129-00-0	2,600	µg/kg				20	11,400								

Contaminant of Potential Concern[1] (COPC)	CAS Number	Proposed Sediment Cleanup Level[2]	Units	Evaluation of RI Data Results[3]												Contaminant of Concern[7] (COC) (Yes/No)	Comments/Rationale
									Non-Detect PCUL Exceedance Evaluation			PCUL Exceedance Evaluation[6]					
				Number of Samples	Number of Detections	Detection Frequency (%)	Maximum Non-Detect Concentration	Maximum Detected Concentration	Number of Non-detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)	Number of detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)		
Chlorinated Hydrocarbons																	
1,2,4-Trichlorobenzene	120-82-1	0.81	mg/kg OC	36	1	3%	1.59	n/a	**5**	**13.9%**	**2.0**	0	n/a	<0.1	No	Not retained as a COC. Dry wieght non-detect exceedance of the PCUL is less than 10% of the samples analyzed, generally less than 2 times the PCUL and/or are colocated in area generally containing elevated wood debris which may be affecting the OC normalized concentration.
	120-82-1	31	µg/kg				32	3.2									
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	2.3	mg/kg OC	36	3	8%	1.59	0.17	0	No Exceedance	<0.1	0	n/a	<0.1	No		
	95-50-1	35	µg/kg				32	3.5									
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	3.1	mg/kg OC	36	2	6%	1.59	0.11	0	No Exceedance	<0.1	0	n/a	<0.1	No		
	106-46-7	110	µg/kg				32	11									
Hexachlorobenzene	118-74-1	0.38	mg/kg OC	36	0	0%	1.59	n/a	**6**	**16.7%**	**4.2**	0	n/a	<0.1	No		
	118-74-1	22	µg/kg				32	n/a									
Phthalates																	
Bis(2-Ethylhexyl) Phthalate	117-81-7	47	mg/kg OC	36	25	69%	10.21	91	0	No Exceedance	<0.1	**1**	**2.8%**	**1.9**	**Yes**	Retained as a COC	
	117-81-7	1,300	µg/kg				250	160									
Butyl benzyl Phthalate	85-68-7	4.9	mg/kg OC	36	9	25%	1.59	1.3	0	No Exceedance	<0.1	0	No Exceedance	No Exceedance	No		
	85-68-7	63	µg/kg				32	20									
Dibutyl Phthalate	84-74-2	220	mg/kg OC	36	6	17%	3.39	0.97	0	No Exceedance	<0.1	0	No Exceedance	No Exceedance	No		
	84-74-2	1,400	µg/kg				32	35									
Diethyl Phthalate	84-66-2	61	mg/kg OC	36	3	8%	7.73	0.26	0	No Exceedance	<0.1	0	No Exceedance	No Exceedance	No		
	84-66-2	200	µg/kg				9.44	36.08									
Dimethyl Phthalate	131-11-3	53	mg/kg OC	36	4	11%	3.39	2.85	0	No Exceedance	<0.1	0	No Exceedance	No Exceedance	No		
	131-11-3	71	µg/kg				100	10									
Di-N-Octyl Phthalate	117-84-0	58	mg/kg OC	36	1	3%	3.39	4.39	0	No Exceedance	<0.1	0	No Exceedance	No Exceedance	No		
	117-84-0	6,200	µg/kg				100	n/a									
Phenols																	
2,4-Dimethylphenol	105-67-9	29	µg/kg	35	6	17%	880	17.0	**4**	**11.4%**	**30.3**	0	No Exceedance	No Exceedance	No	Not retained as a COC. Detected concentrations less than the PCUL.	
2-methylphenol (o-Cresol)	95-48-7	63	µg/kg	38	2	5%	100	15.0	**1**	**2.6%**	**1.6**	0	No Exceedance	No Exceedance	No		
4-methylphenol (p-Cresol)	106-44-5	670	µg/kg	38	23	61%	38	3,900	0	No Exceedance	No Exceedance	**4**	**10.5%**	**5.8**	**Yes**	Retained as a COC	
Pentachlorophenol	87-86-5	360	µg/kg	38	3	8%	180	480	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No		
Phenol	108-95-2	420	µg/kg	38	20	53%	49	560	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No		
Miscellaneous Extractables																	
Dibenzofuran	132-64-9	15	mg/kg OC	48	32	67%	2	12	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No		
	132-64-9	540	µg/kg				32	370									
Hexachlorobutadiene	87-68-3	3.9	mg/kg OC	37	0	0%	2	n/a	**2**	**5.4%**	**2.9**	0	No Exceedance	No Exceedance	No	Not retained as a COC. Non-detect exceedance of the PCUL is less than 10% of the samples analyzed, generally less than 2 times the PCUL and/or are colocated in area generally containing elevated wood debris.	
	87-68-3	11	µg/kg				32	n/a									
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	11	mg/kg OC	37	0	0%	2	n/a	**1**	**2.7%**	**1.1**	0	No Exceedance	No Exceedance	No		
	86-30-6	28	µg/kg				32	n/a									
Benzoic Acid	65-85-0	650	µg/kg	35	14	40%	380	4,300	0	No Exceedance	No Exceedance	**1**	**2.9%**	**6.6**	**Yes**	Retained as a COC	
Benzyl Alcohol	100-51-6	57	µg/kg	36	1	3%	100	6.2	**1**	**3%**	**1.8**	0	No Exceedance	No Exceedance	No	Not retained as a COC. Non-detect exceedance of the PCUL is less than 10% of the samples analyzed, generally less than 2 times the PCUL and/or are colocated in area generally containing elevated wood debris.	
Polychlorinated Biphenyls (PCBs)																	
Total PCBs (Aroclors or Congeners)	1336-36-3	130	µg/kg	68	36	53%	20	24.4	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	No		
	1336-36-3	12	mg/kg OC				n/a	3									

Notes:

[1] Contaminants of potential concern (COPCs) were established for the marine area based on a review of sediment sample investigaiton resutls presented in Table 6.

[2] Proposed sediment cleanup levels (PCULs) for the protection of benthic organisms are the Sediment Cleanup Objective (SCO) / Lowest Apparent Effects Threshhold (LAET) values referenced from Table 2.

[3] The sediment data used consist of samples obtained by GeoEngineers in general accordance with the RI/FS Work Plan (GeoEngineers 2015) and subsequent Ecology-Approved Addenda, as well as data collected during previous environmenal studies (see Table 6).

[4] Number of samples with analyte detected or non-detect at a concentration greater than PCUL / total number of samples analyzed for analyte.

[5] Maximum Exceedance Ratio = ratio of maximum detected or non-detect concentration to the PCUL.

[6] Comparison of data results (Table 6) to the Sediment Cleanup Objective (SCO) / Lowest Apparent Effects Threshhold (LAET) values referenced from Table 2.

[7] Contaminant of concern (COC) selection criteria is met if a COPC was detected at a concentration greater than the PCUL. Non-detect results were not considered in the selection of proposed COCs (see comments/rationale).

[8] Total LPAHs are the total of naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene and anthracene; 2-methylnapthalene is not included in the sum of LPAHs.

[9] Total HPAHs are the total of fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthenes, benzo(a)pyrene, indeno(1,2,3-c-d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene.

[10] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

PCUL = proposed cleanup level

NE = not established

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

OC = organic carbon normalized

n/a = not applicable

Bold indicates the value (detect or non-detect) exceeds the PCUL.

Yellow shading indicates analyte is identified as a COC based on PCUL exceedance.

Table 5

Summary Statistics and Evaluation of Contaminants of Concern for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Contaminant of Potential Concern[1] (COPC)	CAS No.	Proposed Sediment Cleanup Level[2]		Units	Evaluation of RI Data Results[3]												Compliance Interval Area Weighted Average[7] (ER)	Contaminant of Concern[8] (COC) (Yes/No)	Comments
										Non-Detect PCUL Exceedance Evaluation			PCUL Exceedance Evaluation[6]					
		Intertidal Sediment (Above -3 ft MLLW)	Subtidal Sediment (below -3 ft MLLW)		Number of Samples	Number of Detections	Detection Frequency (%)	Maximum Non-Detect Concentration	Maximum Detected Concentration	Number of Non-detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)	Number of detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)			
Metals																			
Arsenic	7440-38-2	11	11	mg/kg	39	26	67%	11	14	0	No Exceedance	No Exceedance	**2**	**5.1%**	**1.3**	0.84	No	Compliance interval SWAC for individual metals is less than PCUL. Therefore, not retained as a COC.
Cadmium	7440-43-9a	0.80	0.80	mg/kg	41	33	80%	1.1	2	**2**	**4.9%**	**2.0**	**8**	**19.5%**	**2.0**	0.84	No	
Chromium	16065-83-1	62	62	mg/kg	36	36	100%	n/a	100	0	No Exceedance	No Exceedance	**3**	**8.3%**	**1.6**	0.56	No	
Copper	7440-50-8	45	45	mg/kg	36	36	100%	n/a	248	0	No Exceedance	No Exceedance	**2**	**5.6%**	**5.5**	**1.29**	**Yes**	Retained as a COC
Lead	7439-92-1	21	21	mg/kg	36	34	94%	5	23	0	No Exceedance	No Exceedance	**1**	**2.8%**	**1.1**	0.52	No	Compliance interval SWAC is less than PCUL. Therefore, not retained as a COC.
Mercury	7487-94-7	0.20	0.20	mg/kg	36	29	81%	0.11	0.15	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	0.42	No	
Silver	7440-22-4	0.30	0.30	mg/kg	36	8	22%	1.1	0	**25**	**69%**	0.5	0	No Exceedance	No Exceedance	0.51	No	
Zinc	7440-66-6	93	93	mg/kg	36	36	100%	n/a	784	0	No Exceedance	No Exceedance	**6**	**16.7%**	**8.4**	0.82	No	
Organometallic Compounds																			
Tributyltin Ion (Bulk Sediment)	56-35-9	73	73	µg/kg	28	24	86%	3.81	291	0	No Exceedance	No Exceedance	**6**	**21%**	**4.0**	0.32	No	Compliance interval SWAC is less than PCUL. Therefore, not retained as a COC.
Tributyltin Ion (Interstitial Water)	56-35-9a	0.15	0.15	µg/L	11	9	82%	0.043	4.9	0	No Exceedance	No Exceedance	**3**	**27%**	**32.7**			
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	91-57-6	320,000	4,500,000	µg/kg	50	32	64%	32	160	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Acenaphthene	83-32-9	4,800,000	67,000,000	µg/kg	50	32	64%	32	1,600	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Acenaphthylene	208-96-8	4,800,000	67,000,000	µg/kg	50	32	64%	32	100	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Anthracene	120-12-7	4,800,000	67,000,000	µg/kg	50	38	76%	32	1,300	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Fluorene	86-73-7	3,200,000	45,000,000	µg/kg	50	36	72%	32	750	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Naphthalene	91-20-3	1,600,000	22,000,000	µg/kg	50	32	64%	32	860	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Phenanthrene	85-01-8	4,800,000	67,000,000	µg/kg	50	45	90%	32	1,900	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	56-55-3	See cPAH TEQ	See cPAH TEQ	µg/kg	83	72	87%	32	1,100	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	cPAH compounds are retained as COCs based on cPAH TEQ results.
Benzo(a)pyrene	50-32-8	See cPAH TEQ	See cPAH TEQ	µg/kg	83	74	89%	20	933	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Benzofluoranthenes[9] (Total)	n/a	See cPAH TEQ	See cPAH TEQ	µg/kg	83	74	89%	40	4,200	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Benzo(g,h,i)perylene	193-39-5	See cPAH TEQ	See cPAH TEQ	µg/kg	83	69	83%	32	444	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Chrysene	218-01-9	See cPAH TEQ	See cPAH TEQ	µg/kg	83	74	89%	20	2,670	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Dibenzo(a,h)anthracene	53-70-3	See cPAH TEQ	See cPAH TEQ	µg/kg	83	49	59%	32	103	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Fluoranthene	206-44-0	3,200,000	45,000,000	µg/kg	52	47	90%	20	14,500	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Indeno(1,2,3-c,d)pyrene	193-39-5	See cPAH TEQ	See cPAH TEQ	µg/kg	83	69	83%	32	444	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Pyrene	129-00-0	2,400,000	34,000,000	µg/kg	52	48	92%	20	11,400	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAH TEQ[10] (KM)	see Benzo(a)pyrene	21	21	mg/kg	83	83	100%	n/a	1537	0	No Exceedance	No Exceedance	**62**	**74.7%**	**73.2**	**8.99**	**Yes**	Retained as a COC
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	120-82-1	38,000	88,000	µg/kg	36	1	3%	35	3.20	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	21,000,000	230,000,000	µg/kg	36	3	8%	35	3.5	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	200,000	470,000	µg/kg	36	2	6%	35	11	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Hexachlorobenzene	118-74-1	690.00	1,600.0	µg/kg	36	0	0%	35	n/a	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	117-81-7	24,000	63,000	µg/kg	36	25	69%	250	1,100	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Butyl benzyl Phthalate	85-68-7	180,000	460,000	µg/kg	36	9	25%	35	31	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Dibutyl Phthalate	84-74-2	6,100,000	88,000,000	µg/kg	36	6	17%	35	35	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Diethyl Phthalate	84-66-2	49,000,000	700,000,000	µg/kg	36	3	8%	180.000	55	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	

Contaminant of Potential Concern[1] (COPC)	CAS No.	Proposed Sediment Cleanup Level[2]		Units	Evaluation of RI Data Results[3]												Compliance Interval Area Weighted Average[7] (ER)	Contaminant of Concern[8] (COC) (Yes/No)	Comments
										Non-Detect PCUL Exceedance Evaluation			PCUL Exceedance Evaluation[6]					
		Intertidal Sediment (Above -3 ft MLLW)	Subtidal Sediment (below -3 ft MLLW)		Number of Samples	Number of Detections	Detection Frequency (%)	Maximum Non-Detect Concentration	Maximum Detected Concentration	Number of Non-detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)	Number of detections > PCUL	Frequency of PCUL Exceedance[4] (%)	Maximum Exceedance Ratio[5] (ER)			
Dimethyl Phthalate	131-11-3	NE	NE	µg/kg	36	4	11%	100.000	67	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Di-N-Octyl Phthalate	117-84-0	610,000	8,800,000	µg/kg	36	1	3%	100.000	130	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Phenols																		
2,4-Dimethylphenol	105-67-9	1,200,000	18,000,000	µg/kg	35	6	17%	880	17	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
2-methylphenol (o-Cresol)	95-48-7	3,000,000	44,000,000	µg/kg	38	2	5%	100	15	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
4-methylphenol (p-Cresol)	106-44-5	6,100,000	88,000,000	µg/kg	38	23	61%	38	3,900	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Pentachlorophenol	87-86-5	550.00	1,400.0	µg/kg	38	3	8%	180.000	480	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Phenol	108-95-2	18,000,000	260,000,000	µg/kg	38	20	53%	49	560	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Miscellaneous Extractables																		
Dibenzofuran	132-64-9	170,000	2,000,000	µg/kg	48	32	67%	35	370	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Hexachlorobutadiene	87-68-3	14,000	33,000	µg/kg	37	0	0%	35.0000	n/a	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	70,000	180,000	µg/kg	37	0	0%	35	n/a	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Benzoic Acid	65-85-0	240,000,000	3,500,000,000	µg/kg	35	14	40%	380.00	4,300	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Benzyl Alcohol	100-51-6	6,100,000	88,000,000	µg/kg	36	1	3%	100.00	6.2	0	No Exceedance	No Exceedance	0	No Exceedance	No Exceedance	n/a	No	
Polychlorinated Biphenyls (PCBs)																		
Total PCBs (Aroclors or Congeners)	1336-36-3	3.5	3.5	µg/kg	55	23	42%	110.00	54.8	**17**	**31%**	**15.7**	**19**	**34.5%**	**15.7**	**3.28**	**Yes**	Retained as a COC
Total Dioxin-Like PCB Congeners TEQ[11] (KM)	see Total Dioxins/Furans	0.20	0.20	ng/kg	13	13	100%	n/a	1	0	No Exceedance	No Exceedance	**4**	**30.8%**	**5.7**	**1.40**	**Yes**	Retained as a COC
Dioxins and Furans																		
Total Dioxin/Furan TEQ[12] (KM)	1746-01-6	5.0	5.0	ng/kg	29	29	100%	n/a	518	0	No Exceedance	No Exceedance	**10**	**34.5%**	**103.6**	**17.02**	**Yes**	Retained as a COC

Notes:

[1] Contaminants of potential concern (COPCs) were established for the marine area based on a review of sediment sample investigaiton resutls presented in Table 7.

[2] Proposed sediment cleanup levels for the protection of human health and higher trophic level ecological receptors are referenced from Table 3 and are based on the Sediment Cleanup Objective (SCO) except for arsenic, cPAHs and dioxin-like PCBs which are base on regional background which is the Cleanup Screening Level (CSL).

[3] The sediment data used consist of samples obtained by GeoEngineers in general accordance with the RI/FS Work Plan (GeoEngineers 2015) and subsequent Ecology-Approved Addenda, as well as data collected during previous environmenal studies (see Table 7).

[4] Number of samples with analyte detected or non-detect at a concentration greater than PCUL / total number of samples analyzed for analyte.

[5] Maximum Exceedance Ratio (ER) = ratio of maximum detected or non-detect concentration to the PCUL

[6] Comparison of data results (Table 7) to the Proposed Human Health PCUL intertidal and subtidal values referenced from Table 3.

[7] Surface Weighted Avereage Concentration (SWAC) evaluation presented in Figures 49 through 86.

[8] Contaminant of concern (COC) selection criteria is met if a COPC was detected at a concentration greater than the PCUL and the SWAC exceeded the PCUL. Non-detect results were not considered in the selection of proposed COCs (see comments/rationale).

[9] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[10] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[11] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al. 2006).

[12] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA 2003).

PCUL = proposed cleanup level

NE = not established

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

µg/L = micrograms per liter

ng/kg = nanograms per kilogram

n/a = not applicable

KM = Kaplan-Meier method for computing TEQ sums using EPA's Excel TEQ calculator (http://www.epa.gov/superfund/health/contaminants/dioxin/dioxinsoil.html)

Bold indicates the value (detect or non-detect) exceeds the PCUL.

Yellow shading indicates analyte is identified as a COC based on SCO PCUL exceedance.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	LHO-REF	P2-1-3
Sample Identification			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	DUP (LHO-REF)	P2-1-A-COMP (P2-1/P2-2/P2-3)
Sample Date			07/13/04	07/13/04	09/06/07	09/06/07	09/05/07	09/05/07	09/05/07	08/28/08	08/28/08	09/01/09	09/01/09	09/01/09	09/01/09	09/01/09	10/14/10	10/14/10	11/16/12
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	Surface Layer Composite (0-4ft)
Sample Type		Proposed	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NS
Visual Wood Content[3]	%	10	10	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Conventionals																			
Total Organic Carbon (TOC)	%	NE	**15.00**	**10.30**	**0.95**	**0.26**	**0.29**	**2.25**	**0.89**	**4.47**	**6.64**	**2.35**	**2.36**	**2.33**	**4.35**	**2.96**	**2.20**	**2.40**	**0.21**
Total Volatile Solids (TVS)	%	NE	**10.10**	**28.70**	**2.46**	**2.35**	**2.40**	**5.16**	**3.35**	--	--	**15.15**	**16.01**	**17.35**	**17.78**	**14.29**	--	--	**1.83**
Total Solids (TS)	%	NE	**49.0**	**38.8**	**79.1**	**76.8**	**76.5**	**64.6**	**70.1**	**42.5**	**47.5**	**47.3**	**40.8**	**40.4**	**44.4**	**46.0**	--	--	**79.4**
Total Ammonia	mg-N/kg	NE	**47.9**	**22.5**	**5.9**	**5.9**	**12.3**	**6.3**	**7.2**	**53.4**	**14.4**	**11.8**	**24.2**	**61.3**	**29.6**	**67.3**	--	--	**2.2**
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	**520**	**1,900**	**6.7**	**6.7**	**6.7**	**224**	**2.3**	**3,210**	**1,890**	**2,320**	**1,720**	**2,370**	**3,440**	**3,340**	--	--	**94**
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	**53.9**	**28.8**	--	**59.9**	**35**	**4.44**	**6.82**	--	--	--	--	--	--	--	--	--	**1.2**
Very Coarse Sand	%	NE	**9**	**3.5**	--	**7.29**	**15.1**	**4.64**	**8.83**	--	--	--	--	--	--	--	--	--	**1.3**
Coarse Sand	%	NE	**7.5**	**4.6**	--					--	--	--	--	--	--	--	--	--	**1.6**
Medium Sand	%	NE	**6.5**	**6.2**	--					--	--	--	--	--	--	--	--	--	**9**
Fine Sand	%	NE	**6.2**	**9.6**	--					--	--	--	--	--	--	--	--	--	**15.3**
Very Fine Sand	%	NE	**4.3**	**13.6**	--					--	--	--	--	--	--	--	--	--	**12.6**
Coarse Silt	%	NE	**5**	**9.1**	--	**3.52**	**17.6**	**14.4**	**8.16**	--	--	--	--	--	--	--	--	--	**18.8**
Medium Silt	%	NE	**2.4**	**13.2**	--					--	--	--	--	--	--	--	--	--	**16.5**
Fine Silt	%	NE	**1.4**	**3.2**	--					--	--	--	--	--	--	--	--	--	**9.5**
Very Fine Silt	%	NE	**0.5**	**1.1**	--					--	--	--	--	--	--	--	--	--	**6.1**
Clay	%	NE	**3.3**	**7.1**	--	**1.25**	**3.62**	**5.57**	**3.67**	--	--	--	--	--	--	--	--	--	**8.3**
Metals																			
Arsenic	mg/kg	57	10 U	10 U	**2.37**	**2.1**	**3.2**	**5.6**	**4.3**	**4.52**	**5.3**	10 U	10 U	10 U	10 U	9 U	10 U	11 U	6 U
Cadmium	mg/kg	5.1	0.5 U	0.5 U	**0.09**	0.08 U	**0.12**	**0.41**	**0.39**	**0.698**	**0.642**	**0.6**	**0.7**	**1**	**1**	**0.9**	1 U	1.1 U	**0.3**
Chromium	mg/kg	260	**12**	**29**	**12.3**	**13.5**	**21.2**	**20.4**	**21.2**	**31.2**	**31.9**	**33**	**51**	**39**	**41**	**36.6**	**39**	**41**	**26.5 J**
Copper	mg/kg	390	**17.1**	**31.7**	**10.4**	**9.49**	**15.4**	**12.6**	**11.3**	**28.5**	**29.7**	**40.8**	**248**	**38.2**	**39.8**	**33.9**	**42**	**120**	**22.2**
Lead	mg/kg	450	5 U	**8**	**2.23**	**1.63**	**3.39**	**5.74**	**3.48**	**9.29**	**9.32**	**8**	**23**	**10**	**11**	**11**	**11**	**14**	**4**
Mercury	mg/kg	0.41	0.1 U	0.09 U	**0.01 J**	**0.01**	**0.01**	**0.04**	**0.03**	**0.033**	**0.037**	**0.07**	**0.06**	**0.08**	**0.08**	**0.07**	0.1 U	0.11 U	0.03 U
Silver	mg/kg	6.1	0.8 U	0.8 U	0.02 U	**0.03**	**0.043**	**0.07**	**0.06**	**0.15**	**0.1**	0.6 U	0.7 U	0.7 U	0.7 U	0.6 U	1 U	1.1 U	0.4 U
Zinc	mg/kg	410	**35**	**69**	**20.9**	**19.1**	**32.6**	**37.8**	**28.3**	**784**	**711**	**79**	**105**	**102**	**96**	**78**	**79**	**73**	**48**
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (OC Normalized)																			
Sum of LPAHs[4]	mg/kg OC	370	NA	NA	**1.01**	NA	NA	**6.37**	**7.51**	NA	NA	**8.13 J**	**9.11 J**	**11.93 J**	NA	**2.67 J**	**4.64**	**9.88**	NA
2-Methylnaphthalene	mg/kg OC	38	NA	NA	1.02 U	NA	NA	**0.39**	**0.55**	NA	NA	0.85 U	0.85 U	0.86 U	NA	0.68 U	0.64 U	0.58 U	NA
Acenaphthene	mg/kg OC	16	NA	NA	1.02 U	NA	NA	**0.25**	1.12 U	NA	NA	0.85 U	0.85 U	**0.52 J**	NA	0.68 U	0.64 U	0.58 U	NA
Acenaphthylene	mg/kg OC	66	NA	NA	**0.15**	NA	NA	**0.71**	**0.6**	NA	NA	**0.43 J**	0.85 U	**0.56 J**	NA	0.68 U	0.64 U	0.58 U	NA
Anthracene	mg/kg OC	220	NA	NA	1.02 U	NA	NA	**1.69**	**0.91**	NA	NA	**1.91**	**1.31**	**1.89**	NA	**0.57 J**	**1.82**	**3.38**	NA
Fluorene	mg/kg OC	23	NA	NA	1.02 U	NA	NA	**0.39**	**0.49**	NA	NA	**0.68 J**	**0.59 J**	**0.82 J**	NA	0.68 U	0.64 U	**0.67**	NA
Naphthalene	mg/kg OC	99	NA	NA	1.02 U	NA	NA	**1.47**	**2.92**	NA	NA	0.85 U	0.85 U	0.86 U	NA	0.68 U	0.64 U	0.58 U	NA
Phenanthrene	mg/kg OC	100	NA	NA	**0.86**	NA	NA	**1.87**	**2.58**	NA	NA	**5.11**	**7.2**	**8.15**	NA	**2.09**	**2.82**	**5.83**	NA
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (Dry Weight)																			
Sum of LPAHs[4]	µg/kg	5,200	32 U	**204**	NA	9.1 U	**2.4**	NA	NA	**288.8 J**	**292 J**	NA	NA	NA	**283 J**	NA	NA	NA	**35 J**
2-Methylnaphthalene	µg/kg	670	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**13**	**10 J**	NA	NA	NA	**12**	NA	NA	NA	19 U
Acenaphthene	µg/kg	500	32 U	**28**	NA	9.1 U	9.7 U	NA	NA	**8.8 J**	**7 J**	NA	NA	NA	**14 J**	NA	NA	NA	19 U
Acenaphthylene	µg/kg	1,300	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**13**	**69**	NA	NA	NA	**15 J**	NA	NA	NA	19 U
Anthracene	µg/kg	960	32 U	**55**	NA	9.1 U	9.7 U	NA	NA	**73**	**47**	NA	NA	NA	**48**	NA	NA	NA	19 U
Fluorene	µg/kg	540	32 U	**27**	NA	9.1 U	9.7 U	NA	NA	**18**	**19**	NA	NA	NA	**26**	NA	NA	NA	19 U
Naphthalene	µg/kg	2,100	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**16**	**10**	NA	NA	NA	20 U	NA	NA	NA	**17 J**
Phenanthrene	µg/kg	1,500	32 U	**94**	NA	9.1 U	**2.4**	NA	NA	**160**	**140**	NA	NA	NA	**180**	NA	NA	NA	**18 J**

Sample Location[1]			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	LHO-REF	P2-1-3
Sample Identification			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	DUP (LHO-REF)	P2-1-A-COMP (P2-1/P2-2/P2-3)
Sample Date			07/13/04	07/13/04	09/06/07	09/06/07	09/05/07	09/05/07	09/05/07	08/28/08	08/28/08	09/01/09	09/01/09	09/01/09	09/01/09	09/01/09	10/14/10	10/14/10	11/16/12
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	Surface Layer Composite (0-4ft)
Sample Type	Proposed Sediment Cleanup Level[2]		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs) (OC Normalized)																			
Sum of HPAHs[5]	mg/kg OC	960	NA	NA	**12.78**	NA	NA	**20.49**	**23.21**	NA	NA	**47.35 J**	**37.43**	**62.84**	NA	**18.36 J**	**51.23**	**56.04**	NA
Benzo(a)anthracene	mg/kg OC	110	NA	NA	**0.43**	NA	NA	**2.62**	**2.02**	NA	NA	**3.49**	**2.2**	**3.61**	NA	**1.62**	**3.59**	**4.17**	NA
Benzo(a)pyrene	mg/kg OC	99	NA	NA	**0.27**	NA	NA	**2**	**1.91**	NA	NA	**3.06**	**2.12**	**3.95**	NA	**1.18**	**4.45**	**3.71**	NA
Benzofluoranthenes[6] (Total)	mg/kg OC	230	NA	NA	**1.04**	NA	NA	**1.11**	**4.22**	NA	NA	**2.2**	**1.8**	**2.8**	NA	**1**	**10.91**	**9.83**	NA
Benzo(g,h,i)perylene	mg/kg OC	31	NA	NA	**0.21**	NA	NA	**1.2**	**1.24**	NA	NA	**1.87**	**1.36**	**2.06**	NA	**0.47 J**	**2.5**	**2.13**	NA
Chrysene	mg/kg OC	110	NA	NA	**1.89**	NA	NA	**3.69**	**2.92**	NA	NA	**6.38**	**4.24**	**6.44**	NA	**2.36**	**7.27**	**7.92**	NA
Dibenzo(a,h)anthracene	mg/kg OC	12	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	**0.68 J**	0.85 U	**0.86**	NA	0.68 U	0.64 U	0.58 U	NA
Fluoranthene	mg/kg OC	160	NA	NA	**5.26**	NA	NA	**3.64**	**4.61**	NA	NA	**19.57**	**19.07**	**32.19**	NA	**8.78**	**9.09**	**13.75**	NA
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	NA	NA	**0.19**	NA	NA	**1.33**	**1.35**	NA	NA	**1.57**	**1.14**	**1.93**	NA	**0.47 J**	**2.5**	**2.46**	NA
Pyrene	mg/kg OC	1,000	NA	NA	**3.47**	NA	NA	**4.89**	**4.94**	NA	NA	**8.51**	**5.51**	**9.01**	NA	**2.94**	**10.91**	**12.08**	NA
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs) (Dry Weight)																			
Sum of HPAHs[5]	µg/kg	12,000	**228**	**726**	NA	**2.2**	**5.8**	NA	NA	**1700**	**3182**	NA	NA	NA	**1562**	NA	NA	NA	**539**
Benzo(a)anthracene	µg/kg	1,300	32 U	**40**	NA	9.1 U	9.7 U	NA	NA	**140**	**320**	NA	NA	NA	**94**	NA	NA	NA	**15**
Benzo(a)pyrene	µg/kg	1,600	**32**	**38**	NA	9.1 U	9.7 U	NA	NA	**100**	**330**	NA	NA	NA	**100**	NA	NA	NA	**58**
Benzofluoranthenes[6] (Total)	µg/kg	3,200	**82 U**	125	NA	9.1 U	9.7 U	NA	NA	**241**	**398**	NA	NA	NA	**320**	NA	NA	NA	**100**
Benzo(g,h,i)perylene	µg/kg	670	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**54**	**150**	NA	NA	NA	**44**	NA	NA	NA	**26**
Chrysene	µg/kg	1,400	**38**	**73**	NA	9.1 U	9.7 U	NA	NA	**280**	**430**	NA	NA	NA	**160**	NA	NA	NA	**30**
Dibenzo(a,h)anthracene	µg/kg	230	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**19**	**44**	NA	NA	NA	20 U	NA	NA	NA	**15**
Fluoranthene	µg/kg	1,700	**110**	**320**	NA	**2.2**	**3.1**	NA	NA	**490**	**560**	NA	NA	NA	**630**	NA	NA	NA	**26**
Indeno(1,2,3-c,d)pyrene	µg/kg	600	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**66**	**160**	NA	NA	NA	**44**	NA	NA	NA	**19**
Pyrene	µg/kg	2,600	**48**	**130**	NA	9.1 U	**2.7**	NA	NA	**310**	**790**	NA	NA	NA	**170**	NA	NA	NA	**250**
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
Hexachlorobenzene	mg/kg OC	0.38	NA	NA	0.1 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	3.1 U	2.8 U	NA	NA	NA	6.1 U	NA	NA	NA	**3.2 J**
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	3.5 U	3.1 U	NA	NA	NA	6.1 U	NA	NA	NA	4.7 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	3.5 U	3.1 U	NA	NA	NA	6.1 U	NA	NA	NA	4.7 U
Hexachlorobenzene	µg/kg	22	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	1.5 U	1.3 U	NA	NA	NA	6.1 U	NA	NA	NA	4.7 U
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	NA	NA	10.21 U	NA	NA	**0.76**	**1.69**	NA	NA	**4.26**	**28.81**	**16.74**	NA	**3.72**	**2.23**	1.46 U	NA
Butyl benzyl Phthalate	mg/kg OC	4.9	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.64 U	0.68 U	0.64 U	NA	0.51 U	1.59 U	1.46 U	NA
Dibutyl Phthalate	mg/kg OC	220	NA	NA	**0.97**	NA	NA	**0.84**	**2.7**	NA	NA	0.85 U	0.85 U	0.86 U	NA	0.68 U	1.59 U	1.46 U	NA
Diethyl Phthalate	mg/kg OC	61	NA	NA	**0.2**	NA	NA	0.44 U	**0.22**	NA	NA	0.85 U	0.85 U	0.86 U	NA	0.68 U	7.73 U	7.5 U	NA
Dimethyl Phthalate	mg/kg OC	53	NA	NA	**0.11**	NA	NA	0.44 U	1.12 U	NA	NA	**2.85**	0.85 U	0.86 U	NA	0.68 U	1.59 U	1.46 U	NA
Di-N-Octyl Phthalate	mg/kg OC	58	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.85 U	0.85 U	0.86 U	NA	**4.39**	1.59 U	1.46 U	NA
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	32 U	**25**	NA	91 U	**11**	NA	NA	**75**	**44**	NA	NA	NA	**150**	NA	NA	NA	34 U
Butyl benzyl Phthalate	µg/kg	63	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	3.8 U	3.4 U	NA	NA	NA	**20**	NA	NA	NA	4.7 U
Dibutyl Phthalate	µg/kg	1,400	32 U	20 U	NA	**16**	**20**	NA	NA	**22**	26 U	NA	NA	NA	20 U	NA	NA	NA	19 U
Diethyl Phthalate	µg/kg	200	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**10 J**	1.4 U	NA	NA	NA	20 U	NA	NA	NA	47 U
Dimethyl Phthalate	µg/kg	71	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**5.9 J**	**10 J**	NA	NA	NA	20 U	NA	NA	NA	4.7 U
Di-N-Octyl Phthalate	µg/kg	6,200	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	2.0 U	1.8 U	NA	NA	NA	20 U	NA	NA	NA	19 U
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	32 U	20 U	20 U	46 R	49 R	50 R	50 R	6.5 U	5.8 U	**6.6**	6.2 U	6 U	6.1 U	6 U	870 U	880 U	19 U
2-methylphenol (o-Cresol)	µg/kg	63	32 U	20 U	20 U	9.1 U	**2.1**	10 U	10 U	1.8 U	1.6 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U	4.7 U
4-methylphenol (p-Cresol)	µg/kg	670	32 U	**70**	20 U	9.1 U	**65**	10 U	**4**	**130**	**26**	**48**	**47**	**82**	**66**	**55**	35 U	35 U	38 U
Pentachlorophenol	µg/kg	360	160 U	99 U	49 U	91 U	97 U	100 U	100 U	**32 J**	22 U	30 U	31 U	30 U	**71**	30 U	170 U	180 U	47 U
Phenol	µg/kg	420	32 U	20 U	49 U	13 U	**80**	16 U	17 U	**12**	2.2 U	20 U	20 U	**15**	20 U	20 U	**240**	35 U	19 U

Sample Location[1]			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	LHO-REF	P2-1-3
Sample Identification			LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	DUP (LHO-REF)	P2-1-A-COMP (P2-1/P2-2/P2-3)
Sample Date			07/13/04	07/13/04	09/06/07	09/06/07	09/05/07	09/05/07	09/05/07	08/28/08	08/28/08	09/01/09	09/01/09	09/01/09	09/01/09	09/01/09	10/14/10	10/14/10	11/16/12
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	Surface Layer Composite (0-4ft)
Sample Type		Proposed Sediment Cleanup Level[2]	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	NA	NA	1.02 U	NA	NA	**0.25**	**0.31**	NA	NA	0.85 U	**0.42 J**	**0.52 J**	NA	0.68 U	1.59 U	1.46 U	NA
Hexachlorobutadiene	mg/kg OC	3.9	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	NA	NA	1.02 U	NA	NA	0.44 U	1.12 U	NA	NA	0.26 U	0.26 U	0.26 U	NA	0.2 U	1.59 U	1.46 U	NA
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	**9.0 J**	**7.3 J**	NA	NA	NA	**20**	NA	NA	NA	19 U
Hexachlorobutadiene	µg/kg	11	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	3.0 U	2.7 U	NA	NA	NA	6.1 U	NA	NA	NA	4.7 U
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	32 U	20 U	NA	9.1 U	9.7 U	NA	NA	1.9 U	1.7 U	NA	NA	NA	6.1 U	NA	NA	NA	19 U
Benzoic Acid	µg/kg	650	320 U	200 U	**200**	19 U	200 R	200 R	200 R	**120 J**	110 U	200 U	200 U	200 U	200 U	200 U	35 U	35 U	380 U
Benzyl Alcohol	µg/kg	57	32 U	20 U	**6.2**	190 R	20 U	20 U	10 U	2.5 U	2.3 U	30 U	31 U	30 U	30 U	30 U	35 U	35 U	19 U
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	NA	NA	2.11 U	NA	NA	0.71 U	1.69 U	NA	NA	0.17 U	0.17 U	0.17 U	NA	0.14 U	4.55 U	4.58 U	NA
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	16 U	16 U	NA	20 U	14 U	NA	NA	14 U	7.5 U	NA	NA	NA	**4.6 J**	NA	NA	NA	3.8 U
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	Pass	--	**Fail**	Pass	Pass	Pass	Pass	Pass	Pass	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	Pass	--	Pass	Pass	Pass	Pass	Pass	**Yes**	Pass	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	Pass	--	Pass	Pass	Pass	Pass	Pass	**Yes**	Pass	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	**Fail**	--	--	--	--	--	**--**	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]	P2-1-3	P2-1-3	P2-1	P2-2	P2-3	LY-01	LY-02	LY-03	LY-03	LY-03	LY-03	LY-04	LY-04	LY-04	LY-05	LY-05	LY-05
Sample Identification			P2-1-B-COMP (P2-1/P2-2/P2-3)	P2-1-Z-COMP (P2-1/P2-2/P2-3)	P2-1-A	P2-2-A	P2-3-A	LY-SS-01_ 0-10	LY-SS-02_ 0-10	LY-SS-03_ 0-10	LY-SS-Dup-01 (LY-SS-03_0-10)	LY-SC-03_ 3-4	LY-SC-03_ 4-5	LY-SS-04_ 0-10	LY-SC-04_ 3-4	LY-SC-Dup-02 (LY-SC-04_3-4)	LY-SS-05_ 0-10	LY-SC-05_ 1-2	LY-SC-05_ 3-4
Sample Date			11/16/12	11/16/12	11/14/12	11/15/12	11/16/12	11/17/15	11/17/15	11/17/15	11/17/15	11/18/15	11/18/15	11/17/15	11/18/15	11/18/15	11/17/15	11/19/15	11/19/15
Sample Interval (dbm)			Subsurface Layer Composite (4-5ft)	Z-Layer Composite (5-6ft)	Surface Layer Discrete	Surface Layer Discrete	Surface Layer Discrete	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	3 - 4	3 - 4	0 - 10 cm	1 - 2	3 - 4
Sample Type			Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core
Stratigraphic Unit			Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	10	--	--	--	--	--	<5	Absent	5	5	75	10	20	40	40	10	Absent	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	**0.13**	**0.15**	--	--	--	**1.21**	**0.56**	**5.56**	**2.95**	**8.74**	**9.29**	**2.75**	**1.21**	**0.905 J**	**21.50**	**0.55**	--
Total Volatile Solids (TVS)	%	NE	**1.37**	**1.14**	--	--	--	**1.69**	**0.98**	**13.75**	**11.81**	**28.21**	--	**10.10**	**2.34**	**2.01 J**	**8.23**	--	--
Total Solids (TS)	%	NE	**80.5**	**82.1**	--	--	--	**85.9**	**89.9**	**48.2**	**55.4**	**39.9**	**45.5**	**46.9**	**75.4**	**87.7 J**	**54.7**	**77.7**	--
Total Ammonia	mg-N/kg	NE	**0.9**	**0.9**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	**15.4**	**15.8**	**16.7**	--	**34.0**	--	**22.1**	**8.2**	--	**8.0**
Total Sulfide	mg/kg	NE	1.24 U	1.21 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	0.05 U	**37.5**	**44.0**	--	**161.0**	--	--	**7.2**	--	--
Grain Size																			
Gravel	%	NE	**0.3**	**0.2**	--	--	--	**60.2**	**63.3**	**1.7**	**1.2**	**18.1**	--	**0.6**	**26.6**	**35.4**	**3.3**	--	--
Very Coarse Sand	%	NE	**0.3**	**0.3**	--	--	--	**5.4**	**12.3**	**2.1**	**1.4**	**3.8**	--	**1.5**	**2.2**	**2.6**	**2.4**	--	--
Coarse Sand	%	NE	**0.5**	**0.6**	--	--	--	**7.3**	**12.9**	**3.2**	**2.7**	**4.8**	--	**1.4**	**2.6**	**2.7**	**2.7**	--	--
Medium Sand	%	NE	**7.2**	**8.4**	--	--	--	**13.2**	**8.7**	**4.8**	**4.6**	**7**	--	**2.4**	**11.1**	**10.9**	**4.6**	--	--
Fine Sand	%	NE	**21.8**	**31.3**	--	--	--	**8.1**	**1.6**	**6**	**8.4**	**7.9**	--	**3.3**	**26.2**	**24.8**	**13.5**	--	--
Very Fine Sand	%	NE	**20.9**	**12.8**	--	--	--	**0.6**	**0.4**	**10.4**	**12**	**8.4**	--	**7**	**15.7**	**13.8**	**18.9**	--	--
Coarse Silt	%	NE	**22.2**	**13.4**	--	--	--	**4.6**	0.7 U	**22.9**	**21.8**	**6.5**	--	**28**	**5.2**	**1.7**	**17.8**	--	--
Medium Silt	%	NE	**12.8**	**11.5**	--	--	--	**0.1**	0.7 U	**20.8**	**19.8**	**15**	--	**18**	**3.1**	**2.1**	**12.2**	--	--
Fine Silt	%	NE	**6.3**	**8.9**	--	--	--	**0.1**	0.7 U	**10**	**10.2**	**8**	--	**14.2**	**1.6**	**1.2**	**7.5**	--	--
Very Fine Silt	%	NE	**3.3**	**5.5**	--	--	--	**0.1**	0.7 U	**4.3**	**4.5**	**5.2**	--	**5.6**	**1.3**	**1**	**3.4**	--	--
Clay	%	NE	**4.5**	**7**	--	--	--	0.3 U	0.7 U	**13.8**	**13.6**	**15.2**	--	**17.9**	**4.4**	**3.7**	**13.5**	--	--
Metals																			
Arsenic	mg/kg	57	6 U	6 U	--	--	--	**5.6 J**	**5.15 J**	**9.7 J**	**8 J**	**8.6 J**	--	**8.3 J**	**11**	**14**	**10**	**11**	--
Cadmium	mg/kg	5.1	**0.3**	0.2	--	--	--	0.072 U	0.023 U	**1.1**	**1.2**	**0.8**	--	**1**	**0.5**	**0.5**	**0.6**	**1.6**	**1.1**
Chromium	mg/kg	260	**19 J**	**19.9 J**	--	--	--	**42.4**	**53.8**	**40**	**40**	**35**	--	**41**	**15.7**	**18.6**	**33.4**	--	--
Copper	mg/kg	390	**16.2**	**14.5**	--	--	--	**17.2**	**42.4**	**34.6**	**36.8**	**41.1**	--	**33.8**	**9.6**	**10.8**	**30**	--	--
Lead	mg/kg	450	2	**4**	--	--	--	**11**	**11**	**18**	**17**	**13**	--	**18**	**2.11 J**	**2.21 J**	**14**	--	--
Mercury	mg/kg	0.41	0.03 U	0.02 U	--	--	--	**0.0052 J**	**0.0026 JJ**	**0.08**	**0.08**	**0.08**	--	**0.06**	**0.0182 J**	**0.0141 J**	**0.05**	--	--
Silver	mg/kg	6.1	0.4 U	0.3 U	--	--	--	0.4 U	0.3 U	0.6 U	0.6 U	0.7 U	--	0.6 U	0.4 U	0.4 U	0.5 U	--	--
Zinc	mg/kg	410	**32**	**30**	--	--	--	**61**	**57**	**95**	**89**	**90**	--	**93**	**27**	**34**	**73**	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	NA	NA	--	--	--	**0.93 J**	**0.71**	NA	**11.49 J**	NA	--	**97.35**	**4.17 J**	**6.21 J**	**3.29**	**16.15 J**	--
2-Methylnaphthalene	mg/kg OC	38	NA	NA	--	--	--	0.39 U	**0.43 J**	NA	**2.17 J**	NA	--	**2.29**	**0.3 J**	**0.49 J**	**0.33**	**0.91**	--
Acenaphthene	mg/kg OC	16	NA	NA	--	--	--	0.39 U	0.84 U	NA	**0.78**	NA	--	**58.18**	0.4 U	**0.52 J**	**0.3**	**0.73 J**	--
Acenaphthylene	mg/kg OC	66	NA	NA	--	--	--	0.39 U	0.84 U	NA	**0.54**	NA	--	**0.98**	**0.2 J**	0.54 U	**0.14**	**0.65 J**	--
Anthracene	mg/kg OC	220	NA	NA	--	--	--	0.39 U	0.84 U	NA	**1.56 J**	NA	--	**7.27**	**0.45**	**0.9**	**0.33**	**1.45**	--
Fluorene	mg/kg OC	23	NA	NA	--	--	--	0.39 U	0.84 U	NA	**1.15 J**	NA	--	**10.18**	**0.38 J**	**0.71**	**0.34**	**1.34**	--
Naphthalene	mg/kg OC	99	NA	NA	--	--	--	**0.26 J**	0.84 U	NA	**3.39**	NA	--	**3.64**	**1.9**	**2.21**	**1.3**	**7.44**	--
Phenanthrene	mg/kg OC	100	NA	NA	--	--	--	**0.68 J**	**0.71 J**	NA	**4.07**	NA	--	**17.09**	**1.24**	**1.88**	**0.88**	**4.54**	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	18 U	19 U	--	--	--	NA	NA	**472 J**	NA	**1252**	--	NA	NA	NA	NA	NA	--
2-Methylnaphthalene	µg/kg	670	18 U	19 U	--	--	--	NA	NA	**140 J**	NA	**99**	--	NA	NA	NA	NA	NA	--
Acenaphthene	µg/kg	500	18 U	19 U	--	--	--	NA	NA	**25**	NA	**140**	--	NA	NA	NA	NA	NA	--
Acenaphthylene	µg/kg	1,300	18 U	19 U	--	--	--	NA	NA	**29**	NA	**42**	--	NA	NA	NA	NA	NA	--
Anthracene	µg/kg	960	18 U	19 U	--	--	--	NA	NA	**69 J**	NA	**210**	--	NA	NA	NA	NA	NA	--
Fluorene	µg/kg	540	18 U	19 U	--	--	--	NA	NA	**49 J**	NA	**180**	--	NA	NA	NA	NA	NA	--
Naphthalene	µg/kg	2,100	18 U	19 U	--	--	--	NA	NA	**160**	NA	**340**	--	NA	NA	NA	NA	NA	--
Phenanthrene	µg/kg	1,500	18 U	19 U	--	--	--	NA	NA	**140**	NA	**340**	--	NA	NA	NA	NA	NA	--

Sample Location[1]			P2-1-3	P2-1-3	P2-1	P2-2	P2-3	LY-01	LY-02	LY-03	LY-03	LY-03	LY-03	LY-04	LY-04	LY-04	LY-05	LY-05	LY-05
Sample Identification			P2-1-B-COMP (P2-1/P2-2/P2-3)	P2-1-Z-COMP (P2-1/P2-2/P2-3)	P2-1-A	P2-2-A	P2-3-A	LY-SS-01_ 0-10	LY-SS-02_ 0-10	LY-SS-03_ 0-10	LY-SS-Dup-01 (LY-SS-03_0-10)	LY-SC-03_ 3-4	LY-SC-03_ 4-5	LY-SS-04_ 0-10	LY-SC-04_ 3-4	LY-SC-Dup-02 (LY-SC-04_3-4)	LY-SS-05_ 0-10	LY-SC-05_ 1-2	LY-SC-05_ 3-4
Sample Date			11/16/12	11/16/12	11/14/12	11/15/12	11/16/12	11/17/15	11/17/15	11/17/15	11/17/15	11/18/15	11/18/15	11/17/15	11/18/15	11/18/15	11/17/15	11/19/15	11/19/15
Sample Interval (dbm)			Subsurface Layer Composite (4-5ft)	Z-Layer Composite (5-6ft)	Surface Layer Discrete	Surface Layer Discrete	Surface Layer Discrete	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	3 - 4	3 - 4	0 - 10 cm	1 - 2	3 - 4
Sample Type		Proposed	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core
Stratigraphic Unit		Sediment	Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	NA	NA	--	--	--	**9.03 J**	**6.4 J**	NA	**34.14 J**	NA	NA	**72.58**	**5.37 J**	**10.25 J**	**4.76**	**18.73 J**	--
Benzo(a)anthracene	mg/kg OC	110	NA	NA	--	--	--	**0.55 J**	0.84 U	NA	**2.17 J**	NA	NA	**2.98**	**0.31 J**	**0.7**	**0.31**	**1.11**	--
Benzo(a)pyrene	mg/kg OC	99	NA	NA	--	--	--	**0.55**	**0.59 J**	NA	**1.76**	NA	NA	**1.6**	**0.51**	**0.41 J**	**0.22**	**1.07**	--
Benzofluoranthenes[6] (Total)	mg/kg OC	230	NA	NA	--	--	--	**2.23 J**	**1.96**	NA	**5.08**	NA	NA	**4.73**	**0.63**	**1.1**	**0.6**	**2.18**	--
Benzo(g,h,i)perylene	mg/kg OC	31	NA	NA	--	--	--	**1.32**	**0.66 J**	NA	**1.19**	NA	NA	**0.98**	**0.55**	**0.46 J**	**0.19**	**0.78 J**	--
Chrysene	mg/kg OC	110	NA	NA	--	--	--	**1.24 J**	**0.98**	NA	**4.07 J**	NA	NA	**4.36**	**0.48**	**0.95**	**0.42**	**1.34**	--
Dibenzo(a,h)anthracene	mg/kg OC	12	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.51 U	NA	NA	0.51 U	0.4 U	0.54 U	0.08 U	0.91 U	--
Fluoranthene	mg/kg OC	160	NA	NA	--	--	--	**1.49 J**	**0.84 J**	NA	**11.53**	NA	NA	**35.64**	**1.49 J**	**3.76 J**	**1.35**	**5.99**	--
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	NA	NA	--	--	--	**0.67**	**0.55 J**	NA	**0.88**	NA	NA	**0.84**	0.4 U	0.54 U	**0.13**	**0.64 J**	--
Pyrene	mg/kg OC	1,000	NA	NA	--	--	--	**0.99 J**	**0.82 J**	NA	**7.46**	NA	NA	**21.45**	**1.4 J**	**2.87 J**	**1.53**	**5.63**	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	**10 J**	19 U	--	--	--	NA	NA	**1332 J**	NA	**3012**	**2717**	NA	NA	NA	NA	NA	--
Benzo(a)anthracene	µg/kg	1,300	18 U	19 U	--	--	--	NA	NA	**99 J**	NA	**190**	**200**	NA	NA	NA	NA	NA	--
Benzo(a)pyrene	µg/kg	1,600	18 U	19 U	--	--	--	NA	NA	**64**	NA	**110**	**120**	NA	NA	NA	NA	NA	--
Benzofluoranthenes[6] (Total)	µg/kg	3,200	37 U	37 U	--	--	--	NA	NA	**220**	NA	**300**	**350**	NA	NA	NA	NA	NA	--
Benzo(g,h,i)perylene	µg/kg	670	18 U	19 U	--	--	--	NA	NA	**43**	NA	**60**	**68**	NA	NA	NA	NA	NA	--
Chrysene	µg/kg	1,400	18 U	19 U	--	--	--	NA	NA	**220 J**	NA	**320**	**320**	NA	NA	NA	NA	NA	--
Dibenzo(a,h)anthracene	µg/kg	230	18 U	19 U	--	--	--	NA	NA	**11 J**	NA	**18**	**17**	NA	NA	NA	NA	NA	--
Fluoranthene	µg/kg	1,700	18 U	19 U	--	--	--	NA	NA	**360**	NA	**1200**	**1000**	NA	NA	NA	NA	NA	--
Indeno(1,2,3-c,d)pyrene	µg/kg	600	18 U	19 U	--	--	--	NA	NA	**35**	NA	**54**	**52**	NA	NA	NA	NA	NA	--
Pyrene	µg/kg	2,600	**10 J**	19 U	--	--	--	NA	NA	**280**	NA	**760**	**590**	NA	NA	NA	NA	NA	--
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	--	0.17 U	0.4 U	0.54 U	0.02 U	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	--	0.17 U	0.4 U	**0.17 J**	0.02 U	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	--	0.17 U	0.4 U	0.54 U	0.02 U	--	--
Hexachlorobenzene	mg/kg OC	0.38	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	--	0.17 U	0.4 U	0.54 U	0.02 U	--	--
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	4.6 U	4.6 U	--	--	--	NA	NA	4.8 U	NA	5 U	--	NA	NA	NA	NA	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	4.6 U	4.6 U	--	--	--	NA	NA	4.8 U	NA	**2.8 J**	--	NA	NA	NA	NA	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	4.6 U	4.6 U	--	--	--	NA	NA	4.8 U	NA	5 U	--	NA	NA	NA	NA	--	--
Hexachlorobenzene	µg/kg	22	4.6 U	4.6 U	--	--	--	NA	NA	4.8 U	NA	5 U	--	NA	NA	NA	NA	--	--
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	NA	NA	--	--	--	**90.91**	**5.88 J**	NA	**6.1**	NA	--	**9.45**	**52.07 J**	**4.86 J**	**2.23**	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	NA	NA	--	--	--	**0.4**	0.84 U	NA	**1.05 J**	NA	--	**0.29**	0.4 U	**0.43 J**	0.02 U	--	--
Dibutyl Phthalate	mg/kg OC	220	NA	NA	--	--	--	1.57 U	3.39 U	NA	0.68 U	NA	--	0.69 U	1.57 U	2.21 U	0.09 U	--	--
Diethyl Phthalate	mg/kg OC	61	NA	NA	--	--	--	2.73 U	3.39 U	NA	0.68 U	NA	--	1.24 U	1.57 U	2.21 U	**0.26**	--	--
Dimethyl Phthalate	mg/kg OC	53	NA	NA	--	--	--	1.57 U	3.39 U	NA	0.68 U	NA	--	0.69 U	1.57 U	2.21 U	0.09 U	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	NA	NA	--	--	--	1.57 U	3.39 U	NA	0.68 U	NA	--	0.69 U	1.57 U	2.21 U	0.09 U	--	--
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	24 U	27 U	--	--	--	NA	NA	**160**	NA	250 U	--	NA	NA	NA	NA	--	--
Butyl benzyl Phthalate	µg/kg	63	4.6 U	4.6 U	--	--	--	NA	NA	**5.4**	NA	5 U	--	NA	NA	NA	NA	--	--
Dibutyl Phthalate	µg/kg	1,400	18 U	19 U	--	--	--	NA	NA	19 U	NA	**35 J**	--	NA	NA	NA	NA	--	--
Diethyl Phthalate	µg/kg	200	4.6 U	4.6 U	--	--	--	NA	NA	37 U	NA	100 U	--	NA	NA	NA	NA	--	--
Dimethyl Phthalate	µg/kg	71	4.6 U	4.6 U	--	--	--	NA	NA	19 U	NA	100 U	--	NA	NA	NA	NA	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	18 U	19 U	--	--	--	NA	NA	19 U	NA	100 U	--	NA	NA	NA	NA	--	--
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	18 U	19 U	--	--	--	24 U	24 U	24 U	**13 J**	**17 J**	**12 J**	24 U	24 U	24 U	25 U	--	--
2-methylphenol (o-Cresol)	µg/kg	63	4.6 U	4.6 U	--	--	--	19 U	19 U	19 U	20 U	100 U	19 U	19 U	19 U	20 U	20 U	--	--
4-methylphenol (p-Cresol)	µg/kg	670	37 U	37 U	--	--	--	19 U	19 U	**800 J**	**460 J**	**3900**	**1100**	**1100**	**53**	**46**	**330**	--	--
Pentachlorophenol	µg/kg	360	46 U	46 U	--	--	--	95 U	94 U	96 U	98 U	**480 J**	95 U	96 U	97 U	98 U	98 U	--	--
Phenol	µg/kg	420	18 U	19 U	--	--	--	19 U	19 U	**42 J**	**76 J**	**560**	**370**	**67 J**	**20**	**20**	**300 J**	--	--

Sample Location[1]			P2-1-3	P2-1-3	P2-1	P2-2	P2-3	LY-01	LY-02	LY-03	LY-03	LY-03	LY-03	LY-04	LY-04	LY-04	LY-05	LY-05	LY-05
Sample Identification			P2-1-B-COMP (P2-1/P2-2/P2-3)	P2-1-Z-COMP (P2-1/P2-2/P2-3)	P2-1-A	P2-2-A	P2-3-A	LY-SS-01_ 0-10	LY-SS-02_ 0-10	LY-SS-03_ 0-10	LY-SS-Dup-01 (LY-SS-03_0-10)	LY-SC-03_ 3-4	LY-SC-03_ 4-5	LY-SS-04_ 0-10	LY-SC-04_ 3-4	LY-SC-Dup-02 (LY-SC-04_3-4)	LY-SS-05_ 0-10	LY-SC-05_ 1-2	LY-SC-05_ 3-4
Sample Date			11/16/12	11/16/12	11/14/12	11/15/12	11/16/12	11/17/15	11/17/15	11/17/15	11/17/15	11/18/15	11/18/15	11/17/15	11/18/15	11/18/15	11/17/15	11/19/15	11/19/15
Sample Interval (dbm)			Subsurface Layer Composite (4-5ft)	Z-Layer Composite (5-6ft)	Surface Layer Discrete	Surface Layer Discrete	Surface Layer Discrete	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	3 - 4	3 - 4	0 - 10 cm	1 - 2	3 - 4
Sample Type		Proposed Sediment Cleanup Level[2]	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core
Stratigraphic Unit			Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	NA	NA	--	--	--	**0.26 J**	0.84 U	NA	**1.22**	NA	NA	**12.36**	**0.29 J**	**0.53**	**0.38**	--	--
Hexachlorobutadiene	mg/kg OC	3.9	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	NA	0.17 U	0.4 U	0.54 U	0.02 U	--	--
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	NA	NA	--	--	--	0.39 U	0.84 U	NA	0.17 U	NA	NA	0.17 U	0.4 U	0.54 U	0.02 U	--	--
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	18 U	19 U	--	--	--	NA	NA	**48**	NA	**130**	**140**	NA	NA	NA	NA	--	--
Hexachlorobutadiene	µg/kg	11	4.6 U	4.6 U	--	--	--	NA	NA	4.8 U	NA	5 U	4.8 U	NA	NA	NA	NA	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	18 U	19 U	--	--	--	NA	NA	4.8 U	NA	5 U	4.8 U	NA	NA	NA	NA	--	--
Benzoic Acid	µg/kg	650	370 U	370 U	--	--	--	190 U	190 U	**200**	**220**	**4,300 J**	**160 J**	**110 J**	190 U	200 U	**110 J**	--	--
Benzyl Alcohol	µg/kg	57	18 U	19 U	--	--	--	19 U	19 U	19 U	20 U	100 U	19 U	19 U	19 U	20 U	20 U	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	NA	**0.043 J**	NA	--	**0.067 J**	--	--	**0.01 J**	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	3.8 U	3.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	**1.71 J**	NA	**3.0 J**	--	NA	--	--	NA	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			LY-05	LY-06	LY-06	LY-06	LY-06	LY-07	LY-07	LY-07	LY-08	LY-08	LY-08	LY-09	LY-09	LY-09	LY-10	LY-10	LY-11
Sample Identification			LY-SC-05_ 4-5	LY-SS-06_ 0-10	LY-SS-Dup-02 (LY-SS-06_0-10)	LY-SC-06_ 3-4	LY-SC-06_ 4-5	LY-SS-07_ 0-10	LY-SC-07_ 0-1	LY-SC-07_ 3-4	LY-SS-08_ 0-10	LY-SC-08_ 3-4	LY-SC-08_ 5-6	LY-SS-09_ 0-10	LY-SC-09_ 2-3	LY-SC-09_ 3-4	LY-SS-10_ 0-10	LY-SC-10_ 0-1	LY-SS-11_ 0-10
Sample Date			11/19/15	11/17/15	11/17/15	11/19/15	11/19/15	11/17/15	11/20/15	11/20/15	11/17/15	11/20/15	11/20/15	11/17/15	11/18/2015	11/18/2015	11/17/15	11/18/15	11/17/15
Sample Interval (dbm)			4 - 5	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	0 - 1	3 - 4	0 - 10 cm	3 - 4	5 - 6	0 - 10 cm	2 - 3	3 - 4	0 - 10 cm	0 - 1	0 - 10 cm
Sample Type		Proposed	Core	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Surface
Stratigraphic Unit		Sediment	Native	Recent	Recent	Recent	Native	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	10	Absent	10	10	10	Absent	Absent	Absent	Absent	10	40	<5	10	<5	<5	<5	<5	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	--	**1.75**	**2.24**	--	**0.56**	**0.73**	**0.19**	--	**1.86**	**6.32**	**3.17**	**1.52**	**2.70**	--	**1.84**	**2.65**	**1.32**
Total Volatile Solids (TVS)	%	NE	--	**6.43**	**8.42**	--	--	--	--	--	**6.61**	**16.08**	--	**6.15**	--	--	**5.49**	--	--
Total Solids (TS)	%	NE	--	**55.1**	**55.4**	--	**76.5**	--	**75.8**	--	**55.0**	**47.4**	**51.1**	**56.3**	**47.9**	--	**53.0**	**50.9**	**57.0**
Total Ammonia	mg-N/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	**6.2**	**7.0**	**29.6**	--	--	--	--	**7.8**	**41**	--	**7.7**	--	**76.2**	**6.2**	--	--
Total Sulfide	mg/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	**0.2**	**49.2**	**16.2**	--	--	--	--	**1.6**	**8.3**	--	**1.6**	--	**0.3**	**0.9**	--	--
Grain Size																			
Gravel	%	NE	--	**2.9**	**2.8**	--	--	**2.8**	--	--	**1.8**	**6.8**	--	**2.2**	--	--	**2**	--	--
Very Coarse Sand	%	NE	--	**1.5**	**2.1**	--	--	**2.1**	--	--	**1.4**	**3.4**	--	**1.2**	--	--	**1.2**	--	--
Coarse Sand	%	NE	--	**2.5**	**2.9**	--	--	**2.9**	--	--	**1.8**	**3.4**	--	**2.2**	--	--	**0.8**	--	--
Medium Sand	%	NE	--	**5.9**	**6.4**	--	--	**6.4**	--	--	**3.5**	**4.1**	--	**3.9**	--	--	**1.8**	--	--
Fine Sand	%	NE	--	**22.4**	**21.4**	--	--	**21.4**	--	--	**14.5**	**7.5**	--	**10.8**	--	--	**10.6**	--	--
Very Fine Sand	%	NE	--	**17.7**	**18.1**	--	--	**18.1**	--	--	**22.4**	**9.8**	--	**23.7**	--	--	**20.8**	--	--
Coarse Silt	%	NE	--	**13.9**	**12.3**	--	--	**12.3**	--	--	**20.8**	**13.4**	--	**26.2**	--	--	**21.8**	--	--
Medium Silt	%	NE	--	**8.7**	**8.8**	--	--	**8.8**	--	--	**11.2**	**15.7**	--	**11.7**	--	--	**15.1**	--	--
Fine Silt	%	NE	--	**6.4**	**6.7**	--	--	**6.7**	--	--	**5.8**	**9**	--	**4.2**	--	--	**6.4**	--	--
Very Fine Silt	%	NE	--	**3.7**	**4.1**	--	--	**4.1**	--	--	**3.6**	**5.9**	--	**2.9**	--	--	**4.1**	--	--
Clay	%	NE	--	**14.3**	**14.5**	--	--	**14.5**	--	--	**13.2**	**21**	--	**11**	--	--	**15.4**	--	--
Metals																			
Arsenic	mg/kg	57	--	**12**	**11**	--	**7**	--	--	--	**10**	**10**	--	**8.4 J**	10 U	--	**8.29 J**	--	--
Cadmium	mg/kg	5.1	**0.8**	**0.5**	**0.4**	--	**0.7**	--	--	--	**0.7**	**0.6**	--	**0.7**	**0.7**	--	**0.7**	--	--
Chromium	mg/kg	260	--	**31.8**	**32.1**	--	--	--	--	--	**33**	**38**	--	**29.6**	--	--	**31.5**	--	--
Copper	mg/kg	390	--	**31.7**	**28.3**	--	--	--	--	--	**25.8**	**32.2**	--	**27.2**	--	--	**22.2**	--	--
Lead	mg/kg	450	--	**9**	**8**	--	--	--	--	--	**10**	**14**	--	**7**	--	--	**8**	--	--
Mercury	mg/kg	0.41	--	**0.06**	**0.05**	--	--	--	--	--	**0.0435 J**	**0.15**	--	**0.05**	--	--	**0.09**	--	--
Silver	mg/kg	6.1	--	0.6 U	0.5 U	--	--	--	--	--	0.6 U	0.6 U	--	0.5	--	--	0.5 U	--	--
Zinc	mg/kg	410	--	**67**	**70**	--	--	--	--	--	**79**	**86**	--	**67**	--	--	**68**	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	--	**40.11 J**	**32.72 J**	--	--	--	--	--	**144.25**	NA	**75.43**	**163.62**	**35.96**	--	**23.59**	--	--
2-Methylnaphthalene	mg/kg OC	38	--	**4.63**	**3.08**	--	--	--	--	--	**3.82**	NA	**5.05**	**4.8**	**2.56**	--	**2.72**	--	--
Acenaphthene	mg/kg OC	16	--	**3.31**	**2.81**	--	--	--	--	--	**6.45**	NA	**5.36**	**1.71**	**2.81**	--	**1.3**	--	--
Acenaphthylene	mg/kg OC	66	--	**2.34**	**2.1**	--	--	--	--	--	**5**	NA	**1.92**	**3.36**	**1.3**	--	**1.63**	--	--
Anthracene	mg/kg OC	220	--	**3.89 J**	**4.02 J**	--	--	--	--	--	**9.14**	NA	**15.46**	**85.53**	**9.26**	--	**3.32**	--	--
Fluorene	mg/kg OC	23	--	**3.71**	**2.81**	--	--	--	--	--	**9.14**	NA	**8.52**	**16.45**	**5.93**	--	**2.12**	--	--
Naphthalene	mg/kg OC	99	--	**16.57**	**12.5**	--	--	--	--	--	**12.37**	NA	**24.92**	**9.21**	**5.93**	--	**8.15**	--	--
Phenanthrene	mg/kg OC	100	--	**10.29**	**8.48**	--	--	--	--	--	**102.15**	NA	**19.24**	**47.37**	**10.74**	--	**7.07**	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	--	NA	NA	--	--	--	--	--	NA	**4230**	NA	NA	NA	--	NA	--	--
2-Methylnaphthalene	µg/kg	670	--	NA	NA	--	--	--	--	--	NA	**120**	NA	NA	NA	--	NA	--	--
Acenaphthene	µg/kg	500	--	NA	NA	--	--	--	--	--	NA	**620**	NA	NA	NA	--	NA	--	--
Acenaphthylene	µg/kg	1,300	--	NA	NA	--	--	--	--	--	NA	**100**	NA	NA	NA	--	NA	--	--
Anthracene	µg/kg	960	--	NA	NA	--	--	--	--	--	NA	**800**	NA	NA	NA	--	NA	--	--
Fluorene	µg/kg	540	--	NA	NA	--	--	--	--	--	NA	**750**	NA	NA	NA	--	NA	--	--
Naphthalene	µg/kg	2,100	--	NA	NA	--	--	--	--	--	NA	**860**	NA	NA	NA	--	NA	--	--
Phenanthrene	µg/kg	1,500	--	NA	NA	--	--	--	--	--	NA	**1100**	NA	NA	NA	--	NA	--	--

Sample Location[1]			LY-05	LY-06	LY-06	LY-06	LY-06	LY-07	LY-07	LY-07	LY-08	LY-08	LY-08	LY-09	LY-09	LY-09	LY-10	LY-10	LY-11
Sample Identification			LY-SC-05_ 4-5	LY-SS-06_ 0-10	LY-SS-Dup-02 (LY-SS-06_0-10)	LY-SC-06_ 3-4	LY-SC-06_ 4-5	LY-SS-07_ 0-10	LY-SC-07_ 0-1	LY-SC-07_ 3-4	LY-SS-08_ 0-10	LY-SC-08_ 3-4	LY-SC-08_ 5-6	LY-SS-09_ 0-10	LY-SC-09_ 2-3	LY-SC-09_ 3-4	LY-SS-10_ 0-10	LY-SC-10_ 0-1	LY-SS-11_ 0-10
Sample Date			11/19/15	11/17/15	11/17/15	11/19/15	11/19/15	11/17/15	11/20/15	11/20/15	11/17/15	11/20/15	11/20/15	11/17/15	11/18/2015	11/18/2015	11/17/15	11/18/15	11/17/15
Sample Interval (dbm)			4 - 5	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	0 - 1	3 - 4	0 - 10 cm	3 - 4	5 - 6	0 - 10 cm	2 - 3	3 - 4	0 - 10 cm	0 - 1	0 - 10 cm
Sample Type		Proposed	Core	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Surface
Stratigraphic Unit		Sediment	Native	Recent	Recent	Recent	Native	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	--	**87.37 J**	**59.51**	--	--	--	--	--	**369.57**	NA	**143.15**	**619.54**	**182.26**	--	**62.01 J**	**196.64**	**--**
Benzo(a)anthracene	mg/kg OC	110	--	**8**	**4.46**	--	**3.59**	--	NA	--	**11.83**	NA	**10.09**	**72.37**	**12.96**	--	**5.98**	**21.89**	**9.85**
Benzo(a)pyrene	mg/kg OC	99	--	**5.31**	**3.71**	--	**2.51**	--	NA	--	**6.99**	NA	**5.68**	**55.26**	**7.04**	--	**4.46**	**12.08**	**8.33**
Benzofluoranthenes[6] (Total)	mg/kg OC	230	--	**10.86**	**8.93**	--	4.67	--	5.79	--	**32.26**	NA	**12.93**	**111.84**	**3.19**	--	**12.5**	**30.94**	**20.45**
Benzo(g,h,i)perylene	mg/kg OC	31	--	**2.63**	**1.96**	--	**--**	--	NA	--	**3.39**	NA	**3.47**	**21.05**	**20.74**	--	**2.23**	**4.91**	**--**
Chrysene	mg/kg OC	110	--	**8.57**	**6.25**	--	**3.23**	--	NA	--	**41.94**	NA	**12.93**	**118.42**	**23.33**	--	**9.78**	**30.94**	**14.39**
Dibenzo(a,h)anthracene	mg/kg OC	12	--	**0.69 J**	0.63 U	--	0.86 U	--	NA	--	**0.97**	NA	**0.73**	**5.72**	**0.96**	--	**0.65 J**	**1.55**	**1.29**
Fluoranthene	mg/kg OC	160	--	**17.71**	**14.29**	--	--	--	--	--	**161.29**	NA	**56.78**	**125**	**66.67**	--	**10.33**	**33.21**	**--**
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	--	**2.17**	**1.61**	--	**1.33**	--	NA	--	**3.39**	NA	**2.68**	**17.76**	**2.93**	--	**1.96**	**4.53**	**3.71**
Pyrene	mg/kg OC	1,000	--	**31.43**	**18.3**	--	--	--	--	--	**107.53**	NA	**37.85**	**92.11**	**44.44**	--	**14.13**	**56.6**	**--**
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	--	NA	NA	--	--	--	--	--	NA	**8086**	NA	NA	NA	--	NA	NA	--
Benzo(a)anthracene	µg/kg	1,300	--	NA	NA	--	NA	--	**5**	--	NA	**540**	NA	NA	NA	--	NA	NA	NA
Benzo(a)pyrene	µg/kg	1,600	--	NA	NA	--	NA	--	**4.2 J**	--	NA	**240**	NA	NA	NA	--	NA	NA	NA
Benzofluoranthenes[6] (Total)	µg/kg	3,200	--	NA	NA	--	26	--	11	--	NA	**660**	NA	NA	NA	--	NA	NA	NA
Benzo(g,h,i)perylene	µg/kg	670	--	NA	NA	--	NA	--	--	--	NA	**95**	NA	NA	NA	--	NA	NA	--
Chrysene	µg/kg	1,400	--	NA	NA	--	NA	--	**6.3**	--	NA	**750**	NA	NA	NA	--	NA	NA	NA
Dibenzo(a,h)anthracene	µg/kg	230	--	NA	NA	--	NA	--	4.8 U	--	NA	**23**	NA	NA	NA	--	NA	NA	NA
Fluoranthene	µg/kg	1,700	--	NA	NA	--	--	--	--	--	NA	**3500**	NA	NA	NA	--	NA	NA	--
Indeno(1,2,3-c,d)pyrene	µg/kg	600	--	NA	NA	--	NA	--	4.8 U	--	NA	**78**	NA	NA	NA	--	NA	NA	NA
Pyrene	µg/kg	2,600	--	NA	NA	--	--	--	--	--	NA	**2200**	NA	NA	NA	--	NA	NA	--
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	--	0.27 U	0.21 U	--	--	--	--	--	0.26 U	NA	NA	0.33 U	--	--	0.26 U	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	--	0.27 U	0.21 U	--	--	--	--	--	0.26 U	NA	NA	0.33 U	--	--	0.26 U	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	--	0.27 U	**0.11 J**	--	--	--	--	--	0.26 U	NA	NA	0.33 U	--	--	0.26 U	--	--
Hexachlorobenzene	mg/kg OC	0.38	--	0.27 U	0.21 U	--	--	--	--	--	0.26 U	NA	NA	0.33 U	--	--	0.26 U	--	--
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	--	NA	NA	--	--	--	--	--	NA	4.8 U	--	NA	--	--	NA	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	--	NA	NA	--	--	--	--	--	NA	**3.5 J**	--	NA	--	--	NA	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	--	NA	NA	--	--	--	--	--	NA	**11**	--	NA	--	--	NA	--	--
Hexachlorobenzene	µg/kg	22	--	NA	NA	--	--	--	--	--	NA	4.8 U	--	NA	--	--	NA	--	--
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	--	**3.43**	**2.86**	--	--	--	--	--	**3.6**	NA	--	**3.68**	--	--	**2.28 J**	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	--	0.27 U	0.21 U	--	--	--	--	--	**0.7**	NA	--	**1.32**	--	--	**0.52**	--	--
Dibutyl Phthalate	mg/kg OC	220	--	1.09 U	0.85 U	--	--	--	--	--	1.08 U	NA	--	1.32 U	--	--	1.03 U	--	--
Diethyl Phthalate	mg/kg OC	61	--	1.09 U	**1.7 U**	--	--	--	--	--	1.08 U	NA	--	2.83 U	--	--	3.1 U	--	--
Dimethyl Phthalate	mg/kg OC	53	--	1.09 U	0.85 U	--	--	--	--	--	1.08 U	NA	--	1.32 U	--	--	1.03 U	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	--	1.09 U	0.85 U	--	--	--	--	--	1.08 U	NA	--	1.32 U	--	--	1.03 U	--	--
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	--	NA	NA	--	--	--	--	--	NA	**62 J**	--	NA	--	--	NA	--	--
Butyl benzyl Phthalate	µg/kg	63	--	NA	NA	--	--	--	--	--	NA	4.8 U	--	NA	--	--	NA	--	--
Dibutyl Phthalate	µg/kg	1,400	--	NA	NA	--	--	--	--	--	NA	19 U	--	NA	--	--	NA	--	--
Diethyl Phthalate	µg/kg	200	--	NA	NA	--	--	--	--	--	NA	19 U	--	NA	--	--	NA	--	--
Dimethyl Phthalate	µg/kg	71	--	NA	NA	--	--	--	--	--	NA	19 U	--	NA	--	--	NA	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	--	NA	NA	--	--	--	--	--	NA	19 U	--	NA	--	--	NA	--	--
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	--	24 U	**14 J**	--	24 U	--	--	--	24 U	**12 J**	--	25 U	--	--	24 U	--	--
2-methylphenol (o-Cresol)	µg/kg	63	--	19 U	19 U	--	19 U	--	--	--	20 U	**15 J**	--	20 U	--	--	19 U	--	--
4-methylphenol (p-Cresol)	µg/kg	670	--	**310 J**	**550 J**	--	19 U	--	--	--	**280**	**330**	--	**200**	--	--	**370**	--	--
Pentachlorophenol	µg/kg	360	--	97 U	97 U	--	96 U	--	--	--	97 U	96 U	--	99 U	--	--	96 U	--	--
Phenol	µg/kg	420	--	**50 J**	**78 J**	--	8.6 J	--	--	--	**41 J**	**160**	--	**47 J**	--	--	**46 J**	--	--

Sample Location[1]			LY-05	LY-06	LY-06	LY-06	LY-06	LY-07	LY-07	LY-07	LY-08	LY-08	LY-08	LY-09	LY-09	LY-09	LY-10	LY-10	LY-11
Sample Identification			LY-SC-05_ 4-5	LY-SS-06_ 0-10	LY-SS-Dup-02 (LY-SS-06_0-10)	LY-SC-06_ 3-4	LY-SC-06_ 4-5	LY-SS-07_ 0-10	LY-SC-07_ 0-1	LY-SC-07_ 3-4	LY-SS-08_ 0-10	LY-SC-08_ 3-4	LY-SC-08_ 5-6	LY-SS-09_ 0-10	LY-SC-09_ 2-3	LY-SC-09_ 3-4	LY-SS-10_ 0-10	LY-SC-10_ 0-1	LY-SS-11_ 0-10
Sample Date			11/19/15	11/17/15	11/17/15	11/19/15	11/19/15	11/17/15	11/20/15	11/20/15	11/17/15	11/20/15	11/20/15	11/17/15	11/18/2015	11/18/2015	11/17/15	11/18/15	11/17/15
Sample Interval (dbm)			4 - 5	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	0 - 1	3 - 4	0 - 10 cm	3 - 4	5 - 6	0 - 10 cm	2 - 3	3 - 4	0 - 10 cm	0 - 1	0 - 10 cm
Sample Type		Proposed	Core	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Surface
Stratigraphic Unit		Sediment	Native	Recent	Recent	Recent	Native	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	--	**3.49**	**2.37**	--	--	--	--	--	**5.91**	NA	--	**4.41**	--	--	**1.79**	--	--
Hexachlorobutadiene	mg/kg OC	3.9	--	0.27 U	0.21 U	--	--	--	--	--	0.26 U	NA	--	0.33 U	--	--	0.26 U	--	--
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	--	0.27 U	0.21 U	--	--	--	--	--	0.26 U	NA	--	0.33 U	--	--	0.26 U	--	--
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	--	NA	NA	--	--	--	--	--	NA	**370**	--	NA	--	--	NA	--	--
Hexachlorobutadiene	µg/kg	11	--	NA	NA	--	--	--	--	--	NA	4.8 U	--	NA	--	--	NA	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	--	NA	NA	--	--	--	--	--	NA	4.8 U	--	NA	--	--	NA	--	--
Benzoic Acid	µg/kg	650	--	**130 J**	**78 J**	--	--	--	--	--	**92 J**	**360**	--	**96 J**	--	--	**110 J**	--	--
Benzyl Alcohol	µg/kg	57	--	19 U	19 U	--	--	--	--	--	20 U	19 U	--	20 U	--	--	19 U	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	mg/kg OC	12	--	**0.61 J**	**0.16 J**	--	**0.009 J**	**0.06 J**	--	--	**0.06 J**	--	--	--	--	--	**0.05**	--	**0.04**
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	µg/kg	130	--	NA	NA	--	NA	NA	--	--	NA	--	--	--	--	--	NA	--	NA
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			LY-11	LY-13	LY-14	LY-14	LY-14	LY-15	LY-15	LY-16	LY-16	LY-17	LY-17	LY-18	LY-18	LY-19	LY-19	LY-19	LY-20
Sample Identification			LY-SC-11_ 0-1	LY-SS-13_ 0-10	LY-SS-14_ 0-10	LY-SC-14_ 0-1	LY-SC-14_ 1-2	LY-SS-15_ 0-10	LY-SC-15_ 0-1	LY-SS-16_ 0-10	LY-SC-16_ 1-2	LY-SS-17_ 0-10	LY-SC-17_ 1-2	LY-SS-18_ 0-10	LY-SC-18_ 0-1	LY-SS-19_ 0-10	LY-SC-19_ 1-2	LY-SC-19_ 2-3	LY-SS-20_ 0-10
Sample Date			11/19/15	11/17/15	08/30/21	08/31/21	08/31/21	08/30/21	09/02/21	08/30/21	09/02/21	08/31/21	09/01/21	08/30/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21
Sample Interval (dbm)			0 - 1	0 - 10 cm	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm
Sample Type		Proposed	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Core	Surface
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	10	<5	Absent	Absent	Absent	Absent	10	Absent	10	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	5
Conventionals																			
Total Organic Carbon (TOC)	%	NE	1.25	1.29	1.11	1.55	0.10	0.84	0.49	1.35	1.00	0.49	0.09	--	--	1.73	1.44 J	1.07	2.23
Total Volatile Solids (TVS)	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Solids (TS)	%	NE	53.2	59.1	64.3	77.3	79.0	62.3	64.5	68.9	71.6	70.3	84.9	--	--	47.1	61.4	67.1	51.3
Total Ammonia	mg-N/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																			
Arsenic	mg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	450	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg OC	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg OC	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg OC	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg OC	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg OC	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg OC	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/kg	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	1,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]			LY-11	LY-13	LY-14	LY-14	LY-14	LY-15	LY-15	LY-16	LY-16	LY-17	LY-17	LY-18	LY-18	LY-19	LY-19	LY-19	LY-20
Sample Identification			LY-SC-11_ 0-1	LY-SS-13_ 0-10	LY-SS-14_ 0-10	LY-SC-14_ 0-1	LY-SC-14_ 1-2	LY-SS-15_ 0-10	LY-SC-15_ 0-1	LY-SS-16_ 0-10	LY-SC-16_ 1-2	LY-SS-17_ 0-10	LY-SC-17_ 1-2	LY-SS-18_ 0-10	LY-SC-18_ 0-1	LY-SS-19_ 0-10	LY-SC-19_ 1-2	LY-SC-19_ 2-3	LY-SS-20_ 0-10
Sample Date			11/19/15	11/17/15	08/30/21	08/31/21	08/31/21	08/30/21	09/02/21	08/30/21	09/02/21	08/31/21	09/01/21	08/30/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21
Sample Interval (dbm)			0 - 1	0 - 10 cm	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm
Sample Type	Proposed		Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Core	Surface
Stratigraphic Unit	Sediment		Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone	Cleanup Level[2]		Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg OC	110	**13.6**	**5.81**	0.9	**2.53**	--	*3.83*	*5.1*	*0.79*	**1.27**	2.59	3.73 J	--	--	*2.5*	**1.2**	--	*11.79*
Benzo(a)pyrene	mg/kg OC	99	**13.6**	**10.08**	0.91	**2.28**	--	*3*	*5.39*	*1.17*	**1.73**	3.53	3.44 J	--	--	*2.1*	**1.85**	--	*10.85*
Benzofluoranthenes[6] (Total)	mg/kg OC	230	**32.8**	**25.58**	1.33	**5.17**	--	*5.7*	*8.12*	*1.99*	**2.56**	5.21	3.57 J	--	--	*4.72*	**3.1**	--	*36.77*
Benzo(g,h,i)perylene	mg/kg OC	31	--	--	0.81	**1.17**	--	*1.99*	*4.16*	*0.88*	**1.26**	2.57	1.3 J	--	--	*1.66*	**1.38**	--	*6.55 J*
Chrysene	mg/kg OC	110	**26.4**	**10.08**	1.15	**5.52**	--	*5.32*	*7.63*	*1.31*	**2.08**	4.24	5.14 J	--	--	*5.05*	**2.15**	--	*40*
Dibenzo(a,h)anthracene	mg/kg OC	12	**1.84**	**1.55**	0.35 J	**0.46**	--	*0.67*	*1.62*	*0.32 J*	**0.41 J**	0.84 J	5.54 U	--	--	*0.54*	**0.36**	--	*1.5 J*
Fluoranthene	mg/kg OC	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	**5.6**	**4.81**	0.56	**0.98**	--	*1.73*	*3.71*	*0.67*	**1.16**	2.37	1.24 J	--	--	*1.38*	**1.04**	--	*6.5 J*
Pyrene	mg/kg OC	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/kg	1,300	NA	NA	**10**	NA	--	*NA*	*25*	*NA*	NA	**12.7**	**3.36 J**	**2.29 J**	4.97 U	*NA*	NA	--	*NA*
Benzo(a)pyrene	µg/kg	1,600	NA	NA	**10.1**	NA	--	*NA*	*26.4*	*NA*	NA	**17.3**	**3.1 J**	**2.96 J**	4.97 U	*NA*	NA	--	*NA*
Benzofluoranthenes[6] (Total)	µg/kg	3,200	NA	NA	**14.76**	NA	--	*NA*	*39.8*	*NA*	NA	**25.55**	**3.21 J**	**3.88 J**	4.97 U	*NA*	NA	--	*NA*
Benzo(g,h,i)perylene	µg/kg	670	--	--	**8.98**	NA	--	*NA*	*20.4*	*NA*	NA	**12.6**	**1.17 J**	**2.65 J**	4.97 U	*NA*	NA	--	*NA*
Chrysene	µg/kg	1,400	NA	NA	**12.8**	NA	--	*NA*	*37.4*	*NA*	NA	**20.8**	**4.63 J**	**4.02 J**	4.97 U	*NA*	NA	--	*NA*
Dibenzo(a,h)anthracene	µg/kg	230	NA	NA	**3.84 J**	NA	--	*NA*	*7.93*	*NA*	NA	**4.14 J**	4.99 U	5 U	4.97 U	*NA*	NA	--	*NA*
Fluoranthene	µg/kg	1,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	µg/kg	600	NA	NA	**6.26**	NA	--	*NA*	*18.2*	*NA*	NA	**11.6**	**1.12 J**	**2.09 J**	4.97 U	*NA*	NA	--	*NA*
Pyrene	µg/kg	2,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg OC	0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	mg/kg OC	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	mg/kg OC	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]			LY-11	LY-13	LY-14	LY-14	LY-14	LY-15	LY-15	LY-16	LY-16	LY-17	LY-17	LY-18	LY-18	LY-19	LY-19	LY-19	LY-20
Sample Identification			LY-SC-11_ 0-1	LY-SS-13_ 0-10	LY-SS-14_ 0-10	LY-SC-14_ 0-1	LY-SC-14_ 1-2	LY-SS-15_ 0-10	LY-SC-15_ 0-1	LY-SS-16_ 0-10	LY-SC-16_ 1-2	LY-SS-17_ 0-10	LY-SC-17_ 1-2	LY-SS-18_ 0-10	LY-SC-18_ 0-1	LY-SS-19_ 0-10	LY-SC-19_ 1-2	LY-SC-19_ 2-3	LY-SS-20_ 0-10
Sample Date			11/19/15	11/17/15	08/30/21	08/31/21	08/31/21	08/30/21	09/02/21	08/30/21	09/02/21	08/31/21	09/01/21	08/30/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21
Sample Interval (dbm)			0 - 1	0 - 10 cm	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 1 ft	0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm
Sample Type		Proposed	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Core	Core	Surface
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg OC	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	650	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	--	--	**0.08 J**	**0.64 J**	NA	*14.4*	*NA*	*11.9*	**0.2 J**	NA	NA	--	--	*0.53 J*	**2.64 J**	**0.11 J**	*0.43 J*
Total PCBs Congeners	mg/kg OC	12	--	**1.01 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	--	--	NA	NA	1.6 U	*NA*	*13.9*	*NA*	NA	1.6 U	1.6 U	--	--	*NA*	NA	NA	*NA*
Total PCBs Congeners	µg/kg	130	--	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			LY-20	LY-20	LY-21	LY-21	LY-22	LY-22	LY-22	LY-23	LY-23	LY-23	LY-24	LY-24	LY-24	LY-25	LY-25	LY-25	LY-26
Sample Identification			LY-SC-20_ 1-2	LY-SC-20_ 2-3	LY-SS-21_ 0-10	LY-SC-21_ 1-2	LY-SS-22_ 0-10	LY-SS-22_Dup-1 (LY-SS-22_0-10)	LY-SC-22_ 1-2	LY-SS-23_ 0-10	LY-SC-23_ 2-3	LY-SC-23_ 5-6	LY-SS-24_ 0-10	LY-SC-24_ 0-1	LY-SC-24_ 1-2	LY-SS-25_ 0-10	LY-SC-25_ 1-2	LY-SC-25_ 3-4	LY-SS-26_ 0-10
Sample Date			08/31/21	08/31/21	08/30/21	09/02/21	08/31/21	08/31/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21	09/01/21	09/01/21	08/30/21	09/02/21	09/02/21	08/31/21
Sample Interval (dbm)			1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 10 cm	1 - 2 ft	0 - 10 cm	2 - 3 ft	5 - 6 ft	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	1 - 2 ft	3 - 4 ft	0 - 10 cm
Sample Type		Proposed	Core	Core	Surface	Core	Surface	Surface	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	10	Absent	Absent	5	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	--	**1.20**	*1.92*	**3.09**	*1.68 J*	*1.36*	**1.24**	--	**2.33**	--	--	*1.62*	--	*1.60*	**1.78**	--	*0.61 J*
Total Volatile Solids (TVS)	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Solids (TS)	%	NE	--	**64.2**	*56.4*	**50.1**	*69.6*	*70.3*	**58.8**	--	**53.7**	--	--	*55.1*	--	*47.1*	**55.5**	--	*63.4*
Total Ammonia	mg-N/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																			
Arsenic	mg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	450	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	mg/kg OC	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	mg/kg OC	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	mg/kg OC	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	mg/kg OC	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/kg OC	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	mg/kg OC	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/kg	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	1,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]			LY-20	LY-20	LY-21	LY-21	LY-22	LY-22	LY-22	LY-23	LY-23	LY-23	LY-24	LY-24	LY-24	LY-25	LY-25	LY-25	LY-26
Sample Identification			LY-SC-20_ 1-2	LY-SC-20_ 2-3	LY-SS-21_ 0-10	LY-SC-21_ 1-2	LY-SS-22_ 0-10	LY-SS-22_Dup-1 (LY-SS-22_0-10)	LY-SC-22_ 1-2	LY-SS-23_ 0-10	LY-SC-23_ 2-3	LY-SC-23_ 5-6	LY-SS-24_ 0-10	LY-SC-24_ 0-1	LY-SC-24_ 1-2	LY-SS-25_ 0-10	LY-SC-25_ 1-2	LY-SC-25_ 3-4	LY-SS-26_ 0-10
Sample Date			08/31/21	08/31/21	08/30/21	09/02/21	08/31/21	08/31/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21	09/01/21	09/01/21	08/30/21	09/02/21	09/02/21	08/31/21
Sample Interval (dbm)			1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 10 cm	1 - 2 ft	0 - 10 cm	2 - 3 ft	5 - 6 ft	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	1 - 2 ft	3 - 4 ft	0 - 10 cm
Sample Type	Proposed		Core	Core	Surface	Core	Surface	Surface	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface
Stratigraphic Unit	Sediment		Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone	Cleanup Level[2]		Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	mg/kg OC	110	--	**8.33**	*12.4*	**5.6**	*4.5 J*	*3.68*	**4.74**	--	**7.77**	--	--	--	--	*1.88*	**7.02**	--	*74.59 J*
Benzo(a)pyrene	mg/kg OC	99	--	**6.06**	*9.95*	**4.08**	*3.85 J*	*6.79*	**6.36**	--	**6.18**	--	--	--	--	*2.04*	**8.09**	--	*54.43 J*
Benzofluoranthenes[6] (Total)	mg/kg OC	230	--	**9.81**	*36.51*	**7.4**	*10.57 J*	*15.1*	**12.37**	--	**12.36**	--	--	--	--	*5.38*	**18.15**	--	*89.84 J*
Benzo(g,h,i)perylene	mg/kg OC	31	--	**3.25**	*5.57*	**2.82**	*2.4 J*	*3.64*	**3.44**	--	**3.53**	--	--	--	--	*1.28*	**5.62**	--	*23.61 J*
Chrysene	mg/kg OC	110	--	**8.42**	*50.31*	**9.58**	*13.04 J*	*9.85*	**8.47**	--	**16.09**	--	--	--	--	*4.23*	**14.33**	--	*109.02 J*
Dibenzo(a,h)anthracene	mg/kg OC	12	--	**2.25**	*2.21 J*	**0.87**	*0.72*	*1.17*	**1.23**	--	**1.25**	--	--	--	--	*0.38*	**1.96**	--	*7.8 J*
Fluoranthene	mg/kg OC	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	--	**3.11**	*6.04*	**2.69**	*2.29 J*	*3.57*	**3.6**	--	**3.56**	--	--	--	--	*1.19*	**5.62**	--	*25.41 J*
Pyrene	mg/kg OC	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/kg	1,300	**229**	NA	*NA*	NA	*NA*	*NA*	NA	**89.2**	NA	**198**	*11.8*	--	**68.1**	*NA*	NA	**34.6**	*NA*
Benzo(a)pyrene	µg/kg	1,600	**154**	NA	*NA*	NA	*NA*	*NA*	NA	**56.1**	NA	**172**	*14*	--	**114**	*NA*	NA	**46.6**	*NA*
Benzofluoranthenes[6] (Total)	µg/kg	3,200	**324**	NA	*NA*	NA	*NA*	*NA*	NA	**110.7**	NA	**247.5**	*23.43*	--	**223**	*NA*	NA	**71.9**	*NA*
Benzo(g,h,i)perylene	µg/kg	670	**86.9**	NA	*NA*	NA	*NA*	*NA*	NA	**34.6**	NA	**103**	*12.2*	--	**64.6**	*NA*	NA	**35.5**	*NA*
Chrysene	µg/kg	1,400	**445**	NA	*NA*	NA	*NA*	*NA*	NA	**235**	NA	**258**	*18.5*	--	**119**	*NA*	NA	**47.8**	*NA*
Dibenzo(a,h)anthracene	µg/kg	230	**27.7**	NA	*NA*	NA	*NA*	*NA*	NA	**11.7**	NA	**24**	*3.4 J*	--	**21.4**	*NA*	NA	**6.1**	*NA*
Fluoranthene	µg/kg	1,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	µg/kg	600	**81.5**	NA	*NA*	NA	*NA*	*NA*	NA	**31.8**	NA	**81.7**	*9.27*	--	**61.3**	*NA*	NA	**23.5**	*NA*
Pyrene	µg/kg	2,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg OC	0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	mg/kg OC	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	mg/kg OC	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]			LY-20	LY-20	LY-21	LY-21	LY-22	LY-22	LY-22	LY-23	LY-23	LY-23	LY-24	LY-24	LY-24	LY-25	LY-25	LY-25	LY-26
Sample Identification			LY-SC-20_ 1-2	LY-SC-20_ 2-3	LY-SS-21_ 0-10	LY-SC-21_ 1-2	LY-SS-22_ 0-10	LY-SS-22_Dup-1 (LY-SS-22_0-10)	LY-SC-22_ 1-2	LY-SS-23_ 0-10	LY-SC-23_ 2-3	LY-SC-23_ 5-6	LY-SS-24_ 0-10	LY-SC-24_ 0-1	LY-SC-24_ 1-2	LY-SS-25_ 0-10	LY-SC-25_ 1-2	LY-SC-25_ 3-4	LY-SS-26_ 0-10
Sample Date			08/31/21	08/31/21	08/30/21	09/02/21	08/31/21	08/31/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21	09/01/21	09/01/21	08/30/21	09/02/21	09/02/21	08/31/21
Sample Interval (dbm)			1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 10 cm	1 - 2 ft	0 - 10 cm	2 - 3 ft	5 - 6 ft	0 - 10 cm	0 - 1 ft	1 - 2 ft	0 - 10 cm	1 - 2 ft	3 - 4 ft	0 - 10 cm
Sample Type	Proposed		Core	Core	Surface	Core	Surface	Surface	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface
Stratigraphic Unit	Sediment		Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone	Cleanup Level[2]		Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	mg/kg OC	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	650	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	--	**0.31 J**	*0.42 J*	**0.76 J**	*0.58 J*	*0.68 J*	**0.85 J**	**--**	**0.54 J**	**--**	--	*1.58 J*	--	*0.53*	**1.74**	--	*1.44 J*
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	--	NA	*NA*	NA	*NA*	*NA*	NA	--	NA	--	--	*NA*	--	*NA*	NA	--	*NA*
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			LY-26	LY-27	LY-27	LY-28	LY-28	LY-28	LY-28	LY-29	LY-29	LY-30	LY-30	LY-31	LY-31	LY-32	COA_01	COA_02	COA_03
Sample Identification			LY-SS-26_Dup-1 (LY-SS-26_0-10)	LY-SS-27_ 0-10	LY-SC-27_ 1-2	LY-28_ 0-10	Dup (LY-28_0-10)	LY-28_ 1-2	LY-28_ 2-3	LY-29_ 0-10	LY-29_ 1-2	LY-30_ 0-10	LY-30_ 1-2	LY-31_ 0-10	LY-31_ 1-2	LY-32_ 0-10	COA_01_G_ 20201120	COA_02_G_ 20201119	COA_03_G_ 20201118
Sample Date			08/31/21	08/31/21	09/01/21	01/26/23	01/26/23	01/27/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	11/20/20	11/19/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	1 -2 ft	2 - 3 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type		Proposed	Surface	Surface	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Surface	Surface	Surface
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Recent	Recent	Native	Recent	Native	Recent	Native	Recent	Native	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	--
Visual Wood Content[3]	%	10	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	1.08	1.15	--	--	--	--	--	--	--	--	--	--	--	--	1.08	1.36	1.57
Total Volatile Solids (TVS)	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.60	4.92	5.87
Total Solids (TS)	%	NE	60.8	62.3	--	--	--	--	--	--	--	--	--	--	--	--	82.2	54.1	44.9
Total Ammonia	mg-N/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9	27.9	41.5
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6	984	2,260
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Sand	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Silt	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	%	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																			
Arsenic	mg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.15	6.44	6.17
Cadmium	mg/kg	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	0.85	0.58
Chromium	mg/kg	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27.5	32.3	34.3
Copper	mg/kg	390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28.4	36.3	31.7
Lead	mg/kg	450	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13.6	11.4	9.44
Mercury	mg/kg	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0149 J	0.111	0.0835
Silver	mg/kg	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05 J	0.17 J	0.11
Zinc	mg/kg	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	122	82.8	77.8
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.65 J	22.6 J	12.83 J
2-Methylnaphthalene	mg/kg OC	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.84 J	1.31 J	1.54
Acenaphthene	mg/kg OC	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	0.79 J	1.59
Acenaphthylene	mg/kg OC	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	2.56	0.92 J
Anthracene	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	4.58	1.9
Fluorene	mg/kg OC	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	1.69	1.99
Naphthalene	mg/kg OC	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	2.25	1.52
Phenanthrene	mg/kg OC	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.65 J	10.74	4.91
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
2-Methylnaphthalene	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Acenaphthene	µg/kg	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Acenaphthylene	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Anthracene	µg/kg	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Fluorene	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Naphthalene	µg/kg	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Phenanthrene	µg/kg	1,500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA

Sample Location[1]			LY-26	LY-27	LY-27	LY-28	LY-28	LY-28	LY-28	LY-29	LY-29	LY-30	LY-30	LY-31	LY-31	LY-32	COA_01	COA_02	COA_03
Sample Identification			LY-SS-26_Dup-1 (LY-SS-26_0-10)	LY-SS-27_ 0-10	LY-SC-27_ 1-2	LY-28_ 0-10	Dup (LY-28_0-10)	LY-28_ 1-2	LY-28_ 2-3	LY-29_ 0-10	LY-29_ 1-2	LY-30_ 0-10	LY-30_ 1-2	LY-31_ 0-10	LY-31_ 1-2	LY-32_ 0-10	COA_01_G_ 20201120	COA_02_G_ 20201119	COA_03_G_ 20201118
Sample Date			08/31/21	08/31/21	09/01/21	01/26/23	01/26/23	01/27/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	11/20/20	11/19/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	1 -2 ft	2 - 3 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	Proposed		Surface	Surface	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Surface	Surface	Surface
Stratigraphic Unit	Sediment		Recent	Recent	Recent	Recent	Recent	Recent	Native	Recent	Native	Recent	Native	Recent	Native	Recent	Recent	Recent	Recent
Tidal Zone	Cleanup Level[2]		Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)									--										
Sum of HPAHs[5]	mg/kg OC	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	***11.68***	***350.04***	***64.38 J***
Benzo(a)anthracene	mg/kg OC	110	***1.84 J***	***3.24***	--	--	--	--	--	--	--	--	--	--	--	--	***0.57 J***	***14.19***	***3.69***
Benzo(a)pyrene	mg/kg OC	99	***2.23 J***	***3.5***	--	--	--	--	--	--	--	--	--	--	--	--	*1.15 J*	***12.35***	***4.48***
Benzofluoranthenes[6] (Total)	mg/kg OC	230	***4.43 J***	***6.5***	--	--	--	--	--	--	--	--	--	--	--	--	*2.63 J*	***57.94***	***13.31***
Benzo(g,h,i)perylene	mg/kg OC	31	***1.78 J***	***3.3***	--	--	--	--	--	--	--	--	--	--	--	--	*1.39 J*	***5.96***	***2.62***
Chrysene	mg/kg OC	110	***3.25 J***	***4.58***	--	--	--	--	--	--	--	--	--	--	--	--	*2.45*	***64.19***	***10.19***
Dibenzo(a,h)anthracene	mg/kg OC	12	***0.79 J***	***0.92***	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	***2.49***	***1.14 J***
Fluoranthene	mg/kg OC	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	***1.05 J***	***108.82***	***11.59***
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	***1.69 J***	***2.03***	--	--	--	--	--	--	--	--	--	--	--	--	***1.84 U***	***6.88***	***2.45***
Pyrene	mg/kg OC	1,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	***2.44***	***77.21***	***14.9***
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Benzo(a)anthracene	µg/kg	1,300	*NA*	*NA*	--	**11.2 J**	**28.7 J**	**136**	**3.80 J**	--	--	**9.31**	**1.57 J**	**9.01**	4.98 U	--	*NA*	*NA*	*NA*
Benzo(a)pyrene	µg/kg	1,600	*NA*	*NA*	--	**11.4 J**	**29.2 J**	**204**	**7.37**	--	--	**11.8**	**3.41 J**	**6.83**	4.98 U	--	*NA*	*NA*	*NA*
Benzofluoranthenes[6] (Total)	µg/kg	3,200	*NA*	*NA*	--	**13.45 J**	**79.5 J**	**333**	**14.43 J**	--	--	**10.46 J**	**7.37 J**	**7.2 J**	4.98 U	--	*NA*	*NA*	*NA*
Benzo(g,h,i)perylene	µg/kg	670	*NA*	*NA*	--	**9.15 J**	**13.9**	**118**	**3.11 J**	--	--	**9.28**	**1.62 J**	**4.04 J**	4.98 U	--	*NA*	*NA*	*NA*
Chrysene	µg/kg	1,400	*NA*	*NA*	--	**11.9 J**	**62.7 J**	**212**	**6.13**	--	--	**25**	**2.73 J**	**11.4**	4.98 U	--	*NA*	*NA*	*NA*
Dibenzo(a,h)anthracene	µg/kg	230	*NA*	*NA*	--	**2.83 J**	**4.06 J**	**32.2**	4.98 U	--	--	**2.9**	4.95	**1.09 J**	4.98 U	--	*NA*	*NA*	*NA*
Fluoranthene	µg/kg	1,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Indeno(1,2,3-c,d)pyrene	µg/kg	600	*NA*	*NA*	--	**5.35**	**13.1**	**106**	**2.43 J**	--	--	**3.77**	**1.31 J**	**2.98 J**	4.98 U	--	*NA*	*NA*	*NA*
Pyrene	µg/kg	2,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*0.46 U*	*0.37 U*	*0.32 U*
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*0.46 U*	*0.37 U*	*0.32 U*
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*0.46 U*	*0.37 U*	*0.32 U*
Hexachlorobenzene	mg/kg OC	0.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	*1.46 U*	*1.27 U*
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Hexachlorobenzene	µg/kg	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*4.59 U*	***3.59 J***	***2.22 J***
Butyl benzyl Phthalate	mg/kg OC	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	***0.72 J***	*1.27 U*
Dibutyl Phthalate	mg/kg OC	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	***1.39 J***	***1.17 J***	***1.25 J***
Diethyl Phthalate	mg/kg OC	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	***2.01***	*1.27 U*
Dimethyl Phthalate	mg/kg OC	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	***1.93***	*1.27 U*
Di-N-Octyl Phthalate	mg/kg OC	58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*1.84 U*	*1.46 U*	*1.27 U*
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Butyl benzyl Phthalate	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Dibutyl Phthalate	µg/kg	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Diethyl Phthalate	µg/kg	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Dimethyl Phthalate	µg/kg	71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Di-N-Octyl Phthalate	µg/kg	6,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*NA*	*NA*	*NA*
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*19.9 U*	***3 J***	***2.2 J***
2-methylphenol (o-Cresol)	µg/kg	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*19.9 U*	*19.9 U*	*19.9 U*
4-methylphenol (p-Cresol)	µg/kg	670	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*19.9 U*	***51.3***	***33.5***
Pentachlorophenol	µg/kg	360	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*99.3 U*	*99.6 U*	*99.7 U*
Phenol	µg/kg	420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*19.9 U*	***12.7 J***	***11.9 J***

Sample Location[1]			LY-26	LY-27	LY-27	LY-28	LY-28	LY-28	LY-28	LY-29	LY-29	LY-30	LY-30	LY-31	LY-31	LY-32	COA_01	COA_02	COA_03
Sample Identification			LY-SS-26_Dup-1 (LY-SS-26_0-10)	LY-SS-27_ 0-10	LY-SC-27_ 1-2	LY-28_ 0-10	Dup (LY-28_0-10)	LY-28_ 1-2	LY-28_ 2-3	LY-29_ 0-10	LY-29_ 1-2	LY-30_ 0-10	LY-30_ 1-2	LY-31_ 0-10	LY-31_ 1-2	LY-32_ 0-10	COA_01_G_ 20201120	COA_02_G_ 20201119	COA_03_G_ 20201118
Sample Date			08/31/21	08/31/21	09/01/21	01/26/23	01/26/23	01/27/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23	01/26/23	11/20/20	11/19/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	1 -2 ft	2 - 3 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type		Proposed	Surface	Surface	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core	Surface	Core	Surface	Surface	Surface	Surface
Stratigraphic Unit		Sediment	Recent	Recent	Recent	Recent	Recent	Recent	Native	Recent	Native	Recent	Native	Recent	Native	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	**0.88 J**	**1.76**
Hexachlorobutadiene	mg/kg OC	3.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46 U	0.37 U	0.32 U
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.84 U	1.46 U	1.27 U
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Hexachlorobutadiene	µg/kg	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Benzoic Acid	µg/kg	650	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**73.4 J**	199 U	199 U
Benzyl Alcohol	µg/kg	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.9 U	19.9 U	19.9 U
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	**1.13 J**	**4.24**	--	NA	NA	NA	NA	NA	NA	NA	--	NA	NA	NA	**1.06 J**	**1.09 J**	**0.48 J**
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	NA	NA	--	1.6 U	1.6 U	**24.4**	1.16 U	**8.5**	1.16 U	1.16 U	--	1.6 U	1.6 U	1.6 U	NA	NA	NA
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			COA_04	COA_05	COA_05	COA_06	COA_06	COA_07	COA_08	COA-SS-1	COA-SS-1	COA-SS-1	COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-3	COA-SS-3	COA-SS-3
Sample Identification			COA_04_G_20201118	COA_05_G_20201119	COA-05-D_G_20201119	COA_06_G_20201120	COA-06-D_G_20201120	COA_07_G_20201118	COA_08_G_20201119	COA-SS-1-1-3-20201116	COA-SS-1-3-5-20201116	**COA-SS-1-6.5-8.5-20201116**	COA-SS-2-1.5-3.5-20201118	COA-SS-2-3.5-5.5-20201118	COA-SS-2-5.5-7.5-20201118	**COA-SS-2-7.5-9.5-20201118**	COA-SS-3-1-3-20201118	COA-SS-3-3-5-20201118	COA-SS-3-5-7-20201118
Sample Date			11/18/20	11/19/20	11/19/20	11/20/20	11/20/20	11/18/20	11/19/20	11/16/20	11/16/20	**11/16/20**	11/18/20	11/18/20	11/18/20	**11/18/20**	11/18/20	11/18/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 - 3 ft	3 -5 ft	**6.5 - 8.5 ft**	1.5 - 3.5 ft	3.5 - 5.5 ft	5.5 - 7.5 ft	**7.5 - 9.5 ft**	1 - 3 ft	3 -5 ft	5 -7 ft
Sample Type		**Proposed**	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core	Core	**Core**	Core	Core	Core	**Core**	Core	Core	Core
Stratigraphic Unit		**Sediment**	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	**Native**	Recent	Native	Native	**Native**	Recent	Native	Native
Tidal Zone		**Cleanup Level[2]**	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	10	Absent	Absent	Absent	Absent	Absent	Absent	<5	Absent	Absent	Absent	<5	Absent	Absent	Absent	Absent	Absent	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	1.38	1.56	1.63	0.97	1.09	0.93 J	0.13	0.35	0.14	**0.11**	0.20	0.21	0.09	**0.11**	1.12 J	0.07	0.07
Total Volatile Solids (TVS)	%	NE	5.39	5.04	5.26	3.41	3.44	3.48 J	1.05	2.50	1.29	**1.35**	2.34	1.68	1.97	**1.41**	1.61	1.11	1.07
Total Solids (TS)	%	NE	48.2	57.2	56.5	69.2	69.3	68.82 J	77.9	75.7	86.6	**87.0**	77.2	81.9	81.1	**86.3**	79.6	87.4	90.4
Total Ammonia	mg-N/kg	NE	34.8	27.7	28.0	11.8	12.8	8.76 J	1.8	8.8	2.3	**2.5**	6.7	3.4	3.0	**1.6**	5.0	3.6	3.4
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	1,690	1,380	1,270	257	277	114	2.9	158	1.19 U	**1.4**	20.9	1.17 U	1.26 U	1.14 U	1.6	1.14 U	1.18 U
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	--	2.03	--	--	--	--	--	20.1	16	**29**	5.6	7	2	**6.3**	--	10.6	21.2
Very Coarse Sand	%	NE	--	0.96	--	--	--	--	--	2.3	3.7	**4.6**	2.4	3	1.4	**2.6**	--	5.1	4.3
Coarse Sand	%	NE	--	1.96	--	--	--	--	--	3.1	4.5	**6.1**	2.7	4.3	2	**3.2**	--	6.7	4.6
Medium Sand	%	NE	--	3.9	--	--	--	--	--	5.6	6.2	**8.5**	4.7	5.7	2.7	**5.3**	--	10	7
Fine Sand	%	NE	--	20.9	--	--	--	--	--	7.2	11	**8.3**	6.7	8.9	6	**6.6**	--	9.9	8.3
Very Fine Sand	%	NE	--	25.9	--	--	--	--	--	6.8	8.5	**7**	6.9	6.2	4.5	**6.7**	--	8.7	8.2
Coarse Silt	%	NE	--	11.76	--	--	--	--	--	9.7	9.5	**6.7**	10.4	10	5.3	**8.4**	--	11.2	9.6
Medium Silt	%	NE	--	10.73	--	--	--	--	--	10.5	10.1	**6.6**	11.8	9.4	14.5	**14.9**	--	10	10.3
Fine Silt	%	NE	--	4.96	--	--	--	--	--	7.6	8	**6.7**	10	10.1	13.3	**10.7**	--	8.7	9.3
Very Fine Silt	%	NE	--	3.1	--	--	--	--	--	6.8	6.9	**5.3**	8.4	8.6	12.2	**9.8**	--	6.7	7.1
Clay	%	NE	--	13.8	--	--	--	--	--	20.2	15.7	**11.3**	30.5	26.8	36.1	**25.5**	--	12.5	10.2
Metals																			
Arsenic	mg/kg	57	6.26	7.5	7.24	6.56	5.65	5.98	3.2	4.38	4.02	**5.11**	3.96	6.05	6.37	**4.9**	3.78	5.02	1.14
Cadmium	mg/kg	5.1	0.57	0.54	0.55	0.39	0.39	0.41	0.14	0.28	0.12	**0.12**	0.11 J	0.05 J	0.08 J	**0.13**	0.25	0.09 J	0.11 U
Chromium	mg/kg	260	34.2	36.9	30.8	25.4	30.3	55.6	32	62	124	**99.7**	23.3	40.2	38.2	**73.5**	23.6	81.5	39.3
Copper	mg/kg	390	25.4	29.3	22.2	12.3	6.63	23.8	12.5	34.3	23.7	**23.9**	19.5	41.2	41.3	**37.4**	8.34	21.3	9.48
Lead	mg/kg	450	7.82	9.73	7.21	5.16	3.82	2.02	3.71	5.01	2.78	**3.02**	2.99	4.73	4.87	**3.95**	2.41	2.42	0.87
Mercury	mg/kg	0.41	0.0716	0.0531	0.46	0.0534	0.04	0.046	0.0181 J	0.157	0.0347	**0.0321**	0.0574	0.0377	0.0364	**0.0317**	0.019 J	0.0319	0.0307
Silver	mg/kg	6.1	0.11 J	0.08 J	0.08 J	0.06 J	0.05 J	0.05 J	0.03 J	0.1 J	0.07 J	**0.06 J**	0.06 J	0.05 J	0.07 J	**0.07 J**	0.05 J	0.06 J	0.21 U
Zinc	mg/kg	410	76.2	62	63.9	38.5	39.9	38.4	38.6	59.9	45.4	**47.4**	34.9	68.1	69.6	**60.1**	27.6	38.6	20.7
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	13.27 J	31.67 J	17.6 J	38.65 J	29.49 J	25.66 J	NA	NA	NA	NA	NA	NA	NA	NA	8.49 J	NA	NA
2-Methylnaphthalene	mg/kg OC	38	1.57	1.36	1.48	1.41 J	1.7 J	1.53 J	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Acenaphthene	mg/kg OC	16	0.78 J	1.15 J	1.41	1.76 J	0.83 J	1.49 J	NA	NA	NA	NA	NA	NA	NA	NA	0.5 J	NA	NA
Acenaphthylene	mg/kg OC	66	0.92 J	3.08	0.98 J	1.41 J	2.04	1.6 J	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Anthracene	mg/kg OC	220	2.2	7.69	2.85	5.34	6.21	4.15	NA	NA	NA	NA	NA	NA	NA	NA	1.41 J	NA	NA
Fluorene	mg/kg OC	23	1.6	2.65	1.96	3.02	1.99	1.86 J	NA	NA	NA	NA	NA	NA	NA	NA	0.68 J	NA	NA
Naphthalene	mg/kg OC	99	2.73	4.22	4.92	10.52	6.22	7	NA	NA	NA	NA	NA	NA	NA	NA	3.22	NA	NA
Phenanthrene	mg/kg OC	100	5.04	12.88	5.48	16.6	12.2	9.55	NA	NA	NA	NA	NA	NA	NA	NA	2.68	NA	NA
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	NA	NA	NA	NA	NA	NA	7.7 J	65.7 J	6.2 J	**6 J**	18.7 J	4.7 J	4.8 J	19.9 U	NA	20 U	19.9 U
2-Methylnaphthalene	µg/kg	670	NA	NA	NA	NA	NA	NA	19.9 U	8.3 J	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Acenaphthene	µg/kg	500	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Acenaphthylene	µg/kg	1,300	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Anthracene	µg/kg	960	NA	NA	NA	NA	NA	NA	19.9 U	6.1 J	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Fluorene	µg/kg	540	NA	NA	NA	NA	NA	NA	19.9 U	5 J	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Naphthalene	µg/kg	2,100	NA	NA	NA	NA	NA	NA	7.7 J	34.5	19.9 U	19.9 U	6.4 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Phenanthrene	µg/kg	1,500	NA	NA	NA	NA	NA	NA	19.9 U	20.1	6.2 J	**6 J**	12.3 J	4.7 J	4.8 J	19.9 U	NA	20 U	19.9 U

Sample Location[1]			COA_04	COA_05	COA_05	COA_06	COA_06	COA_07	COA_08	COA-SS-1	COA-SS-1	**COA-SS-1**	COA-SS-2	COA-SS-2	COA-SS-2	**COA-SS-2**	COA-SS-3	COA-SS-3	COA-SS-3
Sample Identification			COA_04_G_20201118	COA_05_G_20201119	COA_05-D_G_20201119	COA_06_G_20201120	COA_06-D_G_20201120	COA_07_G_20201118	COA_08_G_20201119	COA-SS-1-1-3-20201116	COA-SS-1-3-5-20201116	**COA-SS-1-6.5-8.5-20201116**	COA-SS-2-1.5-3.5-20201118	COA-SS-2-3.5-5.5-20201118	COA-SS-2-5.5-7.5-20201118	**COA-SS-2-7.5-9.5-20201118**	COA-SS-3-1-3-20201118	COA-SS-3-3-5-20201118	COA-SS-3-5-7-20201118
Sample Date			11/18/20	11/19/20	11/19/20	11/20/20	11/20/20	11/18/20	11/19/20	11/16/20	11/16/20	**11/16/20**	11/18/20	11/18/20	11/18/20	**11/18/20**	11/18/20	11/18/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 - 3 ft	3 -5 ft	**6.5 - 8.5 ft**	1.5 - 3.5 ft	3.5 - 5.5 ft	5.5 - 7.5 ft	**7.5 - 9.5 ft**	1 - 3 ft	3 -5 ft	5 -7 ft
Sample Type	**Proposed**		Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core	Core	**Core**	Core	Core	Core	**Core**	Core	Core	Core
Stratigraphic Unit	**Sediment**		Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	**Native**	Recent	Native	Native	**Native**	Recent	Native	Native
Tidal Zone	**Cleanup Level[2]**		Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	61.52 J	302.23	70.31 J	100.52 J	338.83	160.58	NA	NA	NA	NA	NA	NA	NA	NA	28.66 J	NA	NA
Benzo(a)anthracene	mg/kg OC	110	4.51	23.46	5.04	8.3	15.6	6.94	NA	NA	NA	NA	NA	NA	NA	NA	2.11	NA	NA
Benzo(a)pyrene	mg/kg OC	99	5.23	23.53	5.09	8.76	35.87	9.46	NA	NA	NA	NA	NA	NA	NA	NA	2.24	NA	NA
Benzofluoranthenes[6] (Total)	mg/kg OC	230	15.72	52.31	12.39	18.04	90.73	64.52	NA	NA	NA	NA	NA	NA	NA	NA	6.8	NA	NA
Benzo(g,h,i)perylene	mg/kg OC	31	2.85	10.58	2.9	3.39	14.86	8.45	NA	NA	NA	NA	NA	NA	NA	NA	1.21 J	NA	NA
Chrysene	mg/kg OC	110	10.36	41.79	8.96	9.9	70.73	25.38	NA	NA	NA	NA	NA	NA	NA	NA	5.84	NA	NA
Dibenzo(a,h)anthracene	mg/kg OC	12	1.32 J	4.86	1.2 J	1.41 J	7.08	3.63	NA	NA	NA	NA	NA	NA	NA	NA	0.56 J	NA	NA
Fluoranthene	mg/kg OC	160	7.25	67.95	13.37	19.48	41.28	13.23	NA	NA	NA	NA	NA	NA	NA	NA	3.75	NA	NA
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	2.84	11.73	2.69	3.81	16.51	9.19	NA	NA	NA	NA	NA	NA	NA	NA	1.06 J	NA	NA
Pyrene	mg/kg OC	1,000	11.45	66.03	18.65	27.42	46.15	19.78	NA	NA	NA	NA	NA	NA	NA	NA	5.09	NA	NA
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	NA	NA	NA	NA	NA	NA	13.4 J	266.7 J	8.2 J	9.3 J	171.9 J	39.7 U	39.7 U	6.6 J	NA	39.9 U	39.8 U
Benzo(a)anthracene	µg/kg	1,300	NA	NA	NA	NA	NA	NA	19.9 U	11.5 J	19.9 U	19.9 U	5.4 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Benzo(a)pyrene	µg/kg	1,600	NA	NA	NA	NA	NA	NA	19.9 U	16 J	19.9 U	19.9 U	9.7 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Benzofluoranthenes[6] (Total)	µg/kg	3,200	NA	NA	NA	NA	NA	NA	39.8 U	42	39.8 U	39.8 U	31.3 J	39.7 U	39.7 U	39.9 U	NA	39.9 U	39.8 U
Benzo(g,h,i)perylene	µg/kg	670	NA	NA	NA	NA	NA	NA	19.9 U	13.6 J	19.9 U	9.3 J	6.2 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Chrysene	µg/kg	1,400	NA	NA	NA	NA	NA	NA	19.9 U	23.3	19.9 U	19.9 U	10.8 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Dibenzo(a,h)anthracene	µg/kg	230	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Fluoranthene	µg/kg	1,700	NA	NA	NA	NA	NA	NA	4.6 J	34.2	19.9 U	19.9 U	14.8 J	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Indeno(1,2,3-c,d)pyrene	µg/kg	600	NA	NA	NA	NA	NA	NA	19.9 U	10.1 J	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Pyrene	µg/kg	2,600	NA	NA	NA	NA	NA	NA	8.8 J	116	8.2 J	19.9 U	93.7	19.9 U	19.9 U	6.6 J	NA	20 U	19.9 U
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	0.36 U	0.32 U	0.31 U	0.52 U	0.46 U	0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	0.36 U	0.32 U	0.31 U	0.52 U	0.46 U	0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	0.36 U	0.32 U	0.1 J	0.11 J	0.46 U	0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA	NA
Hexachlorobenzene	mg/kg OC	0.38	1.44 U	1.28 U	1.22 U	2.05 U	1.83 U	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	1.78 U	NA	NA
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	5 U	5 U
Hexachlorobenzene	µg/kg	22	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	NA	19.9 U	19.9 U
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	2.59 J	2.09 J	3.06 U	5.14 U	10.83	5.35 U	NA	NA	NA	NA	NA	NA	NA	NA	4.41 J	NA	NA
Butyl benzyl Phthalate	mg/kg OC	4.9	1.44 U	1.28 U	1.23 U	2.06 U	1.83 U	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Dibutyl Phthalate	mg/kg OC	220	1.33 J	1.1 J	0.96 J	1.47 J	1.81 J	1.88 J	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Diethyl Phthalate	mg/kg OC	61	1.44 U	1.28 U	1.23 U	2.45	1.61 J	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	2.82	NA	NA
Dimethyl Phthalate	mg/kg OC	53	0.6 J	1.28 U	0.52 J	2.06 U	16.79	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Di-N-Octyl Phthalate	mg/kg OC	58	1.44 U	1.28 U	1.23 U	2.06 U	1.83 U	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	NA	NA	NA	NA	NA	NA	49.8 U	378	49.8 U	49.8 U	49.6 U	49.7 U	49.6 U	49.8 U	NA	49.9 U	219
Butyl benzyl Phthalate	µg/kg	63	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Dibutyl Phthalate	µg/kg	1,400	NA	NA	NA	NA	NA	NA	14.8 J	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Diethyl Phthalate	µg/kg	200	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	25.9	19.9 U	26.8	19.9 U	NA	33.7	26
Dimethyl Phthalate	µg/kg	71	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Di-N-Octyl Phthalate	µg/kg	6,200	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	19.9 U	19.9 U	3.6 J	2.2 J	3.2 J	2.2 J	19.9 U	19.9 U	19.9 U	99.5 U	19.8 U	19.9 U	99.3 U	19.9 U	20 U	20 U	99.6 U
2-methylphenol (o-Cresol)	µg/kg	63	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U
4-methylphenol (p-Cresol)	µg/kg	670	16.3 J	81.3	46	31.5	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U
Pentachlorophenol	µg/kg	360	99.7 U	99.6 U	99.8 U	99.8 U	99.6 U	99.5 U	99.6 U	99.5 U	99.6 U	99.5 U	99.2 U	99.4 U	99.3 U	99.7 U	99.8 U	99.8 U	99.6 U
Phenol	µg/kg	420	11.3 J	10 J	15 J	10.8 J	8.7 J	19.9 U	19.9 U	19.9 U	19.9 U	8.9 J	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U

Sample Location[1]			COA_04	COA_05	COA_05	COA_06	COA_06	COA_07	COA_08	COA-SS-1	COA-SS-1	**COA-SS-1**	COA-SS-2	COA-SS-2	COA-SS-2	**COA-SS-2**	COA-SS-3	COA-SS-3	COA-SS-3
Sample Identification			COA_04_G_ 20201118	COA_05_G_ 20201119	COA-05-D_G_ 20201119	COA_06_G_ 20201120	COA-06-D_G_ 20201120	COA_07_G_ 20201118	COA_08_G_ 20201119	COA-SS-1-1-3-20201116	COA-SS-1-3-5-20201116	**COA-SS-1-6.5-8.5-20201116**	COA-SS-2-1.5-3.5-20201118	COA-SS-2-3.5-5.5-20201118	COA-SS-2-5.5-7.5-20201118	**COA-SS-2-7.5-9.5-20201118**	COA-SS-3-1-3-20201118	COA-SS-3-3-5-20201118	COA-SS-3-5-7-20201118
Sample Date			11/18/20	11/19/20	11/19/20	11/20/20	11/20/20	11/18/20	11/19/20	11/16/20	11/16/20	**11/16/20**	11/18/20	11/18/20	11/18/20	**11/18/20**	11/18/20	11/18/20	11/18/20
Sample Interval (dbm)			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 - 3 ft	3 -5 ft	**6.5 - 8.5 ft**	1.5 - 3.5 ft	3.5 - 5.5 ft	5.5 - 7.5 ft	**7.5 - 9.5 ft**	1 - 3 ft	3 -5 ft	5 -7 ft
Sample Type		**Proposed Sediment Cleanup Level[2]**	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core	Core	**Core**	Core	Core	Core	**Core**	Core	Core	Core
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	**Native**	Recent	Native	Native	**Native**	Recent	Native	Native
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal	**Subtidal**	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	**1.02 J**	**1.41**	**1.48**	**1.48 J**	**1.94**	**1.6 J**	NA	NA	NA	NA	NA	NA	NA	NA	**0.62 J**	NA	NA
Hexachlorobutadiene	mg/kg OC	3.9	0.36 U	0.32 U	0.31 U	0.52 U	0.46 U	0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA	NA
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	1.44 U	1.28 U	1.23 U	2.06 U	1.83 U	2.14 U	NA	NA	NA	NA	NA	NA	NA	NA	1.79 U	NA	NA
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	NA	NA	NA	NA	NA	NA	19.9 U	**5.1 J**	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Hexachlorobutadiene	µg/kg	11	NA	NA	NA	NA	NA	NA	5 U	5 U	5 U	19.9 U	5 U	5 U	19.9 U	19.9 U	NA	5 U	5 U
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	NA	NA	NA	NA	NA	NA	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	NA	20 U	19.9 U
Benzoic Acid	µg/kg	650	199 U	199 U	200 U	200 U	199 U	199 U	199 U	199 U	199 U	199 U	198 U	199 U	199 U	199 U	200 U	200 U	199 U
Benzyl Alcohol	µg/kg	57	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	**0.52 J**	**1.11 J**	**0.43 J**	**0.22 J**	**0.41 J**	**1.49 J**	NA	NA	NA	NA	NA	NA	NA	NA	0.14 U	NA	NA
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)																			
Total PCBs Aroclors	µg/kg	130	NA	NA	NA	NA	NA	NA	1.6 U	2.1 U	1.6 U	1.6 U	**1.8 J**	1.6 U	1.6 U	1.6 U	NA	1.6 U	1.6 U
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]			COA-SS-3	Pre-1	Pre-2	Pre-3	PP-1-Pre	PP-2-Pre	PP-2-Pre	PP-3-Pre	PP-4-Pre	PP-5-Pre	PP-6-Pre	PP-7-Pre	PP-8-Pre	PP-9-Pre	PP-10-Pre	PP-1-Post	PP-1-Post
Sample Identification			COA-SS-3-7-9-20201118	COA_NS-01-PRE-20240730	COA_NS-02-PRE-20240730	COA_NS-03-PRE-20240730	COA_PP-01-PRE_20240730	COA_PP-02-PRE_20240730	COA_PP-02-PRE_20240730DUP	COA_PP-03-PRE_20240730	COA_PP-04-PRE_20240730	COA_PP-05-PRE_20240730	COA_PP-06-PRE_20240730	COA_PP-07-PRE_20240730	COA_PP-08-PRE_20240730	COA_PP-09-PRE_20240730	COA_PP-10-PRE_20240730	COA_PP-01-POST_20241002	COA_PP-01-POST_20241002DUP
Sample Date			11/18/20	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	10/02/24	10/02/24
Sample Interval (dbm)			7 - 9 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-10 cm	0-10 cm
Sample Type		Proposed	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Sediment	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	10	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Conventionals																			
Total Organic Carbon (TOC)	%	NE	**0.08**	*1.84*	*1.55*	*1.67*	*1.52*	*0.95*	*2.44*	*1.64*	*0.96*	*0.89*	*2.00*	*1.63*	*0.72*	*1.22*	*1.56*	**1.60**	**1.40**
Total Volatile Solids (TVS)	%	NE	**1.18**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Solids (TS)	%	NE	**89.5**	*53.0*	*42.6*	*52.4*	*49.7*	*56.1*	*56.7*	*55.2*	*57.3*	*72.7*	*55.0*	*42.1*	*77.1*	*62.3*	*54.3*	**47.7**	**47.8**
Total Ammonia	mg-N/kg	NE	**3.0**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	1.05 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size																			
Gravel	%	NE	**15.2**	*0.3 U*	*0.3 U*	*0.3*	*3.1*	*1*	--	*7.8*	*16.4*	*0.4*	*0.6*	*0.4*	*1.8*	*1*	*0.3 U*	**5.3**	--
Very Coarse Sand	%	NE	**4.3**	*40.4*	*19.9*	*22.4*	*38.4*	*52*	--	*48.4*	*27*	*87.9*	*47.9*	*20.1*	*87*	*57.9*	*49.1*	**33.6**	--
Coarse Sand	%	NE	**4.1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Sand	%	NE	**5.4**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Sand	%	NE	**10.2**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Sand	%	NE	**9.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Coarse Silt	%	NE	**10.5**	*47.8*	*65.9*	*67.8*	*46.2*	*34*	--	*34.1*	*46.4*	*7.7*	*41.2*	*65.6*	*7.2*	*33.5*	*42.9*	**46.2**	--
Medium Silt	%	NE	**11.8**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fine Silt	%	NE	**9.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Very Fine Silt	%	NE	**8.3**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	%	NE	**11**	*11.7*	*14.1*	*9.7*	*12.2*	*13*	--	*9.8*	*10*	*4.3*	*10.4*	*14.1*	*4.1*	*8*	*8.2*	14.8	--
Metals																			
Arsenic	mg/kg	57	**2.82**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	5.1	**0.07 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	260	**79.4**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	390	**26.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	450	**2.81**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.41	**0.0307**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	6.1	**0.09 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	410	**43.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	mg/kg OC	370	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
2-Methylnaphthalene	mg/kg OC	38	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Acenaphthene	mg/kg OC	16	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Acenaphthylene	mg/kg OC	66	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Anthracene	mg/kg OC	220	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Fluorene	mg/kg OC	23	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Naphthalene	mg/kg OC	99	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Phenanthrene	mg/kg OC	100	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA	NA
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (																			
Sum of LPAHs[4]	µg/kg	5,200	**6 J**	***221.38 J***	***94.5 J***	***219.9 J***	***335.6 J***	***207.2 J***	***151.9 J***	***1145.8***	***80.55 J***	***132.9 J***	***574.1***	***63.6 J***	***36.5 J***	***262.5 J***	***234.5 J***	**124.9 J**	**133.6 J**
2-Methylnaphthalene	µg/kg	670	20 U	*21.9*	*16.6*	*26.2*	*22.4*	*21.6*	*18.4*	*33.4*	*13 J*	*13.7 J*	*38.7*	*17.2*	*7.47 U*	*18.9*	*22.8*	**15.7**	**11.1**
Acenaphthene	µg/kg	500	20 U	***10.2 J***	*7.5 U*	***12.8 J***	***13.5 J***	***7.98 J***	***14.4 J***	***41.8***	*7.49 U*	*7.48 U*	***44***	*7.49 U*	*7.47 U*	***11.7 J***	***11.7 J***	**6.7**	**5.9**
Acenaphthylene	µg/kg	1,300	20 U	***9.28 J***	*7.5 U*	***11.2 J***	***13.3 J***	***7.83 J***	*7.5 UJ*	***69.4***	*7.49 U*	*7.48 U*	***25.1***	*7.49 U*	*7.47 U*	***11.8 J***	***12.1 J***	**6.2 J**	**8.9**
Anthracene	µg/kg	960	20 U	***28.5***	***21.2***	***38.1***	***93.8***	***44.2 J***	***13.2 J***	***184***	***17.3***	***13.6 J***	***119***	***10.7 J***	*7.47 U*	***48.8***	***45.7***	**20**	**27.4 J**
Fluorene	µg/kg	540	20 U	***12.6 J***	***8.44 J***	***16.5***	***20.1***	***13.3 J***	***12 J***	***65.3***	***8.95 J***	***8.11 J***	***42.7***	*7.49 U*	*7.47 U*	***16.3***	***20.2***	**11.4**	**12.7**
Naphthalene	µg/kg	2,100	20 U	***64.6***	***14.4 J***	***34.3***	***63.9***	***48.5***	***73.8***	***85.3***	***21.9***	***66***	***76.3***	***23.8***	***25.8***	***69.9***	***61.6***	**39.8 J**	**21.2 J**
Phenanthrene	µg/kg	1,500	**6 J**	***96.2***	***50.5***	***107***	***131***	***85.4 J***	***38.5 J***	***700***	***32.4***	***45.2 J***	***267***	***29.1***	***10.7 J***	***104***	***83.2***	**40.8**	**57.5 J**

Sample Location[1]			COA-SS-3	Pre-1	Pre-2	Pre-3	PP-1-Pre	PP-2-Pre	PP-2-Pre	PP-3-Pre	PP-4-Pre	PP-5-Pre	PP-6-Pre	PP-7-Pre	PP-8-Pre	PP-9-Pre	PP-10-Pre	PP-1-Post	PP-1-Post
Sample Identification			COA-SS-3-7-9-20201118	COA_NS-01-PRE-20240730	COA_NS-02-PRE-20240730	COA_NS-03-PRE-20240730	COA_PP-01-PRE_20240730	COA_PP-02-PRE_20240730	COA_PP-02-PRE_20240730DUP	COA_PP-03-PRE_20240730	COA_PP-04-PRE_20240730	COA_PP-05-PRE_20240730	COA_PP-06-PRE_20240730	COA_PP-07-PRE_20240730	COA_PP-08-PRE_20240730	COA_PP-09-PRE_20240730	COA_PP-10-PRE_20240730	COA_PP-01-POST_20241002	COA_PP-01-POST_20241002DUP
Sample Date			11/18/20	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	10/02/24	10/02/24
Sample Interval (dbm)			7 - 9 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-10 cm	0-10 cm
Sample Type		Proposed	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Sediment	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	mg/kg OC	960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/kg OC	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	mg/kg OC	99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzofluoranthenes[6] (Total)	mg/kg OC	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	mg/kg OC	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	mg/kg OC	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	mg/kg OC	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	mg/kg OC	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	mg/kg OC	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Sum of HPAHs[5]	µg/kg	12,000	40 U	1078.8 J	610.46 J	1459.5	2509.3	742.9 J	227.75 J	26363.7	497.5	536.1 J	3908.2	376.9 J	50.4 J	1426.6	2305.6	660.9 J	1094.3 J
Benzo(a)anthracene	µg/kg	1,300	20 U	56.4	55.1	86.3	313	59.2 J	13.8 J	805	31.2	32.6	307	24.7	7.47 U	89.3	161	55.2	59.6 J
Benzo(a)pyrene	µg/kg	1,600	20 U	68.5	65.9	106	258	62.3 J	15.9 J	762	46.7	34.8	341	29.7	7.47 U	129	129	56.2	48.6
Benzofluoranthenes[6] (Total)	µg/kg	3,200	40 U	186	136	280	598	122 J	33.2 J	2850	110	77.5	807	70	22.4 U	317	438	140 J	154 J
Benzo(g,h,i)perylene	µg/kg	670	20 U	39	29.9	54	77.3	39.5 J	19.6 J	292	26.2	22.8	131	16.6	7.47 U	63	52	26.3	25.3
Chrysene	µg/kg	1,400	20 U	138	75.2	191	424	159 J	22.7 J	2320	54.2	71.8 J	524	46.1	9.6 J	195	366	69.6	115 J
Dibenzo(a,h)anthracene	µg/kg	230	20 U	11.2 J	8.16 J	15.5	30.3	13.5 J	7.5 UJ	79.7	7.49 U	7.48 U	46.2	7.49 U	7.47 U	19.6	17	6.5 J	6.6
Fluoranthene	µg/kg	1,700	20 U	286	97.6	320	350	129 J	42.9 J	10700	67.3	148 J	751	73.1	18	290	605	87.4 J	344 J
Indeno(1,2,3-c,d)pyrene	µg/kg	600	20 U	34.7	27.6	48.7	85.7	30.4 J	8.55 J	335	23.9	16.6	140	13.7 J	7.47 U	60.7	51.6	20.7 J	22.2
Pyrene	µg/kg	2,600	20 U	259	115	358	373	128 J	71.1 J	8220	138	132 J	861	103	22.8	263	486	199 J	319 J
Chlorinated Hydrocarbons (OC Normalized)																			
1,2,4-Trichlorobenzene	mg/kg OC	0.81	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg OC	0.38	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (Dry Weight)																			
1,2,4-Trichlorobenzene	µg/kg	31	5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	22	19.9 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (OC Normalized)																			
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	mg/kg OC	220	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	mg/kg OC	61	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	mg/kg OC	53	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates (Dry Weight)																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	50 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	63	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	1,400	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	200	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	71	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenols (Dry Weight)																			
2,4-Dimethylphenol	µg/kg	29	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	63	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	670	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	360	99.9 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	420	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]			COA-SS-3	Pre-1	Pre-2	Pre-3	PP-1-Pre	PP-2-Pre	PP-2-Pre	PP-3-Pre	PP-4-Pre	PP-5-Pre	PP-6-Pre	PP-7-Pre	PP-8-Pre	PP-9-Pre	PP-10-Pre	PP-1-Post	PP-1-Post
Sample Identification			COA-SS-3-7-9-20201118	COA_NS-01-PRE-20240730	COA_NS-02-PRE-20240730	COA_NS-03-PRE-20240730	COA_PP-01-PRE_20240730	COA_PP-02-PRE_20240730	COA_PP-02-PRE_20240730DUP	COA_PP-03-PRE_20240730	COA_PP-04-PRE_20240730	COA_PP-05-PRE_20240730	COA_PP-06-PRE_20240730	COA_PP-07-PRE_20240730	COA_PP-08-PRE_20240730	COA_PP-09-PRE_20240730	COA_PP-10-PRE_20240730	COA_PP-01-POST_20241002	COA_PP-01-POST_20241002 DUP
Sample Date			11/18/20	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	10/02/24	10/02/24
Sample Interval (dbm)			7 - 9 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-10 cm	0-10 cm
Sample Type		Proposed Sediment Cleanup Level[2]	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit			Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)																			
Dibenzofuran	mg/kg OC	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	mg/kg OC	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous Extractables (Dry Weight)																			
Dibenzofuran	µg/kg	540	20 U	12.5 J	7.95 J	16.3 J	17.6	11.8 J	14.9 J	34.9	9.51 J	7.48 U	35.2	7.79 J	7.47 U	17.2	15 J	8.3	9.7
Hexachlorobutadiene	µg/kg	11	5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	650	200 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	57	20 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)																			
Total PCBs Aroclors	mg/kg OC	12	NA	1.33 J	0.85 J	1.32 J	0.84 J	0.93	0.42 J	1.4 J	1.84 J	5.55 J	0.1 U	4.87 J	1.22	3.2 J	1.25 J	0.98 J	0.46
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)															NA				
Total PCBs Aroclors	µg/kg	130	**1.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]																			
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized scre

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compound

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 6

Summary of Sediment Analytical Results for the Protection of Benthic Organisms

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]	PP-2-Post	PP-3-Post	PP-4-Post	PP-5-Post	PP-6-Post	PP-7-Post	PP-8-Post	PP-9-Post	PP-10-Post
Sample Identification			COA_PP-02-POST_20241002	COA_PP-03-POST_20241002	COA_PP-04-POST_20241002	COA_PP-05-POST_20241002	COA_PP-06-POST_20241002	COA_PP-07-POST_20241002	COA_PP-08-POST_20241002	COA_PP-09-POST_20241002	COA_PP-10-POST_20241002
Sample Date			10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24
Sample Interval (dbm)			0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Sample Type			Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening											
Sheen	n/a	NE	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	10	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Conventionals											
Total Organic Carbon (TOC)	%	NE	**0.90**	**1.70**	**1.20**	**1.50**	**1.90**	**1.60**	**0.60**	**1.20**	**1.10**
Total Volatile Solids (TVS)	%	NE	--	--	--	--	--	--	--	--	--
Total Solids (TS)	%	NE	**54.3**	**55.0**	**58.0**	**71.8**	**60.7**	**42.5**	**79.3**	**62.8**	**58.7**
Total Ammonia	mg-N/kg	NE	--	--	--	--	--	--	--	--	--
Porewater Ammonia	mg-N/L	NE	--	--	--	--	--	--	--	--	--
Total Sulfide	mg/kg	NE	--	--	--	--	--	--	--	--	--
Porewater Sulfide	mg/L	NE	--	--	--	--	--	--	--	--	--
Grain Size											
Gravel	%	NE	**1.9**	**8.3**	**20.3**	**1.4**	**1**	**0.3**	**1.4**	**0.7**	**4.2**
Very Coarse Sand	%	NE	**54.6**	**47.7**	**27.1**	**84.3**	**57.8**	**25.3**	**88.1**	**61.7**	**64.2**
Coarse Sand	%	NE	--	--	--	--	--	--	--	--	--
Medium Sand	%	NE	--	--	--	--	--	--	--	--	--
Fine Sand	%	NE	--	--	--	--	--	--	--	--	--
Very Fine Sand	%	NE	--	--	--	--	--	--	--	--	--
Coarse Silt	%	NE	**30.3**	**29.6**	**40.8**	**7.7**	**30.9**	**60.4**	**5.4**	**28**	**20.4**
Medium Silt	%	NE	--	--	--	--	--	--	--	--	--
Fine Silt	%	NE	--	--	--	--	--	--	--	--	--
Very Fine Silt	%	NE	--	--	--	--	--	--	--	--	--
Clay	%	NE	13.2	14.3	11.7	6.6	10.3	14.1	5.2	9.5	11.2
Metals											
Arsenic	mg/kg	57	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	5.1	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	260	--	--	--	--	--	--	--	--	--
Copper	mg/kg	390	--	--	--	--	--	--	--	--	--
Lead	mg/kg	450	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.41	--	--	--	--	--	--	--	--	--
Silver	mg/kg	6.1	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	410	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (											
Sum of LPAHs[4]	mg/kg OC	370	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	mg/kg OC	38	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	mg/kg OC	16	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	mg/kg OC	66	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	mg/kg OC	220	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	mg/kg OC	23	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	mg/kg OC	99	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	mg/kg OC	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs) (											
Sum of LPAHs[4]	µg/kg	5,200	**72.1 J**	**1586.8 J**	**63.5 J**	**250.3 J**	**1304.3 J**	**217.1 J**	**58.1**	**141.1 J**	**115.3 J**
2-Methylnaphthalene	µg/kg	670	**9.2**	**33.9**	**9.9**	**9.5**	**113**	**23.3**	**7.3**	**11.3**	**8.6**
Acenaphthene	µg/kg	500	**4.3 J**	**43.3**	**3.2 J**	**13.5**	**40**	**17.2**	**10.3**	**8**	**6.7**
Acenaphthylene	µg/kg	1,300	**3.1 J**	**100 J**	**4.3 J**	**5.5 J**	**62.7 J**	**6.8 J**	**2.5 U**	**8.9 J**	**4.2 J**
Anthracene	µg/kg	960	**11.6 J**	**160**	**12.7**	**46.3 J**	**123**	**40.4**	**7.9**	**29.5**	**22**
Fluorene	µg/kg	540	**6.8**	**94.3**	**7.1**	**16.4**	**88.2**	**26.8**	**9.3**	**11.2**	**11.2**
Naphthalene	µg/kg	2,100	**22.7**	**59.2**	**12.7**	**51.6**	**78.4**	**27.9**	**8.2**	**37.6**	**15**
Phenanthrene	µg/kg	1,500	**23.6 J**	**1130**	**23.5**	**117 J**	**912**	**98**	**22.4**	**45.9**	**56.2**

Sample Location[1]			PP-2-Post	PP-3-Post	PP-4-Post	PP-5-Post	PP-6-Post	PP-7-Post	PP-8-Post	PP-9-Post	PP-10-Post
Sample Identification			COA_PP-02-POST_20241002	COA_PP-03-POST_20241002	COA_PP-04-POST_20241002	COA_PP-05-POST_20241002	COA_PP-06-POST_20241002	COA_PP-07-POST_20241002	COA_PP-08-POST_20241002	COA_PP-09-POST_20241002	COA_PP-10-POST_20241002
Sample Date			10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24
Sample Interval (dbm)			0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Sample Type		Proposed Sediment Cleanup Level[2]	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone			Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)											
Sum of HPAHs[5]	mg/kg OC	960	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/kg OC	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	mg/kg OC	99	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzofluoranthenes[6] (Total)	mg/kg OC	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	mg/kg OC	31	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	mg/kg OC	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	mg/kg OC	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	mg/kg OC	160	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	mg/kg OC	34	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	mg/kg OC	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)											
Sum of HPAHs[5]	µg/kg	12,000	**227.1 J**	**35687 J**	**442.1 J**	**999.1 J**	**5573 J**	**855.3 J**	**125.1 J**	**891.1 J**	**636.6 J**
Benzo(a)anthracene	µg/kg	1,300	**16.4 J**	**1030**	**31.9**	**114**	**434**	**73.5**	**5.2**	**60.9**	**59.4**
Benzo(a)pyrene	µg/kg	1,600	**18.7**	**933**	**28.9**	**85.4**	**261**	**62**	**9.7**	**73.7**	**49.3**
Benzofluoranthenes[6] (Total)	µg/kg	3,200	**41.3 J**	**4200**	**86.8 J**	**188 J**	**703 J**	**165 J**	**33.3 J**	**239 J**	**119 J**
Benzo(g,h,i)perylene	µg/kg	670	**12.6**	**407 J**	**13.3**	**41.2**	**102**	**27.4**	**3.9 J**	**28.5**	**20.7**
Chrysene	µg/kg	1,400	**23 J**	**2670**	**66.8**	**119**	**846**	**109**	**8.6**	**138**	**68.1**
Dibenzo(a,h)anthracene	µg/kg	230	**2.7 J**	**103 J**	**3.3 J**	**13.4 J**	**35 J**	**7.5 J**	2.5 U	**6.5 J**	**4.1 J**
Fluoranthene	µg/kg	1,700	**42.6 J**	**14500**	**64.1**	**202 J**	**1490**	**156**	**26.9**	**138**	**136**
Indeno(1,2,3-c,d)pyrene	µg/kg	600	**9.4 J**	**444 J**	**11 J**	**36.1 J**	**102 J**	**24.9 J**	**3.3 J**	**26.5 J**	**18 J**
Pyrene	µg/kg	2,600	**60.4 J**	**11400**	**136 J**	**200 J**	**1600 J**	**230 J**	**34.2 J**	**180 J**	**162 J**
Chlorinated Hydrocarbons (OC Normalized)											
1,2,4-Trichlorobenzene	mg/kg OC	0.81	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	mg/kg OC	2.3	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	mg/kg OC	3.1	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	mg/kg OC	0.38	--	--	--	--	--	--	--	--	--
Chlorinated Hydrocarbons (Dry Weight)											
1,2,4-Trichlorobenzene	µg/kg	31	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	35	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	110	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	22	--	--	--	--	--	--	--	--	--
Phthalates (OC Normalized)											
Bis(2-Ethylhexyl) Phthalate	mg/kg OC	47	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	mg/kg OC	4.9	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	mg/kg OC	220	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	mg/kg OC	61	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	mg/kg OC	53	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	mg/kg OC	58	--	--	--	--	--	--	--	--	--
Phthalates (Dry Weight)											
Bis(2-Ethylhexyl) Phthalate	µg/kg	1,300	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	63	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	1,400	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	200	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	71	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	6,200	--	--	--	--	--	--	--	--	--
Phenols (Dry Weight)											
2,4-Dimethylphenol	µg/kg	29	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	63	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	670	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	360	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	420	--	--	--	--	--	--	--	--	--

Sample Location[1]			PP-2-Post	PP-3-Post	PP-4-Post	PP-5-Post	PP-6-Post	PP-7-Post	PP-8-Post	PP-9-Post	PP-10-Post
Sample Identification			COA_PP-02-POST_20241002	COA_PP-03-POST_20241002	COA_PP-04-POST_20241002	COA_PP-05-POST_20241002	COA_PP-06-POST_20241002	COA_PP-07-POST_20241002	COA_PP-08-POST_20241002	COA_PP-09-POST_20241002	COA_PP-10-POST_20241002
Sample Date			10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24
Sample Interval (dbm)			0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Sample Type		Proposed Sediment	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit			Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone		Cleanup Level[2]	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Miscellaneous Extractables (OC Normalized)											
Dibenzofuran	mg/kg OC	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	mg/kg OC	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine (as diphenylamine)	mg/kg OC	11	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous Extractables (Dry Weight)											
Dibenzofuran	µg/kg	540	**5.7**	**63.6 J**	**6**	**9.9**	**33.5**	**18.4**	**14.9**	**9.7**	**7.6**
Hexachlorobutadiene	µg/kg	11	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	28	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	650	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	57	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (OC Normalized)											
Total PCBs Aroclors	mg/kg OC	12	0.22 UJ	**2.44 J**	**2.24 J**	**1.17 J**	**2.88 J**	**1.93 J**	0.3 U	**1.07 J**	**0.65**
Total PCBs Congeners	mg/kg OC	12	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) (Dry Weight)											
Total PCBs Aroclors	µg/kg	130	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs Congeners	µg/kg	130	--	--	--	--	--	--	--	--	--
Bioassay Tests[7]											
10-Day Amphipod Mortality Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--
Larval Development Test (Acute Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--
Microtox® Porewater Test	n/a	NE	--	--	--	--	--	--	--	--	--
20-Day Juvenile Infaunal Growth Test (Chronic Toxicity)	n/a	NE	--	--	--	--	--	--	--	--	--
Benthic Abundance of Major Taxa	n/a	NE	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown in Figure 6.

[2] Proposed cleanup levels (PCULs) area presented in Table 2. The organic carbon normalized screening levels are applicable to sediment with a total organic carbon (TOC) concentration ranging from 0.5 to 3.5 percent. Results for sediment samples with TOC concentrations outside of the 0.5 to 3.5 percent range are screened against the dry weight screening levels (EPA, 1988).

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total LPAH represents the sum of the detected concentrations of the following LPAH compounds: acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported. The result for 2-Methylnaphthalene is not included in the LPAH sum.

[5] Total HPAH represents the sum of the detected concentrations of the following HPAH compounds: benz[a]anthracene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, pyrene, and total benzofluoranthenes. When all compounds are undetected, only the single highest individual chemical quantitation limit is reported.

[6] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

mg/L = milligram per liter

µg/L = microgram per liter

mg-N/kg = milligrams of nitrogen per kilogram

mg-N/L = milligrams of nitrogen per liter

mg/kg = milligram per kilogram

mg/kg OC = milligram per kilogram normalized to organic carbon

µg/kg = microgram per kilogram

--= not analyzed

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

cm = centimeter

ft = feet

n/a = not applicable

NA denotes that the corresponding result is not appropriate based on the TOC concentration in the sample (see Note 2).

NE = not established

dbm = depth below mudline

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) or the organic carbon normalized value calculated from the PQL exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	LHO-REF
Sample Identification				LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	DUP (LHO-REF)
Sample Date				07/13/04	07/13/04	09/06/07	09/06/07	09/05/07	09/05/07	09/05/07	08/28/08	08/28/08	09/01/09	09/01/09	09/01/09	09/01/09	09/01/09	10/14/10	10/14/10
Sample Interval (dbm)				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type				Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																			
Arsenic	mg/kg	11	11	10 U	10 U	**2.37**	**2.1**	**3.2**	**5.6**	**4.3**	**4.52**	**5.3**	10 U	10 U	10 U	10 U	9 U	10 U	11 U
Cadmium	mg/kg	0.80	0.80	0.5 U	0.5 U	**0.09**	0.08 U	**0.12**	**0.41**	**0.39**	**0.698**	**0.642**	**0.6**	**0.7**	**1**	**1**	**0.9**	1 U	1.1 U
Chromium	mg/kg	62	62	**12**	**29**	**12.3**	**13.5**	**21.2**	**20.4**	**21.2**	**31.2**	**31.9**	**33**	**51**	**39**	**41**	**36.6**	**39**	**41**
Copper	mg/kg	45	45	**17.1**	**31.7**	**10.4**	**9.49**	**15.4**	**12.6**	**11.3**	**28.5**	**29.7**	**40.8**	**248**	**38.2**	**39.8**	**33.9**	**42**	**120**
Lead	mg/kg	21	21	5 U	**8**	**2.23**	**1.63**	**3.39**	**5.74**	**3.48**	**9.29**	**9.32**	**8**	**23**	**10**	**11**	**11**	**11**	**14**
Mercury	mg/kg	0.20	0.20	0.1 U	0.09 U	**0.01 J**	**0.01**	**0.01**	**0.04**	**0.03**	**0.033**	**0.037**	**0.07**	**0.06**	**0.08**	**0.08**	**0.07**	0.1 U	0.11 U
Silver	mg/kg	0.30	0.30	0.8 U	0.8 U	0.02 U	**0.03**	**0.043**	**0.07**	**0.06**	**0.15**	**0.1**	0.6 U	0.7 U	0.7 U	0.7 U	0.6 U	1 U	1.1 U
Zinc	mg/kg	93	93	**35**	**69**	**20.9**	**19.1**	**32.6**	**37.8**	**28.3**	**784**	**711**	**79**	**105**	**102**	**96**	**78**	**79**	**73**
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	--	--	--	--	--	**160**	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	32 U	20 U	9.7 U	9.1 U	9.7 U	**8.7**	**4.9**	**13**	**10 J**	20 U	20 U	20 U	**12**	20 U	14 U	14 U
Acenaphthene	µg/kg	4,800,000	67,000,000	32 U	**28**	9.7 U	9.1 U	9.7 U	**5.7**	10 U	**8.8 J**	**7 J**	20 U	20 U	**12 J**	**14 J**	20 U	14 U	14 U
Acenaphthylene	µg/kg	4,800,000	67,000,000	32 U	20 U	**1.4**	9.1 U	9.7 U	**16**	**5.3**	**13**	**69**	**10 J**	20 U	**13 J**	**15 J**	20 U	14 U	14 U
Anthracene	µg/kg	4,800,000	67,000,000	32 U	**55**	9.7 U	9.1 U	9.7 U	**38**	**8.1**	**73**	**47**	**45**	**31**	**44**	**48**	**17 J**	**40**	**81**
Fluorene	µg/kg	3,200,000	45,000,000	32 U	**27**	9.7 U	9.1 U	9.7 U	**8.7**	**4.4**	**18**	**19**	**16 J**	**14 J**	**19 J**	**26**	20 U	14 U	**16**
Naphthalene	µg/kg	1,600,000	22,000,000	32 U	20 U	9.7 U	9.1 U	9.7 U	**33**	**26**	**16**	**10**	20 U	20 U	20 U	20 U	20 U	14 U	14 U
Phenanthrene	µg/kg	4,800,000	67,000,000	32 U	**94**	**8.2**	9.1 U	**2.4**	**42**	**23**	**160**	**140**	**120**	**170**	**190**	**180**	**62**	**62**	**140**
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	32 U	**40**	**4.1**	9.1 U	9.7 U	**59**	**18**	**140**	**320**	**82**	**52**	**84**	**94**	**48**	**79**	**100**
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**32**	**38**	**2.6**	9.1 U	9.7 U	**45**	**17**	**100**	**330**	**72**	**50**	**92**	**100**	**35**	**98**	**89**
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**82**	**125**	**9.9**	9.1 U	9.7 U	**25**	**37.6**	**241**	**398**	**51.7**	**42.48**	**65.24**	**320**	**29.6**	**240**	**236**
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	32 U	20 U	**2**	9.1 U	9.7 U	**27**	**11**	**54**	**150**	**44**	**32**	**48**	**44**	**14 J**	**55**	**51**
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**38**	**73**	**18**	9.1 U	9.7 U	**83**	**26**	**280**	**430**	**150**	**100**	**150**	**160**	**70**	**160**	**190**
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	**19**	**44**	**16 J**	20 U	**20**	20 U	20 U	14 U	14 U
Fluoranthene	µg/kg	3,200,000	45,000,000	**110**	**320**	**50**	**2.2**	**3.1**	**82**	**41**	**490**	**560**	**460**	**450**	**750**	**630**	**260**	**200**	**330**
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	32 U	20 U	**1.8**	9.1 U	9.7 U	**30**	**12**	**66**	**160**	**37**	**27**	**45**	**44**	**14 J**	**55**	**59**
Pyrene	µg/kg	2,400,000	34,000,000	**48**	**130**	**33**	9.1 U	**2.7**	**110**	**44**	**310**	**790**	**200**	**130**	**210**	**170**	**87**	**240**	**290**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**41.72 L3**	**56.69**	**4.92**	12.83 Lmax	13.68 Lmax	**58.06**	**24.28**	**149.4**	**426.5**	**92.17**	**64.15**	**114.92**	**149**	**45.91**	**138.4**	**127.55**
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	3.1 U	2.8 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	3.5 U	3.1 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	3.5 U	3.1 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
Hexachlorobenzene	µg/kg	690	1,600	32 U	20 U	0.99 U	9.1 U	9.7 U	10 U	10 U	1.5 U	1.3 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	32 U	**25**	97 U	91 U	**11**	**17**	**15**	**75**	**44**	**100**	**680**	**390**	**150**	**110**	**49**	35 U
Butyl benzyl Phthalate	µg/kg	180,000	460,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	3.8 U	3.4 U	15 U	16 U	15 U	**20**	15 U	35 U	35 U
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	32 U	20 U	**9.2**	**16**	**20**	**19**	**24**	**22**	26 U	20 U	20 U	20 U	20 U	20 U	35 U	35 U
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	32 U	20 U	**1.9**	9.1 U	9.7 U	10 U	**2**	**10 J**	1.4 U	20 U	20 U	20 U	20 U	20 U	170 U	180 U
Dimethyl Phthalate	µg/kg	NE	NE	32 U	20 U	**1.0**	9.1 U	9.7 U	10 U	10 U	**5.9 J**	**10 J**	**67**	20 U	20 U	20 U	20 U	35 U	35 U
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	2 U	1.8 U	20 U	20 U	20 U	20 U	**130**	35 U	35 U

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	LHO-REF
Sample Identification				LP-1	LP-2	FB-A4-14	FB-A4-15	FB-A4-19	FB-A4-20	FB-A4-21	S-1	S-2	S-3	S-4	S-5	S-6	S-7	LHO-REF	DUP (LHO-REF)
Sample Date				07/13/04	07/13/04	09/06/07	09/06/07	09/05/07	09/05/07	09/05/07	08/28/08	08/28/08	09/01/09	09/01/09	09/01/09	09/01/09	09/01/09	10/14/10	10/14/10
Sample Interval (dbm)				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type				Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	32 U	20 U	20 U	46 R	49 R	50 R	50 R	6.5 U	5.8 U	**6.6**	6.2 U	6 U	6.1 U	6 U	870 U	880 U
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	32 U	20 U	20 U	9.1 U	**2.1**	10 U	10 U	1.8 U	1.6 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	32 U	**70**	20 U	9.1 U	**65**	10 U	**4**	**130**	**26**	**48**	**47**	**82**	**66**	**55**	35 U	35 U
Pentachlorophenol	µg/kg	550	1,400	160 U	99 U	49 U	91 U	97 U	100 U	100 U	**32 J**	22 U	30 U	31 U	30 U	**71**	30 U	170 U	180 U
Phenol	µg/kg	18,000,000	260,000,000	32 U	20 U	49 U	13 U	**80**	16 U	17 U	**12**	2.2 U	20 U	20 U	**15**	20 U	20 U	**240**	35 U
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	32 U	20 U	9.7 U	9.1 U	9.7 U	**5.7**	**2.8**	**9 J**	**7.3 J**	20 U	**10 J**	**12 J**	**20**	20 U	35 U	35 U
Hexachlorobutadiene	µg/kg	14,000	33,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	3 U	2.7 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	32 U	20 U	9.7 U	9.1 U	9.7 U	10 U	10 U	1.9 U	1.7 U	6 U	6.2 U	6 U	6.1 U	6 U	35 U	35 U
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	320 U	200 U	**200**	19 U	200 R	200 R	200 R	**120 J**	110 U	200 U	200 U	200 U	200 U	200 U	35 U	35 U
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	32 U	20 U	**6.2**	190 R	20 U	20 U	10 U	2.5 U	2.3 U	30 U	31 U	30 U	30 U	30 U	35 U	35 U
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	16 U	16 U	20 U	13 U	14 U	16 U	15 U	14 U	7.5 U	3.9 U	4 U	4 U	**4.6 J**	4 U	100 U	110 U
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	--	--	--	--	--	**1.43**	--	--	--	**8.07**	--	--	--	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		P2-1-3	P2-1-3	P2-1-3	P2-1	P2-2	P2-3	LY-01	LY-02	LY-03	LY-03	LY-03	LY-03	LY-04	LY-04	LY-04	LY-05
Sample Identification				P2-1-A-COMP (P2-1/P2-2/P2-3)	P2-1-B-COMP (P2-1/P2-2/P2-3)	P2-1-Z-COMP (P2-1/P2-2/P2-3)	P2-1-A	P2-2-A	P2-3-A	LY-SS-01_ 0-10	LY-SS-02_ 0-10	LY-SS-03_ 0-10	LY-SS-Dup-01 (LY-SS-03_0-10)	LY-SC-03_ 3-4	LY-SC-03_ 4-5	LY-SS-04_ 0-10	LY-SC-04_ 3-4	LY-SC-Dup-02 (LY-SC-04_3-4)	LY-SS-05_ 0-10
Sample Date				11/16/12	11/16/12	11/16/12	11/14/12	11/15/12	11/16/12	11/17/15	11/17/15	11/17/15	11/17/15	11/18/15	11/18/15	11/17/15	11/18/15	11/18/15	11/17/15
Sample Interval (dbm)				Surface Layer Composite (0-4ft)	Susurface Layer Composite (4-5ft)	Z-Layer Composite (5-6ft)	Surface Layer Discrete	Surface Layer Discrete	Surface Layer Discrete	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	3 - 4	3 - 4	0 - 10 cm
Sample Type				Core	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Core	Core	Surface	Core	Core	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	NE	NE	--	--	--	--	--	--	<5	Asent	5	5	75	10	20	40	40	10
Metals																			
Arsenic	mg/kg	11	11	6 U	6 U	6 U	--	--	--	**5.60 J**	**5.15 J**	**9.7 J**	**8.0 J**	**8.6 J**	--	**8.3 J**	**11**	**14**	**10**
Cadmium	mg/kg	0.80	0.80	**0.3**	**0.3**	0.2 U	--	--	--	0.072 U	0.023 U	**1.1**	**1.2**	**0.8**	--	**1**	**0.5**	**0.5**	**0.6**
Chromium	mg/kg	62	62	**26.5 J**	**19 J**	**19.9 J**	--	--	--	**42.4**	**53.8**	**40**	**40**	**35**	--	**41**	**15.7**	**18.6**	**33.4**
Copper	mg/kg	45	45	**22.2**	**16.2**	**14.5**	--	--	--	**17.2**	**42.4**	**34.6**	**36.8**	**41.1**	--	**33.8**	**9.6**	**10.8**	**30**
Lead	mg/kg	21	21	**4**	2 U	**4**	--	--	--	**11**	**11**	**18**	**17**	**13**	--	**18**	**2.11 J**	**2.21 J**	**14**
Mercury	mg/kg	0.20	0.20	0.03 U	0.03 U	0.02 U	--	--	--	**0.0052 J**	**0.0026 J**	**0.08**	**0.08**	**0.08**	--	**0.06**	**0.0182 J**	**0.0141 J**	**0.05**
Silver	mg/kg	0.30	0.30	0.4 U	0.4 U	0.3 U	--	--	--	0.4 U	0.3 U	0.6 U	0.6 U	0.7 U	--	0.6 U	0.4 U	0.4 U	0.5 U
Zinc	mg/kg	93	93	**48**	**32**	**30**	--	--	--	**61**	**57**	**95**	**89**	**90**	--	**93**	**27**	**34**	**73**
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	**0.38**	--	--	**4.9 J**	**0.45 J**	**0.02 J**	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	--	**3.7**	**2.9 J**	**280 J**	**91 J**	**10 J**	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	19 U	18 U	19 U	--	--	--	4.7 U	**2.4 J**	**140 J**	**64 J**	**99**	--	**63**	**3.6 J**	**4.4 J**	**72**
Acenaphthene	µg/kg	4,800,000	67,000,000	19 U	18 U	19 U	--	--	--	4.7 U	4.7 U	**25**	**23**	**140**	--	**1,600**	4.8 U	**4.7 J**	**64**
Acenaphthylene	µg/kg	4,800,000	67,000,000	19 U	18 U	19 U	--	--	--	4.7 U	4.7 U	**29**	**16**	**42**	--	**27**	**2.4 J**	4.9 U	**30**
Anthracene	µg/kg	4,800,000	67,000,000	19 U	18 U	19 U	--	--	--	4.7 U	4.7 U	**69 J**	**46 J**	**210**	--	**200**	**5.5**	**8.1**	**70**
Fluorene	µg/kg	3,200,000	45,000,000	19 U	18 U	19 U	--	--	--	4.7 U	4.7 U	**49 J**	**34 J**	**180**	--	**280**	**4.6 J**	**6.4**	**74**
Naphthalene	µg/kg	1,600,000	22,000,000	**17 J**	18 U	19 U	--	--	--	**3.1 J**	4.7 U	**160**	**100**	**340**	--	**100**	**23**	**20**	**280**
Phenanthrene	µg/kg	4,800,000	67,000,000	**18 J**	18 U	19 U	--	--	--	**8.2 J**	**4.0 J**	**140**	**120**	**340**	--	**470**	**15**	**17**	**190**
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**15**	18 U	19 U	--	--	--	**6.6 J**	4.7 U	**99 J**	**64 J**	**190**	**200**	**82**	**3.8 J**	**6.3**	**66**
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**58**	18 U	19 U	--	--	--	**6.6**	**3.3 J**	**64**	**52**	**110**	**120**	**44**	**6.2**	**3.7 J**	**48**
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**100**	37 U	37 U	--	--	--	**27 J**	**11**	**220**	**150**	**300**	**350**	**130**	**7.6**	**10**	**130**
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**26**	18 U	19 U	--	--	--	**16**	**3.7 J**	**43**	**35**	**60**	**68**	**27**	**6.6**	**4.2 J**	**40**
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**30**	18 U	19 U	--	--	--	**15 J**	**5.5**	**220 J**	**120 J**	**320**	**320**	**120**	**5.8**	**8.6**	**91**
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**15**	18 U	19 U	--	--	--	4.7 U	4.7 U	**11 J**	15 U	**18**	**17**	14 U	4.8 U	4.9 U	17 U
Fluoranthene	µg/kg	3,200,000	45,000,000	**26**	18 U	19 U	--	--	--	**18 J**	**4.7 J**	**360**	**340**	**1,200**	**1,000**	**980**	**18 J**	**34 J**	**290**
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**19**	18 U	19 U	--	--	--	**8.1**	**3.1 J**	**35**	**26**	**54**	**52**	**23**	4.8 U	4.9 U	**28**
Pyrene	µg/kg	2,400,000	34,000,000	**250**	**10 J**	19 U	--	--	--	**12 J**	**4.6 J**	**280**	**220**	**760**	**590**	**590**	**17 J**	**26 J**	**330**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**73.2**	27.28 Lmax	28.59 Lmax	--	--	--	**11.07**	**5.13 J**	**102.7**	**78.4**	**169.4**	**185.1**	**69.9**	**7.84**	**5.59 J**	**72.22**
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	**3.2 J**	4.6 U	4.6 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	5.0 U	--	4.8 U	4.8 U	4.9 U	4.9 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	4.7 U	4.6 U	4.6 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	**2.8 J**	--	4.8 U	4.8 U	**1.5 J**	4.9 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	4.7 U	4.6 U	4.6 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	5.0 U	--	4.8 U	4.8 U	4.9 U	4.9 U
Hexachlorobenzene	µg/kg	690	1,600	4.7 U	4.6 U	4.6 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	5.0 U	--	4.8 U	4.8 U	4.9 U	4.9 U
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	34 U	24 U	27 U	--	--	--	**1,100**	**33 J**	**160**	**180**	250 U	--	**260**	**630 J**	**44 J**	**480**
Butyl benzyl Phthalate	µg/kg	180,000	460,000	4.7 U	4.6 U	4.6 U	--	--	--	**4.9**	4.7 U	**5.4**	**31 J**	5.0 U	--	**7.9**	4.8 U	**3.9 J**	4.9 U
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	19 U	18 U	19 U	--	--	--	19 U	19 U	19 U	20 U	**35 J**	--	19 U	19 U	20 U	20 U
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	47 U	4.6 U	4.6 U	--	--	--	33 U	19 U	37 U	20 U	100 U	--	34 U	19 U	20 U	**55**
Dimethyl Phthalate	µg/kg	NE	NE	4.7 U	4.6 U	4.6 U	--	--	--	19 U	19 U	19 U	20 U	100 U	--	19 U	19 U	20 U	20 U
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	19 U	18 U	19 U	--	--	--	19 U	19 U	19 U	20 U	100 U	--	19 U	19 U	20 U	20 U

Sample Location[1]		Proposed Sediment Cleanup Level[2]		P2-1-3	P2-1-3	P2-1-3	P2-1	P2-2	P2-3	LY-01	LY-02	LY-03	LY-03	LY-03	LY-03	LY-04	LY-04	LY-04	LY-05
Sample Identification				P2-1-A-COMP (P2-1/P2-2/P2-3)	P2-1-B-COMP (P2-1/P2-2/P2-3)	P2-1-Z-COMP (P2-1/P2-2/P2-3)	P2-1-A	P2-2-A	P2-3-A	LY-SS-01_ 0-10	LY-SS-02_ 0-10	LY-SS-03_ 0-10	LY-SS-Dup-01 (LY-SS-03_0-10)	LY-SC-03_ 3-4	LY-SC-03_ 4-5	LY-SS-04_ 0-10	LY-SC-04_ 3-4	LY-SC-Dup-02 (LY-SC-04_3-4)	LY-SS-05_ 0-10
Sample Date				11/16/12	11/16/12	11/16/12	11/14/12	11/15/12	11/16/12	11/17/15	11/17/15	11/17/15	11/17/15	11/18/15	11/18/15	11/17/15	11/18/15	11/18/15	11/17/15
Sample Interval (dbm)				Surface Layer Composite (0-4ft)	Susurface Layer Composite (4-5ft)	Z-Layer Composite (5-6ft)	Surface Layer Discrete	Surface Layer Discrete	Surface Layer Discrete	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	3 - 4	3 - 4	0 - 10 cm
Sample Type				Core	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Core	Core	Surface	Core	Core	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Intertidal	Intertidal	Intertidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	19 U	18 U	19 U	--	--	--	24 U	24 U	24 U	**13 J**	**17 J**	**12 J**	24 U	24 U	24 U	25 U
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	4.7 U	4.6 U	4.6 U	--	--	--	19 U	19 U	19 U	20 U	100 U	19 U	19 U	19 U	20 U	20 U
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	38 U	37 U	37 U	--	--	--	19 U	19 U	**800 J**	**460 J**	**3,900**	**1,100**	**1,100**	**53**	**46**	**330**
Pentachlorophenol	µg/kg	550	1,400	47 U	46 U	46 U	--	--	--	95 U	94 U	96 U	98 U	**480 J**	95 U	96 U	97 U	98 U	98 U
Phenol	µg/kg	18,000,000	260,000,000	19 U	18 U	19 U	--	--	--	19 U	19 U	**42 J**	**76 J**	**560**	**370**	**67 J**	**20**	**20**	**300 J**
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	19 U	18 U	19 U	--	--	--	**3.1 J**	4.7 U	**48**	**36**	**130**	**140**	**340**	**3.5 J**	**4.8 J**	**82**
Hexachlorobutadiene	µg/kg	14,000	33,000	4.7 U	4.6 U	4.6 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	5.0 U	4.8 U	4.8 U	4.8 U	4.9 U	4.9 U
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	19 U	18 U	19 U	--	--	--	4.7 U	4.7 U	4.8 U	4.9 U	5.0 U	4.8 U	4.8 U	4.8 U	4.9 U	4.9 U
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	380 U	370 U	370 U	--	--	--	190 U	190 U	**200**	**220**	**4,300 J**	**160 J**	**110 J**	190 U	200 U	**110 J**
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	19 U	18 U	19 U	--	--	--	19 U	19 U	19 U	20 U	100 U	19 U	19 U	19 U	20 U	20 U
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	3.8 U	3.8 U	3.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	**1.71 J**	**0.128 J**	**3.0 J**	--	**1.83 J**	--	--	**2.06 J**
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	**0.101 J**	**0.108 J**	**0.302 J**	--	**0.074 J**	--	--	**0.143 J**
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	**0.16 JL14**	**0.12 JL16**	**0.12 JL13**	--	--	--	**0.95 JL10**	--	**11.26**	**7.53**	--	--	--	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-05	LY-05	LY-05	LY-06	LY-06	LY-06	LY-06	LY-07	LY-07	LY-07	LY-08	LY-08	LY-08	LY-09	LY-09	LY-09
Sample Identification				LY-SC-05_ 1-2	LY-SC-05_ 3-4	LY-SC-05_ 4-5	LY-SS-06_ 0-10	LY-SS-Dup-02 (LY-SS-06_0-10)	LY-SC-06_ 3-4	LY-SC-06_ 4-5	LY-SS-07_ 0-10	LY-SC-07_ 0-1	LY-SC-07_ 3-4	LY-SS-08_ 0-10	LY-SC-08_ 3-4	LY-SC-08_ 5-6	LY-SS-09_ 0-10	LY-SC-09_ 2-3	LY-SC-09_ 3-4
Sample Date				11/19/15	11/19/15	11/19/15	11/17/15	11/17/15	11/19/15	11/19/15	11/17/15	11/20/15	11/20/15	11/17/15	11/20/15	11/20/15	11/17/15	11/18/2015	11/18/2015
Sample Interval (dbm)				1 - 2	3 - 4	4 - 5	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	0 - 1	3 - 4	0 - 10 cm	3 - 4	5 - 6	0 - 10 cm	2 - 3	3 - 4
Sample Type				Core	Core	Core	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Native	Recent	Recent	Recent	Native	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	NE	NE	Asent	Asent	Asent	10	10	10	Asent	Asent	Asent	Asent	10	40	<5	10	<5	<5
Metals																			
Arsenic	mg/kg	11	11	**11**	--	--	**12**	**11**	--	**7**	--	--	--	**10**	**10**	--	**8.40 J**	10 U	--
Cadmium	mg/kg	0.80	0.80	**1.6**	**1.1**	**0.8**	**0.5**	**0.4**	--	**0.7**	--	--	--	**0.7**	**0.6**	--	**0.7**	**0.7**	--
Chromium	mg/kg	62	62	--	--	--	**31.8**	**32.1**	--	--	--	--	--	**33**	**38**	--	**29.6**	--	--
Copper	mg/kg	45	45	--	--	--	**31.7**	**28.3**	--	--	--	--	--	**25.8**	**32.2**	--	**27.2**	--	--
Lead	mg/kg	21	21	--	--	--	**9**	**8**	--	--	--	--	--	**10**	**14**	--	**7**	--	--
Mercury	mg/kg	0.20	0.20	--	--	--	**0.06**	**0.05**	--	--	--	--	--	**0.0435 J**	**0.15**	--	**0.05**	--	--
Silver	mg/kg	0.30	0.30	--	--	--	0.6 U	0.5 U	--	--	--	--	--	0.6 U	0.6 U	--	0.5 U	--	--
Zinc	mg/kg	93	93	--	--	--	**67**	**70**	--	--	--	--	--	**79**	**86**	--	**67**	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	**0.013**	**0.011**	**0.009**	--	0.005 U	--	0.043 U	**0.013**	**0.007**	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	**5**	--	--	**81**	**69**	--	--	--	--	--	**71**	**120**	**160**	**73**	**69**	--
Acenaphthene	µg/kg	4,800,000	67,000,000	**4.0 J**	--	--	**58**	**63**	--	--	--	--	--	**120**	**620**	**170**	**26**	**76**	--
Acenaphthylene	µg/kg	4,800,000	67,000,000	**3.6 J**	--	--	**41**	**47**	--	--	--	--	--	**93**	**100**	**61**	**51**	**35**	--
Anthracene	µg/kg	4,800,000	67,000,000	**8**	--	--	**68 J**	**90 J**	--	--	--	--	--	**170**	**800**	**490**	**1,300**	**250**	--
Fluorene	µg/kg	3,200,000	45,000,000	**7.4**	--	--	**65**	**63**	--	--	--	--	--	**170**	**750**	**270**	**250**	**160**	--
Naphthalene	µg/kg	1,600,000	22,000,000	**41**	--	--	**290**	**280**	--	--	--	--	--	**230**	**860**	**790**	**140**	**160**	--
Phenanthrene	µg/kg	4,800,000	67,000,000	**25**	--	--	**180**	**190**	--	--	--	--	--	**1,900**	**1,100**	**610**	**720**	**290**	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**6.1**	--	--	**140**	**100**	--	**20**	--	**5**	--	**220**	**540**	**320**	**1,100**	**350**	--
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**5.9**	--	--	**93**	**83**	--	**14**	--	**4.2 J**	--	**130**	**240**	**180**	**840**	**190**	--
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**12**	--	--	**190**	**200**	--	26	--	11	--	**600**	**660**	**410**	**1,700**	**86**	--
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**4.3 J**	--	--	**46**	**44**	--	--	--	--	--	**63**	**95**	**110**	**320**	**560**	--
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**7.4**	--	--	**150**	**140**	--	**18**	--	**6.3**	--	**780**	**750**	**410**	**1,800**	**630**	--
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	5.0 U	--	--	**12 J**	14 U	--	4.8 U	--	4.8 U	--	**18**	**23**	**23**	**87**	**26**	--
Fluoranthene	µg/kg	3,200,000	45,000,000	**33**	--	--	**310**	**320**	--	--	--	--	--	**3,000**	**3,500**	**1,800**	**1,900**	**1,800**	--
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**3.5 J**	--	--	**38**	**36**	--	**7.4**	--	4.8 U	--	**63**	**78**	**85**	**270**	**79**	--
Pyrene	µg/kg	2,400,000	34,000,000	**31**	--	--	**550**	**410**	--	--	--	--	--	**2,000**	**2,200**	**1,200**	**1,400**	**1,200**	--
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**8.35**	--	--	**132.5**	**119.4**	--	**19.7**	--	**5.99 J**	--	**227.9**	**377.6**	**267.9**	**1173.7**	**250.4**	--
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	--	--	--	4.8 U	4.8 U	--	--	--	--	--	4.9 U	4.8 U	--	5.0 U	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	--	--	--	4.8 U	4.8 U	--	--	--	--	--	4.9 U	**3.5 J**	--	5.0 U	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	--	--	--	4.8 U	**2.5 J**	--	--	--	--	--	4.9 U	**11**	--	5.0 U	--	--
Hexachlorobenzene	µg/kg	690	1,600	--	--	--	4.8 U	4.8 U	--	--	--	--	--	4.9 U	4.8 U	--	5.0 U	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	--	--	--	**60**	**64**	--	--	--	--	--	**67**	**62 J**	--	**56**	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	--	--	--	4.8 U	4.8 U	--	--	--	--	--	**13**	4.8 U	--	**20**	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	--	--	--	19 U	19 U	--	--	--	--	--	20 U	19 U	--	20 U	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	--	--	--	19 U	38 U	--	--	--	--	--	20 U	19 U	--	43 U	--	--
Dimethyl Phthalate	µg/kg	NE	NE	--	--	--	19 U	19 U	--	--	--	--	--	20 U	19 U	--	20 U	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	--	--	--	19 U	19 U	--	--	--	--	--	20 U	19 U	--	20 U	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-05	LY-05	LY-05	LY-06	LY-06	LY-06	LY-06	LY-07	LY-07	LY-07	LY-08	LY-08	LY-08	LY-09	LY-09	LY-09
Sample Identification				LY-SC-05_ 1-2	LY-SC-05_ 3-4	LY-SC-05_ 4-5	LY-SS-06_ 0-10	LY-SS-Dup-02 (LY-SS-06_0-10)	LY-SC-06_ 3-4	LY-SC-06_ 4-5	LY-SS-07_ 0-10	LY-SC-07_ 0-1	LY-SC-07_ 3-4	LY-SS-08_ 0-10	LY-SC-08_ 3-4	LY-SC-08_ 5-6	LY-SS-09_ 0-10	LY-SC-09_ 2-3	LY-SC-09_ 3-4
Sample Date				11/19/15	11/19/15	11/19/15	11/17/15	11/17/15	11/19/15	11/19/15	11/17/15	11/20/15	11/20/15	11/17/15	11/20/15	11/20/15	11/17/15	11/18/2015	11/18/2015
Sample Interval (dbm)				1 - 2	3 - 4	4 - 5	0 - 10 cm	0 - 10 cm	3 - 4	4 - 5	0 - 10 cm	0 - 1	3 - 4	0 - 10 cm	3 - 4	5 - 6	0 - 10 cm	2 - 3	3 - 4
Sample Type				Core	Core	Core	Surface	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core	Surface	Core	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Native	Recent	Recent	Recent	Native	Recent	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Intertidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--	--	--	24 U	**14 J**	--	24 U	--	--	--	24 U	**12 J**	--	25 U	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--	--	--	19 U	19 U	--	19 U	--	--	--	20 U	**15 J**	--	20 U	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--	--	--	**310 J**	**550 J**	--	19 U	--	--	--	**280**	**330**	--	**200**	--	--
Pentachlorophenol	µg/kg	550	1,400	--	--	--	97 U	97 U	--	96 U	--	--	--	97 U	96 U	--	99 U	--	--
Phenol	µg/kg	18,000,000	260,000,000	--	--	--	**50 J**	**78 J**	--	8.6 J	--	--	--	**41 J**	**160**	--	**47 J**	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	--	--	--	**61**	**53**	--	--	--	--	--	**110**	**370**	--	**67**	--	--
Hexachlorobutadiene	µg/kg	14,000	33,000	--	--	--	4.8 U	4.8 U	--	--	--	--	--	4.9 U	4.8 U	--	5.0 U	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--	--	--	4.8 U	4.8 U	--	--	--	--	--	4.9 U	4.8 U	--	5.0 U	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--	--	--	**130 J**	**78 J**	--	--	--	--	--	**92 J**	**360**	--	**96 J**	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--	--	--	19 U	19 U	--	--	--	--	--	20 U	19 U	--	20 U	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	**10.7 J**	**3.62 J**	--	0.0479 J	**0.458 J**	--	--	**1.1 J**	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	**1.149 J**	**0.22 J**	--	**0.043 JL10**	**0.069 J**	--	--	**0.108 J**	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	--	--	--	**3.56 J**	**2.64 J**	--	--	--	--	--	**8.04**	--	**6.56 J**	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

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Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-10	LY-10	LY-11	LY-11	LY-13	LY-14	LY-14	LY-14	*LY-15*	*LY-15*	*LY-16*	LY-16	LY-17	LY-17	LY-18	LY-18
Sample Identification				LY-SS-10_ 0-10	LY-SC-10_ 0-1	LY-SS-11_ 0-10	LY-SC-11_ 0-1	LY-SS-13_ 0-10	LY-SS-14_ 0-10	LY-SC-14_ 0-1	LY-SC-14_ 1-2	*LY-SS-15_ 0-10*	*LY-SC-15_ 0-1*	*LY-SS-16_ 0-10*	LY-SC-16_ 1-2	LY-SS-17_ 0-10	LY-SC-17_ 1-2	LY-SS-18_ 0-10	LY-SC-18_ 0-1
Sample Date				11/17/15	11/18/15	11/17/15	11/19/15	11/17/15	08/30/21	08/31/21	08/31/21	*08/30/21*	*09/02/21*	*08/30/21*	09/02/21	08/31/21	09/01/21	08/30/21	09/01/21
Sample Interval (dbm)				0 - 10 cm	0 - 1	0 - 10 cm	0 - 1	0 - 10 cm	0 - 10 cm	0 - 1 ft	1 - 2 ft	*0 - 10 cm*	*0 - 1 ft*	*0 - 10 cm*	1 - 2 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 1 ft
Sample Type				Surface	Core	Surface	Core	Surface	Surface	Core	Core	*Surface*	*Core*	*Surface*	Core	Surface	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	*Recent*	*Recent*	*Recent*	Recent	Recent	Native	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	*Subtidal*	*Subtidal*	*Subtidal*	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	*NS*	*NS*	*NS*	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	NE	NE	<5	<5	Asent	<5	Asent	Asent	Asent	Asent	*10*	*Asent*	*10*	Asent	Asent	Asent	Asent	Asent
Metals																			
Arsenic	mg/kg	11	11	**8.29 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.80	0.80	**0.7**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	62	62	**31.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	45	45	**22.2**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	21	21	**8**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.20	0.20	**0.09**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	0.30	0.30	0.5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	93	93	**68**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	--	--	--	--	--	--	--	--	--	--	*4.17*	**1.9**	**0.809**	**0.559**	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	**50**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	4,800,000	67,000,000	**24**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	4,800,000	67,000,000	**30**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/kg	4,800,000	67,000,000	**61**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/kg	3,200,000	45,000,000	**39**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	1,600,000	22,000,000	**150**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	4,800,000	67,000,000	**130**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**110**	**580**	**130**	**170**	**75**	**10**	**39.2**	--	*32.2*	*25*	*376*	**10.7**	**12.7**	**3.36 J**	**2.29 J**	4.97 U
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**82**	**320**	**110**	**170**	**130**	**10.1**	**35.3**	--	*25.2*	*26.4*	*276*	**15.8**	**17.3**	**3.1 J**	**2.96 J**	4.97 U
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**230**	**820**	**270**	**410**	**330**	**14.76**	**80.1**	--	*47.9*	*39.8*	*602*	**26.84**	**25.55**	**3.21 J**	**3.88 J**	4.97 U
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**41**	**130**	--	--	--	**8.98**	**18.1**	--	*16.7*	*20.4*	*98.7*	**11.9**	**12.6**	**1.17 J**	**2.65 J**	4.97 U
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**180**	**820**	**190**	**330**	**130**	**12.8**	**85.6**	--	*44.7*	*37.4*	*640*	**17.7**	**20.8**	**4.63 J**	**4.02 J**	4.97 U
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**12 J**	**41**	**17**	**23**	**20**	**3.84 J**	**7.17**	--	*5.63*	*7.93*	*44.6*	**4.38 J**	**4.14 J**	4.99 U	5 U	4.97 U
Fluoranthene	µg/kg	3,200,000	45,000,000	**190**	**880**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**36**	**120**	**49**	**70**	**62**	**6.26**	**15.2**	--	*14.5*	*18.2*	*107*	**9**	**11.6**	**1.12 J**	**2.09 J**	4.97 U
Pyrene	µg/kg	2,400,000	34,000,000	**260**	**1,500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**122.6**	**484.3**	**158.5**	**240.6**	**180**	**13.71**	**50.32**	--	*35.67*	*35.87*	*395.36*	**21.07**	**22.91**	**4.12 J**	**4.04 J**	7.01 Lmax
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	690	1,600	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	**42 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	**9.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	19 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	57 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	NE	NE	19 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	19 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-10	LY-10	LY-11	LY-11	LY-13	LY-14	LY-14	LY-14	*LY-15*	*LY-15*	*LY-16*	LY-16	LY-17	LY-17	LY-18	LY-18
Sample Identification				LY-SS-10_ 0-10	LY-SC-10_ 0-1	LY-SS-11_ 0-10	LY-SC-11_ 0-1	LY-SS-13_ 0-10	LY-SS-14_ 0-10	LY-SC-14_ 0-1	LY-SC-14_ 1-2	*LY-SS-15_ 0-10*	*LY-SC-15_ 0-1*	*LY-SS-16_ 0-10*	LY-SC-16_ 1-2	LY-SS-17_ 0-10	LY-SC-17_ 1-2	LY-SS-18_ 0-10	LY-SC-18_ 0-1
Sample Date				11/17/15	11/18/15	11/17/15	11/19/15	11/17/15	08/30/21	08/31/21	08/31/21	*08/30/21*	*09/02/21*	*08/30/21*	09/02/21	08/31/21	09/01/21	08/30/21	09/01/21
Sample Interval (dbm)				0 - 10 cm	0 - 1	0 - 10 cm	0 - 1	0 - 10 cm	0 - 10 cm	0 - 1 ft	1 - 2 ft	*0 - 10 cm*	*0 - 1 ft*	*0 - 10 cm*	1 - 2 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 1 ft
Sample Type				Surface	Core	Surface	Core	Surface	Surface	Core	Core	*Surface*	*Core*	*Surface*	Core	Surface	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	*Recent*	*Recent*	*Recent*	Recent	Recent	Native	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	*Subtidal*	*Subtidal*	*Subtidal*	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	24 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	19 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	**370**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	550	1,400	96 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	18,000,000	260,000,000	**46 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	**33**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	14,000	33,000	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	4.8 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	**110 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	19 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	--	--	--	--	--	**0.9 J**	**9.9 J**	1.6 U	*121*	*13.9*	*160.6*	**2 J**	1.6 U	1.6 U	--	--
Total PCBs Congeners	µg/kg	3.5	3.5	**0.997 J**	--	**0.489 J**	--	**13.0 J**	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	**0.094 J**	--	**0.097 J**	--	**0.458**	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	**4.02 J**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-19	LY-19	LY-19	LY-20	LY-20	LY-20	LY-21	LY-21	LY-22	LY-22	LY-22	LY-23	LY-23	LY-23	LY-24	LY-24
Sample Identification				LY-SS-19_ 0-10	LY-SC-19_ 1-2	LY-SC-19_ 2-3	LY-SS-20_ 0-10	LY-SC-20_ 1-2	LY-SC-20_ 2-3	LY-SS-21_ 0-10	LY-SC-21_ 1-2	LY-SS-22_ 0-10	LY-SS-22_Dup-1 (LY-SS-22_0-10)	LY-SC-22_ 1-2	LY-SS-23_ 0-10	LY-SC-23_ 2-3	LY-SC-23_ 5-6	LY-SS-24_ 0-10	LY-SC-24_ 0-1
Sample Date				08/30/21	08/31/21	08/31/21	08/30/21	08/31/21	08/31/21	08/30/21	09/02/21	08/31/21	08/31/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21	09/01/21
Sample Interval (dbm)				0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 10 cm	1 - 2 ft	0 - 10 cm	2 - 3 ft	5 - 6 ft	0 - 10 cm	0 - 1 ft
Sample Type				Surface	Core	Core	Surface	Core	Core	Surface	Core	Surface	Surface	Core	Surface	Core	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	NE	NE	Asent	Asent	Asent	5	Asent	Asent	5	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent
Metals																			
Arsenic	mg/kg	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.80	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	62	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	45	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	0.30	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	93	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	*5.72*	--	--	*97.9*	--	--	*21.9*	**4.31**	*42.3 J*	*17.6 J*	**17.9 J**	--	--	--	--	*267*
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/kg	3,200,000	45,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	1,600,000	22,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	*43.3*	**17.3**	--	*263*	**229**	**100.0**	*238*	**173**	*75.6 J*	*50.1*	**58.8**	**89.2**	**181**	**198**	*11.8*	--
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	*36.3*	**26.7**	--	*242*	**154**	**72.7**	*191*	**126**	*64.7 J*	*92.4*	**78.9**	**56.1**	**144**	**172**	*14*	--
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	*81.6*	**44.6**	--	*820*	**324**	**117.7**	*701*	**228.6**	*177.5 J*	*205.3*	**153.4**	**110.7**	**288**	**247.5**	*23.43*	--
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	*28.8*	**19.9**	--	*146 J*	**86.9**	**39.0**	*107*	**87.1**	*40.4 J*	*49.5*	**42.6**	**34.6**	**82.3**	**103**	*12.2*	--
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	*87.3*	**30.9**	--	*892*	**445**	**101.0**	*966*	**296**	*219 J*	*134*	**105**	**235**	**375**	**258**	*18.5*	--
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	*9.31*	**5.17**	--	*33.4 J*	**27.7**	**27.0**	*42.4 J*	**26.8**	*12.1*	*15.9*	**15.2**	**11.7**	**29.2**	**24**	*3.4 J*	--
Fluoranthene	µg/kg	3,200,000	45,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	*23.9*	**15**	--	*145 J*	**81.5**	**37.3**	*116*	**83**	*38.5 J*	*48.6*	**44.7**	**31.8**	**82.9**	**81.7**	*9.27*	--
Pyrene	µg/kg	2,400,000	34,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	*52.98*	**35.22**	--	*377.06*	**224.67**	**101.91**	*310.4*	**180.1**	*97.26 J*	*125.73*	**107.16**	**82.79**	**205.86**	**229.7**	*18.98*	--
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	690	1,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-19	LY-19	LY-19	LY-20	LY-20	LY-20	LY-21	LY-21	LY-22	LY-22	LY-22	LY-23	LY-23	LY-23	LY-24	LY-24
Sample Identification				LY-SS-19_ 0-10	LY-SC-19_ 1-2	LY-SC-19_ 2-3	LY-SS-20_ 0-10	LY-SC-20_ 1-2	LY-SC-20_ 2-3	LY-SS-21_ 0-10	LY-SC-21_ 1-2	LY-SS-22_ 0-10	LY-SS-22_Dup-1 (LY-SS-22_0-10)	LY-SC-22_ 1-2	LY-SS-23_ 0-10	LY-SC-23_ 2-3	LY-SC-23_ 5-6	LY-SS-24_ 0-10	LY-SC-24_ 0-1
Sample Date				08/30/21	08/31/21	08/31/21	08/30/21	08/31/21	08/31/21	08/30/21	09/02/21	08/31/21	08/31/21	09/01/21	08/30/21	08/31/21	08/31/21	08/30/21	09/01/21
Sample Interval (dbm)				0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	2 - 3 ft	0 - 10 cm	1 - 2 ft	0 - 10 cm	0 - 10 cm	1 - 2 ft	0 - 10 cm	2 - 3 ft	5 - 6 ft	0 - 10 cm	0 - 1 ft
Sample Type				Surface	Core	Core	Surface	Core	Core	Surface	Core	Surface	Surface	Core	Surface	Core	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	550	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	18,000,000	260,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	14,000	33,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	*9.2 J*	**38 J**	**1.2 J**	*9.6 J*	--	**3.7 J**	*8.1 J*	**23.4**	*9.8 J*	*9.2 J*	**10.5 J**	--	**12.5 J**	--	--	*25.6 J*
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	--	--	--	*2.68*	**8.09**	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-24	LY-25	LY-25	LY-25	LY-26	LY-26	LY-27	LY-27	LY-28	LY-28	LY-28	LY-28	LY-29	LY-29	LY-30	LY-30
Sample Identification				LY-SC-24_ 1-2	LY-SS-25_ 0-10	LY-SC-25_ 1-2	LY-SC-25_ 3-4	LY-SS-26_ 0-10	LY-SS-26_Dup-1 (LY-SS-26_0-10)	LY-SS-27_ 0-10	LY-SC-27_ 1-2	LY-28_ 0-10	Dup (LY-28_0-10)	LY-28_ 1-2	LY-28_ 2-3	LY-29_ 0-10	LY-29_ 1-2	LY-30_ 0-10	LY-30_ 1-2
Sample Date				09/01/21	08/30/21	09/02/21	09/02/21	08/31/21	08/31/21	08/31/21	09/01/21	01/26/23	01/26/23	01/27/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23
Sample Interval (dbm)				1 - 2 ft	0 - 10 cm	1 - 2 ft	3 - 4 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	1 -2 ft	2 - 3 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft
Sample Type				Core	Surface	Core	Core	Surface	Surface	Surface	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	Recent	Native	Recent	Native
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Visual Wood Content[3]	%	NE	NE	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent
Metals																			
Arsenic	mg/kg	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.80	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	62	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	45	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	0.30	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	93	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	--	*15.5 J*	**97.8**	**87.9 J**	*12 J*	*128 J*	*257*	**291**	--	--	--	--	--	--	--	--
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/kg	3,200,000	45,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	1,600,000	22,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/kg	4,800,000	67,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**68.1**	*30*	**125**	**34.6**	*455 J*	*19.9 J*	*37.3*	--	**11.2 J**	**28.7 J**	**136**	**3.80 J**	--	--	**9.31**	**1.57 J**
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**114**	*32.6*	**144**	**46.6**	*332 J*	*24.1 J*	*40.3*	--	**11.4 J**	**29.2 J**	**204**	**7.37**	--	--	**11.8**	**3.41 J**
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**223**	*86.1*	**323**	**71.9**	*548 J*	*47.8 J*	*74.7*	--	**13.45 J**	**79.5 J**	**333**	**14.43 J**	--	--	**10.46 J**	**7.37 J**
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**64.6**	*20.4*	**100**	**35.5**	*144 J*	*19.2 J*	*37.9*	--	**9.15**	**13.9**	**118**	**3.11 J**	--	--	**9.28**	**1.62 J**
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**119**	*67.7*	**255**	**47.8**	*665 J*	*35.1 J*	*52.7*	--	**11.9 J**	**62.7 J**	**212**	**6.13**	--	--	**25**	**2.73 J**
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**21.4**	*6.13*	**34.9**	**6.1**	*47.6 J*	*8.48 J*	*10.6*	--	**2.83 J**	**4.06 J**	**32.2**	4.98 U	--	--	**2.9**	4.95 U
Fluoranthene	µg/kg	3,200,000	45,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**61.3**	*19*	**100**	**23.5**	*155 J*	*18.2 J*	*23.3*	--	**5.35**	**13.1**	**106**	**2.43 J**	--	--	**3.77**	**1.31 J**
Pyrene	µg/kg	2,400,000	34,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**152.57**	*47.4*	**204.84**	**60.69**	*459.21 J*	*33.89 J*	*55.42*	--	**14.8 J**	**42.36 J**	**266.84**	**9.73**	--	--	**14.69**	**4.57 J**
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	690	1,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-24	LY-25	LY-25	LY-25	LY-26	LY-26	LY-27	LY-27	LY-28	LY-28	LY-28	LY-28	LY-29	LY-29	LY-30	LY-30
Sample Identification				LY-SC-24_ 1-2	LY-SS-25_ 0-10	LY-SC-25_ 1-2	LY-SC-25_ 3-4	LY-SS-26_ 0-10	LY-SS-26_Dup-1 (LY-SS-26_0-10)	LY-SS-27_ 0-10	LY-SC-27_ 1-2	LY-28_ 0-10	Dup (LY-28_0-10)	LY-28_ 1-2	LY-28_ 2-3	LY-29_ 0-10	LY-29_ 1-2	LY-30_ 0-10	LY-30_ 1-2
Sample Date				09/01/21	08/30/21	09/02/21	09/02/21	08/31/21	08/31/21	08/31/21	09/01/21	01/26/23	01/26/23	01/27/23	01/27/23	01/26/23	01/27/23	01/26/23	01/27/23
Sample Interval (dbm)				1 - 2 ft	0 - 10 cm	1 - 2 ft	3 - 4 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	1 -2 ft	2 - 3 ft	0 - 10 cm	1 -2 ft	0 - 10 cm	1 -2 ft
Sample Type				Core	Surface	Core	Core	Surface	Surface	Surface	Core	Surface	Surface	Core	Core	Surface	Core	Surface	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	Recent	Native	Recent	Native
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	550	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	18,000,000	260,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/kg	14,000	33,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	--	*8.5*	**10.2**	--	*8.8 J*	*12.2 J*	*48.8*	--	1.6 U	1.6 U	24.4 J	1.6 U	8.5	1.6 U	1.6 U	--
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	--	*4.38*	**10.62**	--	*1.83 J*	*2.17*	*4.87*	--	--	--	--	--	--	--	--	--

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specil

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

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U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-31	LY-31	LY-32	COA_01	COA_02	COA_03	COA_04	COA_05	COA_05	COA_06	COA_06	COA_07	COA_08	COA-SS-1	COA-SS-1	COA-SS-1
Sample Identification				LY-31_ 0-10	LY-31_ 1-2	LY-32_ 0-10	COA_01_G_ 20201120	COA_02_G_ 20201119	COA_03_G_ 20201118	COA_04_G_ 20201118	COA_05_G_ 20201119	COA_05-D_G_ 20201119	COA_06_G_ 20201120	COA_06-D_G_ 20201120	COA_07_G_ 20201118	COA_08_G_ 20201119	COA-SS-1-1-3-20201116	COA-SS-1-3-5-20201116	COA-SS-1-6.5-8.5-20201116
Sample Date				01/26/23	01/27/23	01/26/23	11/20/20	11/19/20	11/18/20	11/18/20	11/19/20	11/19/20	11/20/20	11/20/20	11/18/20	11/19/20	11/16/20	11/16/20	11/16/20
Sample Interval (dbm)				0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 - 3 ft	3 -5 ft	6.5 - 8.5 ft
Sample Type				Surface	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core	Core	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	Native
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	NS	NS	NS	–	–	–	–	–	–	–	–	–	–	–	–	–
Visual Wood Content[3]	%	NE	NE	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Asent	<5	Asent	Asent	Asent
Metals																			
Arsenic	mg/kg	11	11	–	–	–	3.15	6.44	6.17	6.26	7.5	7.24	6.56	5.65	5.98	3.2	4.38	4.02	**5.11**
Cadmium	mg/kg	0.80	0.80	–	–	–	0.14	0.85	0.58	0.57	0.54	0.55	0.39	0.39	0.41	0.14	0.28	0.12	**0.12**
Chromium	mg/kg	62	62	–	–	–	27.5	32.3	34.3	34.2	36.9	30.8	25.4	30.3	55.6	32	62	124	**99.7**
Copper	mg/kg	45	45	–	–	–	28.4	36.3	31.7	25.4	29.3	22.2	12.3	6.63	23.8	12.5	34.3	23.7	**23.9**
Lead	mg/kg	21	21	–	–	–	13.6	11.4	9.44	7.82	9.73	7.21	5.16	3.82	2.02	3.71	5.01	2.78	**3.02**
Mercury	mg/kg	0.20	0.20	–	–	–	0.0149 J	0.111	0.0835	0.0716	0.0531	0.46	0.0534	0.04	0.046	0.0181 J	0.157	0.0347	**0.0321**
Silver	mg/kg	0.30	0.30	–	–	–	0.05 J	0.17 J	0.11 J	0.11 J	0.08 J	0.08 J	0.06 J	0.05 J	0.05 J	0.03 J	0.1 J	0.07 J	**0.06 J**
Zinc	mg/kg	93	93	–	–	–	122	82.8	77.8	76.2	62	63.9	38.5	39.9	38.4	38.6	59.9	45.4	**47.4**
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tributyltin Ion (bulk sediment)	µg/kg	73	73	–	–	–	16.7	118	17	8.97	382	119	15.9	3.08 J	2.05 J	0.838 J	23.1	4.92	3.81 U
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	–	–	–	9.1 J	17.8 J	24.2	21.6	21.2	24.2	13.7 J	18.5 J	14.2 J	19.9 U	8.3 J	19.9 U	19.9 U
Acenaphthene	µg/kg	4,800,000	67,000,000	–	–	–	19.9 U	10.7 J	24.9	10.8 J	17.9 J	23	17.1 J	9 J	13.9 J	19.9 U	19.9 U	19.9 U	19.9 U
Acenaphthylene	µg/kg	4,800,000	67,000,000	–	–	–	19.9 U	34.8	14.5 J	12.7 J	48.1	15.9 J	13.7 J	22.2	14.9 J	19.9 U	19.9 U	19.9 U	19.9 U
Anthracene	µg/kg	4,800,000	67,000,000	–	–	–	19.9 U	62.3	29.8	30.3	120	46.5	51.8	67.7	38.6	19.9 U	6.1 J	19.9 U	19.9 U
Fluorene	µg/kg	3,200,000	45,000,000	–	–	–	19.9 U	23	31.3	22.1	41.3	32	29.3	21.7	17.3 J	19.9 U	5 J	19.9 U	19.9 U
Naphthalene	µg/kg	1,600,000	22,000,000	–	–	–	19.9 U	30.6	23.9	37.7	65.8	80.2	102	67.8	65.1	7.7 J	34.5	19.9 U	19.9 U
Phenanthrene	µg/kg	4,800,000	67,000,000	–	–	–	7 J	146	77.1	69.5	201	89.3	161	133	88.8	19.9 U	20.1	6.2 J	**6 J**
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**9.01**	4.98 U	–	6.2 J	193	57.9	62.3	366	82.1	80.5	170	64.5	19.9 U	11.5 J	19.9 U	19.9 U
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**6.83**	4.98 U	–	12.4 J	168	70.4	72.2	367	83	85	391	88	19.9 U	16 J	19.9 U	19.9 U
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**7.2 J**	4.98 U	–	28.4 J	788	209.0	217.0	816	202.0	175.0	989	600.0	39.8 U	42	39.8 U	39.8 U
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**4.04 J**	4.98 U	–	15 J	81	41.2	39.3	165	47.2	32.9	162	78.6	19.9 U	13.6 J	19.9 U	**9.3 J**
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**11.4**	4.98 U	–	26.5	873	160	143	652	146	96	771	236	19.9 U	23.3	19.9 U	19.9 U
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**1.09 J**	4.98 U	–	19.9 U	33.9	17.9 J	18.2 J	75.8	19.5 J	13.7 J	77.2	33.8	19.9 U	19.9 U	19.9 U	19.9 U
Fluoranthene	µg/kg	3,200,000	45,000,000	–	–	–	11.3 J	1,480	182	100	1,060	218	189	450	123	4.6 J	34.2	19.9 U	19.9 U
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**2.98 J**	4.98 U	–	19.9 U	93.6	38.4	39.2	183	43.8	37	180	85.5	19.9 U	10.1 J	19.9 U	19.9 U
Pyrene	µg/kg	2,400,000	34,000,000	–	–	–	26.3	1,050	234	158	1,030	304	266	503	184	8.8 J	116	8.2 J	19.9 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**8.97**	7.02 Lmax	–	17.01 J	287.58	104.32	107.3	517.6	119.2	116.58	540.33	168.74	30.05 Lmax	23.39 J	30.05 Lmax	30.05 Lmax
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	–	–	–	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	–	–	–	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	–	–	–	5 U	5 U	5 U	5 U	5 U	1.7 J	1.1 J	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobenzene	µg/kg	690	1,600	–	–	–	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	–	–	–	49.6 U	48.8 J	34.9 J	35.7 J	32.6 J	49.9 U	49.9 U	118	49.8 U	49.8 U	378	49.8 U	49.8 U
Butyl benzyl Phthalate	µg/kg	180,000	460,000	–	–	–	19.9 U	9.8 J	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	–	–	–	15 J	15.9 J	19.6 J	18.4 J	17.1 J	15.6 J	14.3 J	19.7 J	17.5 J	14.8 J	19.9 U	19.9 U	19.9 U
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	–	–	–	19.9 U	27.4	19.9 U	19.9 U	19.9 U	20 U	23.8	17.6 J	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Dimethyl Phthalate	µg/kg	NE	NE	–	–	–	19.9 U	26.3	19.9 U	8.3 J	19.9 U	8.5 J	20 U	183	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	–	–	–	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U

Sample Location[1]		Proposed Sediment Cleanup Level[2]		LY-31	LY-31	LY-32	COA_01	COA_02	COA_03	COA_04	COA_05	COA_05	COA_06	COA_06	COA_07	COA_08	COA-SS-1	COA-SS-1	COA-SS-1
Sample Identification				LY-31_ 0-10	LY-31_ 1-2	LY-32_ 0-10	COA_01_G_ 20201120	COA_02_G_ 20201119	COA_03_G_ 20201118	COA_04_G_ 20201118	COA_05_G_ 20201119	COA_05-D_G_ 20201119	COA_06_G_ 20201120	COA_06-D_G_ 20201120	COA_07_G_ 20201118	COA_08_G_ 20201119	COA-SS-1-1-3-20201116	COA-SS-1-3-5-20201116	COA-SS-1-6.5-8.5-20201116
Sample Date				01/26/23	01/27/23	01/26/23	11/20/20	11/19/20	11/18/20	11/18/20	11/19/20	11/19/20	11/20/20	11/20/20	11/18/20	11/19/20	11/16/20	11/16/20	11/16/20
Sample Interval (dbm)				0 - 10 cm	1 -2 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	1 - 3 ft	3 -5 ft	6.5 - 8.5 ft
Sample Type				Surface	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Core	Core	Core
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Native	Native
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--	--	--	19.9 U	3 J	2.2 J	19.9 U	19.9 U	3.6 J	2.2 J	3.2 J	2.2 J	19.9 U	19.9 U	19.9 U	99.5 U
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--	--	--	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--	--	--	19.9 U	51.3	33.5	16.3 J	81.3	46	31.5	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Pentachlorophenol	µg/kg	550	1,400	--	--	--	99.3 U	99.6 U	99.7 U	99.7 U	99.6 U	99.8 U	99.8 U	99.6 U	99.5 U	99.6 U	99.5 U	99.6 U	99.5 U
Phenol	µg/kg	18,000,000	260,000,000	--	--	--	19.9 U	12.7 J	11.9 J	11.3 J	10 J	15 J	10.8 J	8.7 J	19.9 U	19.9 U	19.9 U	19.9 U	8.9 J
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	--	--	--	19.9 U	11.9 J	27.6	14.1 J	22	24.1	14.4 J	21.1	14.9 J	19.9 U	5.1 J	19.9 U	19.9 U
Hexachlorobutadiene	µg/kg	14,000	33,000	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	19.9 U
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--	--	--	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--	--	--	73.4 J	199 U	199 U	199 U	199 U	200 U	200 U	199 U	199 U	199 U	199 U	199 U	199 U
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--	--	--	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U	19.9 U
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	1.6 U	1.6 U	1.6 U	11.5 J	14.8 J	7.6 J	7.2 J	17.3	7	2.1 J	4.5 J	13.9	1.6 U	2.1	1.6 U	1.6 U
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	--	--	--	2.55 J	4.39 J	4.19	3.54 J	4.41	1.84 JL10	1.75 J	3.44	1.81 J	1.19 JL10	1.97 J	1.06 JL13	0.98 JL15

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-3	COA-SS-3	COA-SS-3	COA-SS-3	Pre-1	Pre-2	Pre-3	PP-1-Pre	PP-2-Pre	PP-2-Pre	PP-3-Pre	PP-4-Pre
Sample Identification				COA-SS-2-1.5-3.5-20201118	COA-SS-2-3.5-5.5-20201118	COA-SS-2-5.5-7.5-20201118	COA-SS-2-7.5-9.5-20201118	COA-SS-3-1-3-20201118	COA-SS-3-3-5-20201118	COA-SS-3-5-7-20201118	COA-SS-3-7-9-20201118	COA_NS-01-PRE-20240730	COA_NS-02-PRE-20240730	COA_NS-03-PRE-20240730	COA_PP-01-PRE_20240730	COA_PP-02-PRE_20240730	COA_PP-02-PRE_20240730DUP	COA_PP-03-PRE_20240730	COA_PP-04-PRE_20240730
Sample Date				11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24
Sample Interval (dbm)				1.5 - 3.5 ft	3.5 - 5.5 ft	5.5 - 7.5 ft	7.5 - 9.5 ft	1 - 3 ft	3 -5 ft	5 -7 ft	7 - 9 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type				Core	Core	Core	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Native	Native	Recent	Native	Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	NE	NE	<5	Asent	Asent	Asent	Asent	Asent	Asent	Asent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Metals																			
Arsenic	mg/kg	11	11	3.96	6.05	6.37	4.9	3.78	5.02	1.14	2.82	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.80	0.80	0.11 J	0.05 J	0.08 J	0.13	0.25	0.09 J	0.11 U	0.07 J	--	--	--	--	--	--	--	--
Chromium	mg/kg	62	62	23.3	40.2	38.2	73.5	23.6	81.5	39.3	79.4	--	--	--	--	--	--	--	--
Copper	mg/kg	45	45	19.5	41.2	41.3	37.4	8.34	21.3	9.48	26.5	--	--	--	--	--	--	--	--
Lead	mg/kg	21	21	2.99	4.73	4.87	3.95	2.41	2.42	0.87	2.81	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.20	0.20	0.0574	0.0377	0.0364	0.0317	0.019 J	0.0319	0.0307	0.0307	--	--	--	--	--	--	--	--
Silver	mg/kg	0.30	0.30	0.06 J	0.05 J	0.07 J	0.07 J	0.05 J	0.06 J	0.21 U	0.09 J	--	--	--	--	--	--	--	--
Zinc	mg/kg	93	93	34.9	68.1	69.6	60.1	27.6	38.6	20.7	43.5	--	--	--	--	--	--	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	9.34	3.84 U	3.83 U	0.502 J	0.958 J	3.82 U	3.83 U	3.8 U	7.04	8.96	52.9	2.51 J	1.92 UJ	4.4 J	13.8	18.7
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	21.9	16.6	26.2	22.4	21.6	18.4	33.4	13 J
Acenaphthene	µg/kg	4,800,000	67,000,000	19.8 U	19.9 U	19.9 U	19.9 U	5.6 J	20 U	19.9 U	20 U	10.2 J	7.5 U	12.8 J	13.5 J	7.98 J	14.4 J	41.8	7.49 U
Acenaphthylene	µg/kg	4,800,000	67,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	9.28 J	7.5 U	11.2 J	13.3 J	7.83 J	7.5 UJ	69.4	7.49 U
Anthracene	µg/kg	4,800,000	67,000,000	19.8 U	19.9 U	19.9 U	19.9 U	15.8 J	20 U	19.9 U	20 U	28.5	21.2	38.1	93.8	44.2 J	13.2 J	184	17.3
Fluorene	µg/kg	3,200,000	45,000,000	19.8 U	19.9 U	19.9 U	19.9 U	7.6 J	20 U	19.9 U	20 U	12.6 J	8.44 J	16.5	20.1	13.3 J	12 J	65.3	8.95 J
Naphthalene	µg/kg	1,600,000	22,000,000	6.4 J	19.9 U	19.9 U	19.9 U	36.1	20 U	19.9 U	20 U	64.6	14.4 J	34.3	63.9	48.5	73.8	85.3	21.9
Phenanthrene	µg/kg	4,800,000	67,000,000	12.3 J	4.7 J	4.8 J	19.9 U	30	20 U	19.9 U	6 J	96.2	50.5	107	131	85.4 J	38.5 J	700	32.4
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	5.4 J	19.9 U	19.9 U	19.9 U	23.6	20 U	19.9 U	20 U	56.4	55.1	86.3	313	59.2 J	13.8 J	805	31.2
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	9.7 J	19.9 U	19.9 U	19.9 U	25.1	20 U	19.9 U	20 U	68.5	65.9	106	258	62.3 J	15.9 J	762	46.7
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	31.3 J	39.7 U	39.7 U	39.9 U	76.2	39.9 U	39.8 U	40 U	186	136	280	598	122 J	33.2 J	2,850	110
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	6.2 J	19.9 U	19.9 U	19.9 U	13.5 J	20 U	19.9 U	20 U	39	29.9	54	77.3	39.5 J	19.6 J	292	26.2
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	10.8 J	19.9 U	19.9 U	19.9 U	65.4	20 U	19.9 U	20 U	138	75.2	191	424	159 J	22.7 J	2,320	54.2
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	19.8 U	19.9 U	19.9 U	19.9 U	6.3 J	20 U	19.9 U	20 U	11.2 J	8.16 J	15.5	30.3	13.5 J	7.5 UJ	80	7.49 U
Fluoranthene	µg/kg	3,200,000	45,000,000	14.8 J	19.9 U	19.9 U	19.9 U	42	20 U	19.9 U	20 U	286	97.6	320	350	129 J	42.9 J	10,700	67.3
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	19.8 U	19.9 U	19.9 U	19.9 U	11.9 J	20 U	19.9 U	20 U	34.7	27.6	48.7	85.7	30.4 J	8.55 J	335	23.9
Pyrene	µg/kg	2,400,000	34,000,000	93.7	19.9 U	19.9 U	6.6 J	57	20 U	19.9 U	20 U	259	115	358	373	128 J	71.1 J	8,220	138
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	14.13 J	30.04 Lmax	30.04 Lmax	30.06 Lmax	37.55	30.19 Lmax	30.05 Lmax	30.20 Lmax	98.71	89.34 J	150.96	364.94	86.4 J	21.91 J	1192.17	64.29
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	690	1,600	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	49.6 U	49.7 U	49.6 U	49.8 U	49.4 J	49.9 U	219	50 U	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	25.9	19.9 U	26.8	19.9 U	31.6	33.7	26	20 U	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	NE	NE	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-2	COA-SS-3	COA-SS-3	COA-SS-3	COA-SS-3	Pre-1	Pre-2	Pre-3	PP-1-Pre	PP-2-Pre	PP-2-Pre	PP-3-Pre	PP-4-Pre
Sample Identification				COA-SS-2-1.5-3.5-20201118	COA-SS-2-3.5-5.5-20201118	COA-SS-2-5.5-7.5-20201118	COA-SS-2-7.5-9.5-20201118	COA-SS-3-1-3-20201118	COA-SS-3-3-5-20201118	COA-SS-3-5-7-20201118	COA-SS-3-7-9-20201118	COA_NS-01-PRE-20240730	COA_NS-02-PRE-20240730	COA_NS-03-PRE-20240730	COA_PP-01-PRE_20240730	COA_PP-02-PRE_20240730	COA_PP-02-PRE_20240730DUP	COA_PP-03-PRE_20240730	COA_PP-04-PRE_20240730
Sample Date				11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	11/18/20	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24
Sample Interval (dbm)				1.5 - 3.5 ft	3.5 - 5.5 ft	5.5 - 7.5 ft	7.5 - 9.5 ft	1 - 3 ft	3 -5 ft	5 -7 ft	7 - 9 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type				Core	Core	Core	Core	Core	Core	Core	Core	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Native	Native	Native	Recent	Native	Native	Native	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	19.8 U	19.9 U	99.3 U	19.9 U	20 U	20 U	99.6 U	20 U	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	550	1,400	99.2 U	99.4 U	99.3 U	99.7 U	99.8 U	99.8 U	99.6 U	99.9 U	--	--	--	--	--	--	--	--
Phenol	µg/kg	18,000,000	260,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	19.8 U	19.9 U	19.9 U	19.9 U	**6.9 J**	20 U	19.9 U	20 U	**12.5 J**	**7.95 J**	**16.3**	**17.6**	**11.8 J**	**14.9 J**	**34.9**	**9.51 J**
Hexachlorobutadiene	µg/kg	14,000	33,000	5 U	5 U	19.9 U	19.9 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	198 U	199 U	199 U	199 U	200 U	200 U	199 U	200 U	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	19.8 U	19.9 U	19.9 U	19.9 U	20 U	20 U	19.9 U	20 U	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	**1.8 J**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**1.3**	**24.5 J**	**13.1 J**	**22.1 J**	**12.8 J**	**8.8**	**10.2 J**	**22.9 J**	**17.7 J**
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	**1.19 J**	**1.03 JL15**	**1.04 JL15**	**1.14 JL13**	**1.26 JL12**	**0.96 JL15**	**1.03 JL13**	**0.96 JL15**	**1.35 L11**	**1.33 L11**	**2.82**	**2.10 JL9**	**0.39 JL13**	**0.55 JL11**	**33.03**	**1.21L10**

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural backg

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		PP-5-Pre	PP-6-Pre	PP-7-Pre	PP-8-Pre	PP-9-Pre	PP-10-Pre	PP-1-Post	PP-1-Post	PP-2-Post	PP-3-Post	PP-4-Post	PP-5-Post	PP-6-Post	PP-7-Post	PP-8-Post	PP-9-Post
Sample Identification				COA_PP-05-PRE_20240730	COA_PP-06-PRE_20240730	COA_PP-07-PRE_20240730	COA_PP-08-PRE_20240730	COA_PP-09-PRE_20240730	COA_PP-10-PRE_20240730	COA_PP-01-POST_20241002	COA_PP-01-POST_20241002DUP	COA_PP-02-POST_20241002	COA_PP-03-POST_20241002	COA_PP-04-POST_20241002	COA_PP-05-POST_20241002	COA_PP-06-POST_20241002	COA_PP-07-POST_20241002	COA_PP-08-POST_20241002	COA_PP-09-POST_20241002
Sample Date				07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24
Sample Interval (dbm)				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Sample Type				Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Field Screening																			
Sheen	n/a	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Visual Wood Content[3]	%	NE	NE	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Metals																			
Arsenic	mg/kg	11	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	0.80	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	62	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	45	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	0.30	0.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	93	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organometallic Compounds																			
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	3.28 J	14.6	11.4	18.1	19.1	23	21.2 J	4.0 J	1.9 UJ	11.7 J	8.0 J	47.3 J	31.8 J	8.9 J	1.9 UJ	7.4 J
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)																			
2-Methylnaphthalene	µg/kg	320,000	4,500,000	13.7 J	38.7	17.2	7.47 U	18.9	22.8	15.7	11.1	9.2	33.9	9.9	9.5	113	23.3	7.3	11.3
Acenaphthene	µg/kg	4,800,000	67,000,000	7.48 U	44	7.49 U	7.47 U	11.7 J	11.7 J	6.7	5.9	4.3 J	43.3	3.2 J	13.5	40	17.2	10.3	8
Acenaphthylene	µg/kg	4,800,000	67,000,000	7.48 U	25.1	7.49 U	7.47 U	11.8 J	12.1 J	6.2 J	8.9	3.1 J	100.0 J	4.3 J	5.5 J	62.7 J	6.8 J	2.5 U	8.9 J
Anthracene	µg/kg	4,800,000	67,000,000	13.6 J	119	10.7 J	7.47 U	48.8	45.7	20	27.4 J	11.6 J	160.0	12.7	46.3 J	123	40.4	7.9	29.5
Fluorene	µg/kg	3,200,000	45,000,000	8.11 J	42.7	7.49 U	7.47 U	16.3	20.2	11.4	12.7	6.8	94	7.1	16.4	88.2	26.8	9.3	11.2
Naphthalene	µg/kg	1,600,000	22,000,000	66	76.3	23.8	25.8	69.9	61.6	39.8 J	21.2 J	22.7	59.2	12.7	51.6	78.4	27.9	8.2	37.6
Phenanthrene	µg/kg	4,800,000	67,000,000	45.2 J	267	29.1	10.7 J	104	83.2	40.8	57.5 J	23.6 J	1130	23.5	117.0 J	912	98	22.4	45.9
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)																			
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	32.6	307	24.7	7.47 U	89.3	161	55.2	59.6 J	16.4 J	1030	31.9	114	434	73.5	5.2	60.9
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	34.8	341	29.7	7.47 U	129	129	56.2	48.6	19	933	28.9	85.4	261	62	9.7	73.7
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	77.5	807	70	22.4 U	317	438	140 J	154.0 J	41.3 J	4200	86.8 J	188.0 J	703 J	165 J	33.3 J	239 J
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	22.8	131	16.6	7.47 U	63	52	26.3	25.3	13	407 J	13.3	41.2	102	27.4	3.9 J	28.5
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	71.8 J	524	46.1	9.6 J	195	366	69.6	115 J	23.0 J	2670	66.8	119	846	109	8.6	138
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	7.48 U	46.2	7.49 U	7.47 U	19.6	17	6.5 J	6.6	2.7 J	103 J	3.3 J	13.4 J	35.0 J	7.5 J	2.5 U	6.5 J
Fluoranthene	µg/kg	3,200,000	45,000,000	148 J	751	73.1	18	290	605	87.4 J	344 J	42.6 J	14,500	64.1	202 J	1490	156	26.9	138
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	16.6	140	13.7 J	7.47 U	60.7	51.6	20.7 J	22.2	9.4 J	444 J	11.0 J	36.1 J	102 J	24.9 J	3.3 J	26.5 J
Pyrene	µg/kg	2,400,000	34,000,000	132 J	861	103	22.8	263	486	199 J	319 J	60.4 J	11,400	136 J	200 J	1,600 J	230 J	34.2 J	180 J
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)																			
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	48.91	476.26	41.46	7.95 JL5	179.61	199.42	79.14	73.99	25.91	1,537.4	42.87	121.74	396.86	90.18	14.05	108.37
Chlorinated Hydrocarbons																			
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/kg	690	1,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates																			
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl Phthalate	µg/kg	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		PP-5-Pre	PP-6-Pre	PP-7-Pre	PP-8-Pre	PP-9-Pre	PP-10-Pre	PP-1-Post	PP-1-Post	PP-2-Post	PP-3-Post	PP-4-Post	PP-5-Post	PP-6-Post	PP-7-Post	PP-8-Post	PP-9-Post
Sample Identification				COA_PP-05-PRE_20240730	COA_PP-06-PRE_20240730	COA_PP-07-PRE_20240730	COA_PP-08-PRE_20240730	COA_PP-09-PRE_20240730	COA_PP-10-PRE_20240730	COA_PP-01-POST_20241002	COA_PP-01-POST_20241002DUP	COA_PP-02-POST_20241002	COA_PP-03-POST_20241002	COA_PP-04-POST_20241002	COA_PP-05-POST_20241002	COA_PP-06-POST_20241002	COA_PP-07-POST_20241002	COA_PP-08-POST_20241002	COA_PP-09-POST_20241002
Sample Date				07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	07/30/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24	10/02/24
Sample Interval (dbm)				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm	0-10 cm
Sample Type				Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent	Recent
Tidal Zone				Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal	Subtidal
Phenols																			
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/kg	550	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/kg	18,000,000	260,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous Extractables																			
Dibenzofuran	µg/kg	170,000	2,000,000	7.48 U	35.2	7.79 J	7.47 U	17.2	15 J	8.3	9.7	5.7	63.6 J	6	9.9	33.5	18.4	14.9	9.7
Hexachlorobutadiene	µg/kg	14,000	33,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs)																			
Total PCBs Aroclors	µg/kg	3.5	3.5	36.7 J	2 U	79.4 J	8.8	39.1 J	19.5 J	22.1	6.4	2.0 UJ	41.5 J	26.9 J	15.5 J	54.8 J	30.8 J	2.0 U	12.8 J
Total PCBs Congeners	µg/kg	3.5	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)																			
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans																			
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	0.31 JL14	3.77L10	1.88 L9	0.25 JL14	1.34 L11	4.83	1.63 JL11	0.57 JL11	517.93	186.70	0.66 J	0.48 JL12	5.15	2.57	0.72 J	1.80

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specil

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Table 7

Summary of Sediment Analytical Results for the Protection of Human Health and Higher Trophic Level Ecological Receptors

Anacortes Port Log Yard
Anacortes, Washington

Sample Location[1]		Proposed Sediment Cleanup Level[2]		PP-10-Post
Sample Identification				COA_PP-10-POST_20241002
Sample Date				10/02/24
Sample Interval (dbm)				0-10 cm
Sample Type				Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent
Tidal Zone				Subtidal
Field Screening				
Sheen	n/a	NE	NE	--
Visual Wood Content[3]	%	NE	NE	Absent
Metals				
Arsenic	mg/kg	11	11	--
Cadmium	mg/kg	0.80	0.80	--
Chromium	mg/kg	62	62	--
Copper	mg/kg	45	45	--
Lead	mg/kg	21	21	--
Mercury	mg/kg	0.20	0.20	--
Silver	mg/kg	0.30	0.30	--
Zinc	mg/kg	93	93	--
Organometallic Compounds				
Tributyltin Ion (interstitial water)	µg/L	0.15	0.15	--
Tributyltin Ion (bulk sediment)	µg/kg	73	73	**20.2 J**
Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAHs)				
2-Methylnaphthalene	µg/kg	320,000	4,500,000	**8.6**
Acenaphthene	µg/kg	4,800,000	67,000,000	**6.7**
Acenaphthylene	µg/kg	4,800,000	67,000,000	**4.2 J**
Anthracene	µg/kg	4,800,000	67,000,000	**22**
Fluorene	µg/kg	3,200,000	45,000,000	**11.2**
Naphthalene	µg/kg	1,600,000	22,000,000	**15**
Phenanthrene	µg/kg	4,800,000	67,000,000	**56.2**
High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAHs)				
Benzo(a)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**59.4**
Benzo(a)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**49.3**
Benzofluoranthenes[4] (Total)	µg/kg	See cPAH TEQ	See cPAH TEQ	**119 J**
Benzo(g,h,i)perylene	µg/kg	See cPAH TEQ	See cPAH TEQ	**20.7**
Chrysene	µg/kg	See cPAH TEQ	See cPAH TEQ	**68.1**
Dibenzo(a,h)anthracene	µg/kg	See cPAH TEQ	See cPAH TEQ	**4.1 J**
Fluoranthene	µg/kg	3,200,000	45,000,000	**136**
Indeno(1,2,3-c,d)pyrene	µg/kg	See cPAH TEQ	See cPAH TEQ	**18.0 J**
Pyrene	µg/kg	2,400,000	34,000,000	**162 J**
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)				
Total cPAHs TEQ[5] (KM)	µg/kg	21	21	**70.03**
Chlorinated Hydrocarbons				
1,2,4-Trichlorobenzene	µg/kg	38,000	88,000	--
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/kg	21,000,000	230,000,000	--
1,4-Dichlorobenzene (p-Dichlorobenzene)	µg/kg	200,000	470,000	--
Hexachlorobenzene	µg/kg	690	1,600	--
Phthalates				
Bis(2-Ethylhexyl) Phthalate	µg/kg	24,000	63,000	--
Butyl benzyl Phthalate	µg/kg	180,000	460,000	--
Dibutyl Phthalate	µg/kg	6,100,000	88,000,000	--
Diethyl Phthalate	µg/kg	49,000,000	700,000,000	--
Dimethyl Phthalate	µg/kg	NE	NE	--
Di-N-Octyl Phthalate	µg/kg	610,000	8,800,000	--

Sample Location[1]		Proposed Sediment Cleanup Level[2]		PP-10-Post
Sample Identification				C0A_PP-10-POST_20241002
Sample Date				10/02/24
Sample Interval (dbm)				0-10 cm
Sample Type				Surface
Stratigraphic Unit		Intertidal Zone	Sutidal Zone	Recent
Tidal Zone				Subtidal
Phenols				
2,4-Dimethylphenol	µg/kg	1,200,000	18,000,000	--
2-methylphenol (o-Cresol)	µg/kg	3,000,000	44,000,000	--
4-methylphenol (p-Cresol)	µg/kg	6,100,000	88,000,000	--
Pentachlorophenol	µg/kg	550	1,400	--
Phenol	µg/kg	18,000,000	260,000,000	--
Miscellaneous Extractables				
Dibenzofuran	µg/kg	170,000	2,000,000	**7.6**
Hexachlorobutadiene	µg/kg	14,000	33,000	--
N-Nitrosodiphenylamine (as diphenylamine)	µg/kg	70,000	180,000	--
Benzoic Acid	µg/kg	240,000,000	3,500,000,000	--
Benzyl Alcohol	µg/kg	6,100,000	88,000,000	--
Polychlorinated Biphenyls (PCBs)				
Total PCBs Aroclors	µg/kg	3.5	3.5	**7.1**
Total PCBs Congeners	µg/kg	3.5	3.5	--
Dioxin-Like Polychlorinated Biphenyls (PCBs)				
Total Dioxin-like PCB Congeners TEQ[6] (KM)	ng/kg	0.20	0.20	--
Dioxins and Furans				
Total Dioxin and Furan TEQ[7] (KM)	ng/kg	5.0	5.0	**1.32 L9**

Notes:

[1] Sample locations shown on Figure 6.

[2] Proposed cleanup levels (PCULs) are presented in Table 3. Screening levels are based on the exposure pathways specific to intertidal sediment (i.e., beach play, clamming and net fishing) and subtidal sediment (i.e., net fishing) and is the risk-based value adjusted for natural background and PQL, whichever is higher.

[3] Visual wood content values of <1 indicate that wood debris was not identified in the sample.

[4] Total benzofluoranthenes represents the sum of concentrations of the b, j, and k isomers.

[5] Total cPAH Toxicity Equivalency Quotients (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).

[6] Total PCB congener TEQs were calculated using the 2005 World Health Organization (WHO) TEF values for humans and mammals (Van den Berg et al., 2006).

[7] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA, 2003).

µg/L = microgram per liter

mg/kg = milligram per kilogram

µg/kg = microgram per kilogram

ng/kg = nanogram per kilogram

U = The analyte was not detected at a concentration greater than the value identified.

J = The analyte was detected and the detected concentration is considered an estimate.

L = Indicates the upper bound estimate of the TEQ total.

KM = Kaplan-Meier approach for summing TEQs.

cm = centimeter

ft = feet

n/a = not applicable

NE = not established

dbm = depth below mudline

-- = not analyzed

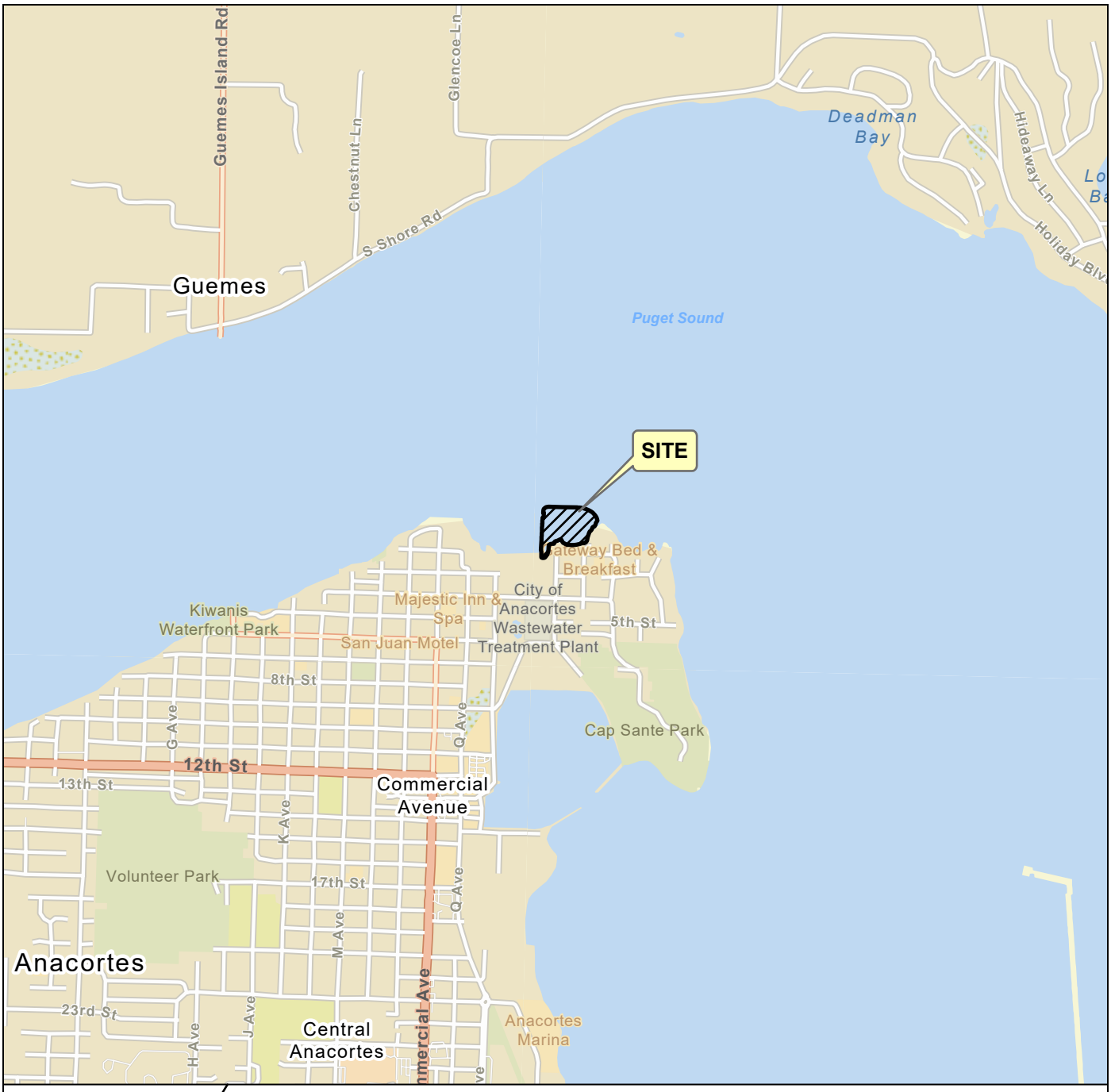
Bold font type indicates the analyte was detected at the reported concentration.

Yellow shading indicates exceedance of the PCUL.

Blue shading indicates that the practical quantitation limit (PQL) exceeds the preliminary cleanup level.

Grey italicized text indicates that sediment represented by this sample was either removed as a result of the City's Wastewater Treatment Plant Outfall Dredging Project or is superseded by more recent co-located sediment sample result.

Figures





N

0 100

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI Streets Map, 2023

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Vicinity Map

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 1

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Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Fence
- Harbor Line

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

N

0 100

Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Site Plan

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 2

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F02_SitePlan Date Exported: 05/28/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Parcel Boundary
- Mean Higher High Water (MHHW)
- Fence
- Harbor Line

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

N

0 100

Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Parcel Boundaries

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 3

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F03_ParcelBoundaries Date Exported: 05/28/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Storm Drain
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- New City of Anacortes Waste Water Treatment Plan Outfall
- Pier 2 Terminal Stormwater Network
- T Avenue Stormwater Network

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

N

0 100

Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Stormwater Network and Outfalls

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 4

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Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Harbor Line
- Outfall

Habitats

- Approximate Eel Grass Boundary
- Mixed Microalgae Zone
- *Gracilaria and Chondracanthus* Zone
- *Ulva* Zone

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

N

0 100

Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

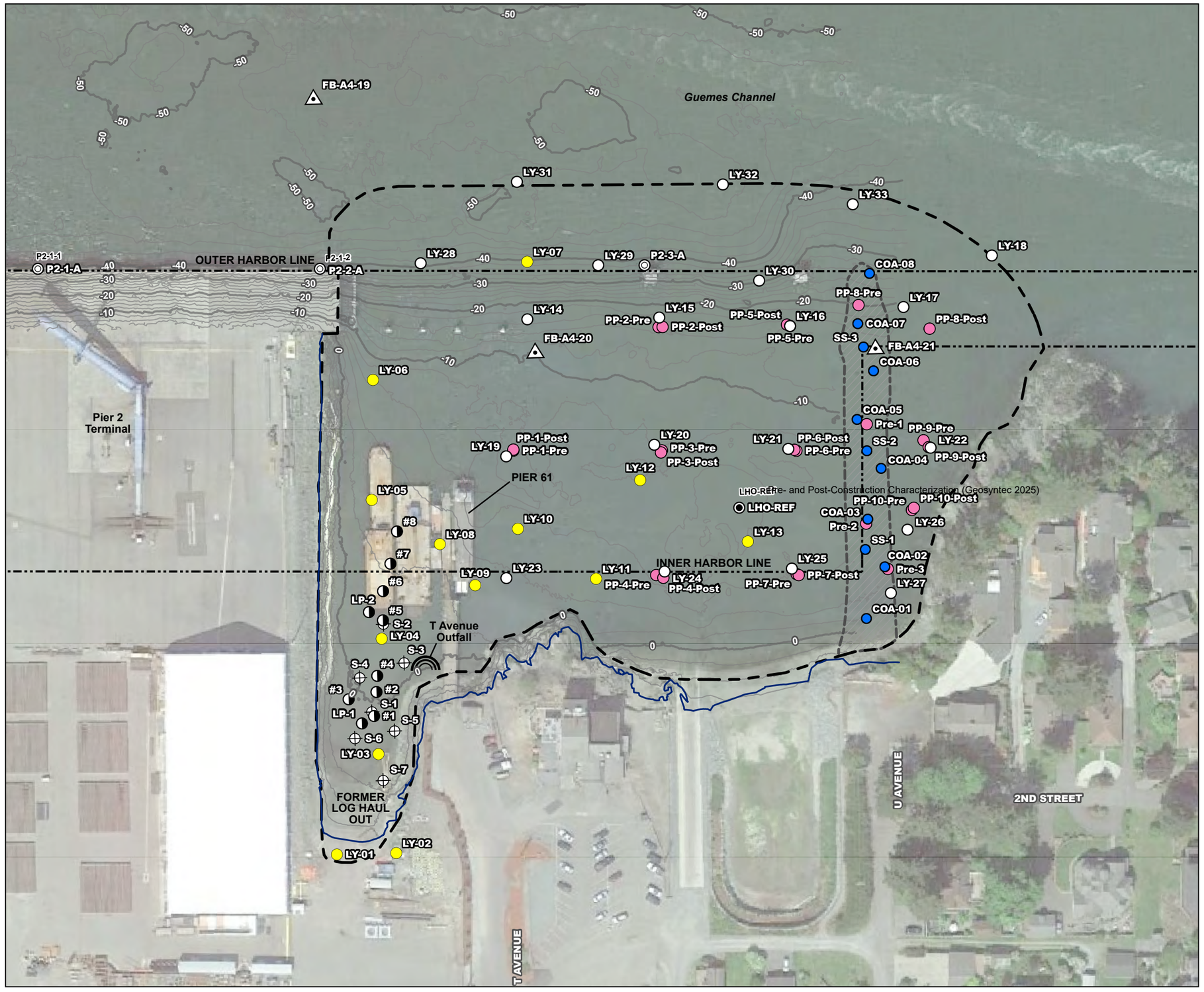
Eelgrass and Macroalgae Habitat

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 5

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Legend

- Anacortes Log Yard Site
- Mean Higher High Water (MHHW)
- Harbor Line
- City of Anacortes Outfall
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area
- Pre- and Post-Construction Characterization (Geosyntec 2025)
- Supplemental Sediment Investigation (GeoEngineers 2021-23)
- Nearshore Sediment Characterization Study (DOF 2020)
- RI/FS Investigation (GeoEngineers 2016)
- Dredged Material Characterization Study (GeoEngineers 2012)
- Supplemental Sediment Characterization Study (GeoEngineers 2012)
- Sediment Characterization Study (GeoEngineers 2010)
- Fidalgo Bay Sediment Investigation (SAIC 2008)
- Pier 2 Log Haul Out Facility Due Diligence Study (Floyd|Snyder 2004)

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

N

0 100

Feet

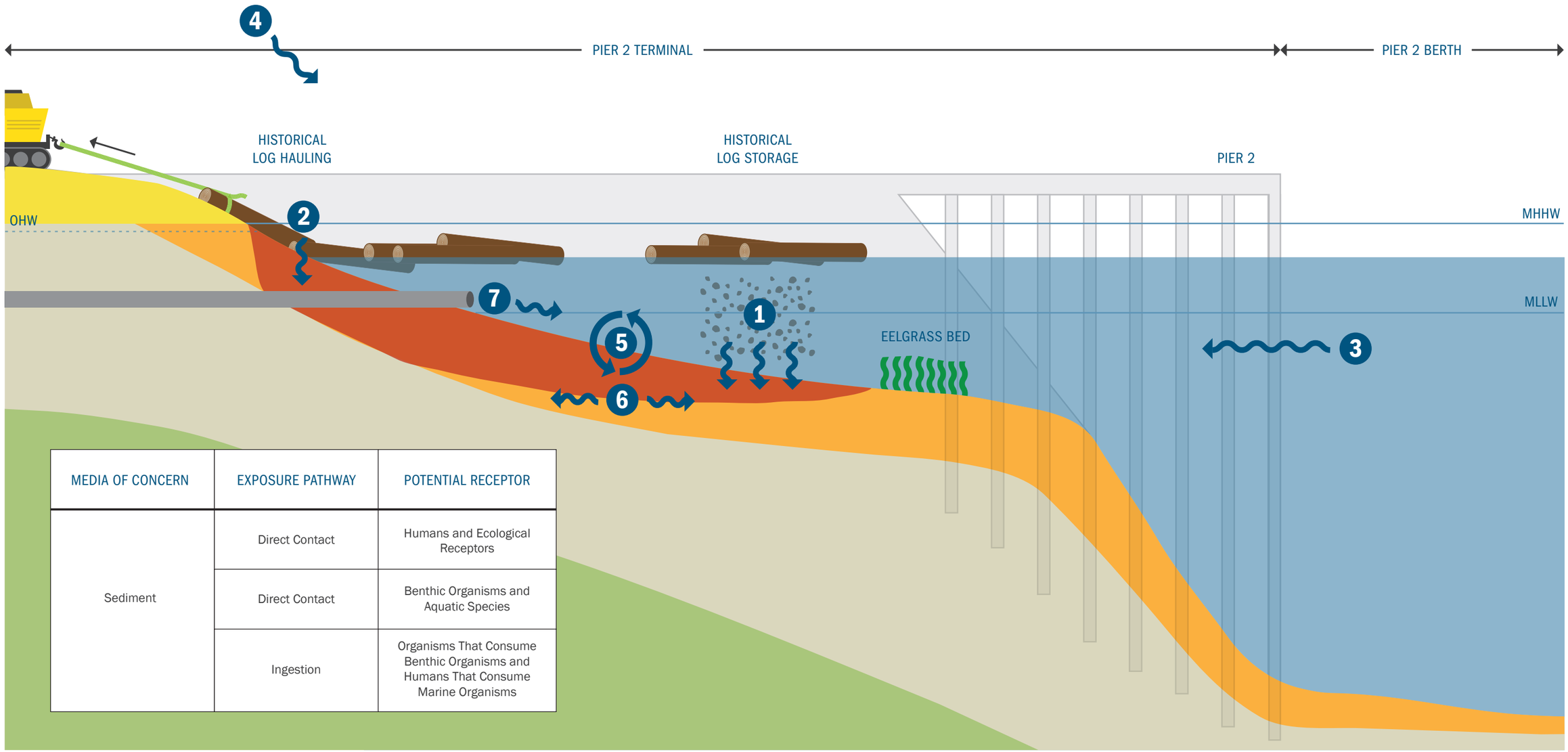
Sediment Investigations

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 6

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MEDIA OF CONCERN	EXPOSURE PATHWAY	POTENTIAL RECEPTOR
Sediment	Direct Contact	Humans and Ecological Receptors
	Direct Contact	Benthic Organisms and Aquatic Species
	Ingestion	Organisms That Consume Benthic Organisms and Humans That Consume Marine Organisms

Legend

- Potential Contaminant Transport Pathway
- MHHW Mean Higher High Water
- MLLW Mean Lower Low Water
- OHW Ordinary High Water

Stratigraphy

- Artificial Upland Fill
- Pier 2 Terminal Fill with Armored Slopes
- Wood Debris
- Recent Sediment Deposits
- Glaciomarine Drift Deposits
- Bedrock

Release and Transport Pathway

1. Direct Deposition to Sediment Surface from Rafted Logs
2. Direct Deposition to Sediment Surface as Logs Came Into Contact During Historical Log Haul Out Operations
3. Deposition to Sediment from Off-Site Source(s)
4. Atmospheric Deposition from Historical Industrial Pyrogenic Sources (i.e., Coal, Wood, Grass and Fossil Fuel Combustion)
5. Suspension and Re-Deposition of Sediment and Wood Debris Through Bioturbation and Marine Disturbances
6. Wood Degradation
7. Direct Deposition from City of Anacortes Outfall Discharge

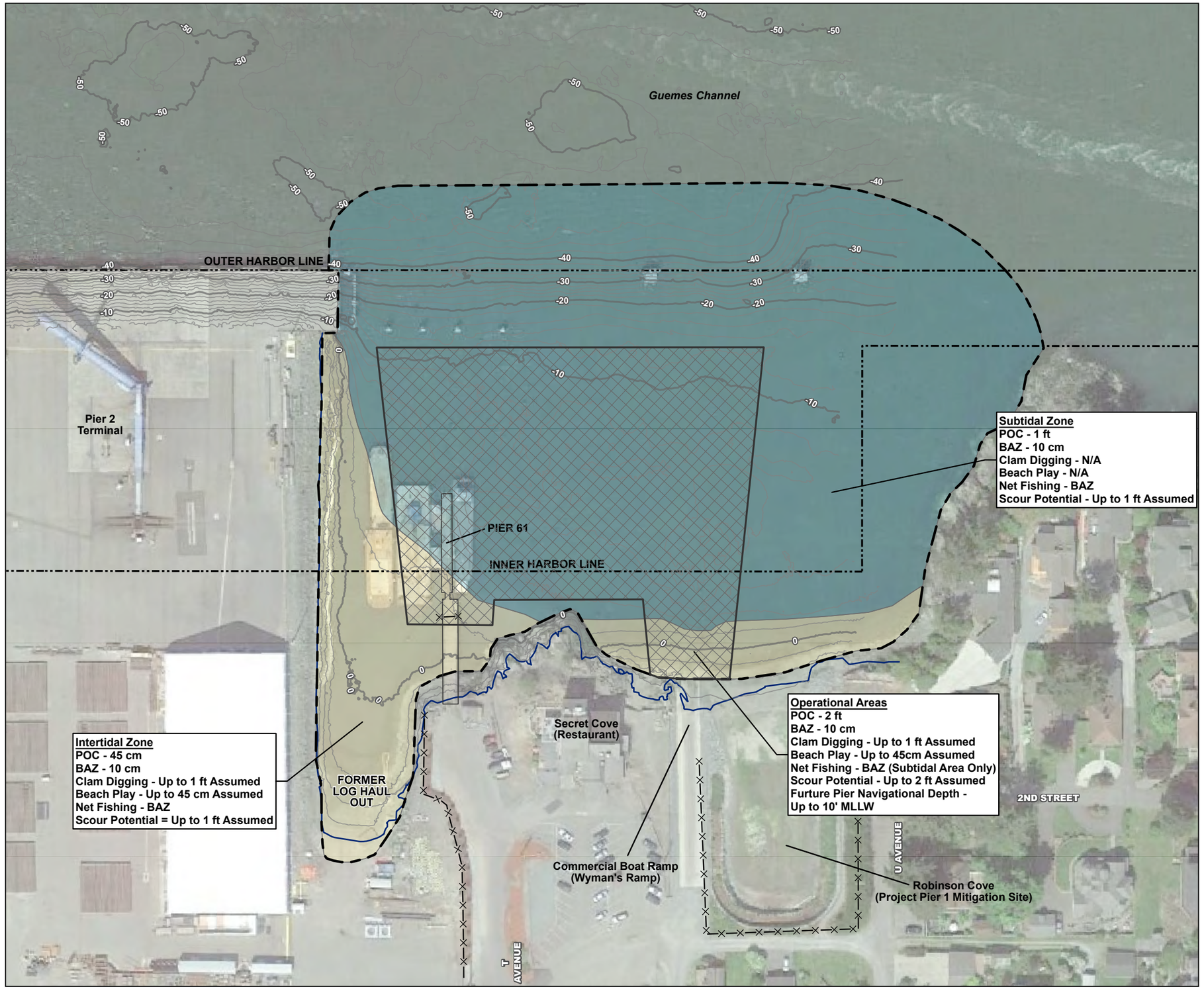
Conceptual Site Model

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 7

P:\5\5147016\Graphics_Misc\5147016l07 Fig 8 Conceptual Site Model.ai Date Exported: 1/3/18 by spride



Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Fence
- Harbor Line

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

Sediment Compliance Area

- Intertidal Zone
- Subtidal Zone
- Operational Area (Anticipated Future Extent)

POC = Point of Compliance
bml = Below Mudline
ft =Feet
cm = Centimeter
BAZ = Biologically Active Zone
N/A = Not Applicable
MLLW = Mean Low Lower Water

N

0 100

Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

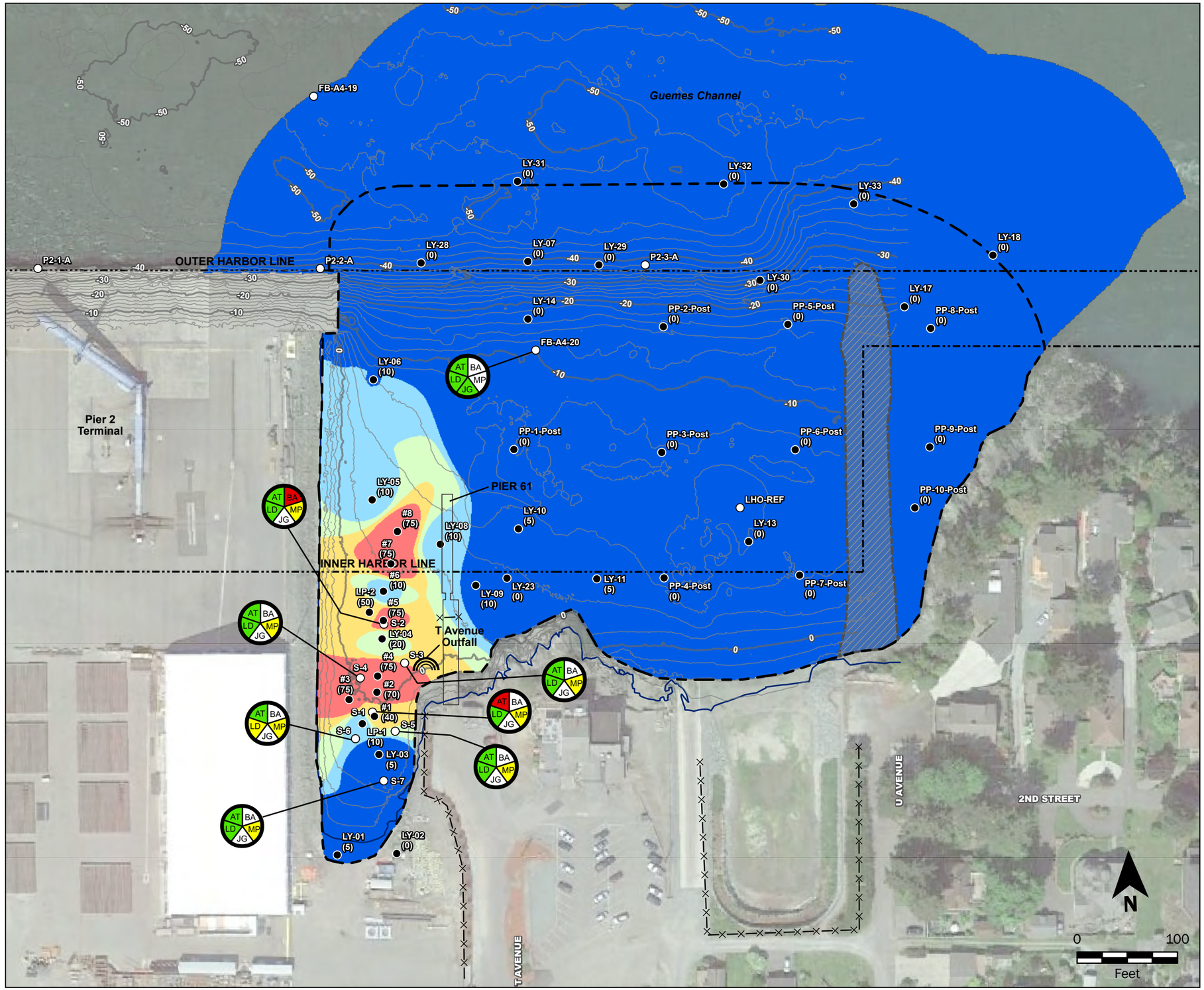
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 8

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F08_SedimentComplianceInterval Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

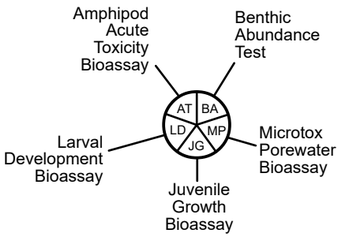
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Wood Debris**

<10%	15 - 35%	>60%
10 - 15%	35 - 60%	

**At each location, the highest concentration is shown.

Bioassay Testing and Result Summary



Meets SQS and CSL Criteria	Failure of CSL Criteria
Failure of SQS Criteria	No Result

ft = Feet
% = Percent
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

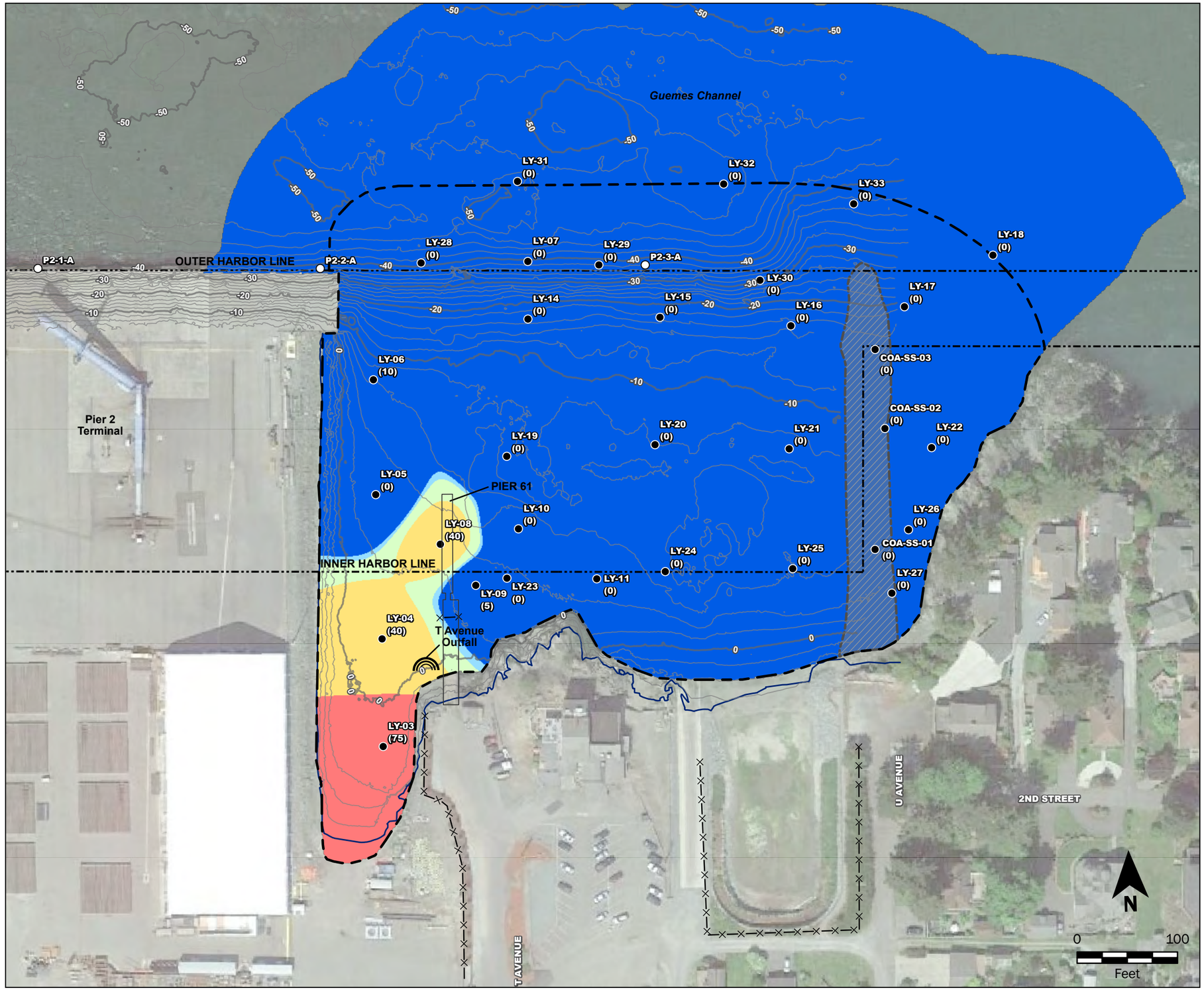
Observed Wood Content
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 9

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F09_ObservedWoodContentPOC Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Wood Debris**

- <10%
- 10 - 15%
- 15 - 35%
- 35 - 60%
- >60%

**At each location, the highest concentration is shown.

ft = Feet
% = Percent

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

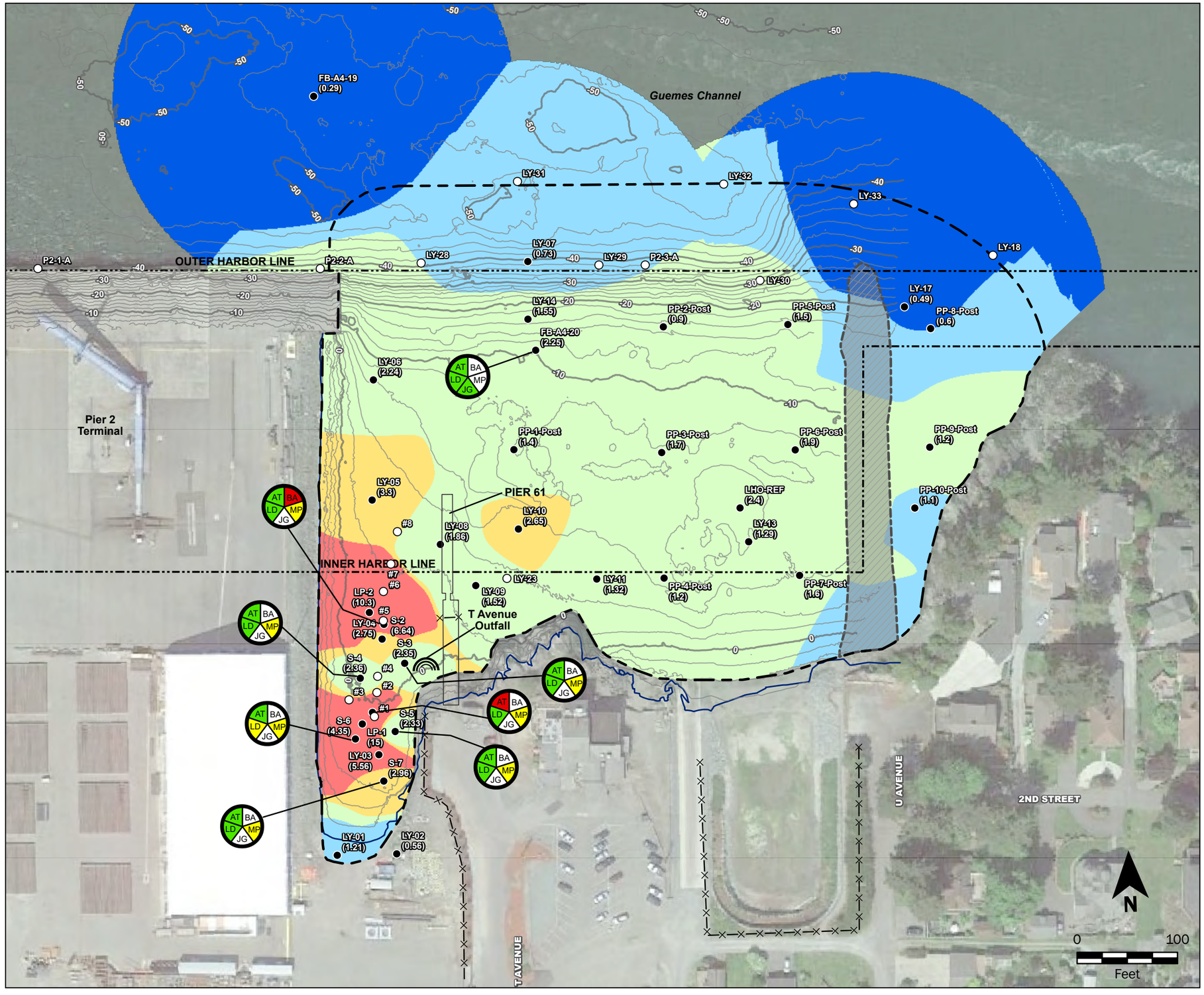
Observed Wood Content Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 10

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F10_ObservedWoodContentSubsurf Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

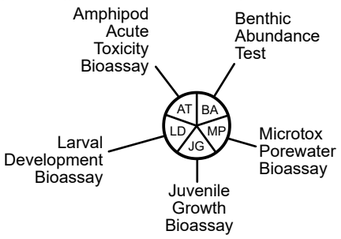
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Total Organic Carbon (TOC)**

- <0.5%
- 0.5 - 1.25%
- 1.25 - 2.5%
- 2.5 - 3.5%
- >3.5%

**At each location, the highest concentration is shown.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
% = Percent
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

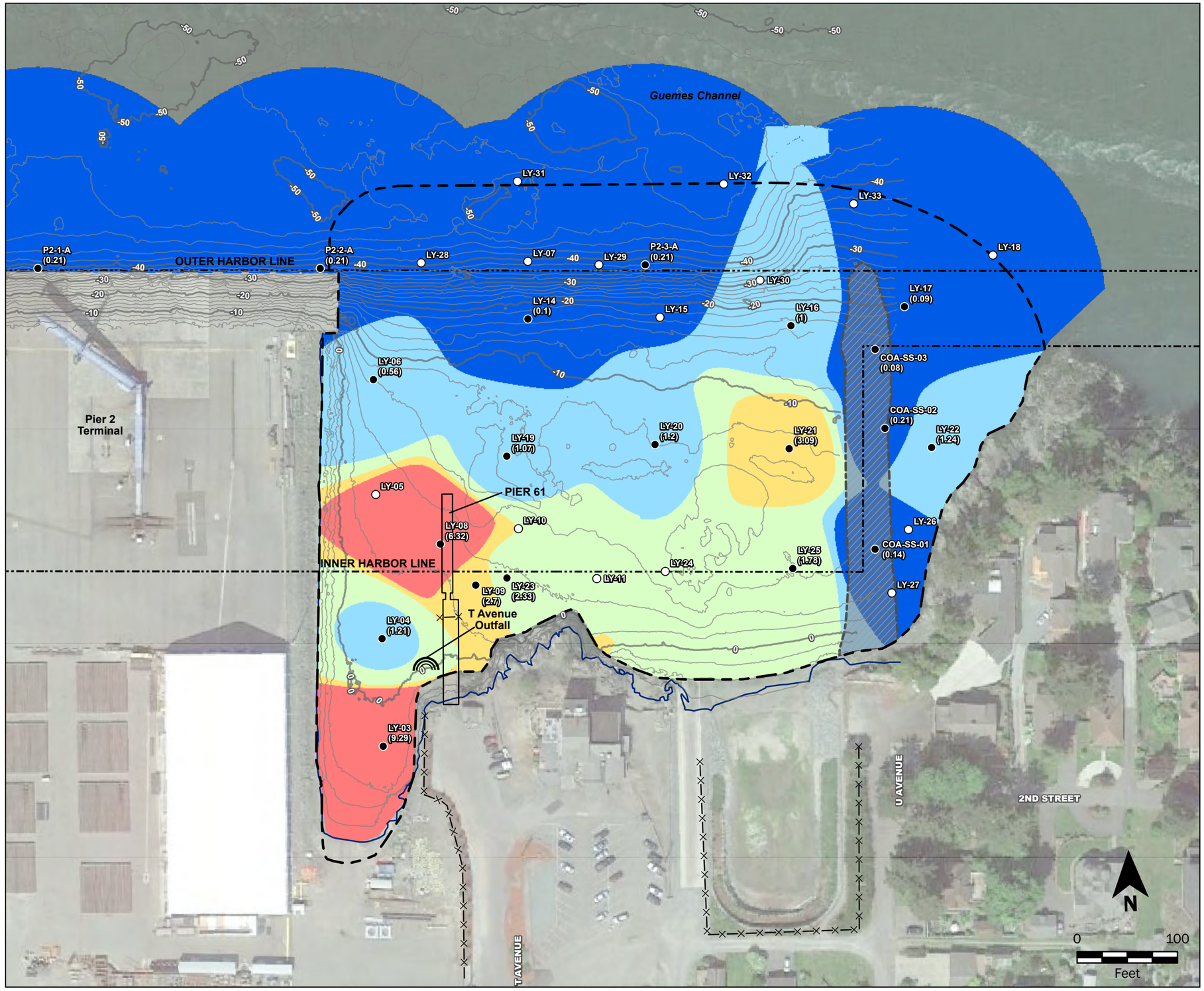
Total Organic Carbon Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 11

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F11_TotalOrganicCarbonPOC Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Total Organic Carbon (TOC)**

- <0.5%
- 0.5 - 1.25%
- 1.25 - 2.5%
- 2.5 - 3.5%
- >3.5%

**At each location, the highest concentration is shown.

ft = Feet
% = Percent

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

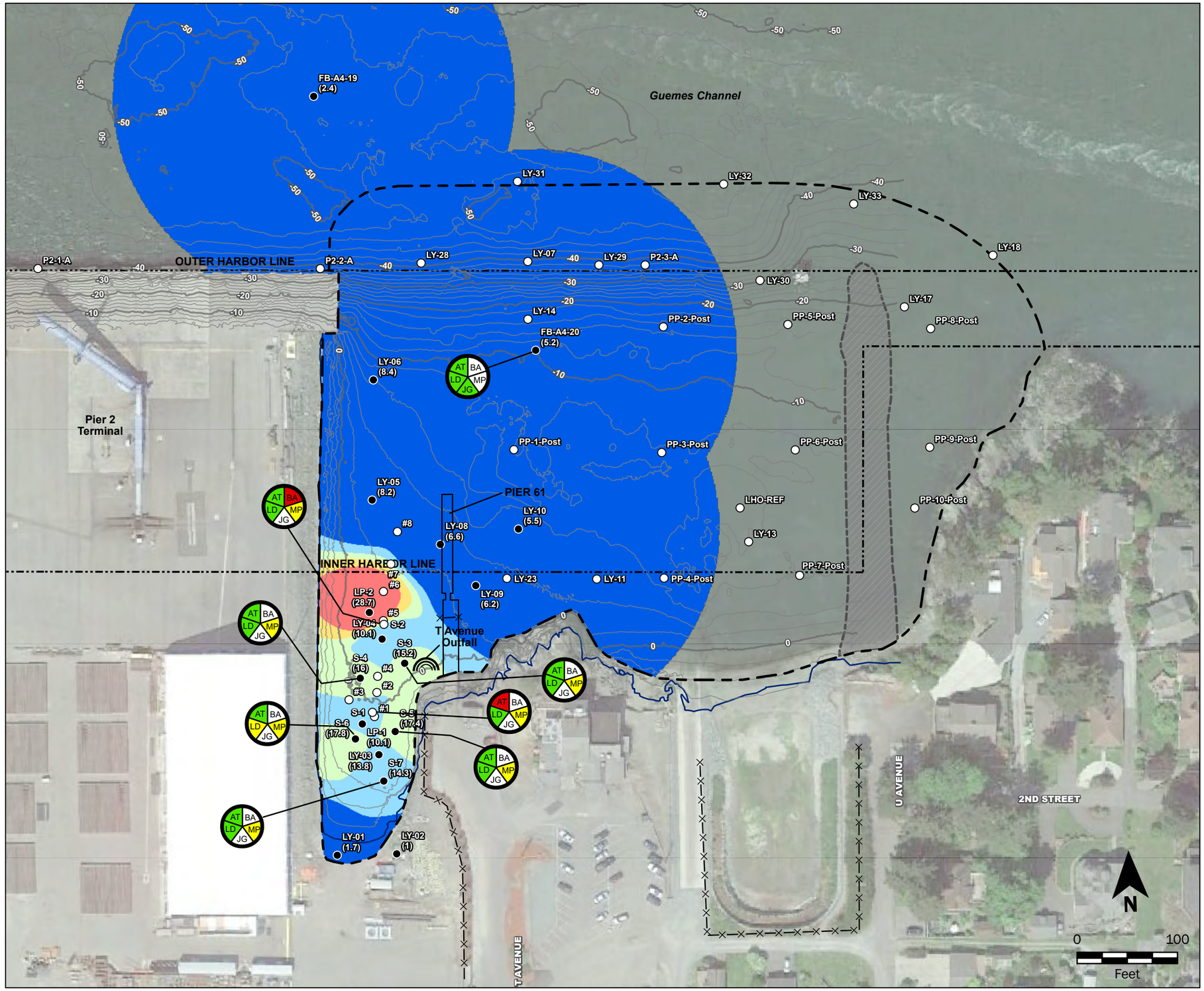
Total Organic Carbon Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 12

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F12_TotalOrganicCarbonSubsurf Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

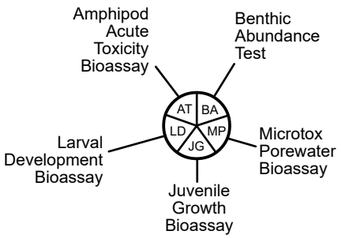
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Total Volatile Solids (TVS)**

- <10%
- 15 - 20%
- >25%
- 10 - 15%
- 20 - 25%

**At each location, the highest concentration is shown.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
% = Percent
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

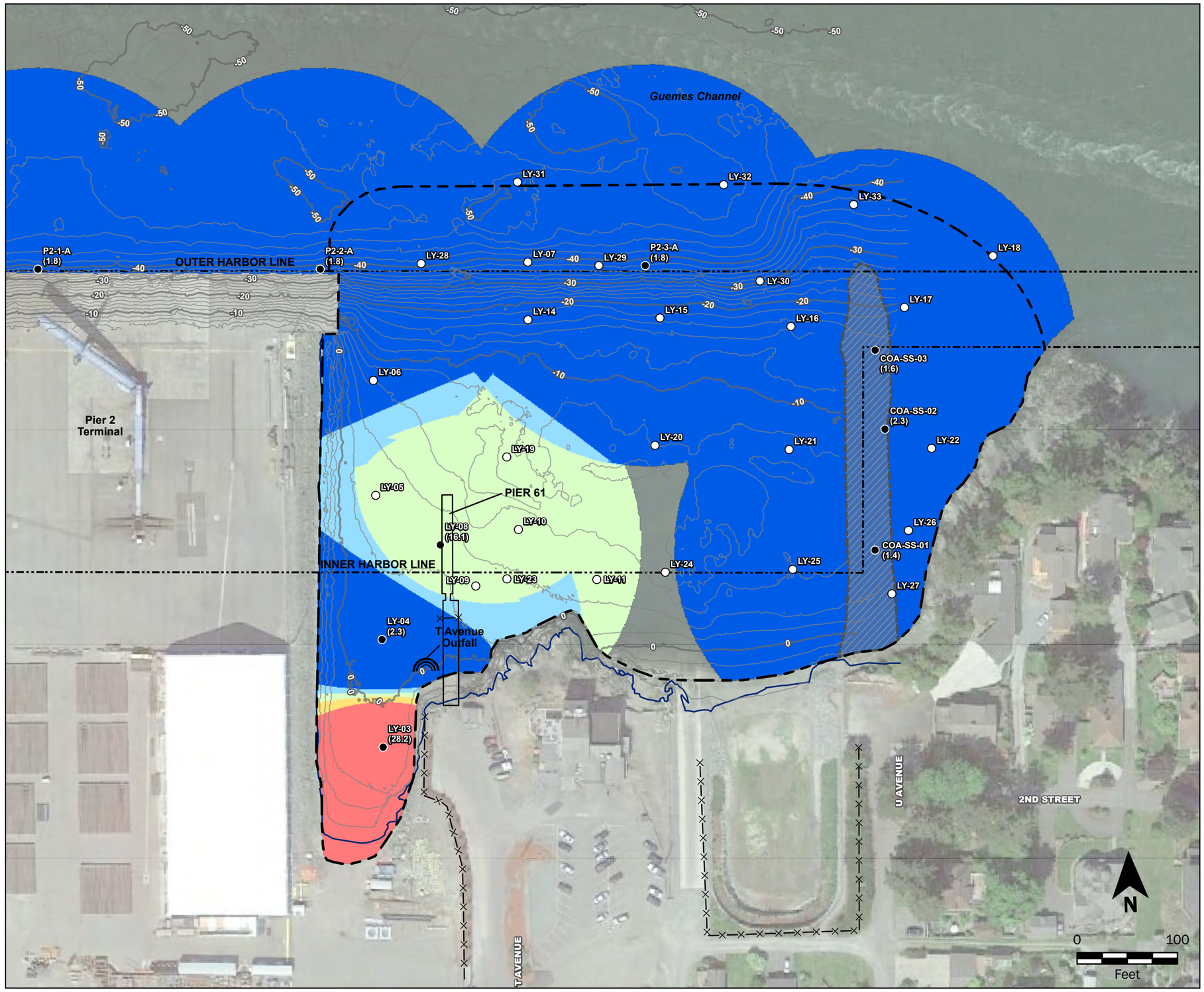
Total Volatile Solids
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 13

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F13_TotalVolatileSolidsPOC Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Total Volatile Solids (TVS)*

- <10%
- 15 - 20%
- >25%
- 10 - 15%
- 20 - 25%

**At each location, the highest concentration is shown.

ft = Feet
% = Percent

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

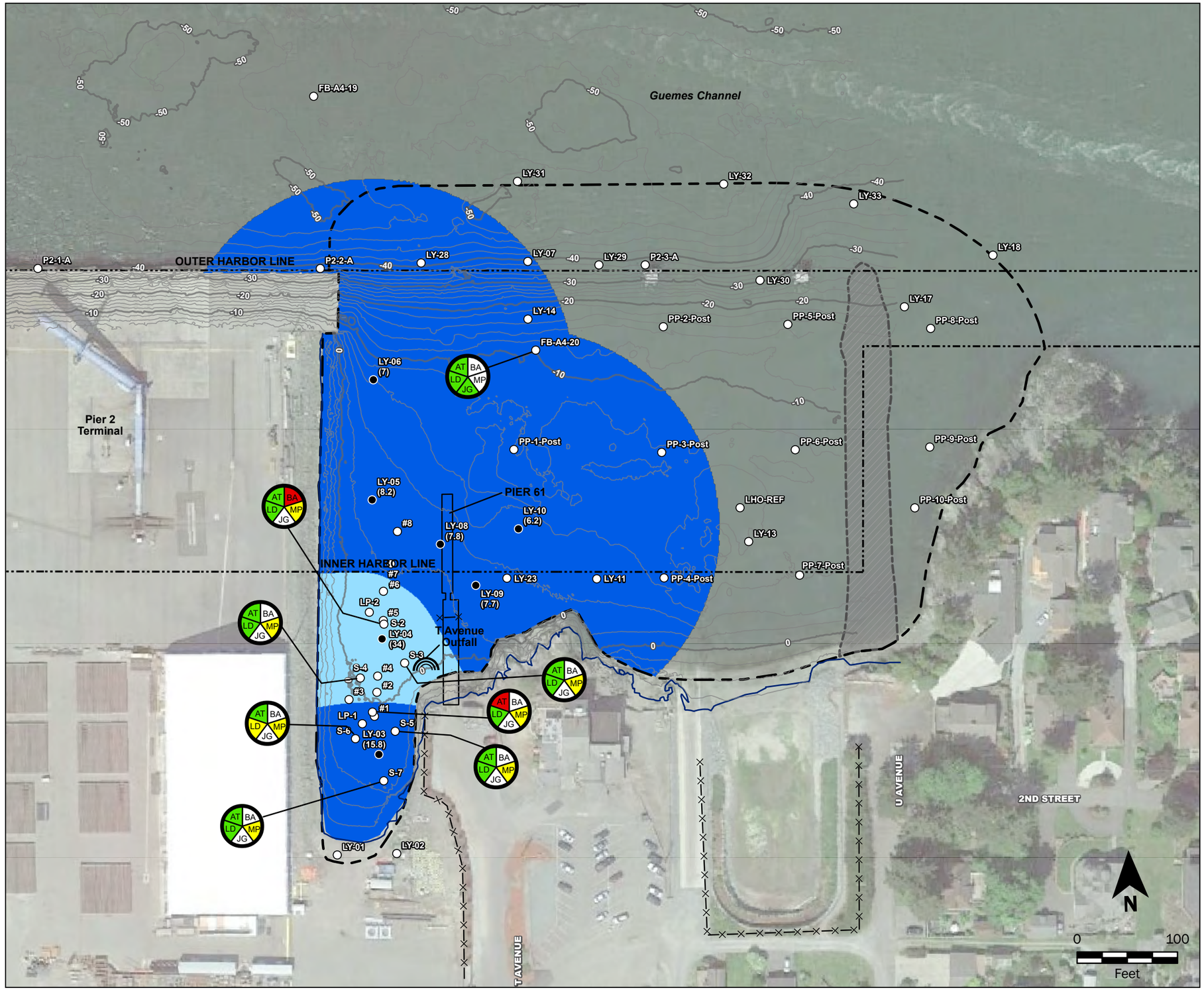
Total Volatile Solids
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 14

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016O8_F14_TotalOrganicVolatileSolidsSubsurf Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2ft)

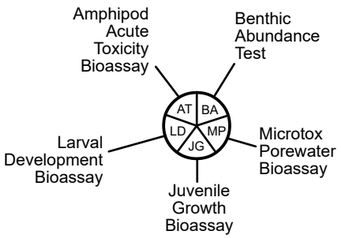
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Porewater Ammonia (mg-N/L)*

<20	40 - 60	>80
20 - 4	60 - 80	

**At each location, the highest concentration is shown.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
mg-N/L = Milligram Nitrogen per Liter
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

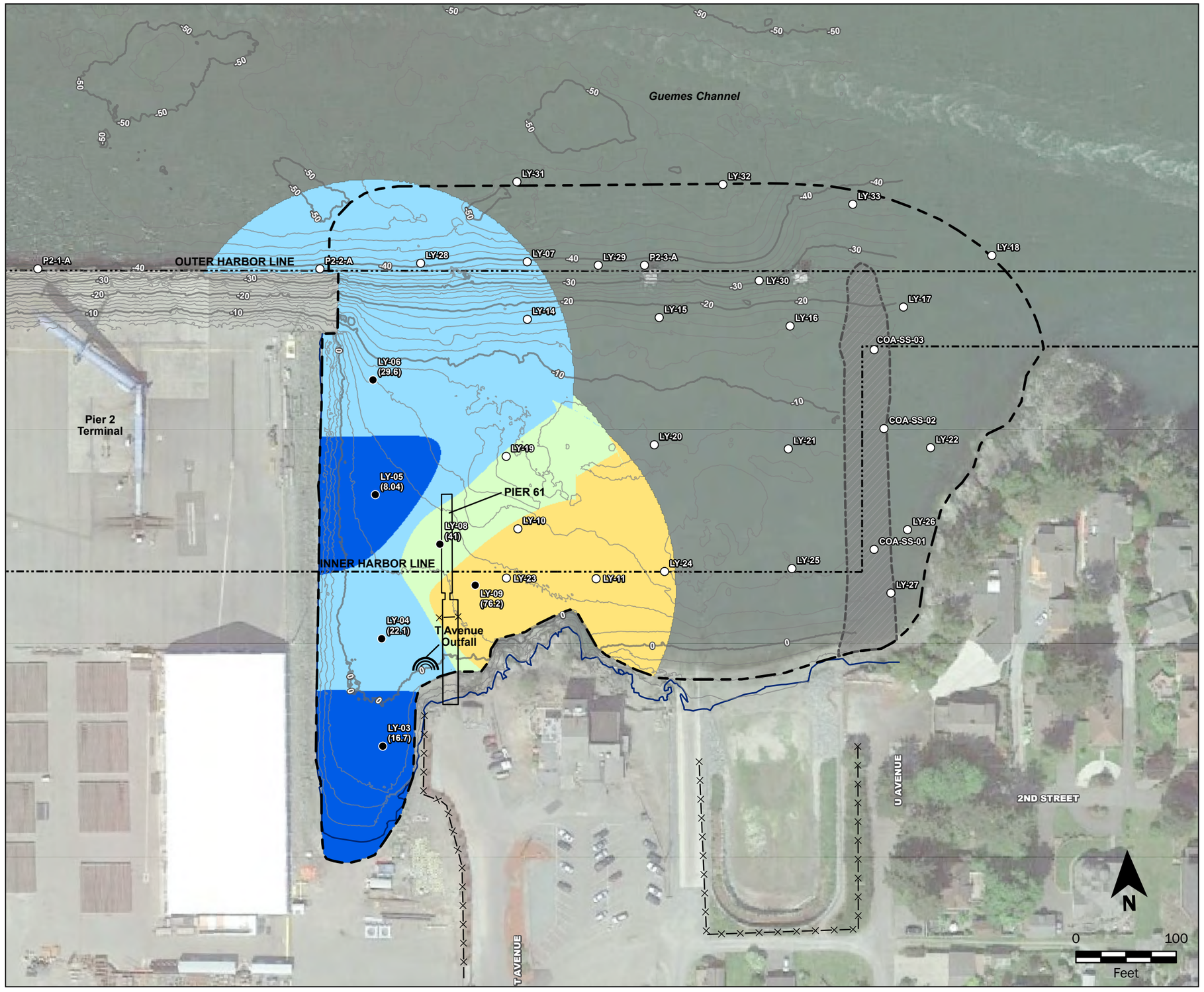
Porewater Ammonia Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 15

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F15_PorewaterAmmoniaPOC Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Porewater Ammonia (mg-N/L)**

<20	40 - 60	>80
20 - 40	60 - 80	

**At each location, the highest concentration is shown.

ft = Feet
mg-N/L = Milligram Nitrogen per Liter

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

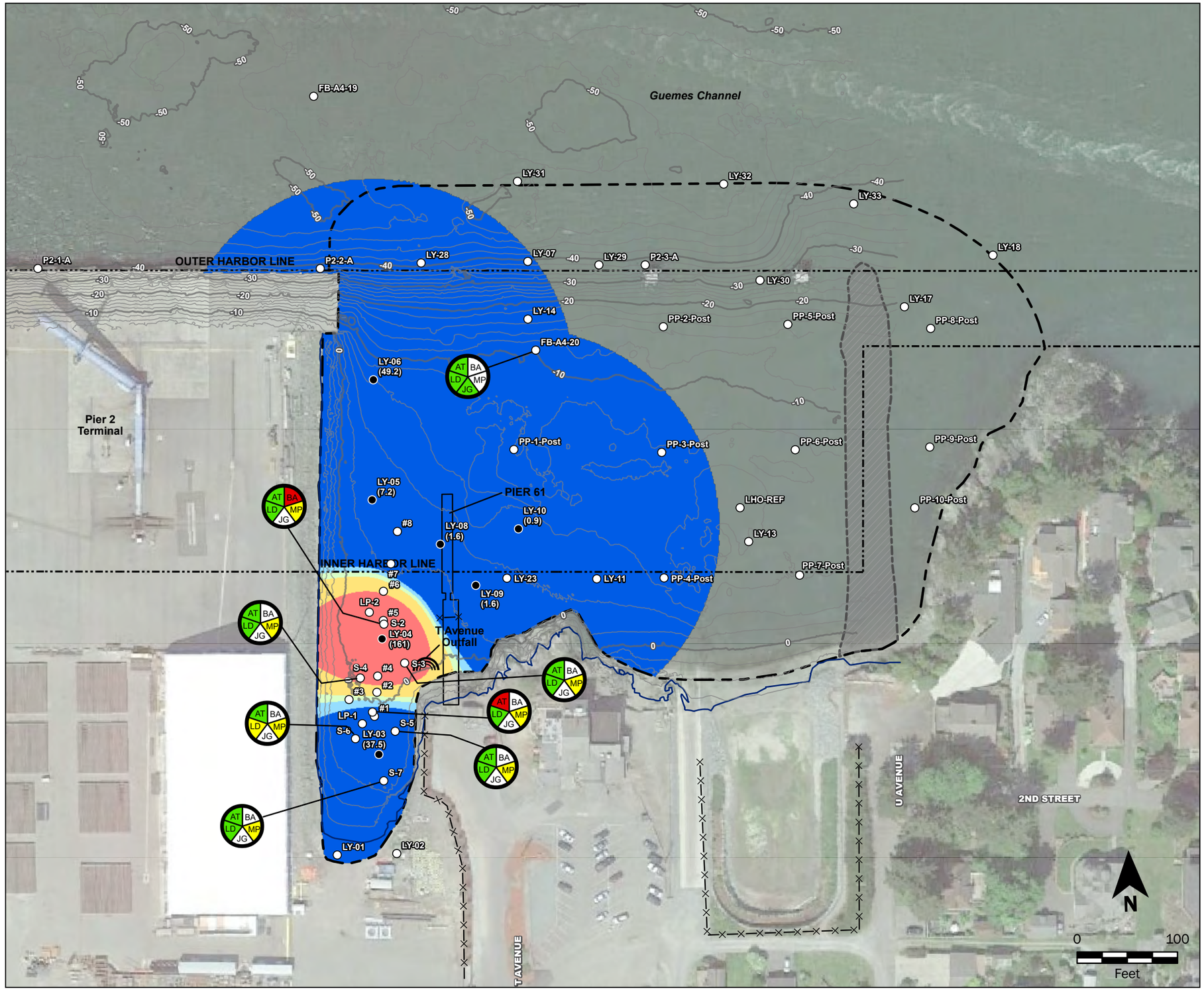
Porewater Ammonia Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 16

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F16_PorewaterAmmoniaSubsurf Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

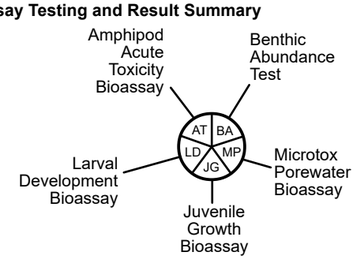
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Porewater Sulfides (mg/L)**

<20	40 - 60	>80
20 - 40	60 - 80	

**At each location, the highest concentration is shown.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
mg/L = Milligram per Liter
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

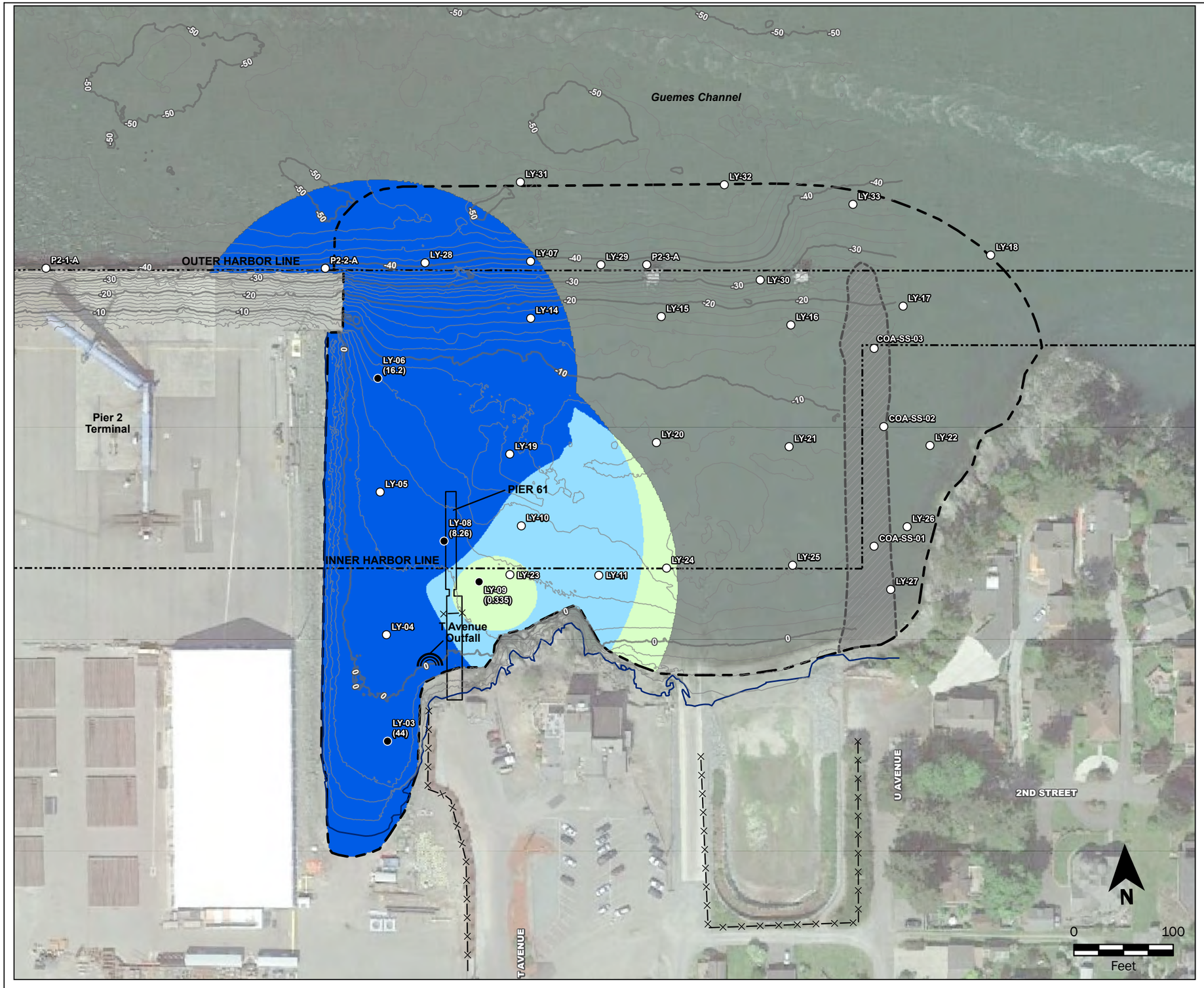
Porewater Sulfides
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 17

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F17_PorewaterSulfidesPOC Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Interpolated Distribution of Porewater Sulfides (mg/L)**

<20	40 - 60	>80
20-40	60-80	

**At each location, the highest concentration is shown.

ft = Feet
mg/L = Milligram per Liter

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

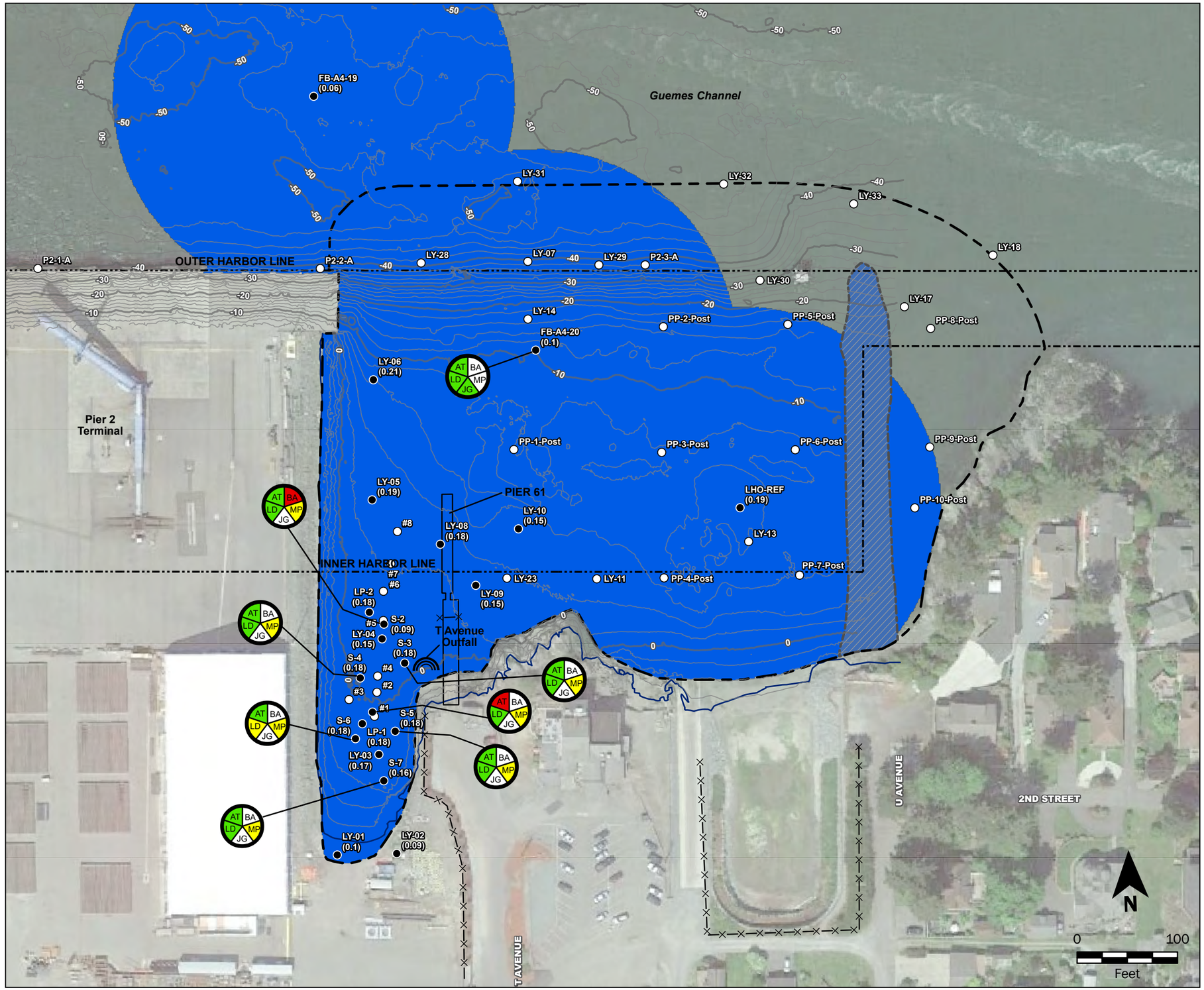
Porewater Sulfides Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 18

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F18_PorewaterSulfidesSubsurf Date Exported: 12/23/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

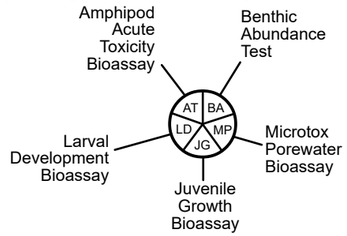
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

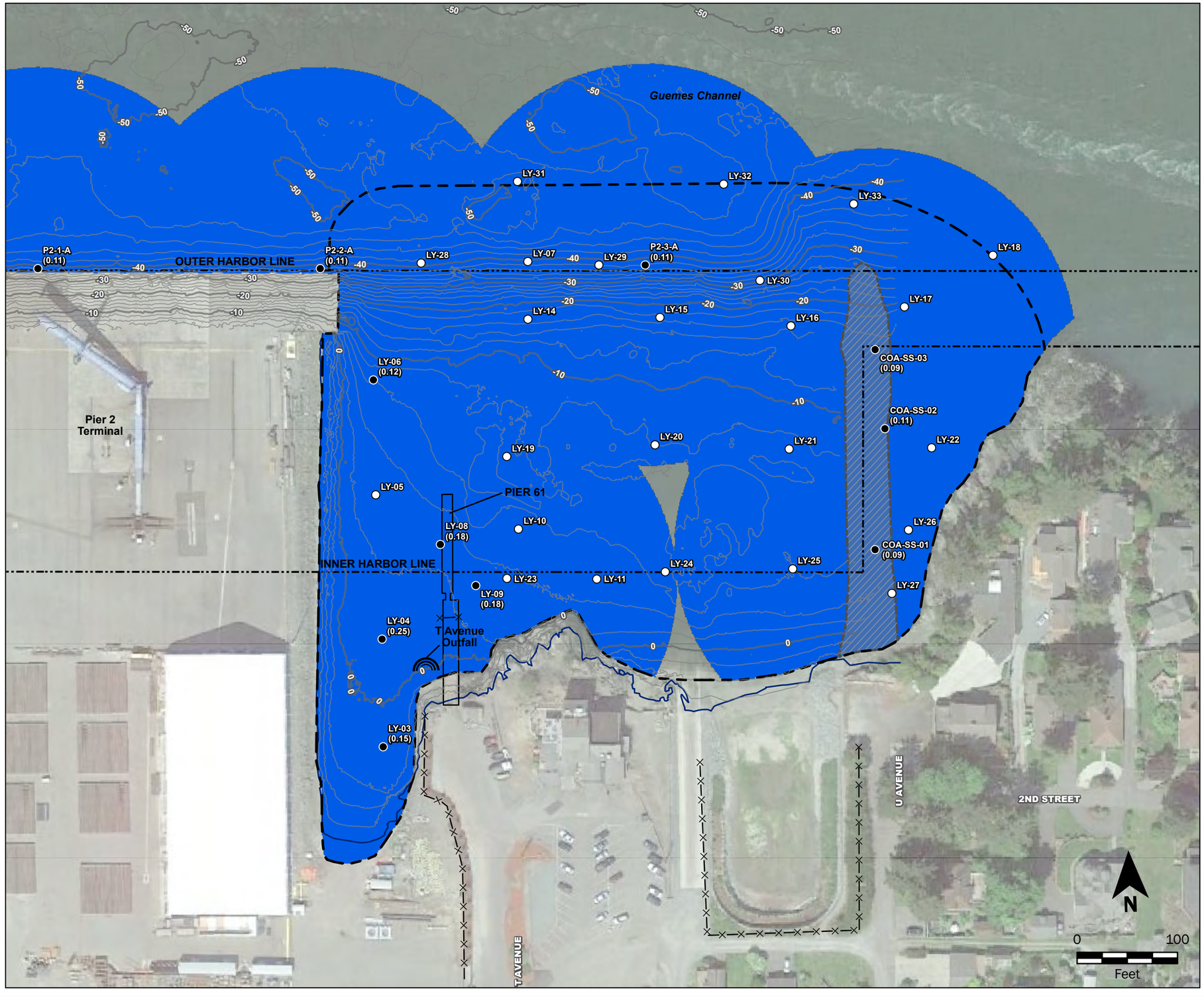
Arsenic Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 19

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\514701608_F19_ArsenicResultsPOC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

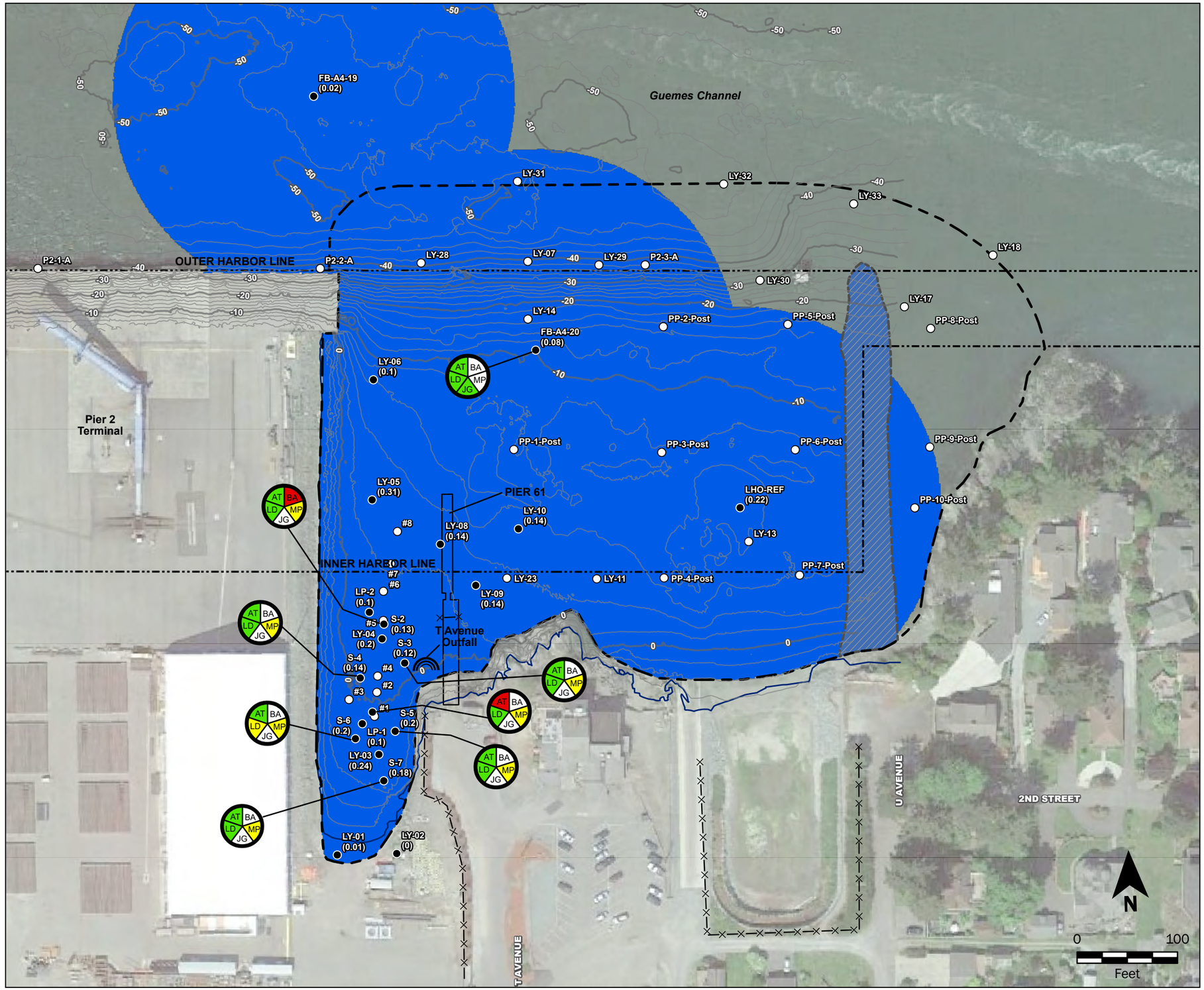
Arsenic Results (Benthic)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 20

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F20_ArsenicResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

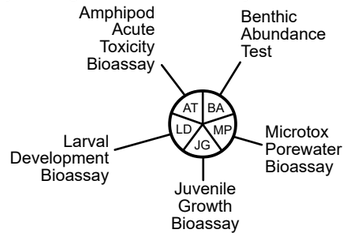
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

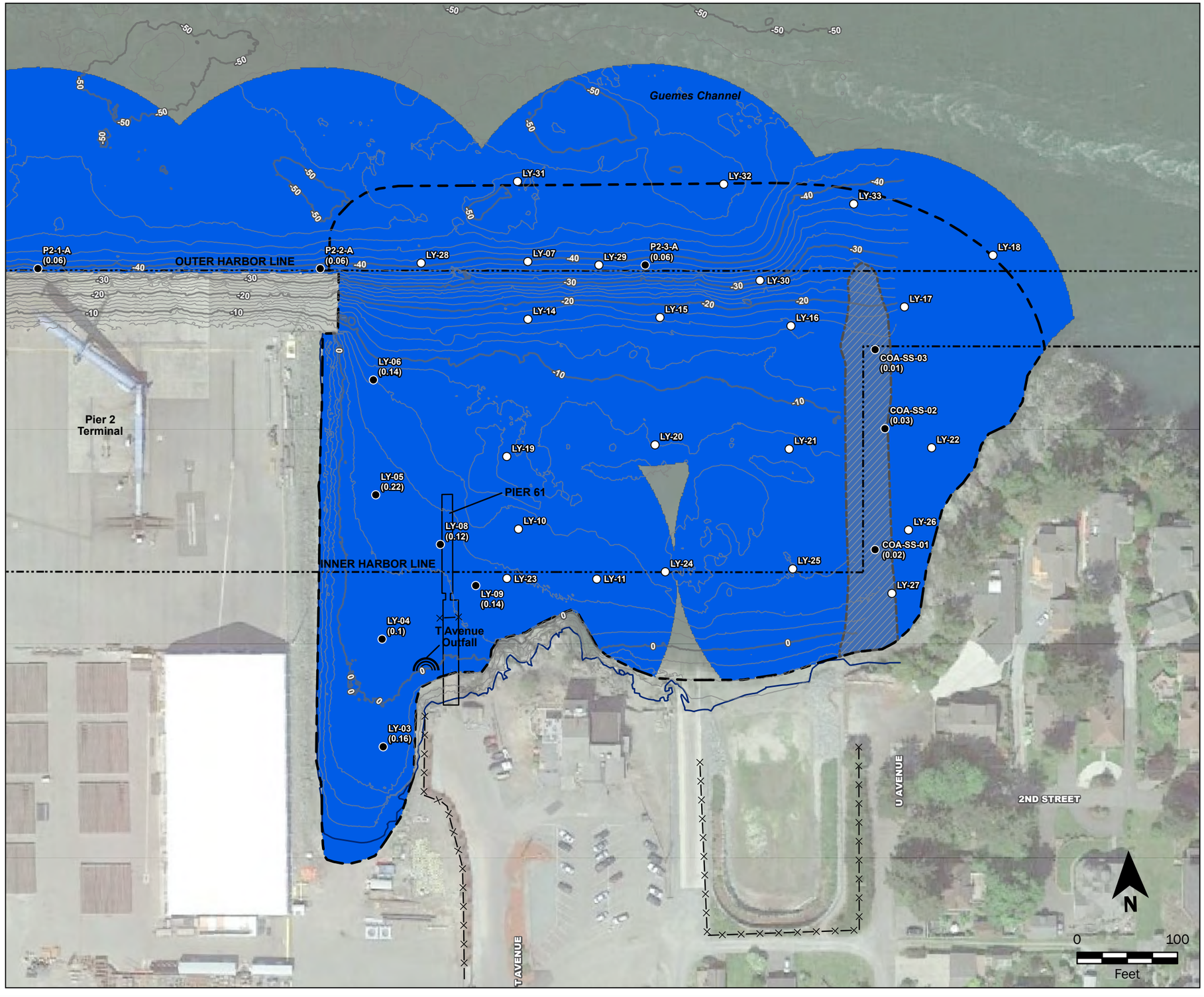
Cadmium Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 21

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\514701608_P21_CadmiumResultsPOC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

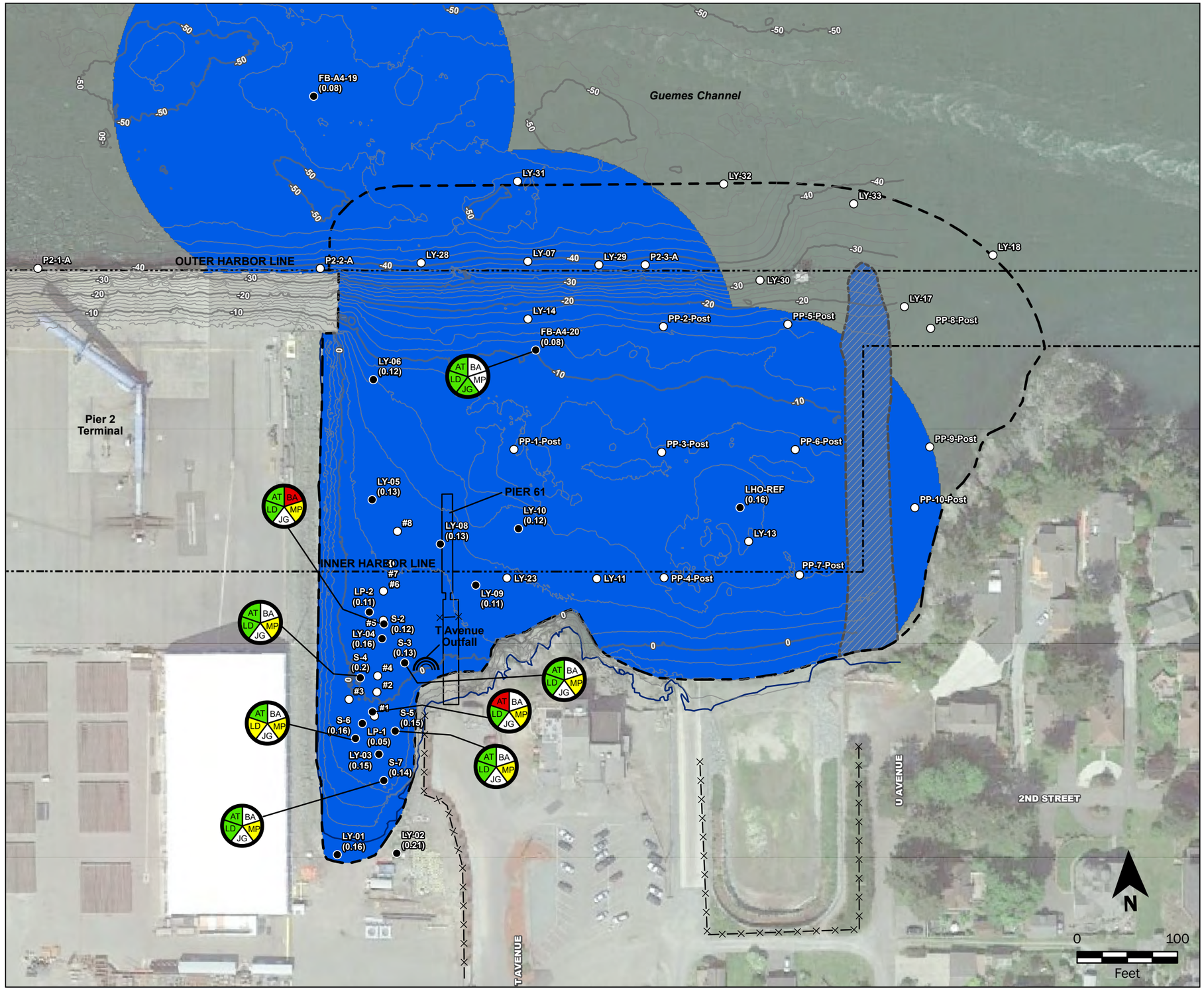
Cadmium Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 22

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F22_CadmiumResultsSubsurf Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

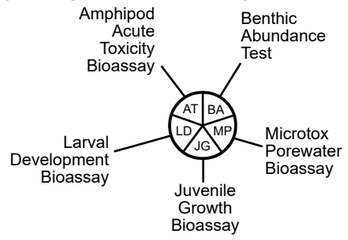
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

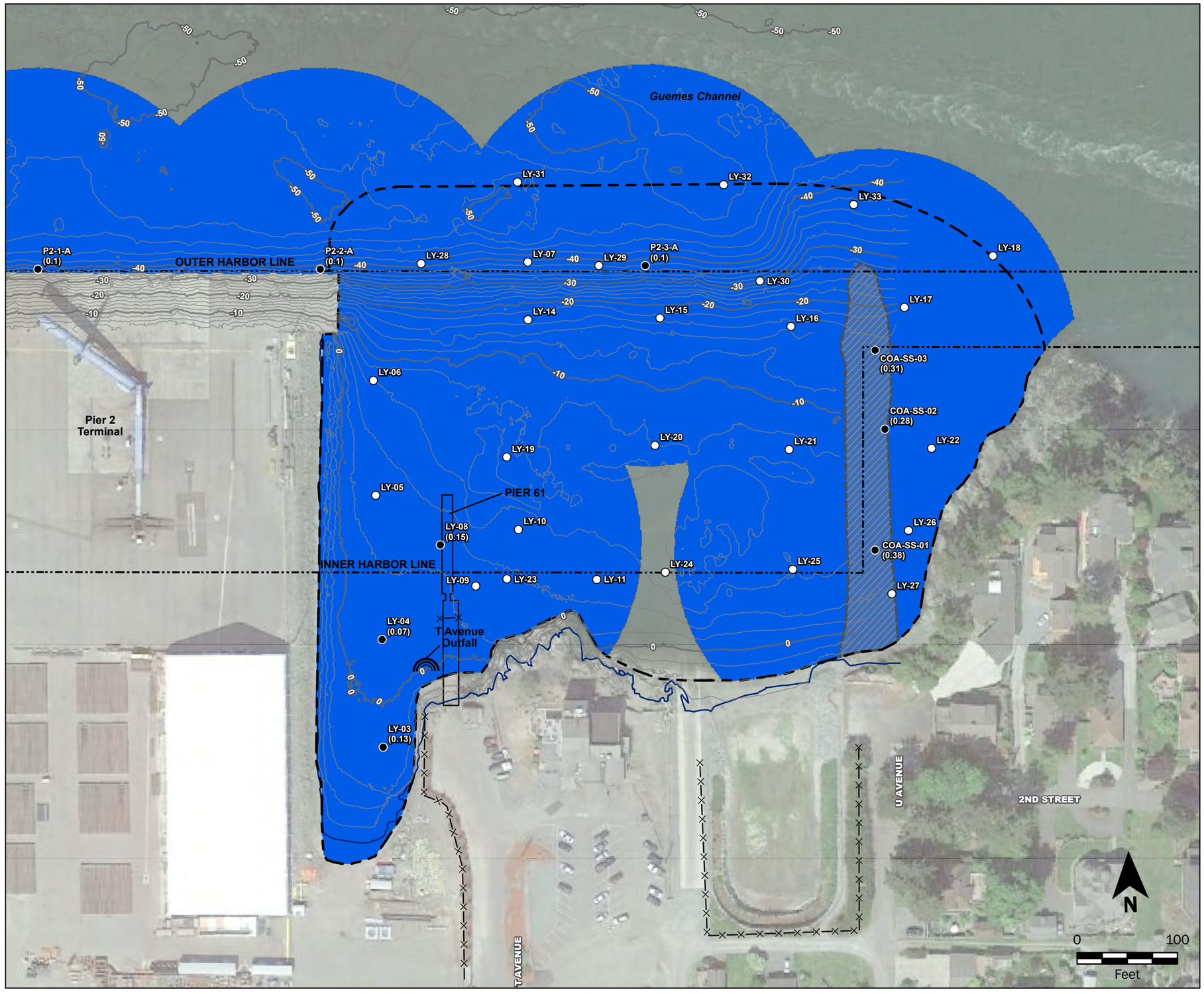
Chromium Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 23

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_P23_ChromiumResultsPOC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

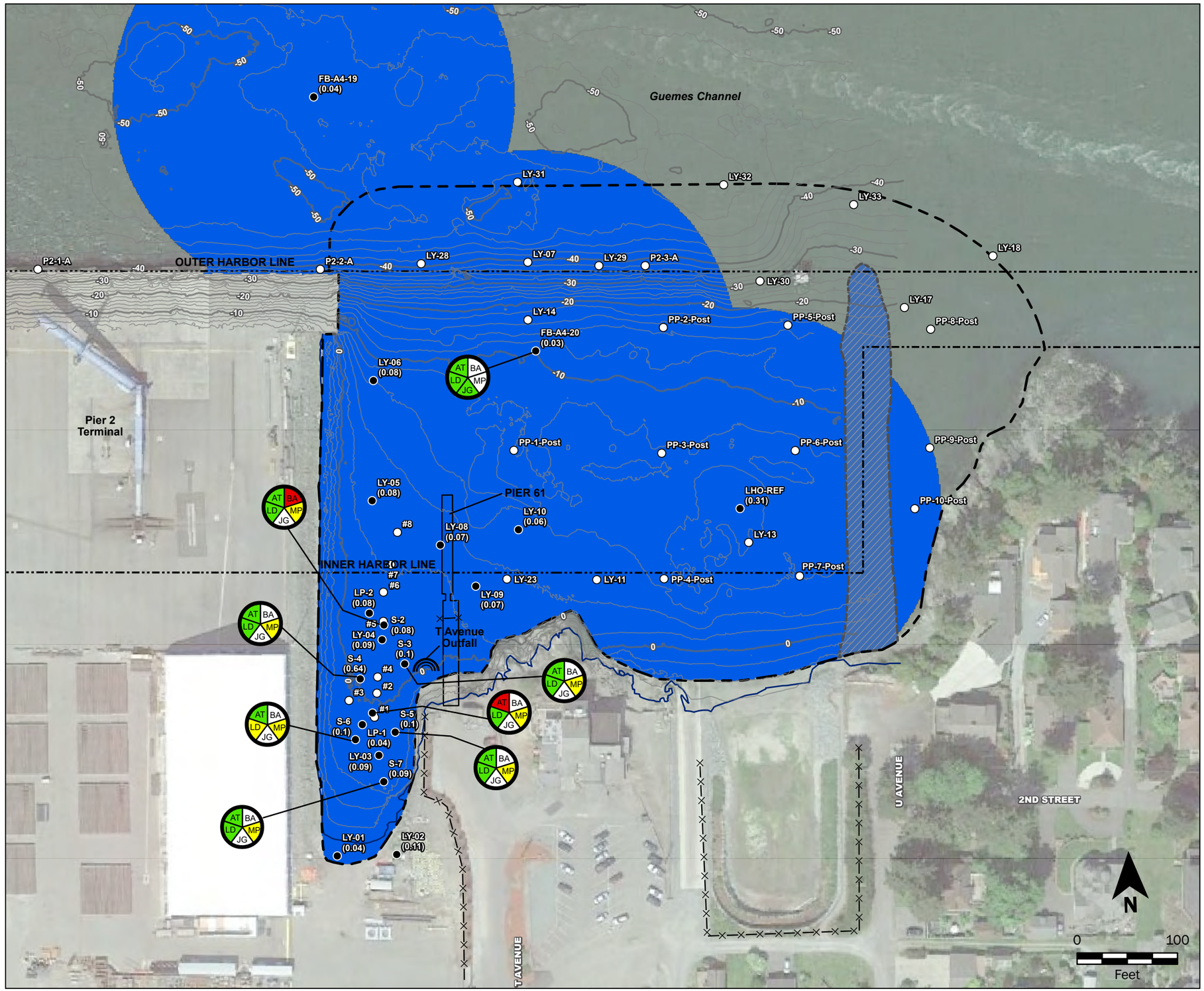
Chromium Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 24

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F24_ChromiumResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

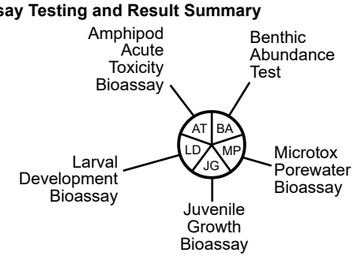
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



Meets SQS and CSL Criteria	Failure of CSL Criteria
Failure of SQS Criteria	No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

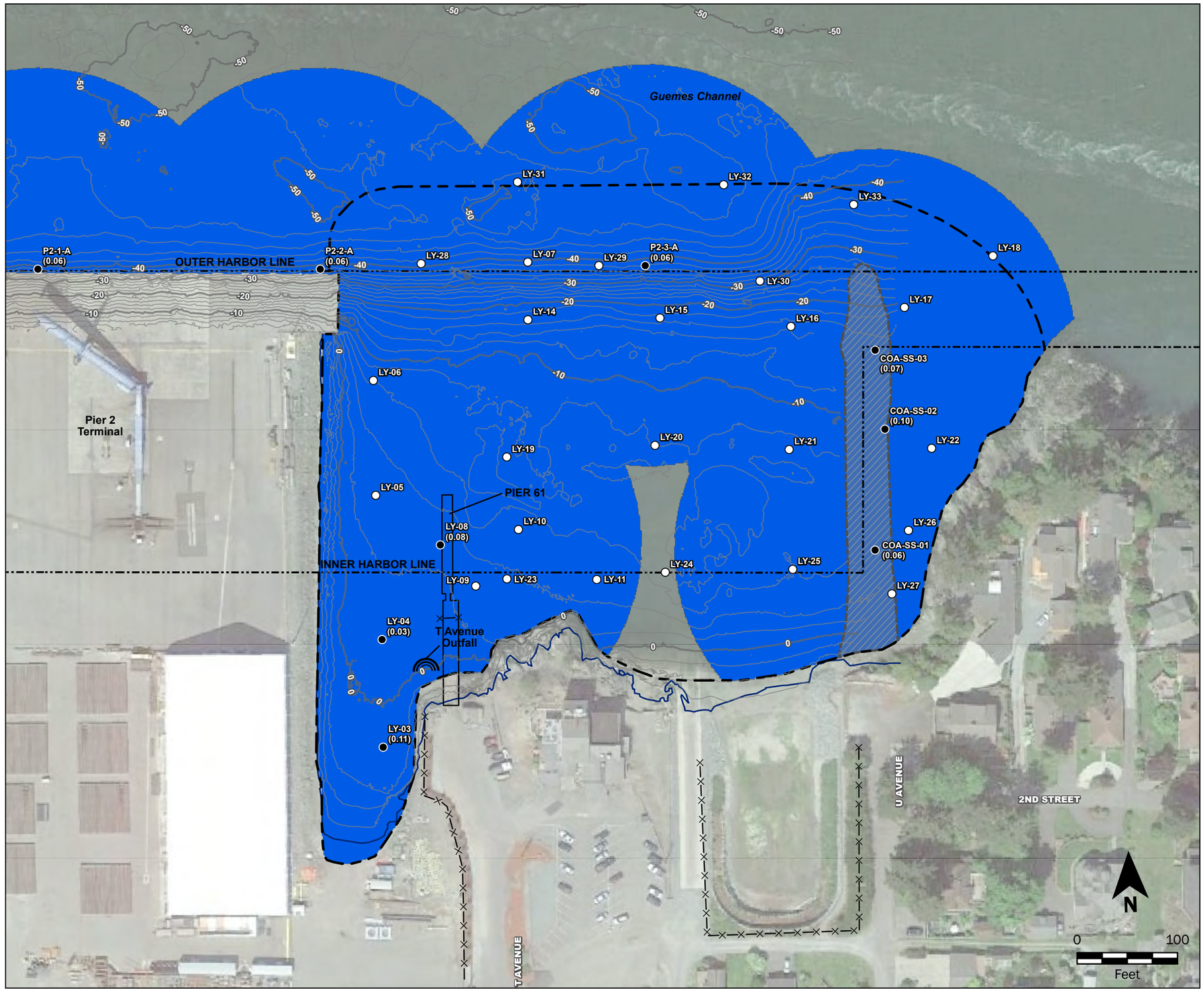
Copper Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 25

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F25_CopperResultsPOC Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

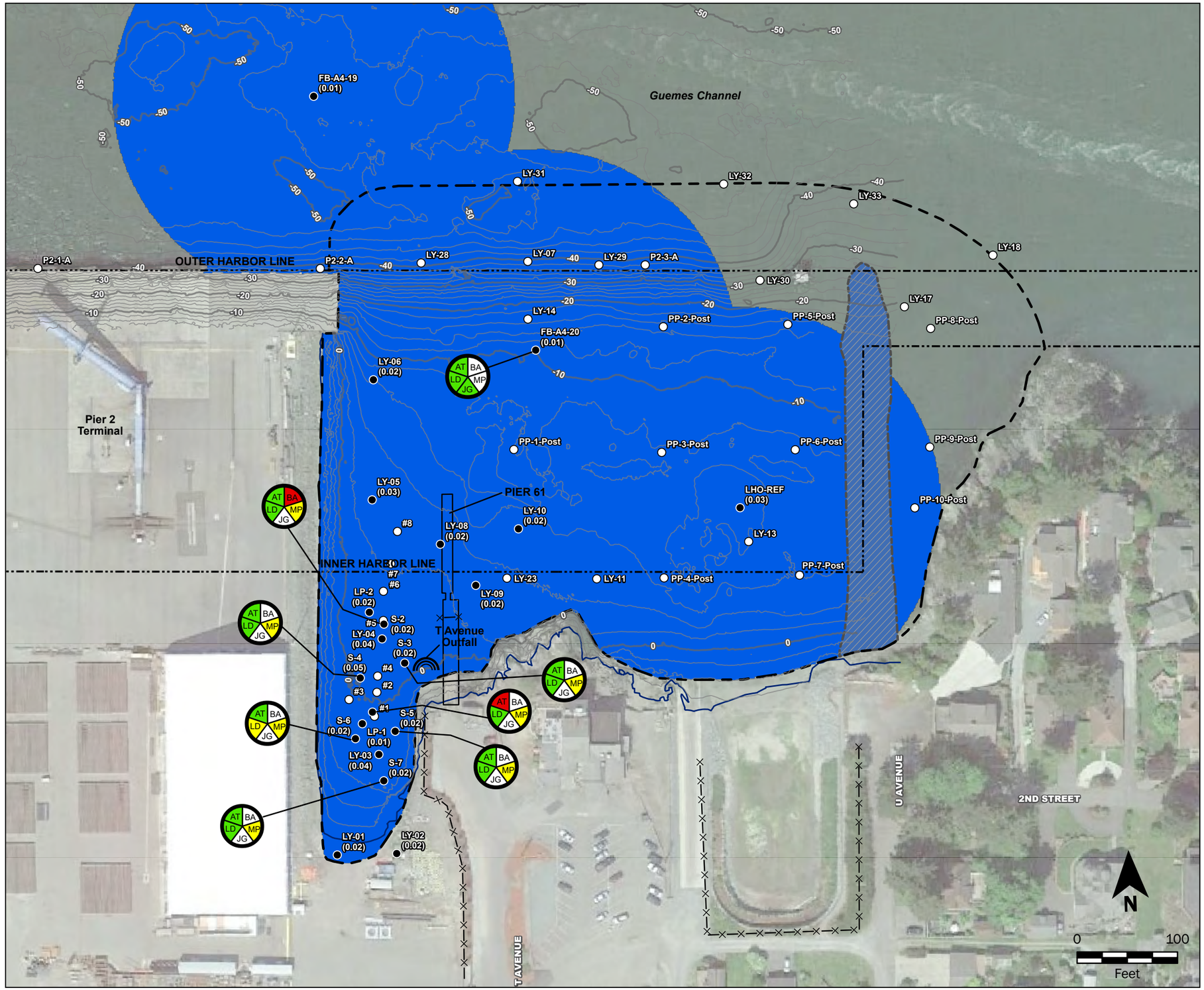
Copper Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 26

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F26_CopperResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

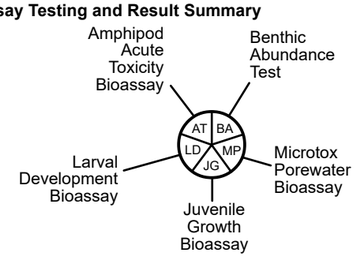
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

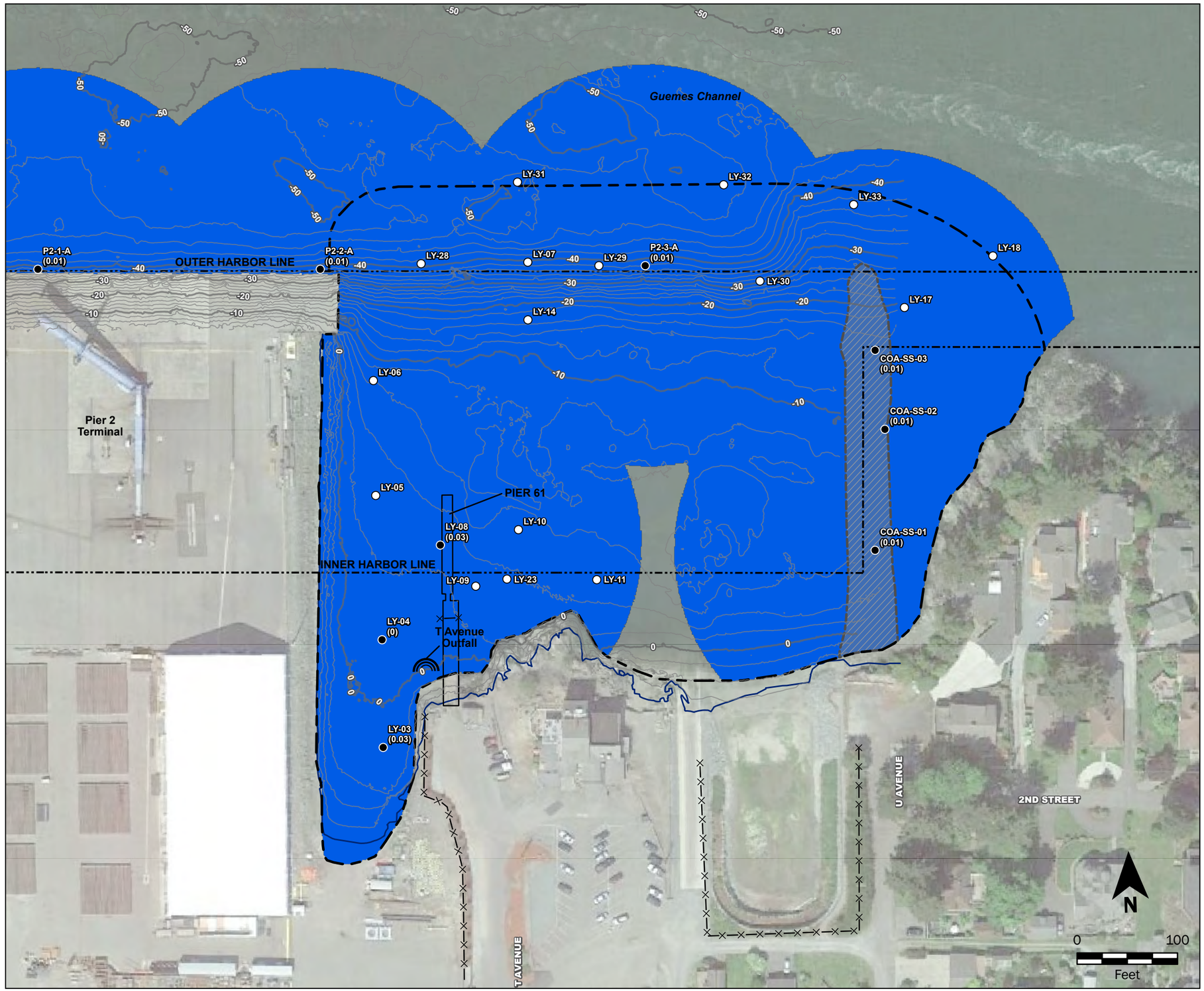
Lead Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 27

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F27_LeadResultsPOC Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

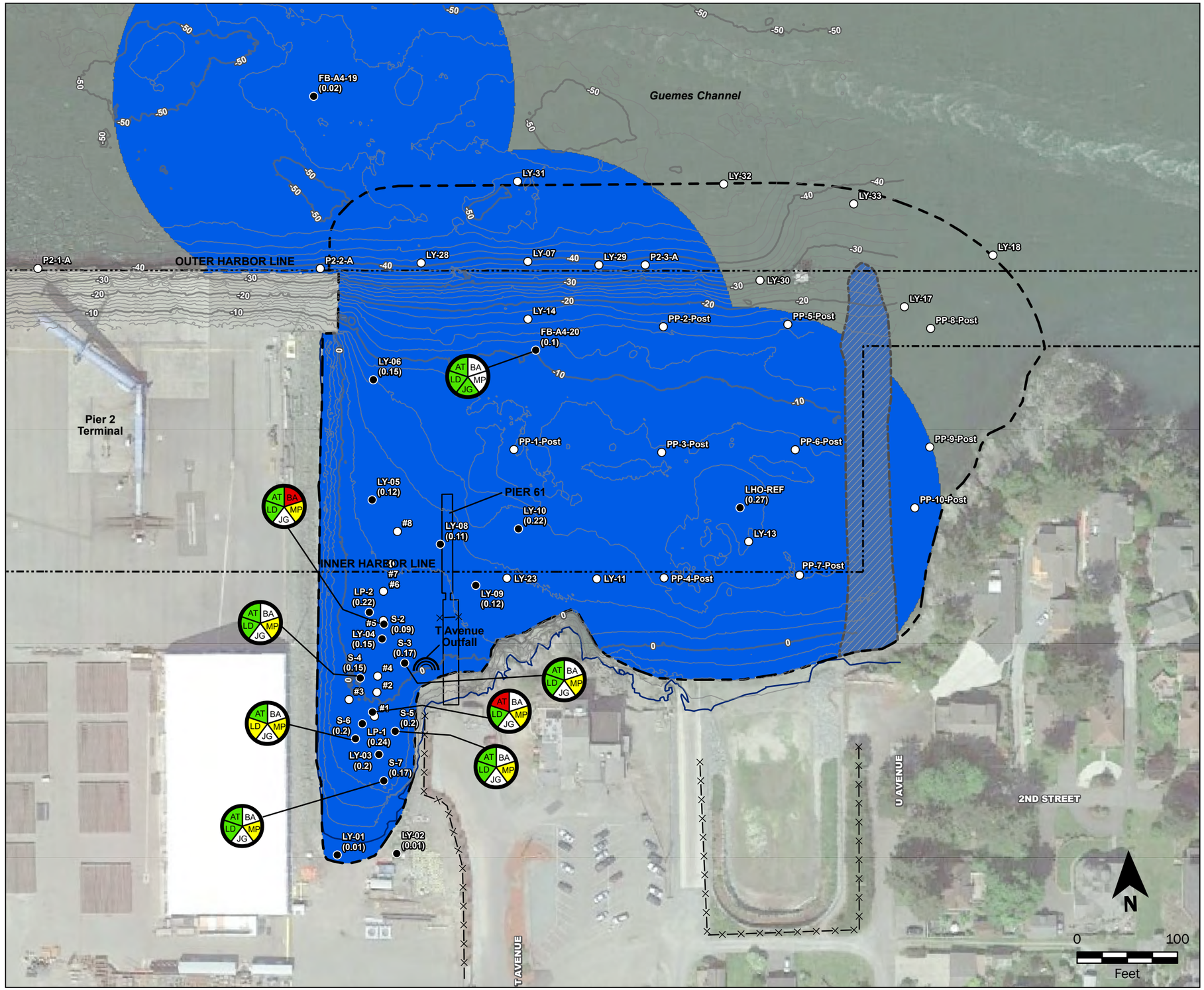
Lead Results (Benthic)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 28

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F28_LeadResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

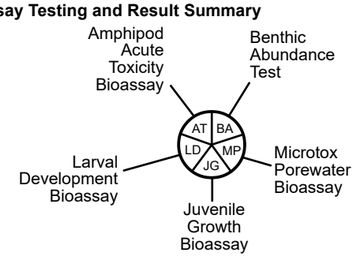
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

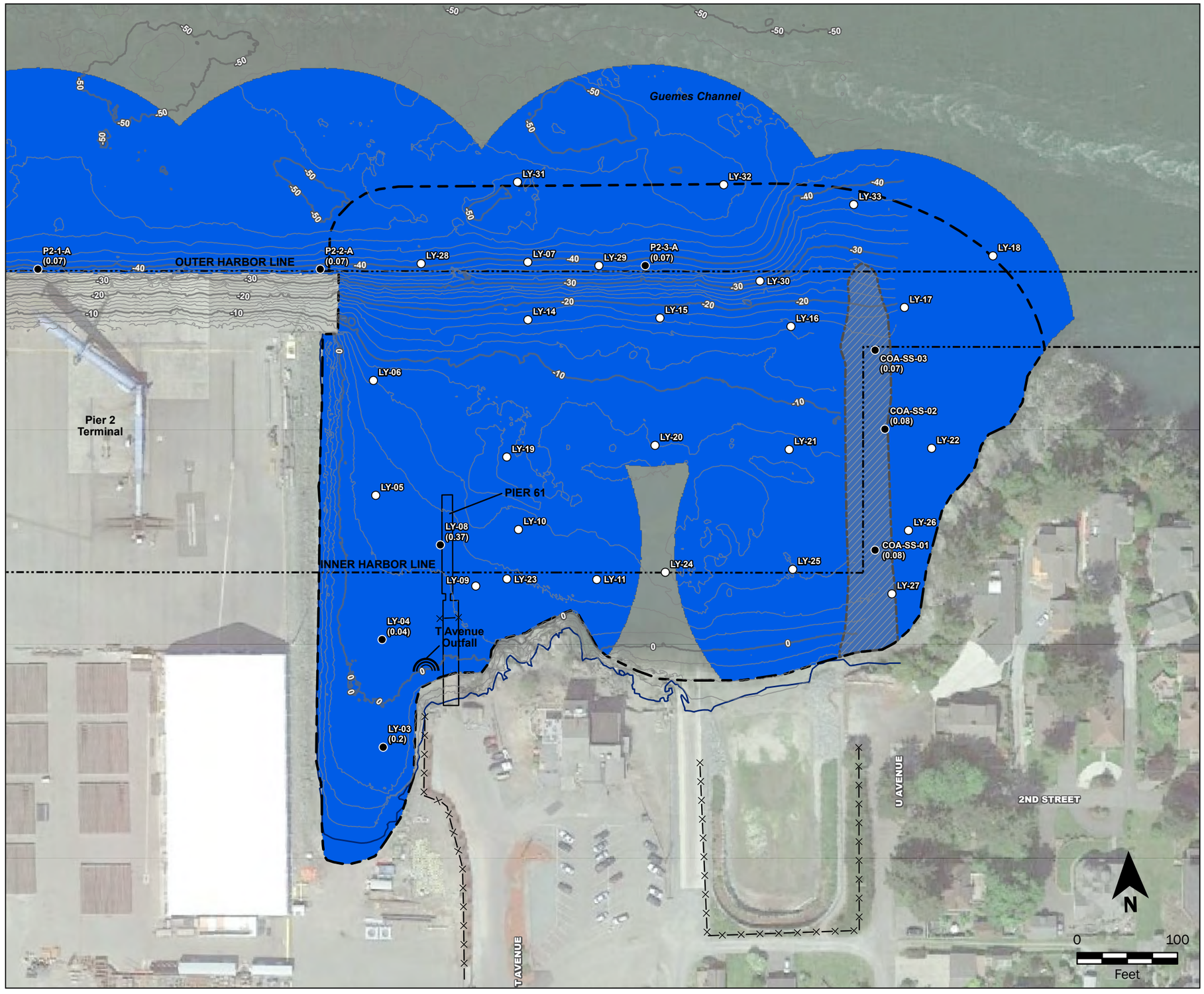
Mercury Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 29

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F29_MercuryResultsPOC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

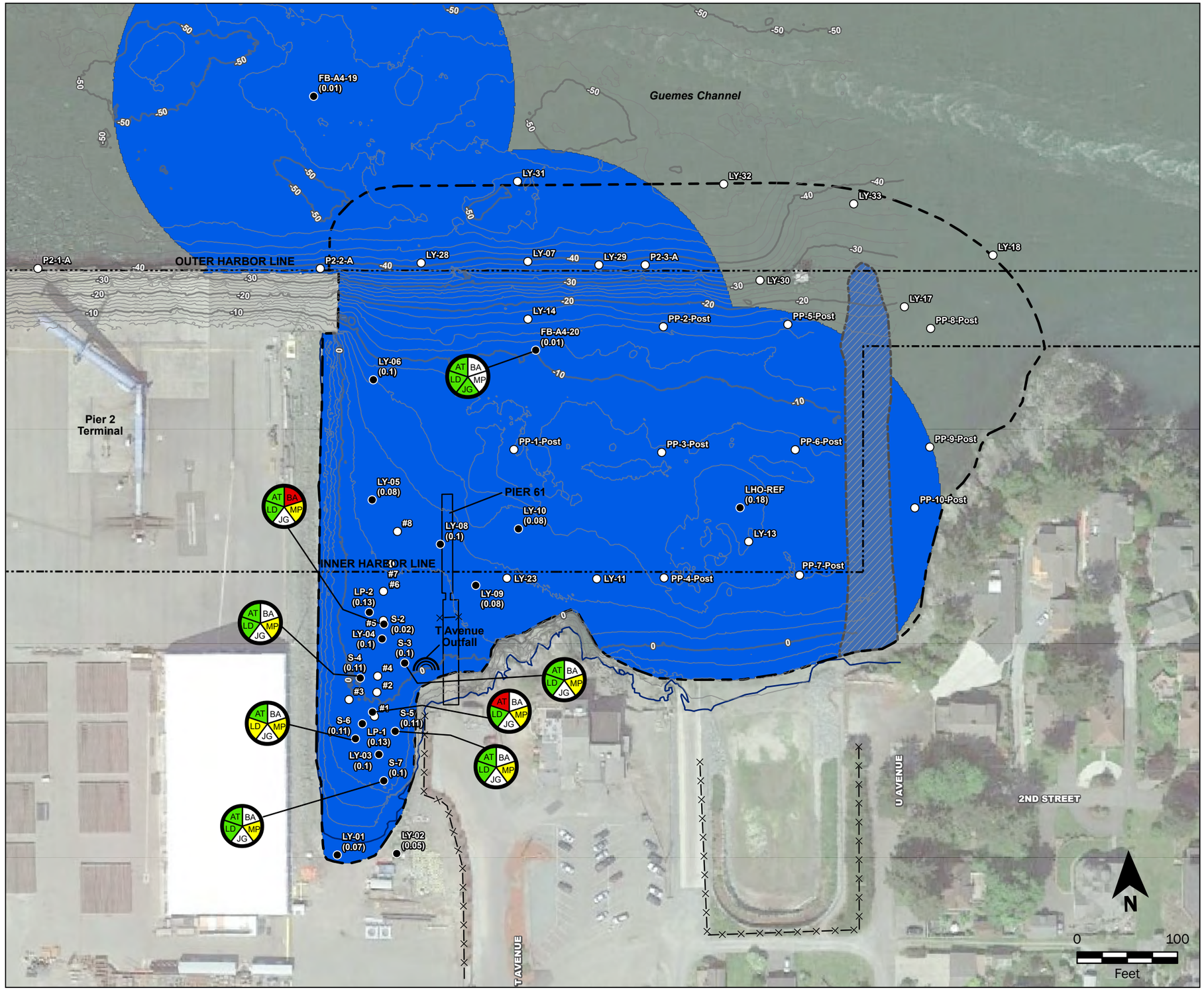
Mercury Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 30

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F30_MercuryResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

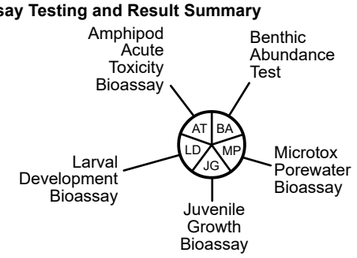
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

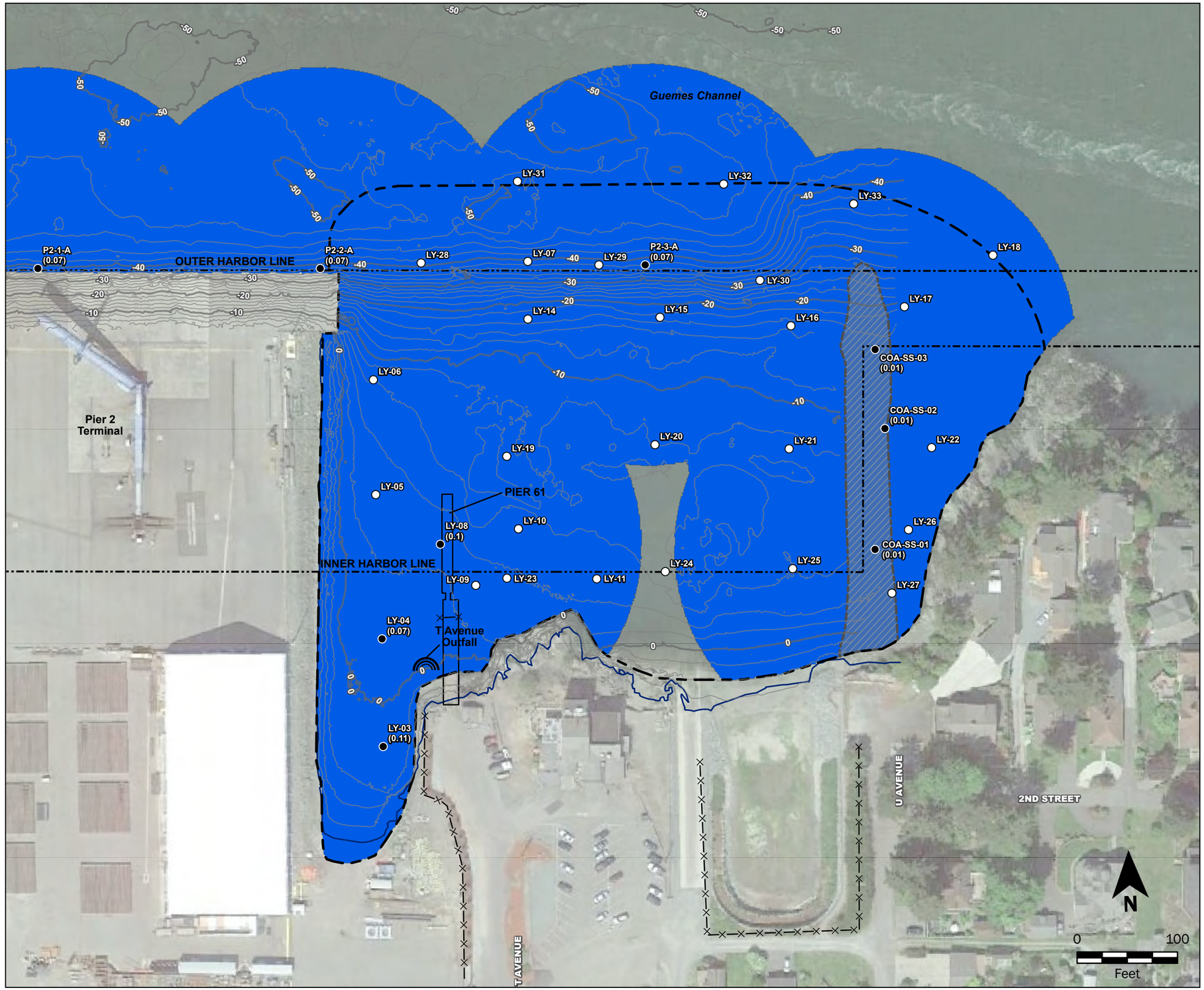
Silver Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 31

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F31_SilverResultsPOC Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

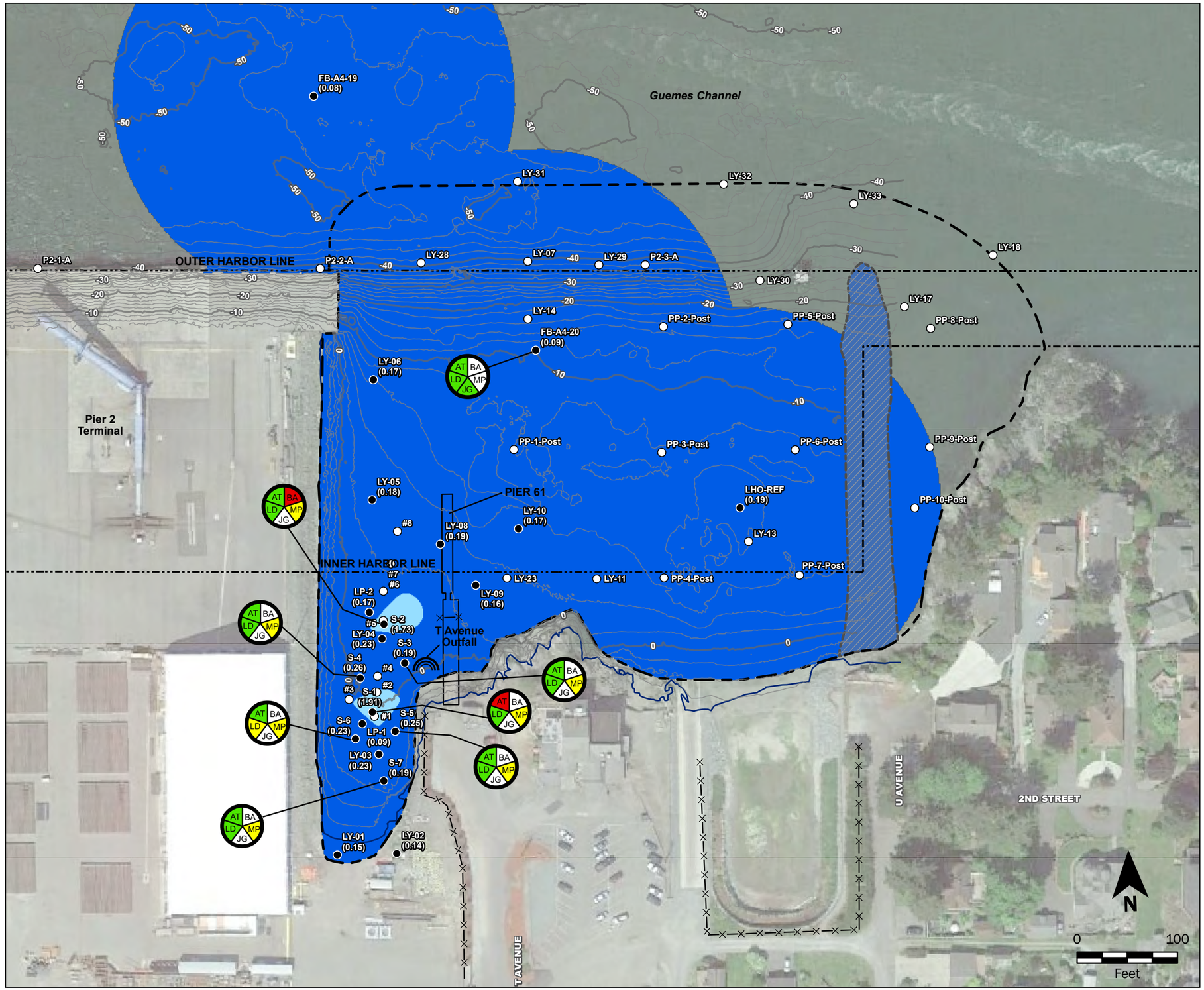
Silver Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 32

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F32_SilverResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

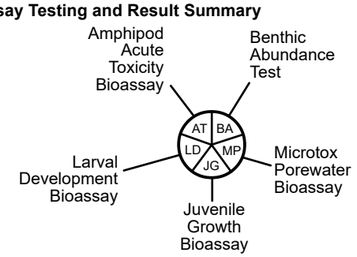
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

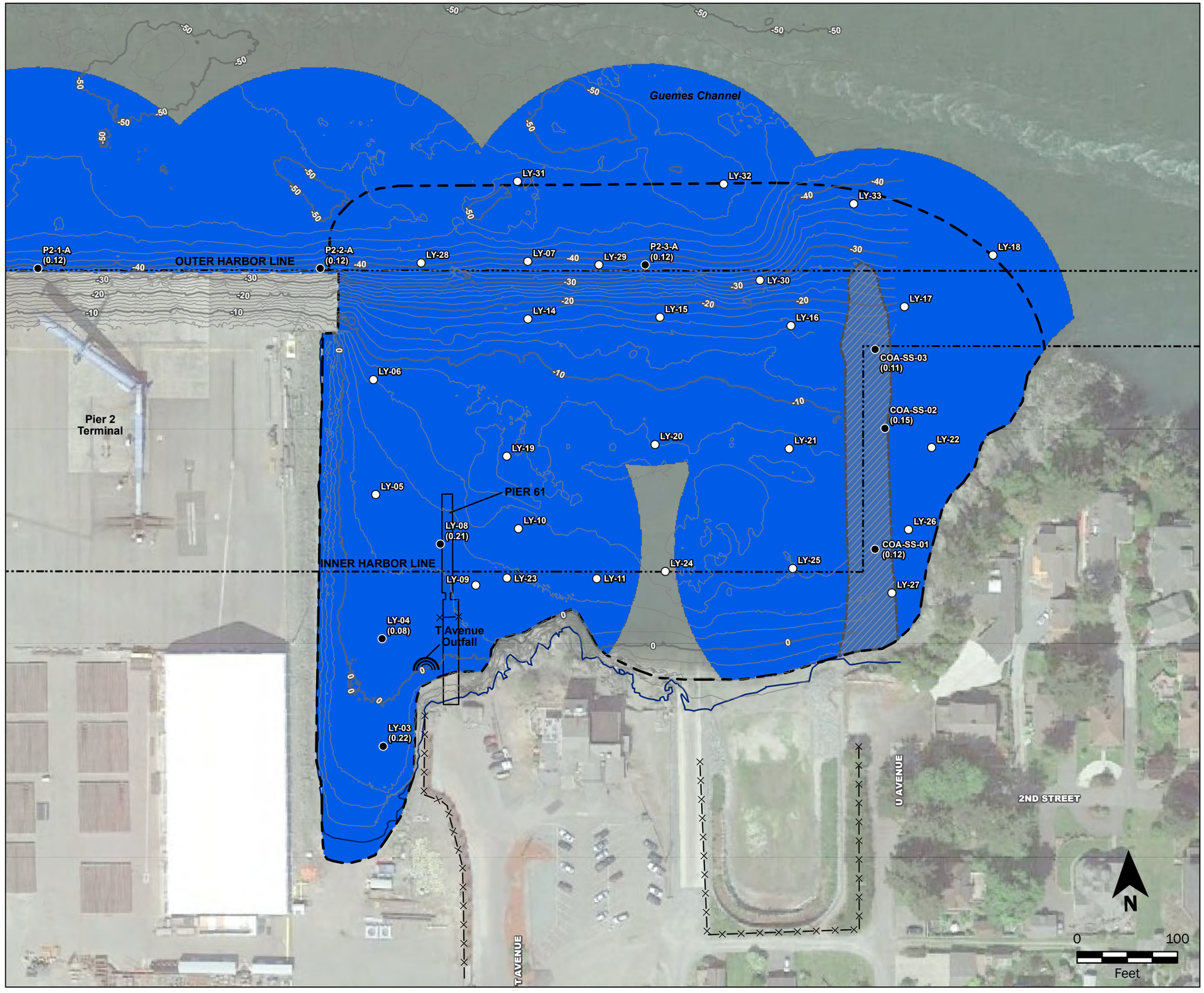
Zinc Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 33

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F33_ZincResultsPOC Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

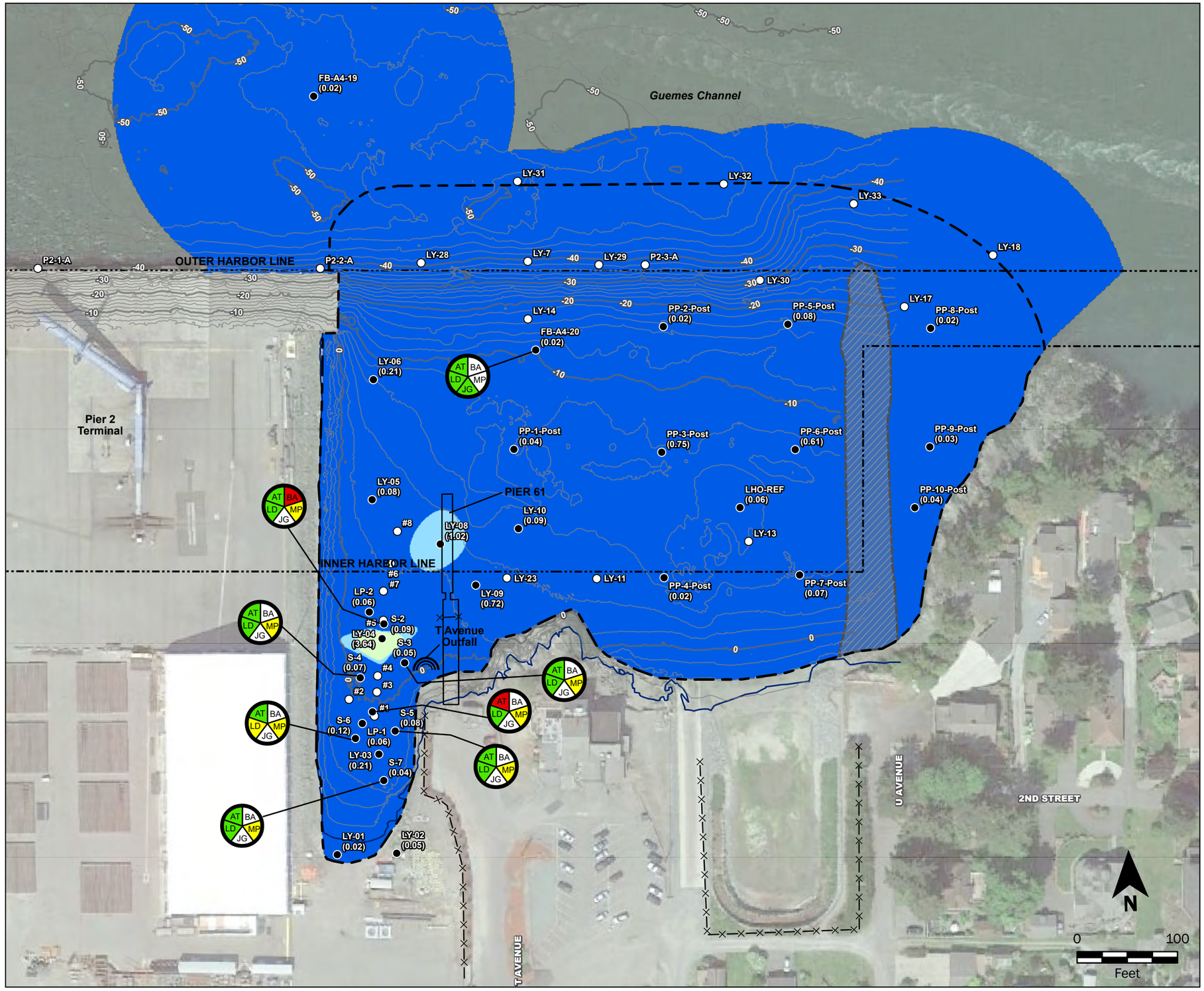
Zinc Results (Benthic)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 34

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F34_ZincResultsSubsurf Date Exported: 12/29/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Project Dredge Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

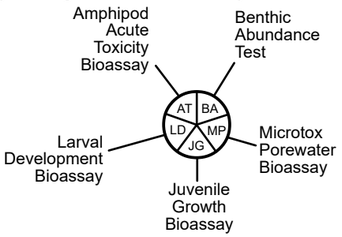
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

LPAH Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 35

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F35_LPAHPOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

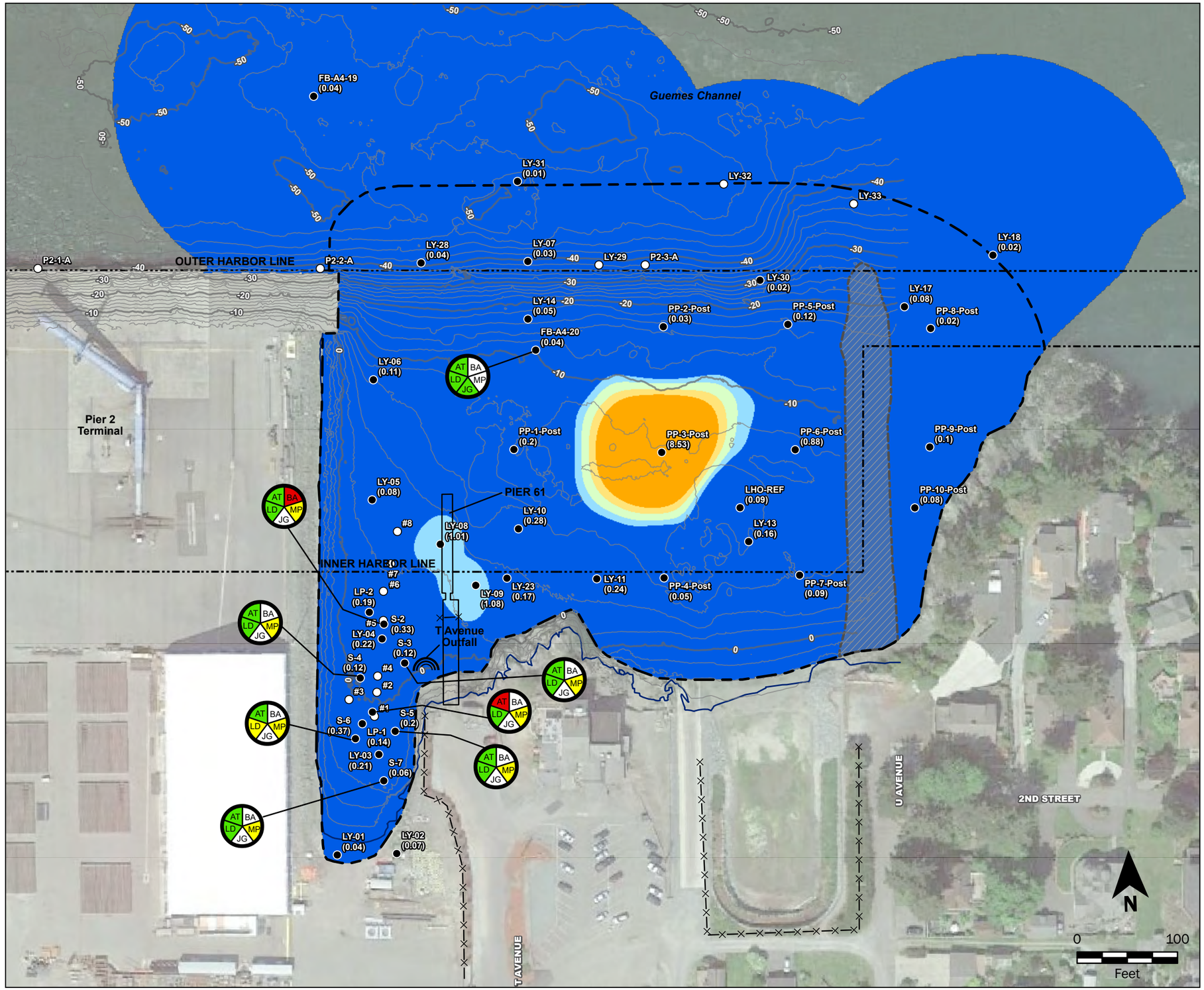
LPAH Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 36

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F36_LPAHSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

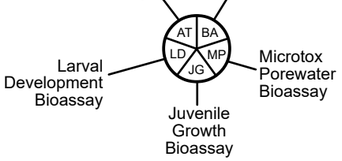
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



Meets SQS and CSL Criteria	Failure of CSL Criteria
Failure of SQS Criteria	No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

HPAH Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 37

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

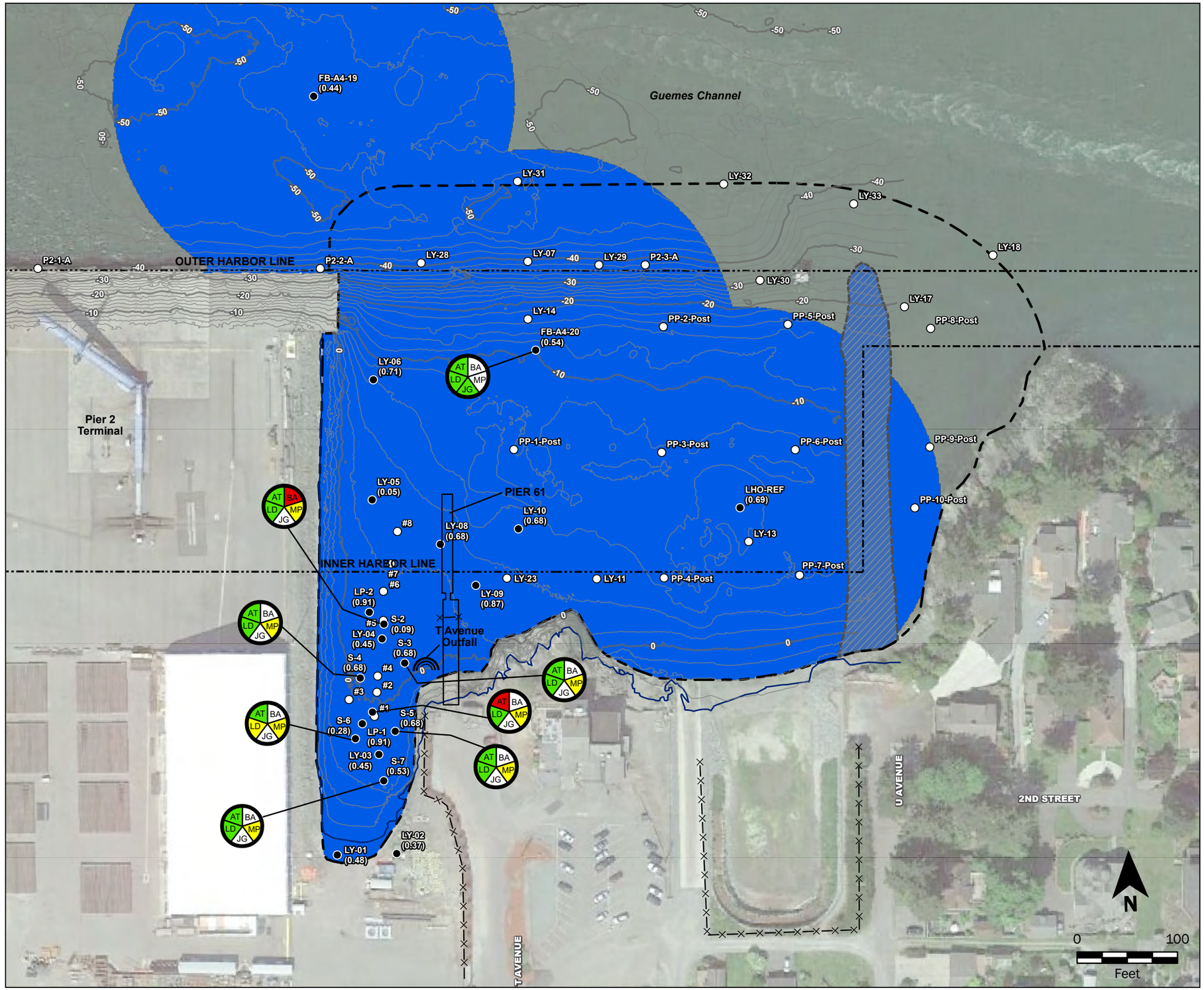
HPAH Results (Benthic)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 38

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F38_HPAHSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

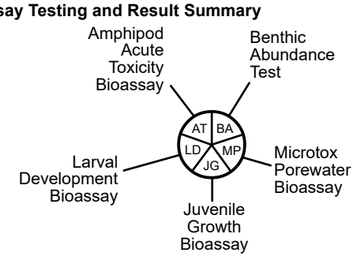
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

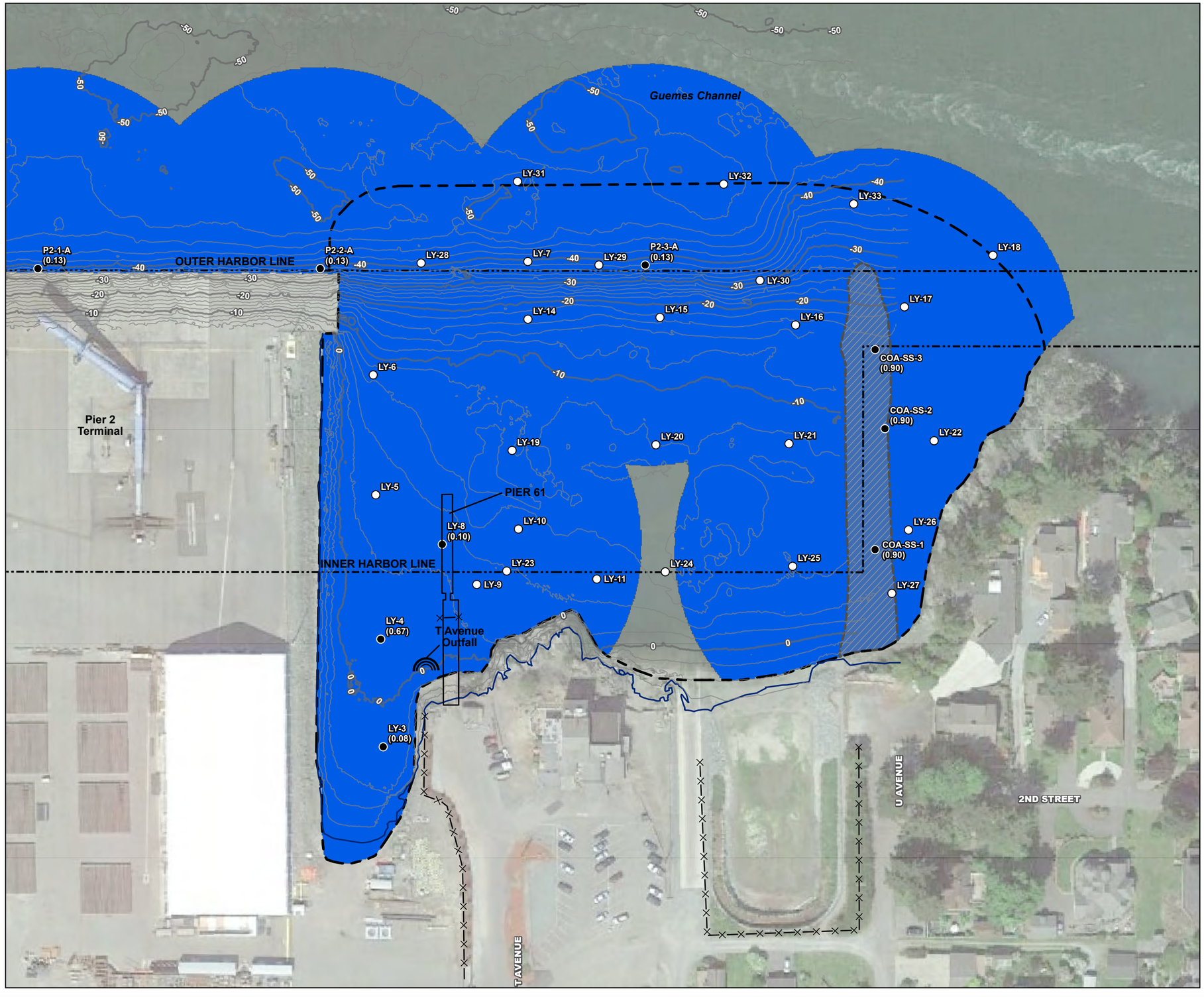
Chlorinated Hydrocarbon Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 39

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F39_ChlorinatedHydrocarbonsPOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

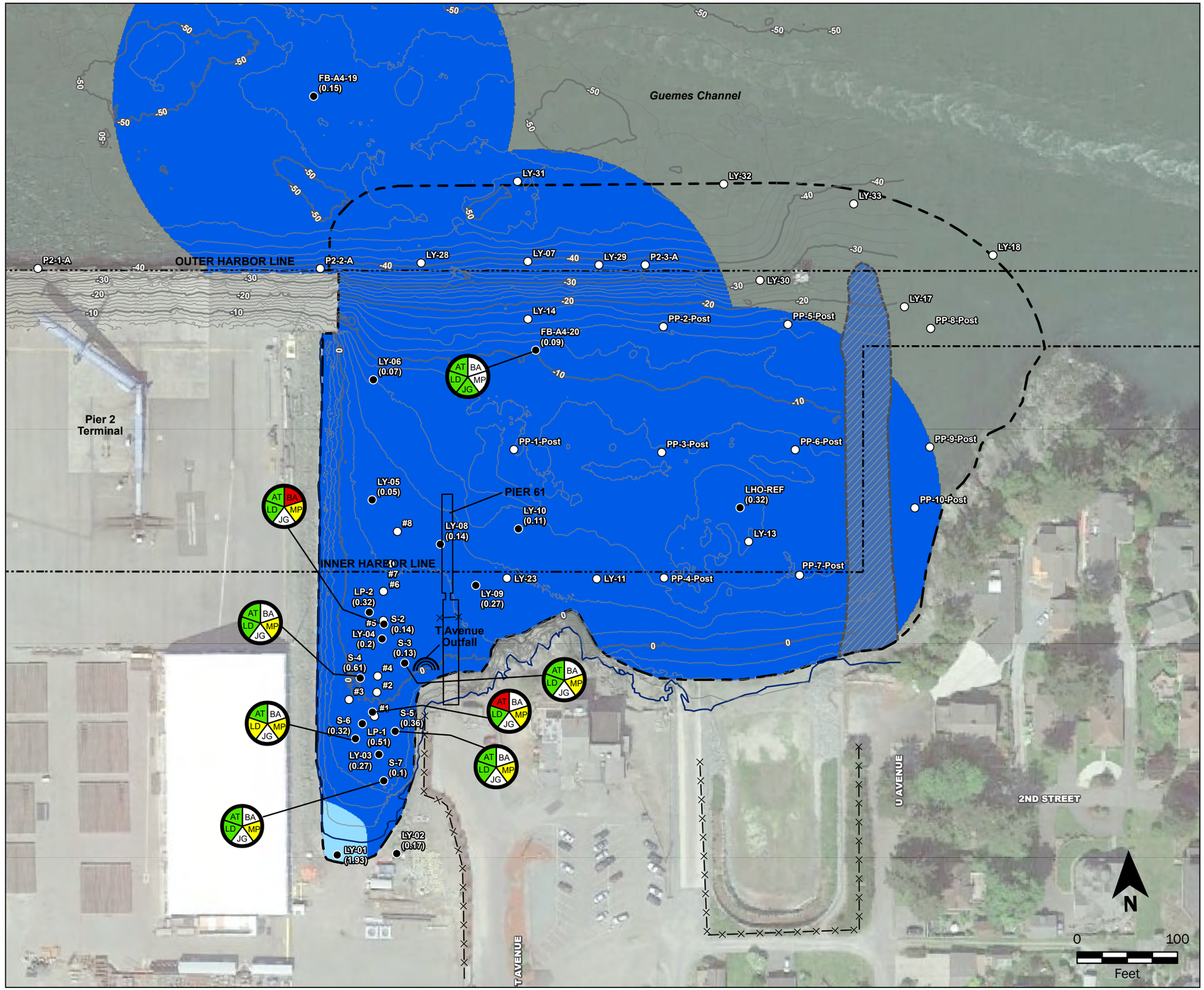
Chlorinated Hydrocarbon Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 40

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016O8_F40_ChloronatedHydrocarbonsSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

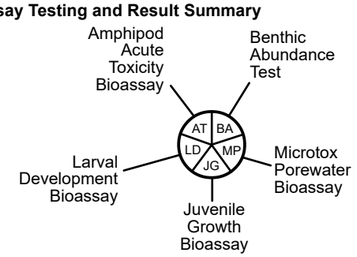
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Phthalate Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 41

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F41_PhthalatePOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

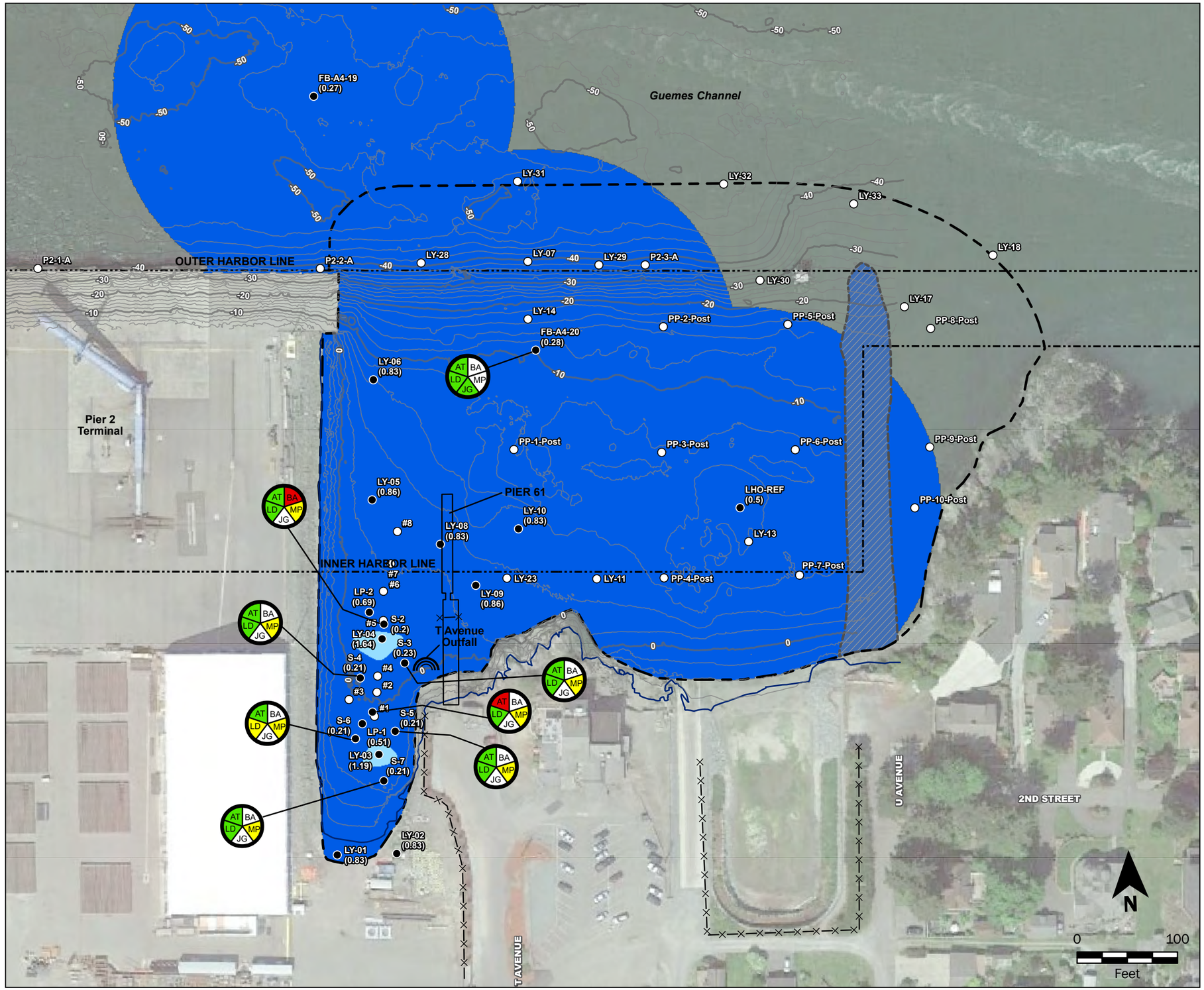
Phthalate Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 42

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F42_PhthalateSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

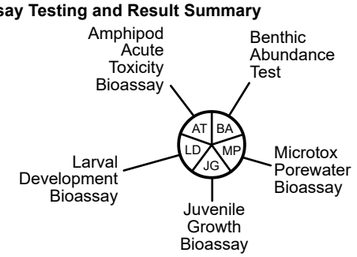
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

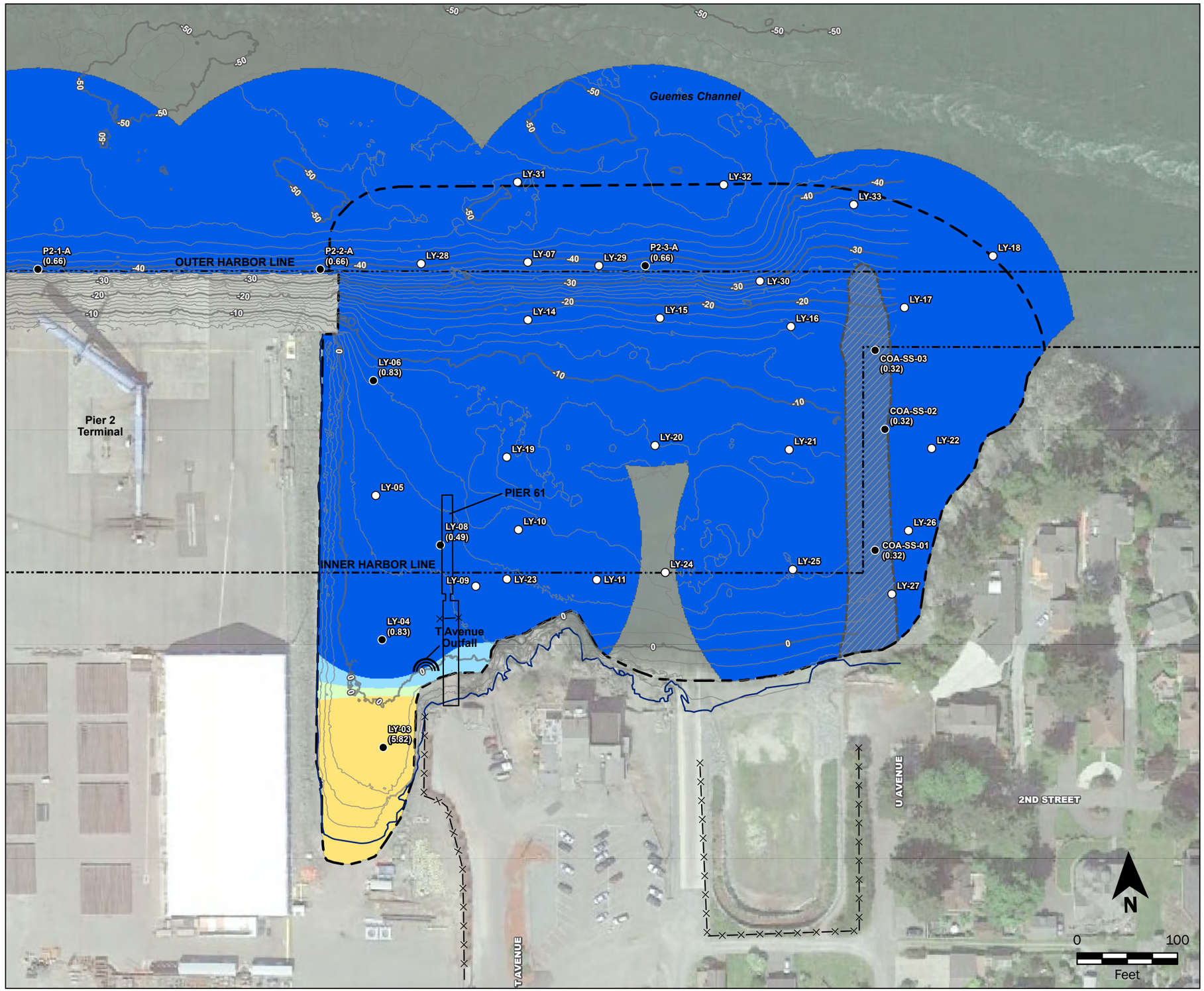
Phenol Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 43

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F43_PhenolPOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

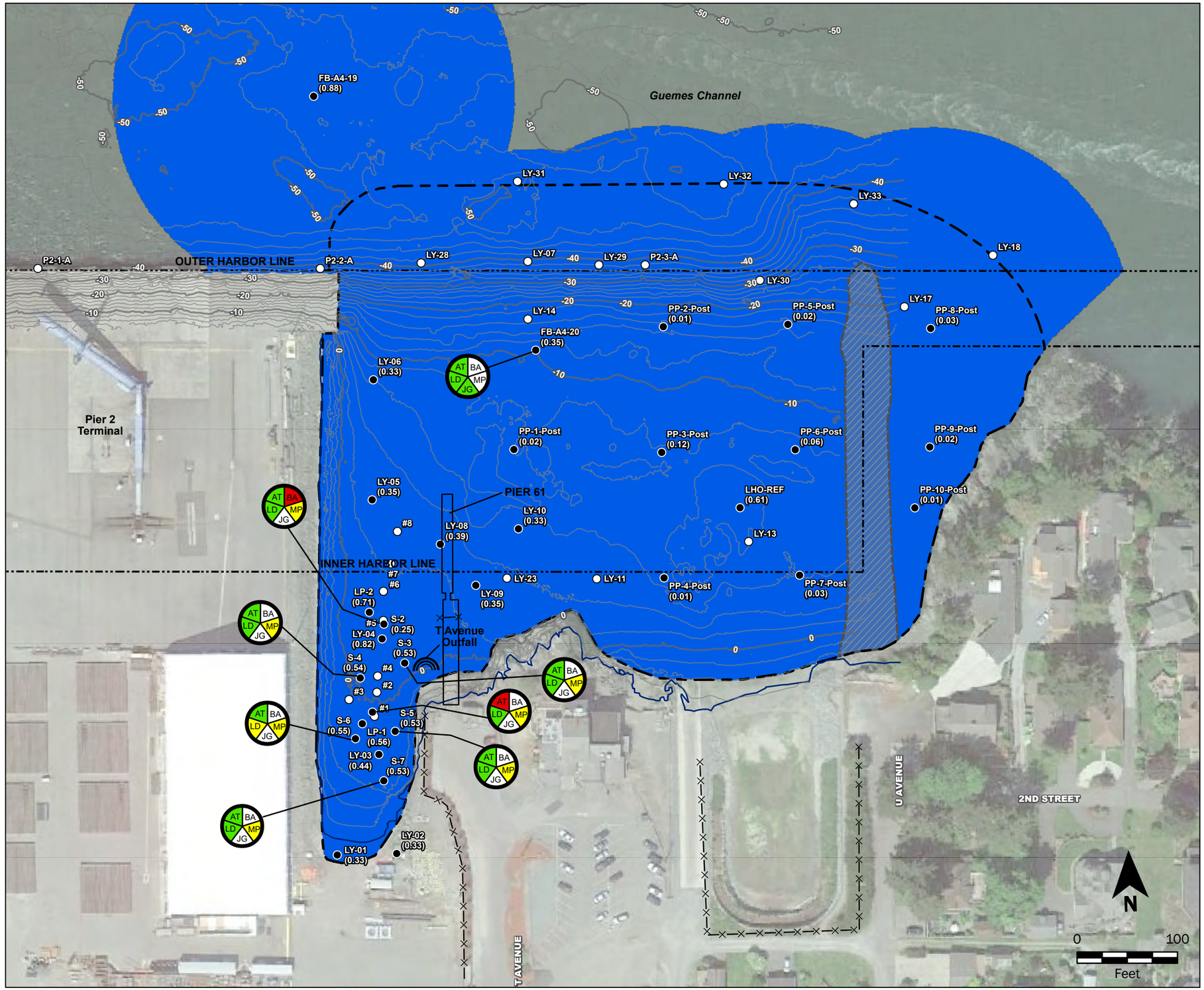
Phenol Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 44

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F44_PhenolSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

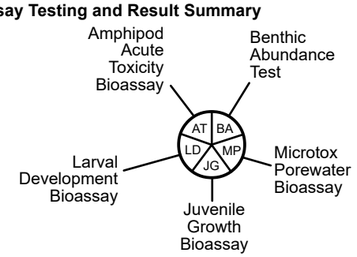
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

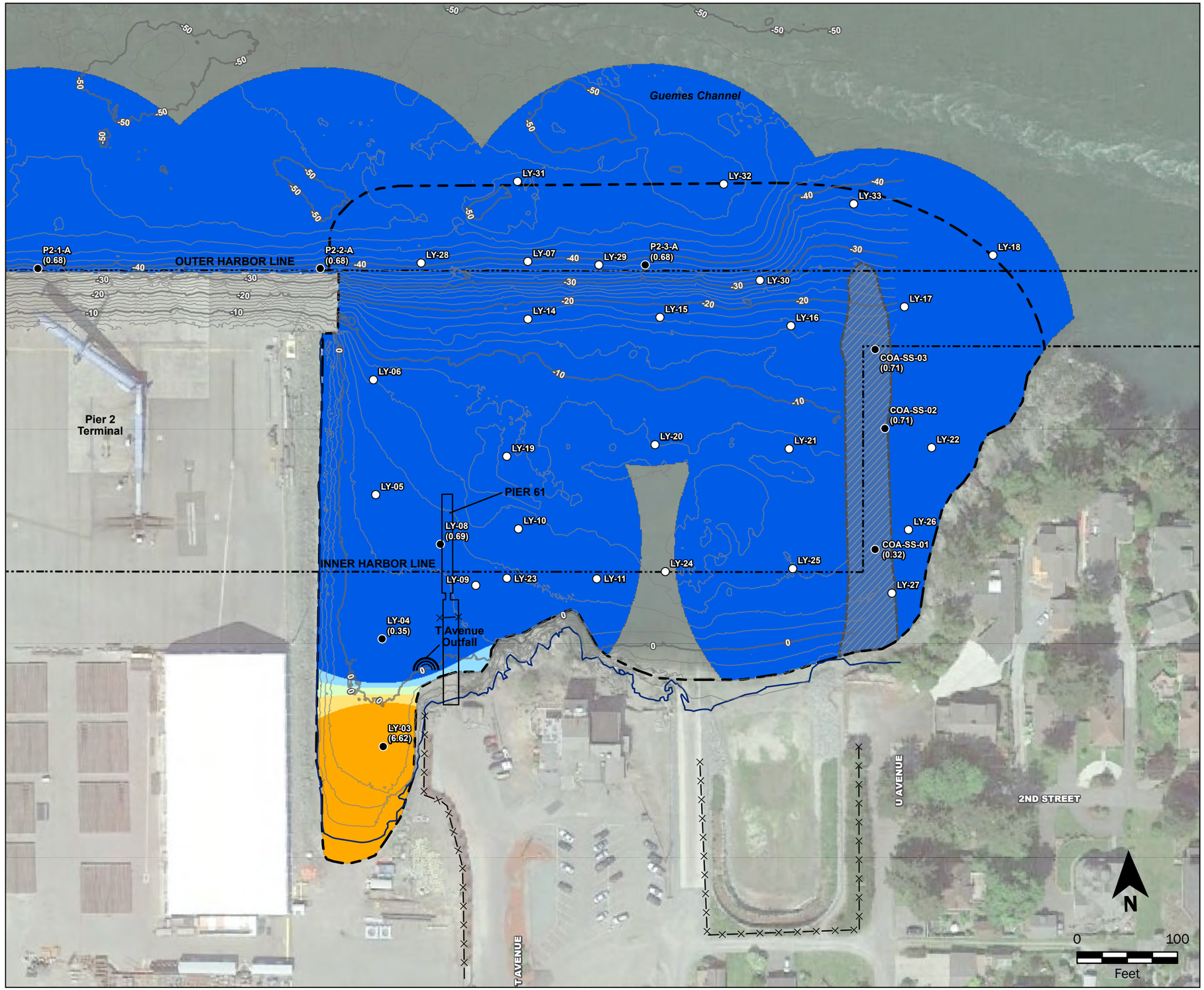
Miscellaneous Extractable Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 45

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F45_MiscExtractablesPOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

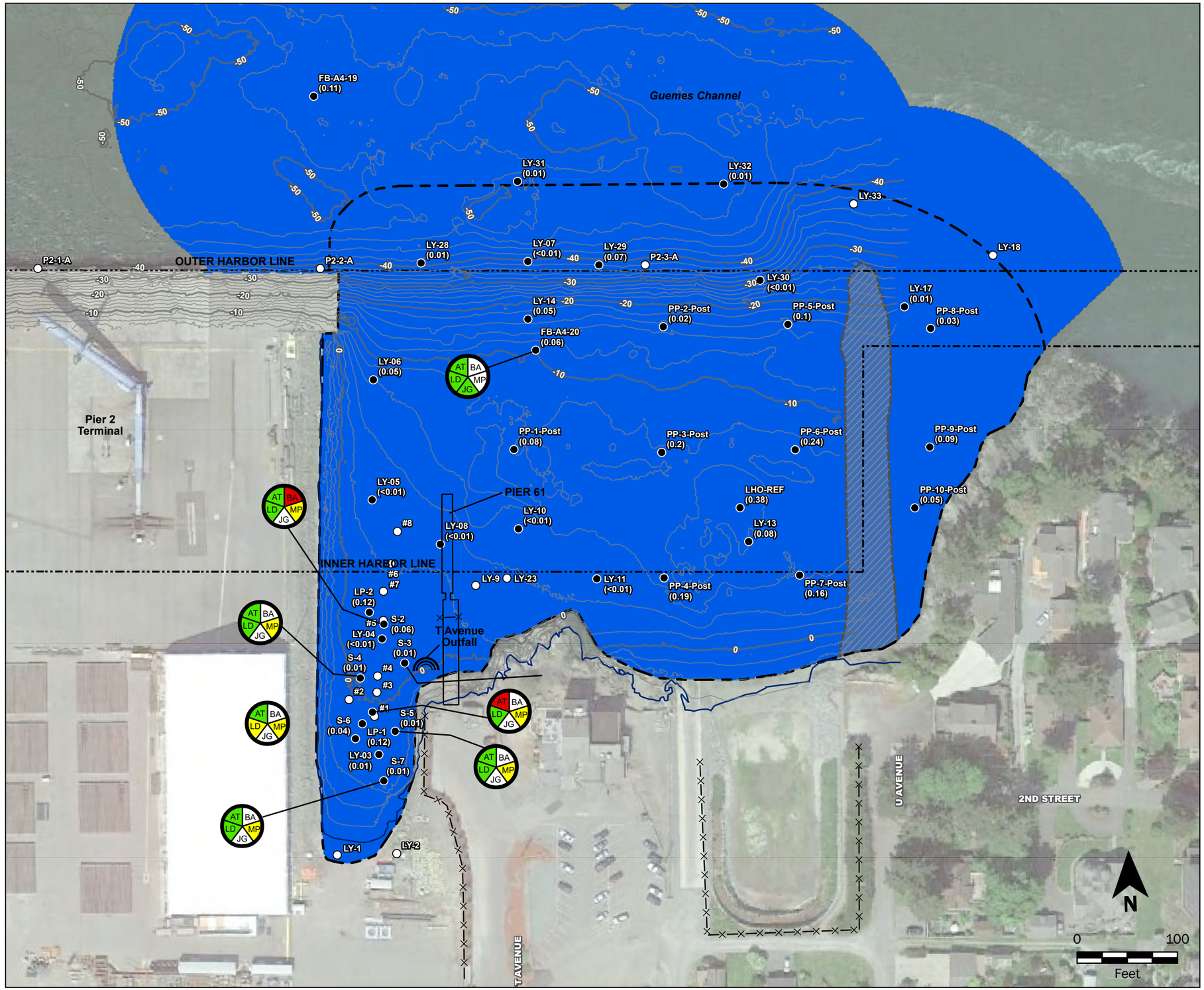
Miscellaneous Extractable Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 46

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F46_MiscExtractablesSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

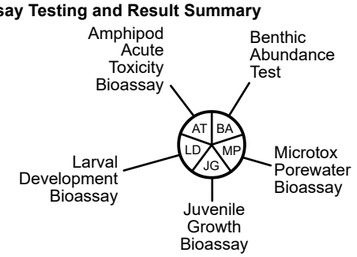
*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

Bioassay Testing and Result Summary



- Meets SQS and CSL Criteria
- Failure of CSL Criteria
- Failure of SQS Criteria
- No Result

ft = Feet
SQS = Sediment Quality Objective
CSL = Cleanup Screening Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

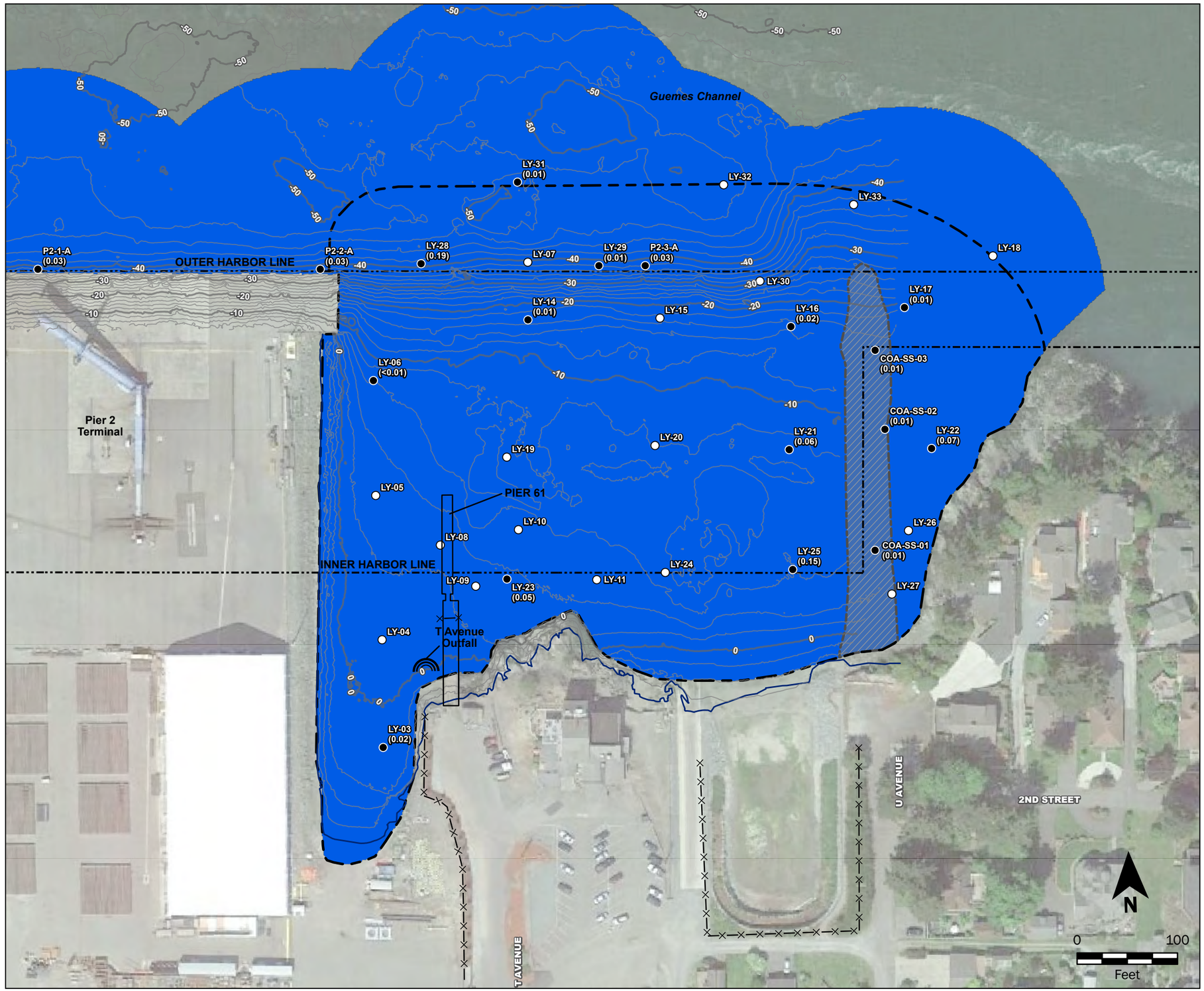
PCB Results (Benthic)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 47

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F47_PCBPOC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

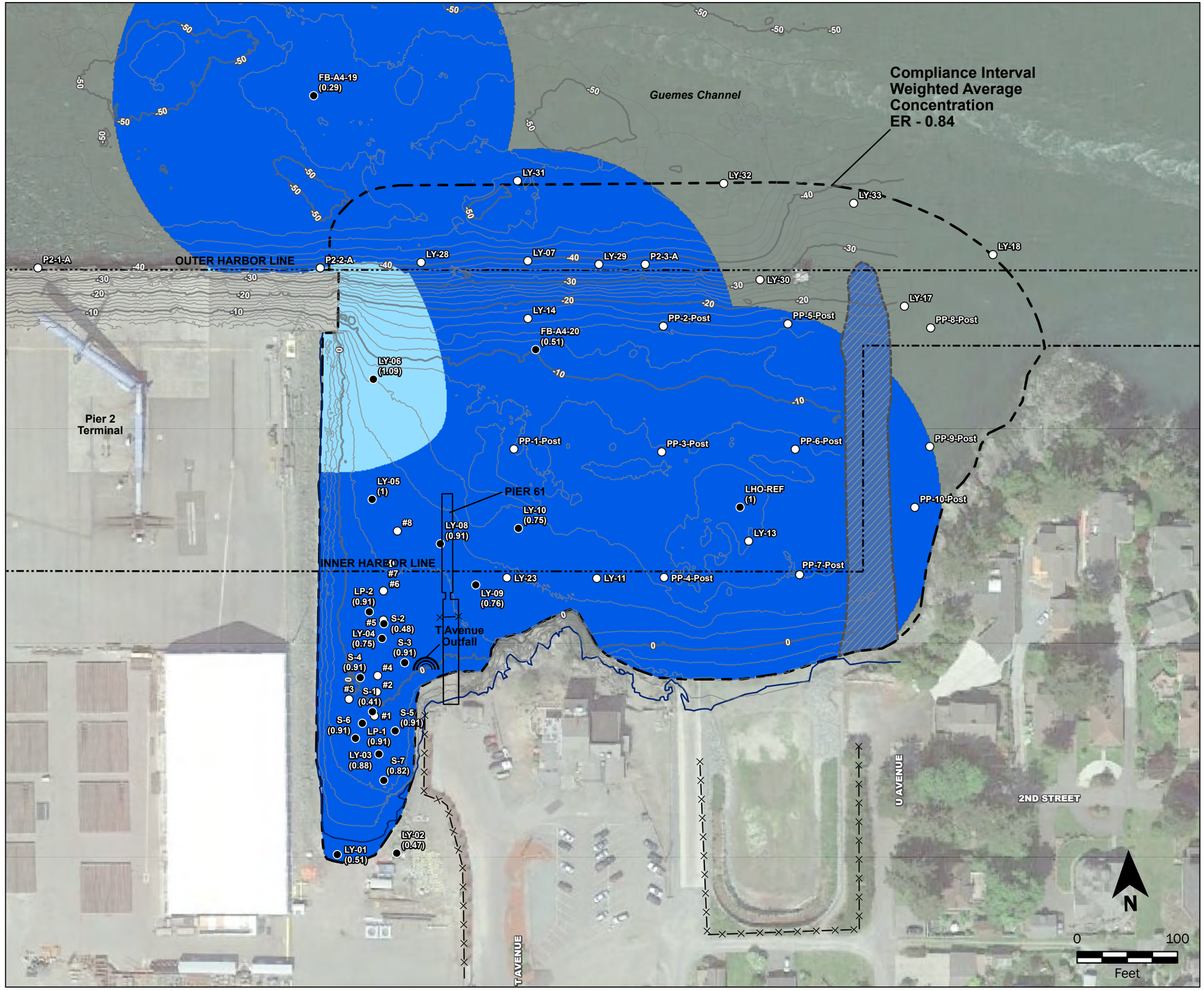
PCB Results (Benthic) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 48

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F48_PCBSubsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

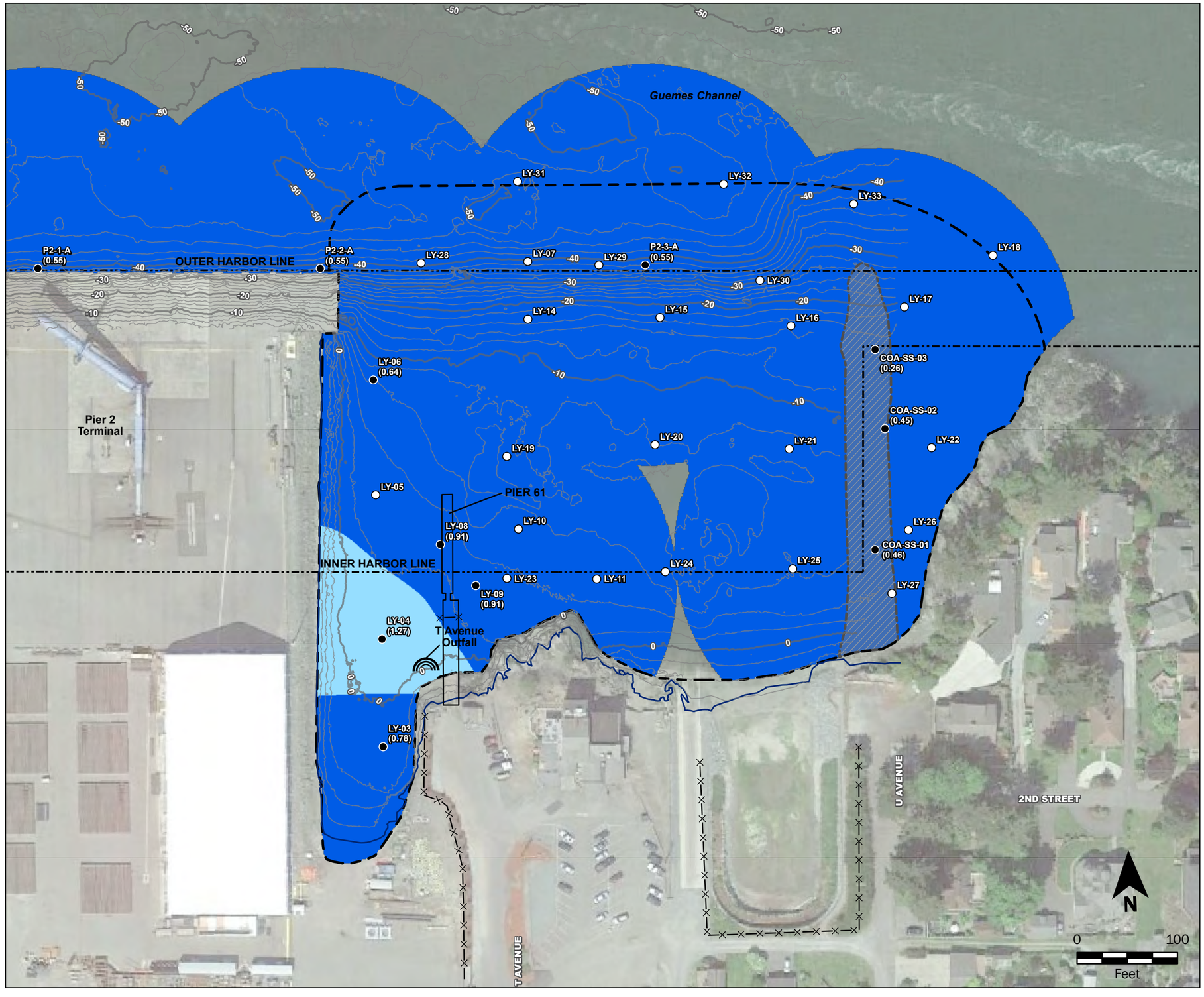
Arsenic Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 49

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F49_Arsenic_HH_POC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

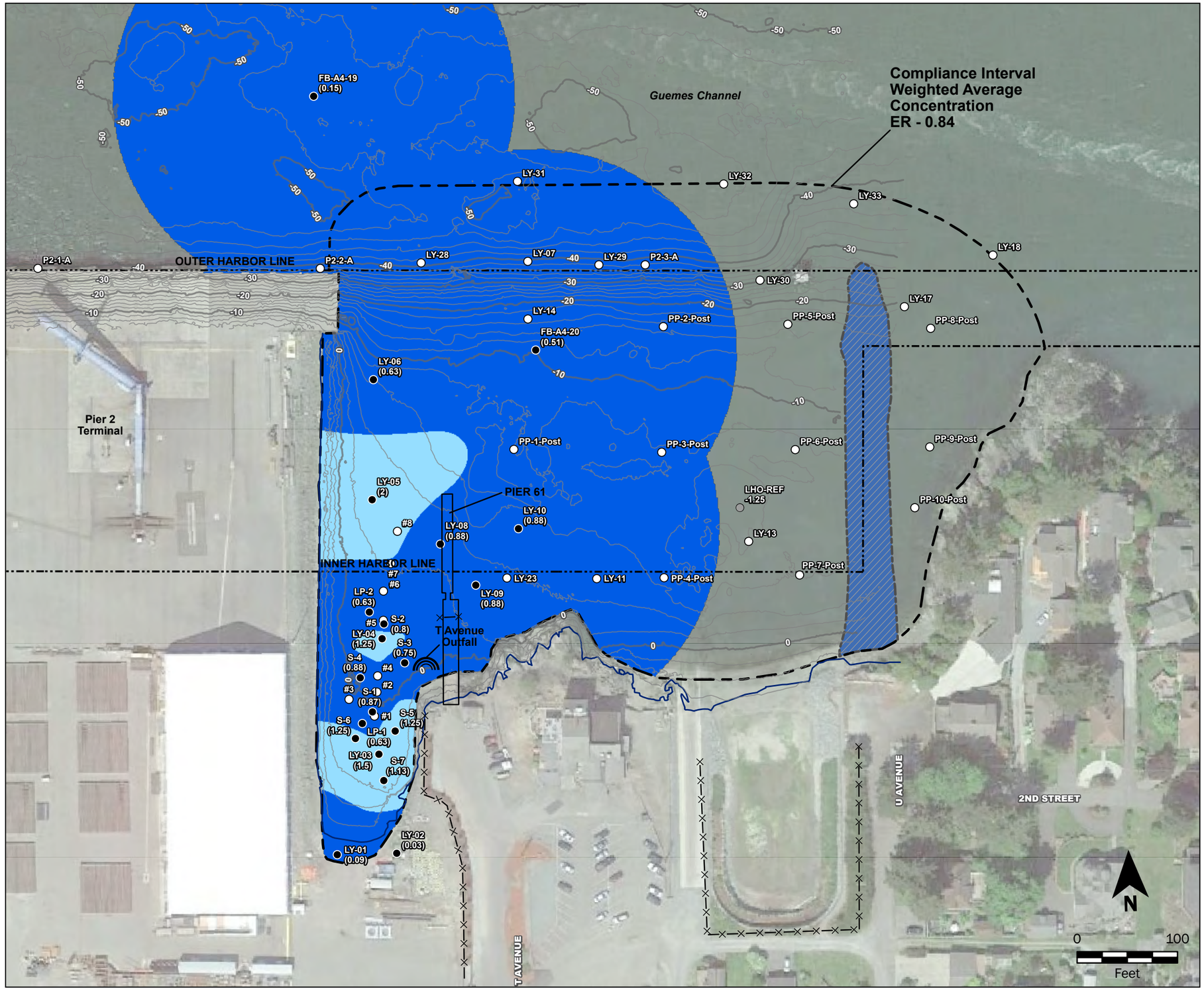
Arsenic Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 50

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F50_Arsenic_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) (denoted as a negative result) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Cadmium Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 51

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F51_Cadmium_HH_POC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

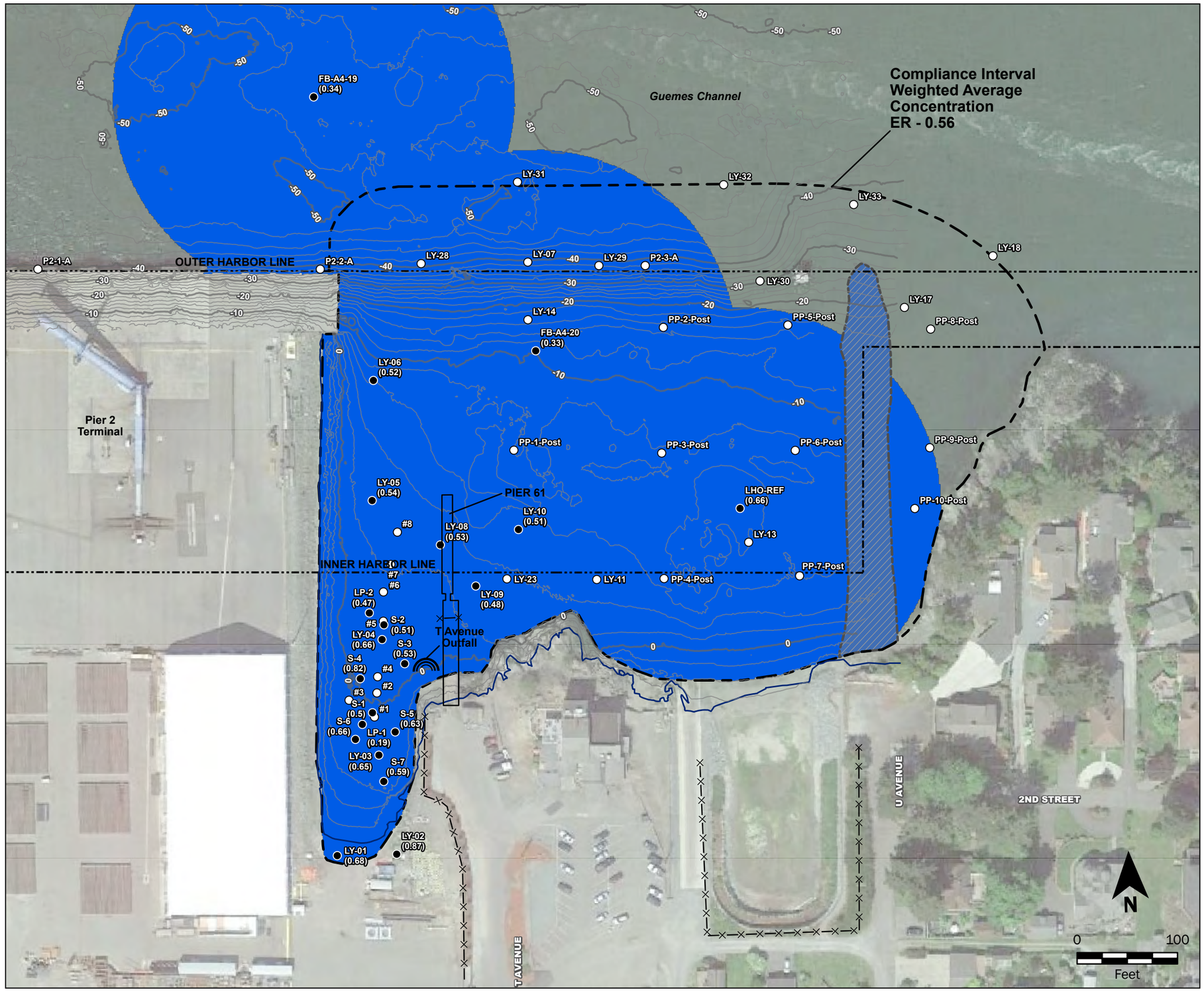
Cadmium Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 52

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F52_Cadmium_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

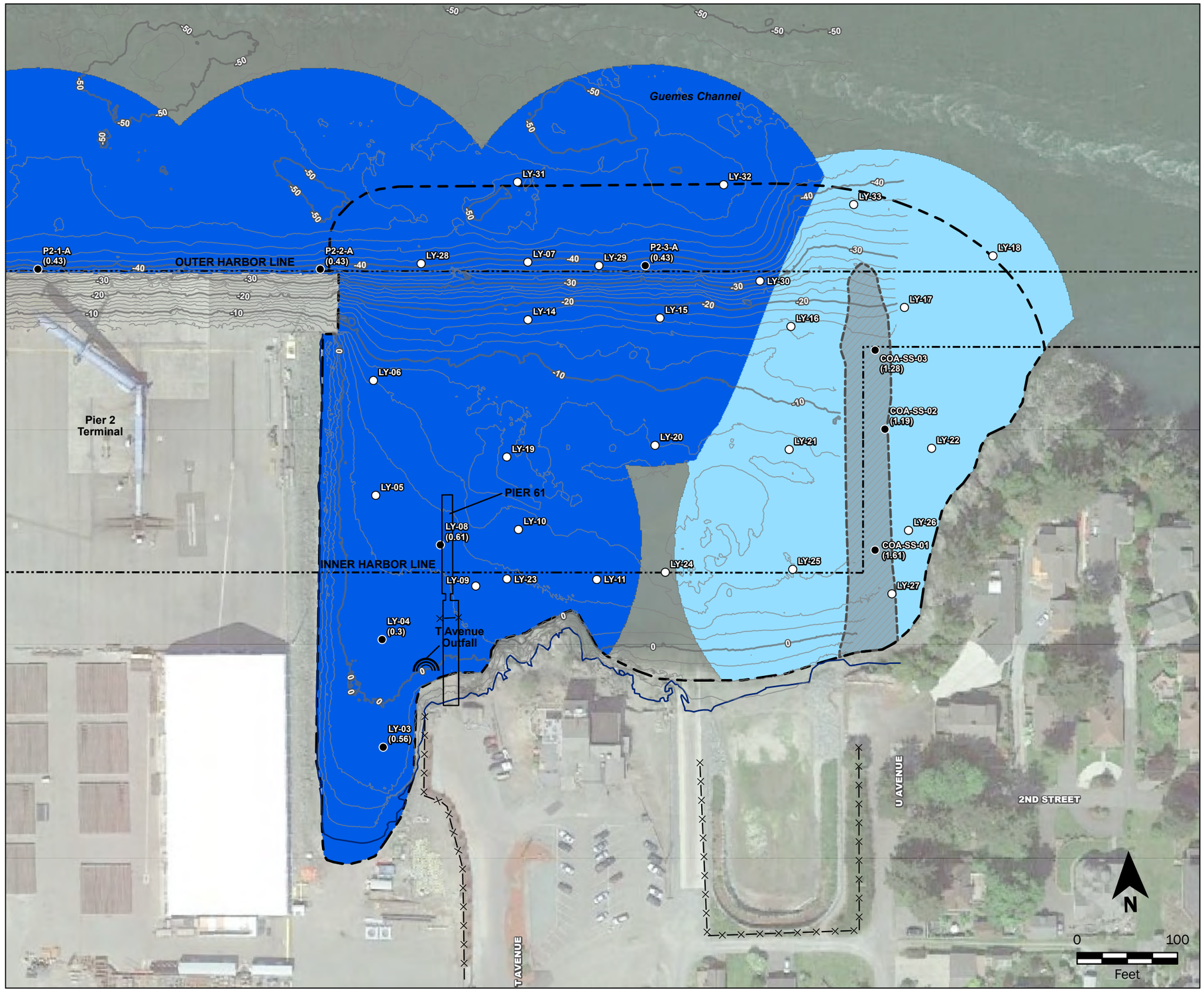
Chromium Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 53

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016O8_F53_Chromium_HH_POC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

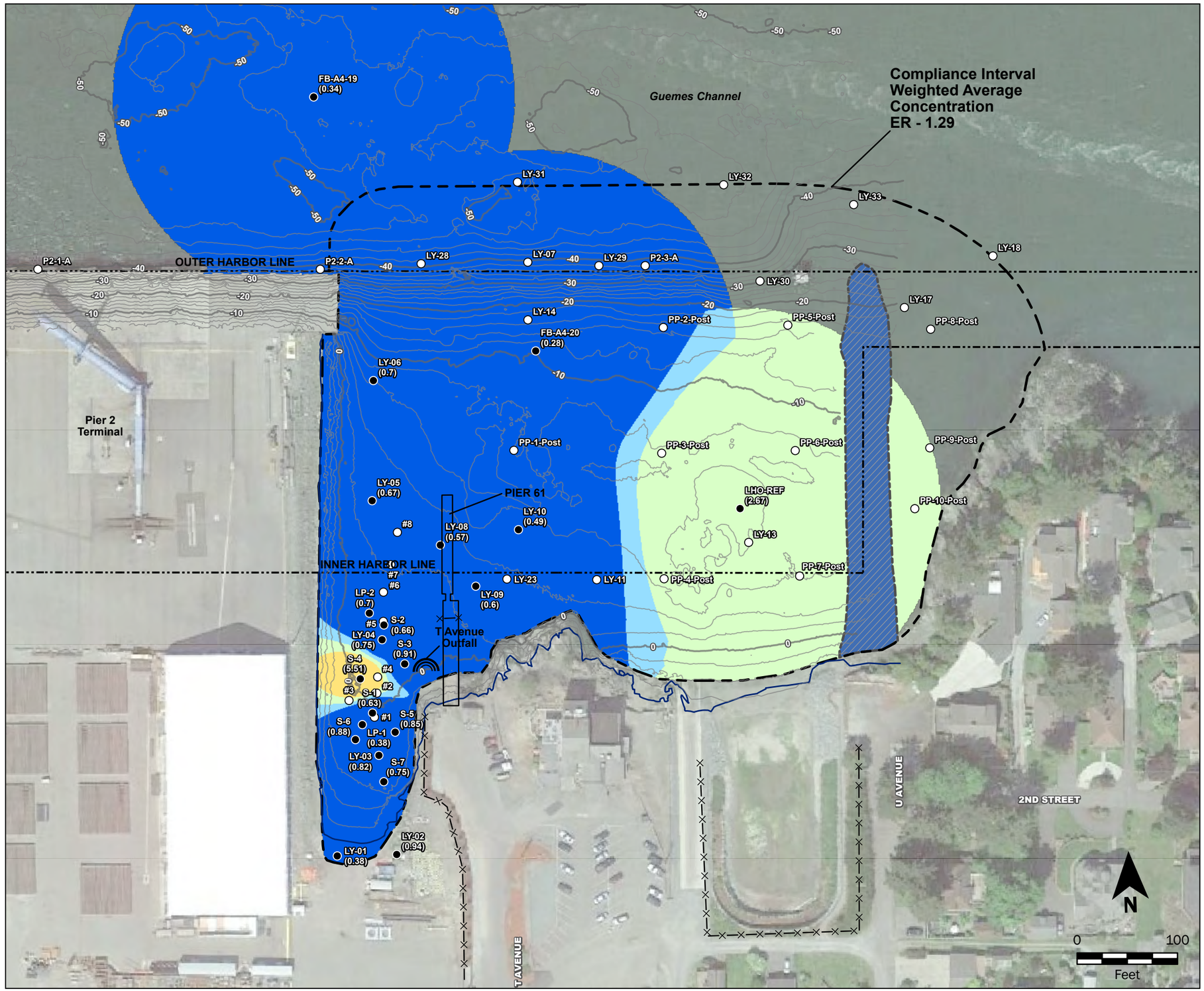
Chromium Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 54

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016O8_F54_Chromium_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

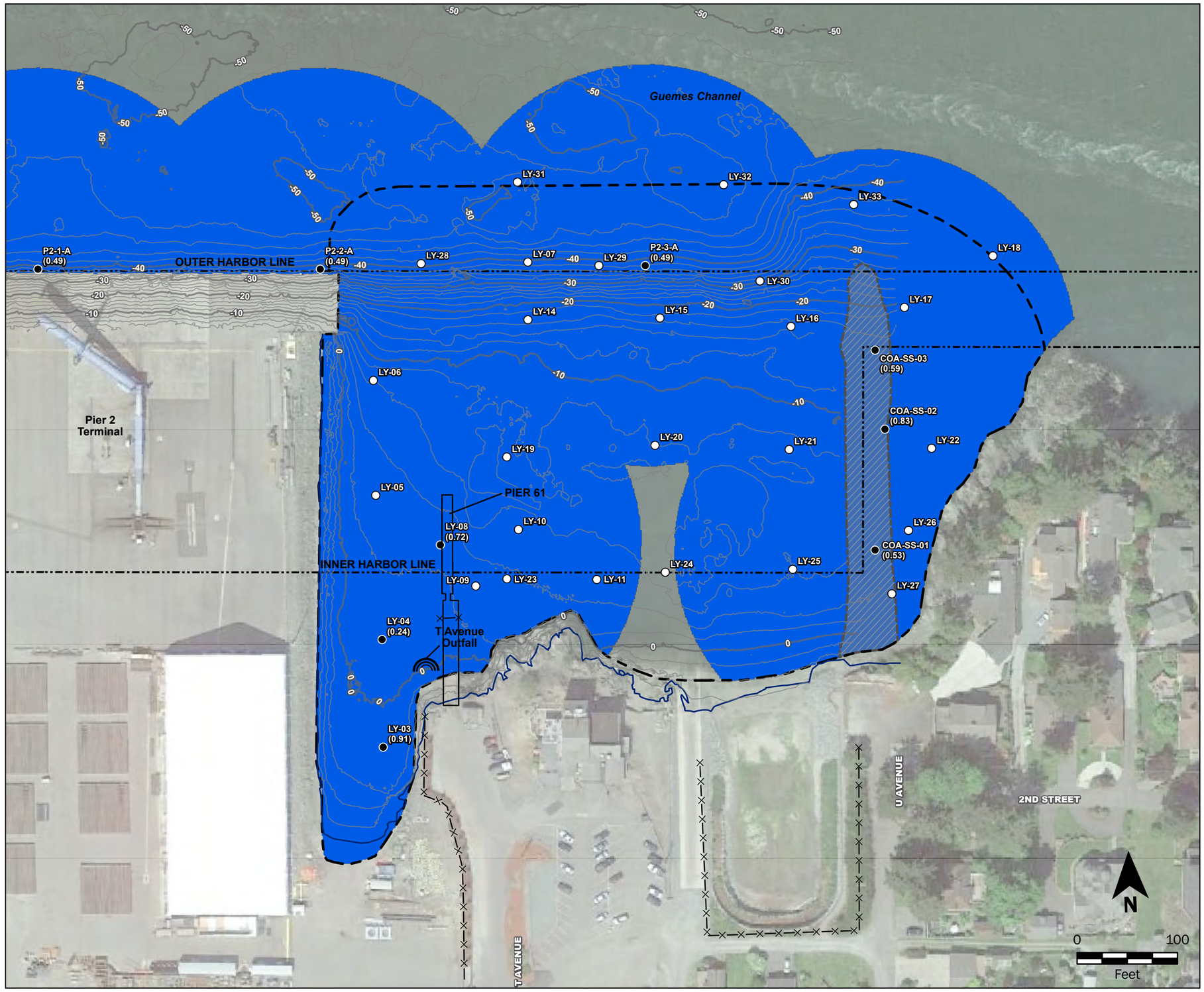
Copper Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 55

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F55_Copper_HH_POC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

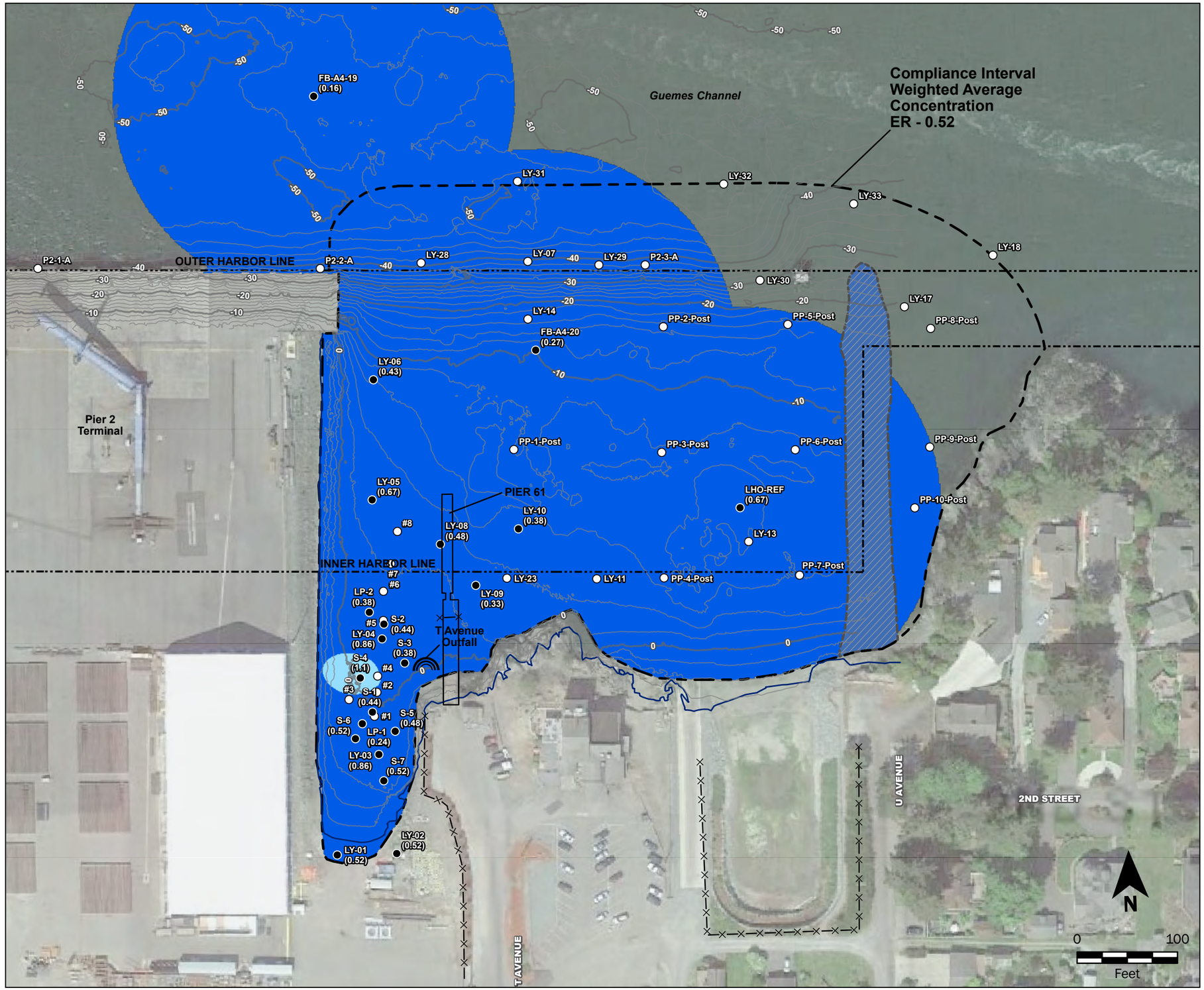
Copper Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 56

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

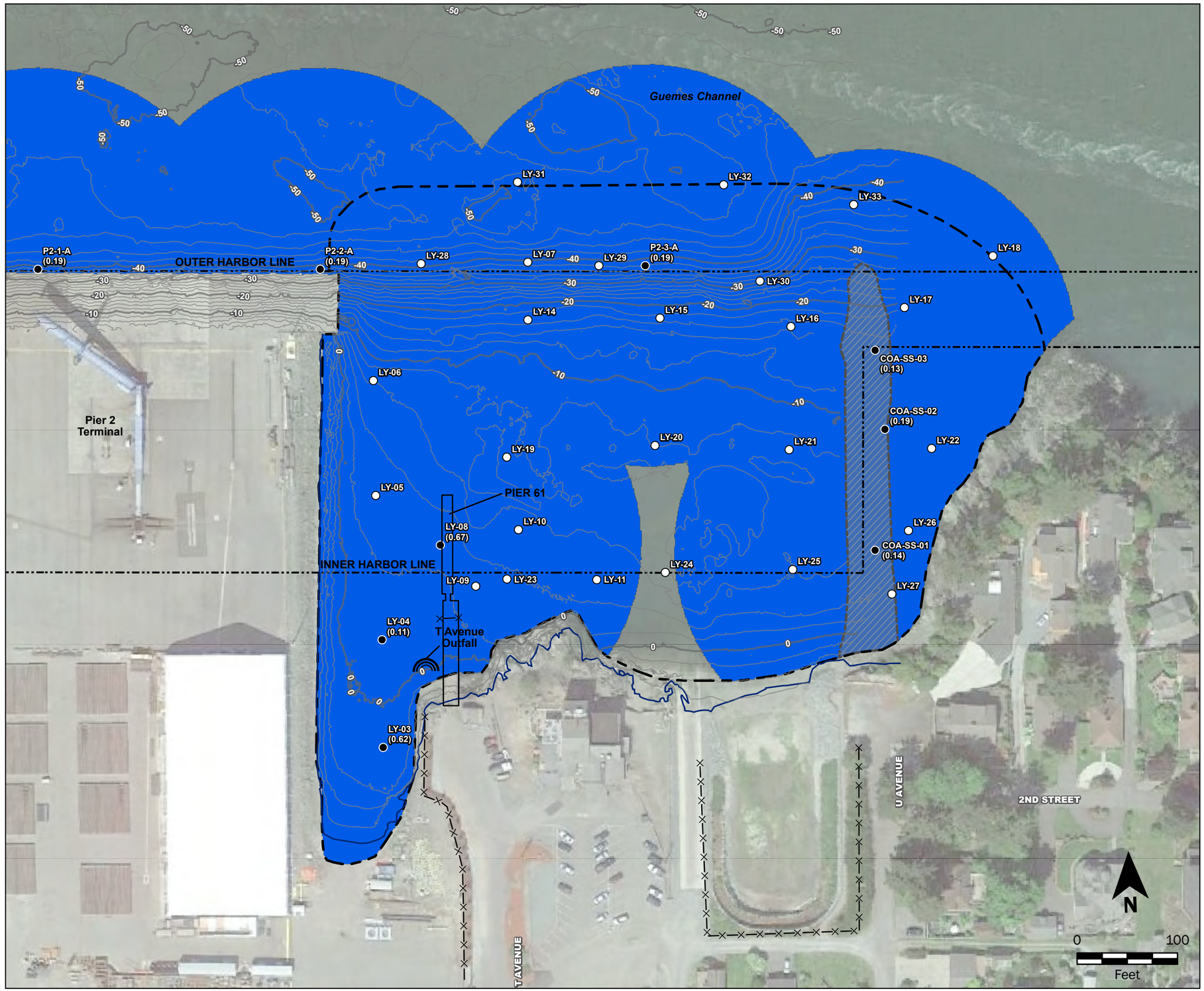
Lead Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 57

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

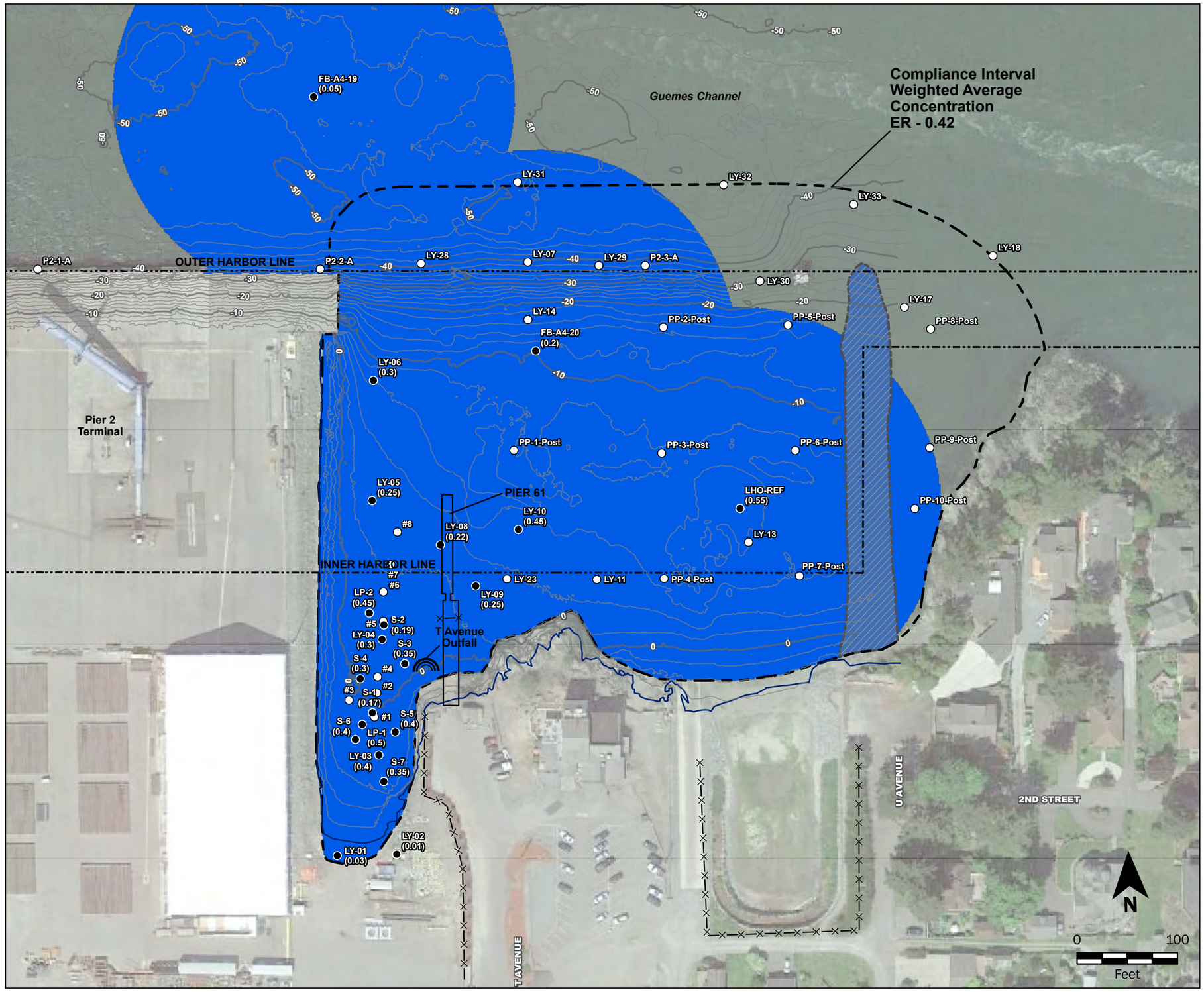
Lead Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 58

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F58_Lead_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

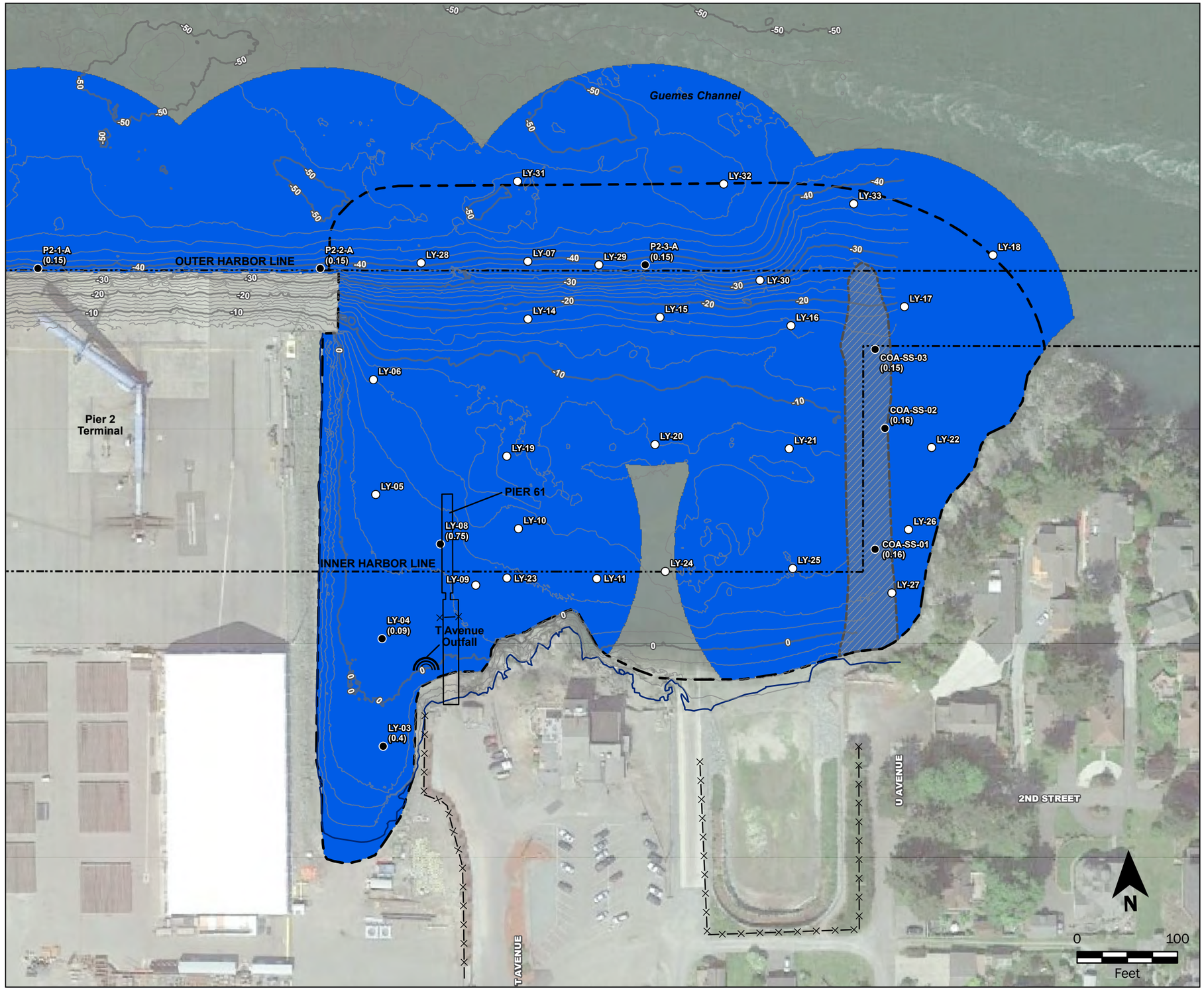
Mercury Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 59

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

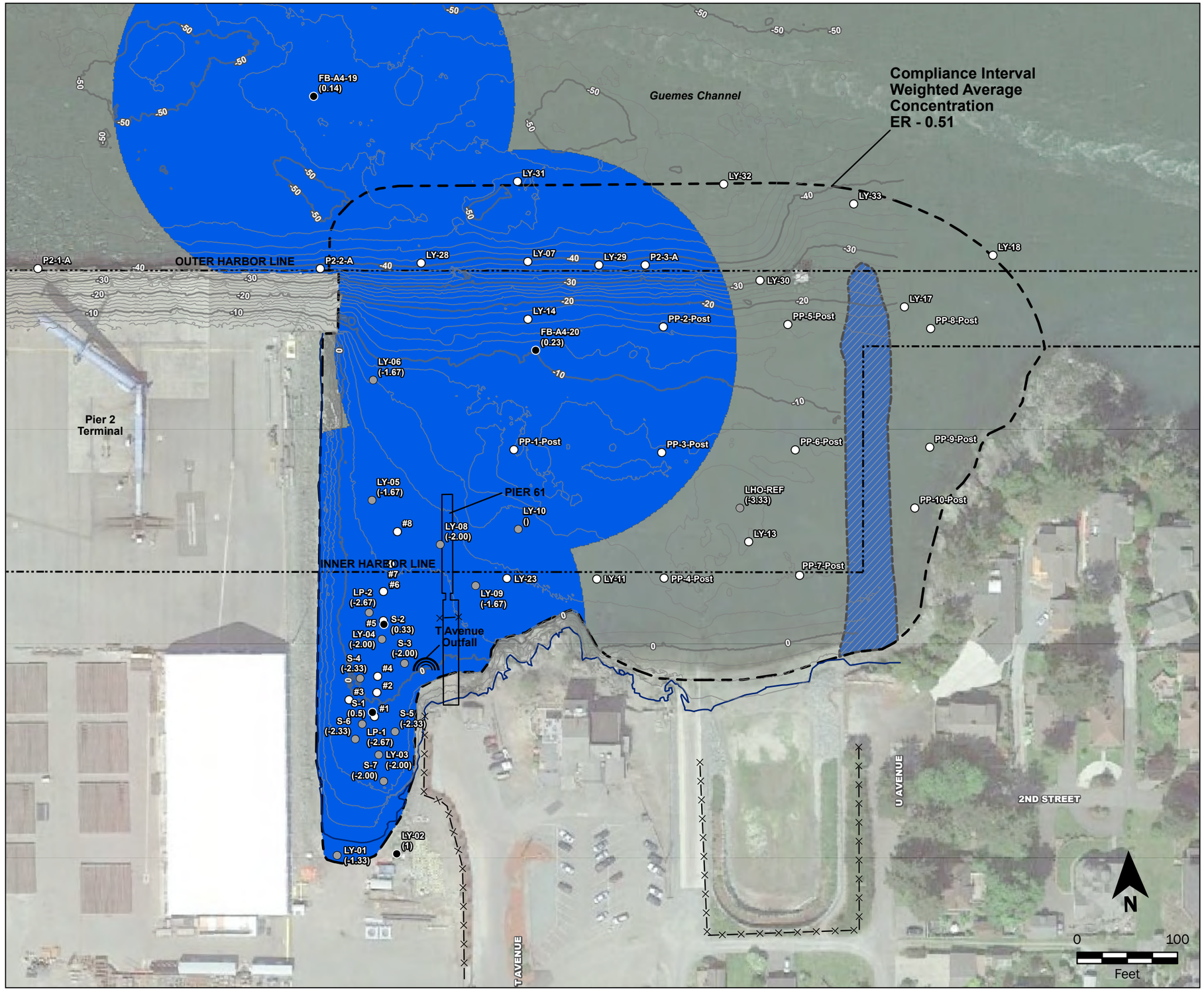
Mercury Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 60

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F60_Mercury_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) (denoted as a negative result) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Silver Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 61

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

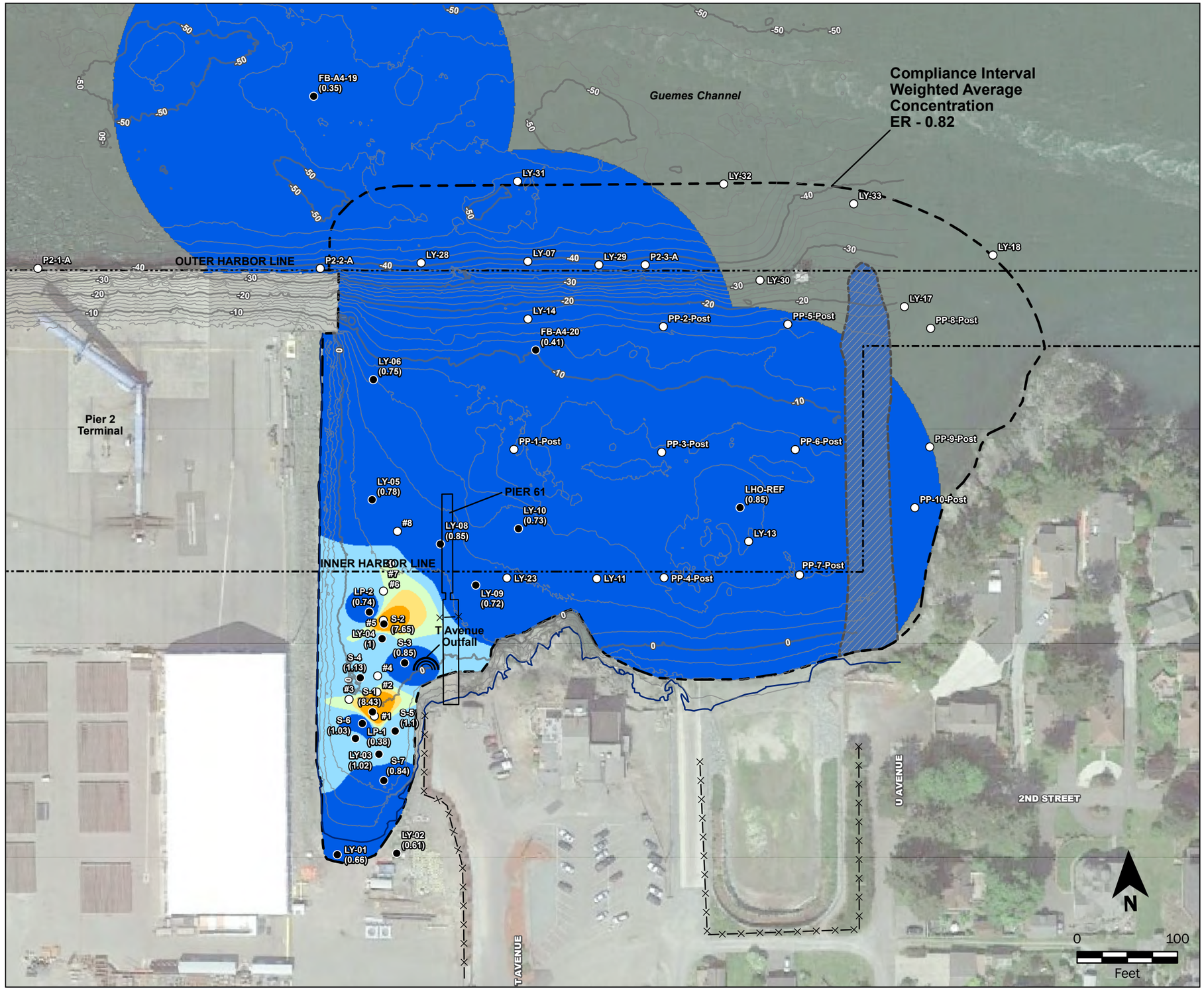
Silver Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 62

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F62_Silver_HH_Subsurf Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

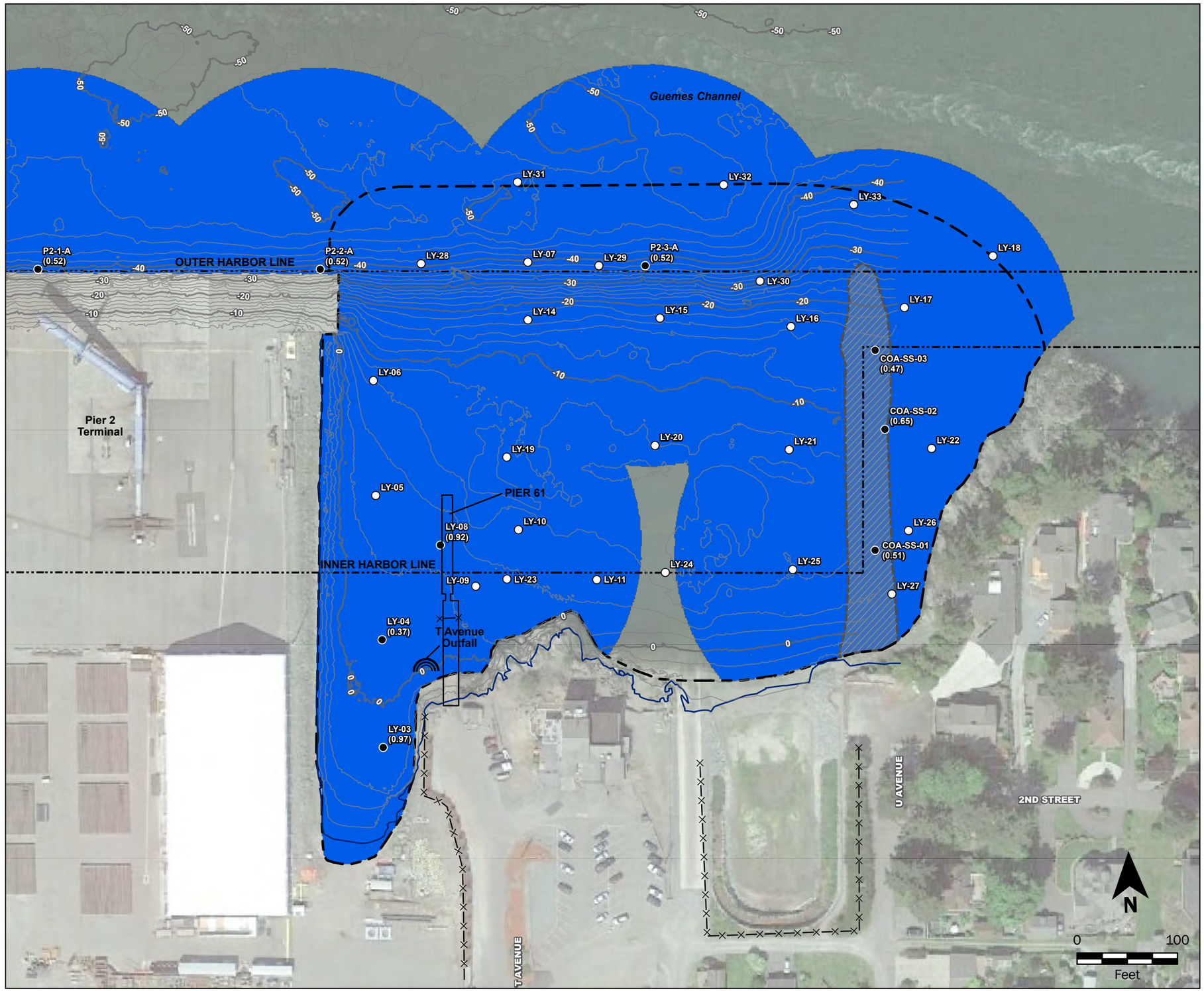
Zinc Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 63

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F63_Zinc_HH_POC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Zinc Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 64

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F64_Zinc_HH_Subsurf Date Exported: 12/30/25 by maugust

Compliance Interval
Weighted Average
Concentration
ER - 0.32

Guemes Channel

FB-A4-19

LY-31 LY-32 LY-33 LY-18

P2-1-A P2-2-A P2-3-A

OUTER HARBOR LINE

LY-28 LY-07 (0.03) LY-29 LY-30

LY-14 FB-A4-20 (2.19)

LY-17 (0.01) PP-8-Post (0.03)

PP-2-Post (0.03) PP-5-Post (0.65)

LY-06 (0.09)

Pier 2
Terminal

PP-1-Post (0.29) PP-3-Post (0.16) PP-6-Post (0.44) PP-9-Post (0.1)

PP-10-Post (0.28)

LY-05 PIER 61 LHO-REF

#8 LY-08 (0.09) LY-10 LY-13

INNER HARBOR LINE

#7 #6 LY-09 LY-23 LY-11 PP-4-Post (0.11) PP-7-Post (0.12)

LP-2 #5 S-2 T Avenue Outfall LY-04 S-3

S-4 #4 #2 #3 S-1 #1 LP-1 S-5 S-6 LY-03 S-7

LY-01 LY-02

T AVENUE

U AVENUE

2ND STREET

N

0 100

Feet

Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

**Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio****

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

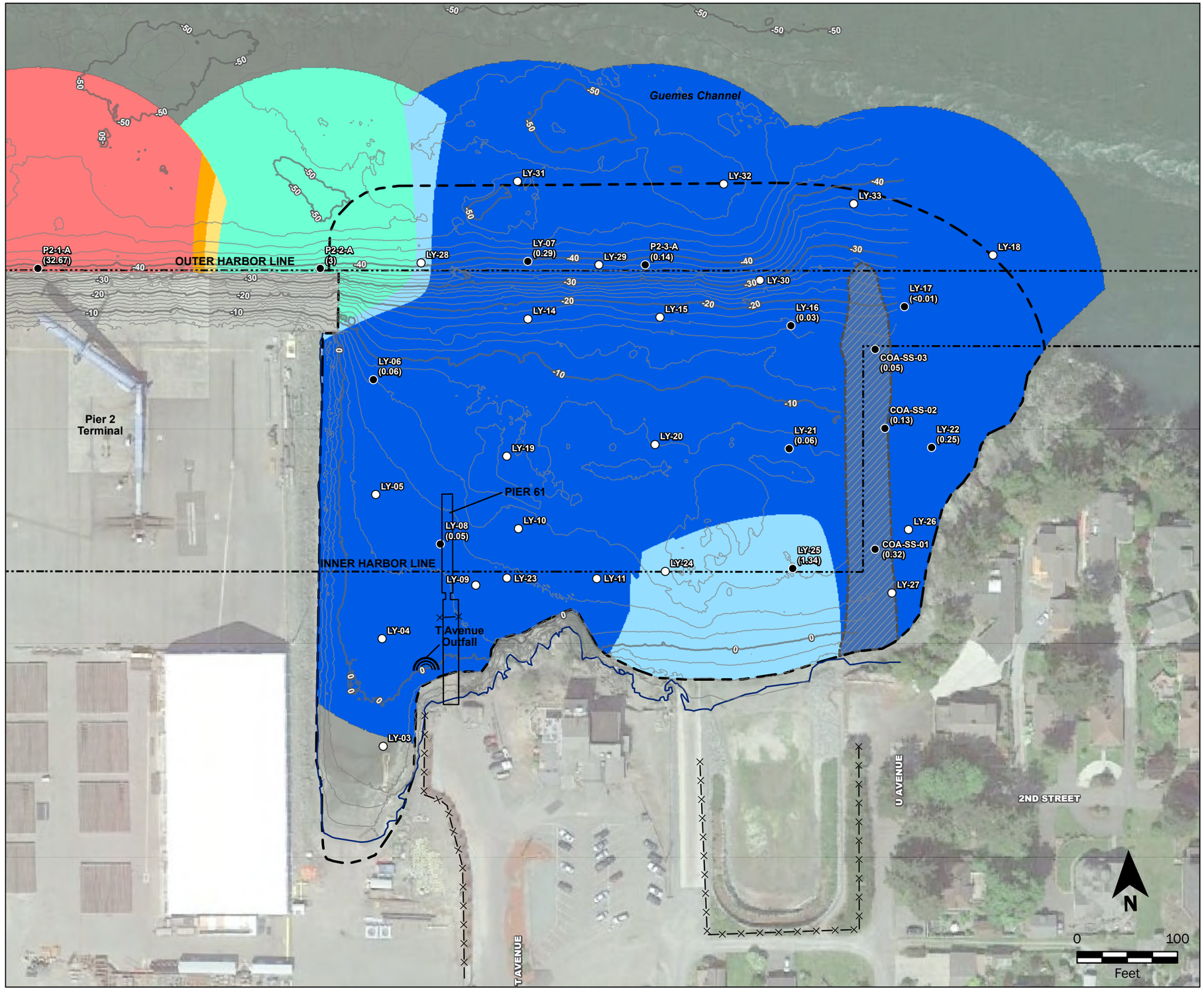
**Tributyltin Results (Human Health)
Sediment Compliance Interval**

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 65

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F65_TBT_HH_POC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

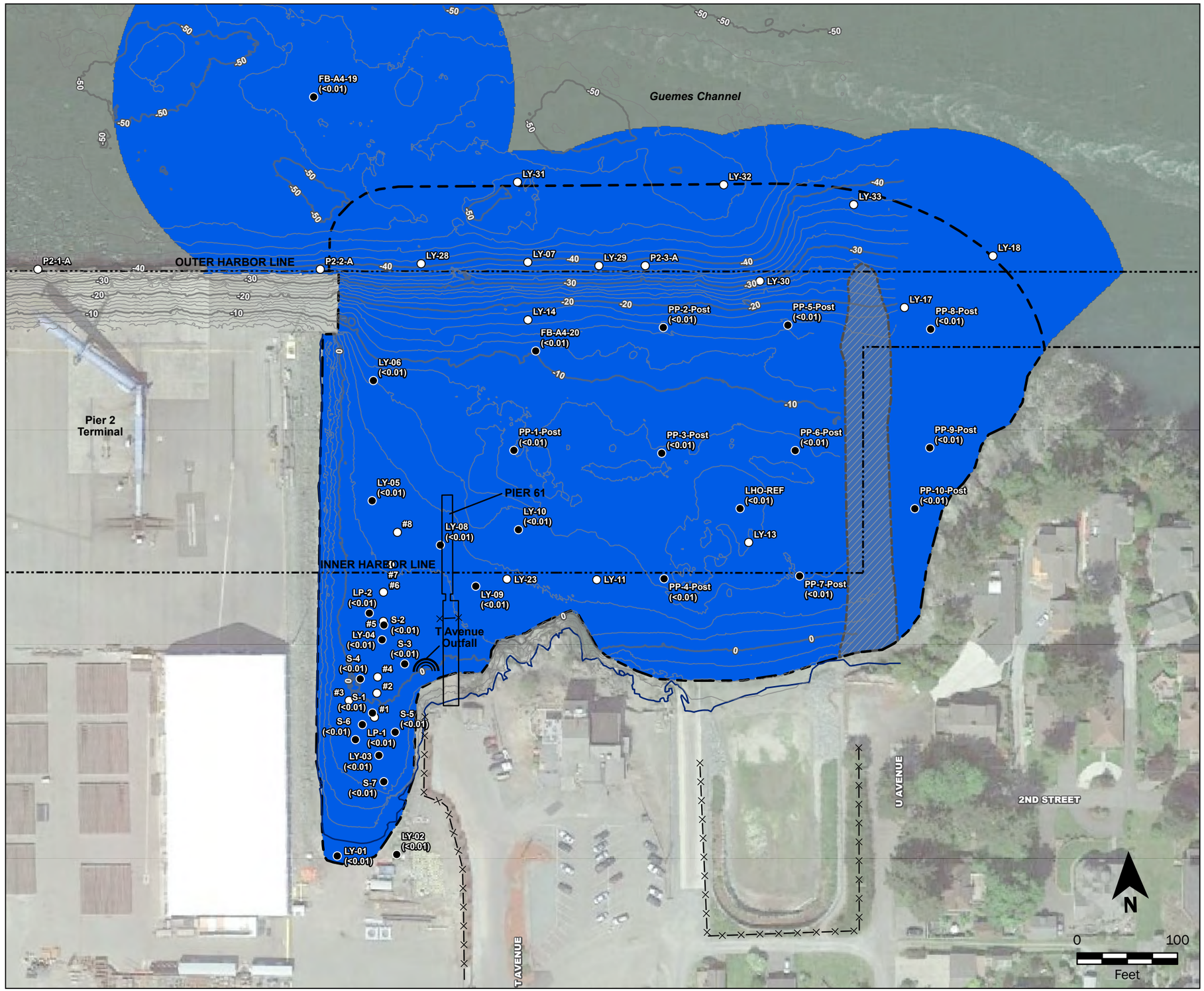
Tributyltin Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 66

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F66_TBT_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

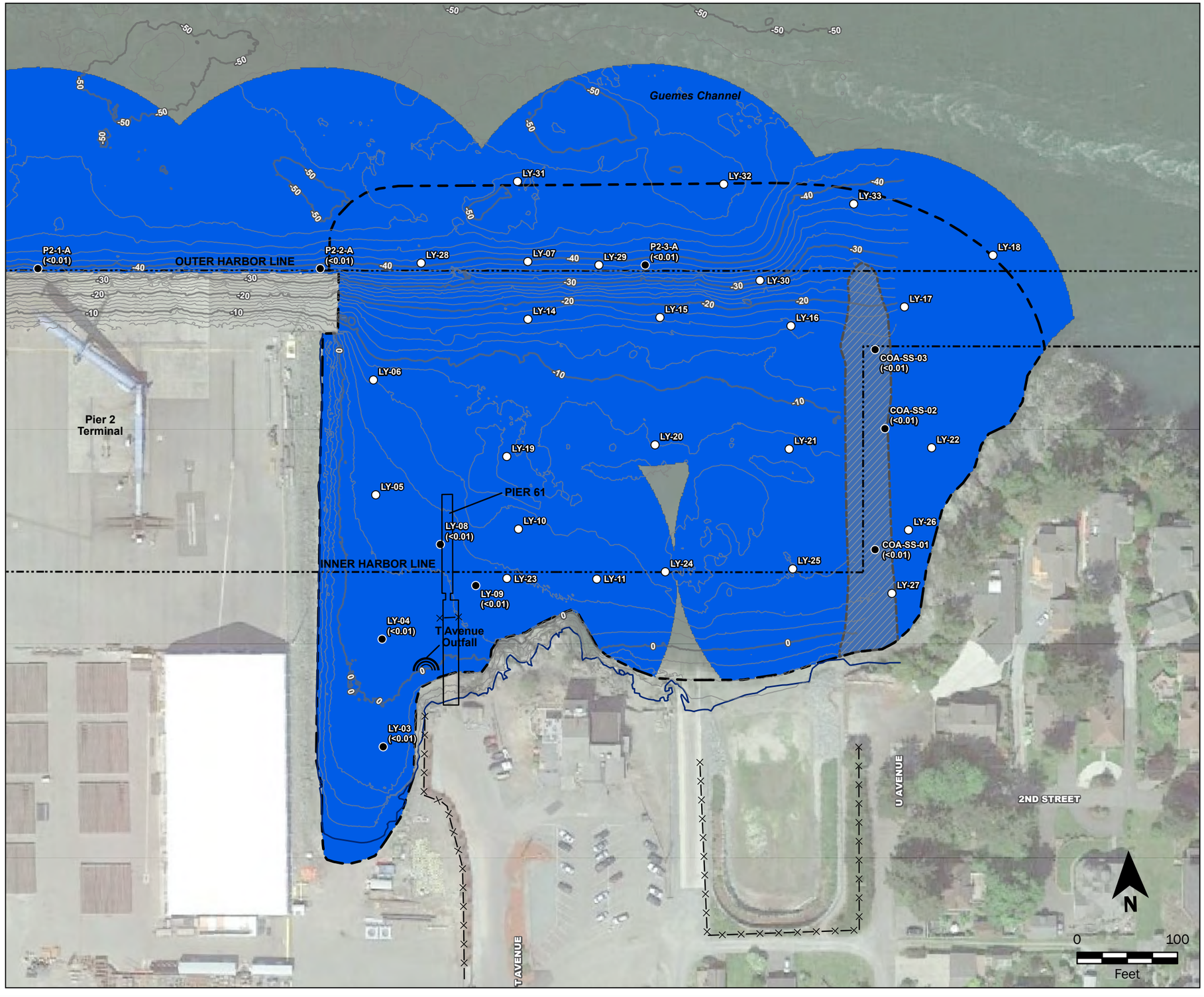
LPAH Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 67

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

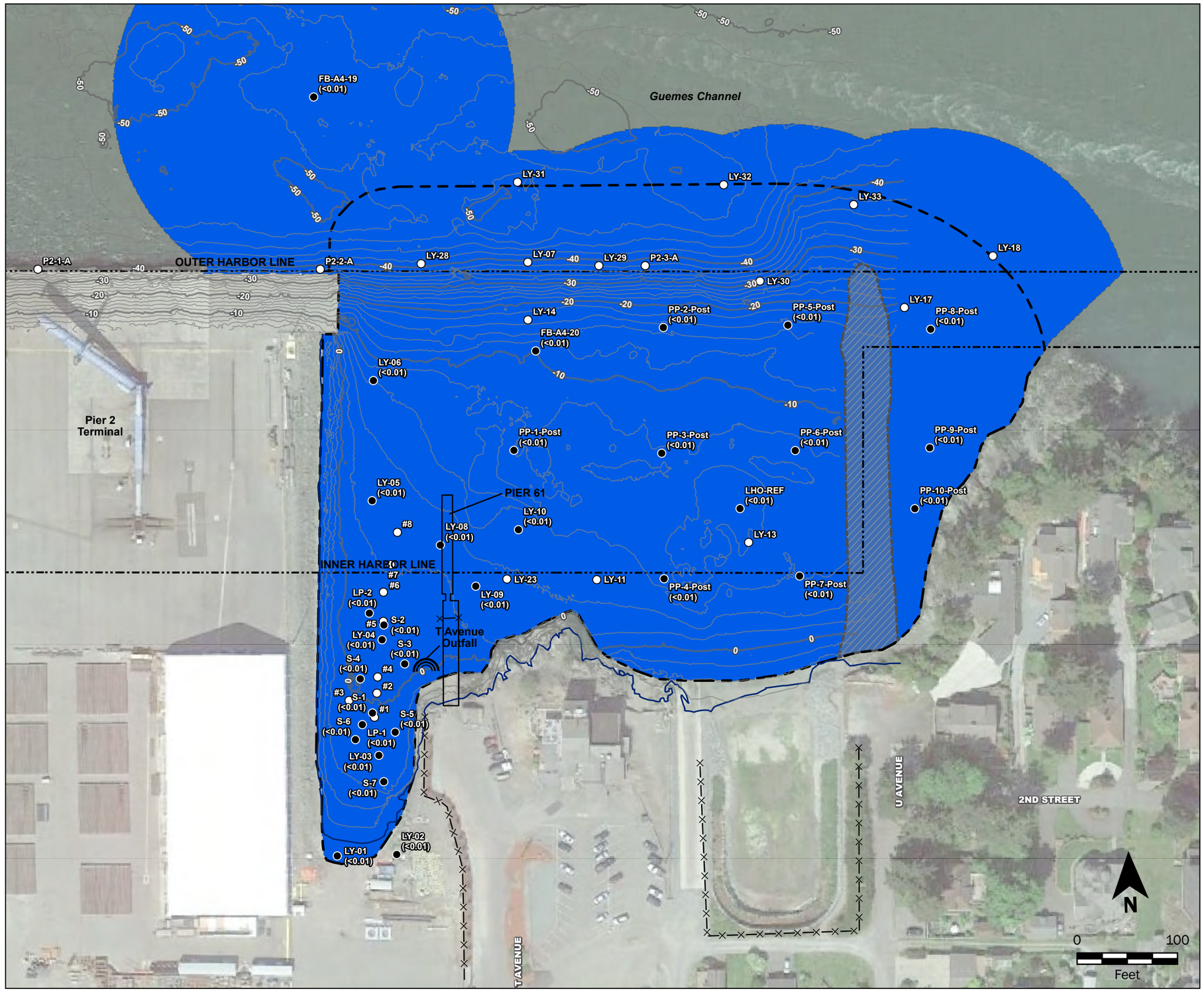
LPAH Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 68

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016008_F68_LPAH_HH_Subsurf Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

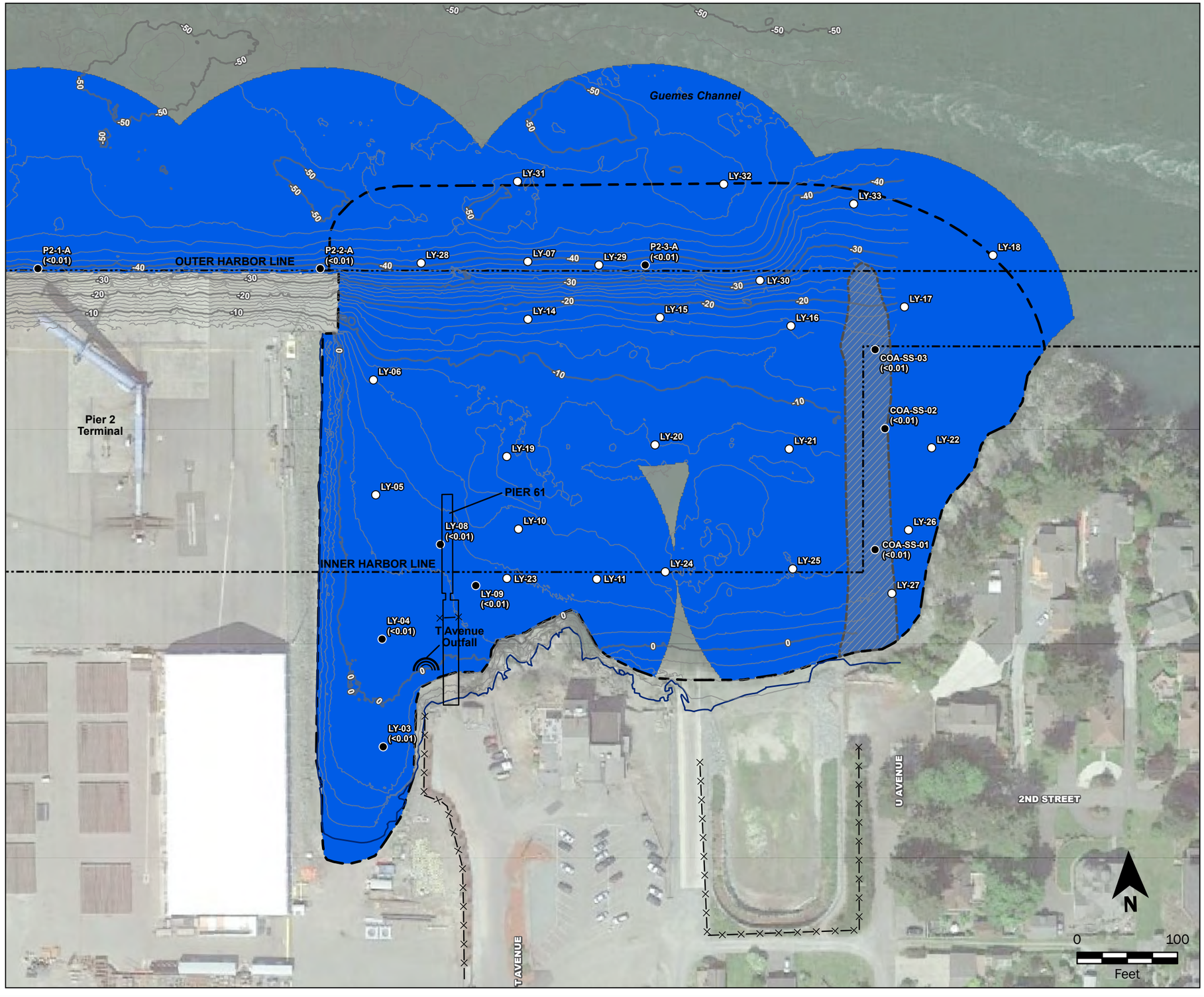
HPAH Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 69

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F69_HPAH_HH_POC Date Exported: 12/30/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

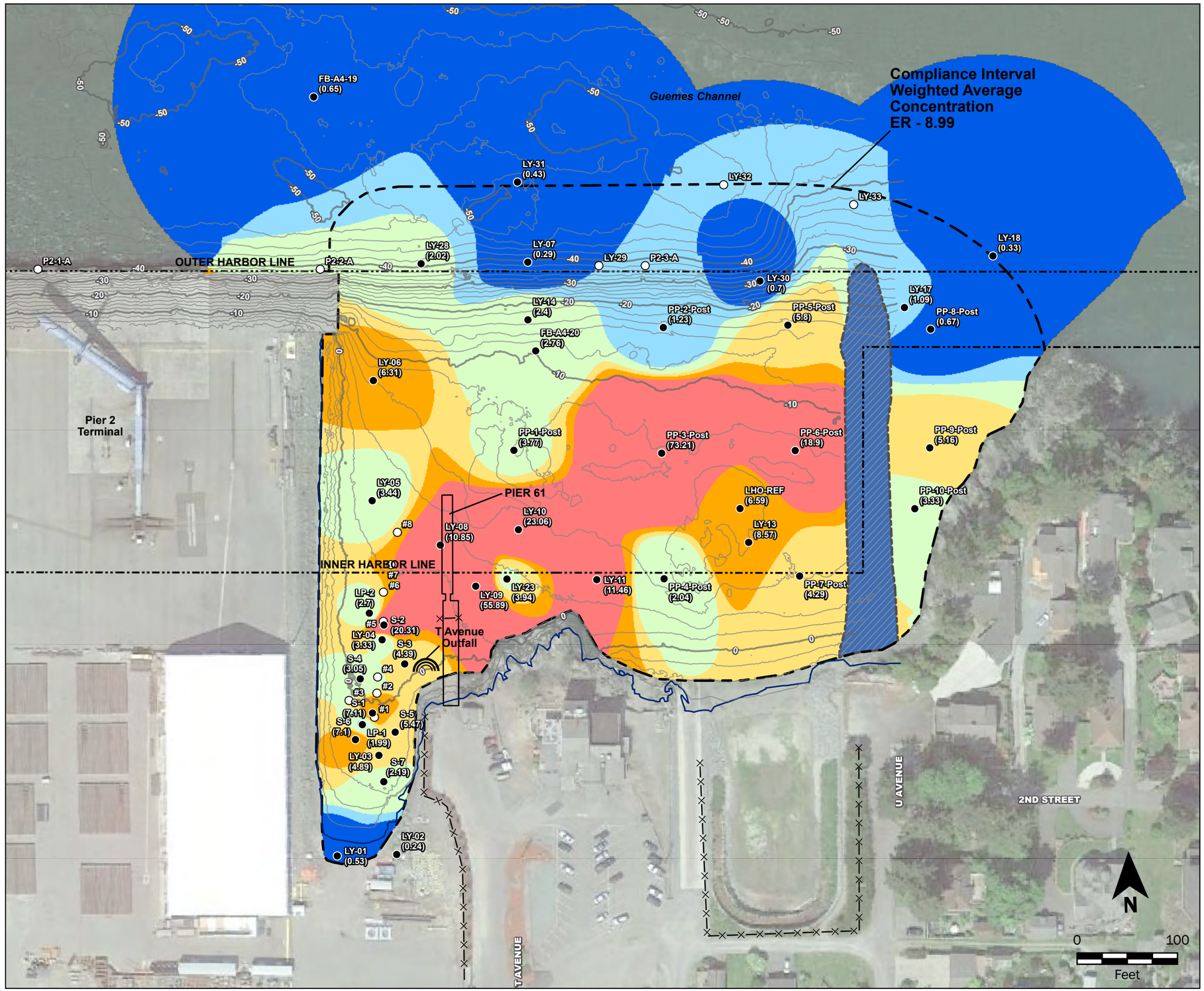
HPAH Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 70

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

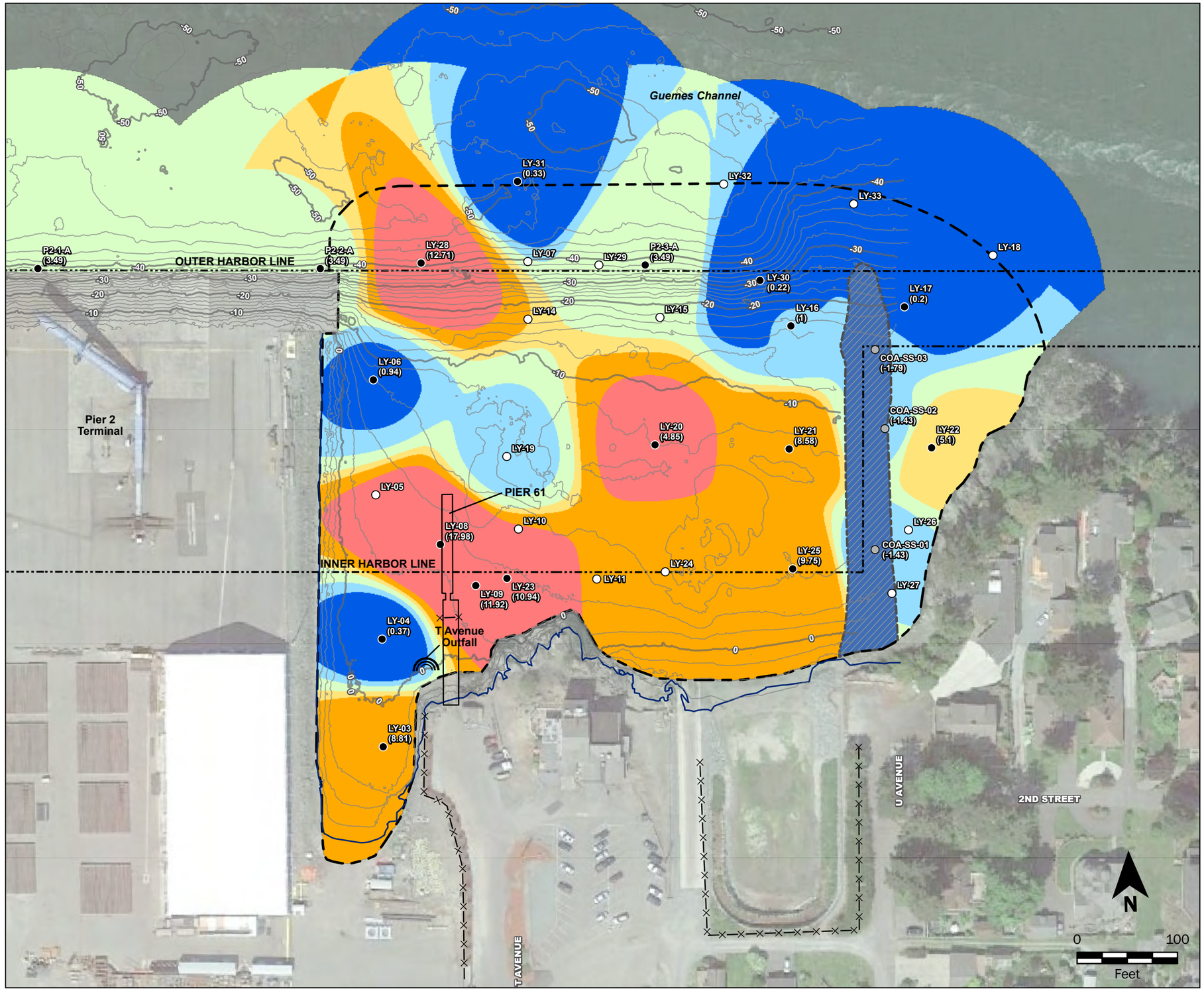
cPAH Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 71

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) (denoted as a negative result) not included in ER interpolation.

ft = Feet

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

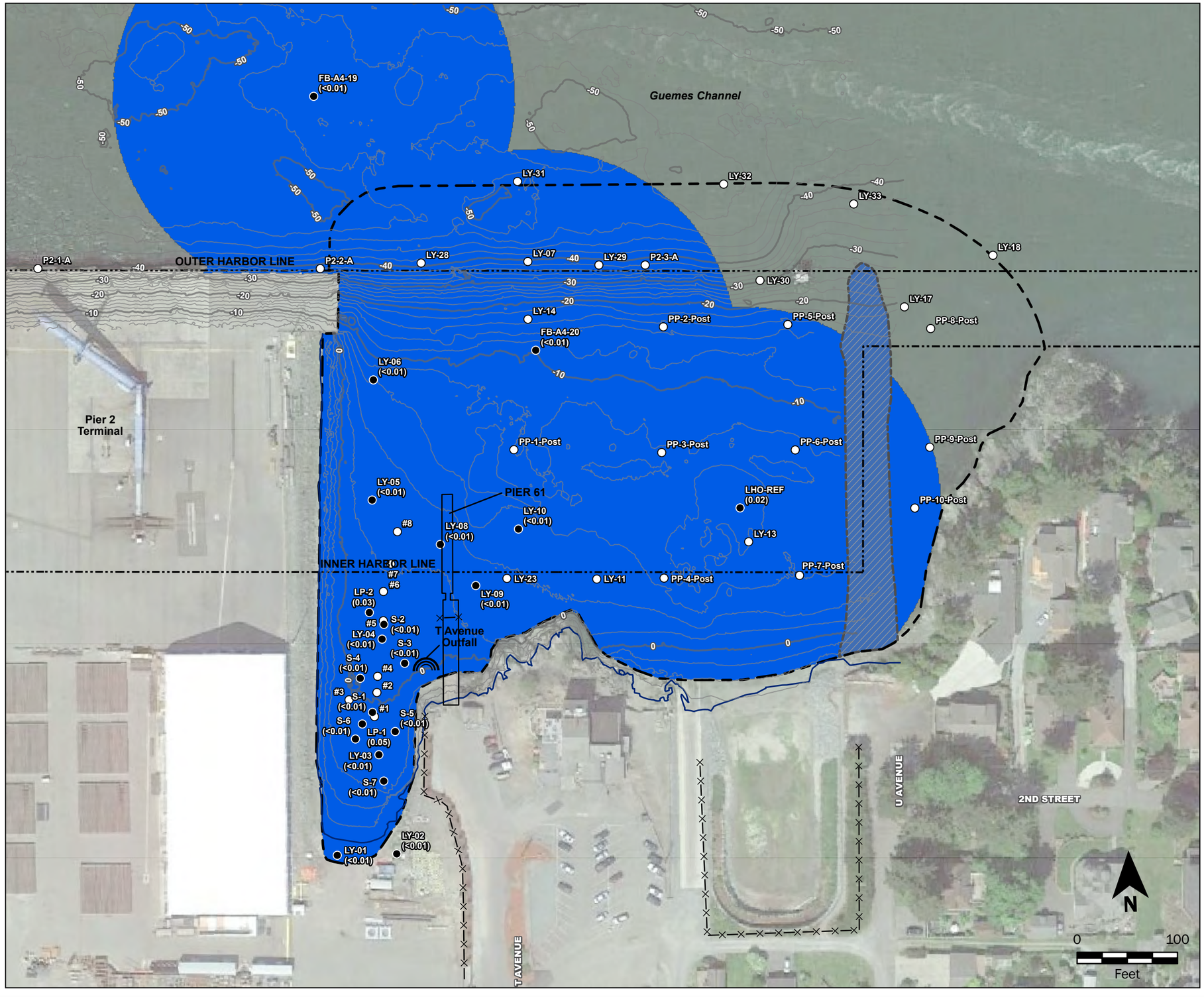
cPAH Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 72

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

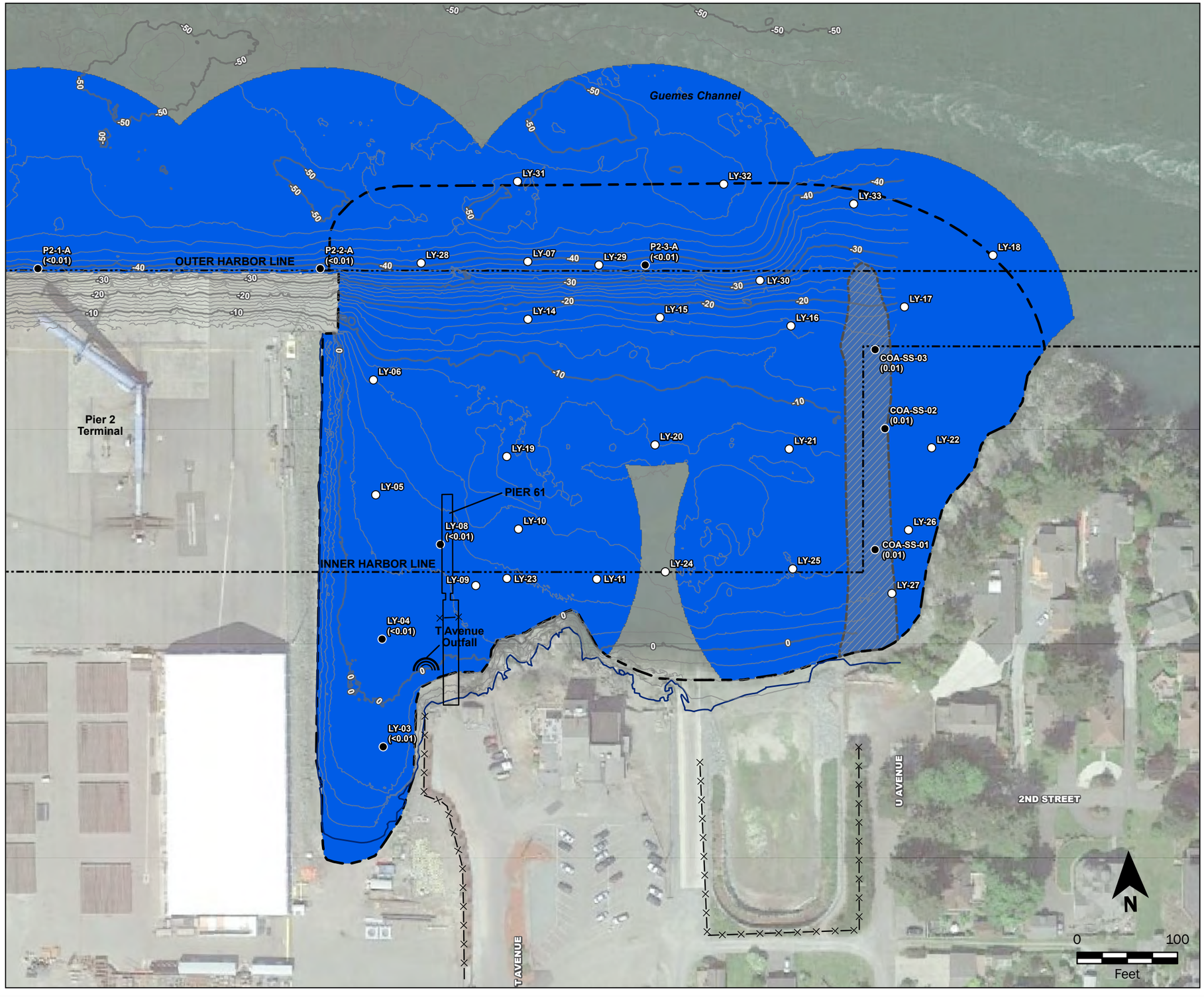
Chlorinated Hydrocarbons Results (Human Health) Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 73

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

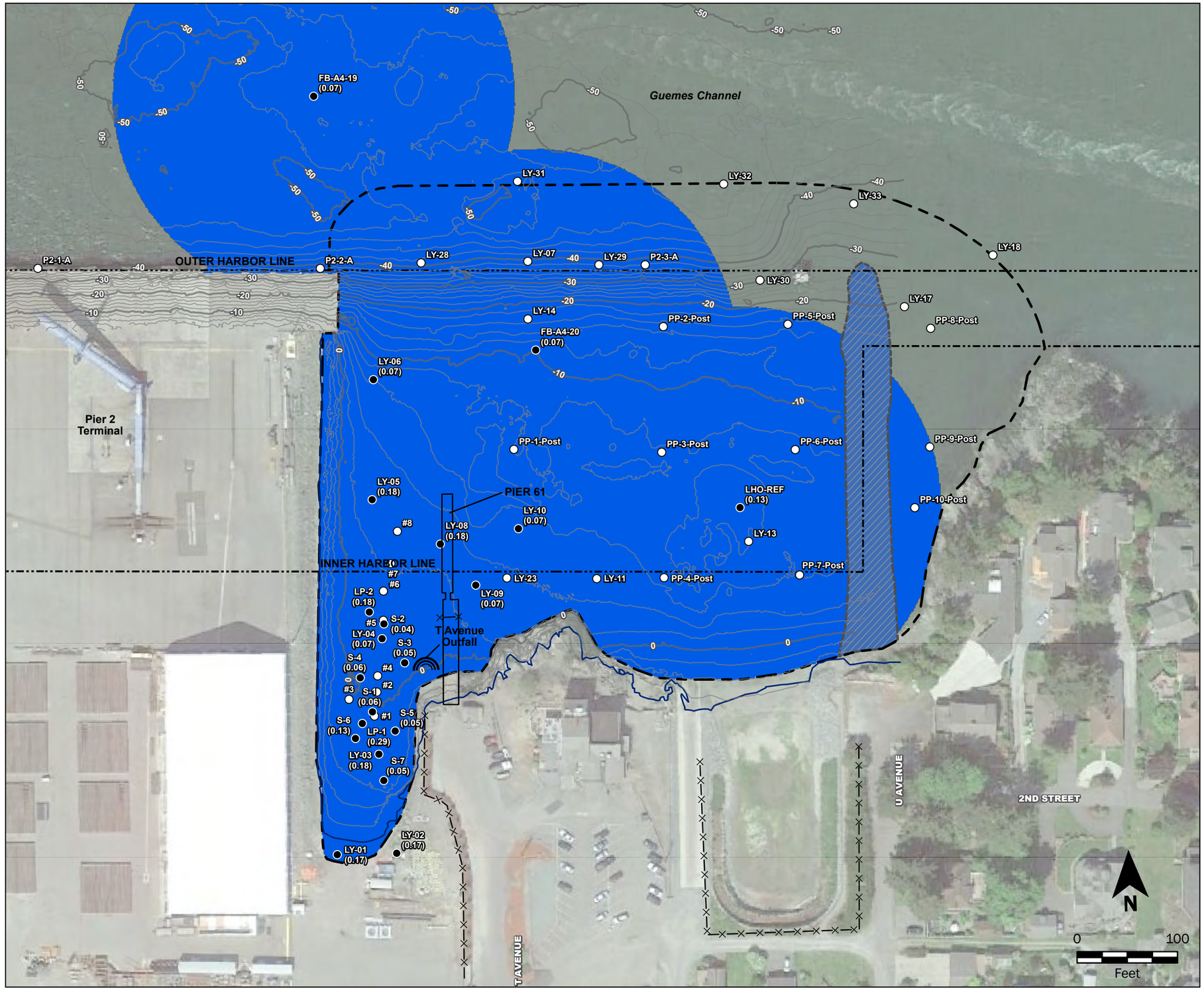
Chlorinated Hydrocarbons Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 74

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016O8_F74_chlorinatedhydrocarbons_HH_Subsurf Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

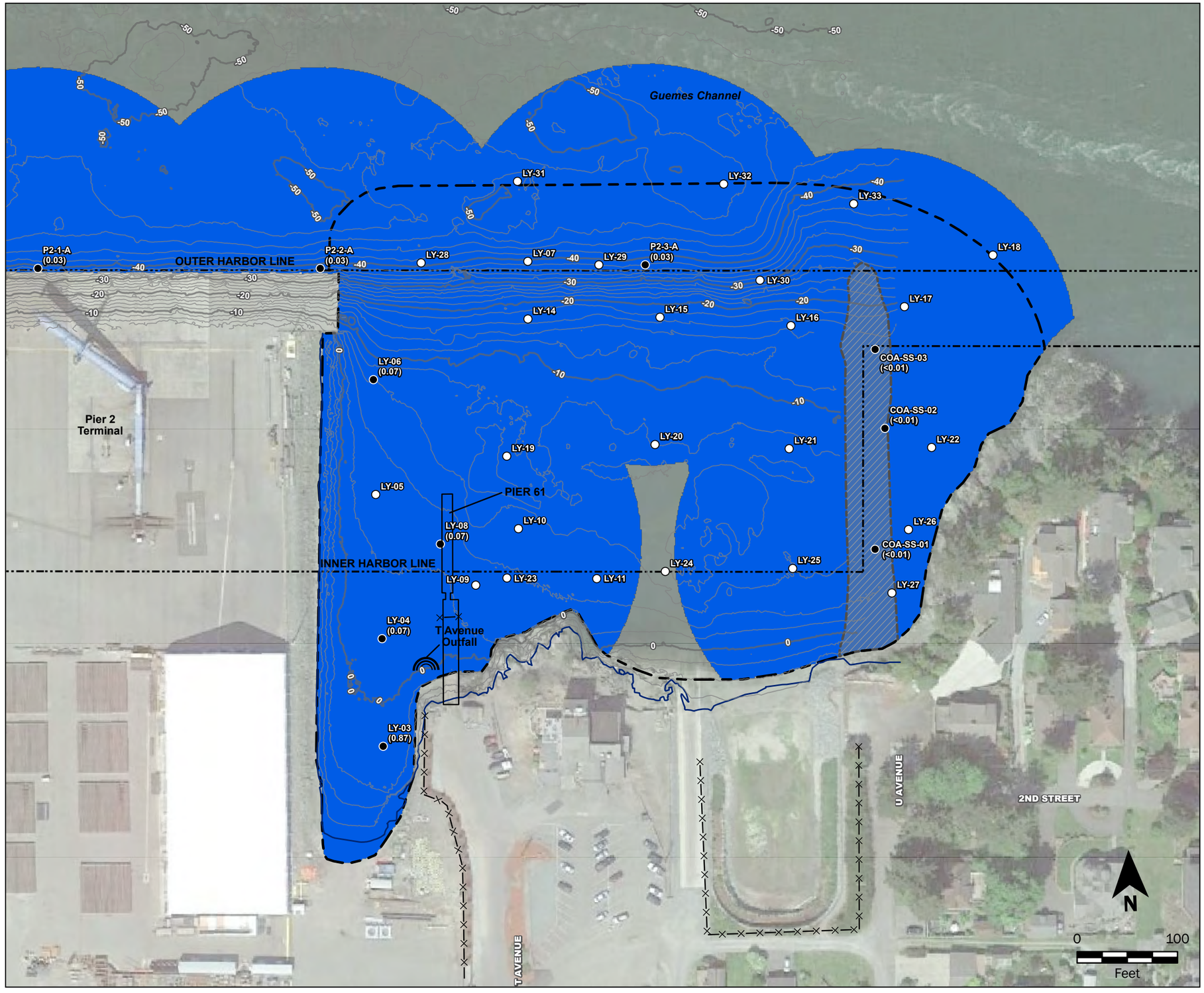
Phthalate Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 75

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F75_Phthalate_HH_POC Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

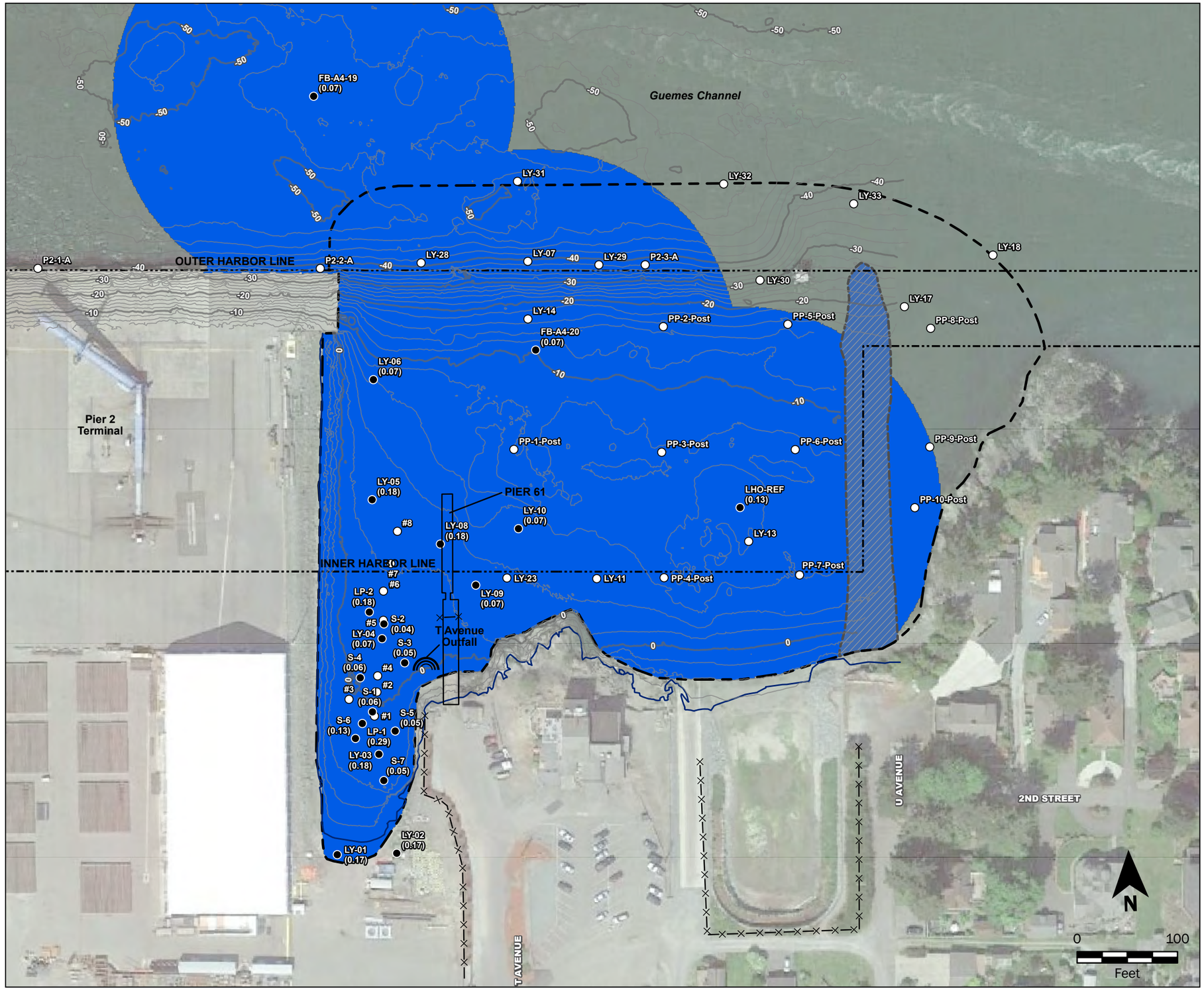
Phthalate Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 76

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

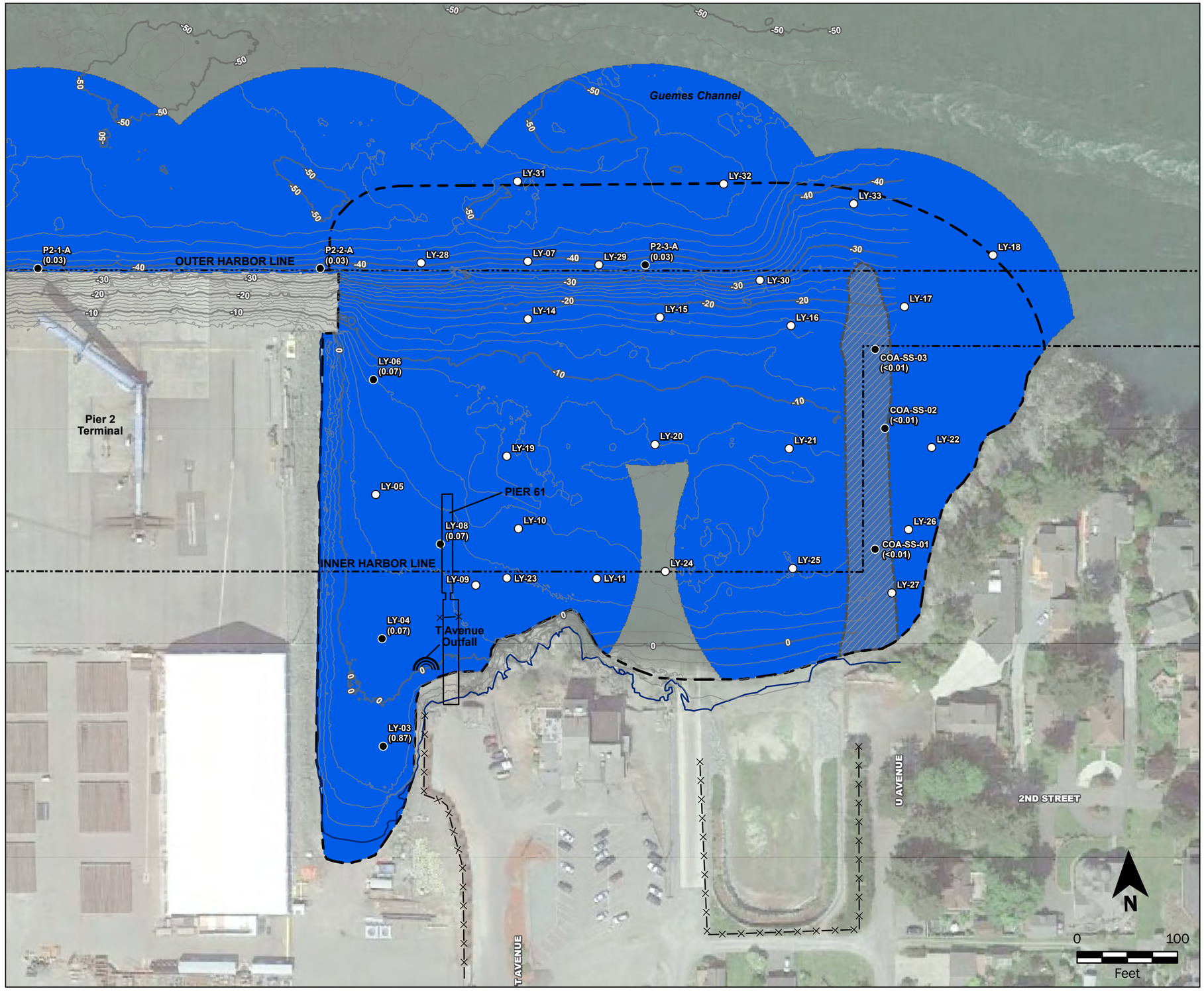
Phenol Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 77

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F77_Phenol_HH_POC Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

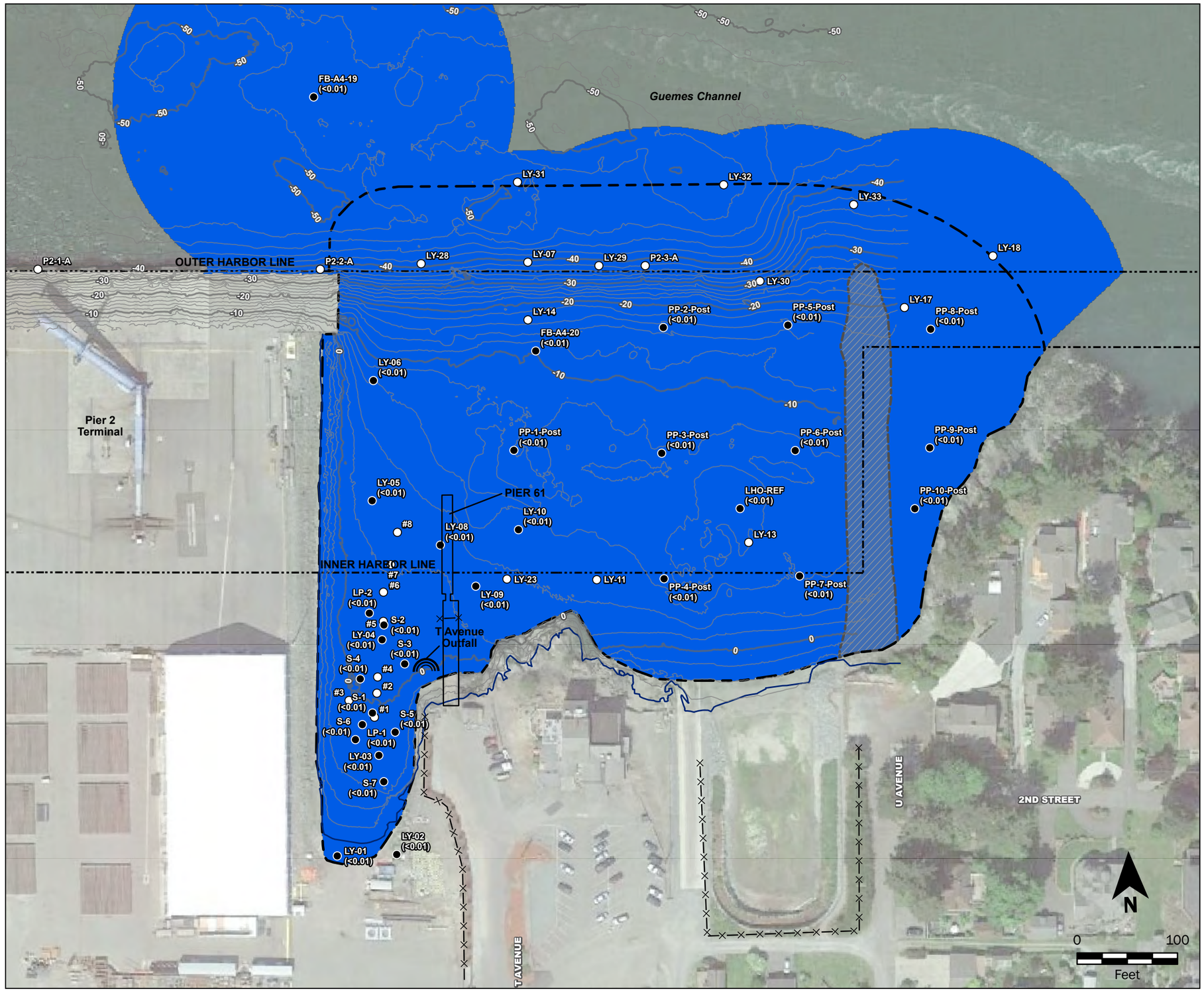
Phenol Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 78

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F78_Phenol_HH_Subsurf Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

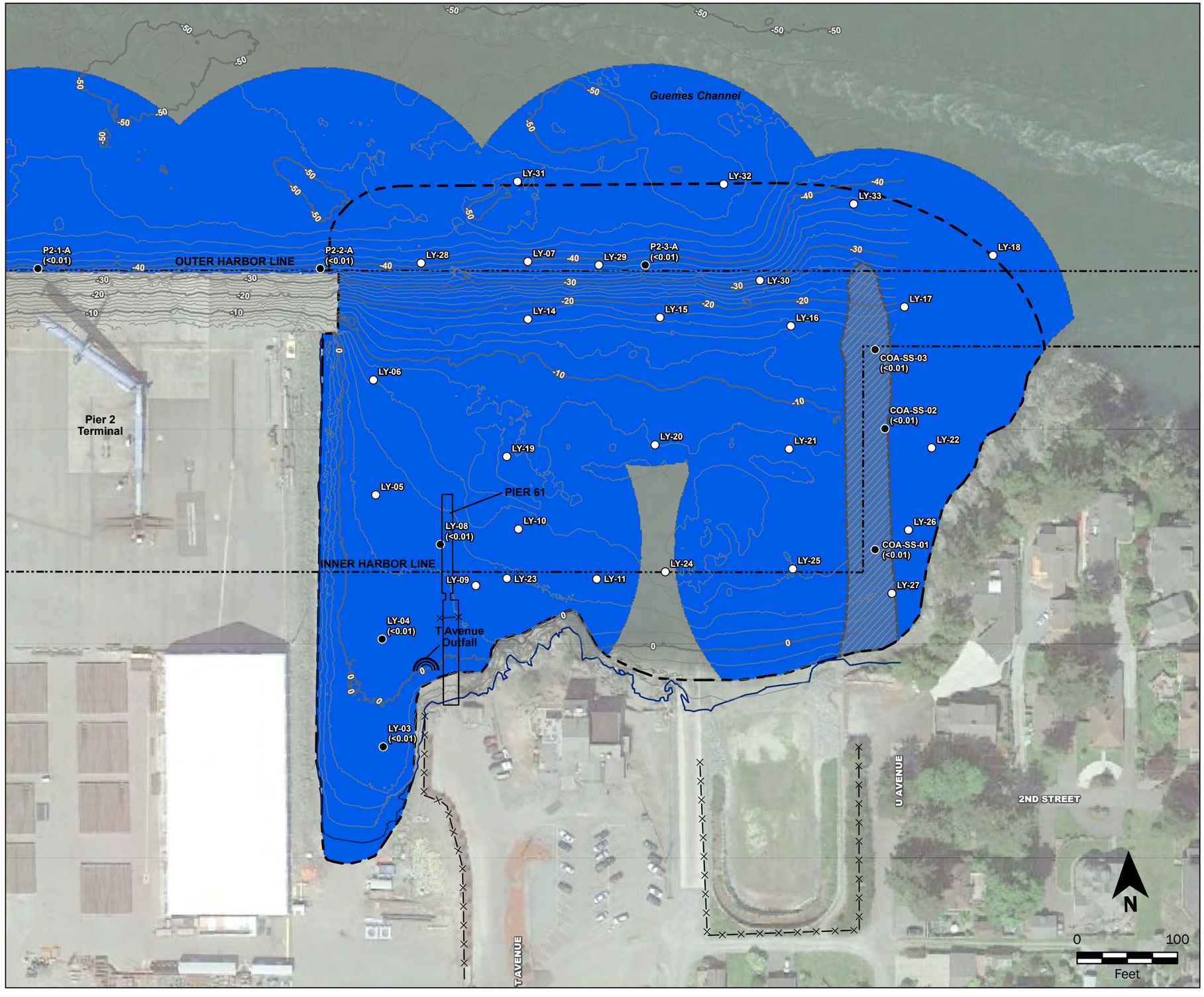
Miscellaneous Extractables Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 79

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F79_MiscExtractables_HH_POC Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

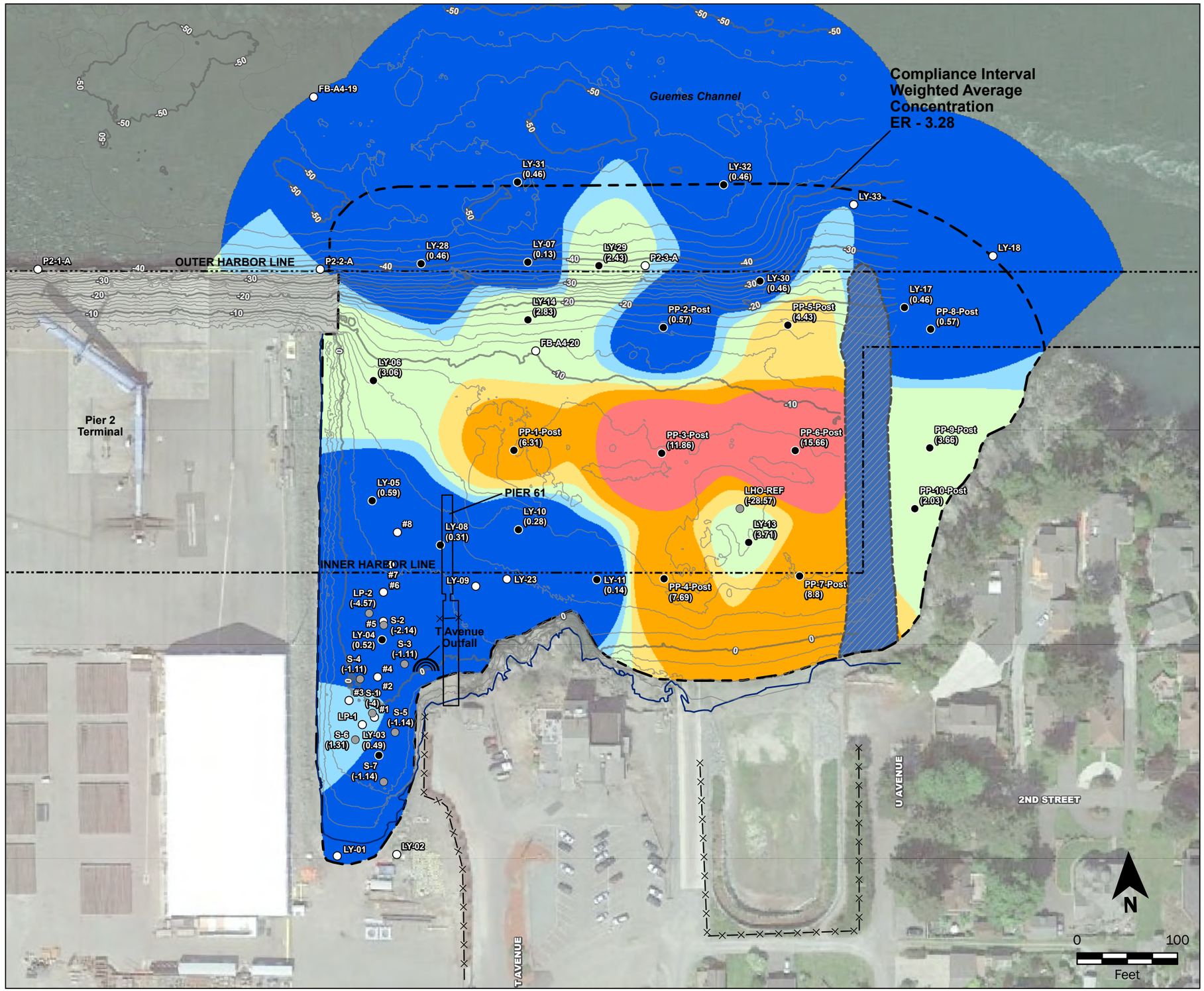
Miscellaneous Extractables Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 80

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Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) (denoted as a negative result) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

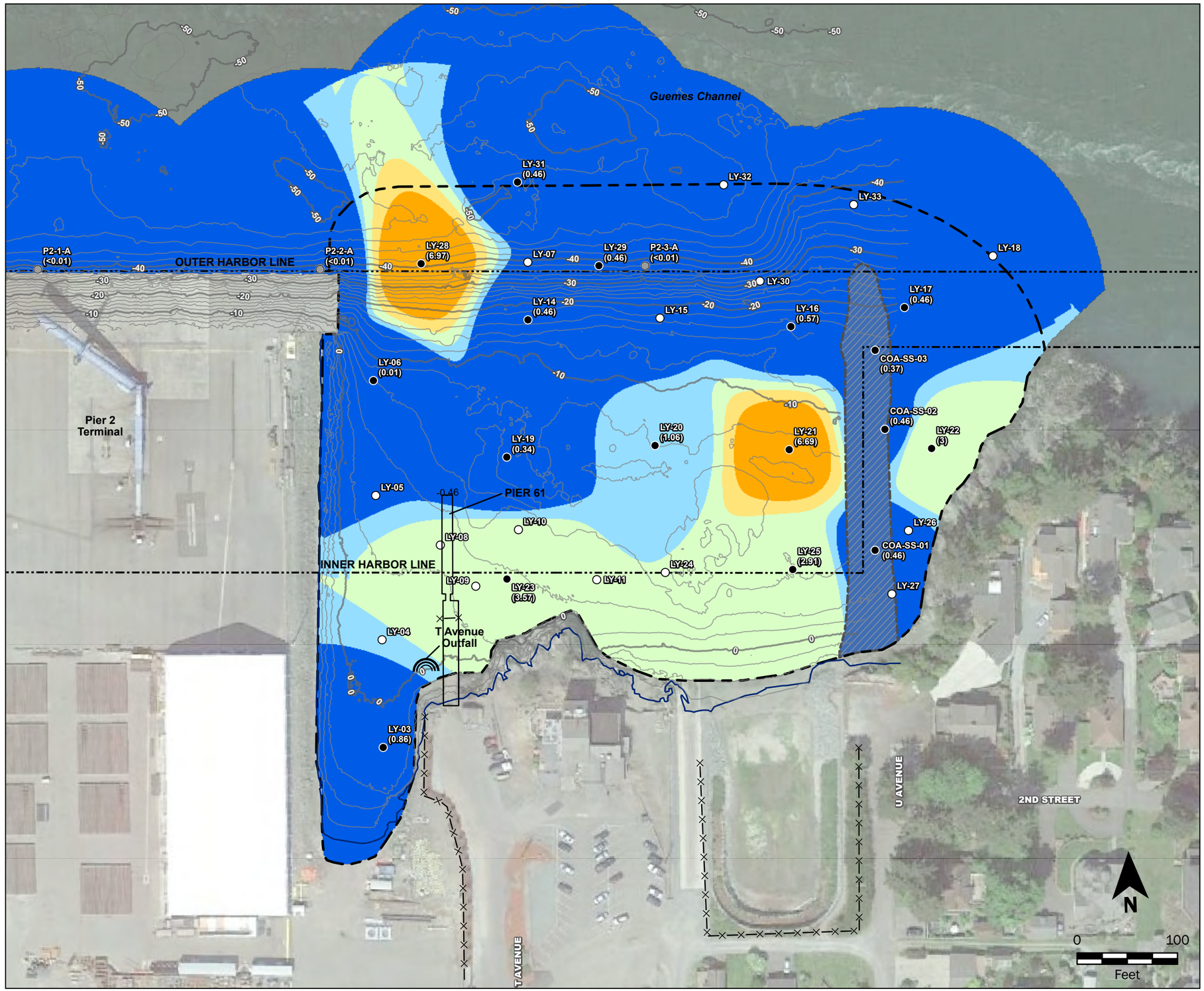
PCB Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 81

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F81_PCB_HH_POC Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Sample Location - Non-Detect Result Greater than Proposed Cleanup Level (PCUL)
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) (denoted as a negative result) not included in ER interpolation.

ft = Feet

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Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

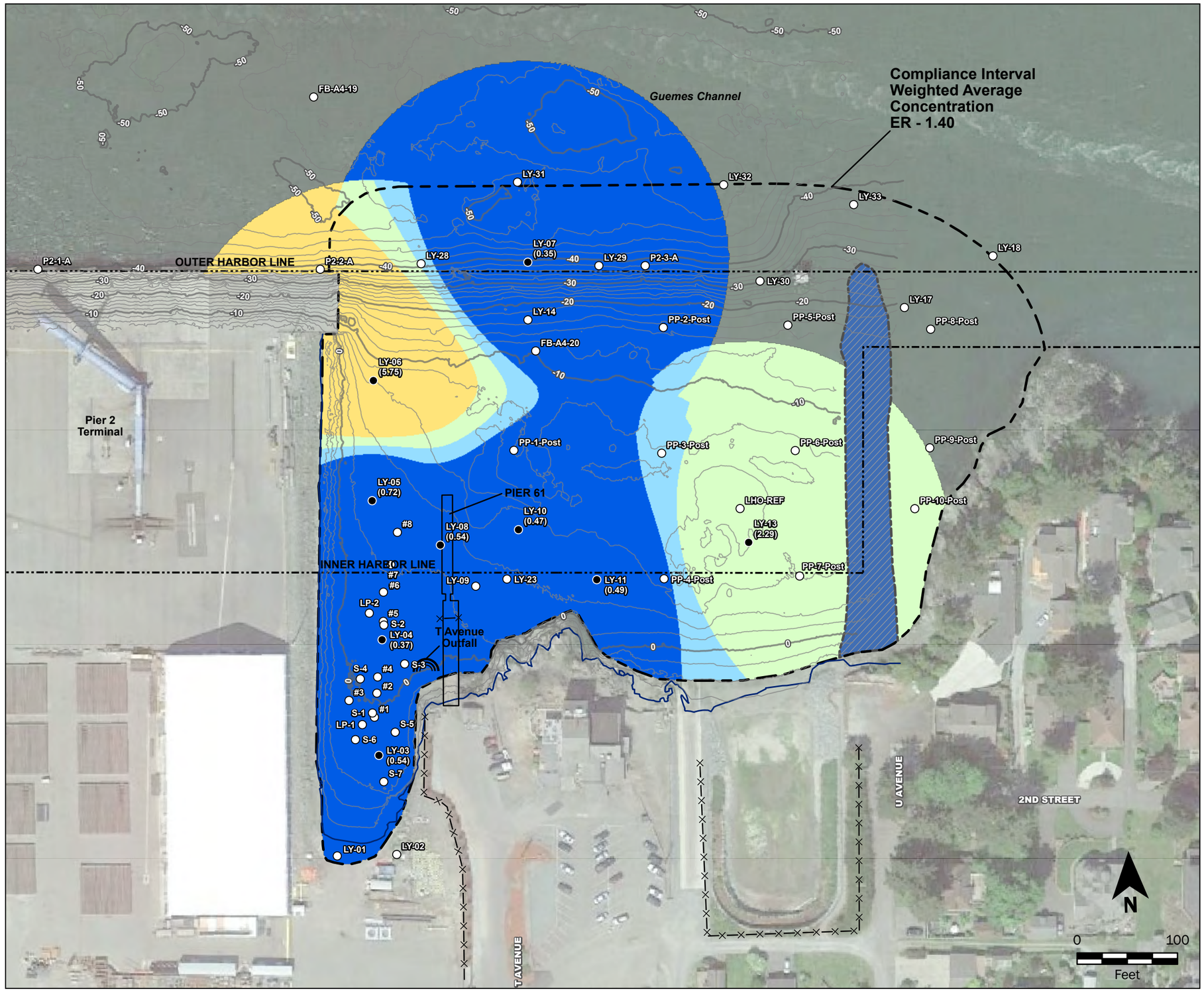
PCB Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 82

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F82_PCB_HH_Subsurf Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Dioxin-Like PCB Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 83

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F83_DioxLikePCB_HH_POC Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

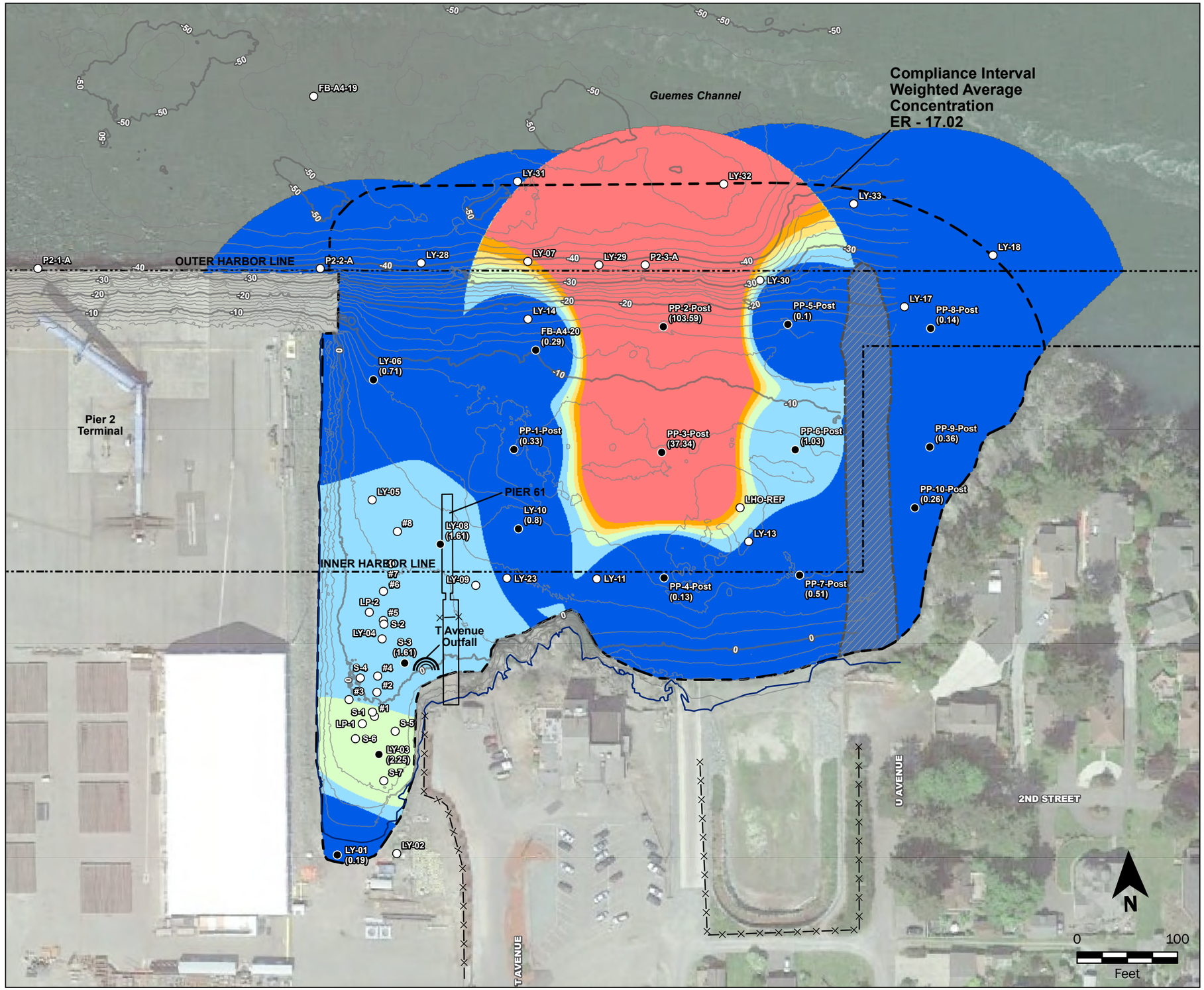
Dioxin-Like PCB Results (Human Health) Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 84

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F84_DioxLikePCB_HH_Subsurf Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

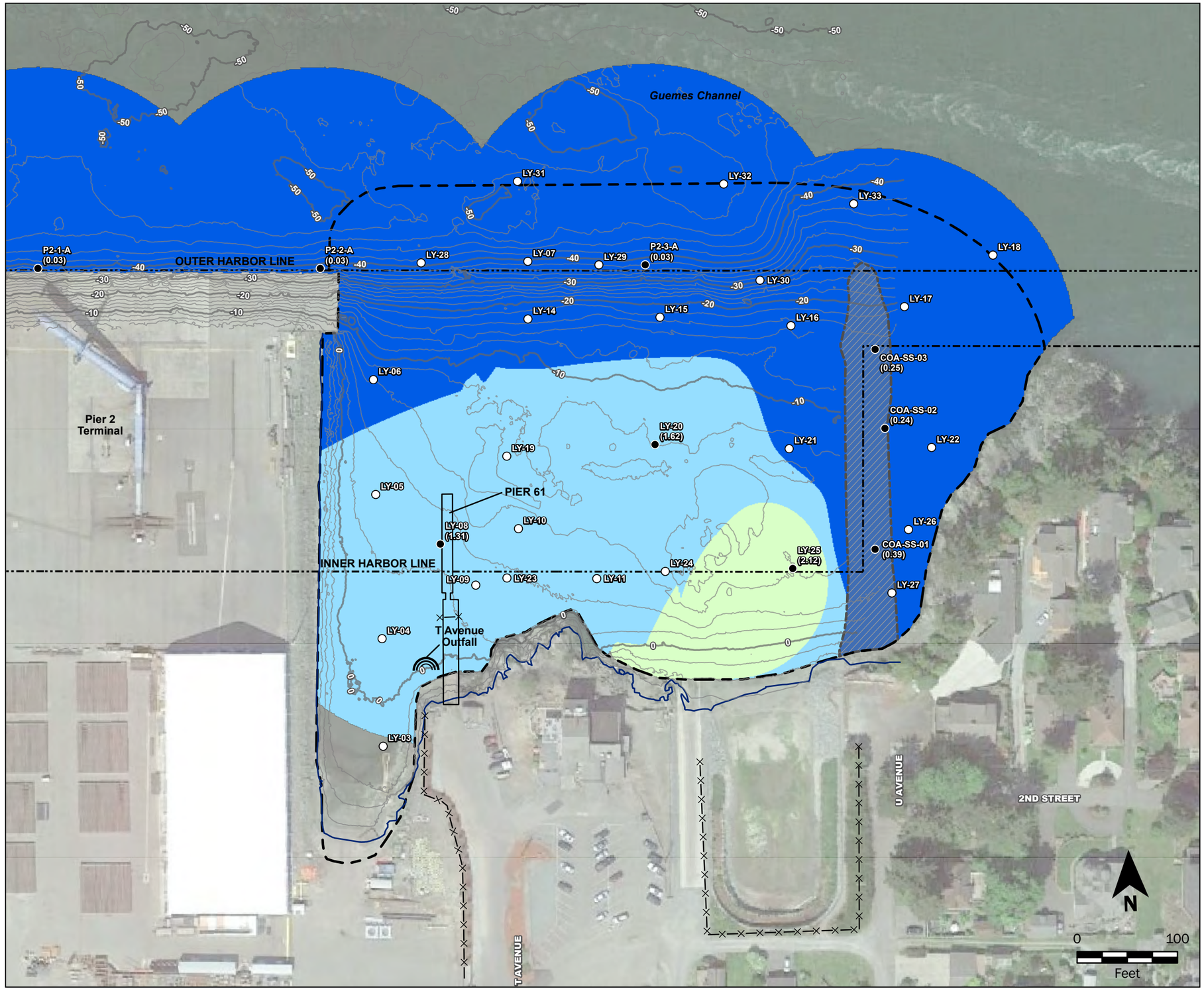
Dioxin/Furan Results (Human Health)
Sediment Compliance Interval

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 85

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F85_Dioxins_HH_POC Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

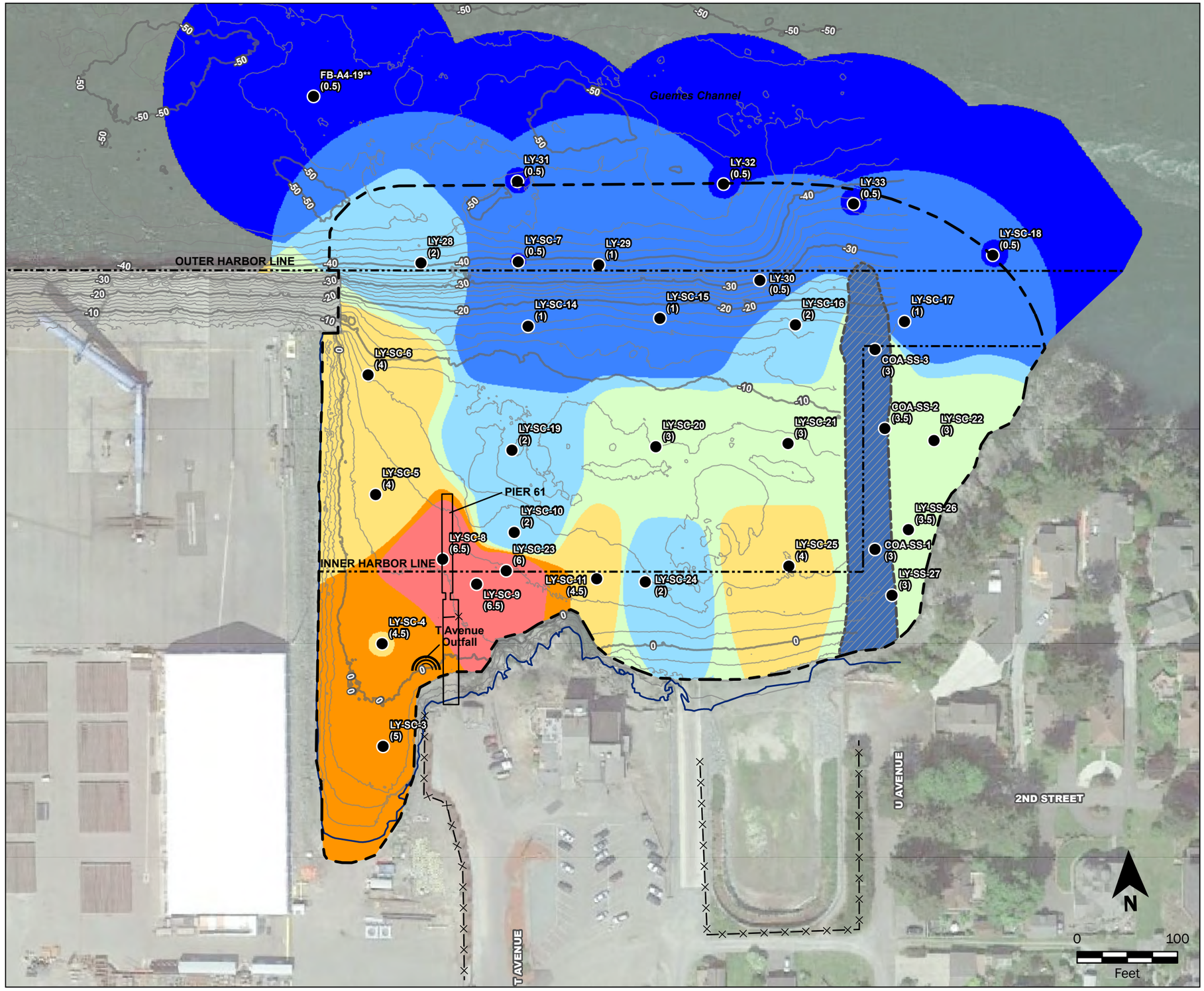
Dioxin/Furan Results (Human Health)
Subsurface Sediment

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 86

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F86_Dioxins_HH_Subsurf Date Exported: 12/31/25 by maugust



Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Index Contour (10 ft)
- Contour (2 ft)
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*
- Sediment Core Sample Location
- **(5.0')** Estimated Contamination Thickness (ft).

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Contaminated Sediment Thickness (ft)

<0.5'	1.5'-2.5'	3.5-4.5'	>5.5'
0.5-1.5'	2.5-3.5'	4.5-5.5'	

ft = Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

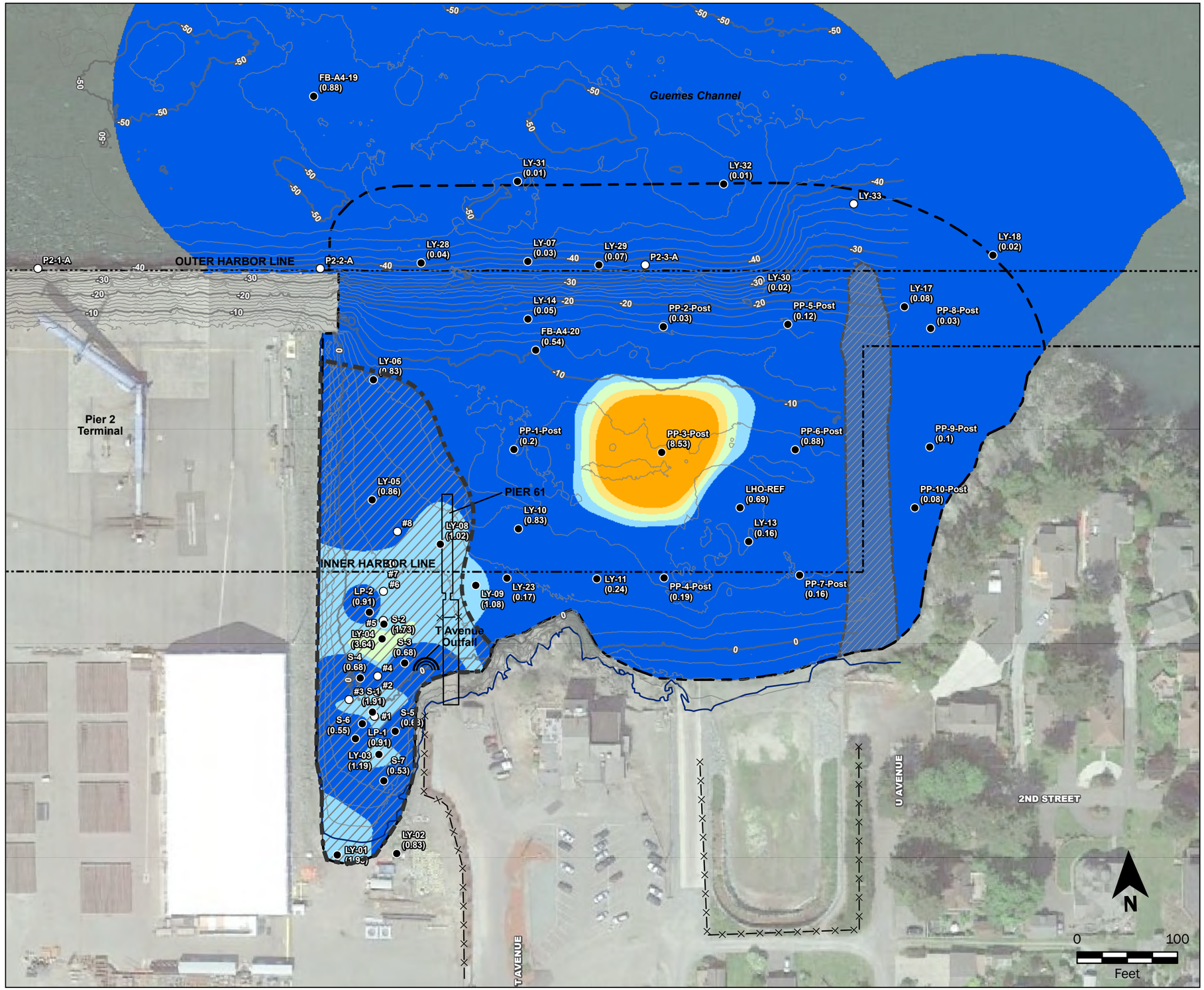
Contaminated Sediment Thickness

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 87

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F87_SedimentThickness Date Exported: 01/07/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- Extent of Wood Debris (Greater Than 10 Percent by Volume)
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW)
Concentration Gradient of Maximum Benthic Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet
PCUL = Proposed Cleanup Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

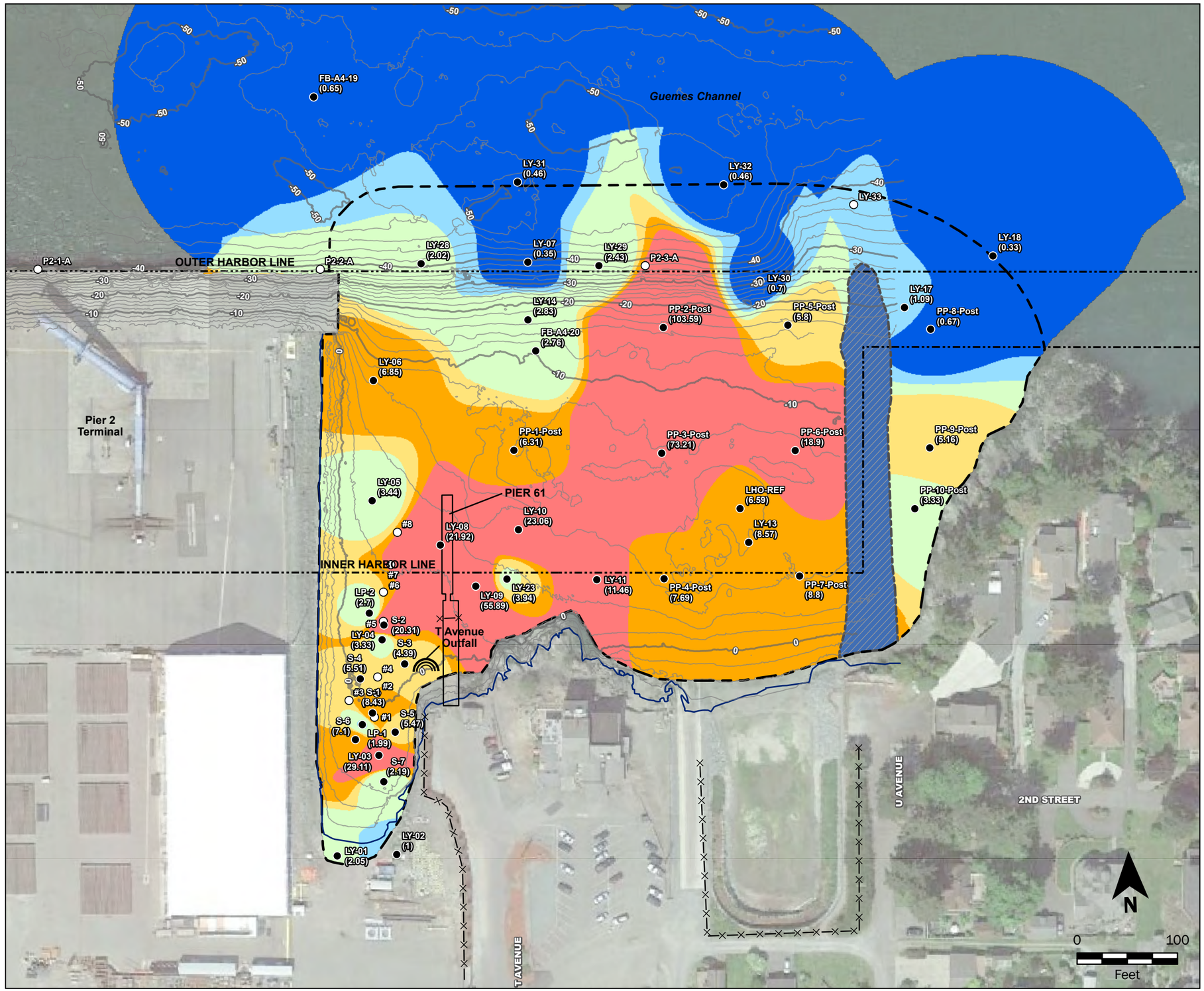
Compliance Interval Benthic PCUL Exceedances

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 88

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F88_Max_Benthic_POC Date Exported: 01/02/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Sample Location - With Sediment Data
- Sample Location - No Sediment Data
- Mean Higher High Water (MHHW)
- Fence
- Outfall
- Harbor Line
- City of Anacortes Waste Water Treatment Outfall Dredge Project Area*

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

*Clean imported material placed by the City to backfill the dredge prism in September 2024 as part of the Waste Water Treatment Plant Outfall Project.

Inverse Distance Weighted (IDW) Concentration Gradient of Maximum Human Health Exceedance Ratio**

<1	2 - 4	6-10
1 - 2	4 - 6	>10

**Exceedance Ratio (ER) calculated by dividing the detected analyte concentration by the proposed sediment screening level. At each location, the highest ER for the identified analyte or analyte group is shown. ER for non-detect result exceeding screening level(s) not included in ER interpolation.

ft = Feet
PCUL = Proposed Cleanup Level

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

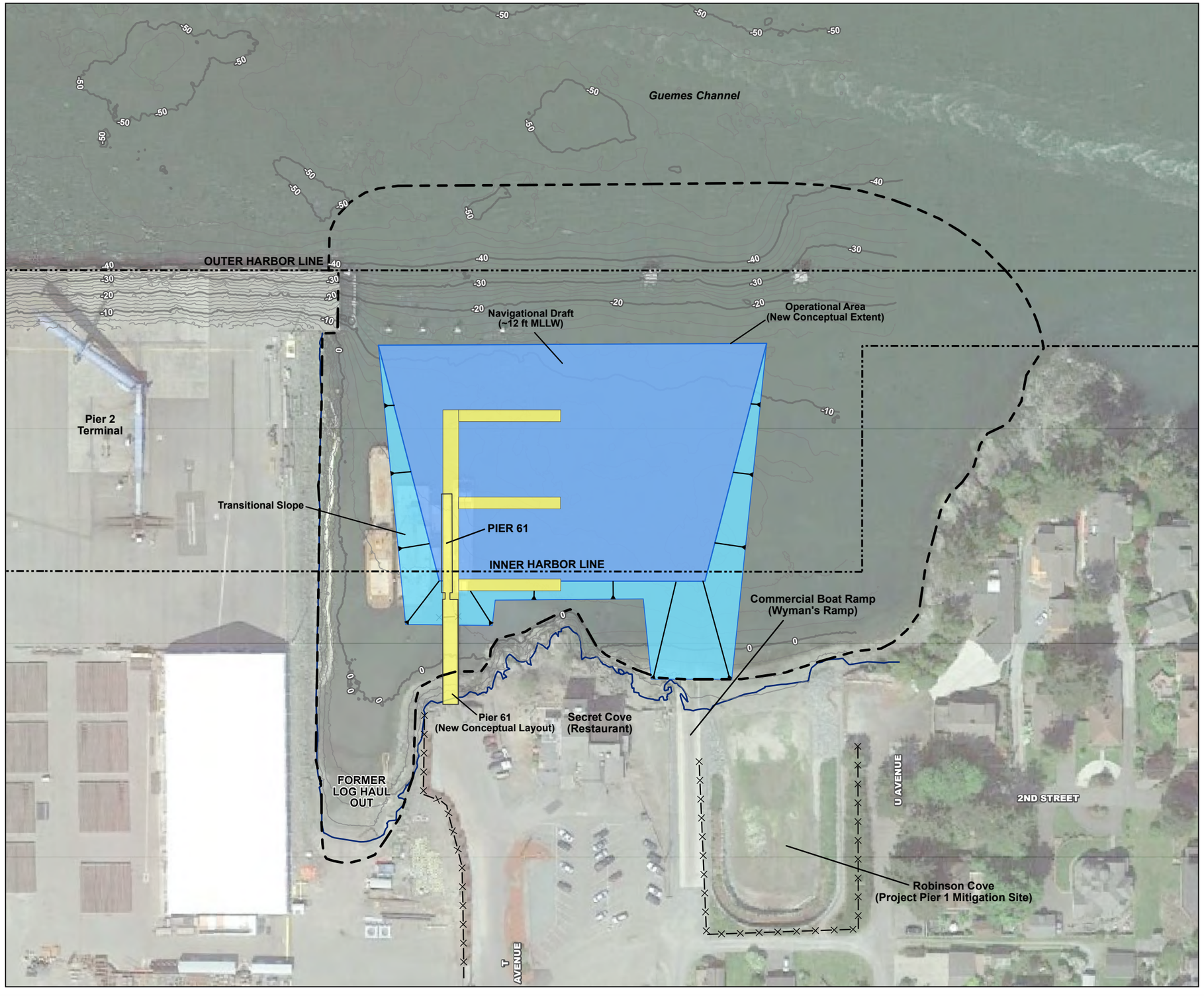
Compliance Interval Human Health PCUL Exceedances

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 89

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F89_Max_HH_POC Date Exported: 01/02/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Fence
- Harbor Line

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

N

0 100

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Conceptual Pier 61 Redevelopment and Operational Area Layout

Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 90

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_08_F90_ConceptualPier61Redevelopment Date Exported: 01/02/26 by maugust



Legend

- Anacortes Port Log Yard Site
- Mean Higher High Water (MHHW)
- Fence
- Harbor Line

Bathymetric Contours

- Index Contour (10 ft)
- Contour (2 ft)

Remedial Area/Technology

- Sediment Management Area (SMA)
- Future Cleanup Action Area
- Full Removal and Backfill Area (Variable Thickness)
- Full Removal Area With No Backfill
- Benthic Contaminant of Concern (COC) and Substance of Concern (SOC) Extent

N

0 100

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Aerial Imagery, accessed 2023. Bathymetry from David Evans and Associates Inc. (DEA) survey dated June 26, 2014.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Proposed Interim Action

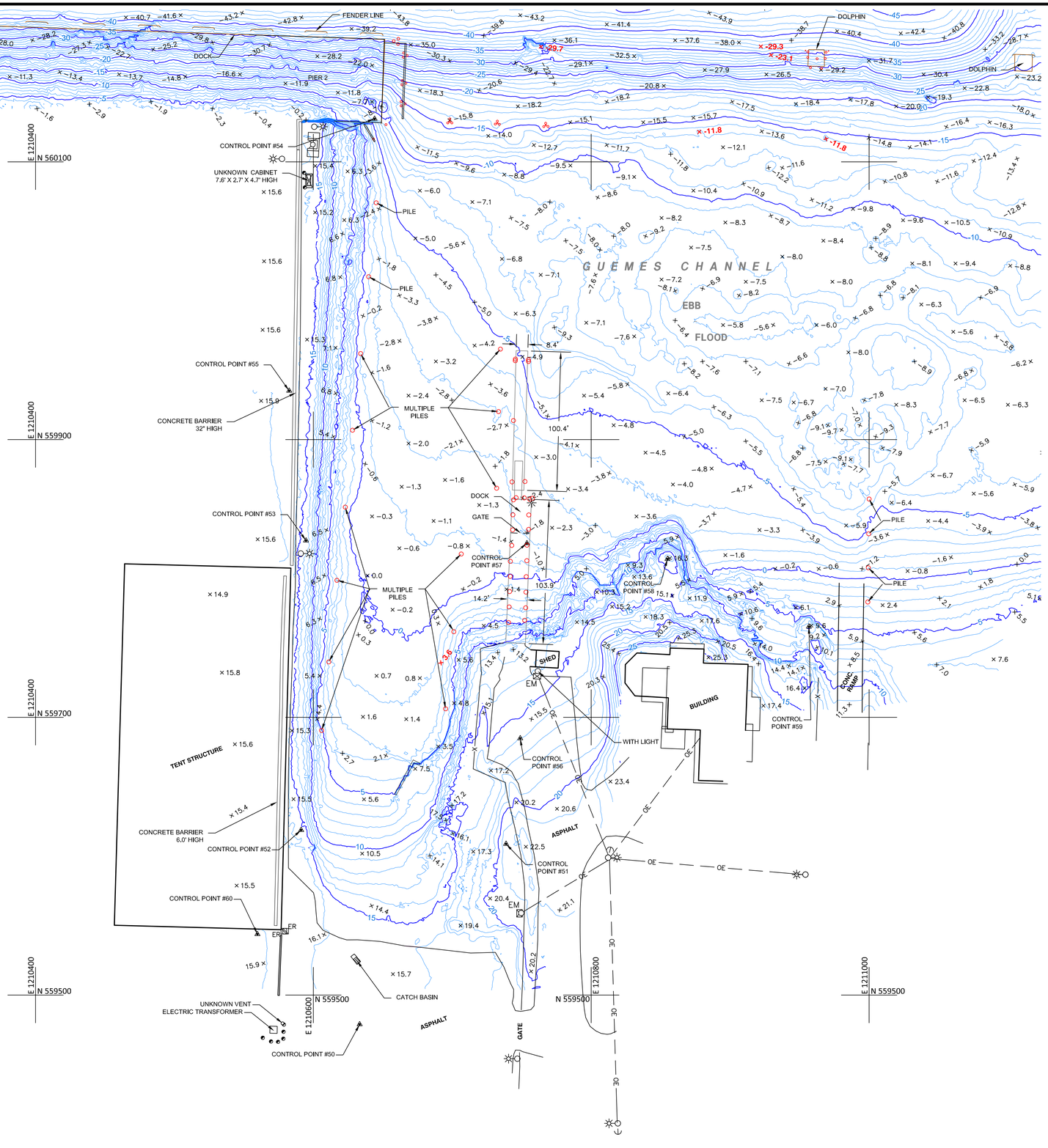
Anacortes Port Log Yard
Anacortes, Washington

GeoEngineers

Figure 91

P:\5\5147016\GIS\5147016_Project\5147016_Project.aprx\5147016_F91_ProposedInterimAction Date Exported: 01/07/26 by maugust

Bathymetric Survey



NOTES:

1. THIS DRAWING PRESENTS THE RESULTS OF A 2014 MULTIBEAM BATHYMETRIC AND A MAY 2015 3D TERRESTRIAL SCANNER SURVEY CONDUCTED BY THE MARINE SERVICES AND GEOMATICS DIVISION OF DAVID EVANS AND ASSOCIATES, INC. (DEA).
2. DATE OF SURVEY: UPLAND SURVEY APRIL 23, 2015, BATHYMETRIC SURVEY JUNE 26, 2014.
3. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 WITH THE 2011 ADJUSTMENT (NAD83/11) STATE PLANE COORDINATE SYSTEM (SPCS), WASHINGTON NORTH ZONE BASED ON SURVEY CONTROL SUPPLIED TO DEA FROM WH PACIFIC.
4. VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW) ON NOAA TIDAL DATUM EPOCH 1941-1959, BASED ON PORT OF ANACORTES SURVEY PROVIDED TO DEA BY WH PACIFIC.
5. UNITS: U.S. FEET.
6. THIS HYDROGRAPHIC SURVEY WAS COLLECTED IN ACCORDANCE TO THE U.S. ARMY CORPS OF ENGINEERS (USACE) HYDROGRAPHIC SURVEYING MANUAL EM1110-2-1003 DATED JANUARY 2002.
7. THIS BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE CONDITION OF THE BOTTOM AT THE TIME OF THE SURVEY; THE CONDITION OF THE SEAFLOOR MAY CHANGE AT ANY TIME AFTER THE DATE OF THIS SURVEY.

CONTROL USED:

SURVEY CONTROL AS PROVIDED BY THE PORT OF ANACORTES:

JETTY-2 (RTK-GPS BASE)
2" BRASS CAP WITH NO STAMP
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

DHA 1723-22
PK NAIL
N: 559404.80
E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK NAIL
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

#50
MAG NAIL & WASHER
N: 559478.92
E: 1210633.31
Z: 15.94 (MLLW)

#51
HUB & TACK
N: 559608.81
E: 1210738.69
Z: 21.74 (MLLW)

#52
HUB & TACK
N: 559618.82
E: 1210591.18
Z: 15.68 (MLLW)

#53
HUB & TACK
N: 559827.26
E: 1210594.70
Z: 14.31 (MLLW)

#54
MAG NAIL & WASHER
N: 560130.97
E: 1210644.08
Z: 16.12 (MLLW)

#55
PK NAIL
N: 559935.11
E: 1210582.58
Z: 15.99 (MLLW)

#56
MAG NAIL & WASHER
N: 559684.83
E: 1210748.91
Z: 16.00 (MLLW)

#57
SPIKE
N: 559825.33
E: 1210753.73
Z: 12.84 (MLLW)

#58
"X" ON BOULDER
N: 559813.96
E: 1210854.88
Z: 16.14 (MLLW)

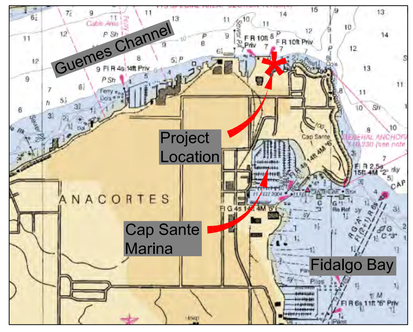
#59
"X" ON BOULDER
N: 559765.24
E: 1210956.71
Z: 10.07 (MLLW)

#60
MAG NAIL & WASHER
N: 559543.87
E: 1210559.74
Z: 15.88 (MLLW)

LEGEND:

- GENERAL OUTLINE OF MARINE STRUCTURES DETERMINED FROM MOBILE LASER SCANNING SYSTEM IN 2009
- GENERAL OUTLINE OF STRUCTURES PROVIDED BY THE PORT OF ANACORTES
- OE — OVERHEAD POWER
- FENCE
- LEAST DEPTH ON UNKNOWN OBJECT ABOVE CONTOURED SURFACE
- 1 FOOT CONTOUR INTERVAL
- SPOT SOUNDING
- 5 FOOT CONTOUR INTERVAL
- FM — ELECTRIC METER
- ELECTRIC CABINET
- ELECTRIC POLE
- ELECTRIC POLE WITH LIGHT
- GUY ANCHOR
- BOLLARD
- FR — ELECTRIC RISER
- CONTROL POINT PK NAIL
- CONTROL POINT AS NOTED
- FIRE HYDRANT

VICINITY MAP



NORTH
0 20 40 80
SCALE FEET

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECTION OF A NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS/THE HYDROGRAPHIC SOCIETY OF AMERICA, CERTIFIED HYDROGRAPHER.

GREGORY P. BAIRD,
NSPS/THSOA CERTIFIED HYDROGRAPHER (261)

SURVEYOR'S CERTIFICATION:
I, GREGORY P. BAIRD, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF WASHINGTON (REG NO. 48744), HEREBY CERTIFY THAT THIS BATHYMETRIC SURVEY WAS PERFORMED UNDER MY DIRECTION AND THAT THE CONTOURS SHOWN HEREON ARE ACCURATELY DEPICTED, UNLESS OTHERWISE NOTED.

GREGORY P. BAIRD, P.L.S.

TOPOGRAPHIC & BATHYMETRIC CONTOURS

PORT OF ANACORTES
PIER 2 LOG HAUL OUT

SHORELINE TOPOGRAPHIC SURVEY
ANACORTES, WASHINGTON

AGREEMENT FOR PROFESSIONAL SERVIDES #21-00-B TASK ORDER #04-15

DAVID EVANS AND ASSOCIATES INC.
MARINE SERVICES
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

DATE: JUNE 11, 2015
DESIGN: GPB
DRAWN: KMD
CHECKED: DDHA
REVISION NUMBER:

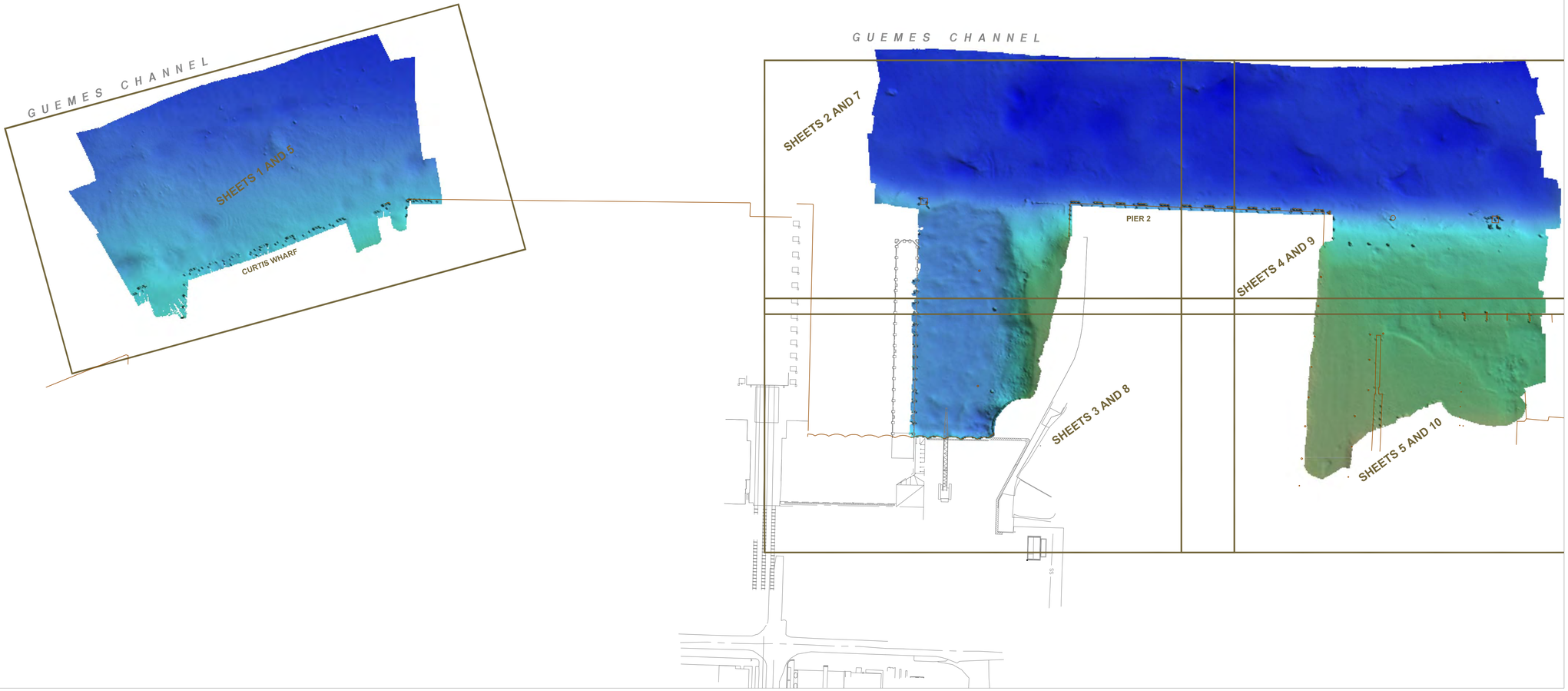
SCALE: 1"=40'

PROJECT NUMBER:
POAN0000-0010

DRAWING FILE:
MS-BC-X-POAN0010.dwg

SHEET NO.
1
OF 1

Plot Date: 6/11/2015 4:02 PM
Save Date: 6/11/2015 4:01 PM
By: Kyle McNaught-Davis
By: Kmd
File: S:\SURVEY\COLFILES\Marine Services\POAN 0010 POAN 0009\POAN0010\0400CADMS-BC-X-POAN0010.dwg



BATHYMETRIC SURVEY

PORT OF ANACORTES
PIER 2 AND CURTIS WHARF

ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
2. Date of survey: March 28, 2012.
3. Horizontal datum: North American Datum of 1983 with the 1991 adjustment (NAD83/91) State Plane Coordinate System (SPCS), Washington North Zone based on Port of Anacortes survey control monument "JETTY-2".
4. Vertical datum: Mean Lower Low Water (MLLW) on NOAA tidal datum epoch 1941-1959, based on Port of Anacortes survey control monument "JETTY-2".
5. Units: U.S. Feet.
6. The data was thinned to a 1.64 foot grid, using an inverse distance weighted algorithm.
7. The sun-illuminated image was generated from a Digital Terrain Model (DTM) based on a 0.5 meter grid of multibeam data in Caris HIPS software. Illumination angles and color scale are shown in the legend.
8. Water surface elevations were obtained from a Trimble SPS-751 RTK-GPS. A Trimble SPS-851 RTK-GPS base station was deployed to provide real-time GPS correctors.
9. Bathymetric data was collected using a RESON Seabat 7101 multibeam sonar operating at 240 kHz, with an Applanix POS/MV combined kinematic GPS and inertial positioning and motion reference system for vessel attitude and heave.
10. This hydrographic survey was collected in accordance to the U.S. Army Corps Of Engineers (USACE) hydrographic surveying manual EM1110-2-1003 dated January 2002.
11. This bathymetric survey is representative of the condition of the bottom at the time of the survey; the condition of the seafloor may change at any time after the date of this survey.
12. Planimetric data is provided for reference only and should not be used for engineering or design.

This hydrographic survey was completed under the direction of an American Congress on Surveying and Mapping (ACSM) certified hydrographer.

Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

CONTROL

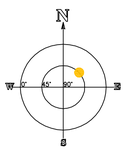
Survey Control as provided by the Port of Anacortes:

JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

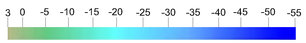
DHA 1723-22
PK Nail
N: 559404.80
E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

HILLSHADE INFORMATION



Hillshade image illumination based on Sun azimuth from 45° at an elevation of 45°.

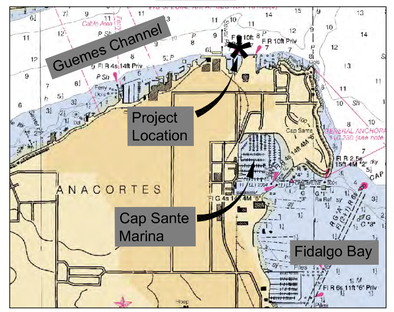


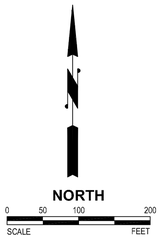
Depth in Feet (MLLW)

LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP





REVISIONS: APPD.

DATE: 04/18/12
DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

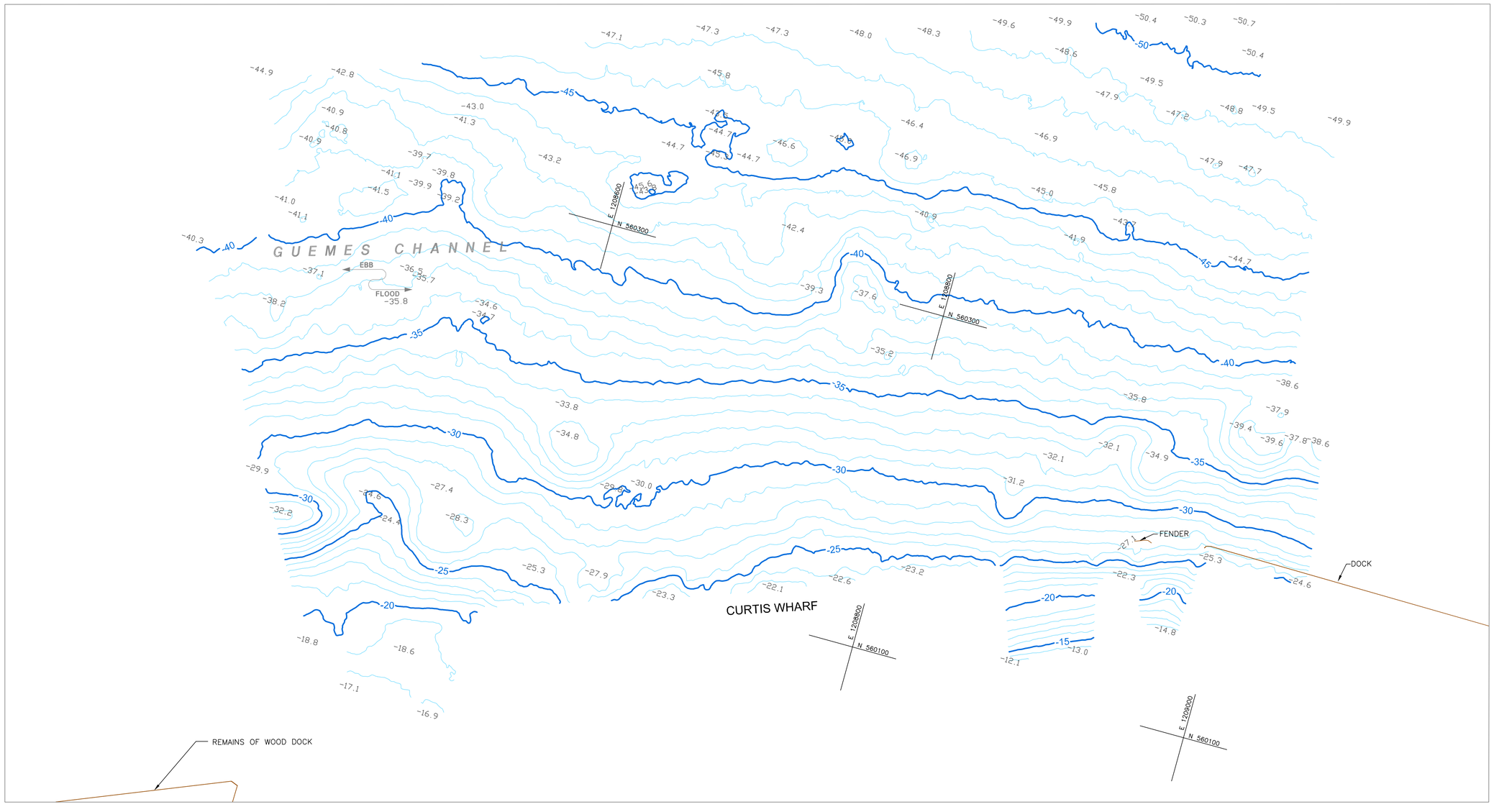
SCALE:

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
INDEX

OF



NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
2. Date of survey: March 28, 2012.
3. Horizontal datum: North American Datum of 1983 with the 1991 adjustment (NAD83/91) State Plane Coordinate System (SPCS), Washington North Zone based on Port of Anacortes survey control monument "JETTY-2".
4. Vertical datum: Mean Lower Low Water (MLLW) on NOAA tidal datum epoch 1941-1959, based on Port of Anacortes survey control monument "JETTY-2".
5. Units: U.S. Feet.
6. The data was thinned to a 1.64 foot grid, using an inverse distance weighted algorithm.
7. Contour interval: 1 foot.
8. Bathymetric data was collected using a RESON Seabat 7101 multibeam sonar operating at 240 kHz, with an Applanix POS/MV combined kinematic GPS and inertial positioning and motion reference system for vessel attitude and heave.
9. Water surface elevations were obtained from a Trimble SPS-751 RTK-GPS. A Trimble SPS-851 RTK-GPS base station was deployed to provide real-time GPS correctors.
10. Spot soundings are positioned at the decimal point.
11. This hydrographic survey was collected in accordance to the U.S. Army Corps Of Engineers (USACE) hydrographic surveying manual EM1110-2-1003 dated January 2002.
12. This bathymetric survey is representative of the condition of the bottom at the time of the survey; the condition of the seafloor may change at any time after the date of this survey.
13. Planimetric data is provided for reference only and should not be used for engineering or design.

CONTROL

Survey Control as provided by the Port of Anacortes:

JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

DHA 1723-22
PK Nail
N: 559404.80
E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

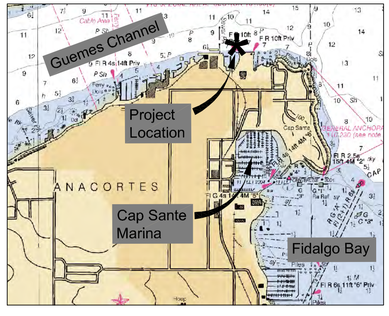
LEGEND

1 Foot Contour Interval
-5 5 Foot Contour Interval
-6.2 Spot Sounding (Location At Decimal)
General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

This hydrographic survey was completed under the direction of an American Congress on Surveying and Mapping (ACSM) certified hydrographer.

Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

BATHYMETRIC CONTOURS
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

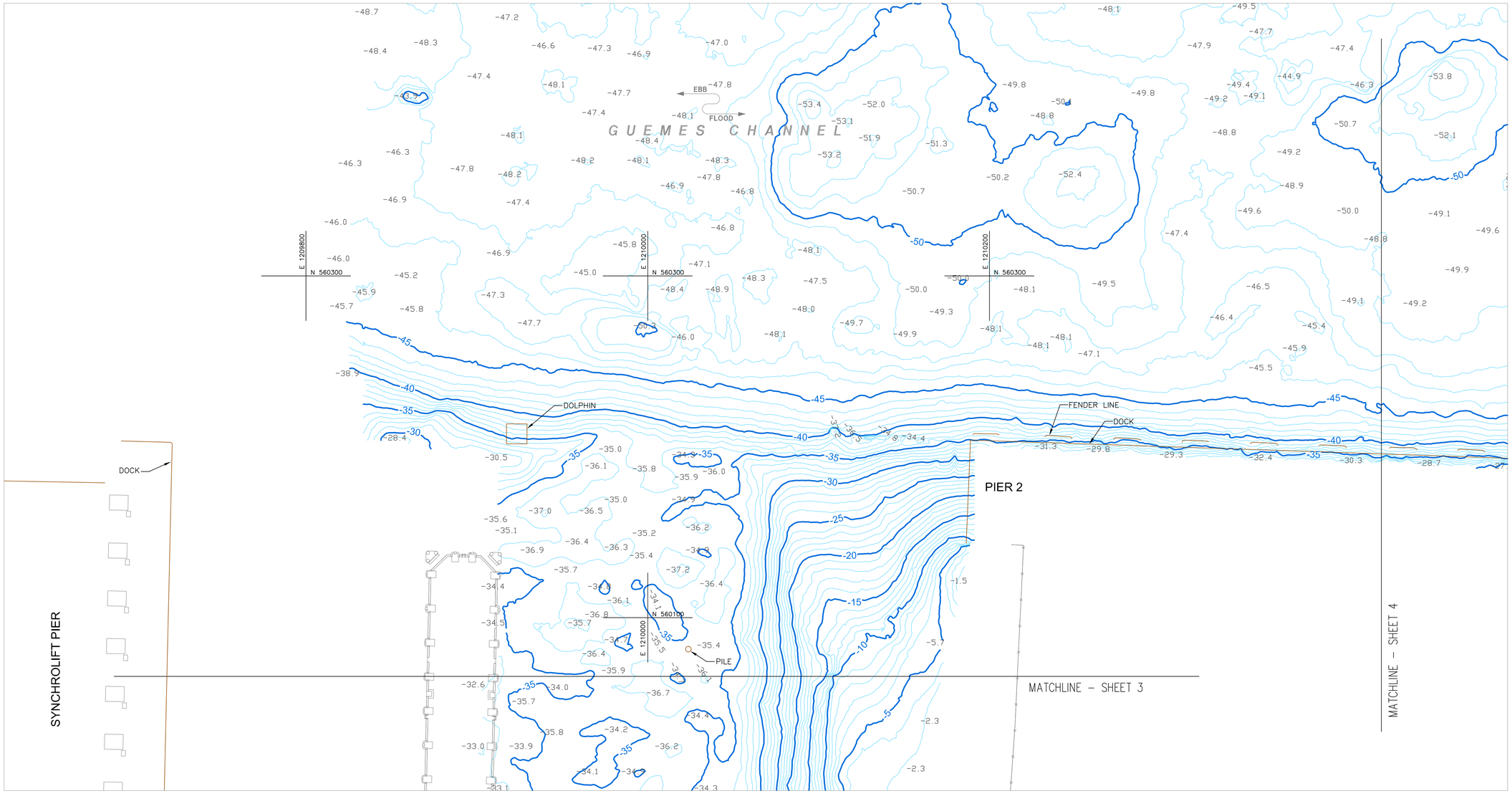
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DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
1
OF 10



NOTES

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DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

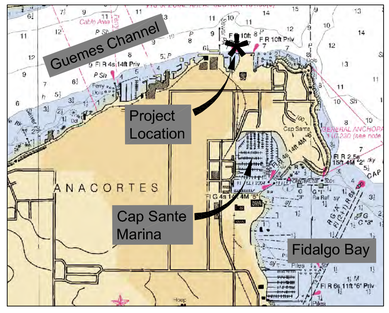
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VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

BATHYMETRIC CONTOURS
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

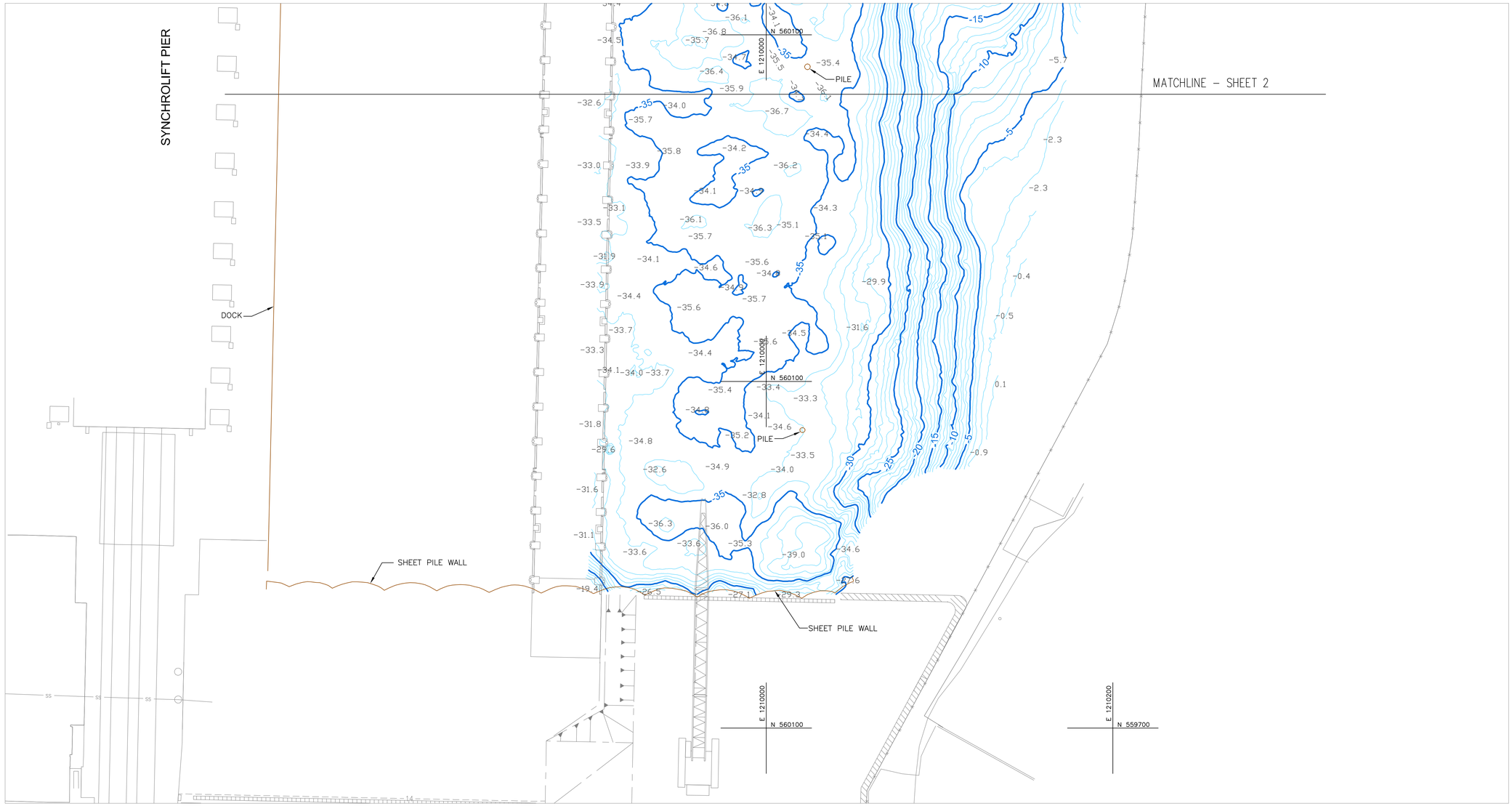
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CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
2
OF 10



NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
2. Date of survey: March 28, 2012.
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CONTROL

Survey Control as provided by the Port of Anacortes:

JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
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Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

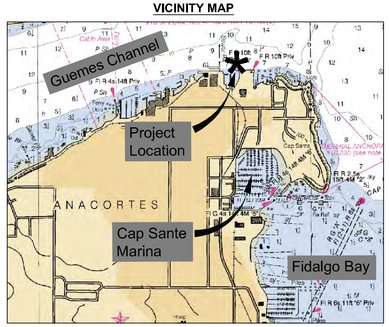
LEGEND

1 Foot Contour Interval
-5 5 Foot Contour Interval
-6.2 Spot Sounding (Location At Decimal)
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Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

BATHYMETRIC CONTOURS
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

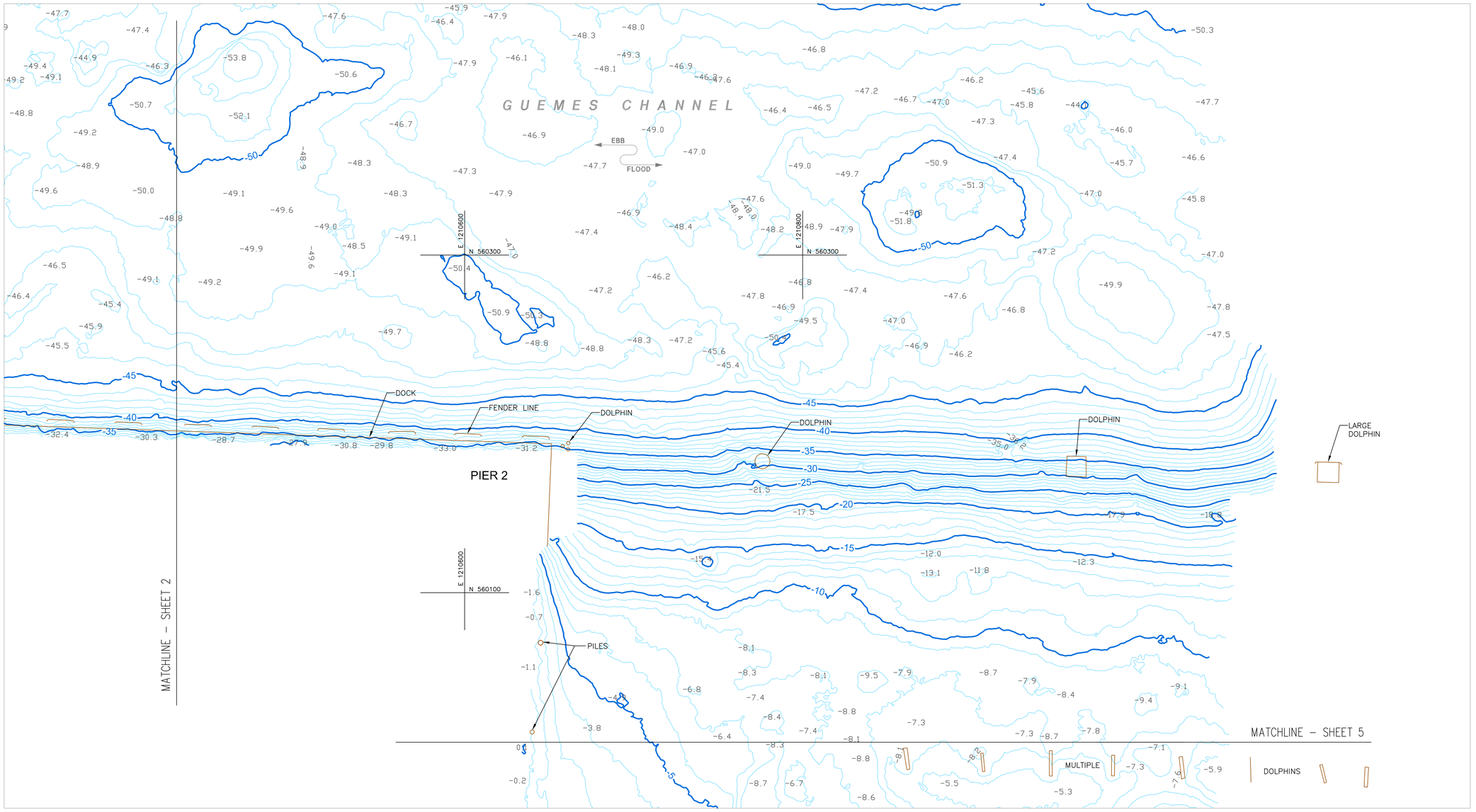
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CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
3
OF 10



NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
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JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
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Z: 12.49 (MLLW)

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PK Nail
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E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

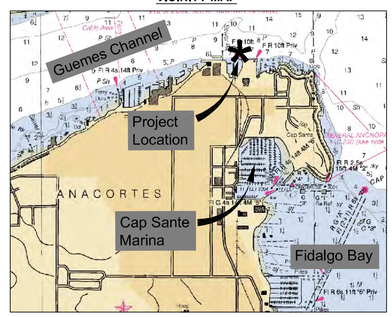
LEGEND

- 1 Foot Contour Interval
- -5 5 Foot Contour Interval
- -6.2 Spot Sounding (Location At Decimal)
- General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

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Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

VICINITY MAP



NORTH

0 15 30 60
SCALE FEET

BATHYMETRIC CONTOURS
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON

GREGORY BAIRD — STATE OF WASHINGTON — 22648 — REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

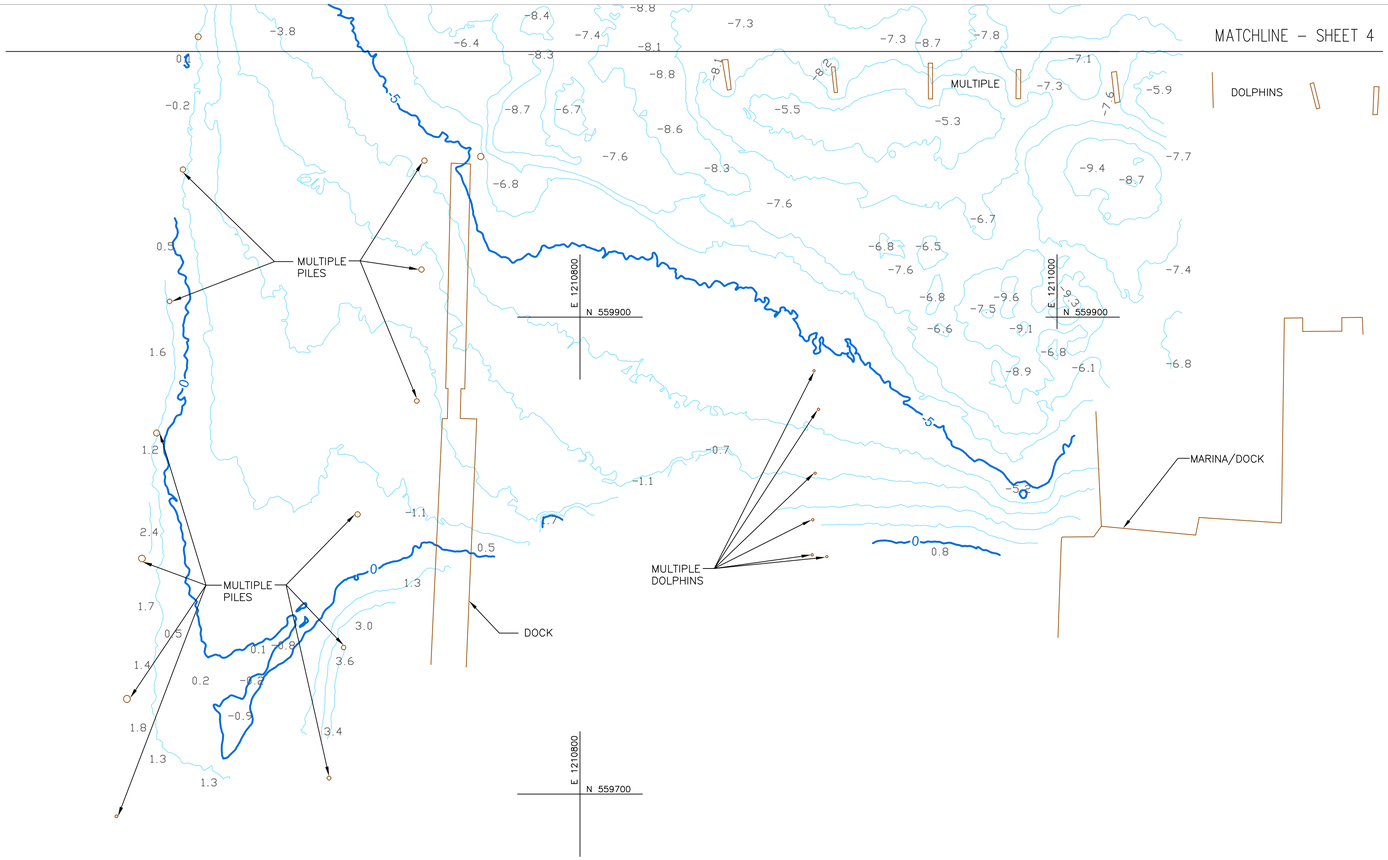
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REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
4
OF 10



NOTES

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Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

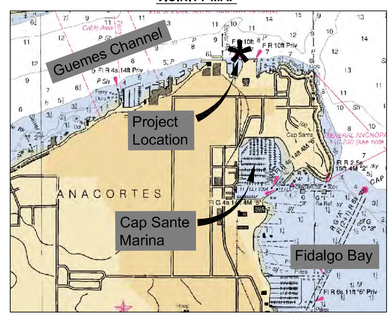
LEGEND

1 Foot Contour Interval
-5 5 Foot Contour Interval
–6.2 Spot Sounding (Location At Decimal)
General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

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Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

BATHYMETRIC CONTOURS
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
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Phone: 360.314.3200

REVISIONS: APPD.

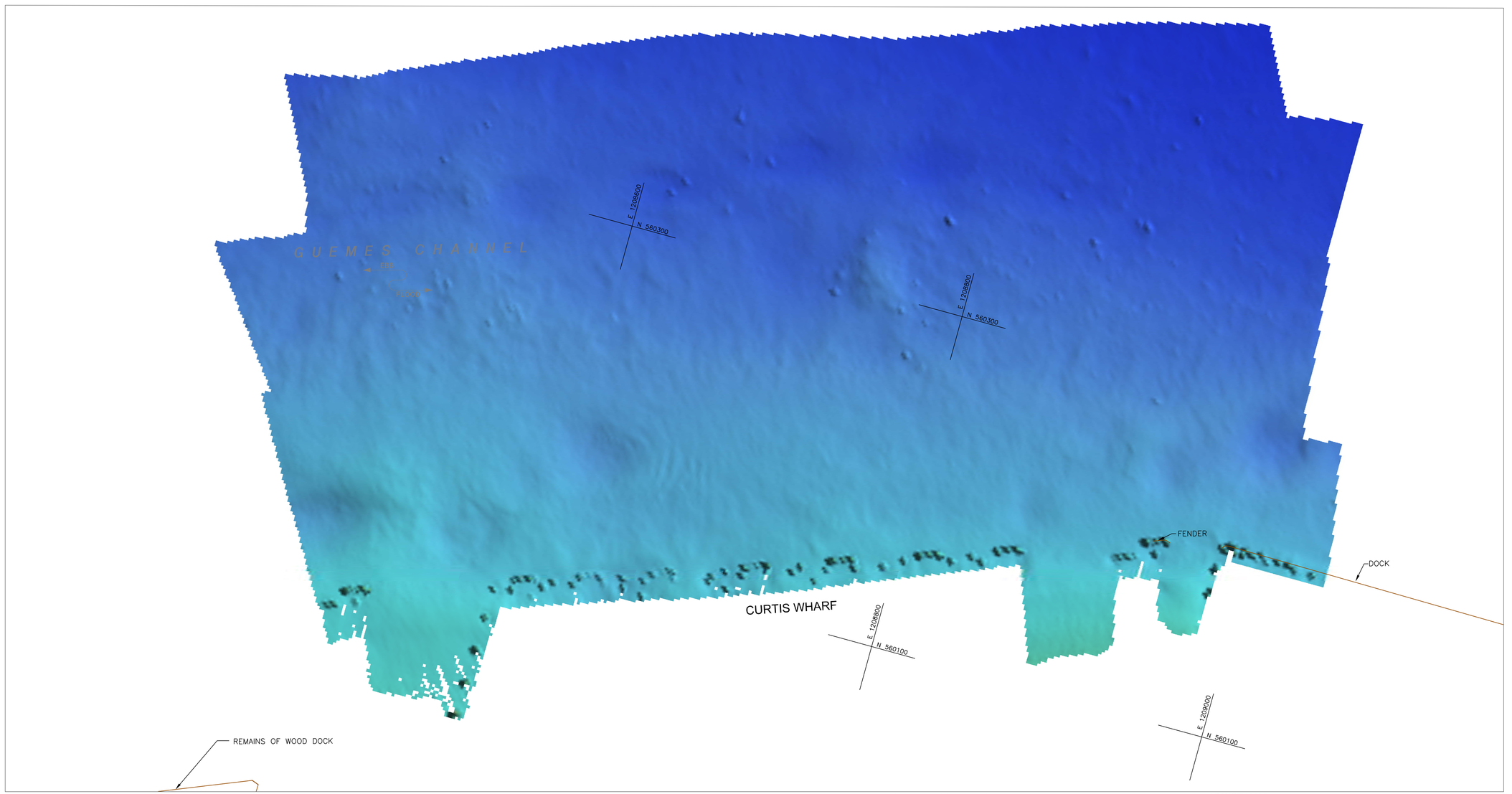
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CHECKED: GPB/BXHO
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SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
5
OF 10



NOTES

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5. Units: U.S. Feet.
6. The data was thinned to a 1.64 foot grid, using an inverse distance weighted algorithm.
7. The sun-illuminated image was generated from a Digital Terrain Model (DTM) based on a 0.5 meter grid of multibeam data in Caris HIPS software. Illumination angles and color scale are shown in the legend.
8. Water surface elevations were obtained from a Trimble SPS-751 RTK-GPS. A Trimble SPS-851 RTK-GPS base station was deployed to provide real-time GPS correctors.
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ACSM Certified Hydrographer, No. 263

CONTROL

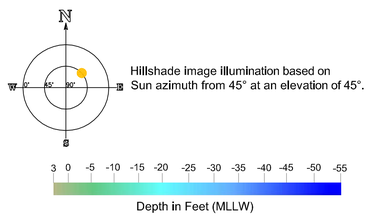
Survey Control as provided by the Port of Anacortes:

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2" Brass cap with no stamp
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PK Nail
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Z: 15.44 (MLLW)

HILLSHADE INFORMATION

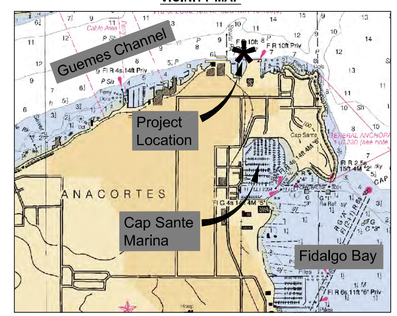


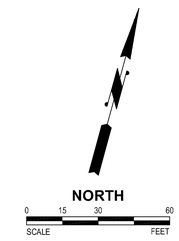
Hillshade image illumination based on Sun azimuth from 45° at an elevation of 45°.

LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP





SUN-ILLUMINATED IMAGE

PORT OF ANACORTES
PIER 2 AND CURTIS WHARF

ANACORTES, WASHINGTON

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

DATE: 04/18/12
DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

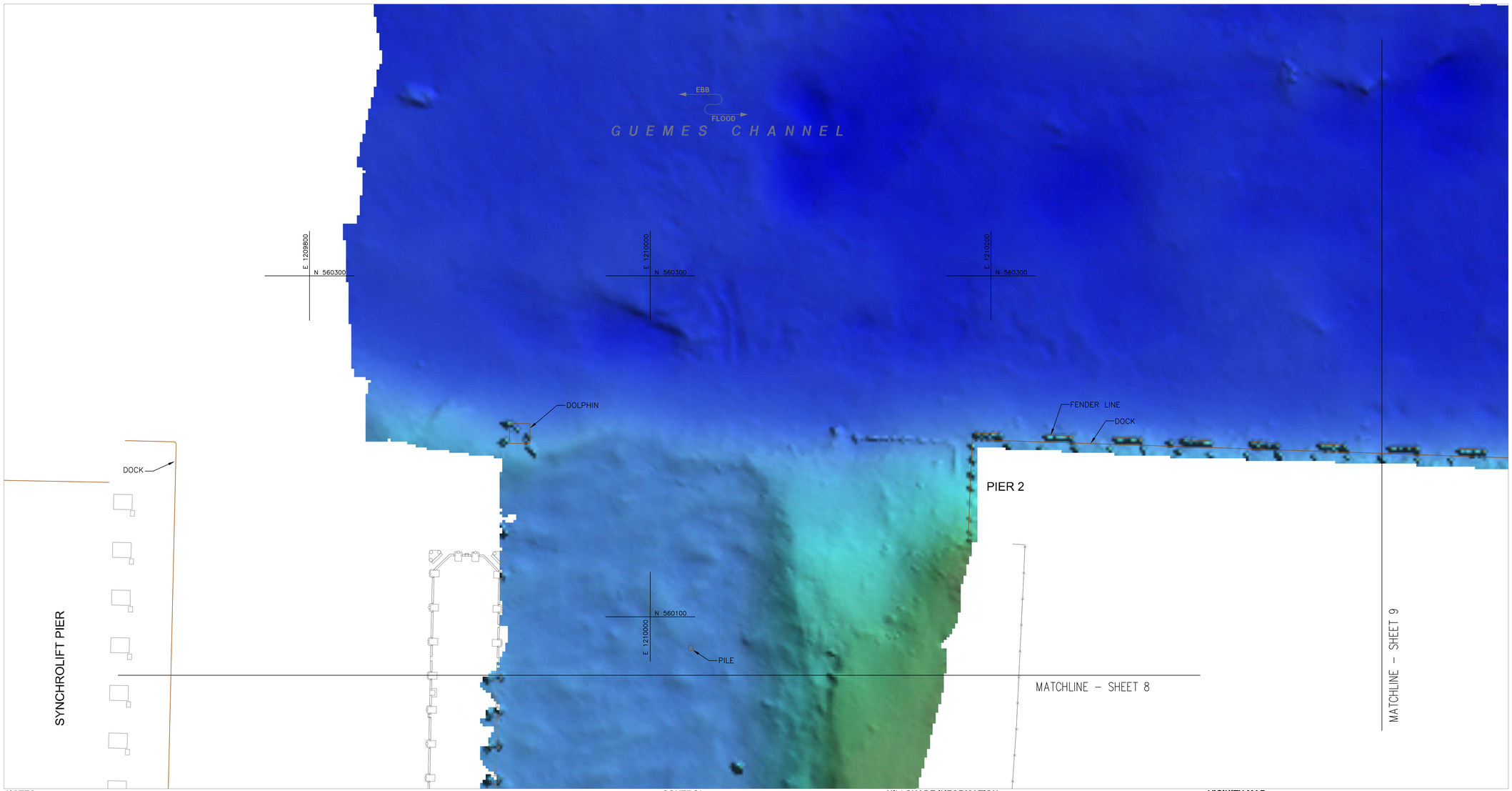
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PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
6
OF 10

SUN-ILLUMINATED IMAGE
PORT OF ANACORTES
PIER 2 AND CURTIS WHARF
ANACORTES, WASHINGTON



NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
2. Date of survey: March 28, 2012.
3. Horizontal datum: North American Datum of 1983 with the 1991 adjustment (NAD83/91) State Plane Coordinate System (SPCS), Washington North Zone based on Port of Anacortes survey control monument "JETTY-2".
4. Vertical datum: Mean Lower Low Water (MLLW) on NOAA tidal datum epoch 1941-1959, based on Port of Anacortes survey control monument "JETTY-2".
5. Units: U.S. Feet.
6. The data was thinned to a 1.64 foot grid, using an inverse distance weighted algorithm.
7. The sun-illuminated image was generated from a Digital Terrain Model (DTM) based on a 0.5 meter grid of multibeam data in Caris HIPS software. Illumination angles and color scale are shown in the legend.
8. Water surface elevations were obtained from a Trimble SPS-751 RTK-GPS. A Trimble SPS-851 RTK-GPS base station was deployed to provide real-time GPS correctors.
9. Bathymetric data was collected using a RESON Seabat 7101 multibeam sonar operating at 240 kHz, with an Applanix POS/MV combined kinematic GPS and inertial positioning and motion reference system for vessel attitude and heave.
10. This hydrographic survey was collected in accordance to the U.S. Army Corps Of Engineers (USACE) hydrographic surveying manual EM1110-2-1003 dated January 2002.
11. This bathymetric survey is representative of the condition of the bottom at the time of the survey; the condition of the seafloor may change at any time after the date of this survey.
12. Planimetric data is provided for reference only and should not be used for engineering or design.

This hydrographic survey was completed under the direction of an American Congress on Surveying and Mapping (ACSM) certified hydrographer.

Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

CONTROL

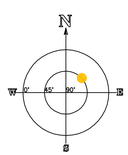
Survey Control as provided by the Port of Anacortes:

JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

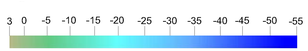
DHA 1723-22
PK Nail
N: 559404.80
E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

HILLSHADE INFORMATION



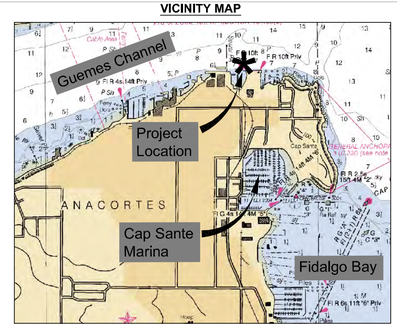
Hillshade image illumination based on Sun azimuth from 45° at an elevation of 45°.

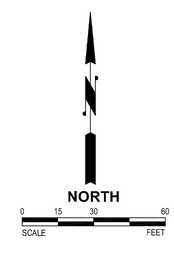


LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP





DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

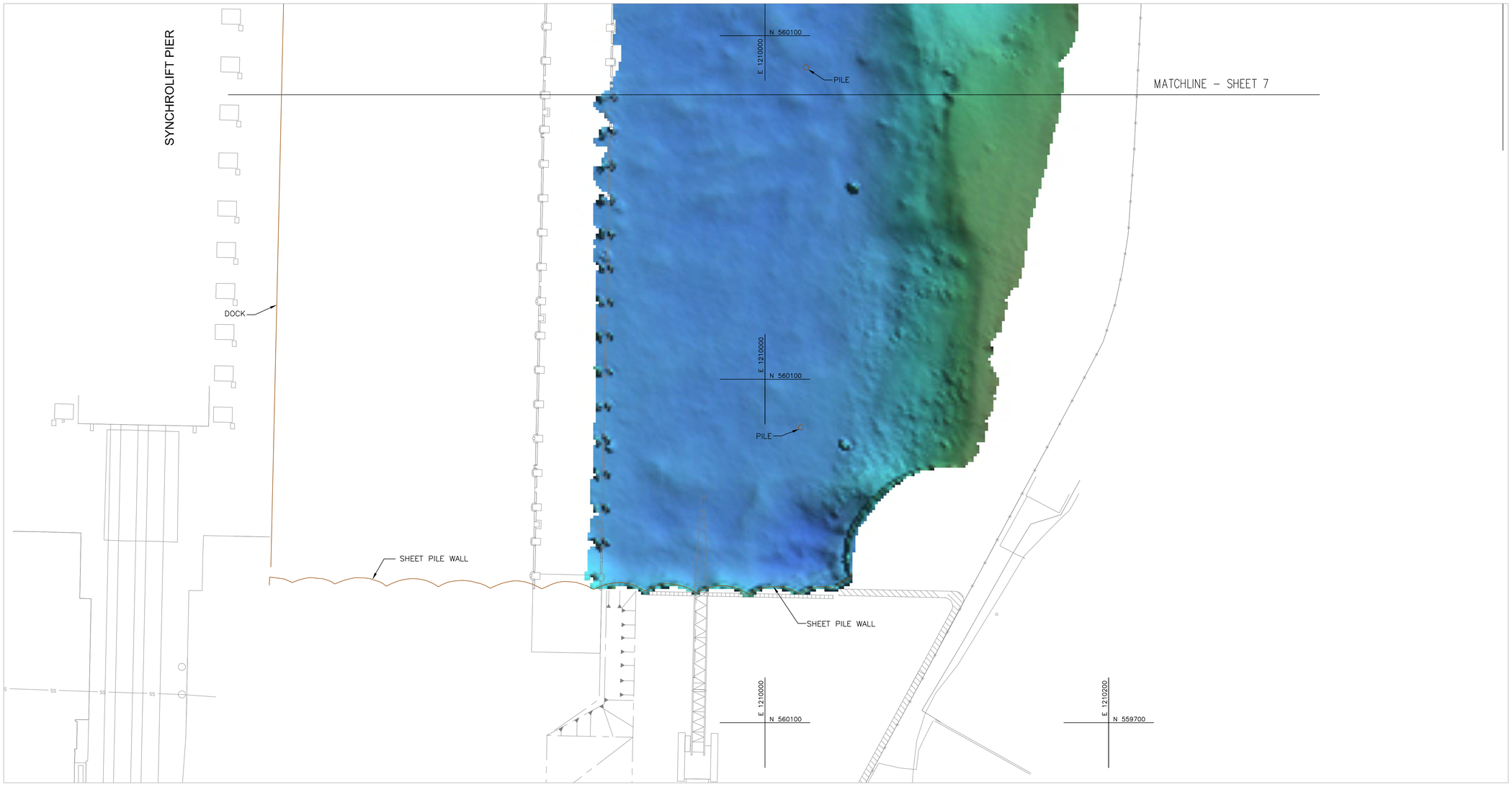
DATE: 04/18/12
DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
7
OF 10



NOTES

1. This drawing presents the results of a multibeam bathymetric survey conducted by the Marine Services Division of David Evans and Associates, Inc. (DEA).
2. Date of survey: March 28, 2012.
3. Horizontal datum: North American Datum of 1983 with the 1991 adjustment (NAD83/91) State Plane Coordinate System (SPCS), Washington North Zone based on Port of Anacortes survey control monument "JETTY-2".
4. Vertical datum: Mean Lower Low Water (MLLW) on NOAA tidal datum epoch 1941-1959, based on Port of Anacortes survey control monument "JETTY-2".
5. Units: U.S. Feet.
6. The data was thinned to a 1.64 foot grid, using an inverse distance weighted algorithm.
7. The sun-illuminated image was generated from a Digital Terrain Model (DTM) based on a 0.5 meter grid of multibeam data in Caris HIPS software. Illumination angles and color scale are shown in the legend.
8. Water surface elevations were obtained from a Trimble SPS-751 RTK-GPS. A Trimble SPS-851 RTK-GPS base station was deployed to provide real-time GPS correctors.
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Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

CONTROL

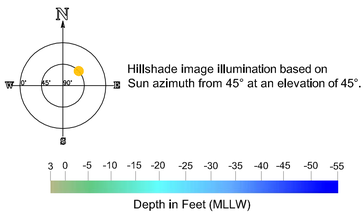
Survey Control as provided by the Port of Anacortes:

JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

DHA 1723-22
PK Nail
N: 559404.80
E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

HILLSHADE INFORMATION

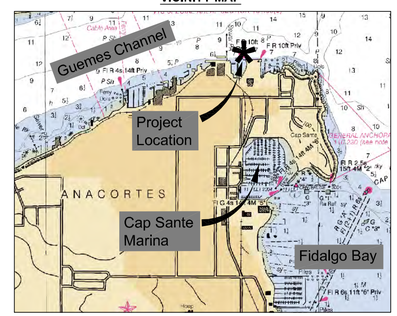


Hillshade image illumination based on Sun azimuth from 45° at an elevation of 45°.

LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

SUN-ILLUMINATED IMAGE

PORT OF ANACORTES
PIER 2 AND CURTIS WHARF

ANACORTES, WASHINGTON

GREGORY BAIRD — STATE OF WASHINGTON — 22746 — REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID EVANS AND ASSOCIATES INC.
2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

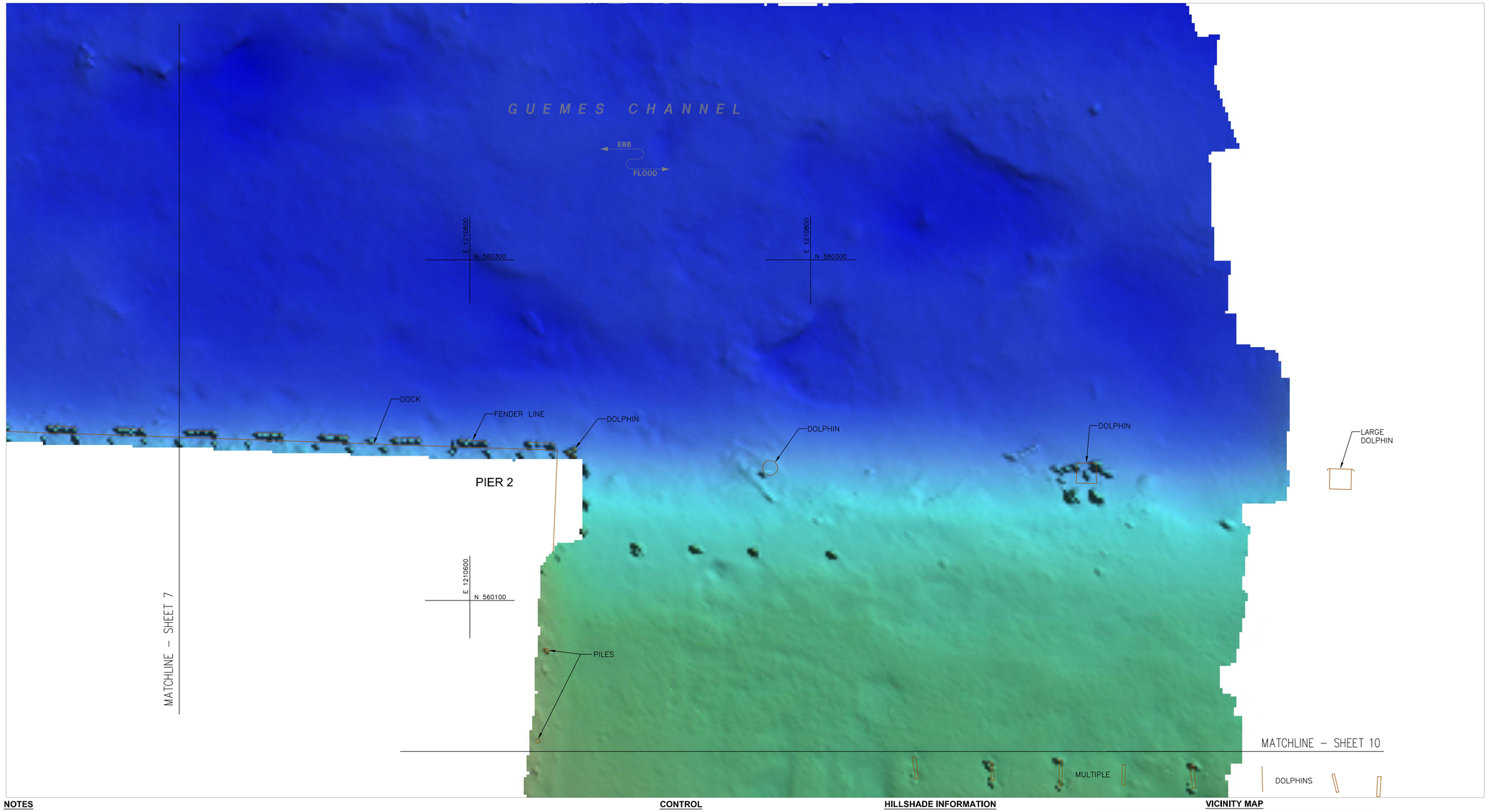
DATE: 04/18/12
DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
8
OF 10



NOTES

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Benjamin L. Hocker
ACSM Certified Hydrographer, No. 263

CONTROL

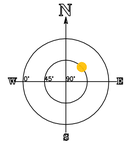
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JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
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Z: 12.49 (MLLW)

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PK Nail
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E: 1210236.68
Z: 14.97 (MLLW)

DHA 1723-26
PK Nail
N: 559841.84
E: 1210232.19
Z: 15.44 (MLLW)

HILLSHADE INFORMATION



Hillshade image illumination based on Sun azimuth from 45° at an elevation of 45°.

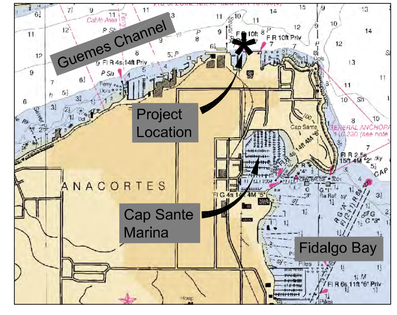
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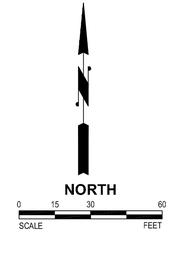
Depth in Feet (MLLW)

LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP





SUN-ILLUMINATED IMAGE

PORT OF ANACORTES
PIER 2 AND CURTIS WHARF

ANACORTES, WASHINGTON

GREGORY BAIRD — STATE OF WASHINGTON — 21672 — REGISTERED PROFESSIONAL LAND SURVEYOR

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2801 Southeast Columbia Way Suite 130
Vancouver Washington 98661
Phone: 360.314.3200

REVISIONS: APPD.

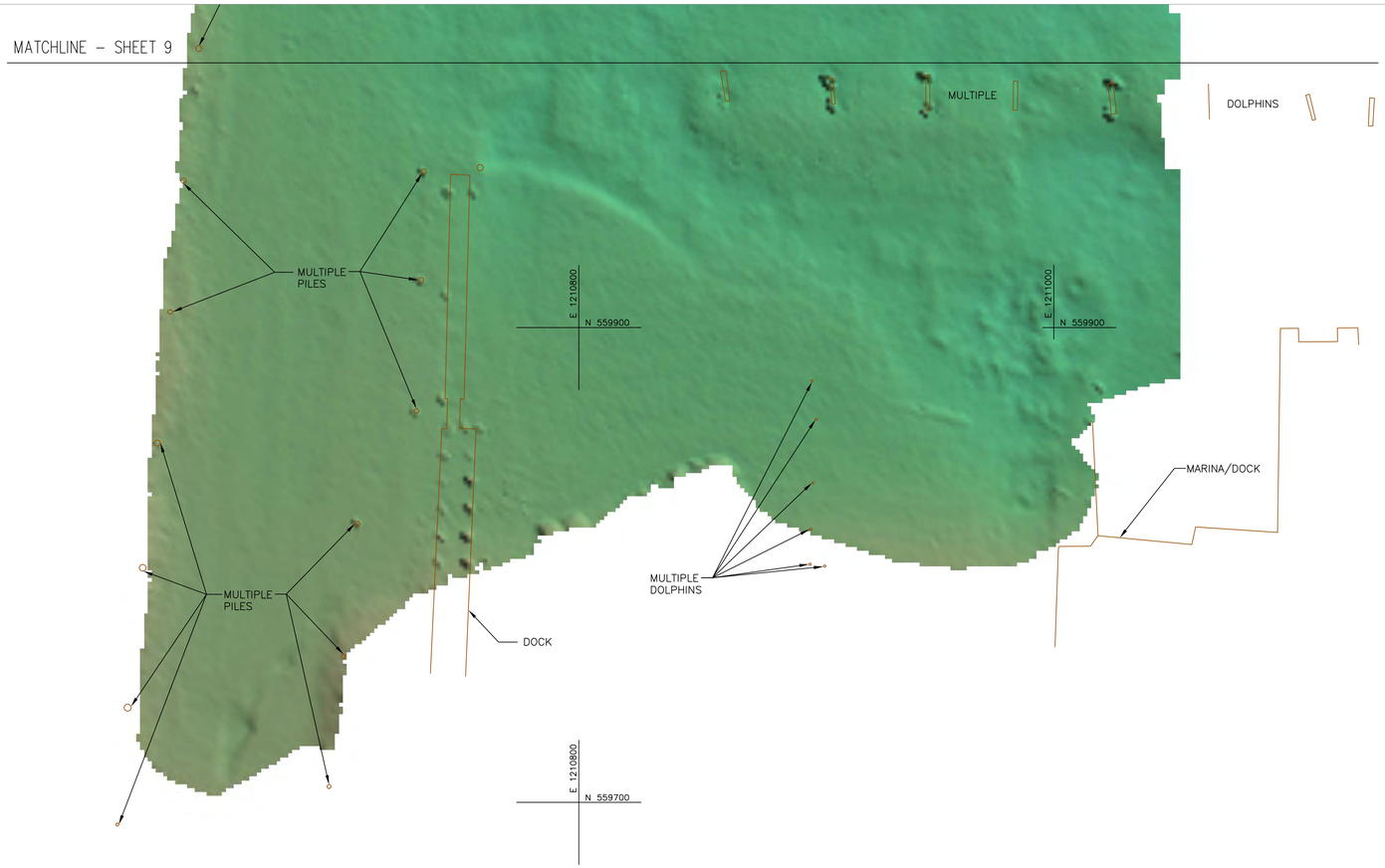
DATE: 04/18/12
DESIGN:
DRAWN: SNA/MJCH
CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
9
OF 10



NOTES

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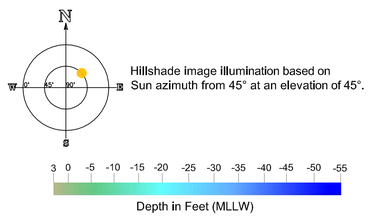
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JETTY-2 (RTK-GPS Base)
2" Brass cap with no stamp
N: 556042.54
E: 1210661.63
Z: 12.49 (MLLW)

DHA 1723-22
PK Nail
N: 559404.80
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N: 559841.84
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Z: 15.44 (MLLW)

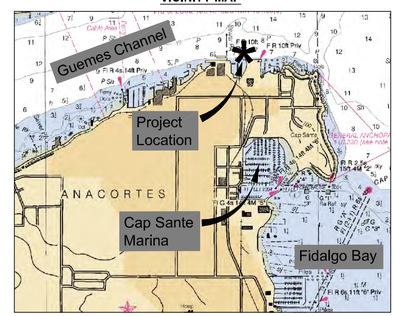
HILLSHADE INFORMATION



LEGEND

General Outline of Marine Structures Determined From Mobile Laser Scanning System in 2009

VICINITY MAP



NORTH
0 15 30 60
SCALE FEET

SUN-ILLUMINATED IMAGE

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PIER 2 AND CURTIS WHARF

ANACORTES, WASHINGTON

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REVISIONS: APPD.

DATE: 04/18/12
DESIGN:
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CHECKED: GPB/BXHO
REVISION NUMBER:

SCALE: 1" = 30'

PROJECT NUMBER:
POAN0000-0007

DRAWING FILE:
POAN00000007

SHEET NO.
10
OF 10