AGENDA

City of Gig Harbor Hearing Examiner
Virtual Hearing of Tuesday, June 2, 2026 at 1:30 PM

This hearing will be accessible to listen by using the information below:
Link to join Webinar https://us06web.zoom.us/j/89687328917
Call-in: (253) 215-8782 Hearing ID: 896 8732 8917

If you wish to submit a written public comment, please provide your comments to the Planning Division by **Monday, June 1, 2026, by 4:30 pm.** All written comments to be included in the record shall have the title: **FOR PUBLIC COMMENT** included. Send comments to: PlanningComments@gigharborwa.gov.

Please see the Public Comment & Decorum section at the end of this agenda for information on options to make public comment.

I. Open Public Hearing

II. Public Hearing

Items on this agenda will be reviewed according to the following format:

1. Open public hearing
2. Staff Report
3. Applicant's presentation
4. Public Comment
5. Close public hearing

New Business

CITY OF GIG HARBOR PUBLIC WORKS DEPARTMENT, GIG HARBOR, WA 98335: Gig **Harbor Commercial Homeport**, PL-SDP-22-0005, PL-SPR-22-0007 & PL-SEPA-22-0014. The proposal is to construct a commercial fishing homeport dock system at Ancich Waterfront Park, including a 280-foot main walk float, 15 60-foot finger floats, two 80-foot finger float, an 80-foot gangway, and installation of steel guide and fender piles. The project also includes utility extensions with a sewer pump-out station, removal of the existing Jerkovich Pier and creosote piles, and shoreline mitigation improvements such as beach nourishment and stormwater outfall restoration. The proposal would result in a net overwater coverage increase of approximately 4,852 square feet.

III. Adjournment

PUBLIC COMMENT & DECORUM

The city desires to allow a maximum opportunity for public comment. However, the business of the Hearing Examiner must proceed in an orderly, timely manner.

Public comment may be made remotely via Zoom or by phone during designated portions of the meeting. To speak during the meeting via Zoom, press the Raise Hand button near the bottom of your Zoom window or press *9 on your phone. Please refrain from raising your hand until the Hearing Examiner has announced that the public comment portion of the hearing has been opened. Your name or the last three digits of your phone number will be called out when it is your turn to speak. When using your phone to call in, you may need to press *6 to unmute yourself. Speakers will be allotted 3 minutes per individual. Comments shall be made, first giving the speaker's name and address. Anyone making "out of order" comments may be subject to removal from the meeting. Written comments may be submitted to the Hearing Examiner by email at PlanningComments@gigharborwa.gov.

All speakers shall be courteous in their language and deportment and shall not engage in or discuss or comment on personalities or indulge in derogatory remarks or insinuations with regard to the Hearing Examiner, or any member of the staff or the public.

There will be no demonstrations during or at the conclusion of any public comment. These guidelines are intended to promote an orderly system of holding public hearings to give every person an opportunity to be heard and to ensure that no individuals are embarrassed by voicing their opinions.

AMERICANS WITH DISABILITIES (ADA) ACCOMMODATIONS

ADA accommodations can be provided upon request. Those requiring special accommodations should contact the city clerk at cityclerk@gjgharborwa.gov or (253) 853-7613 at least 24 hours prior to the meeting.

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TO: Hearing Examiner
FROM: Katharine Shaffer, Principal Planner
DATE: May 26, 2026

RE: PL-SDP-22-0005, PL-SPR 22-007, PL-DR-22-0040

Gig Harbor Commercial Fishing Homeport
Public Hearing Date: June 2, 2026

I. GENERAL INFORMATION:

A. Owners: City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335

B. Applicant: City of Gig Harbor
Public Works Department
3510 Grandview Street
Gig Harbor, WA 98335

II. APPLICANT'S REQUEST:

The City of Gig Harbor is requesting approval of a Shoreline Substantial Development Permit (SDP), Site Plan Review (SPR), and Design Review (DR) to construct a commercial fishing homeport dock system at Ancich Waterfront Park.

The proposal includes:

- Installation of an approximately 280-foot mainwalk float
- Six 60-foot finger floats and one 80-foot finger float
- An approximately 80-foot gangway
- Installation of steel guide and fender piles
- Extension of utilities to the dock, including one sewer pump-out station
- Proposed Mitigation includes the removal of the existing Jerkovich Pier and associated creosote piles, beach nourishment and stormwater outfall restoration at Maritime Pier, and purchasing of mitigation credits

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The proposal includes approximately 6,411 square feet of gross overwater coverage. After removal of the existing 1,558.5 square foot Jerkovich Pier, the project results in a net overwater coverage increase of approximately 4,852.5 square feet.

The submitted applications are being reviewed under section 19.01.002.B: Optional Consolidated Permit Processing of the Gig Harbor Municipal Code (GHMC) in which the two or more procedures may be processed collectively under the highest numbered procedure required for any part of the application.

III. SITE DESCRIPTION:

A. Location: Ancich Waterfront Park

Adjacent to Gig Harbor Bay
Section 08, Township 21 North, Range 02 East

Assessor's Parcel Number: 5970000244



B. Site Area/Acreage: 0.78 acres

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C. Existing Site Characteristics:

1. **Topography:** Elevations decrease across the upland portion of the parcel toward the shorelin

2. **Vegetation:** Ornamental landscaping along the shoreline edge near the existing building

3. **Wetlands and Critical Areas:** Critical fish and wildlife habitat area

4. **Special Flood Hazard:** AE Flood Zone

D. Zoning:

1. Subject parcels: Waterfront Millville (WM) and Historic District Overlay

2. Adjacent zoning and current use:
- **a. North:** Gig Harbor Bay
- **b. East:** WM, Single-family residence
- **c. South:** R-1, Single-family residence
- **d. West:** WM, Fishing activities and services

The Gig Harbor Shoreline Master Program (SMP) designates the subject site as a "Historic Working Waterfront" Shoreline Environment Designation. SMP subsection 5.2.6 addresses the purpose and management policies for that designation.

E. Utilities / Road Access: Directly accessed off Harborview Drive.

IV. APPLICABLE CODES AND POLICIES:

A. Comprehensive Plan: The subject property is classified as Parks, Recreation, and Open Space in the City's Comprehensive Plan. These areas provide passive and active recreation opportunities through parks, recreation facilities, sports facilities, conservation areas, open space, and other city-owned property with comparable uses. These areas do not include private facilities. While these locations may include ancillary commercial uses such as

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snack bars, they are not envisioned as a substantial location for new growth.

B. Gig Harbor Municipal Code (GHMC):
The subject parcel is zoned WM Waterfront Millville. The following code chapters apply to this proposal:

17.48 Waterfront Millville
17.96 Site Plans
17.99 Design Manual
18.04 Environmental Review (SEPA)
18.08 Critical Areas

C. **Shoreline Master Program:** Development upon the shorelines of Gig Harbor is regulated by the city of Gig Harbor Shoreline Master Program that was adopted on November 8, 2021 and became effective on January 28, 2022. The following sections/subsections of the Master Program apply to this project:

5.2.6 Historic Working Waterfront
6.2 Marine Shorelines, Vegetation Conservation and Critical Areas Protection
6.2.2 No Net Loss and Mitigation
6.2.5.24 Critical Fish and Wildlife Habitat Areas
7.11.8 Piers, Docks, Floats and Lifts
7.11.11 Regulations – Commercial Fishing Moorage
8.2.1 Shoreline Substantial Development Permit

D. **Washington Administrative Code:** The Shoreline Substantial Development Permit must be found consistent with the provisions of WAC 173-27-150.

V. BACKGROUND INFORMATION:

The City of Gig Harbor proposes to construct a new commercial fishing homeport at Ancich Waterfront Park, located at 3589 Harborview Drive (Parcel No. 5970000244), within Gig Harbor Bay. The project site is zoned Waterfront Millville (WM) and is within "Historic Working Waterfront" shoreline designation.

The proposal is consistent with the long-term vision for Ancich Waterfront Park established through a public planning process led by the City's Parks Commission and

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adopted by the City Council through Resolution No. 949 (Exhibit 2). The resolution followed a community visioning effort conducted in 2013 involving local residents, businesses, waterfront stakeholders, and property owners to identify appropriate uses for the site. Through that process, the Parks Commission recommended that the park support water-dependent uses, including facilities that serve the local commercial fishing fleet, while preserving the historic working waterfront character of the area. The recommendations included providing dock and moorage facilities for commercial fishing vessels, maintaining the historic netshed, and supporting public access and waterfront activity compatible with the surrounding community.

Consistent with that vision, the proposal includes the installation of a new overwater moorage facility intended to serve the local commercial fishing fleet. The facility includes:

- A 280-foot-long main walk floating dock
- Seven finger floats, including:
    - Six 60-foot finger floats
    - One 80-foot finger float
- An 80-foot aluminum gangway connecting the new floats to the existing Ancich Pier
- Sixteen 24-inch diameter steel guide piles to anchor the floats
- Four 12.75-inch diameter steel fender piles along the gangway

The new facility will provide 17 commercial berths. The floats will be fully grated to maximize light penetration and minimize shading impacts to the marine environment. The project results in approximately 6,411 square feet of new overwater coverage, inclusive of the gangway and float system, with some overlapping areas accounted for in the coverage calculations.

In addition to the moorage construction, the proposal includes:

- Extension of existing utilities (water, sewer pump-out, electrical, and fire suppression) to the new dock
- Installation of life ring and fire safety equipment

The project proposes a mix of onsite and offsite mitigation. Onsite, the existing 1,558-square-foot Jerkovich Pier and its 32 creosote piles will be removed. Offsite, the project will place about 600 cubic yards of beach nourishment material at an existing stormwater outfall at Maritime Pier located on Gig Harbor Bay. Remaining impacts will

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be mitigated through purchasing conservation credits from the Puget Sound Partnership.

The project underwent federal consultation under Endangered Species Act (ESA) Section 7 with the National Marine Fisheries Service (NMFS Consultation No. WCRO-2023-00546). On January 8, 2026, the National Marine Fisheries Service (NMFS) issued a Biological Opinion concluding that the proposed action is not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat, with impacts addressed through the proposed mitigation measures (Exhibit 20).

VI. ENVIRONMENTAL REVIEW:

On April 27, 2026, the City issued a Determination of Non-Significance (DNS) (Exhibit 26) pursuant to the State Environmental Policy Act (SEPA) procedures in GHMC 18.04, indicating that the proposed action is not expected to result in probable significant adverse environmental impacts. In accordance with SEPA requirements, a 14-day appeal period followed the issuance of the DNS, providing an opportunity for interested parties to challenge the determination.

The appeal period concluded on May 11, 2026. No appeals were submitted during this timeframe. As a result, the DNS is now considered final, and the SEPA review process for this proposal has been completed.

VII. PUBLIC NOTICE & INPUT:

The legal notice of the proposed action and scheduled hearing (Notice of Public Hearing, “NOPH”) was published in the Tacoma News Tribune on May 18, 2026 and mailed to all property owners within 300 feet of the subject site on May 18, 2026. The NOPH was also posted on the subject site on May 12, 2026. Additional comments were received after noticing and are represented in Exhibit 28. The Declaration of Mailing, Publishing and Posting are included with this staff report as Exhibit 29.

A Notice of Application (NOA) was published in the Tacoma News Tribune, posted on the subject site, and mailed to owners of property within 300 feet of the site on June 7, 2022. The Declaration of Mailing, Publishing and Posting are included with this staff report as Exhibit 29.

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After the Notice of Application was issued in June 2022, the City received a total of four comments: one from the Department of Ecology and three from local tribes (Exhibit 14).

The Squaxin Island Tribe, the Puyallip Tribe of Indians, and the Nisqually Indian Tribe requested a cultural resources survey be done prior to construction. Please see Condition 6.

On July 7, 2022 the Department of Ecology provided comments on the topics below, and related conditions have been added to the proposal:

Solid Waste Management:
Only clean fill may be used for any grading or land-filling activities. Materials not meeting this standard may be classified as solid waste and could require approval from the local jurisdictional health department. All debris generated by the project must be disposed of at an approved facility. Please see Condition 12.

Toxics Cleanup:
The project site is within one-quarter mile of three known or suspected contaminated sites (Eddon Boat Park, Nikolich Property, and Harborview Drive Property). If contamination is discovered during construction or demolition, appropriate testing must be conducted and the Department of Ecology notified. Coordination with the Toxics Cleanup Program is required to determine necessary testing and cleanup procedures. Please see Condition 13.

Water Quality / Watershed Resources:
Erosion and sediment control measures must be installed prior to any clearing, grading, or construction. Runoff containing sediment or pollutants is prohibited. Please see Condition 10. (BMP condition)

Construction Stormwater Permit Requirements:
Coverage under the Construction Stormwater General Permit is required for projects disturbing one acre or more, or for smaller sites that are part of a larger development totaling one acre or more. Ecology may also require permit coverage for any project that could significantly contribute pollutants or risk violating water quality standards. Please see Condition 10. (BMP Condition)

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IX. STAFF ANALYSIS AND FINDINGS:

A. Planning Staff

1. Comprehensive Plan

Land Use Designation: Parks, Recreation, and Open Space. These areas provide passive and active recreation opportunities through parks, recreation facilities, sports facilities, conservation areas, open space, and other city-owned property with comparable uses. These areas do not include private facilities. While these locations may include ancillary commercial uses such as snack bars, they are not envisioned as a substantial location for new growth.

Staff analysis: *The proposed Commercial Fishing Homeport is consistent with the Parks, Recreation, and Open Space Comprehensive Plan designation. The subject property is located on City-owned Park property and supports water-dependent maritime activity that is integral to Gig Harbor's historic working waterfront character. The proposal does not introduce substantial new growth, residential density, or commercial intensity, nor does it convert upland open space to non-park use. Instead, it enhances the public function of Ancich Waterfront Park by supporting traditional fishing activities, educational opportunities, and continued access to navigable waters. Accordingly, the proposal maintains the primary recreational and open space purpose of the designation while reinforcing the City's maritime heritage.*

Relevant Comprehensive Plan Goals and Policies:

HB-14 Increase economic opportunities through new investment.

HB-15 Promote The Harbor, bay and related waterfront lands with improvements and features that support uses related to commercial and recreational boating and water activities.

HB-15.2 Support temporary docking facilities for visiting vessels that retain open surface water area for watercraft circulation.

HB-15.4 Allow supportive uses and services for boaters, commercial crews, and residents.

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HB-16 Promote and preserve the Gig Harbor commercial fishing fleet as a significant cultural and economic resource.

HB-16.1 Allow over-water, water-dependent development that directly supports the commercial fishing industry, such as net sheds and load/unloading docks.

HB-16.3 Encourage the development of facilities that support the commercial fishing industry while ensuring that such advancements are balanced with the historic scale of existing development in The Harbor. This includes the retention and thoughtful redevelopment or reuse of waterfront properties that facilitate commercial fishing activities.

HB-16.4 Promote local commercial fishing as an important component of the economic, cultural, and community life of Gig Harbor through educational opportunities and community events.

HB-16.5 Encourage the development of additional moorage and docking facilities consistent with local commercial fishing needs.

SM-2 Provide for a mix of water-oriented shoreline uses that support public access, recreation, and historical commercial activities while minimizing impacts to shoreline ecological functions.

SM-3.3 Maintain design standards for shoreline uses based on the city's Design Manual.

SM-3.4 Create an accessible and visible waterfront and shoreline that includes public beaches, fishing and boating docks, picnic and passive overlooks and viewpoints.

SM-3.6 Encourage waterfront developments that provide public amenities consistent with the scale and the character of the development, such as additional docks, paths or walks, overlooks, picnic and seating areas, fishing piers or areas, and viewpoints.

SM-3.8 Provide design standards to control scale, construction methods and materials, drainage patterns, site coverage, landscaping and screening, signage, and other features of unique importance to the waterfront setting.

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Staff Analysis: *The proposed Commercial Fishing Homeport is consistent with the goals and policies of the Gig Harbor Comprehensive Plan that support economic development, preservation of the working waterfront, and water-dependent shoreline uses.*

2. Gig Harbor Municipal Code:

17.48 Waterfront Millville (WM):

17.48.10 Intent.
The subject parcels are zoned Waterfront Millville (WM) which is intended to "provide a wide range of uses and activities on the shoreline of Gig Harbor located within the area between Rosedale Street and Stinson Avenue. This district serves primarily as a medium intensity, mixed use waterfront district with an emphasis on medium-density residential, marine-dependent and marine-related uses. Uses which enhance the historic fishing village atmosphere and which are harmonious with surrounding residential areas are encouraged."

Staff Analysis: *The proposal is consistent with the intent of the WM district because it provides marine dependent infrastructure that directly supports commercial fishing activity within the harbor. The proposed moorage and dock facilities are water-dependent uses that rely on direct access to navigable waters and contribute to the working waterfront character envisioned in the district. In addition, the project supports uses that reinforce the historic maritime identity of Gig Harbor and are compatible with the surrounding waterfront environment.*

17.48.090 Performance Standards (relevant to proposal)

A. *Exterior Mechanical Devices.* Air conditioners, heating, cooling, ventilating equipment, pumps and heaters and all other mechanical devices shall be screened.

Staff Analysis: *The project includes limited mechanical and utility equipment associated with dock operations and electrical service. Any mechanical devices proposed as part of the project will be required to be screened or integrated into the dock or upland improvements consistent*

with this standard and applicable design review requirements. Please see Condition 14.

B. Landscaping is required and shall be installed in conformance with Chapter 17.78 GHMC, and/or by conditions of approval of discretionary applications required by this title; such landscaping shall be maintained in a neat manner. In no event shall such landscaped areas be used for storage of materials or parking of vehicles.

Staff Analysis: *Landscaping requirements primarily apply to the already developed upland portions of the subject property. The project includes minimal upland improvements associated with the gangway landing and shoreline area. All disturbed planting areas will be restored with like plantings. Please see Condition 7.*

C. Outdoor Storage of Materials. The outdoor storage of materials, including but not limited to lumber, auto parts, household appliances, pipes, drums, machinery or furniture is permitted as an incidental or accessory activity of a permitted use or the principal feature of a conditional use. Such storage shall be screened by a wall, fence, landscaping or structure from surrounding properties and streets. Fishing-related equipment is exempt from this standard.

Staff Analysis: *The primary use of the facility is commercial fishing moorage, which may involve temporary storage of fishing related equipment associated with vessel operations. Fishing related equipment is specifically exempt from the screening requirement of this section. No permanent outdoor storage areas unrelated to fishing operations are proposed.*

D. Outdoor Lighting. Outdoor lighting shall conform to the standards of GHMC 17.99.350 and 17.99.460. Said lighting shall be shielded so that the direct illumination shall be confined to the property boundaries of the light source. Ground-mounted floodlighting or light projection above the horizontal plane is prohibited between midnight and sunrise. (Temporary outdoor lighting intended to advertise a temporary promotional event shall be exempt from this requirement.)

Staff Analysis: *Lighting associated with the dock and upland improvements will be required to comply with GHMC 17.99.350 and 17.99.460, including shielding to prevent glare and confining illumination to the project area. Lighting will be designed to minimize impacts to surrounding properties and the harbor basin while maintaining safety for vessel operations. Please see Condition 3.*

E. 2. Waterview/Harbor Access Opportunities. (a – f)

Staff Analysis: *The provisions allowing increased hard surface coverage in exchange for public view corridors or harbor access are primarily applicable to nonresidential upland development. The project consists primarily of overwater moorage infrastructure and does not propose increased hard surface coverage beyond the underlying standards. The project location within Ancich Waterfront Park, a publicly accessible shoreline area, already provides opportunities for public waterfront viewing and access.*

F. Design. All development in the WM district shall conform to the design and development standards contained in Chapter 17.99 GHMC.

Staff Analysis: *Proposal was reviewed for compliance with the Design Manual. Please see Design Manual analysis on Page 13 of this staff report.*

G. *Trash Receptacles.* Trash receptacles shall be screened from view. Screening shall be complementary to building design and materials.

Staff Analysis: *Any trash receptacles associated with the facility will be screened from public view and designed to be compatible with surrounding materials and structures. Please see Condition 8.*

17.96 Site Plan Review

17.96.035 Criteria for site plan approval.

The director shall approve applications for minor and major site plan review only if all of the following criteria are met:

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A. The site plan is compatible with the surrounding uses; and

B. The site plan is compliant with all relevant statutory codes, regulations, and ordinances.

Staff Analysis: *The proposed project is consistent with the character and function of the surrounding marine environment. The site is located within an area already developed with water-dependent and water-related uses, including existing marinas, waterfront commercial activities, and overwater structures.*

Staff has reviewed the proposed project for consistency with all applicable codes, regulations, and ordinances and finds that the application meets all the required standards and thresholds.

17.99 Design Manual

17.99.500 Historic district map

Staff Analysis: *The subject parcel is located within the City of Gig Harbor's Historic District, which includes waterfront districts and parcels along Harborview Drive as identified in GHMC 17.99.500. As a result, development within the project area is subject to the Historic District design standards contained in Chapter 17.99 GHMC (Design Manual). The Gig Harbor Design Manual primarily regulates architectural design of buildings; however, the proposed development consists of overwater floating dock structures, gangways, and piles associated with marine moorage. Historic district railing standards specifically exempt overwater piers, docks, and gangways. The project maintains a design consistent with the working waterfront character of the harbor basin and minimizes upland disturbance. Staff finds the proposal consistent with applicable design manual standards related to site sensitive design, lighting, and visual compatibility with the surrounding waterfront environment as conditioned. Please see Condition 14.*

18.08 Critical Areas

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GHMC 18.08.186 Regulation of Fish and Wildlife Habitat Conservation Areas

A. General – Identification of Habitat Areas

Staff Analysis: *GHMC 18.08.186 identifies critical fish and wildlife habitat areas as locations that support endangered, threatened, or sensitive species and other important habitat features such as kelp beds, eelgrass beds, shellfish areas, and other rare habitat types.*

The submitted Critical Areas Report (Exhibit 21) identifies the nearshore marine waters of Gig Harbor as habitat associated with Endangered Species Act (ESA) listed species, including Puget Sound Chinook salmon, Puget Sound steelhead, Southern Resident Killer Whale, and several listed rockfish species. These species utilize nearshore marine environments such as Gig Harbor for migration, feeding, and rearing.

The biological survey conducted as part of the Critical Areas Report identified macroalgae including benthic sugar kelp and Gracilaria, but no eelgrass beds were documented within the project footprint. The shoreline in the vicinity of the project is characterized by hardened shoreline conditions, including a concrete bulkhead and existing overwater structures, and is located within a developed harbor environment.

Based on the information provided in the Critical Areas Report, the project site contains nearshore marine habitat regulated as a Fish and Wildlife Habitat Conservation Area under GHMC 18.08.186(A) due to its association with listed marine species and nearshore habitat features.

B. Classification - Critical fish and wildlife habitat areas are identified

Staff Analysis: *GHMC 18.08.186(B) states that fish and wildlife habitat areas are identified using various state and federal databases and mapping sources, including the Puget Sound Environmental Atlas, Washington Department of Fish and Wildlife Priority Habitats and Species Program, and other agency datasets.*

The Critical Areas Report (Exhibit 21) utilized multiple habitat databases and mapping sources to evaluate the project area, including Washington

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Department of Fish and Wildlife habitat mapping and federal species occurrence records. These sources confirm that the marine waters of Gig Harbor are utilized by salmonid species and other marine organisms associated with Puget Sound nearshore ecosystems.

Staff finds that the Critical Areas Report appropriately used recognized scientific databases and mapping sources consistent with GHMC 18.08.186(B) to identify and evaluate fish and wildlife habitat resources in the project area.

C. Regulation

Staff Analysis: *1. Habitat Assessment*
GHMC 18.08.186(C)(1) requires that a habitat assessment be prepared by a qualified wildlife biologist for development occurring within or within 300 feet of a critical fish and wildlife habitat area.

A Critical Areas Report and Biological Assessment was prepared by qualified environmental consultants evaluating the project site and surrounding marine environment. The report includes a discussion of ESA listed species potentially occurring in the project area, as well as a site plan identifying habitat resources within and adjacent to the project area.

Staff finds that the submitted Critical Areas Report satisfies the habitat assessment requirements of GHMC 18.08.186(C)(1).

Staff Analysis: *2. Habitat Assessment Review*
GHMC 18.08.186(C)(2) provides that habitat assessments may be forwarded to agencies with jurisdiction or expertise, including the Washington Department of Fish and Wildlife (WDFW), Washington Department of Natural Resources (DNR), and the U.S. Fish and Wildlife Service (USFWS).

In addition to City review, the proposal requires review and permitting by several state and federal agencies with jurisdiction over marine waters and aquatic habitat. According to the submitted narrative (Exhibit 19), the project requires a Shoreline Substantial Development Permit from the City of Gig Harbor, Section 10 and Section 404 permits from the U.S. Army

Corps of Engineers, and a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife.

Federal consultation for the project was conducted with NOAA and National Marine Fisheries Service (NMFS) under the Endangered Species Act. NMFS issued a Biological Opinion on January 8, 2026, concluding that the project would result in no jeopardy to listed species and that adverse habitat impacts are offset by the proposed mitigation measures.

Staff finds that the multiagency review process is consistent with the intent of GHMC 18.08.186(C)(2) to ensure appropriate technical review of development proposals occurring within or near critical fish and wildlife habitat areas.

Staff Analysis: *3. Habitat Management Plan*
GHMC 18.08.186(C)(3) requires preparation of a habitat management plan when critical fish and wildlife habitat occurs on or within 300 feet of the project site.

The Critical Areas Report evaluates potential impacts of the proposed dock construction and associated in-water work on marine habitat and species and identifies mitigation measures to minimize impacts. These measures include adherence to the Washington Department of Fish and Wildlife in-water work window, implementation of erosion and turbidity control measures, and removal of existing creosote-treated piles associated with the Jerkovich Pier. The proposal has been conditioned to follow these mitigation measures.

A compensatory mitigation plan has also been prepared for the project. The objective of the mitigation plan is to ensure no net loss of ecological functions within the Gig Harbor nearshore environment. The submitted Mitigation Plan (Exhibit 16) includes removal of the existing Jerkovich Pier and associated creosote-treated piles and restoration of a stormwater outfall near Maritime Pier, including shoreline stabilization and approximately 600 cubic yards of beach nourishment to restore nearshore habitat and reduce sediment erosion into Gig Harbor.

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The mitigation plan also incorporates mitigation sequencing principles by first avoiding and minimizing impacts through project design measures such as grated dock surfaces for light penetration, limited lighting, and dock design that avoids grounding and disturbance to the substrate. The report further evaluates potential impacts to water quality and habitat conditions within the harbor and concludes that the project will not significantly degrade marine habitat when avoidance, minimization, and mitigation measures are implemented.

Staff finds that the Critical Areas Report and Mitigation Plan together function as a habitat management plan consistent with the requirements of GHMC 18.08.186(C)(3). The proposed mitigation measures are intended to offset project impacts and maintain ecological functions within the Gig Harbor nearshore environment.

F. Specific Habitats – Anadromous Fish

1. All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

a. Activities shall be timed to occur only during the allowable work window as designated by the Washington State Department of Fish and Wildlife for the applicable species;

Staff Analysis: *The Critical Areas Report and Mitigation Plan state that all in-water construction activities will occur within the Washington Department of Fish and Wildlife (WDFW) approved in-water work window of August 1 through February 15. This timing restriction minimizes impacts to migrating and rearing salmonids by avoiding sensitive life stages when juvenile fish are most abundant in nearshore areas. Please see Condition 9.*

b. An alternative alignment or location for the activity is not feasible;

Staff Analysis: *The Mitigation Plan (Exhibit 16) describes that multiple project alternatives were evaluated during the feasibility and design*

phases, including different dock configurations and layouts. The selected dock alignment was determined to best accommodate the operational needs of the commercial fishing fleet while minimizing environmental impacts. Because the project is a water-dependent use requiring direct access to navigable waters, relocation outside the harbor environment is not feasible.

c. The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas; and

Staff Analysis: *The project incorporates several design features and best management practices intended to avoid or minimize impacts to marine habitat and fish species. These measures include the use of grated decking on the floating docks to allow light penetration, design of floats to prevent grounding on the substrate, limiting overwater coverage where feasible, and implementing construction BMPs such as turbidity control, debris containment, and spill prevention measures. These design and construction measures are intended to minimize disturbance to nearshore habitat conditions. Please see Condition 10.*

d. Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved critical area report.

Staff Analysis: *Potential impacts associated with the installation of the proposed dock structures are addressed through the proposal's mitigation plan. Mitigation measures include removal of the existing Jerkovich Pier and associated creosote-treated piles, restoration of a stormwater outfall near Maritime Pier, and placement of approximately 600 cubic yards of beach nourishment to restore shoreline conditions and reduce sediment erosion into Gig Harbor. These mitigation measures are intended to offset project impacts and achieve no net loss of ecological function within the nearshore environment.*

3. Gig Harbor Shoreline Master Program (SMP):

Consistency with Applicable Goals and Policies:

The following is an analysis of the applicable SMP policies that apply to the proposal:

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Relationship to Other Plans and Regulations (SMP 1.5)
Chapter 1.5 states, Uses, developments and activities regulated by this Master Program may also be subject to the provisions of the Gig Harbor Comprehensive Plan, the Washington State Environmental Policy Act ("SEPA," Chapter 43.21C RCW and Chapter 197-11 WAC), other provisions of the Gig Harbor Municipal Code (GHMC), including Title 17 Zoning and Title 18 Environment, and various other provisions of local, state and federal law, as may be amended. The specific provisions of GHMC Title 17 shall apply when not specifically addressed by the Master Program's development regulations.

Staff Analysis: *The proposal is subject to and consistent with the SMP as well as other applicable plans and regulations adopted by the City of Gig Harbor. The application package has been reviewed for consistency with the Gig Harbor Comprehensive Plan, the State Environmental Policy Act (SEPA), applicable provisions of the Gig Harbor Municipal Code, including Title 17 (Zoning) and Title 18 (Environment).*

Historic Working Waterfront Environment (SMP 5.2.6)
The purpose of the Historic Working Waterfront designation is to recognize and preserve two of Gig Harbor's most notable historic industries: commercial fishing and boatbuilding. The area possesses a significant concentration of historic uses and structures.

D. Management Policies
In addition to the other applicable policies and regulations of this Program, the following management policies should apply:

1. Uses that preserve the historic integrity of the area and/or promote the preservation and rehabilitation of historic structures should be the primary allowed uses.

   Staff Analysis: *The proposed project directly supports the historic commercial fishing industry that has historically defined the Millville shoreline area. The project provides moorage infrastructure specifically for Gig Harbor's local commercial fishing fleet, thereby reinforcing the working waterfront character of the district. The project also includes removal of the deteriorated Jerkovich Pier, which will eliminate an aging creosote structure and improve shoreline conditions while maintaining the historic fishing use of the site.*

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2. The City shall investigate ways to maintain the District's integrity, character and economic viability.

   Staff Analysis: *The City initiated the proposal to maintain the viability of Gig Harbor's commercial fishing industry by providing dedicated moorage facilities for working vessels. The project is intended to support the long-term economic sustainability of the fishing fleet and preserve the traditional maritime use of the harbor.*

3. The City will consider development allowances and incentives that contribute to the structural rehabilitation and continued industrial uses of the District.

   Staff Analysis: *The proposal is a city funded public infrastructure investment that facilitates continued maritime activity. By providing dedicated moorage for commercial fishing vessels, the project allows existing fishermen to maintain operations within the harbor and helps retain the district's traditional working waterfront uses.*

4. Standards should be established that promote the health and economic viability of the District.

   Staff Analysis: *By providing infrastructure necessary for commercial fishing operations, the proposal promotes continued industrial maritime activity within the City and reinforces the economic health of the Historic Working Waterfront. The project provides dedicated moorage for Gig Harbor's commercial fishing fleet, ensuring that working fishing vessels can continue to operate from the harbor. This supports the local fishing industry and helps maintain the harbor's traditional maritime economy.*

5. The cultural benefit and historic relevance of the District should be promoted and publicized whenever possible.

   Staff Analysis: *The proposal supports the continued presence of the commercial fishing fleet within Gig Harbor, which is a central component of the City's maritime heritage.*

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6. Education should be enhanced through interpretive signage and viewpoints where feasible.

   Staff Analysis: *The proposal is located within Ancich Waterfront Park, a public waterfront park that already provides public access and opportunities for interpretation of Gig Harbor's maritime history. The addition of commercial fishing moorage adjacent to public areas will allow visitors to observe working vessels and reinforce the educational value of the site.*

7. Water-dependent historic uses should be given priority over non-water oriented uses.

   Staff Analysis: *Commercial fishing moorage is a water-dependent use because the activity requires direct access to navigable waters. The proposed floating dock and slips are designed specifically to accommodate commercial fishing vessels and therefore prioritize a historic water-dependent use.*

8. All development and uses waterward of the ordinary high water mark should be located and designed to minimize interference with surface navigation and to minimize adverse visual impacts, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

   Staff Analysis: *The proposed dock is designed with grated decking to allow light penetration and reduce shading impacts to the marine environment. Construction will occur within established work windows and utilize best management practices such as turbidity curtains and spill prevention measures to protect fish and wildlife habitat. In addition, the dock layout maintains navigational access within the harbor and aligns with existing marina infrastructure.*

9. All development and uses landward of the ordinary high water mark should be located and designed to minimize adverse visual impacts, be compatible and consistent with historic district design details, and conform to the existing patterns of development in scale, materials and character of the historic structures within the District.

   Staff Analysis: *The project includes minimal landward development and primarily involves overwater structures extending from the existing Ancich Pier. The shoreline area already contains maritime infrastructure including piers, a*

netshed, and marina facilities. The scale and character of the proposed dock are consistent with the existing working waterfront environment.

10. The City should investigate and encourage use and development allowances that promote the preservation of the Millville District as a whole.

    Staff Analysis: *The proposal implements the vision established by the City Council through Resolution No. 949 (Exhibit 2) for the future use of Ancich Waterfront Park. The resolution identified support for the commercial fishing fleet and development of a dock/float system aligned with the historic netshed as priorities to reinforce the working waterfront character of the site.*

11. Redevelopment should occur in a manner that avoids impacts to critical areas and natural shoreline processes.

    Staff Analysis: *The proposal is new construction of a commercial dock and does not propose redevelopment. However, a Critical Areas Report (Exhibit 21) was prepared for the project to evaluate potential impacts to fish and wildlife habitat and nearshore resources. The report concludes that impacts will be minimized through design features and mitigation measures and that the project will not result in a net loss of ecological function.*

12. Shoreline uses and modifications located waterward of the ordinary high water mark should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

    Staff Analysis: *The project incorporates several measures to protect water quality and shoreline processes, including removal of creosote piles from the Jerkovich Pier, installation of grated decking to reduce shading, use of turbidity curtains during construction, and restoration of a nearby stormwater outfall with beach nourishment. These mitigation measures are intended to offset project impacts and maintain shoreline ecological functions.*

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Marine Shorelines, Vegetation Conservation and Critical Areas Protection-Section (SMP 6.2)

General Policies (SMP 6.2.1)

A. Level of Protection
Staff Analysis: *The proposal includes mitigation and avoidance measures intended to ensure protection of shoreline ecological functions. The project has been reviewed through a Critical Areas Report and mitigation plan to address potential impacts and maintain shoreline ecological processes.*

B. No Net Loss
Staff Analysis: *The proposed mitigation measures will result in a no-net loss of ecological functions according to the Mitigation Plan (Exhibit 16).The proposal includes onsite mitigation to address project impacts through the removal of the Jerkovich Pier, eliminating approximately 1,558 square feet of overwater coverage, along with the extraction of 32 associated 12-inch creosote timber piles. Additional mitigation will be provided through offsite shoreline restoration involving the placement of roughly 600 cubic yards of beach nourishment material at an existing stormwater outfall. Remaining unavoidable impacts will be mitigated through the purchase of conservation credits from the Puget Sound Partnership (Exhibit 18).*

C. Mitigation Measures
Staff Analysis: *The project will mitigate its impacts by removing the Jerkovich Pier and 32 creosote piles, conducting offsite shoreline restoration with beach nourishment, and purchasing conservation credits to address remaining impacts.*

D. Habitat
Staff Analysis: *The proposal was reviewed for impacts to critical saltwater habitat. Design features and mitigation measures are intended to minimize habitat impacts and improve nearshore conditions through removal of creosote piles and other restoration measures.*

E. Wetlands
Staff Analysis: *No wetlands are located within the project area; therefore, the proposal will not result in impacts to wetland functions or values.*

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F. Development in Critical Areas
Staff Analysis: *A Critical Areas Report was prepared evaluating potential impacts to fish and wildlife habitat. The report concludes impacts will be minimized through design and mitigation measures.*

G. Cumulative Impacts
Staff Analysis: *The Critical Areas Report (Exhibit 21) analyzed direct and cumulative impacts comparing new overwater structures, pile installation, and construction effects against the already urbanized shoreline setting of Gig Harbor. The nearshore environment is heavily modified by bulkheads, piers, and marinas, meaning incremental impacts from the project occur within an already altered baseline. Following the analysis, the proposal was determined to achieve no net loss of ecological function.*

H. Protect Critical Areas
Staff Analysis: *The Critical Areas Report (Exhibit 21) demonstrates that the Commercial Fishing Homeport Project proposal protects critical areas through site-specific design, construction controls, and mitigation measures. The report documents nearshore habitat conditions within 300 feet of the project area, including the absence of eelgrass, the presence of sparse kelp, and the use of the area by ESA-listed species, ensuring that the project design reflects actual site conditions and avoids sensitive resources. Construction activities are regulated to minimize impacts, including limiting in-water work to the August 1–February 15 window to protect juvenile salmon, installing turbidity curtains to maintain water quality, and preventing barge grounding to avoid substrate disturbance. Long-term impacts from overwater structures are minimized using 100% grated decking, which maintains light penetration necessary for primary productivity, fish migration, and benthic vegetation. The project also removes existing sources of ecological degradation by eliminating 32 creosote-treated piles and more than 1,500 square feet of deteriorating asphalt decking from the Jerkovich Pier, reducing chemical contamination and improving habitat conditions. Additional off-site mitigation includes restoration of a failing stormwater outfall and placement of beach nourishment to enhance sediment processes, reduce turbidity, and improve habitat for forage fish and salmonids. Through the application of mitigation sequencing, avoidance, minimization, on-site and off-site mitigation, and mitigation credits the project protects critical areas.*

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I. Landslide and Erosion
Staff Analysis: *The proposal does not involve development on steep slopes or geologically hazardous areas and will not increase landslide or erosion risks.*

J. Wetland Functions and Values
Staff Analysis: *The nearest wetland observed is approximately 400 feet west of the project along the shoreline of Eddon Boat Park. (Exhibit 25).*

K. Streams
Staff Analysis: *No streams were identified within 200 feet of the project (Exhibit 25).*

L. Gig Harbor Bay
Staff Analysis: *Best management practices, in-water work timing restrictions, turbidity controls, and stormwater upgrades are incorporated to prevent siltation and safeguard the water quality and marine habitats of Gig Harbor Bay. Please see Condition 10.*

M. Drainage and Stream Flow
Staff Analysis: *The proposal does not alter natural drainage patterns or stream flow.*

N. Aquifer Recharge Areas
Staff Analysis: *The project occurs within the marine shoreline environment and does not impact aquifer recharge areas.*

O. Wildlife
Staff Analysis: *The project was reviewed through biological assessment and regulatory consultation processes to evaluate potential effects on listed species. (Exhibit 5).*

P. Fish and Wildlife Habitat Conservation Areas
Staff Analysis: *The project location, Gig Harbor Bay is classified as a critical fish and wildlife habitat area. Please see Page 30 for addition analysis.*

Q. Functions of Shoreline Vegetation
Staff Analysis: *The project does not remove shoreline vegetation within the park area and includes mitigation measures intended to protect shoreline ecological functions.*

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R. Erosion Control Projects
Staff Analysis: *Temporary erosion and sediment control measures, including turbidity curtains, will be implemented during construction.*

S. Vegetation Conservation
Staff Analysis: *Existing shoreline vegetation will be retained where feasible, and the project avoids clearing of native vegetation within the park area. Please see Condition 7.*

T. Vegetation Management for Views
Staff Analysis: *The proposal does not include vegetation removal for view corridors.*

No Net Loss and Mitigation (SMP 6.2.2)

1. Uses and developments that cause a net loss of ecological functions and processes shall be prohibited. All uses and development shall provide a report to the Shoreline Administrator that addresses no net loss of ecological function associated with a development proposal in a format approved by the City.

Staff Analysis: *The application material included a Critical Areas Report (Exhibit 21) and a Mitigation Plan (Exhibit 16). Both documents determined that the proposed mitigation that there will be no net loss of ecological functions and processes because of the project. All effects will be compensated for on-site and off-site to the greatest extent possible. Remaining impacts will be offset by the purchase of mitigation credits at an approved mitigation bank. The City of Gig Harbor has a pre-sale agreement in place with Puget Sound Partnership to offset these impacts (Exhibit 18).*

2. All shoreline use and development, including preferred uses and uses that are exempt from permit requirements, shall be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological processes and functions.

Staff Analysis: *All shoreline development has been designed and will be maintained in a manner that maintains shoreline ecological processes and functions.*

3. Mitigation measures shall be applied in the following sequence of steps listed in order of priority.

a) Avoiding the impact altogether by not taking a certain action or parts of an action, or altering the action to avoid impacts;

b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering or by taking affirmative steps to avoid or reduce impacts;

c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d) Reducing or eliminating the impact over time by preservation and maintenance operations; and

e) Compensating for the impact by replacing, enhancing, or providing similar substitute resources or environments and monitoring the impact and the mitigation project and taking appropriate corrective measures.

Staff Analysis: *The proposal utilizes mitigation sequence options, Options B, C, and E. The new overwater structures will incorporate grated decking to improve light penetration and reduce overall environmental impacts. On-site shoreline conditions will be enhanced through the removal of the remaining portion of the Jerkovich Pier. Additional off-site mitigation will be completed within the same watershed to address project-related impacts. Any remaining unavoidable impacts will be offset through the purchase of mitigation credits from an approved mitigation bank. The City of Gig Harbor currently maintains a pre-sale agreement with the Puget Sound Partnership (Exhibit 18) to facilitate the use of these credits. Please see Condition 16.*

4. Mitigation actions shall not have a significant adverse impact on other shoreline ecological functions.

Staff Analysis: *The proposed mitigation measures are expected to result in an overall net improvement to the shoreline ecological functions within Gig Harbor. These actions will enhance conditions beyond the existing degraded baseline and are not anticipated to cause any significant adverse effects on other shoreline ecological functions.*

5. When compensatory mitigation measures are required, all of the following shall apply:

a) The quality and quantity of the replaced, enhanced, or substituted resources shall be the same or better than the affected resources; and

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Staff Analysis: *The Mitigation Plan demonstrates that the proposed actions will result in resource conditions that are equal to or better than existing degraded conditions. Removal of the Jerkovich Pier eliminates 32 creosote-treated timber piles and 1,558.5 square feet of asphalt decking, removing approximately 16 tons of creosote from Gig Harbor. The restoration of the stormwater outfall includes placement of 600 cubic yards of beach nourishment to restore sediment processes and improve nearshore ecological function. Together, these actions replace lost ecological functions and improve overall shoreline condition.*

b) The mitigation site and associated vegetative planting shall be nurtured and maintained such that healthy native plant communities can grow and mature over time; and

Staff Analysis: *The mitigation plan incorporates beach nourishment designed to improve substrate and support natural recruitment of intertidal vegetation and aquatic habitat. Although no active planting is proposed, the restored conditions will allow native shoreline and nearshore plant communities to reestablish and mature over time. The City will maintain the stormwater outfall per Stormwater Manual for Western Washington requirements, supporting continued habitat function.*

c) The mitigation shall be informed by pertinent scientific and technical studies, including, but not limited to, the Shoreline Inventory and Characterization Report, the Shoreline Restoration Plan and other background studies prepared in support of this Program; and

Staff Analysis: *The mitigation strategy is informed by several technical analyses and regulatory frameworks, including:*

- *Marine habitat survey completed in 2022 documenting existing macrovegetation (Saccharina and Gracilaria)*
- *The National Oceanic and Atmospheric Administration (NOAA) Puget Sound Nearshore Conservation Calculator to quantify project impacts and required mitigation credits*
- *Stormwater Management Manual for Western Washington (SWMMWW) standards for outfall restoration*
- *The Washington Department of Fish and Wildlife (WDFW) recommendations for the Maritime Pier outfall location due to its degraded condition*

d) The mitigation shall replace the functions as quickly as possible following the impacts to ensure no net loss; and

Staff Analysis: *Removal of the Jerkovich Pier is a one-time action that immediately restores light penetration and eliminates contaminants. Beach nourishment at the stormwater outfall will fill the plunge pool and immediately stabilize sediment transport, improving water quality and habitat function upon placement. These actions begin compensating for project impacts as soon as construction occurs, allowing functional replacement early in the project timeline.*

e) The mitigation activity shall be monitored and maintained to ensure that it achieves its intended functions and values; and

Staff Analysis: *The Mitigation Plan (Exhibit 16) includes a structured monitoring program:*

- *The outfall and beach nourishment site will be monitored annually for three years to ensure proper operation and acceptable beach conditions. Please see Condition 5.*
- *The City will perform maintenance if stabilization is insufficient, including potential replenishment of nourishment.*
- *For pier removal, documentation (photos and disposal receipts) will confirm complete removal and proper disposal of all creosote materials.*

These provisions ensure mitigation is maintained until performance standards are met.

f) The City shall require the applicant/proponent to post a bond or provide other financial surety equal to the estimated cost of the mitigation in order to ensure the mitigation is carried out successfully. The bond/surety shall be returned to the applicant/proponent upon completion of the mitigation activity and any required monitoring.

Staff Analysis: *The City of Gig Harbor will directly fund all construction, mitigation, and monitoring activities. There will be no bond or financial surety.*

6. When compensatory measures are appropriate pursuant to the mitigation priority sequence (Section 6.2.2 Regulation #3 above), preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of

the impact. However, off-site compensatory mitigation (provided within the same watershed or appropriate drainage area shoreline (e.g., reach or drift cell) is allowed when it provides greater and more sustainable benefits. When determining whether offsite mitigation provides greater and more sustainable benefits, the City shall consider limiting factors, critical habitat needs, and other factors identified by the Gig Harbor shoreline restoration plan, or an approved watershed or comprehensive resource management plan. Authorization of off-site compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions. Compliance with off-site mitigation requirements in Section 6.2.4 is required.

Staff Analysis: *The project includes mitigation within the same drift cell to the extent feasible. On-site mitigation consists of removing the remaining Jerkovich Pier, which eliminates creosote piles and solid decking and improves water quality and light penetration in the nearshore environment. Because no additional meaningful on-site opportunities exist, the City is also implementing off-site mitigation within the same watershed at the Maritime Pier stormwater outfall. This site was identified in coordination with the Washington Department of Fish and Wildlife due to its degraded condition. Restoring the outfall and placing 600 cubic yards of beach nourishment will stabilize shoreline processes, reduce turbidity, and improve habitat. Conservation credits purchased from an approved conversation bank will also be used in the same watershed. Please see Condition 16.*

7. To encourage shoreline property owners to remove bulkheads and perform other beneficial shoreline restoration actions in advance of shoreline development or redevelopment, as of November 25, 2013, the City may give mitigation credit to any beneficial restoration action that occurred on a proposed development site within 5 years of the proposed development/redevelopment activity provided that:

Staff Analysis: *The proposal does not include any shoreline armoring.*

SMP 6.2.5.24 Critical Fish and Wildlife Habitat Areas

1. Critical fish and wildlife habitat areas are those areas identified as being of critical importance in the maintenance and preservation of fish, wildlife and natural vegetation. Areas which are identified or classified as fish and wildlife habitat areas subject to this section shall be subject to the requirements of this section.

Staff Analysis: *The Biological Assessment (Exhibit 5) and the Critical Areas Report (Exhibit 21) confirm that the proposal is located entirely within nearshore marine waters, which function as a Fish and Wildlife Habitat Conservation Area supporting multiple species listed under the Endangered Species Act (ESA). The action area includes designated critical habitat for Chinook salmon, Southern Resident killer whales, and Georgia Basin rockfish, underscoring the ecological importance of the site.*

The Biological Assessment (Exhibit 5) documents both juvenile and adult use of Gig Harbor by Chinook salmon and steelhead, including identifiable seasonal patterns of presence within the harbor. These use patterns indicate that the project area provides important rearing, migration, and foraging functions for ESA-listed salmonids.

Consistent with the Critical Areas Report (Exhibit 21), no wetlands, streams, ponds, or other freshwater habitats are present within the project footprint, confirming that the project's potential effects are limited to the marine environment.

A 2022 macrovegetation survey identified the presence of kelp species (Saccharina) within the action area, indicating the availability of structurally complex marine habitat. No eelgrass was observed during the survey.

2. General. Critical fish and wildlife habitat areas are identified as follows:

> a. Areas with which federal or state endangered, threatened and sensitive species of fish, wildlife and plants have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;

Staff Analysis: *The Biological Assessment (Exhibit 5) includes a comprehensive evaluation of listed species, providing listed species along with presence/absence and effect determinations. It concludes that the project is likely to adversely affect (LAA) Puget Sound Chinook salmon, with designated critical habitat present, and Puget Sound steelhead. The project is determined to be not likely to adversely affect (NLAA) bull trout, which are considered very unlikely to be present during the in-water work window, as well as Southern Resident killer whale. Similarly, the BA finds NLAA determinations for bocaccio rockfish and yelloweye rockfish, although critical habitat for these species is present within the action area. Additional NLAA determinations are made for humpback whale and marbled murrelet.*

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The analysis provided identifies species with a primary association to the shoreline environment and evaluating how the proposed project and its modifications could affect species' reproduction and long-term persistence.

b. Habitats and species of local importance, including:

i) Areas with which state-listed monitor or candidate species or federally listed candidate species have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;

ii) Special habitat areas which are infrequent in occurrence in the City of Gig Harbor and which provide specific habitats as follows:

(1) Old-growth forests;

(2) Snag-rich areas;

(3) Category 2 wetland areas;

(4) Significant stands of trees which provide roosting areas for endangered, threatened, rare or species of concern as identified by the Washington State Department of Wildlife;

Staff Analysis: *No habitats for stated-listed candidate or monitor species occur on site. In addition, there are no special habitats (old-growth, snag-rich areas, Category II wetlands, significant roost trees) occurring on or within 300 feet of the project area.*

c. Commercial and public recreational shellfish areas;

Staff Analysis: *Submitted reports confirm there are no shellfish areas on-site.*

d. Kelp and eelgrass beds;

Staff Analysis: *The submitted reports document the presence of sugar kelp (Saccharina) at variable densities ranging from approximately 5 to 30 percent across survey transects, and confirm that no eelgrass was observed within the study area.*

e. Herring and smelt spawning areas

Staff Analysis*: The reports submitted confirmed there were no documented spawning habitat in the project area.*

f. Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;

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Staff Analysis: *None present on-site.*

g. Lakes, ponds and streams planted with fish by a governmental agency, and agency-sponsored group or tribal entity;

Staff Analysis: *None present on-site.*

h. State natural area preserves and natural resource conservation areas.

Staff Analysis: *None present on-site.*

3. Classification. Critical fish and wildlife habitat areas are identified in the following documents:

a. Puget Sound Environmental Atlas (Puget Sound Water Quality Authority);
b. Coastal Zone Atlas of Washington, Volume IV, Pierce County (Washington State Department of Ecology);
c. Commercial and Recreational Shellfish Areas in Puget Sound (Washington State Department of Health);
d. The Department of Natural Resources stream typing maps and natural heritage database;
e. The Washington State Department of Fish and Wildlife priority habitats and species program, the nongame database, and the Washington rivers information system.

Staff Analysis: *All referenced reports and databases were reviewed for critical fish and wildlife habitat areas; however, only the WDFW PHS database contained information documenting such areas.*

4. Regulation.

a. Habitat Assessment and Management Plan. For all regulated activity proposed on a site which contains or is within 300 feet of critical fish and wildlife habitat, a habitat assessment and management plan (HAMP) shall be prepared by a qualified wildlife biologist. The HAMP shall include, at a minimum, the following: (i-x):

Staff Analysis: *The Biological Assessment (Exhibit 5) and the Critical Areas Report (Exhibit 21) provide a comprehensive evaluation of species and habitats within 300 feet of the project area, including detailed species accounts that describe life history*

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characteristics, seasonal presence, habitat use, and critical habitat features. In addition, a macrovegetation survey consisting of 21 SCUBA transects documents substrate conditions, kelp densities, and associated invertebrate communities, including Metridium, sea quills, and sea cucumbers; no eelgrass was observed within the study area.

The submitted reports also include a thorough impact analysis addressing potential effects to species, habitat, water quality, and geomorphology. This analysis evaluates underwater noise associated with pile installation and removal using National Marine Fisheries Service hydroacoustic criteria, identifying a maximum peak sound level of 205.9 dB re 1 µPa (Pile C1 at 10 meters) and a disturbance radius extending up to approximately 0.42 miles. Additional impact considerations include turbidity and sedimentation associated with pile removal and installation, short-term prey disruption and behavioral effects on fish, and long-term habitat improvements resulting from the removal of 32 creosote-treated piles. The project also introduces increased overwater coverage, partially offset through the use of 45 percent open-grate decking to reduce light attenuation. Collectively, these analyses meet the requirements of SMP 6.2.5.24.4(ii).

Supporting figures and mapping included in the submitted reports and macrovegetation survey depict habitat areas within the action area, including sound disturbance zones and other relevant environmental features. The submitted reports further evaluate project effects on designated critical habitats by assessing each Primary Constituent Element (PCE), describing existing conditions, anticipated project impacts, and distinguishing between short-term and long-term effects. For example, for Chinook salmon estuarine PCEs, the analysis identifies temporary turbidity impacts during construction alongside long-term water quality improvements from creosote pile removal, with some localized increases in shading. For juvenile rockfish PCEs, the analysis concludes that habitat conditions are already degraded and that the project would result in minimal incremental effects.

The submitted reports clearly document Endangered Species Act (ESA) effect determinations, concluding that the project is likely to adversely affect Chinook salmon (including critical habitat) and steelhead, while all other evaluated species are determined to be not likely to adversely affect (NLAA). The assessment also incorporates relevant management recommendations, including NMFS acoustic thresholds, U.S. Fish and Wildlife Service marbled murrelet injury thresholds, established in-water work windows (August 1 through February 15), a marine mammal

monitoring plan, and the use of a bubble curtain during pile driving, with noted limitations in shallow water conditions.

Proposed mitigation measures are comprehensive and include the removal of 32 creosote-treated piles to improve critical habitat conditions, demolition of the Jerkovich Pier to reduce approximately 1,558.5 square feet of overwater shading, installation of grated decking to minimize shading from new structures, restoration of a stormwater outfall, and placement of approximately 600 cubic yards of beach nourishment as described in the Critical Areas Report (CAR). The submitted reports evaluate the effectiveness of these measures and conclude that, overall, shading impacts are reduced through design features, water quality is expected to improve over the long term, and the net effect is an increase in habitat quality, with benefits from creosote removal outweighing new impacts.

Finally, the submitted reports outline long-term management and monitoring provisions, including implementation of a marine mammal monitoring plan and monitoring requirements associated with outfall restoration, as well as a water quality impact assessment addressing turbidity, potential contaminant release during pile removal, and anticipated long-term improvements resulting from the elimination of creosote-treated materials.

5. Buffer Requirements. If it is determined by the Administrator or designee that a buffer would serve to mitigate impacts to a critical fish or wildlife habitat, a buffer shall be required on the development site. The width of the buffer shall be based upon the review of scientific and technical information but, in no case, shall exceed 150 feet, nor be less than 25 feet.

Staff Analysis: *Based on the marine (not upland) context and the application of mitigation and in-water BMPs, no additional upland buffer was deemed necessary.*

6. Compensatory mitigation shall be provided to offset impacts to critical fish and wildlife habitat and to meet the requirements of no net loss of shoreline functions. The applicant shall demonstrate that the compensatory mitigation achieve no net loss.

Staff Analysis: *Mitigation will be implemented as described in the Mitigation Plan (Exhibit 16) to offset impacts to critical fish and wildlife habitat. The measures focus on improving shoreline conditions and include removing 32 creosote-treated piles to eliminate contamination, demolishing the Jerkovich Pier to reduce overwater shading,*

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installing grated decking to minimize new shading, restoring a stormwater outfall to improve water quality, and placing about 600 cubic yards of beach nourishment to enhance habitat, as detailed in the Critical Areas Report (Exhibit 21).

The submitted reports conclude that these actions will result in a net improvement to habitat. Shading will be reduced, water quality will improve with the removal of creosote-treated materials, and habitat conditions will be enhanced through nourishment and restoration. Overall, the benefits of removing contaminated materials outweigh temporary construction impacts. These efforts are expected to offset impacts, resulting in no net loss of habitat functions and providing long-term ecological benefits.

7. Compensatory mitigation for impacts shall occur on-site, except where on-site mitigation is not scientifically feasible or practical due to physical features of the site and when off-site mitigation has a greater likelihood of providing equal or improved critical area functions than the impacted critical area. The burden of proof shall be on the applicant to demonstrate that these provisions can be met.

Staff Analysis: *The Mitigation Plan (Exhibit 16) is designed to offset impacts to critical fish and wildlife habitat. On-site mitigation has been included to the maximum extent feasible, including removal of the remaining Jerkovich Pier to eliminate creosote-treated piles and improve water quality and light penetration. However, due to site constraints, on-site measures alone cannot fully offset project impacts.*

Grette Associates confirmed in its third-party review memo (Exhibit 25) that the proposal demonstrates that additional off-site mitigation is necessary and meets SMP requirements. Off-site actions include restoring the Maritime Pier stormwater outfall and placing approximately 600 cubic yards of beach nourishment within the same watershed. These measures will improve shoreline conditions, reduce turbidity, and enhance habitat. Conservation credits will also be used within the same sub-basin to address remaining impacts.

Based on this information, the applicant has demonstrated that on-site mitigation is not fully feasible and that the proposed off-site mitigation meets the requirement to fully offset impacts to critical habitat.

8) Off-site Mitigation. In cases in which it is determined that compensatory mitigation is allowed, the following shall apply: (a-d):

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Staff Analysis: *The proposal's materials, together with Grette's third-party review memo (Exhibit 25), demonstrate that compensatory mitigation sequencing and siting comply with SMP 6.2.5.24(8) off-site mitigation requirements. Because on-site mitigation cannot fully offset the project impacts, off-site mitigation is required. The applicant has submitted a Justification Letter (Exhibit 23) demonstrating that the proposed approach meets all applicable criteria. Mitigation is proposed in accordance with the required hierarchy, beginning within the Gig Harbor Bay drift cell, identified as part of the Harborview/Skansie system. Within this first-priority setting, mitigation is intended to maintain sediment transport continuity and support nearshore ecological processes. If drift cell opportunities are not feasible or available, mitigation would next occur within the broader Gig Harbor Bay shoreline jurisdiction, which maintains functional relevance to salmonid migration, kelp habitat, and water quality processes. If both higher-priority locations are infeasible, mitigation may occur within the South Puget Sound sub-basin, where ecological functions such as forage availability, juvenile salmon migration corridors, and Southern Resident killer whale prey support remain aligned with the impacted habitat types.*

The materials further confirm that lower-priority mitigation locations will only be used where higher-priority options are demonstrated to be infeasible, with the applicant responsible for documenting such infeasibility prior to selecting an alternative site. Mitigation ratios for in-water work will be established in consultation with state and federal resource agencies, including National Marine Fisheries Service and U.S. Fish and Wildlife Service, and subject to approval by the Administrator. These ratios will be based on species-specific impacts, habitat type, and the degree of functional loss as documented in the Biological Assessment and supporting materials prepared for Endangered Species Act Section 7 consultation.

Consistent with SMP requirements, the proposal emphasizes in-kind mitigation as the preferred approach, focusing on nearshore habitat enhancement such as removal of creosote-treated structures and improvement of shallow subtidal habitat conditions. However, because on-site in-kind mitigation has been maximized, the applicant demonstrates that off-site mitigation, particularly through the use of credits within the same drift cell or water body can provide equal or greater ecological function. These functional benefits include improved salmonid rearing conditions, increased nearshore substrate complexity, enhanced water quality, and removal of derelict structures, consistent with SMP 6.2.5.24(8)(d).

The Grette review memo further confirms that off-site mitigation is necessary due to the inability of on-site measures alone to fully compensate for project-related functional

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losses. The applicant's compliance documentation identifies a 600 cubic yard beach nourishment project within Gig Harbor Bay, satisfying the "same water body" priority tier, and proposes conservation credits use within the South-Central Puget Sound sub-basin, which includes Gig Harbor Bay. The memo notes that National Oceanic and Atmospheric Administration, National Marine Fisheries Service, and the Puget Sound Partnership collaborated to define the sub-basin boundary using the Nearshore Conservation Service Area framework.

SMP 7.11.7 Regulations – Piers, Docks, Floats and Lifts – Non-Residential

1. Covered moorage associated with non-residential docks, piers, and floats shall be prohibited

Staff Analysis: *The proposal does not include any covered moorage and is conditioned to be prohibited. Please see Condition 15.*

2. Piers, docks, floats and lifts associated with commercial, industrial, or public recreational developments are allowed only when ecological impacts are mitigated in accordance with the program, and;

a. The dock/pier/float is required to accommodate a water-dependent use; or

b. the dock/pier/float provides opportunities for a substantial number of people to access the shoreline.

Staff Analysis: *The proposal consists of a floating dock system, gangway, and associated moorage facilities intended to serve the City's commercial fishing fleet, which is a water-dependent use.*

3. New commercial, industrial or public recreational docks, piers, floats and lifts shall be designated and constructed to avoid or, if that is possible, to minimize the impacts to nearshore habitats and processes.

Staff Analysis: *The dock system has been designed to minimize impacts to nearshore habitat using grated decking to allow light penetration, non-toxic construction materials, and adherence to state agency approval requirements for in-water structures.*

4. The length, width and height of non-residential docks, piers, floats and lifts shall be no greater than that required for safety and practicality for the primary use.

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Staff Analysis: *The size and configuration of the dock system are limited to that necessary to safely accommodate commercial fishing vessels and support the intended use. The structure has been designed and oriented to avoid navigation hazards and minimize shading impacts and interference with shoreline processes. The floating dock and vessel moorage will remain afloat during low tidal cycles and will not ground out.*

5. New and substantially expanded non-residential docks, piers, floats and lifts shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials for any portions of the dock, pier, float, lifts, framing, or decking that come in contact with water shall be approved by applicable state agencies for use in-water.

Staff Analysis: *The proposal includes new docks, piers, and floats constructed of steel aluminum, and High-density polyethylene (HDPE) with 100% grated decking to allow for light penetration. These features are designed to avoid adverse impacts to water quality and aquatic plants and animals over the long term.*

6. To minimize adverse effects on nearshore habitats and species caused by overwater structures that reduce ambient light levels, the following shall apply:

a. The width of docks, piers, floats and lifts shall be the minimum necessary, and in no case shall be wider than eight (8) feet unless grating is used in accordance with, and authorized by, state resource agency regulations.

Staff Analysis: *All new overwater components, including the 280-foot main walk floating dock and associated finger floats, will be constructed with 100% grated decking to allow for light penetration. The floats are designed specifically for the commercial fleet, with widths minimized to only what is necessary for safe moorage and access.*

b. Materials that will allow light to pass through the deck may be required where the width exceeds eight (8) feet.

Staff Analysis: *All floats and the gangway will incorporate grating with a minimum of 45% net open area, ensuring a high level of light transmission regardless of deck width. This grated design is specifically intended to minimize shading impacts.*

c. Grating to allow light passage or reflective panels to increase light refraction into the water shall be used on piers, docks, floats and gangways in nearshore areas.

Staff Analysis: *The proposal includes grated decking to allow for light penetration on all piers, docks, and floats.*

d. Use of non-toxic materials, including, but not limited to, steel, concrete and non-toxic wood shall be approved by applicable state agencies

Staff Analysis: Construction materials consist of s*teel, aluminum, and HDPE (High-Density Polyethylene) which are considered non-toxic materials. Washington State Fish and Wildlife will review the materials of the project through the Hydraulic Project Approval. Please see Condition 9.*

7. Commercial, industrial or public recreational docks, piers, floats and lifts shall be spaced and oriented to the shoreline in a manner that avoids or minimizes:

a. Hazards and obstructions to navigation, fishing, swimming and pleasure boating; and

Staff Analysis: *The proposed project is not expected to create any hazards or interfere with existing waterway uses, including navigation, commercial and recreational fishing, swimming, or pleasure boating. Consistent with the character of the Historic Working Waterfront, the project will also enhance public viewing opportunities. Visitors to the area, including those at Ancich Park, will be able to observe commercial fishing operations as they occur, providing an authentic look at the region's maritime industry.*

b. Shading of beach substrate below; and

Staff Analysis: *Minor shading is introduced, but the project uses continuous grating and removes the Jerkovich Pier which is a large, shaded area, achieving a minimized shading impact.*

c. Any 'wall' effect that would block or baffle wave patterns, currents, littoral drift, or movement of aquatic life forms

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Staff Analysis: *The project avoids creating any wall effect. Instead, it improves existing shoreline function by removing old pier elements, restoring sediment processes, and enhancing aquatic movement.*

8. Commercial, industrial or public recreational docks, piers, floats and lifts shall be designed and located to ensure that such structures and the vessels moored to them do not ground out during low tidal cycles.

Staff Analysis: *The gangway landing float, located at the shoreline end of the system, has a calculated draft of 2.0 feet under live load conditions. At this location, the mudline elevation is –9.15 feet. Given the lowest observed and astronomical tidal elevation (40-year extreme) of –4.3 feet, the float maintains a minimum clearance of approximately 2.85 feet.*

For vessel moorage, Slip 2 represents the shallowest condition with a mudline elevation of –9.0 feet. The design vessel assigned to this slip has a draft of 4 feet, resulting in a minimum clearance of approximately 0.85 feet during the lowest tidal conditions. All remaining slips provide substantially greater clearance.

SMP 7.11.11 Regulations – Commercial Fishing Moorage

1. New or existing marinas or moorage facilities which provide moorage and support facilities for active commercial fishing vessels shall be exempt from the parking requirements of Gig Harbor Municipal Code Title 17 for those commercial fishing vessels which have an active license or a contract from the previous fishing season or the next fishing season, provided the following requirements are met:

a. One load/unloading parking space on the marina property is continuously provided.

Staff Analysis: *The designated load/unload area is identified on Sheet C1.02 of the approved plans, and signage will be installed to clearly mark this location.*

b. Proof of an active license for commercial fishing vessels or an active contract for commercial fishing boat tenders shall be provided to the City to qualify initially for this exemption. The City may request from the marina owner and/or operator in future years that the applicant affirm within thirty (30) calendar days of written request by the City the status of each active commercial fishing vessel on the site by providing copies of the appropriate license or contract.

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Staff Analysis: *Condition 17 addresses the requirement to provide an active license or active contract for commercial fishing boat tenders.*

c. Development activities associated with pleasure craft or other non-active commercial fishing vessels shall comply with the other relevant sections of this Shoreline Master Program including but not limited to the parking requirements of Gig Harbor Municipal Code Title 17.

Staff Analysis: *The proposal is limited to active commercial fishing operations and does not permit pleasure craft or any vessels not engaged in active commercial fishing. Please see Condition 18.*

Shoreline Substantial Development Permit (SMP 8.2.1)/WAC 173-27-150:
A. Permit required
A permit is required for any development with a total cost or fair market value exceeding seven thousand forty-seven dollars ($7,047) (or the value as amended or adjusted for inflation per RCW 90.58.030 [3] [e]) or any development which materially interferes with the normal public use of the water or shorelines of the state, except those exempted developments set forth in WAC 173-27-040.

Staff Analysis: *The Shoreline Modifications Matrix (Table 7.2) of the Shoreline Master Program identifies Commercial Fishing Moorage as an allowed use within the Historic Working Waterfront shoreline designation, subject to authorization through either a shoreline exemption or a Shoreline Substantial Development Permit. Because the proposed project exceeds the fair market value threshold for an exemption, a Shoreline Substantial Development Permit is required. The applicant has submitted the required permit application.*

E. Hearing Examiner review criteria
A Substantial Development Permit shall be granted by the Hearing Examiner only when the development is consistent with the following, as established in WAC 173- 27-150:

1. The policies and procedures of the act;
2. The provisions of this regulation; and
3. The applicable master program adopted or approved for the area;

provided, that where no master program has been approved for that area, the development shall be reviewed for consistency with the provisions of chapter 173-26 WAC, and to the extent feasible, any draft or approved master program which can be reasonably ascertained as representing the policy of the local

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government.

Local government may attach conditions to the approval of permits as necessary to assure consistency of the project with the act and the local master program.

Staff analysis: *The proposed Commercial Fishing Homeport project is consistent with the policies and procedures of the Shoreline Management Act by supporting and prioritizing water-dependent uses, reinforces the longstanding maritime and commercial fishing character of Gig Harbor and preserves the historic working waterfront that is central to the community's identity.*

The proposal is also consistent with the applicable provisions of the City's shoreline regulations and the adopted Shoreline Master Program governing the project area. As demonstrated in the submitted application materials, special reports, and mitigation plan, the project satisfies shoreline development standards, including compliance with no net loss requirements for shoreline ecological functions. Proposed mitigation measures have been incorporated to avoid, minimize, and offset potential impacts to shoreline resources, ensuring that ecological conditions are maintained consistently with applicable state and local regulations.

B. Operations and Engineering
The City Engineer has reviewed the subject request and has found the proposed development to be generally consistent with the applicable provisions of the Code.

C. Fire Marshal/Building Official
The Building Official has reviewed the subject request and has found the proposed development to be generally consistent with the applicable provisions of the Code.

X. CONCLUSIONS:

A. Shoreline Substantial Development Permit:

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1. The proposed water-dependent use on the site, which is a use permitted by the Shoreline Management Act, is generally consistent with the policies and provisions of the Act.

2. The proposal complies with the requirements of WAC 173-27, including those set forth in WAC 173-27-150.

3. If properly conditioned, the requested Shoreline Substantial Development Permit is consistent with the applicable policies and development standards set forth in the city's Shoreline Master Program.

B. Site Plan Review Permit:

1. The site plan is compatible with the surrounding uses; and

2. The site plan is compliant with all relevant statutory codes, regulations, and ordinances.

XI. RECOMMENDATIONS:

Staff recommend that the Hearing Examiner **approve** the requested Shoreline Substantial Development Permit, with the following conditions included as part of the approval:

Conditions:

1. The applicant shall obtain civil, building, and flood permits from the city prior to commencing construction on the proposed improvements, as needed. These must meet all applicable City code requirements.

2. Prior to final inspection by the City of Gig Harbor Planning staff, the applicant shall provide the Planning Division with any necessary documentation relating to final permit approvals from other agencies.

3. All lighting associated with the dock, gangway, and upland improvements shall comply with the outdoor lighting standards of GHMC 17.99.350. Lighting shall be designed to minimize glare and visual impacts to the harbor basin and adjacent properties.

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4. All utility infrastructure associated with the project shall be integrated into the dock or upland improvements to minimize visual prominence and maintain compatibility with the waterfront setting, consistent with the design detail standards of GHMC 17.99.440 and site-sensitive design provisions of GHMC 17.99.370.

5. Development described herein shall be completed in substantial conformance with the approved site plan, construction drawings, special reports including proposed mitigation, and all materials submitted as part of the application.

6. Before construction begins, a cultural resources survey and report shall be completed and provided to applicable and interested parties. All project activities shall comply with the findings, recommendations, and conditions of the report.

7. Any landscaping areas damaged during construction shall be restored, and plant materials shall be replaced in kind with similar species and size.

8. Any trash receptacles associated with the facility will be screened from public view and designed to be compatible in a manner consistent with the waterfront character and the City of Gig Harbor Design Manual.

9. Construction activities within regulated water bodies shall occur only during the approved “fish window,” as specified by Washington Department of Fish and Wildlife (WDFW). The applicant shall obtain all required permits and adhere to timing limitations and conditions set forth by WDFW.

10. The project shall utilize appropriate Best Management Practices (BMPs) and all necessary erosion, sediment, and turbidity control measures consistent with the approved plans, the most recent version of the City of Gig Harbor Public Works Standards, and the most recent version of the Gig Harbor Stormwater Management and Site Development Manual.

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11. The authorization granted herein is subject to all applicable federal, state, and local laws, regulations, and ordinances. Compliance with such laws, regulations, and ordinances is a condition precedent to the approvals granted and is a continuing requirement of such approvals. By accepting these approvals, the applicant represents that the development and activities allowed will comply with such laws, regulations, and ordinances. If, during the term of the approval granted, the development and activities permitted do not comply with such laws, regulations, or ordinances, the applicant agrees to promptly bring such development or activities into compliance and acknowledges that bringing such development or activities into compliance may require new permit applications to be considered by staff or the Hearing Examiner.

12. Only clean fill may be used for any grading or land-filling activities. Materials not meeting this standard may be classified as solid waste and could require approval from the local jurisdictional health department. All debris generated by the project must be disposed of at an approved facility.

13. The project site is within one-quarter mile of three known or suspected contaminated sites (Eddon Boat Park, Nikolich Property, and Harborview Drive Property). If contamination is discovered during construction or demolition, appropriate testing must be conducted and the Department of Ecology notified. Coordination with the Toxics Cleanup Program is required to determine necessary testing and cleanup procedures.

14. All development within the Historic District shall comply with applicable provisions of Chapter 17.99 GHMC (Design Manual). The design of overwater structures, including docks, gangways, and piles, shall remain consistent with the working waterfront character of the harbor basin and incorporate site-sensitive design, appropriate lighting, and visual compatibility with the surrounding environment, as determined by the City.

15. Covered moorage is prohibited at this facility. All moorage spaces shall remain open and always uncovered. The use, installation, or

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construction of any form of overhead covering, including but not limited to roofs, awnings, tarps, framed structures, or similar protective enclosures, is prohibited.

16. Before construction begins, the Planning Division shall receive proof of purchasing 340 Puget Sound Nearshore Conservation Credits (total $479,740) from the Puget Sound Partnership.

17. Proof of an active license for commercial fishing vessels, or proof of an active contract for commercial fishing boat tenders, shall be provided to the City through established submittal methods.

18. Use of the site is limited to active commercial fishing operations. Pleasure craft and any vessels not engaged in active commercial fishing are not permitted.

Project Planner: Katharine Shaffer

Katharine Shaffer
Principal Planner

Date: **May 26, 2026**

The following exhibits are included for your review of the development application:

Exhibit 1 – Staff Report, May 26, 2026

Exhibit 2 – Resolution No. 949, December 9, 2013

Exhibit 3 – Sewer Concurrency Management Program Capacity Reservation Certification, August 1, 2016

Exhibit 4 – Water Concurrency Management Program Capacity Reservation Certification, August 1, 2016

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Exhibit 5 – Biological Assessment, March 2022

Exhibit 6 – Master Planning Permit Application, May 9, 2022

Exhibit 7 – Owner Authorization, May 9, 2022

Exhibit 8 – Shoreline Permit Application, May 9, 2022

Exhibit 9 – Determination of Complete Application, May 24, 2022

Exhibit 10 – Notice of Application June 7, 2022

Exhibit 11- Declaration of Posting, Mailing, Publishing June 7, 2022

Exhibit 12 – JARPA, May 26, 2022

Exhibit 13 – JARPA Attachment E, May 26, 2022

Exhibit 14 – NOA Comments: Squaxin Island Tribe Comment, Puyallup Tribe Comments, Nisqually Indian Tribe Comments, Department of Ecology Comments, June and July 2022

Exhibit 15 – Transportation Concurrency Management Program Capacity Memo and Reservation Certificate Application, April 4, 2025

Exhibit 16 – Mitigation Plan, August 2025

Exhibit 17 – Joint Aquatic Resource Permit Application (JARPA) Plans, August 2025

Exhibit 18 – Conservation Credit Purchase Form with Puget Sound Partnership, October 1, 2025

Exhibit 19 – Outside Agencies Permitting Narrative, January 8, 2026

Exhibit 20 - NOAA’s Biological Opinion and Essential Fish Habitat Response, January 8, 2026

Exhibit 21 – Critical Area Report, January 2026

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Exhibit 22 – State Environment Policy Act (SEPA) Checklist Revised, February 2, 2026

Exhibit 23 – Narrative Justification SMP 6.2.5.24.8, April 10, 2026

Exhibit 24 – Approved Project Plans, April 13, 2026

Exhibit 25 – Grette Associates Third-Party Critical Areas Review, April 27, 2026

Exhibit 26 – SEPA Determination of Nonsignificance (DNS), April 28, 2026

Exhibit 27 – SEPA DNS Declaration of Notice, Mailing, and Publication, April 28, 2026

Exhibit 28 – Public Comments after SEPA DNS Decision

Exhibit 29 - Declarations of Mailing, Posting, and Publishing, Notice of Public Hearing, May 18, 2026

Exhibit 30 – Power Point Presentation for Public Hearing, May 26, 2026

Duration of Permit Approval: The shoreline substantial development permit addressed by this decision shall expire two (2) years from the effective date of the decision, unless construction activities commence or, if no construction is proposed, the use or activity is commenced. If substantial progress is made within two years, the permit shall remain valid for five (5) years. If construction is not completed within 5 years, the administrator may grant an extension of time up to but not exceeding one (1) year for substantial progress and for completion of the project pursuant to section 4.08 E of the Gig Harbor Shoreline Master Program and WAC 173-27-090. The remaining land use permits addressed by this decision, shall expire three (3) years from the date of the decision, unless a complete application for subsequent building permit or civil permit has been submitted and remained active, pursuant to GHMC 19.02.008. Upon written request by the property owner, prior to the date of land use permit expiration, the director may grant an extension of time up to but not exceeding one (1) year pursuant to GHMC 19.02.008(F). See GHMC 19.02.008 for complete regulations on the duration of permit approvals and expiration of permits.

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Availability of Complete Project Permit File for Review:

The complete project permit file, including findings, conclusions and conditions of approval, if any, is available for review at the city of Gig Harbor Planning Department, 3510 Grandview Street, Gig Harbor, WA 98335. Please contact Katharine Shaffer, Principal Planner, at 253-853-7615 should you desire to review the file.

RESOLUTION NO. 949

A RESOLUTION OF THE CITY OF GIG HARBOR, WASHINGTON, ADOPTING THE PARKS COMMISSION NOTICE OF RECOMMENDATION REGARDING FUTURE USES OF THE ANCICH WATERFRONT PARK.

WHEREAS, on February 25, 2013, the City Council authorized the Parks Commission to conduct a public visioning process for the Ancich Waterfront Park; and

WHEREAS, the intent of the process was to develop a shared vision for the future use of the property; and

WHEREAS, the Parks Commission, Public Works Department and Planning Department worked together as a joint effort; and

WHEREAS, a Stakeholders committee was established in March, 2013, that comprised of approximately 20 local residents, citizens, business owners, recreationalists and nearby property owners; and

WHEREAS, during the first Stakeholders meeting on April 17th, 2013 they identified community needs not currently being met or sufficient along the waterfront of Gig Harbor; and

WHEREAS, during the second meeting on April 24th, 2013 the stakeholders focused on implementing and submitting a collaborative approach to the development of the future park due to the site location and community needs; and

WHEREAS, on May 22, 2013 the Stakeholders in conjunction with the Parks Commission held a well-attended Open House on their findings; and

WHEREAS, during a joint meeting on July 15, 2013 the Parks Commission presented City Council with initial recommendations for the site to preserve the existing structures and begin restoration of the netshed; and

WHEREAS, the Parks Commission met on August 7, 2013, September 4, 2013, and October 2, 2013 regarding the topic; and

WHEREAS, the Parks Commission held an Open House and Public Hearing on November 6th, 2013 and made a motion to forward their recommendation to City Council for final consideration; and

WHEREAS, on December 9th, 2013, the City Council held a public hearing and considered the Parks Commission recommendation for Ancich Waterfront Park attached hereto as Exhibit A; now, therefore,

THE CITY COUNCIL OF THE CITY OF GIG HARBOR, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

Section 1. Ancich Waterfront Park Uses – Adopted. The Gig Harbor City Council hereby adopts the Parks Commission recommendation on uses appropriate for Ancich Waterfront Park as drafted and attached as Exhibit A and incorporated herein by reference.

PASSED by the City Council this 9th day of December, 2013.

APPROVED:

Charles L. Hunter, Mayor

ATTEST/AUTHENTICATED:

Molly Towslee, City Clerk

APPROVED AS TO FORM:
Office of the City Attorney

Angela Summerfield, City Attorney

FILED WITH THE CITY CLERK: 12/02/13
PASSED BY THE CITY COUNCIL: 12/09/13
RESOLUTION NO: 949

GIG HARBOR®
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DEVELOPMENT SERVICES

NOTICE OF RECOMMENDATION

CITY OF GIG HARBOR PARKS COMMISSION

TO: Mayor Hunter and Members of the Council

FROM: Rahna Lovrovich, Chair, Parks Commission

RE: **Ancich Waterfront Park – Recommendation**

Council Directive:
On February 25, 2013, the City Council authorized the Parks Commission to conduct a public visioning process for the Ancich Waterfront Park as outlined in a memo from the Mayor. The intent of the process was to develop a shared vision for the use of the property. This was a joint effort of the Parks Commission, Public Works department and Planning Department with Lindsey Sehmel, Senior Planner, as the Commission's primary liaison.

Stakeholders Participation:
A group of approximately 20 local residents, citizens, business owners, recreationalists, and property owners participated in the visioning process through the months of April and May 2013. The first workshop occurred on April 17th, 2013 and had a focus on goal setting for the site. The stakeholders identified community needs not currently met or sufficient along the waterfront, a summary of these findings can be found in the attached packet. The focus of the second meeting on April 24th was on implementation and submitting a collaborative use approach to the Parks Commission for their consideration. The final recommendations from the stakeholders focus on primary uses to be water dependent with commercial fishing and human powered craft in addition to retention and redevelopment of the existing structures on the site. In no particular order, the stakeholders found that the top priorities of the site are:

- Uses of the site to be shared among the community – collaborative and compatible;
- Preserve and strengthen the view from both landward and waterward;
- Historic preservation of Netshed and recognition of historic features of site;
- Provide dock access and moorage facilities for both commercial fisherman and small/personal craft and that the two should not share the same float system;
- Provide storage opportunities on site and access and maneuverability to and from the storage facility; and
- Provide direct access to the shore.

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Parking was not found to be a priority or need of the site. It was noted that if parking is required, it shall be provided underground and fully screened from the water and public right of way.

These findings were presented at a broadly noticed public open house on May 22, 2013.

Parks Commission Review:
The Parks Commission held work-study sessions at their regularly scheduled meetings from March 2013 through November 2013, meeting minutes are attached.

The Commission hosted a second open house prior to the public hearing on November 6th. Public notice for the open house and public hearing was provided in the Gateway, posted on the property, and on the City's webpage. There was substantial testimony supporting the Parks Commission approach for shared use at the site from a broad range of community members. After deliberation, at the public hearing session, the Parks Commission recommended that the below findings be forwarded to City Council for final consideration.

Findings of Fact:
The Parks Commission makes the following findings in relation to their recommendation to the uses on Ancich Waterfront Park, as supported by the Working Waterfront designation of the Shoreline Master Program.

These recommendations are all of high priority. Additional uses or proposals beyond the scope of these recommendations should be vetted with the broader community involved with the process prior to any implementation:

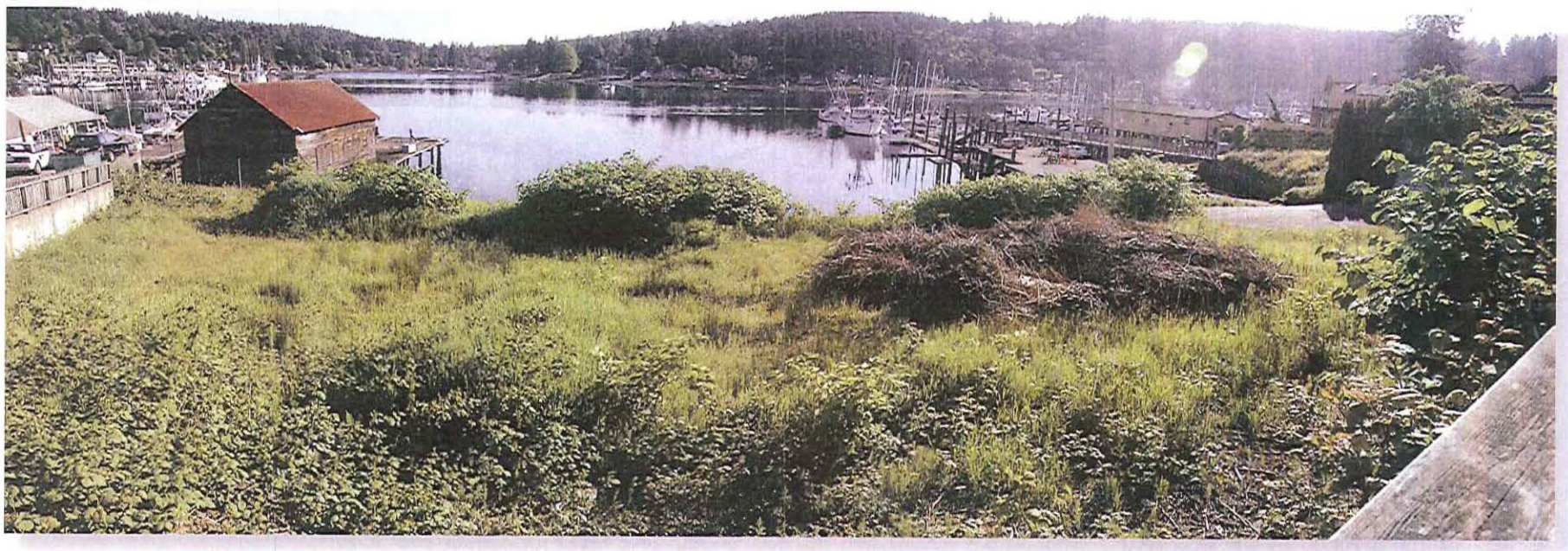
1. Allow the commercial fishing fleet to have singular use of the Ancich netshed, utilizing the opportunity for viewing of net work and educational uses. The netshed is not intended to be used for overnight storage.
2. Build a dock/float system aligned with the netshed for the Commercial fleet, supporting the historic context of the site.
3. Allow use of the commercial dock/float system for transient moorage during summer fishing season.
4. Establish public storage/locker facilities onsite for storage and easy access to and from the water for human powered craft.
5. Adjacent to the southern portion of the lot, build a low profile dock/float system for access to and from the water for small craft users.

Rahna Lovrovich, Chair
Parks Commission

Date 11/25/2013

Parks Commission FINDINGS

UPLAND VIEW



WATER VIEW



List of City-Wide Park Use Priorities
the Parks Commission found <u>not</u> appropriate for Ancich Park

Ancich Waterfront Park

Parks Commission Use/Priority Worksheet of August 7, 2013

Stakeholder identified UNDERMET NEEDS	Community-wide priority of UNDERMET NEEDS (1=high 2=moderate 3=low)	NEED proposed for Ancich Site? Yes	No	Comments
Barefoot Access to shore	3		X	Already available at several parks, not a neccessity.
Boating Destination	2		X	Size contraints on Ancich site, city needs to provide more necessities to be able to be considered a boating destination such as fuel dock, grocery store, and public showers.
Citizen access to water/tidelands	3		X	Already available at several parks, not a neccessity.
Environmental Desitination	2		X	No structure but use allowed and supported.
Fuel Dock	1		X	Not at Ancich due to geography constraints and impacts to the residential neighborhood.
Kayak team home base	3		X	Allow use of Ancich site for team but not appropriate for a large structure/development.
Moorage bouys	3		X	Commission states that the bay is too small for moorage bouys and that they are not an appropriate form of use within the Harbor due to the amount to boat traffic. They are not recommended to be placed anywhere.

Parks Commission FINDINGS



List of Priorities for Ancich Park

Ancich Waterfront Park
Parks Commission Use/Priority Worksheet of August 7, 2013

Stakeholder identified UNDERMET NEEDS	Community-wide priority of UNDERMET NEEDS (1=high 2=moderate 3=low)	Comments
Active netshed for commercial fishing	1	Utilize opportunity for viewing of net work, educational use, supportive of historic working waterfront. Use for work and unload only, not storage.
Boaters access to land	2.5	Secondary to primary moorage, not an exclusive use. Consider proposing time limits for moorage similar to Eddon Boat.
Commercial fishing fleet moorage	1	Yes, very high priority for Ancich site due to working waterfront designation. Align with the netshed. Support the historic context and economy.
Dingy moorage	2	Similar to what is available at Jerisch.
Income producing use	3	For lease process, require leasors of space to rent at market rate cost to cover O&M of facilities.
Human powered craft storage/lockers	1	For general public use with potential to lease a portion of the structure to Kayak Team.
Low profile dock	1.5	City has two already at Eddon and Jerisich. However, this is also an approrpate use for Ancich.
Preservation of Netshed	1	Historical preservation of Ancich netshed is a high priority, and has previously been forwarded to the City Council for initial phasing to preserve and restore it.
Public Dock	2	The Commission recognizes the need for additional seasonal (summer) moorage that could cooperate with the fishing fleet being out of town. There is no proposal for a primary use of a transit moorage dock, and such as use would not be approriate for Ancich.
Recognition of historic working waterfront	1	Yes, very high priority for Ancich site.

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By C. ANDREWS at 2:00 pm, Jan 19, 2023

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 03

GIG HARBOR
"THE MARITIME CITY"

CITY OF GIG HARBOR
SEWER CONCURRENCY MANAGEMENT PROGRAM
CAPACITY RESERVATION CERTIFICATE (CRC)

APPLICANT INFORMATION — **$90.00** *(Non-SFR only)* — **PAID**

APPLICANT (Developer or Owner) *Please circle one*	**PROPERTY OWNER** *(if different than applicant)*
Katrina / Knutson	
FIRST NAME / **LAST NAME**	**FIRST NAME** / **LAST NAME**
City of Gig Harbor	
COMPANY NAME	**COMPANY NAME**
3510 Grandview Street	
MAILING ADDRESS	**MAILING ADDRESS**
Gig Harbor / WA / 98335	
CITY / **STATE** / **ZIP**	**CITY** / **STATE** / **ZIP**
(253)853-8253 / ( )	( ) / ( )
PHONE / **FAX**	**PHONE** / **FAX**
EMAIL ADDRESS: KnutsonK@cityofgigharbor.net	**EMAIL ADDRESS:**

PROJECT INFORMATION

PROJECT NAME: Ancich Park Improvments — **TAX PARCEL #:** 5970000252, 5970000251, 5970000243

PROJECT ADDRESS: 3658 Harborview Drive, Gig Harbor 98335 — **TOTAL ACREAGE:** ~0.8

PROPERTY LEGAL DESCRIPTION: *(may be submitted on a separate 8½" x 11" sheet)*

Lot 5, Block 3, Town Of Millville, Pierce County, W.T., According to the Plat Recorded in Book 2 of Plats at Page 23, in Pierce County, Washington.

PROPERTY DESCRIPTION: *(Check one)*
Note: Applicants are responsible for accurate land designations. The issuance of a Sewer Capacity Reservation Certificate does not constitute land use or development approval.

☐ **SHORT PLAT** ☒ **COMM/INDUSTRIAL** ☐ **SINGLE FAMILY** ☐ **SUB-DIVISION** ☐ **MULTI-FAMILY** *(3+ units)*

OF NEW DWELLING UNITS: 0 — **COMMERCIAL BUILDING AREA:** *(square feet)* 2,800 SF

PROPOSED SEWER USE (IN ERUs): *A sewer hydraulic report must be submitted with this application in accordance with Section 19.10.011 GHMC.*

SINGLE FAMILY: _____ *(1 ERU = 150 gpd)*

COMM/INDUSTRIAL/OTHER: _____ *(See Municipal Code 13.32.060-attached)*

If Comm/Industrial, has interceptor checklist been completed: Yes ☐ No ☐

EXISTING USE OF PROPERTY: The property is currently unused or occupied with an open lawn space. The lots are not developed, with no amenities such as bathrooms, ornamental plantings, etc.

PROPOSED PROPERTY USE: *(if applicable)* Park, recreational activities, working fisherman's netshed, water access for kayaks, and easement for a floating dock.

The applicant acknowledges that a Sewer Capacity Reservation Certificate (CRC) is not a guarantee that sewer capacity will be available to serve the proposed project at the time of development.

Ordinance 1044 establishes that concurrency for sewer shall be valid for the duration of the underlying development permit or as otherwise provided in GHMC 19.10.020, or as set forth in the outside City limits utility extension agreement.

Submit completed application to:
City of Gig Harbor
Public Works – Engineering Department
3510 Grandview Street
Gig Harbor, WA 98335
(253) 851-6170 Fax: (253) 853-7597

Property Owner Signature _____ **Date** 1/11/16

☒ *I, the property owner, authorize my agent to receive all original correspondence (initial)* KK

Authorized Agent Name: Steve Robert

Please call (253) 851-6170, if you have any questions about the Sewer Concurrency Management Program.

FOR CITY USE ONLY

Approval: _____ **Approved Reservation Capacity:** _____ **ERUs**

Date: _____ **Development Application #:** _____

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Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 04

GIG HARBOR
"THE MARITIME CITY"

CITY OF GIG HARBOR
WATER CONCURRENCY MANAGEMENT PROGRAM
CAPACITY RESERVATION CERTIFICATE (CRC)

APPLICANT INFORMATION	**$90.00 (Non-SFR only)**	**PAID**

APPLICANT (Developer or Owner) *Please circle one*	**PROPERTY OWNER** *(if different than applicant)*
Katrina / Knutson	
FIRST NAME / **LAST NAME**	**FIRST NAME** / **LAST NAME**
City of Gig Harbor	
COMPANY NAME	**COMPANY NAME**
3510 Grandview Street	
MAILING ADDRESS	**MAILING ADDRESS**
Gig Harbor / WA / 98335	
CITY / **STATE** / **ZIP**	**CITY** / **STATE** / **ZIP**
(253) 853-8253 / ( )	( ) / ( )
PHONE / **FAX**	**PHONE** / **FAX**
EMAIL ADDRESS: KnutsonK@cityofgigharbor.net	**EMAIL ADDRESS:**

PROJECT INFORMATION

PROJECT NAME: Ancich Park Improvments **TAX PARCEL #:** 970000252, 5970000251, 5970000243

PROJECT ADDRESS: 3658 Harborview Drive, Gig Harbor 98335 **TOTAL ACREAGE:** ~0.8

PROPERTY LEGAL DESCRIPTION: *(may be submitted on a separate 8½" x 11" sheet)*
A water hydraulic report must be submitted with this application in accordance with Section 19.10.011 GHMC.

Lot 5, Block 3, Town Of Millville, Pierce County, W.T., According to the Plat Recorded in Book 2 of Plats at Page 23, in Pierce County, Washington.

PROPERTY DESCRIPTION: *(Check one)*
Note: Applicants are responsible for accurate land designations. The issuance of a Water Capacity Reservation Certificate does not constitute land use or development approval.

☐ **SHORT PLAT** ☒ **COMM/INDUSTRIAL** ☐ **SINGLE FAMILY** ☐ **SUB-DIVISION** ☐ **MULTI-FAMILY** *(3+ units)*

OF NEW DWELLING UNITS: 0 **COMMERCIAL BUILDING AREA:** *(square feet)* 2,800

PROPOSED WATER USE (IN ERUs): *(Including irrigation)*

SINGLE FAMILY *(1 ERU = 200 gpd)*: _____ **COMM/INDUSTRIAL/OTHER:** _____

OF METERS REQUESTED: 3 **SIZE OF EACH METER:** #1 & #2 - 2" and #3 - 4"

EXISTING USE OF PROPERTY: The property is currently unused or occupied with an open lawn space. The lots are not developed, with no amenities such as bathrooms, ornamental plantings, etc.

PROPOSED PROPERTY USE: *(if applicable)* Park, recreational activities, working fisherman's netshed, water access for kayaks, and easement for a floating dock.

The applicant acknowledges that a Water Capacity Reservation Certificate (CRC) is not a guarantee that water capacity will be available to serve the proposed project at the time of development.

Ordinance 1044 establishes that concurrency for water shall be valid for the duration of the underlying development permit or as otherwise provided in GHMC 19.10.020, or as set forth in the outside City limits utility extension agreement.

Property Owner Signature _____ **Date** 8/11/16

If I, the property owner, authorize my agent to receive all original correspondence (initial) KC

Authorized Agent Name: Steve Robert

Submit completed application to:
City of Gig Harbor
Public Works – Engineering Department
3510 Grandview Street
Gig Harbor, WA 98335
(253) 851-6170 Fax: (253) 853-7597

Please call (253) 851-6170, if you have any questions about the Water Concurrency Management Program.

FOR CITY USE ONLY

Approval: _____ **Approved Reservation Capacity:** _____ **ERUs**

Date: _____ **Attached to Permit #:** _____

Revised: 6/9/11

RECEIVED
By MThomas City of Gig Harbor at 2:26 pm, Feb 02, 2026

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 05

Biological Assessment

for the

The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

March 2022

Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Davido Consulting Group, Inc.
9706 4th Ave NE, Suite 300
Seattle, Washington 98115
(206) 523-0024
www.dcgengr.com



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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
City	City of Gig Harbor
dB	Decibel
DCG	Davido Consulting Group, Inc.
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PHS	Priority Habitats and Species
PSA	Proposed Similarity of Appearance
SEL	Sound Exposure Level
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WAC	Washington Administrative Code

1 INTRODUCTION

This Biological Assessment was prepared in accordance with Section 7(c) of the Endangered Species Act (ESA) regarding the potential effects on federally listed species and their habitats from the Commercial Fishing Homeport Project for the City of Gig Harbor (hereafter, City). The proposed project is located within Gig Harbor, Washington. This project will include the installation of a commercial fishing dock at Ancich Waterfront Park. As this work will occur in the nearshore of Gig Harbor, the proposed project has the potential to impact species listed as threatened or endangered under the ESA and/or their critical habitat (Table 1). Additionally, the effects of the proposed project on essential fish habitat (EFH), pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the 1996 Sustainable Fisheries Act, are analyzed in Appendix I.

Table 1. Summary of Proposed Action Effects on ESA Listed Species and Their Critical Habitat

Species	Listing Status	Agency	Species Effects Determination	Critical Habitat in Action Area	Critical Habitat Effects Determination
Coastal Puget Sound Bull Trout (*Salvelinus confluentus*)	Threatened	USFWS	Not Likely to Adversely Affect	No	--
Dolly Varden (*Salvelinus malma*)	PSA Threatened	USFWS	Not Likely to Adversely Affect	No	--
Georgia Basin Bocaccio (*Sebastes paucispinis*)	Endangered	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect
Georgia Basin Yelloweye Rockfish (*Sebastes ruberrimus*)	Threatened	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect
Humpback Whale (*Megaptera novaeangliae*)	Threatened	NMFS	Not Likely to Adversely Affect	No	--
Marbled Murrelet (*Brachyramphus marmoratus*)	Threatened	NMFS	Not Likely to Adversely Affect	No	--
Puget Sound Chinook (*Oncorhynchus tshawytscha*)	Threatened	NMFS	Likely to Adversely Affect	Yes	Likely to Adversely Affect
Puget Sound Steelhead Trout (*Oncorhynchus mykiss*)	Threatened	NMFS	Likely to Adversely Affect	No	--
Southern Resident Killer Whale (*Orca orcinus*)	Endangered	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect

The status and occurrence of anadromous populations of bull trout in Puget Sound are subject to scientific debate surrounding separation of anadromous bull trout from the closely related anadromous Dolly Varden char (Salvelinus malma). Until further resolution is possible, the Washington Department of Fish and Wildlife has made a decision to manage all Puget Sound stocks as if they were a single bull trout/Dolly Varden complex (WDFW 2000). Therefore, no further mention of Dolly Varden char will be made in this document.

Several ESA listed species that could possibly occur in the project area are not evaluated further due to their rare or unconfirmed occurrence and lack of suitable/critical habitat in the action area. Therefore, the proposed project will have **no effect** on the following species: Canada Lynx (*Lynx canadensis*), Eulachon (*Thaleichthys pacificus*), Golden Paintbrush (*Castilleja levisecta*), Gray Wolf (*Canis lupus*), Green Sturgeon (*Acipenser medirostris*), Grizzly Bear (*Ursus arctos*), Leatherback Sea Turtle (*Dermochelys coriacea*), Northern Spotted Owl (*Stix occidentalis caurina*), Oregon

Spotted Frog (*Rana pretiosa*), Streaked Horned Lark (*Eremophila alpestris strigata*), and Yellow-Billed Cuckoo (*Coccyzus americanus*).

2 PROJECT LOCATION

The project is located on the waterfront in Gig Harbor, Washington (Section 5 of Township 21 of Range 2). Water quality in Gig Harbor, despite high development levels, is unimpaired (WDOE 2018). Two salmon-bearing streams, North Creek and Crescent Creek, drain into the harbor to the northwest of the project site. The project area includes the intertidal and subtidal zones (Figure 1).

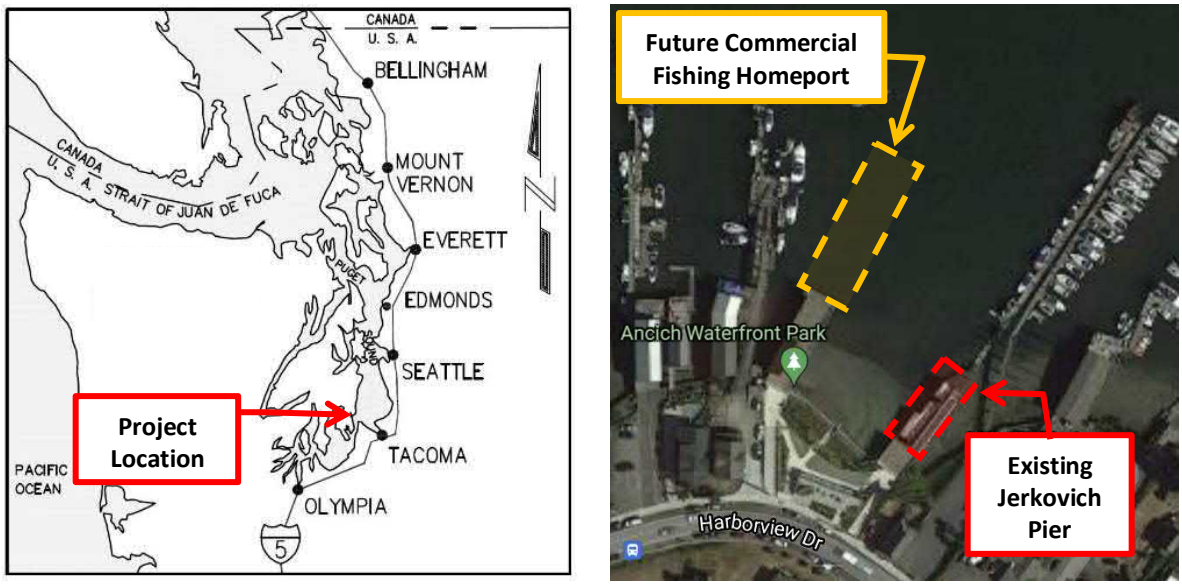


Figure 1. Vicinity and Site Maps

3 PROJECT DESCRIPTION

Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The human powered craft dock is currently under construction (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet. The proposed project consists of the elements listed below, followed by summary tables (Tables 2 and 3).

1. **Float Installation**
   A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

   - (1) 45' Finger Float
   - (5) 60' Finger Floats
   - (1) 80' Finger Float

   (20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a

barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. **Gangway Installation**
   An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. **Safety and Utilities**
   Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. **Mitigation**
   Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See Mitigation Plan for details.

Table 2. Pile Removal and Installation Summary

Structure	Piles Removed	Piles Installed	Net Change in Number of Piles
Jerkovich Pier	32 creosote-treated timber piles, 12-inch diameter	0	-32
Floats	0	20 steel piles, 24-inch diameter	+20
Gangway	0	5 steel piles, 12-inch diameter	+5
Total	**-32**	**+25**	**-7**

Table 3. Overwater Coverage Summary

Structure	Net Change in Overwater Coverage
Jerkovich Pier Demolition	–1,558.5 SF (solid asphalt decking)
Gangway Installation	+527 SF (grating 45% net open area) (area not including overlap with float)
Floats Installation	+5,854 SF (grating 45% net open area))
Total	**+4,822.5 SF**

3.1 Project Sequence

All in-water work will avoid the annual outmigration of juvenile salmonids and the breeding season for marbled murrelets. Per WAC Tidal Reference Area 4, the expected in-water work window is August 1 through February 15 of any year. The project is expected to occur over the course of one in-water work window, from August 1, 2023, to February 15, 2024. The City proposes the following general construction sequence, subject to adjustment by the construction contractor's means and methods:

1. Mobilize equipment
2. Demolish asphalt decking, caps, and stringers of Jerkovich Pier

3. Pull up to 10 timber piles per day with a vibratory hammer until all 32 are removed
4. Drive up to 10 steel guide piles per day with vibratory and impact hammer until all 25 are in place
5. Install floating dock
6. Install finger floats
7. Install gangway
8. Install utilities and dock accessories
9. Demobilize equipment

4 IMPACT AVOIDANCE AND MINIMIZATION MEASURES

The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant in order to avoid, reduce intensity, or otherwise minimize potential impacts:

- Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
- If required by governing agencies, water quality monitoring will be conducted during excavation activities,
- All manmade construction debris will be collected and not allowed to enter waters of the state.
- If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
- All debris or spill material will be properly disposed of at an approved off-site disposal facility.
- As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
- Contractor will maintain a spill containment kit with floating sausage booms on site at all times.
- A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
- Vessels will not ground.

5 ACTION AREA

The action area is defined by the ESA regulations (50 CFR 402.02) as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area is distinct from the project footprint and encompasses a larger area extending to where no measurable effects from the project are anticipated to occur. For this project, the action area includes the area within which project-related noise levels are ≥120 dB re 1 μ PA_{rms} (i.e., the point where no take from the project would occur) in accordance with the NMFS's threshold guidelines (Table 4).

Table 4. NMFS Interim Sound Threshold Guidance for Marine Mammals

Harassment Threshold		
Underwater (dB re: 1 µPa)		
Source	**Cetaceans**	**Pinnipeds**
Vibratory Installation (Non-impulsive Noise)	120	120
Impact Installation (Impulsive Noise)	160	160

NMFS has adopted the following Interim Criteria for injury and disturbance thresholds for fish (Stadler and Woodbury 2009) (Table 5):

Table 5. NMFS Interim Sound Threshold Guidance for Fish

	Pile Driving	
Hearing Group	**Peak SEL**	**Accumulated SEL**
Weight ≥ 2g	206 dB	187 dB
Weight < 2g	--	183 dB

USFWS has adopted the following waterborne injury threshold for marbled murrelets (Table 6):

Table 6. USFWS Interim Sound Threshold Guidance for Marbled Murrelets

	Impact Pile Driving	
Hearing Group	**Auditory Injury Threshold**	**Non-Auditory Injury Threshold**
Marbled Murrelets	202 dB SEL	208 dB SEL



Figure 2. Action Area in Red

Table 7 below calculates the disturbance zone based on the practical spreading loss model, per the interim guidance. The practical spreading loss model was used to determine the zones in which species have the potential to face behavioral disturbance from underwater noise. The formula for calculating practical spreading loss underwater is:

$$TL = GL \times \log \frac{R_1}{R_0}$$

Where TL is the transmission loss (dB) (i.e., the disturbance zone), GL is the geometric loss coefficient (15 is the only valued allowed without real-time sound source verification), R_1 is the range to the target sound pressure level (m), and R_0 is the distance from the source of the initial measurement (m).

The maximum travel distance of underwater sound traveling from the pile driving is approximately 0.42 mi (0.68 km). The action area is constrained by the harbor topography.

Table 7. In-Water Injury and Disturbance Zones

Pile Size	Duration[1]	Source Levels (10 m from Pile)[2]			Injury Zones and Acoustic Thresholds (meters)								Disturbance Zones (meters)		
		Peak (dB)	RMS (dB)	SEL (dB)	Fish, Peak	Fish (<2g)	Fish (≥2g)	Marbled Murrelet	Low-Frequency Cetacean	Mid-Frequency Cetacean	Phocid Pinniped	Otariid Pinniped	Fish	Marbled Murrelet	Marine Mammal
Vibratory Hammer															
Thresholds (dB SEL)					**206**	**187**	**183**	**N/A**	**199**	**198**	**201**	**219**	**N/A**	**N/A**	**120[3]**
12" (nom) steel	8 hrs/day	171	155	155	--	--	--	--	10.9	1.0	6.6	0.5	--	--	232.6
24" (nom) steel	8 hrs/day	181	153	153	--	--	--	--	11.1	1.0	6.8	0.5	--	--	51.3
12" timber	8 hrs/day	172	162	--	--	--	--	--	31.9	2.8	19.4	1.4	--	--	681.3
Impact Hammer															
Thresholds (dB SEL)					**206**	**187**	**183**	**202**	**183**	**185**	**185**	**203**	**150**	**150[4]**	**160**
12" (nom) steel	1,500 strikes/ day	192	169[5]	--	1	0	0	0	32.9	1.2	17.6	1.3	185	185	39.8
24" (nom) steel	1,500 strikes/ day	195	168[5]	164	1	39	21	0	39.3	1.4	21.0	1.5	26	48	513.4

1 Assumes up to 10 piles per day can be pulled or installed.
2 Source levels were obtained from Caltrans (2015) and measured 10m from the pile except for the 24' piles – these were measured 3m from the pile.
3 Ambient background levels at the site were recorded at 134.5 dB (Marine Mammal Monitoring Plan Attachment II).
4 USFWS considers this to be a guideline, not a threshold. In other words, murrelets may respond to sounds in this zone, but that response may not constitute an adverse effect.
5 WSDOT (2018) has established an average reduction of 8-32 dB RMS with the use of a bubble curtain. To be conservative, a reduction of 8 dB RMS was used for impact pile driving only.

6 SPECIES AND HABITAT INFORMATION

The ESA-listed species that may occur in the action area include Coastal Puget Sound bull trout, Georgia Basin bocaccio and yelloweye rockfish, humpback whale, marbled murrelet, Chinook salmon, steelhead trout, and Southern Resident Killer Whale. Critical habitat is present in the action area for Chinook salmon, Georgia Basin rockfishes, and Southern Resident Killer Whale.

6.1 Coastal Puget Sound Bull Trout

Gig Harbor bull trout are most likely from the White and Puyallup River Stocks, which includes an anadromous population (WRIA 10; WDFW 2004, Marks et al. 2014). However, there are no documented sightings or spawning habitat of bull trout in the action area. Only adult and sub-adult bull trout could potentially occupy the action area from spring through mid-summer (WDFW 2004). Following this season, bull trout migrate to freshwater river systems to overwinter. Therefore, it is unlikely bull trout will be present during construction (late-summer and into winter).

6.2 Georgia Basin Bocaccio and Yelloweye Rockfish

In central Puget Sound, bocaccio have historically been part of the recreational fishery with sharp population declines occurring in the late 1980s and 1990s. In Central Puget Sound and the Tacoma Narrows, available data on rockfish populations is based principally on recreational and some commercial harvest; much of which was collected in the 1960s and 1970s when the species were more common. Considering the absence of any bocaccio observations and lack of reports in the past decade, there is a strong possibility that the Distinct Population Segment has been extirpated from most of its range, although a few individuals may be present in reserves or areas where all fishing is prohibited (NOAA Fisheries Species Information 2018). Juvenile bocaccio settle onto shallow nearshore waters in rocky or cobble substrate that support kelp growth at 3 to 6 months of age and move to progressively deeper waters as they grow (Love et al., 1991). Adults typically occupy waters deeper than 120 feet (Love et al., 2002). Yelloweye rockfish are more frequently observed in north Puget Sound. Their distribution most frequently coincides with high-relief, complex, rocky habitats deeper than 120 feet (NOAA Fisheries Species Information 2018, and Love et al., 2002). These habitats are not present in the action area. Juvenile yelloweye rockfish do not typically occupy intertidal waters and shallow habitats (Love et al., 1991). According to the EFH database (2018), juveniles are associated with a minimum water depth of 45 feet. Habitat in the action area is not optimal for adult rockfish or juvenile yelloweye due to a lack of deep water. Habitat in the action area is not optimal for juvenile bocaccio due to a lack of substrate that supports kelp. Based on the current known range of rockfish (northern Puget Sound) and narrow inlet into the harbor it is unlikely that that rockfish larva of either species would be present during construction; therefore, the effects would be discountable on all rockfishes.

6.2.1 Critical Habitat

The PCEs from 50 CFR Part 226 determined essential to the conservation of juvenile bocaccio include:

(1) Juvenile settlement habitats located in the nearshore with substrates such as sand, rock and/or cobble compositions that also support kelp are essential for conservation because these features enable forage opportunities and refuge from predators and enable behavioral and physiological changes needed for juveniles to occupy deeper adult habitats. Several attributes of these sites determine the quality of the area and are useful in considering the conservation value of the associated feature and in determining whether the feature may require special management considerations or protection. These features also are relevant to evaluating the effects of an action in an ESA section 7 consultation if the specific area containing the site is designated as critical habitat. These attributes include:

> *(i) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities; and*

- **Existing Conditions:** As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that "continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor."
- **Effects to PCE:** The presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates in the action area. However, the long-term effect of overwater structures will be minimized with the addition of grating. Based on the small scale and brevity of habitat effects, it is expected that no appreciable loss of function will occur.

(ii) Water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction, and feeding opportunities.

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(2) Nearshore areas are contiguous with the shoreline from the line of extreme high water out to a depth no greater than 30 meters (98 ft) relative to mean lower low water.

- **Existing Conditions:** The action area is characteristic of an urban setting along a waterfront with a highly developed shoreline**.**
- **Effects to PCE:** The project will not alter the current discontinuous nature of the shoreline.

The PCEs from 50 CFR Part 226 determined essential to the conservation of adult bocaccio and adult and juvenile yelloweye rockfish include:

Benthic habitats and sites deeper than 30 m (98 ft) that possess or are adjacent to areas of complex bathymetry consisting of rock and or highly rugose habitat are essential to conservation because these features support growth, survival, reproduction, and feeding opportunities by providing the structure for rockfish to avoid predation, seek food and persist for decades. Several attributes of these sites determine the quality of the habitat and are useful in considering the conservation value of the associated feature, and whether the feature may require special management considerations or protection. These attributes are also relevant in the evaluation of the effects of a proposed action in an ESA section 7 consultation if the specific area containing the site is designated as critical habitat. These attributes include:

(1) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities.

- **Existing Conditions:** As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that "continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor."
- **Effects to PCE:** The presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates in the action area. However, the long-term effect of overwater structures will be minimized with the addition of grating. Based on the small scale and brevity of habitat effects, it is expected that no appreciable loss of function will occur.

(2) Water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction, and feeding opportunities; and

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(3) The type and amount of structure and rugosity that supports feeding opportunities and predator avoidance.

- **Existing Conditions:** Benthic habitats and sites deeper than 30 m (98 ft) that possess or are adjacent to areas of complex bathymetry consisting of rock and or highly rugose habitat are not present in the action area.
- **Effects to PCE:** This PCE will not change as a result of the project.

6.3 Humpback Whale

The humpback whale is distributed worldwide in all ocean basins. In the North Pacific, five District Population Segments (DPSs) breed in subtropical and tropical waters from Asia to Central America then migrate north to feed in highly productive North Pacific feeding grounds (Bettridge *et al.* 2015). Humpback whales use coastal habitats because of their productivity and typically remain within about 50 nautical miles of shore (Evans 1987; Calambokidis and Steiger 1995). Humpbacks are not routinely present in Puget Sound due to a lack of appropriate habitat and food availability. However, sightings in the spring and summer have increased in recent years, but none within Gig Harbor. Gig Harbor is relatively shallow, and its inlet constricted; hence their occurrence in the harbor is expected to be extremely rare.

6.4 Marbled Murrelet

Marbled murrelets are small marine birds in the alcidae family that nest in the coastal old-growth forests of the Pacific Northwest. The breeding season of the marbled murrelet generally begins in April, with most egg laying occurring in late May and early June. By the end of August, chicks have fledged and dispersed from nesting areas (Marks and Bishop 1999). Marbled murrelets differ from other seabirds in that its primary nesting habitat is old-growth coniferous forest within 50 to 75 miles of the coast. The nest typically consists of a depression on a moss-covered branch where a single egg is laid. When not nesting, the birds live at sea, spending their days feeding and then moving several miles offshore at night (SEI 1999). Information provided by the WDFW PHS program (WDFW PHS 2018) does not identify any nesting areas for marbled murrelets within the action area. The occurrence of marbled murrelets in the project and action areas is expected to be very low considering the developed nature of the area, the shallow habitat, and the lack of nesting habitat in or near the action area.

6.5 Puget Sound Chinook

Chinook salmon occurring in the action area most likely originate from Crescent Creek. Adults are expected to migrate through Gig Harbor from August to September and juveniles may enter the harbor between February and July to rear, forage, and begin migration to the Pacific Ocean. Through strict adherence to the work window, juvenile chinook will not be in the harbor during construction. Salmon from other stocks have been documented in the Gig Harbor estuary, including those from the White and Puyallup River stocks (WRIA 10) and the Nisqually River stocks (WRIA 11).

Juvenile salmon are known to be affected by overwater structures causing disorientation, schooling, and altered migration routes into deeper waters (and closer to predators) around the structures. It is also known that the presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates that juvenile Chinook salmon and other listed fish prey upon. This contrasts with adult Chinook salmon as they usually inhabit water much deeper than where the proposed structures will be located and do not frequent the nearshore.

6.5.1 Critical Habitat

(1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development;

- **Existing Conditions:** The action area does not encompass freshwater spawning sites.
- **Effects to PCE:** This PCE will not be affected.

(2) Freshwater rearing sites with:

(i) Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(ii) Water quality and forage supporting juvenile development; and

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(iii) Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(3) Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival;

- **Existing Conditions:** The action area does not encompass freshwater migration corridors**.**
- **Effects to PCE:** This PCE will not be affected.

(4) Estuarine areas free of obstruction and excessive predation with:

(i) Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater;

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(ii) Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

- **Existing Conditions:** The condition of the nearshore water quality is limited by several factors, including developed shorelines; lack of complex habitat to provide cover in the form of overhanging large wood, and side channels; and the presence of non-natural overwater structures.

- **Effects to PCE:** The project will degrade this PCE through an increase in overwater coverage. The sharp underwater light contrasts from overwater structures can cause delays in migration from disorientation, fish schooling (dispersal resulting in a loss of refugia) and altered migration routes around the structures. An increase in overwater cover will continue to preclude colonization of aquatic vegetation. However, the long-term effect of overwater structures will be minimized with the addition of grating.

(iii) *Juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.*

- **Existing Conditions:** Based on expected diet of Chinook salmon, a disturbance of the benthic community is unlikely to adversely affect juvenile or adult salmonids because juvenile salmon feed on floating and drifting invertebrates and small fishes.
- **Effects to PCE:** This PCE will not be affected in the long term. Temporary impacts from an increase in turbidity may disrupt pre fields.

(5) *Nearshore marine areas free of obstruction and excessive predation with:*

(i) *Water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and*

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(ii) *Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.*

- **Existing Conditions:** The condition of the nearshore water quality is limited by several factors, including developed shorelines; lack of complex habitat to provide cover in the form of overhanging large wood and side channels; and the presence of non-natural overwater structures.
- **Effects to PCE:** The project will degrade this PCE through an increase in overwater coverage. The sharp underwater light contrasts from overwater structures can cause delays in migration from disorientation, fish schooling (dispersal resulting in a loss of refugia) and altered migration routes around the structures. However, the long-term effect of overwater structures will be minimized with the addition of grating.

(6) *Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.*

- **Existing Conditions:** The action area does not encompass an offshore area**.**
- **Effects to PCE:** This PCE will not be affected.

6.6 Puget Sound Steelhead Trout

The species exhibits perhaps the most complex suite of life-history traits of any of the Pacific salmon. Steelhead can be anadromous or freshwater residents and, in some circumstances, yield offspring of the opposite life-history form. The anadromous form can spend up to seven years in freshwater prior to smoltification, although two years is most common, and then spend up to four years in saltwater prior to first spawning. Unlike the Pacific salmon species,

steelhead are iteroparous (individuals can spawn more than once). Steelhead that would be present in the action area are most likely East Kitsap winter steelhead from WRIA 15 stocks (WDFW 2018). Spawning occurs in Crescent and North creeks, which drain into the northwest and southwest corners of Gig Harbor, respectively. The adult winter steelhead run is generally from December to February, and spawning occurs from March through June (Wydoski and Whitney 2003). Juvenile steelhead out-migrate from April through June and are not anticipated in the nearshore of the action area in large numbers because the majority of steelhead smolts migrate directly to the open ocean (i.e., they are not nearshore dependent) and do not rear extensively in the estuarine or coastal environments (Burgner et al. 1992). Therefore, through strict adherence to the work window, juvenile steelhead will not be in the harbor during construction. Similar to adult Chinook, steelhead usually inhabit water much deeper than where the proposed structures will be located and do not frequent the nearshore, but they may be in the action area.

6.7 Southern Resident Killer Whale

The Puget Sound Southern Resident Killer Whale spends more time in Puget Sound than transient orcas, travel in larger pods, and eat mostly fish (Krahn et al. 2004). These residents consist of three social groups, identified as the J, K, and L pods (NOAA Fisheries Species Information). In recent years, they have been regularly spotted as far south as central California during the winter months and as far north as Southeast Alaska (NOAA Fisheries Species Information). NOAA has designated three critical areas for Southern Resident Killer Whales by seasonal appearance. The action area is located in Area 2 - Fall/Winter (NMFS 2006). There have been sightings of killer whales in Puget Sound recently and mainly occur on the east side of Vashon Island. The majority of sightings occur in between October and December, and none have occurred within Gig Harbor proper. Occurrence in the harbor is expected to be rare due to the relatively shallow bathymetry and constricted inlet.

6.7.1 Critical Habitat

The PCEs from 50 CFR Part 226 determined essential to the conservation of Southern Resident DPS Killer Whales (Area 2 – Puget Sound Area) are:

(1) Water quality to support growth and development.

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality, but this effect will remain within the harbor. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(2) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development as well as overall population growth.

- **Existing Conditions:** The project area provide refuge and support to prey species. As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that “continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor.”
- **Effects to PCE:** Water quality improvements to the harbor through the removal of creosote contaminants will benefit salmon. The project will not significantly decrease the number of adult salmon in South Puget Sound, and thus has no mechanism to affect prey base.

(3) Passage conditions to allow for migration, resting, and foraging.

- **Existing Conditions:** Gig Harbor is relatively shallow, and its inlet constricted; hence migration, resting, and foraging are unlikely to occur in the harbor.

- **Effects to PCE:** This PCE will not be affected.

7 ENVIRONMENTAL BASELINE

7.1 Terrestrial Habitat

The site consists of 0.42 acres of upland and two piers that extend over the intertidal and subtidal area of Gig Harbor. A concrete bulkhead runs along the length of the shoreline on the property (approximately 200 linear feet). Upland vegetation consists of a City-maintained vegetated buffer along a concrete vertical bulkhead. Paved driveways with parking areas run along the eastern and western site boundaries. A personal/small non-motorized watercraft storage building is tucked into the existing hillside with a roof deck elevation matching the current sidewalk elevation. The building also has a chair lift to provide ADA access to the park below and to each pier from the building, as the adjacent driveways are not to code. The Ancich Pier to the west has been replaced with new materials, including steel piles and timber planks to support the historic Ancich Brothers' Netshed. The remaining portion of the Jerkovich Pier is in disrepair from the asphalt surfacing atop the timber decking causing many structural failures. The pier will be demolished as part of this project.

Dominant land use in the project vicinity is primarily urban and residential. The project area is zoned as Waterfront/Millville (City of Gig Harbor Municipal Code 17.48). The action area is characteristic of an urban setting along a waterfront. Vehicle traffic is moderately heavy along Harborview Road, and vessel traffic primarily consists of recreational vessels.

7.2 Aquatic Habitat

The shoreline of Gig Harbor is substantially altered with bulkheads, docks, and marinas. Water quality assessments from the Washington Department of Ecology show that water quality in Gig Harbor is not currently impaired (WDOE 2022). Two major creeks drain into Gig Harbor, including Crescent Creek and North Creek. These creeks are known to be used by coho salmon, cutthroat trout, fall chum, fall chinook, and winter steelhead (WDFW, 2022).

The backshore is hardened with a concrete bulkhead, the bottom of which is at +9 feet MLLW. The intertidal zone is gradually sloping, with a substrate of gravels transitioning to silty sand sub-tidally. A full macrovegetation survey is scheduled to occur on June 14, 2022. A previous presence/absence macrovegetation survey performed in 2019 by Davido Consulting Group found benthic sugar kelp but no eelgrass habitat in the project vicinity.

8 ANALYSIS OF EFFECTS

The effects of the project on ESA-listed species and their critical habitat are described in this section. The discussion describes how activities associated with the project will contribute to improvement, maintenance, or degradation of habitats used by listed species. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health.

8.1 Direct Impacts

Construction activities will likely have temporary direct impacts on habitat through increases in underwater sound from pier removal and increases in turbidity. Best management practices and mitigation methods will be used to minimize these effects. The level of disturbance and habitat alteration in the project area will be insignificant and discountable, especially when considered in relation to the activity already taking place in developed harbor. While it is possible that species avoid the project area during demolition, they are not likely to abandon the site altogether.

Pile removal will result in new benthic habitat ready for colonization. These habitat improvements may benefit microorganisms such as zooplankton aggregation, but with no baseline data on their abundance, this will be an imperceptible impact of the project upon the prey food web.

A permanent and direct impact of the project will the removal of (32) 12-inch-diameter creosote-treated timber piles and upper intertidal shading will be reduced by approximately 1,558.5 square feet due to the removal of the remainder of the Jerkovich Pier, including its caps, stringers, and asphalt decking.

8.2 Indirect Impacts

Likely indirect effects of the proposed action on listed species may include disruption of prey fields and temporary behavioral responses to non-injurious noise from in-water construction activities. Physical elements of habitat will not be significantly affected by the proposed action. Underwater sounds will likely disaggregate schools of forage fish in the water column in the action area. Turbidity may also temporarily disperse prey in the water column, and burial of non-motile prey species will remove them from the prey field. Species may experience some energetic cost from dispersal of prey, resulting in short-term expenditure of energy seeking other sources or browsing while waiting for prey to re-aggregate following noise and turbidity effects.

8.3 Cumulative Impacts

This section discusses how activities associated with project will contribute to improvement, maintenance, or degradation of habitats used by ESA-listed species in the project area. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health. Net effect is considered to be the overall effect on the species and habitat in the long term. If short term adverse conditions occur when few or no listed species are present in the action area, and if those conditions are no longer present when listed species return to the area, those conditions do not constitute adverse modification of the indicator of habitat quality.

Table 8. Effects of Project Activities on Habitats in the Project and Action Areas

Project Activities	Habitat Indicator	Effects of Action		
		Improve[1]	Maintain[2]	Degrade[3]
Construction Disturbances	Noise		X	
	Entrainment		X	
	Stranding		X	
Water Quality Disturbance	Turbidity		X	
	Chemical Contamination/Nutrients	X		
	Temperature		X	
	Dissolved Oxygen		X	
Sediment Disturbance	Sedimentation Sources/Rates		X	
	Sediment Quality		X	
Habitat Disturbance	Fish Access/Refugia		X	
	Depth		X	
	Substrate		X	
	Slope		X	
	Shoreline		X	
	Riparian Conditions		X	
	Flow And Hydrology/Current Patterns/ Saltwater-Freshwater Mixing Patterns		X	
	Overwater Structures			X
	Disturbance		X	
Biota Disturbance	Prey (Epibenthic and Pelagic Zooplankton)		X	
	Prey (Forage Fish)		X	
	Infauna		X	
	Aquatic/Wetland Vegetation		X	
	Nonindigenous Species		X	
	Ecological Diversity		X	

1 Action will contribute to long-term improvement, over existing conditions, of the habitat indicator.
2 Action will maintain existing conditions.

3 Action will contribute to long-term degradation, over existing conditions, of the habitat indicator.

9 CONCLUSIONS AND EFFECT DETERMINATIONS

The effects determination is the conclusion of the analysis of potential direct or indirect effects of the proposed activity on listed species and critical habitat. The conclusions that could result from the effects analysis for the effects determination include:

- **No Effect.** The appropriate conclusion when the action agency determines its proposed action will not affect listed species or critical habitat.
- **May Affect, is Not Likely to Adversely Affect.** The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects on the species. Insignificant effects relate to the size of the impact and should never reach the scale at which take occurs. Discountable effects are those extremely unlikely to occur. Using best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.
- **May Affect, is Likely to Adversely Affect.** The appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial (see definition of "may affect, is not likely to adversely affect").

A key factor in making an effect determination and distinguishing between a significant and insignificant effect is determining whether the effect would be significant enough to cause a take.

9.1 Coastal Puget Sound Bull Trout

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect coastal Puget Sound bull trout because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect bull trout because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where bull trout are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, bull trout.

9.2 Georgia Basin Bocaccio and Yelloweye Rockfish

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect coastal Georgia Basin bocaccio and yelloweye rockfish and their critical habitat because of a slight reduction in benthic and epibenthic macroinvertebrates prey. However, the project is not likely to adversely affect rockfish due to a lack of preferred habitat and a very unlikely presence during the work window. Therefore, the effect determinations are that this project **may affect, but is not likely to adversely affect** bocaccio and yelloweye rockfish and their critical habitat.

9.3 Humpback Whale

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect humpback whales because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect humpback whales because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where humpback whales are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, humpback whales.

9.4 Marbled Murrelet

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect marbled murrelets because sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect marbled murrelets because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where marbled murrelets are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, marbled murrelets.

9.5 Puget Sound Chinook

Based on the guidance and definitions provided above and the previously discussed project effects, the project **is likely to adversely affect** Puget Sound Chinook salmon and their critical habitat due to an increase in nearshore overwater coverage disorienting, schooling, and altering migration patterns of juveniles and a slight reduction in benthic and epibenthic macroinvertebrates prey. However, the long-term effect of overwater structures will be minimized with the addition of grating. Additionally, overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

9.6 Puget Sound Steelhead Trout

Based on the guidance and definitions provided above and the previously discussed project effects, the project **is likely to adversely affect** Puget Sound steelhead trout due to a slight reduction in benthic and epibenthic macroinvertebrates prey. However, overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

9.7 Southern Resident Killer Whale

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect Southern Resident Killer Whales and their critical habitat because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. But the project is not likely to adversely affect Southern Resident Killer Whales and their critical habitat because temporary sound levels that exceed disturbance criteria will only occur within Gig Harbor, where Southern Resident Killer Whales are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect** Southern Resident Killer Whales and their critical habitat.

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APPENDIX I – ESSENTIAL FISH HABITAT ASSESSMENT

ESSENTIAL FISH HABITAT ASSESSMENT

Action Agency: U.S. Army Corps of Engineers

Project Name: Ancich Waterfront Park Commercial Fishing Homeport

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies, such as the USACE, to consult with NOAA Fisheries on activities that may adversely affect essential fish habitat (EFH). The EFH provision aims to identify and protect habitats for federally managed fish species covered under Fishery Management Plans. The federally managed species that are documented in Gig Harbor include species from the following fisheries: Coastal Pelagic, Groundfish, and Salmonids (Table 11). For further discussion on the effects of the proposed action and conservation measures, please refer to the Biological Assessment.

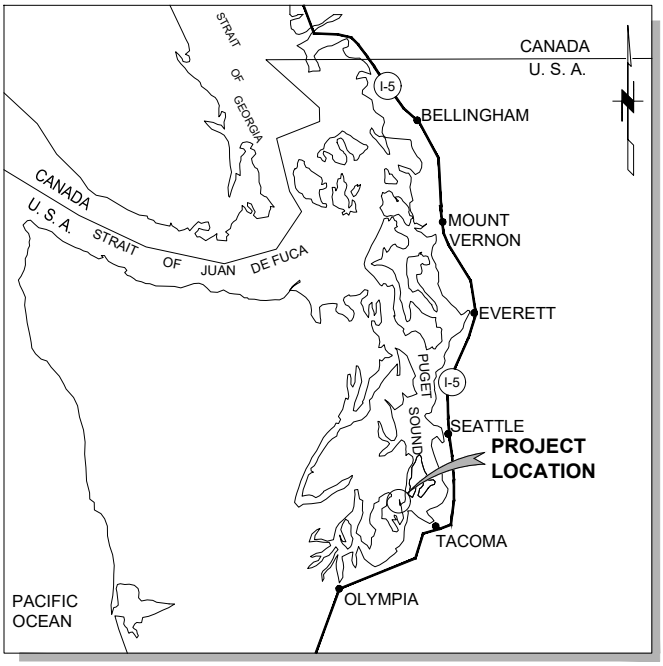
Table 1. Essential Fish Habitat Species Documented in Gig Harbor

Coastal Pelagic Species	
Chub Mackerel, *Scomber japonicas*	Northern Anchovy, *Engraulis mordax*
Jack Mackerel, *Trachurus symmetricus*	Pacific Sardine, *Sardinops sagax*
Market Squid, *Loligo opalescens*	
Groundfish Species	
Arrowtooth Flounder, *Atheresthes stomias*	Pacific Sanddab, *Citharichthys sordidus*
Big Skate, *Raja binoculata*	Petrale Sole, *Eopsetta jordani*
Lingcod, *Ophiodon elongatus*	Quillback Rockfish, *S. maliger*
Black Rockfish, *Sebastes melanops*	Redbanded Rockfish, *S. babcocki*
Bocaccio, *S. paucispinis*	Redstripe Rockfish, *S. proriger*
Brown Rockfish, *S. auriculatus*	Rex Sole, *Errex zachirus*
Butter Sole, *Pleuronectes isolepis*	Rock Sole, *Pleuronectes bilineata*
Cabezon, *Scorpaenichthys marmoratus*	Rosethorn Rockfish, *S. helvomaculatus*
California Skate, *R. inornata*	Rosy Rockfish, *S. rosaceus*
Canary Rockfish, *S. pinniger*	Rougheye Rockfish, *S. aleutianus*
China Rockfish, *S. nebulosus*	Sablefish, *Anoplopoma fimbria*
Copper Rockfish, *S. caurinus*	Sand Sole, *Psettichthys melanostictus*
Curlfin Sole, *Pleuronichthys decurrens*	Sharpchin Rockfish, *S. zacentrus*
Darkblotched Rockfish, *S. crameri*	Shortspine Thornyhead, *Sebastolobus alascanus*
Dover Sole, *Microstomus pacificus*	Spiny Dogfish, *Squalus acanthias*
English Sole, *Pleuronectes vetulus*	Splitnose Rockfish, *S. diploproa*
Flathead Sole, *Hippoglossoides elassodon*	Spotted Ratfish, *Hydrolagus colliei*
Greenstriped Rockfish, *S. elongatus* s	Starry Flounder, *Platichthys stellatus*
Jack Mackerel, *Trachurus symmetricus*	Stripetail Rockfish, *S. saxicola*
Kelp Greenling, *Hexagrammos decagrammus*	Tiger Rockfish, *S. nigrocinctus*
Longnose Skate, *R. rhina*	Vermilion Rockfish, *S. miniatus*
Pacific Cod, *Gadus macrocephalus*	Yelloweye Rockfish, *S. ruberrimus*
Pacific Hake, *Merluccius productus*	Yellowtail Rockfish, *S. flavidus*
Pacific Ocean Perch, *S. alutus*	
Salmonid Species	
Chinook Salmon, *Oncorhynchus tshawytscha*	Puget Sound Pink Salmon, *O. gorbuscha*
Coho Salmon, *O. kisutch*	

Conclusion and Effect Determination

Based on the guidance above and the previously discussed project effects and conservation measures, this project will have **no adverse effect** on designated EFH in the project and action areas

APPENDIX II – DRAWING SET



VICINTIY MAP

NTS



PROJECT LOCATION

NTS

CITY OF GIG HARBOR

MAYOR - TRACIE MARKLEY

PUBLIC WORKS DIRECTOR - JEFF LANGHELM

CITY ADMINISTRATOR - TONY PIASECKI (INTERIM)

CITY COUNCIL MEMBERS -
JENI WOOCK, ROGER HENDERSON
BRENDA LYNKINS, MARY BARBER
ROBYN DENSON, LE RODENBERG
SETH STORSET

VERTICAL DATUM CONVERSION

(FEMA BFE = +14 NAVD 88)

MLLW	NGVD 29	NAVD 88	DATUM PLANE
+17.00	+10.54	+14.00	– FEMA FLOOD ELEV.
+13.80	+7.34	+10.80	– HIGHEST OBSERVED
+13.59	+7.13	+10.59	– HIGH TIDE LINE
+12.80	+6.34	+9.80	– ORDINARY HIGH WATER
+11.80	+5.34	+8.80	– MEAN HIGHER HIGH WATER
+11.00	+4.54	+8.00	– MEAN HIGH WATER
+6.90	+0.44	+3.90	– MEAN TIDE LEVEL
+2.80	-3.66	-0.20	– MEAN LOW WATER
0.00	-6.46	-3.00	– MEAN LOWER LOW WATER
-4.30	-10.76	-7.30	– LOWEST OBSERVED

SOURCES:
MLLW: US ARMY CORPS OF ENGINEERS' SOUTH PUGET SOUND REGION TIDAL DATUM #72 - GIG HARBOR.

NGVD 29 AND NAVD 88: NOAAs VERTICAL DATUM TRANSFORMATION (v3.3) AT JERISICH DOCK (LAT 47.3310, LONG -122.5816).

HTL: HTL IS 13.59' MLLW, BASED IN THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

SHEET INDEX

No.	SHEET TITLE
1	TITLE SHEET AND SHEET INDEX
2	EXISTING AND DEMOLITION PLAN
3	OVERALL SITE PLAN
4	PROPOSED DOCK SOUTH PLAN VIEW
5	PROPOSED DOCK NORTH PLAN VIEW
6	PROPOSED SECTION VIEW
7	GANGWAY SECTION
8	FLOAT SECTION

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PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
1. CAROLYN S. BERG
2. FRISBIE ROBERT G.
3. TARABOCHIA DOMINICH J JR. AND ANCICH LLC
4. PUBLIC RIGHT OF WAY

CITY OF GIG HARBOR ANCICH WATEFRONT PARK - COMMERCIAL FISHING HOMEPORT

TITLE SHEET AND SHEET INDEX

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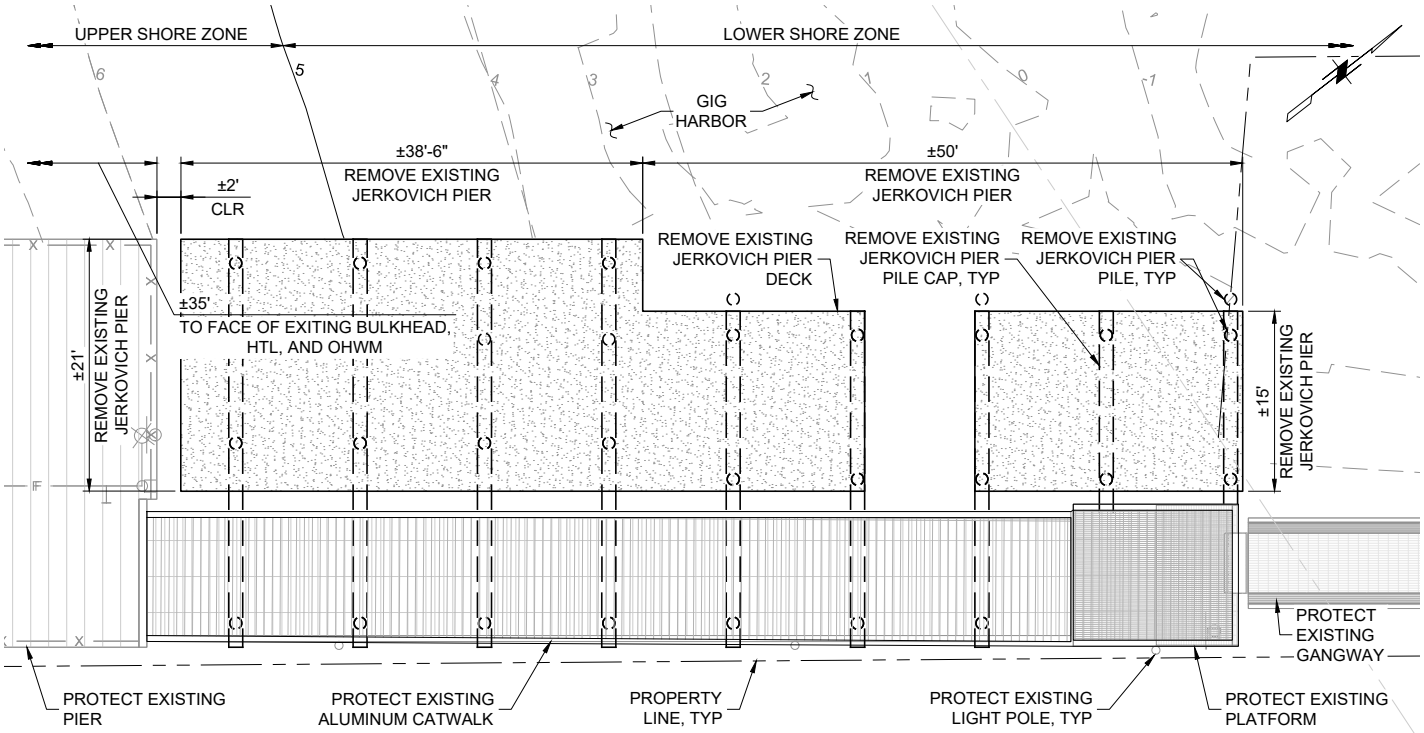
PROPOSED: INSTALL A NEW GANGWAY AND FLOATING DOCK WITH UTILITIES FOR COMMERCIAL FISHING VESSELS.

IN: GIG HARBOR
AT: GIG HARBOR, WA,
PIERCE COUNTY
S5, T21N, R2E

APPLICATION BY:
CITY OF GIG HARBOR

SHEET: 1 OF 8 **DATE:** March 2022

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CITY OF GIG HARBOR ANCICH WATEFRONT PARK - COMMERCIAL FISHING HOMEPORT EXISTING AND DEMOLITION PLAN (MITIGATION PER NWS-2021-187)

8 4 0 8 16
SCALE IN FEET

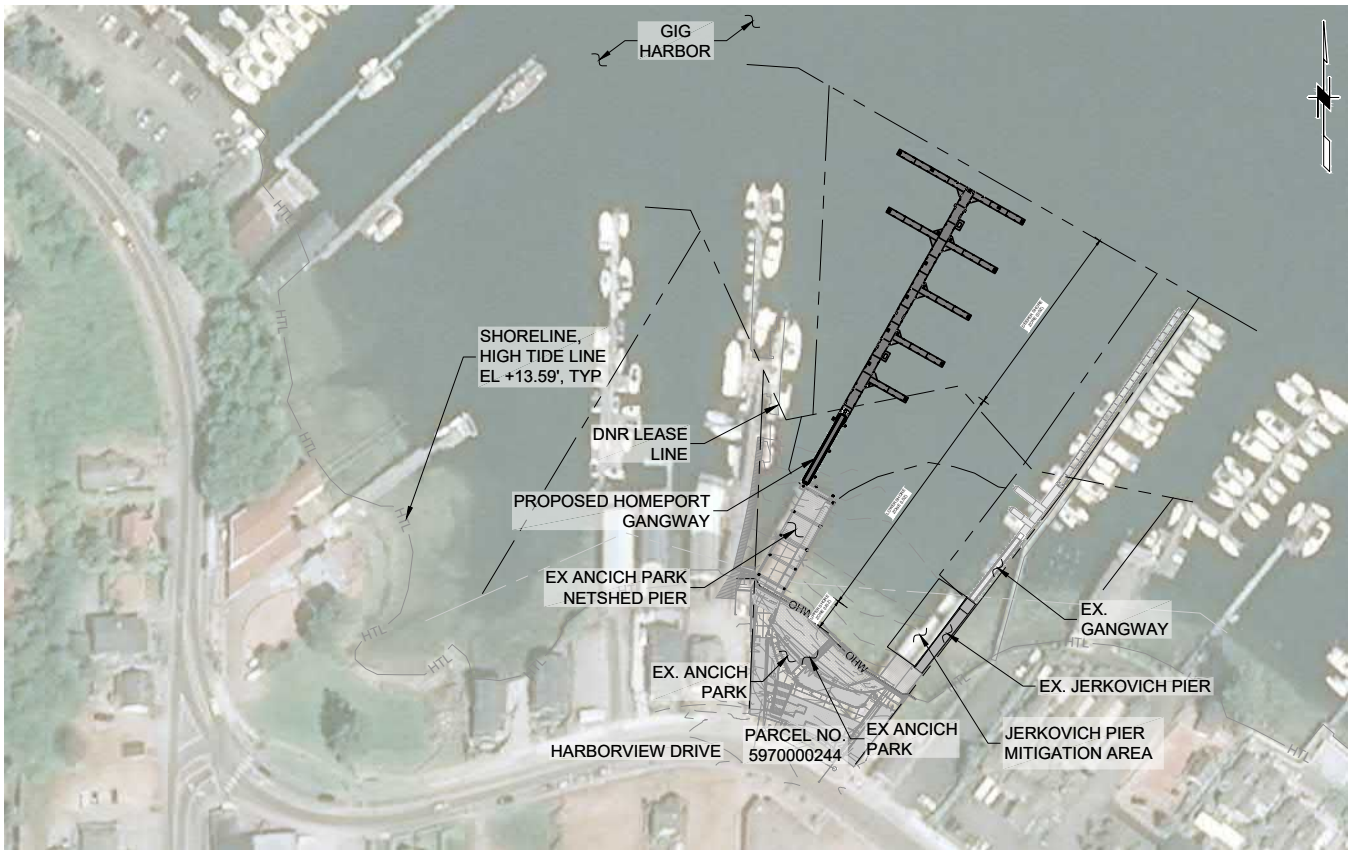
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PROJECT INFORMATION

PROJECT ADDRESS
3589 HARBORVIEW DR, GIG HARBOR, WA 98332

PARCEL NO.
5970000244, WM-ZONING (HR)

LEGAL DESCRIPTION
SECTION 05 TOWNSHIP 21N RANGE 02E QUARTER 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

PROJECT NOTES
NO PROPOSED SITE GRADING OR EARTHWORK.
SEE SITE SPECIFIC GEOTECH REPORT BY PND ENGINEERS SEPTEMBER 2016.
PROJECT IS IN SHORELINE JURISDICTION.
CONTRACTOR TO PROTECT EXPOSED SOILS DURING CONSTRUCTION.
ALL EQUIPMENT ACCESS WILL BE VIA BARGE.

DATUMS
ALL HORIZONTAL CONTROL IS RELATIVE TO EXISTING STRUCTURES.
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

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CITY OF GIG HARBOR
ANCICH WATEFRONT PARK - COMMERCIAL FISHING HOMEPORT

OVERALL SITE PLAN

100 50 0 100 200
SCALE IN FEET

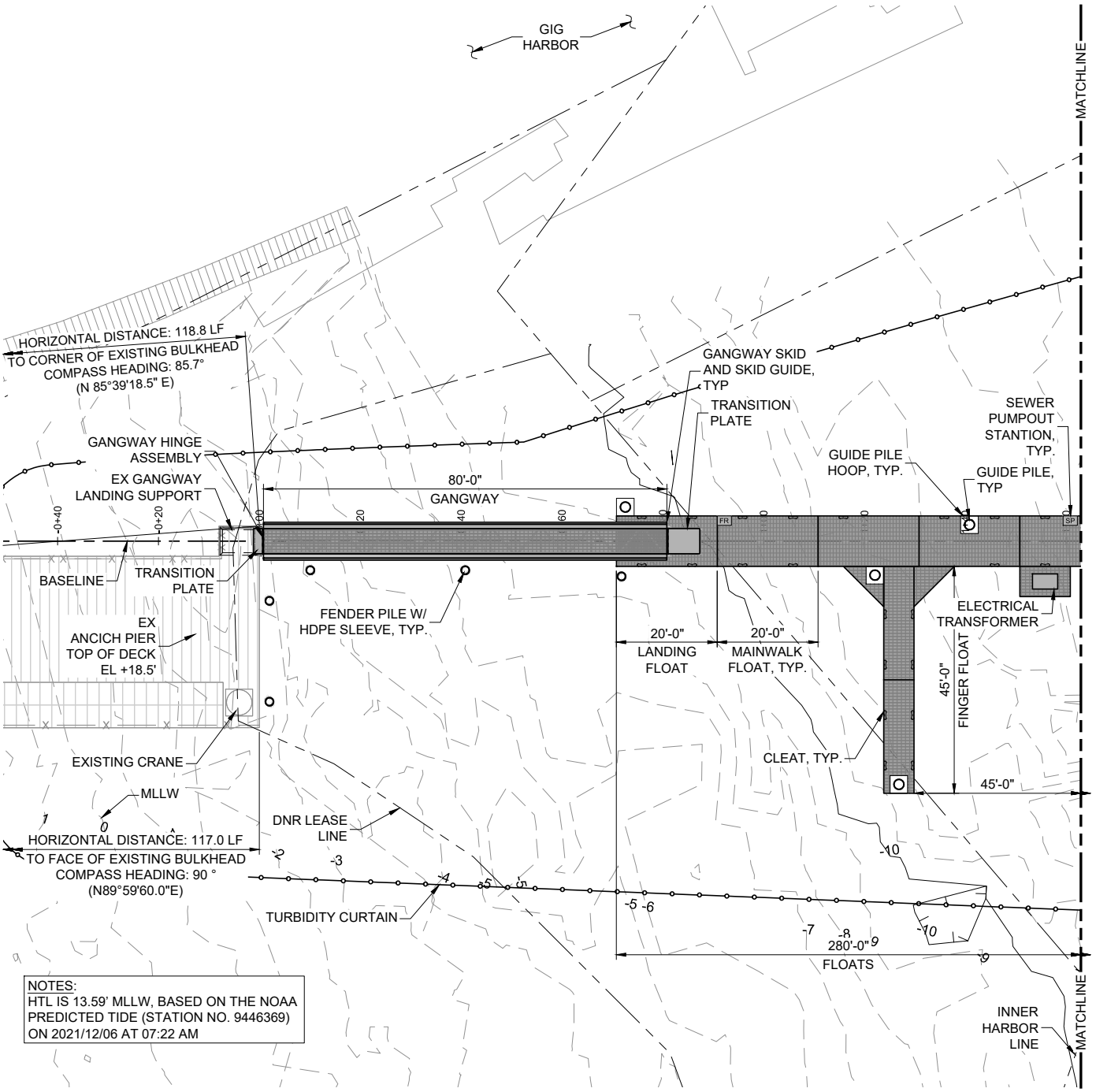
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AT: GIG HARBOR, WA,
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SHEET: 3 OF 8 **DATE:** March 2022

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CITY OF GIG HARBOR
ANCICH WATEFRONT PARK - COMMERCIAL FISHING HOMEPORT

PROPOSED DOCK
SOUTH PLAN VIEW

15 7.5 0 15 30
SCALE IN FEET

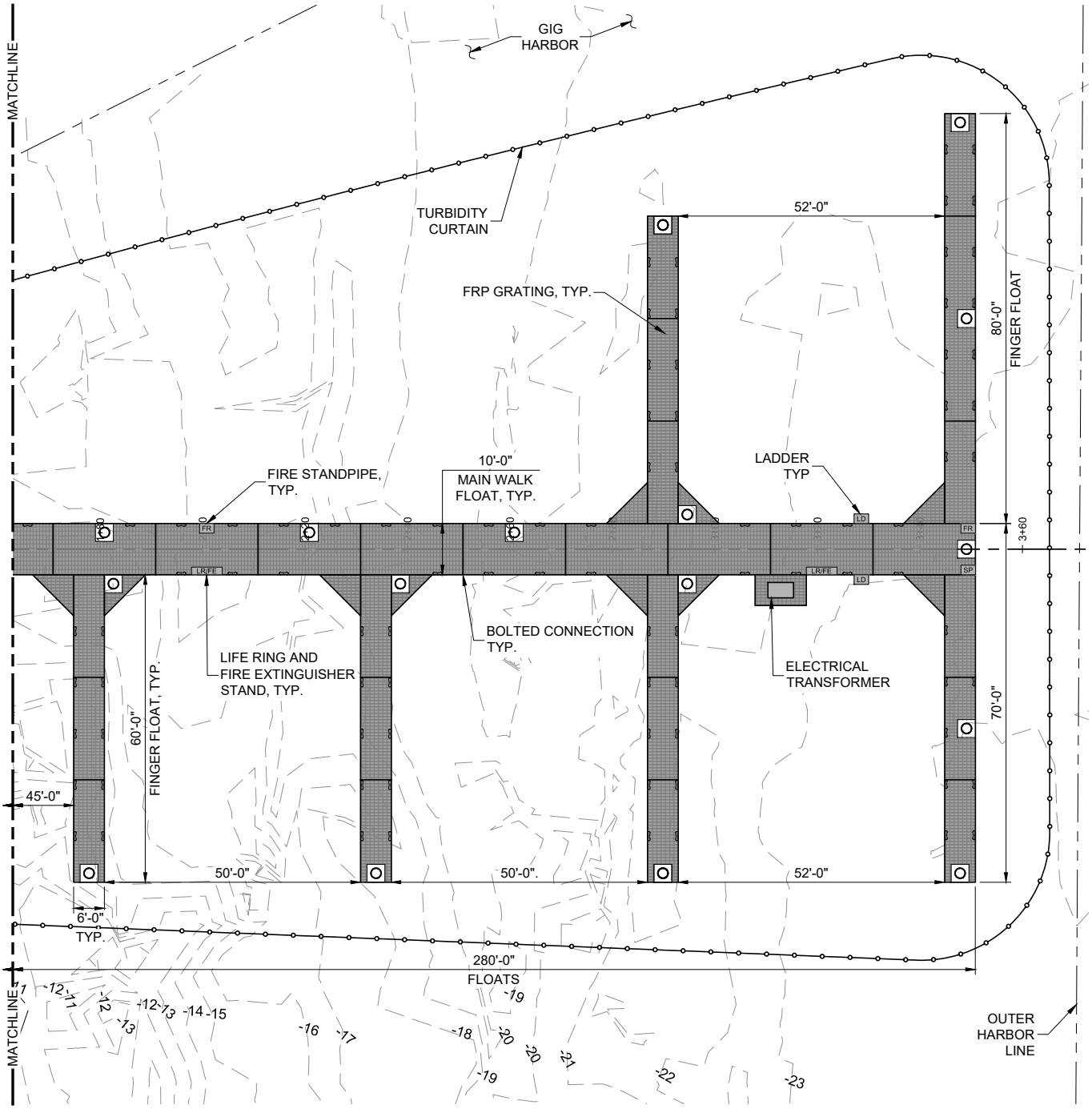
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SHEET: 4 OF 8 **DATE:** March 2022

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CITY OF GIG HARBOR ANCICH WATEFRONT PARK - COMMERCIAL FISHING HOMEPORT

PROPOSED DOCK NORTH PLAN VIEW

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SCALE IN FEET

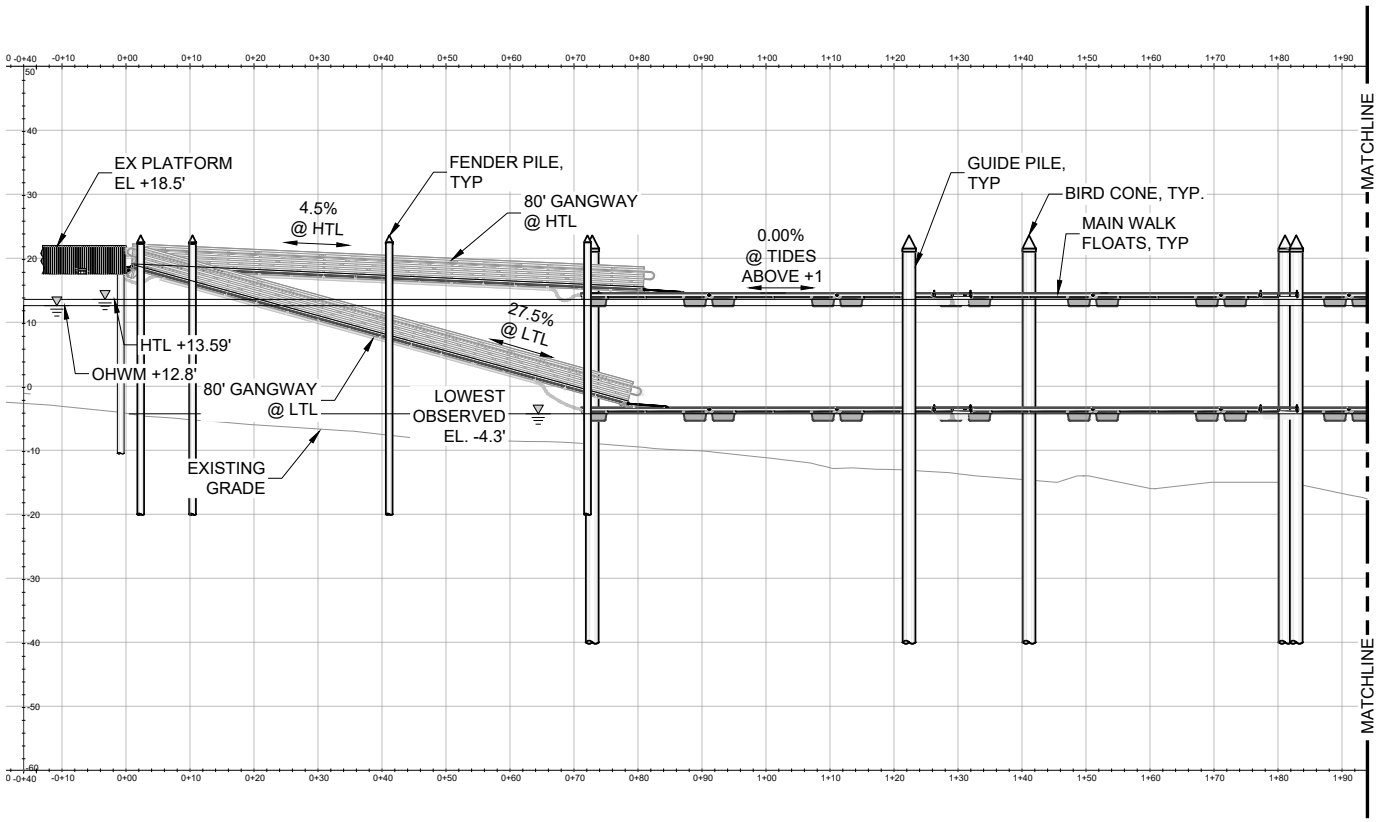
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NOTES:
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM

FINGER FLOAT PILES NOT SHOWN FOR CLARITY

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PROPOSED SECTION VIEW

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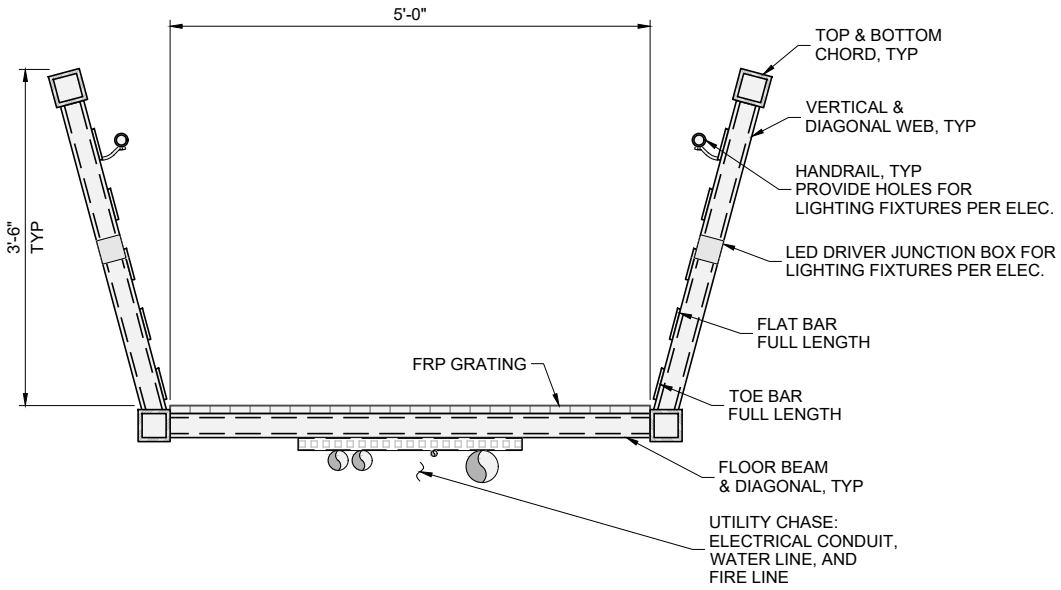
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GANGWAY SECTION

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GANGWAY SECTION

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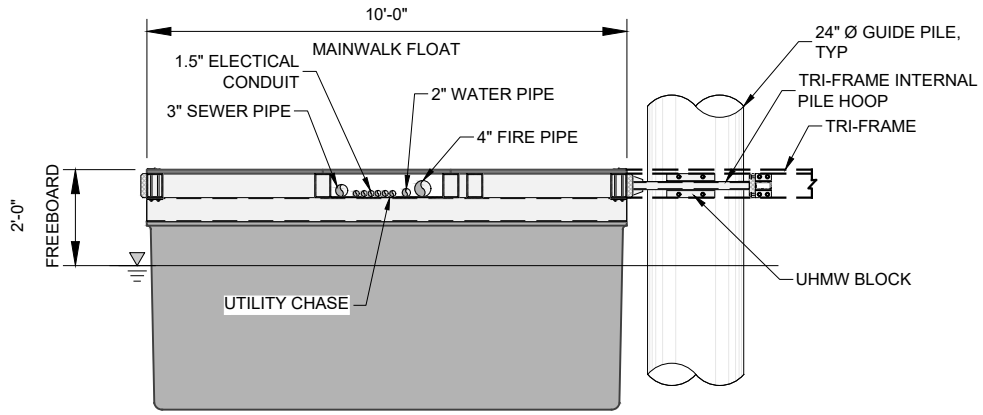
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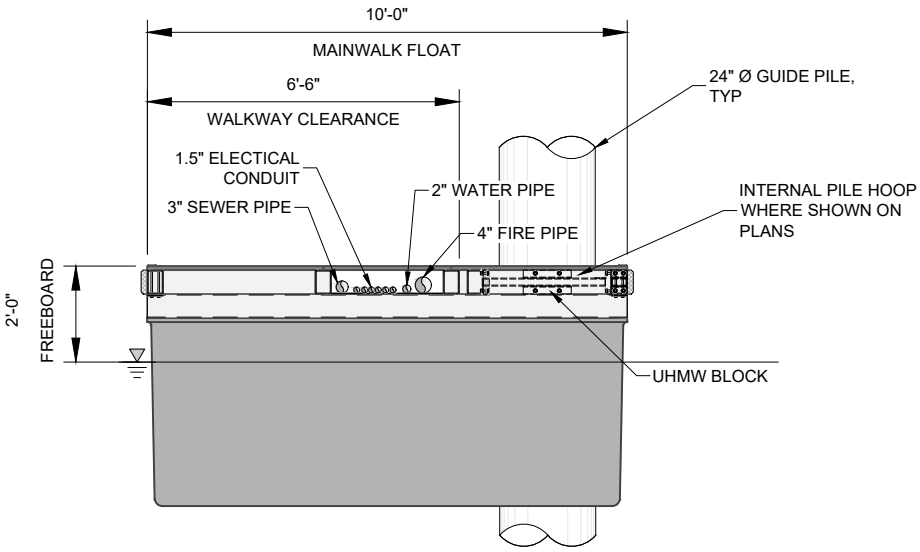
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FINGER FLOAT SECTION



MAINWALK FLOAT SECTION

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FLOAT SECTION

2 1 0 2 4
SCALE IN FEET

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APPENDIX III – MARINE MAMMAL MONITORING PLAN

Marine Mammal Monitoring Plan

for the

The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

March 2022

Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Davido Consulting Group, Inc.
9706 4th Ave NE, Suite 300
Seattle, Washington 98115
(206) 523-0024
www.dcgengr.com



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Table 2. Pile Removal and Installation Summary 4
Table 3. Overwater Coverage Summary 4
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LIST OF ATTACHMENTS

Attachment I Marine Mammal Observation Sheet
Attachment II Hydroacoustic Monitoring Results for the Ancich Park Project (NWS-2016-733)

ACRONYMS AND ABBREVIATIONS

3MP	Marine Mammal Monitoring Plan
dB	Decibel
ESA	Endangered Species Act
NMFS	National Marine Fisheries Service
SEL	Sound Exposure Level
USACE	United States Army Corps of Engineers

1 INTRODUCTION

This marine mammal monitoring plan (3MP) has been prepared to fulfill National Marine Fishery Service (NMFS) requirements to monitor for marine mammals in the defined area of potential waterborne sound effects form the Ancich Waterfront Park Commercial Fishing Homeport Project for the City of Gig Harbor. The proposed project is located within Gig Harbor, Washington. This project will include the installation of a commercial fishing dock at Ancich Waterfront Park. This project does have the potential to impact species of marine mammals that are protected under Marine Mammal Protection Act in the Action Area as defined by the Biological Assessment (Table 1).

Table 1. Marine Mammal Species Likely to Occur in the Project Area

Common Name	Scientific Name
Dall's Porpoise	*Phocoenoides dalli*
Harbor Porpoise	*Phocoena phocoena*
Harbor Seal	*Phoca vitulina*
Humpback Whale	*Megaptera novaeangliae*
Southern Resident Killer Whale	*Orca orcinus*
Stellar Sea Lion	*Eumetopia jubatus*

2 PROJECT DESCRIPTION

Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The human powered craft dock is currently under construction (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet. The proposed project consists of the elements listed below, followed by summary tables (Tables 2 and 3).

1. **Float Installation**
   A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

   - (1) 45' Finger Float
   - (5) 60' Finger Floats
   - (1) 80' Finger Float

   (20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. **Gangway Installation**
   An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. **Safety and Utilities**
   Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. **Mitigation**
   Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See Mitigation Plan for details.

Table 2. Pile Removal and Installation Summary

Structure	Piles Removed	Piles Installed	Net Change in Number of Piles
Jerkovich Pier	32 creosote-treated timber piles, 12-inch diameter	0	-32
Floats	0	20 steel piles, 24-inch diameter	+20
Gangway	0	5 steel piles, 12-inch diameter	+5
Total	**-32**	**+25**	**-7**

Table 3. Overwater Coverage Summary

Structure	Net Change in Overwater Coverage
Jerkovich Pier Demolition	–1,558.5 SF (solid asphalt decking)
Gangway Installation	+527 SF (grating 45% net open area) (area not including overlap with float)
Floats Installation	+5,854 SF (grating 45% net open area))
Total	**+4,822.5 SF**

2.1 Project Sequence

All in-water work will avoid the annual outmigration of juvenile salmonids and the breeding season for marbled murrelets. Per WAC Tidal Reference Area 4, the expected in-water work window is August 1 through February 15 of any year. The project is expected to occur over the course of one in-water work window, from August 1, 2023, to February 15, 2024. The City proposes the following general construction sequence, subject to adjustment by the construction contractor's means and methods:

1. Mobilize equipment
2. Demolish asphalt decking, caps, and stringers of Jerkovich Pier
3. Pull up to 10 timber piles per day with a vibratory hammer until all 32 are removed
4. Drive up to 10 steel guide piles per day with vibratory and impact hammer until all 25 are in place
5. Install floating dock
6. Install finger floats
7. Install gangway
8. Install utilities and dock accessories
9. Demobilize equipment

3 METHODOLOGY

A boat-based, trained observer will be located on-site before and during in-water construction activity at a location appropriate for monitoring marine mammals within and approaching the action area. During observation periods, the observer will continuously scan the area for marine mammals using binoculars and the naked eye. The observer will collect data including, but not limited to, environmental conditions (e.g., sea state, precipitation, glare), marine mammal sightings (e.g., species, numbers, location, behavior, responses to construction activity), and construction activity at the time of sighting. The observer will conduct observations, meet training requirements, fill out data forms, and report findings in accordance with this report. The observer will implement mitigation measures including monitoring of the proposed action area and shutdown procedures. They will be in continuous contact with the construction personnel via two-way radio. A cellular phone with local service will be used as back-up communications and for safety purposes. An employee of the construction contractor will be identified as the main point of contact for the observer.

3.1 Observer Qualifications

Monitoring will be conducted by one qualified, trained marine mammal observer. According to NOAA, the minimum qualifications for marine mammal observers are the following:

1. Visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars or spotting scope may be necessary to correctly identify the target.
2. Advanced education in biological science, wildlife management, mammalogy or related fields (Bachelor's degree or higher is preferred), or equivalent Alaska Native traditional knowledge.
3. Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
4. Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
5. Sufficient training, orientation or experience with vessel operation and pile driving operations to provide for personal safety during observations.
6. Writing skills sufficient to prepare a report of observations. Reports should include such information as the number, type, and location of marine mammals observed; the behavior of marine mammals in the area of potential sound effects during construction; dates and times when observations and in-water construction activities were conducted; dates and times when in-water construction activities were suspended because of marine mammals, etc.
7. Ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine mammals observed in the area, as needed.

3.2 Data Collection

The observer will use a Marine Mammal Observation Sheet (Attachment 1) to record any sightings. Observation sheets will be used to record the following:

- Date and time that permitted construction activity begins and ends;
- Weather parameters (e.g. percent cloud cover, percent glare, visibility) and sea state with the Beaufort Wind Force Scale;
- Species, numbers, and, if possible, sex and age class of observed marine mammals;
- Marine mammal behavior patterns observed, including bearing and direction of travel;
- Location of marine mammal, including distance from observer and distance from pile driving activities to marine mammals
- Record of whether an observation required the implementation of mitigation measures, including shutdown procedures and the duration of each shutdown; and
- Other human activity in the area.

3.3 Equipment

The following equipment will be required to conduct observations for this project:

- Appropriate personal protective equipment including, but not limited to, a life jacket and hearing protection;
- Portable radios and headsets for the observer to communicate with the contractor;
- Cellular phone for backup to radio communications;
- Contact information for the contractor, the U.S. Army Corps of Engineers (USACE) representative, and National Marine Fisheries Service (NMFS) representative;
- Daily tide tables for the project area;
- Watch or chronometer;
- Binoculars (quality 10x42 or better) or spotting scope (20-60 zoom or better) with a built-in rangefinder or reticles (or separate rangefinder);
- Hand-held GPS device, map and compass, or grid map to record locations of marine mammals;
- Copies of MMMP and/or other relevant permit requirement specifications in sealed clear plastic cover; and
- Notebook with pre-standardized Marine Mammal Observation Sheets on waterproof paper.

3.4 Observer Monitoring Location

In order to effectively monitor the pile driving and pulling shutdown zone (Figure 2), the marine mammal observer will be positioned at the best practical vantage point. The observer will be placed at a suitable location in order to observe the action area. This will allow for both an unobstructed view of the pile driving and pulling and the shutdown zone. The monitoring position of the observer will have the following characteristics:

- Unobstructed view of pile being driven;
- Unobstructed view of all water within the shutdown zone;
- Clear view of pile-driving operator or construction foreman in the event of radio failure; and
- Safe distance from pile driving activities in the construction area.

The observer will record all marine mammal sightings, provided it does not interfere with their effectiveness at carrying out the shutdown procedures. If visibility does not allow for full clearance of the observation zone, additional stations or vantage points will be sought.

The marine mammal shutdown zone (action area) will be monitored 30 minutes prior and during all pile driving activity. Pile driving and pulling will not be initiated or will be temporarily suspended until the animals have moved outside of the action area (as determined in Table 4) on its own.



Figure 1. Action Area in Red

Table 2 below calculates the disturbance zone based on the practical spreading loss model, per the interim guidance. The practical spreading loss model was used to determine the zones in which pinnipeds and cetaceans have the potential to face behavioral disturbance from underwater noise. The formula for calculating practical spreading loss underwater is:

$$TL = GL \times \log \frac{R_1}{R_0}$$

Where TL is the transmission loss (dB) (i.e., the disturbance zone), GL is the geometric loss coefficient (15 is the only valued allowed without real-time sound source verification), R_1 is the range to the target sound pressure level (m), and R_0 is the distance from the source of the initial measurement (m).

Table 4. In-water Injury and Disturbance Zones

Pile Size	Duration[1]	Source Levels (10m from pile)[2]			Injury Zones and Acoustic Thresholds (meters)				*Marine Mammal Disturbance Zone (meters)*
		Peak (dB)	RMS (dB)	SEL (dB)	Low-Frequency Cetacean	Mid-Frequency Cetacean	Phocid Pinniped	Otariid Pinniped	
Vibratory Hammer									
Thresholds (dB SEL)					**199**	**198**	**201**	**219**	**120[3]**
12" (nom) steel	8 hrs/day	171	155	155	10.9	1.0	6.6	0.5	232.6
24" (nom) steel	8 hrs/day	181	153	153	11.1	1.0	6.8	0.5	51.3
12" timber	8 hrs/day	172	162	--	31.9	2.8	19.4	1.4	681.3
Impact Hammer									
Thresholds (dB SEL)					**183**	**185**	**185**	**203**	**160**
12" (nom) steel	1,500 strikes/ day	192	169[4]	--	32.9	1.2	17.6	1.3	39.8
24" (nom) steel	1,500 strikes/ day	195	168[4]	164	39.3	1.4	21.0	1.5	39.3

3.5 Monitoring Techniques

The observer will collect sighting data and behaviors of marine mammal species that are spotted in the action area during periods of pile driving or pulling. The observer will have no other construction-related tasks while conducting monitoring. Observation necessitates that daylight is sufficient for the observer to visualize the entirety of the action area, so observations will commence and complete during daylight hours. Monitoring of shutdown and observation zones will take place from 30 minutes prior to initiation and through all pile driving and removal activities.

3.5.1 Pre-Activity Monitoring

The following survey methodology will be implemented prior to commencing permitted activities:

- Prior to the start of permitted activities, the observer will monitor the shutdown and monitoring zones for 30 minutes. They will ensure that no marine mammals are present within action area before permitted activities begin.
- The shutdown zone will be cleared when marine mammals have not been observed within zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft start cannot proceed until the animal has left the zone or has not been observed for 20 minutes.
- When the action area is cleared, the observer will radio the contractor. Permitted activities will not commence until the contractor receives verbal confirmation the zones are clear.

[1] Assumes up to 10 piles per day can be pulled or installed.
[2] Source levels were obtained from Caltrans (2015).
[3] Ambient background levels at the site were recorded at 134.5 dB (Attachment II).
[4] WSDOT (2018) has established an average reduction of 8-32 dB RMS with the use of a bubble curtain. To be conservative, a reduction of 8 dB RMS was used for impact pile driving only.

- In case of fog or reduced visibility, the observer must be able to see the entirety of shutdown and monitoring zones before permitted activities can be initiated.

3.5.2 Soft Start Procedures

When all marine mammals in the disturbance zone have been documented, the observer will instruct the contractor will instruct the contractor to initiate the ramp-up procedure for pile driving. This procedure consists of initiating the vibratory hammer for 15 seconds at reduced energy followed by a 1-minute waiting period. This procedure will be repeated for a total of three sequences before vibratory pile driving begins. For impact driving, a ramp up procedure of three soft starts using the weight of the hammer followed by a 1-minute waiting period will be required prior to driving. For impact driving to proof the piles, a ramp up procedure of three soft starts using the weight of the hammer will be required prior to driving.

3.5.3 During-Activity Monitoring

The following survey methodology will be implemented during permitted activities:

- The observer will search continuously for marine mammals with the naked eye and with the aid of binoculars and spotting scopes.
- All observations of marine mammals will be documented in a Marine Mammal Observation Sheet.
- When a marine mammal is observed, its location will be determined using a rangefinder to verify distance and a GPS or compass to verify heading.

3.5.4 Shutdown

If any cetaceans or pinnipeds are observed within the disturbance zones, or if entry into the zone is eminent, pile-driving activities will be immediately halted. The observer will immediately radio to alert the contractor, requiring an immediate “all-stop”. Pile-driving activities will resume when the animal has voluntarily left the disturbance zone or 20 minutes have passed without re-sighting the animal in the zone. The observer will continue to monitor the animal after it has left the disturbance zone.

3.5.5 Breaks in Work

During an in-water construction delay, the shutdown and monitoring zones will continue to be monitored. No exposures will be recorded for permitted species in the monitoring zone if there are no concurrent permitted construction activities.

If permitted activities cease for more than 30 minutes and monitoring has not continued, pre-activity monitoring and soft start procedures must recommence. This includes breaks due to scheduled or unforeseen construction practices or breaks due to permit-required shutdown. Following 30 minutes of monitoring, work can begin according to the pre-activity monitoring protocols. Work cannot begin if an animal is within the shutdown zone or if visibility is not clear throughout the shutdown and monitoring zones.

4 REPORTING

4.1 Modifications

In the event that the City needs to modify terms of this MMMP, the USACE and NMFS representatives will be promptly contacted for discussion of the requested modification.

4.2 Injured or Dead Marine Mammals

If the City finds an injured, sick, or dead marine mammal, a county representative will notify the NMFS representative and provide the species or description of the animal(s), condition of the animal or carcass, location, date and time of first discovery, observed behaviors (if alive), and photo or video (if available).

- If marine mammal's condition is a direct result of the project, notification will be made and work will stop until NMFS is able to review the circumstances of the prohibited take.
- If cause of death is unclear, the City shall immediately report the incident. Construction activities may continue while NMFS reviews the circumstances of the incident and makes a final determination on the cause of the reported injury or death. NMFS will work with the City to determine whether additional mitigation measures or modifications to the activities are appropriate.

Care should be taken in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death, if that occurs. In preservation of biological materials from a dead animal, the finder (i.e., marine mammal observer) has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed.

4.3 Monitoring Report

A monitoring report will be prepared upon request by the USACE and/or NMFS representatives.

5 REFERENCES

Buehler, David P.E.; Oestman, Rick; Reyff, James; Pommerenck, Kieth; Mitchell, Bill (2015). Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared for the California Department of Transportation, Sacramento, California. Cited as Caltrans (2015).

National Oceanic and Atmospheric Administration (2021). *Guidance for Developing a Marine Mammal Monitoring Plan*. NOAA Fisheries. Accessed February 2022. https://www.fisheries.noaa.gov/alaska/endangered-species-conservation/guidance-developing-marine-mammal-monitoring-plan#more-information

ATTACHMENT I – MARINE MAMMAL OBSERVATION SHEET

Marine Mammal Observation Record Form

Observer(s):

Project Name:

Boat Name/Location:

Time Effort Initiated:

Date:

Time Effort Completed:

Page_____of_____Pages

Sighting #	Sighting Time	Latitude	Longitude	Species	# of Animals	Distance/ Direction to Animal	Behavior Type(s)	Const Type	Distance to Pile	Weather Cond	Beauford Wind Scale	Notes

Behavior Codes

Code	Behavior	Definition
BR	Breaching	Leaps clear of water
CD	Change Direction	Suddenly changes direction of travel
CH	Chuff	Makes loud, forceful exhalation of air at surface
DI	Dive	Forward dives below surface
DE	Dead	Shows decomposition or is confirmed as dead by investigation
DS	Disorientation	An individual displaying multiple behaviors that have no clear direction or purpose
FI	Fight	Agonistic interactions between two or more individuals
FO	Foraging	Confirmed by food seen in mouth
MI	Milling	Moving slowly at surface, changing direction often, not moving in any particular direction
PL	Play	Behavior that does not seem to be directed towards a particular goal; may involve one, two or more individuals
PO	Porpoising	Moving rapidly with body breaking surface of water
SL	Slap	Vigorously slaps surface of water with body, flippers, tail etc.
SP	Spyhopping	Rises vertically in the water to "look" above the water
SW	Swimming	General progress in a direction. Note general direction of travel when last seen [Example: "SW (N)" for swimming north]
TR	Traveling	Traveling in an obvious direction. Note direction of travel when last seen [Example: "TR (N)" for traveling north]
UN	Unknown	Behavior of animal undetermined, does not fit into another behavior
AWA	Approach Work Area	Approaching the work area
LWA	Leave Work Area	Leaving the work area
Pinniped only		
EW	Enter Water (from haul out)	Enters water from a haul-out for no obvious reason
FL	Flush (from haul out)	Enters water in response to disturbance
HO	Haul out (from water)	Hauls out on land
RE	Resting	Resting onshore or on surface of water
LO	Look	Is upright in water "looking" in several directions or at a single focus
SI	Sink	Sinks out of sight below surface without obvious effort (usually from an upright position)
VO	Vocalizing	Animal emits barks, squeals, etc.
Cetacean only		
LG	Logging	Resting on surface of water with no obvious signs of movement

Visibility (NOTES SECTION)

Code	Distance Visible
B	Bad (<0.5km)
P	Poor (0.5 – 0.9km)
M	Moderate (0.9 – 3km)
G	Good (3 - 10km)
E	Excellent (>10km)

Attenuation Type (NOTES SECTION)

Code	Activity Type
SS	Soft Start
BC	Bubble Curtain
DE	Delay onset of In-Water Work
SD	Shut Down In-Water Work

Sighting Cues (NOTES SECTION)

Code	Distance Visible
BL	Blow
BO	Body
BR	Breach
DF	Dorsal Fin
SA	Surface Activity
OTHR	Other

Beaufort Wind Scale

Beaufort Number (Wind Force)	Wind Velocity (Knots)	Wind Description	Sea Conditions
0	<1	Calm	Smooth and mirror like
1	1-3	Light Air	Scaly ripples, no foam crests
2	4-6	Light Breeze	Small wavelets, glassy, no breaking
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps
4	11-16	Moderate Breeze	Small waves, numerous whitecaps

Construction Type

Code	Activity Type
V	Vibratory Pile Driving
I	Impact Pile Driving
ST	Stabbing
NOWC	No Over-Water Construction
NONE	No Construction
OTHR	Other

Marine Mammal Species

Code	Marine Mammal Species
CSL	California Sea Lion
DP	Dall's Porpoise
GW	Gray Whale
HP	Harbor Porpoise
HS	Harbor Seal
HW	Humpback Whale
KW	Killer Whale
MW	Minke Whale
SST	Steller Sea Lion

Weather Conditions

Code	Weather Condition
S	Sunny
PC	Partly Cloudy
L	Light Rain
R	Steady Rain
F	Fog
OC	Overcast
SN	Snow
HR	Heavy Rain

ATTACHMENT II – HYDROACOUSTIC MONITORING RESULTS FOR THE ANCICH PARK PROJECT (NWS-2016-733)

UNDERWATER SOUND LEVELS ASSOCIATED WITH PILE DRIVING DRING ANCICH PARK RESTORATION PROJECT GIG HARBOR, WASHINGTON



January 26th, 2018

For:

P|N|D Engineers, Inc.
Seattle, Washington

By:

Delphis Technical Support and Solutions, LLC.
13332 69th DR SE
Snohomish, WA 98296

DTSS Project No. DTSS 201710

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Appendices
(At end of text)

Title

A. **Output Plots for Individual Pile Driving Events**

B. **Hydro Acoustic Monitoring Data Sheet**

C. **Photos - Ancich Park Pile Driving – January 26th, 2018**

UNDERWATER SOUND LEVELS ASSOCIATED WITH PILE DRIVING DRING ANCICH PARK RESTORATION PROJECT

January 26th, 2018

Executive Summary

Four 24-inch diameter piles were monitored for noise generated while driving piles as part of the Ancich Park and Restoration Project on January 26th, 2018. These piles were driven into the sediment using impact pile driving methods. Where practical, the piles were driven using a vibratory hammer to reduce the number of blows needed to proof the piles. Piles monitored on January 26th had previously been driven into their respective positions and near embedment depth of 30-feet using a vibratory hammer. They required the impact driving to drive the piles approximately 1-foot to achieve the design compression capacity of 400 kips. All in-water activity was mitigated using a single-level bubble curtain. The cSEL did not exceeded the limit of 204 dB re 1 $\mu Pa^2 \cdot sec$ at 10-meters as NMFS directed for this site. Underwater acoustic measurements were recorded in mid-water depth as close to possible to 10-meters and concurrently at approximately 20-meters (or closer) from the pile being driven. The maximum cSEL recorded was 200 dB re 1 $\mu Pa^2 \cdot sec$ during 73 blows over 110 seconds on Pile C1. The highest peak SPL recorded from all pile driving events was 205.9 dB re 1 µPA while driving Pile C1 as measured from 10-meters. The total allowable daily blow count for this site is 750. Total Blow Count monitored for this report for impact pile driving was 227 plus seven (7) soft start blows. Approximately 350 blows were made throughout the day to include proofing piles in shallower, intertidal zone requiring about 20 blows each to drive them at least 1-foot (on-site engineer). No marine animals or stressed fish were observed near the pile driving activity.

1.0 INTRODUCTION

The project area is located within Gig Harbor in southern Puget Sound as shown in Figure 1. The Ancich Park Site is being developed from its current condition to a landscaped park featuring public boat storage, bathrooms, utilities, lighting, and landscaped as part of the Upland Park Improvements and Netshed Restoration Project currently underway by the City of Gig Harbor. In this process approximately (139) 12-inch creosote covered timber piles will be removed. The Ancich Pier will be demolished and replaced with new materials including steel piles and timber planks. Ten 24-inch new steel foundation piles will be driven. In this process approximately thirty-nine 12-inch creosote covered timber piles will be removed. Additionally, because the new piles will be steel, less piles will be installed than currently exist. Delphis Technical Support and Solutions, LLC (DTSS) was contracted by P|N|D Inc. to monitor acoustic levels produced while driving 24-inch diameter piles at the site. This technical report presents the results of underwater sound levels and ancillary metrics measured during the driving of four (4) 24-inch diameter steel pipe piles as part of the Ancich Pier on January 26th, 2018 using a Delmag-32 impact hammer.

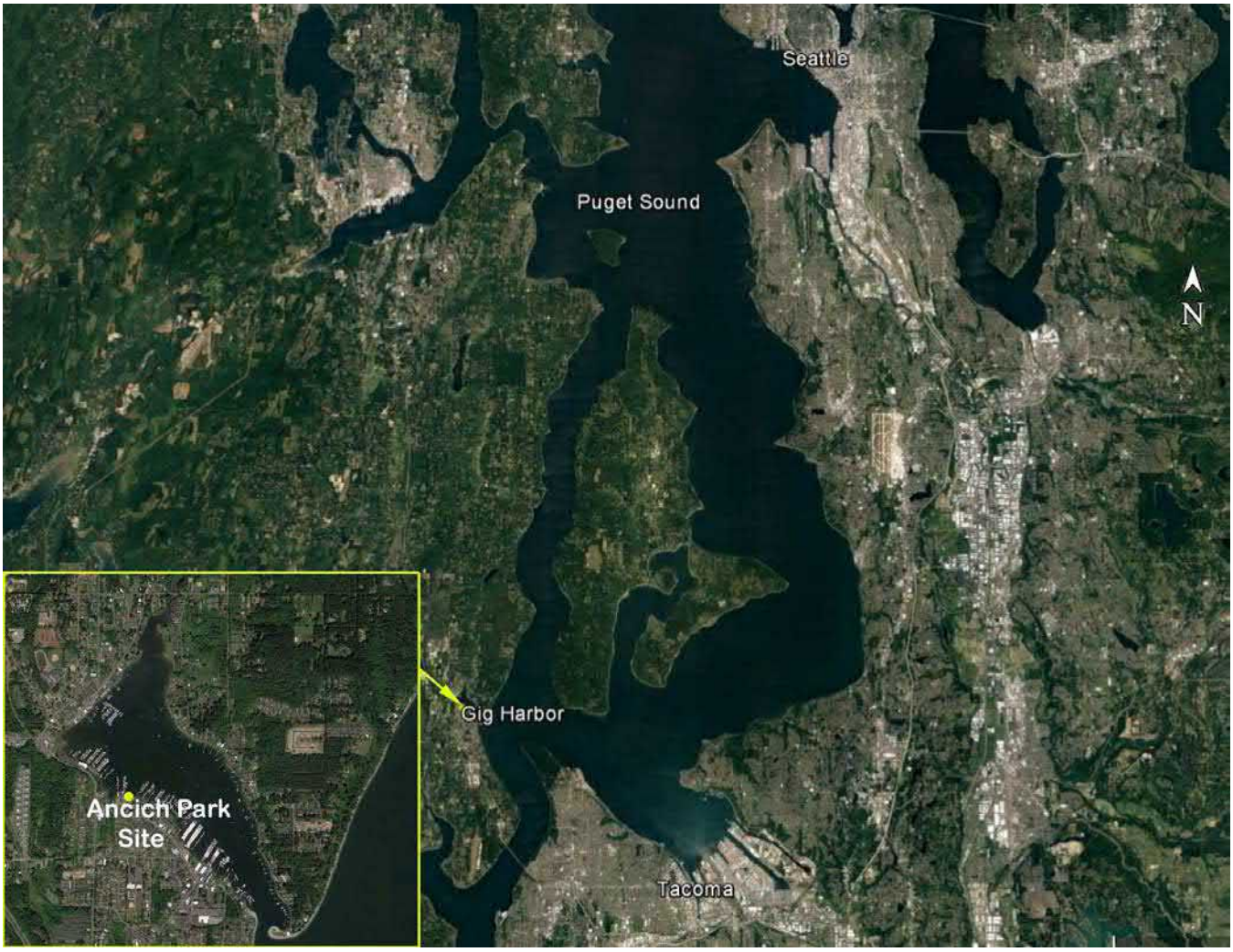


Figure 1 Ancich Park - Project location.

1.1 Characteristrics and Metrics of Underwater Sound

Several descriptors are used to describe underwater noise metrics. Two common descriptors are the instantaneous peak sound pressure level (SPL) and the Root Mean Square (RMS) pressure level during the impulse wave. For this monitoring effort, the following standard metrics have been used for reporting received sound pressure levels from impulsive pile-driving noise ancillary metrics unique to each site and each blow (see ANSI S1.1-1994).

Peak Pressure

The peak pressure is the instantaneous maximum or minimum overpressure observed during an impulsive event. This report presents this metric in Pascals (Pa) or decibels (dB) referenced to a pressure of 1 micropascal (dB re: 1 μPa).

The equation to calculate the sound pressure level in water is:

Sound Pressure Level (SPL) = 20 log (p/pref), where pref is the reference pressure

Root Mean Squared (RMS)

The RMS level is the square root of the squared pressure values divided by the duration. This level, presented in dB re: 1 μPa, is the mean square pressure level of the pulse (or overall duration). It has been used by National Marine Fisheries Service (NMFS) in criteria for judging impacts to marine mammals from underwater impulse-type sounds.

$RMS_{90\%}$ Sound Pressure Level

This metric is defined as the root-mean-square sound pressure level over a period T90 of the impulse waveform that contains 90% of the pulse energy measured in dB re1 μPa. This project reports $RMS_{90\%}$ for the maximum and minimum impulse waveforms during a steady pile driving event as well as the duration of all of blows per pile (hammer reset time removed from record).

Sound Exposure Level (SEL)

SEL is often used as a metric for a single acoustic event and is often used as an indication of the energy dose. SEL is calculated by summing the cumulative pressure squared (p^2), integrating over time, and normalizing to the time over which the pulse or event occurred. For a single pulse, the sound exposure is defined as the integral of the squared sound pressure over the duration of the pulse event (see section 3.54 of ANSI S1.1-1994): The units for SEL are dB re: 1 micropascal-squared-sec (re 1 $\mu Pa^2 \cdot sec$).

cSEL

The relationship between the SEL and the peak pressure is not consistent between pile strikes or between different types of piles for a given pile driving operation. The SEL for each impulsive noise event can be aggregated by summation to calculate the total SEL (or Cumulative-SEL) for the entire exposure duration. This metric is used to describe the noise dose which considers not only the peak pressure but also the duration of the exposure. This project reports cSEL for the maximum and minimum impulse waveforms as well as the aggregated summation of all of blows per pile.

$cSEL_{90\%}$

This metric is defined as the cumulative sound exposure level level over a period T90 of the impulse waveform that contains 90% of the pulse energy. This project reports $cSEL_{90\%}$ for the maximum and minimum impulse waveforms during a steady pile driving event as well as the aggregated summation of all of blows per pile (hammer reset time removed from record).

Continuous Noise or Background Level

Broadband ambient (background) noise levels from this study have been reported in terms of the 1 minute average continuous sound level (1 minute *RMS* dB re 1 uPA).

Figure 2 shows time series plot of a typical (mitigated) impulse waveform generated from a single hammer blow with some of the metrics as they relate to it.

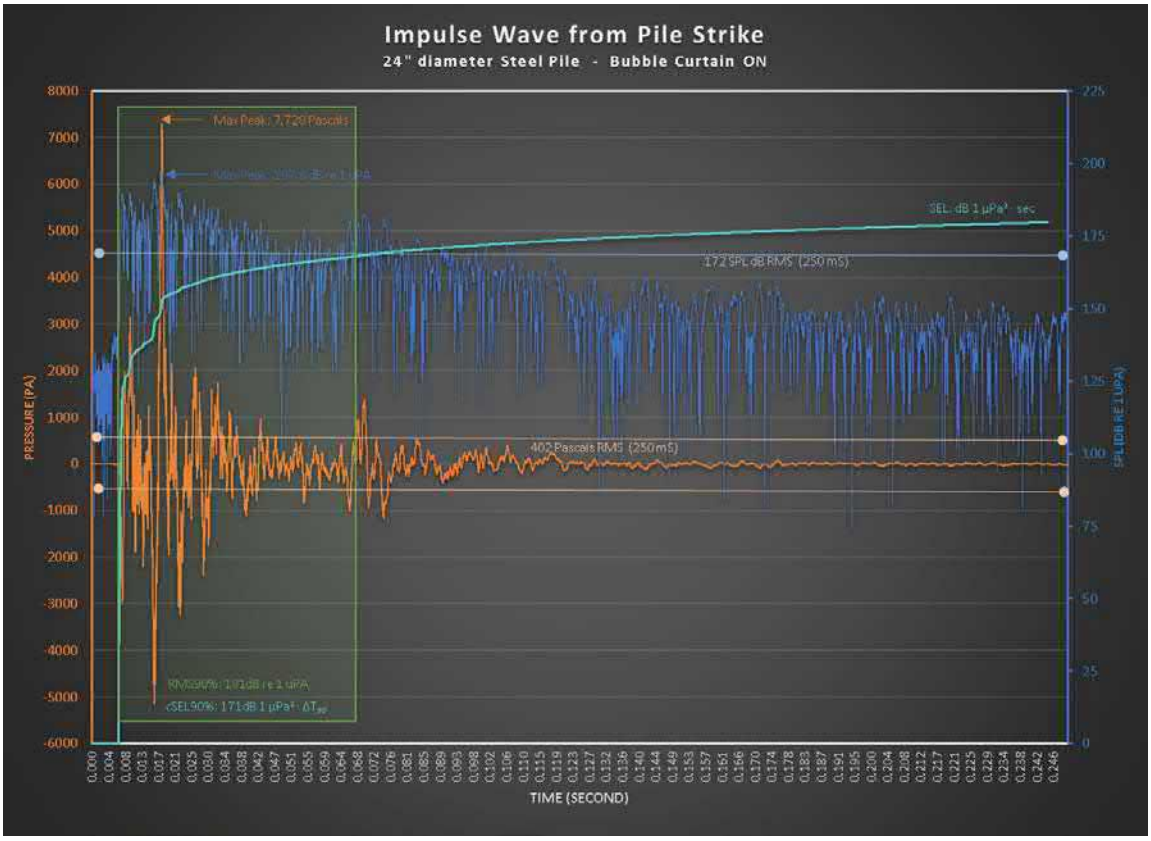


Figure 2 Measurements of an impulse wave associated with pile driving.

2.0 FIELD METHODS

2.1 Equipment

Acoustic Recording

Two (2) CR-1 hydrophones manufactured by Sensor Technology, LTD and assembled by Cetacean Research Technology were used to document the sound frequency spectrum and pressure levels generated by high impulse source levels such as those generated by the impact of the hammer on the pile transmitted through the water. These hydrophones were designed specifically with a 195 dB re 1v/mPa nominal sensitivity with overload pressure to 220 dB re 1mPa without the need for pre-amplification and calibrated over a frequency range of 10 Hz to 30 kHz. Each hydrophone has a maximum cable length of 30-meters.

The hydrophones were connected to their respective channels on a dual channel, DAQ-200 Precision Dynamic Signal Acquisition Interface manufactured by SpectraPLUS® interfaced directly into a field Toughbook laptop computer running SpectraPLUS-SC FFT Spectral Analysis System software.

Concurrent incoming analog signals are digitized from the hydrophone(s) and the real-time voltage signals are displayed on the computer as SPL and digitally stored for post-processing and analysis.

Note; this scope of work required the use of a hydrophone placed at 10-meters from the activity. A second hydrophone was placed at the same water depth at approximately twice the distance from the activity to observe any attenuation characteristics and to collect back-up data in case the primary hydrophone failed.

Positioning

A Bushnell Laser rangefinder was used to take a direct measurement from the pile to the monitoring location. Water depth was determined using the metered hydrophone anchor line as well as a CTD.

CTD Casts

A Hydrolab H20 equipped with conductivity, temperature, dissolved oxygen, turbidity and depth sensors was used to collect a profile of salinity/conductivity, temperature, and depth data to verify station depth and calculate the general speed of sound through the water column.

Air Measurements

A calibrated ExTech Type-II Sound Level Meter was used to record ambient air noise at the 10-meter location prior to pile driving, during vibratory pile driving, and during impact pile driving.

All equipment was mobilized, calibrated if required, and tested prior to their deployment to the site. The computer clock and CTD were coordinated to NIST time standard for Pacific Standard Time zone.

2.2 Site Overview

Ancich Park is located along the southern shore of Gig Harbor. Much of the area is restricted to public access due to the upland construction activity at the site. Arrangements were made to use the city skiff to record acoustic levels close to the pile from the water. However, a last-minute scheduling conflict arose limiting the amount of time the vessel operator could remain on site. Therefore, the best area to achieve a required distance of 10-meters from the hydrophone to the multiple pile driving events was along the starboard side of the contractor's barge while it was in engaged in the pile driving activity. Figure 3 shows the general hydrophone location relative to the four piles that were monitored (Google Earth image date 5/22/2017, does not show current condition of the site presently under construction). The barge provided better stability, shelter, and protection for the equipment than the open skiff, however, higher acoustic background levels are usually recorded so close to the barge. Typically, placing hydrophones at set distances are very opportunistic to get within the required distance and remain safe. The barge is restricted in its positioning and orientation while driving the piles due to depth or obstructions such as the previously installed rows of piles. Operating from the barge limited precise

placement of the near-field hydrophone at the desired 10-meter distance while measuring the acoustic levels produced from impact driving Piles C1 and B4. Note: Piles B1 thru B4 plus C1, and Piles A1 thru A5 had been previously driven close to their final penetration depth using a vibratory hammer on previous days and required approximately one-foot of impact hammering to proof the piles to their ratings. Both hydrophones were moved fore and aft along the side of the barge to attempt to achieve optimal ranges between the pile and the respective hydrophone. There were instances where line of sight between the hydrophone(s) and pile being driven may be obstructed by the new dock pilings. The seafloor slopes upward from about -4-feet MLLW to approximately +10-feet MLLW from the deeper C1 and A5 Piles to the shoreward B1 and A1 Piles (approximately 140-feet distance).



Figure 3 Ancich Pile Driving - Location of piles and hydrophones on barge.

Figure 4 shows the general layout of the deployed hydrophones with respect to the barge and piles during the monitoring. The depth of the hydrophone deployment location was sounded using the metered (1-ft increments) anchor line. The hydrophone mooring bracket was set at the desired mid-water elevation. To maintain a near constant orientation between the hydrophone and pile driving operation (no free turning, sagging, or strumming), the hydrophone is set at its vertical depth along the tight ¼" nylon-chord anchor line. With the top of the anchor tied to a fixed structure on the barge and the and weight on the bottom, the mooring bracket suspends the hydrophone perpendicularly, 1-ft away from the anchor line reducing any ringing or shading caused by suspension lines. Tension is checked periodically to compensate any change due to tide. The hydrophone is secure within the bracket and dampened from any contact of the hard surface using closed cell foam to prevent additional transient vibrations or signals transmitted thought the hard plastic from contaminating the data. Excess

hydrophone cable is placed into its foam case to isolate it from direct contact with the barge deck for similar reasons. The hydrophone cable is suspended from the surface and helps to maintain the orientation of the mooring bracket.



Figure 4 Hydrophone deployment and structures.

The near-field and far-field hydrophones are recorded concurrently on separate channels. The technician can observe the sound pressure levels and spectrum in real time on the monitor.

All impact pile driving was mitigated using a single-level bubble curtain expelling air at approximately 200 cfm.

2.3 Measurements

The technician would check the water level periodically to ensure the hydrophones were deployed at mid-water depth. Prior to starting any pile driving, the Contractor Lead would signal the acoustic technician they were ready. The technician would recheck the distance from pile to hydrophone was correct using the laser rangefinder then check the general area around each hydrophone for any debris or potential interference. The technician would start the recording just prior to the pile driving and before the bubble curtain was activated if possible to record the ramp up of activity from ambient to fully

active. The signals were monitored in real-time to ensure the hydrophones were collecting data at good levels (not over-pressure or under-pressure).

Each 24-bit, two channel recording had a sampling rate of 48,000 Hz (frequency limit 24,000 Hz) with an FFT size of 8192 samples. This provides a spectral resolution of 5.859 Hz.

Following the completion of the activity and shut down of the bubble curtain, the technician would stop the recording and quickly asses the general SPL of the activity as well as the cSEL to determine if additional mitigation was required. Data was saved and backed up on an external hard drive following each event.

2.4 Ancillary Measurements

Discrete air noise readings were taken at the 10-meter location with a Type-II Sound Level Meter to record the maximum A-weighted SPL from background, vibratory and impact pile driving. Results were recorded in logbook.

A CTD cast was conducted at the end of the day to collect a profile of salinity/ conductivity, temperature, and depth data to verify station depth and calculate the general speed of sound through the water column.

3.0 DATA PROCESSING

3.1 Signal Processing

All signals were recorded as broadband encompassing a frequency range from 11.7 Hz to 22.16 kHz. Most of the processing is performed in the field as the SpectraPLUS-SC FFT Spectral Analysis System software records and displays the data. Additional processing of each event included trimming each file to remove extra recording time such as the bubble curtain start up and soft start blows that are not included (per Engineer) as part of the blows per pile record or "event". From the trimmed record containing only the actual blows per pile, the maximum, minimum, and mean SPLs were extracted and plotted as a time series plot. SpectraPLUS-SC was used to determine the RMS and cSEL over the entire event.

The software was used to determine the T_{90} for each wave (approximately 45mS to 60mS) by trimming each pile strike impulse waveform per event to T_{90} and removing the hammer reset time (~1.4 seconds) between strikes then aggregated to determine $RMS_{90\%}$ and $cSEL_{90\%}$ for the entire event as well as the metrics from the maximum and minimum waveforms from each event. All data was processed as broadband between 12 Hz and 20 KHz.

Plots generated from the field data that include SPL amplitude as Linear and logarithmic times series plots as well as Spectrum and cSEL plots are included in Appendix A of this report.

4.0 RESULTS

4.1 Underwater Acoustic Results

Four (4) 24-inch piles were recorded overall that included that were driven using an impact hammer. All events were recorded on the near-field and far-field hydrophones. The time series plots in Figure 5 and Figure 6 summarize the Peak SPLs recorded for each strike during each event using an Impact Hammer.

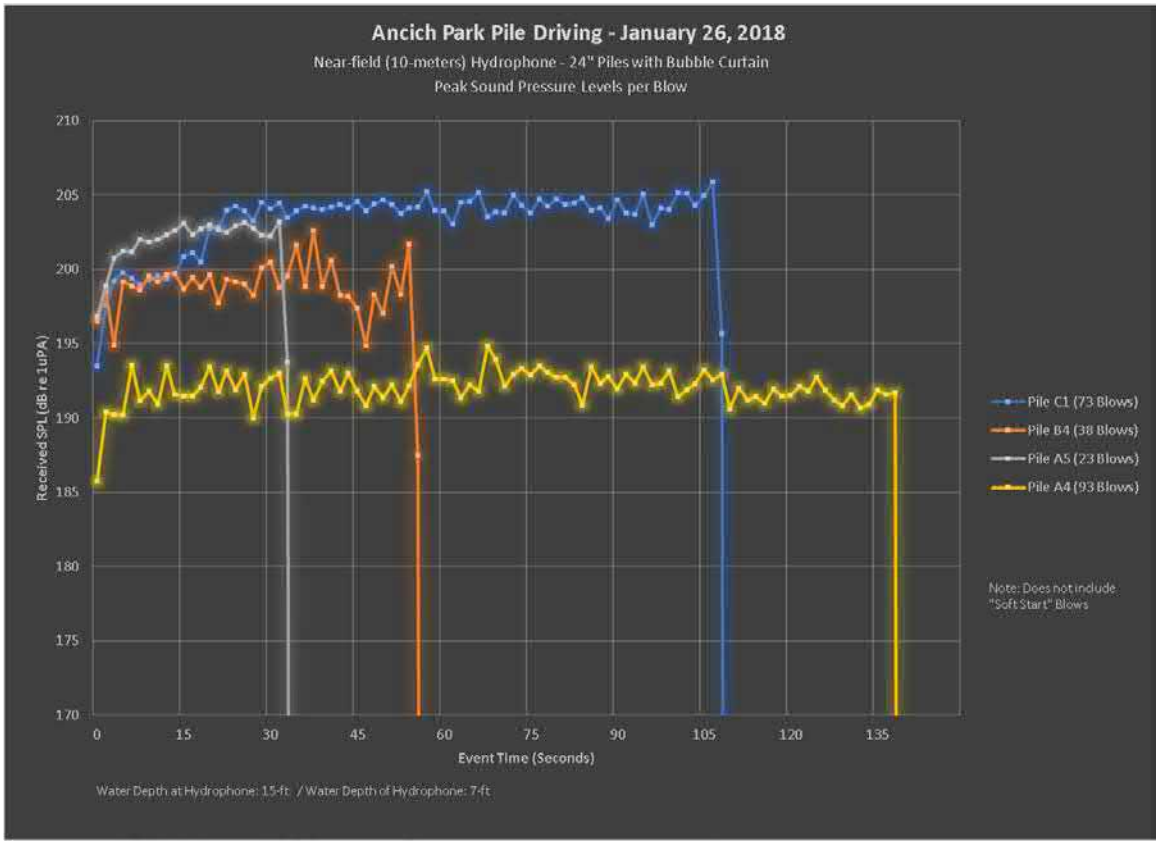


Figure 5 Peak SPLs at approximately 10-meters during impact pile driving.

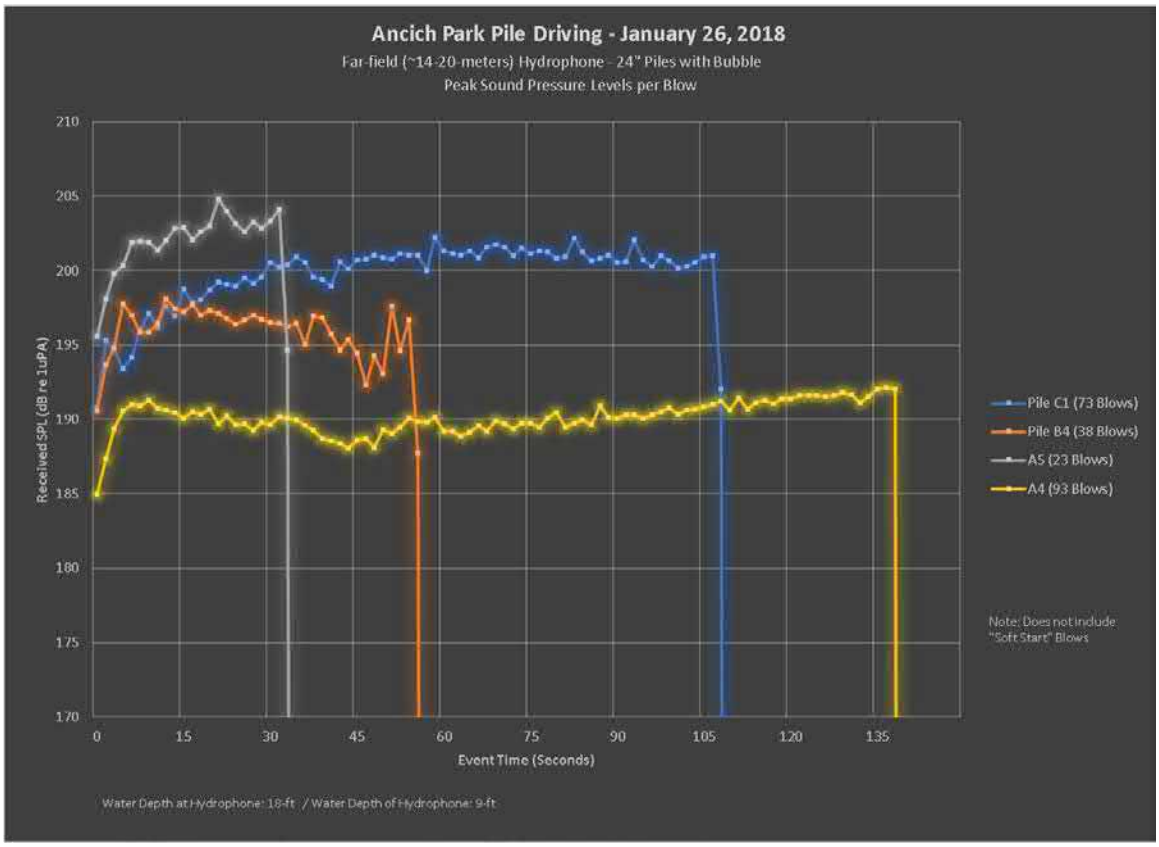


Figure 6 Peak SPLs at approximately 20-meters during impact pile driving.

An average background underwater noise level of 134.5 dB re 1 uPa (RMS over 1 Min) was measured on both hydrophones without any in-water work being performed. Since the hydrophone were placed near the barge at different locations, it is reasonable to assume they were receiving noise propagating from the barge at different levels. These levels were elevated to 138.3 dB re 1 uPa (1 Min) (RMS over 1 Min) when the bubble curtain was in operation. This also corresponded with the start-up of the hammer power-pack and air compressor on the barge deck and other activity such as crane operation.

The highest SPL recorded from the four measured pile driving events was 205.9 dB re 1 µPA while driving Pile C1 as measured from 10-meters. The SPL of the same strike was measured as 201.0 dB re 1 µPA at the far-field hydrophone and would be nearly consistent with the sound attenuation over a doubling distance assuming a loss of about 3 dB re 1 µPA using the cylindrical spreading law (TL=10 log(R); where TL is Transmission Loss and R is Range (m)) for shallow water. This trend is generally visible over most of the recorded events. Note: constant doubling distance hydrophone relationship could not be maintained during this monitoring effort. Obstructed line-of-sight from other structures such as installed piles, also affected received impulses on either hydrophone.

Out of the four (4) impact events, Pile C1 also produced the highest cSEL of 201.1 dB re 1 $\mu Pa^2 \cdot sec$ during 73 blows over 110 seconds.

The highest RMS recorded over the entire pile driving event was 176.2 dB re 1 uPA produced during 23 blows over 32 seconds while driving Pile A5.

The effectiveness of the bubble curtain used was probably limited in the shallow water as the SPLs are similar to 24-inch piles driven without mitigation. However, the cSEL did not exceeded the National Marine Fisheries Service cSEL limit of 204 re 1 $\mu Pa^2 \cdot$ sec per event requiring the Contractor to place a wood pad between the hammer and steel pile for all subsequent impact driving events. Extended out, continuous pile driving of C1 for approximately 9 minutes (approx. 350 blows) maintaining the same general levels would result in an cSEL of 204 dB re 1 $\mu Pa^2 \cdot$ sec. The allowable total daily blow count for this site is 750. Total Blow Count for impact pile driving was 227 plus seventeen (7) soft start blows. Piles B3 thru B1 and A3 thru A1 were embedded another 1-foot to their design capacity of 400 kips requiring approximately 20 blows each for another 120 blows this day. The shallowness of the water and positioning of the hydrophones on the barge would have resulted in poor data quality for those piles but they are not assumed to exceed the highest SPL recorded at C1 and its associated cSEL.

All reported acoustic metrics including SPLs produced during pile driving have been summarized and provided in Hydro Acoustic Monitoring Data Sheet in Appendix B.

4.2 Ancillary Data and Observations

Weather: Light rain occurred throughout the day.
Beaufort Scale: 0

Air Noise: Ambient On board barge, crane and compressors operating
66.7 dB-A weighted (Maximum over 60 seconds)
Impact Driving (steady at 10-meters, 24-inch pile)
102.0 dB-A weighted (Maximum over 60 seconds)

Visual Observations (Wildlife): No marine mammals were observed within the area.
No fish were observed around the piles before driving or distressed and on the surface following an event. Marine birds such as cormorants were observed diving near the marina to the east during pile driving operations and appeared to be unaffected by the noise levels.
The mitigation device (bubble curtain) was ON anytime during pile driving activities.

Conductivity, Temperature, Depth (CTD) Data: The water was well mixed from the surface to approximately 13-feet water depth due to the agitation created by the bubble-curtain. Water depth at the time of the CTD cast was 17-feet corrected to a station depth of -8-feet Mean Lower Low Water (MLLW) based on predicted tides for the area at the time of the cast. Temperature

ranged from 7.9° C on the surface to 8.8°C on the seafloor. Likewise, the salinity ranged from 24.4 PPT on the surface to 29 PPT near the seafloor. Figure 6 shows a plot of the sound velocity calculated from the salinity, temperature, and pressure data measured at the near field station using the Del Grosso sound velocity equation. Sound velocity at the hydrophone was approximately 4,850 ft/sec. Depending on the position of the near-field hydrophone relative to the pile, the time difference between the wave arrival from the near-field hydrophone and the same wave at the far-field hydrophone varied from 0.003 seconds to 0 .006 seconds, or 4.2-meters to 10.4-meters based on the sound velocity.

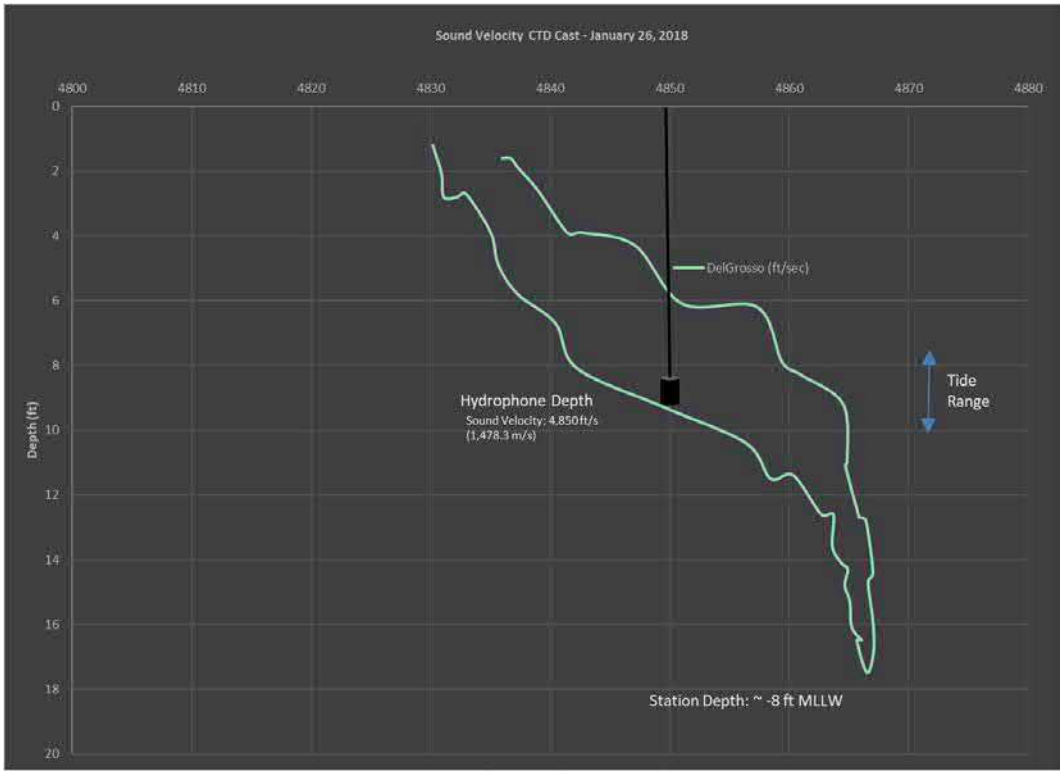


Figure 7 Sound velocity calculated from CTD cast values.

5.0 Data Quality

Collected data exceeded the scope of the monitoring effort for internal comparison and correlation. All data appeared to be within the general ranges expected produced during these types of pile driving operations. The data is of general good quality however is most likely contaminated slightly by the equipment and sounds generated by the barge. While the bubble curtain used did offer mitigation to some degree, the shallowness of the site and the low air delivery cfm does not really allow for a significant attenuation of the impulse wave. All acoustic data is archived for further review and processing.

APPENDIX A

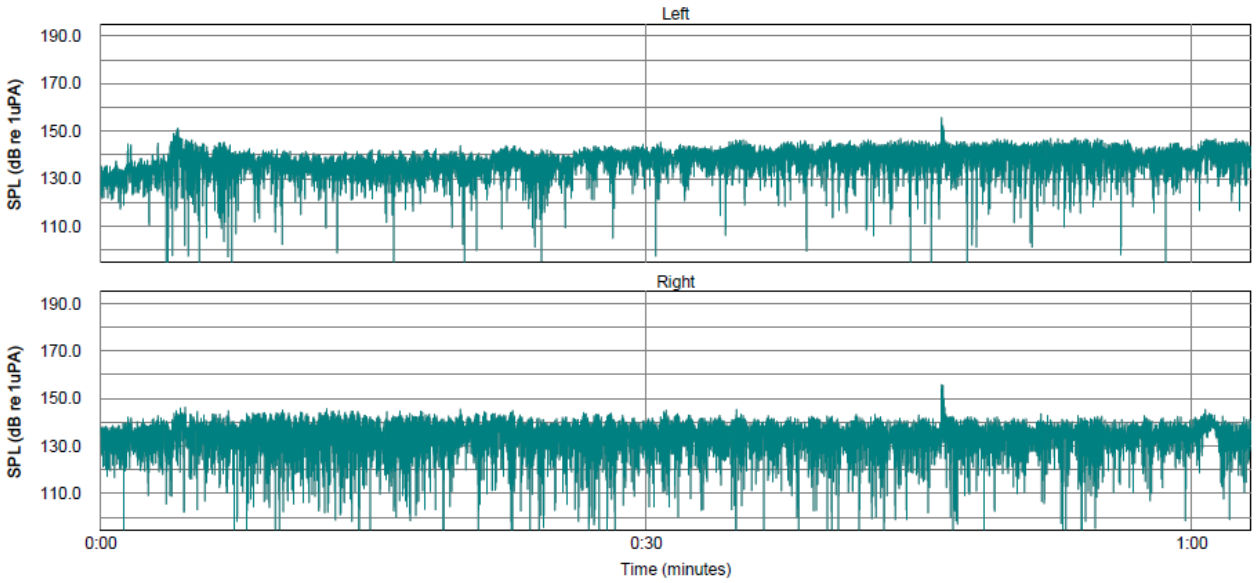
Output Plots for Individual Pile Driving Events

Time Series SPL (Amplitude Linear: Pascals)
Time Series SPL (Amplitude Logarithmic: dB re 1 µPa)
Time Series cSEL (re 1 $\mu Pa^2 \cdot sec$)
Spectrum (Average and Peak)

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Background

Printed By: SpectraPLUS-SC Sound Card Edition
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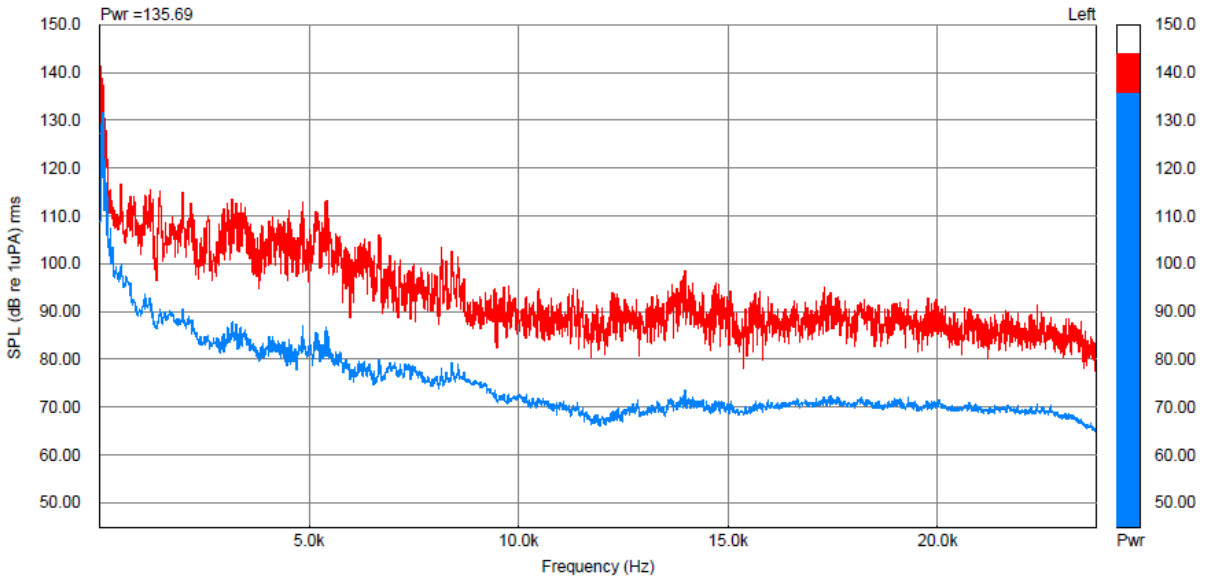
Background levels measured on barge. Machinery on.
Right Channel: 133.6 dB re 1 uPa RMS 1 minute
Left Channel: 135.7 dB re 1 uPa RMS 1 minute

Right Channel at 10- Meters
Left Channel at 20-meters

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Background - Spectrum

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Background levels measured on barge. Machinery on.

Right Channel: 133.6 dB re 1 uPa RMS 1 minute
Left Channel: 135.7 dB re 1 uPa RMS 1 minute

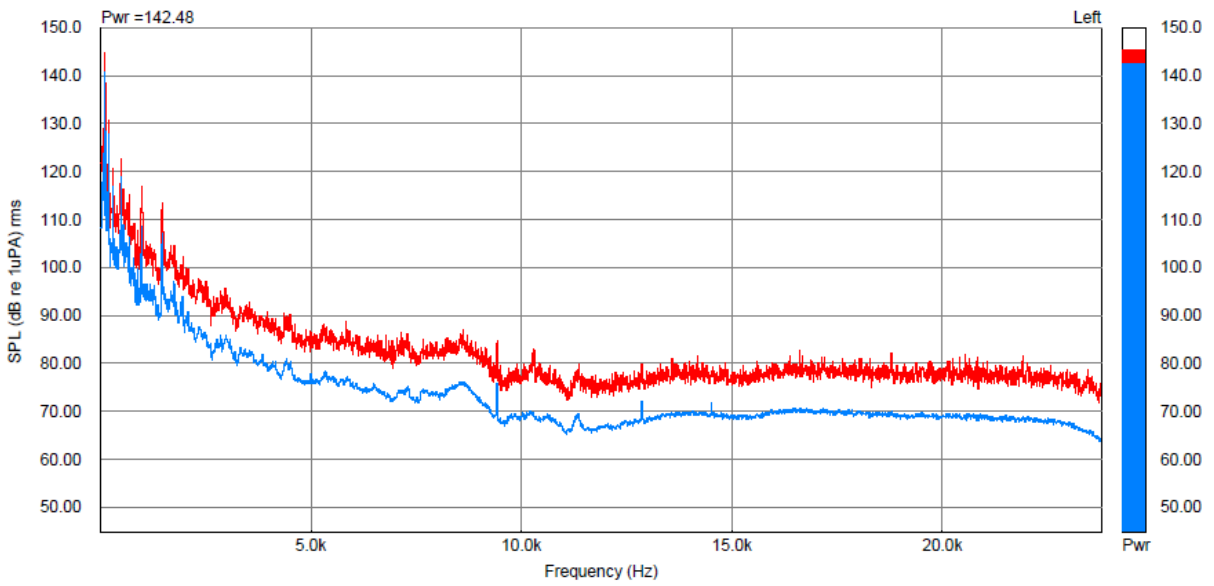
Hydrophone at mid-water depth

Red- Peak Hold over one minute
Blue- Average over one minute

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Bubble Curtain- Spectrum

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Bubble curtain levels measured on barge. Machinery on.

Right Channel: 142.1 dB re 1 uPa RMS 1 minute
Left Channel: 133.1 dB re 1 uPa RMS 1 minute

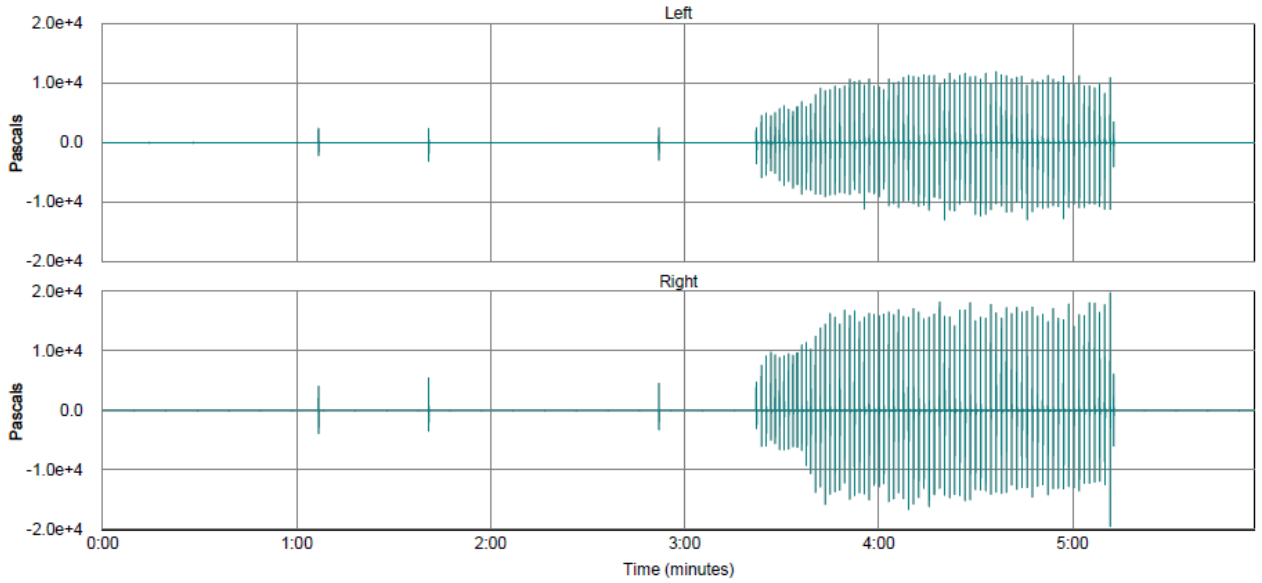
Hydrophone at mid-water depth

Red- Peak Hold over one minute
Blue- Average over one minute

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1

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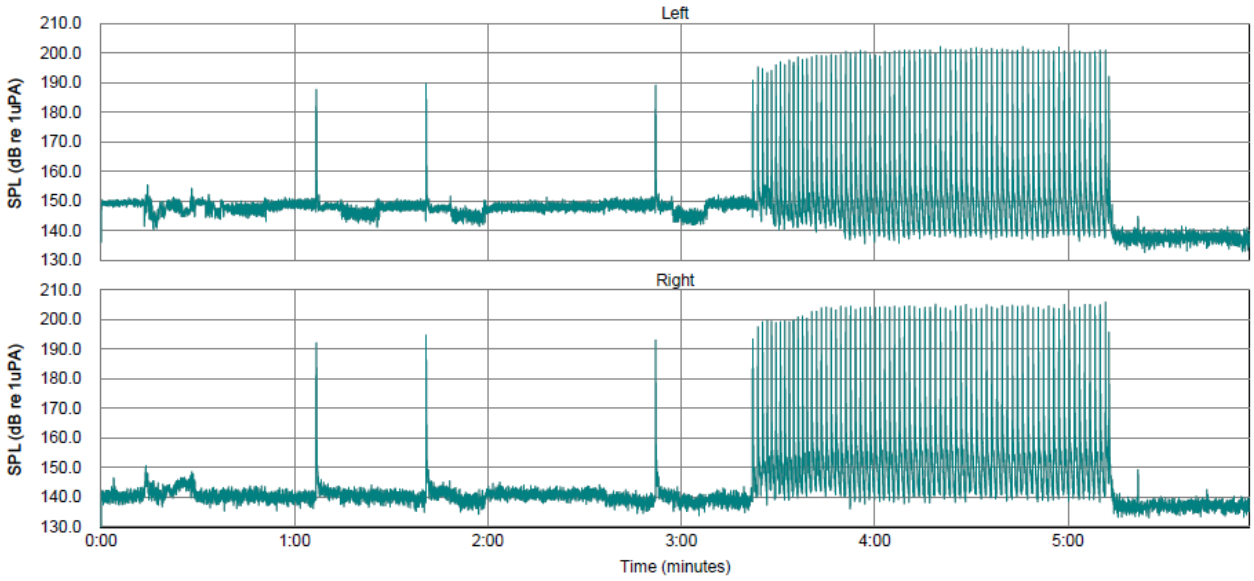
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1

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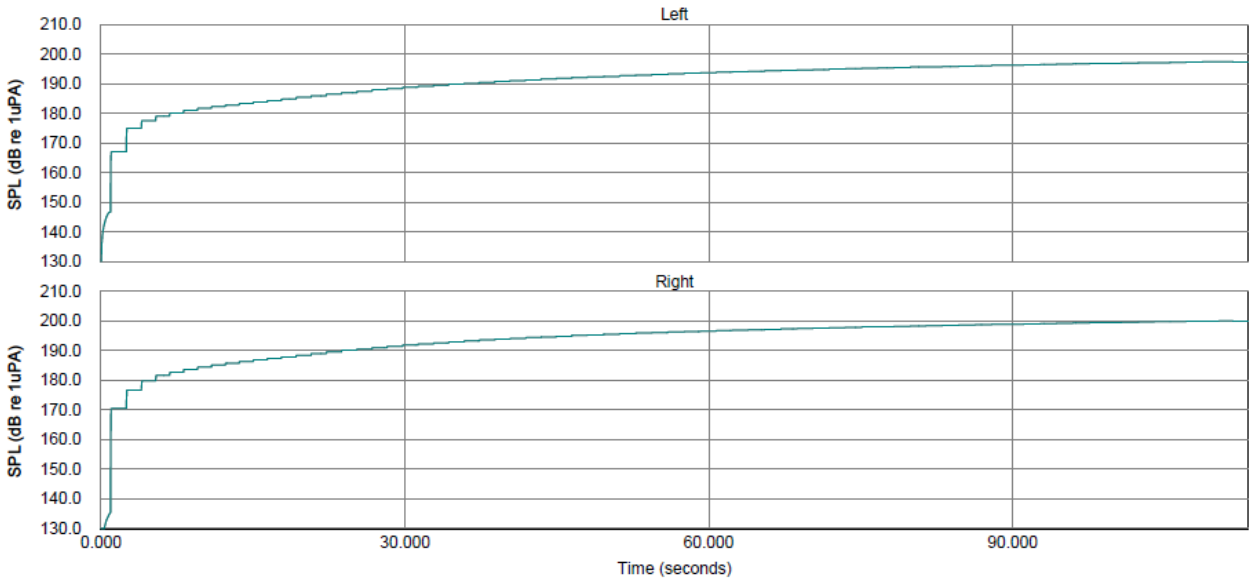
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1 - cSEL

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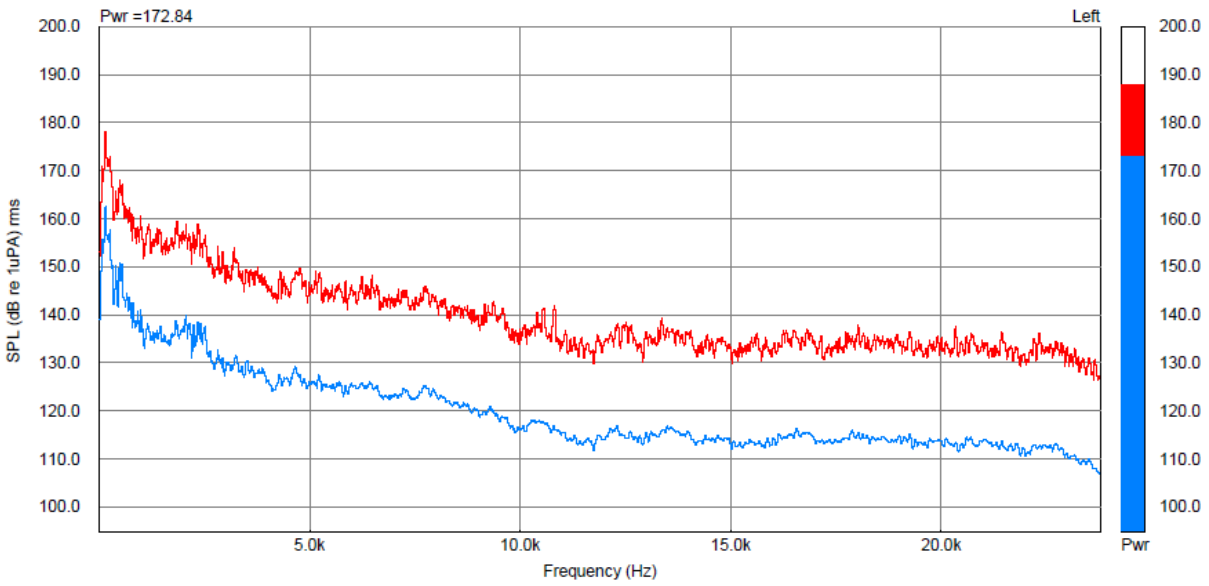
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1 - Spectrum

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Near-field-meters

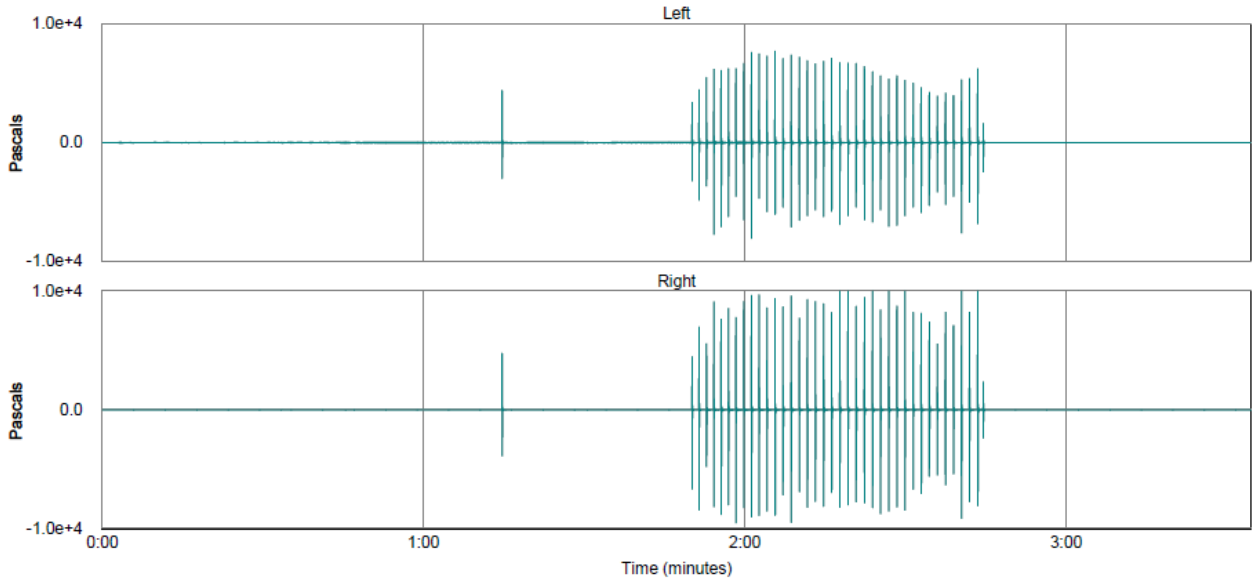
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4

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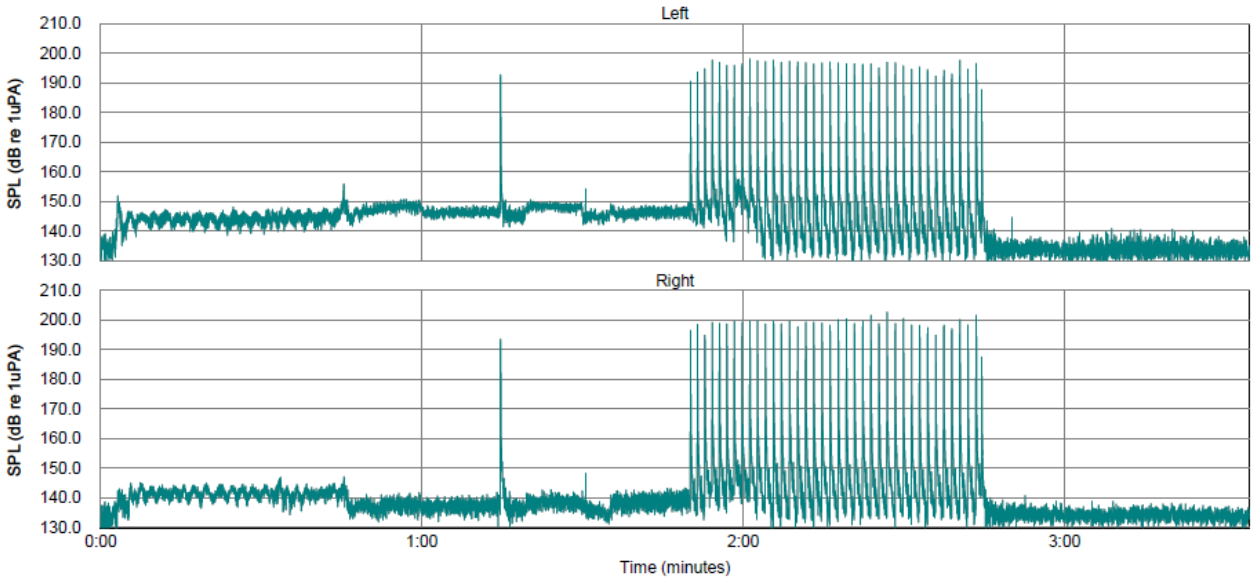
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4

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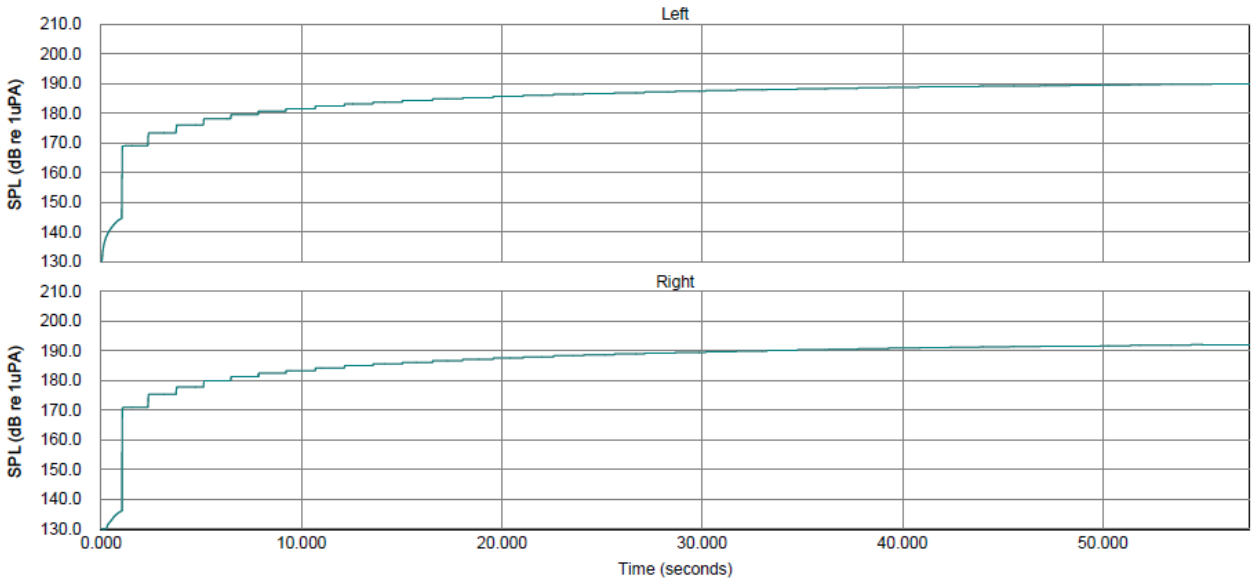
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4-cSEL

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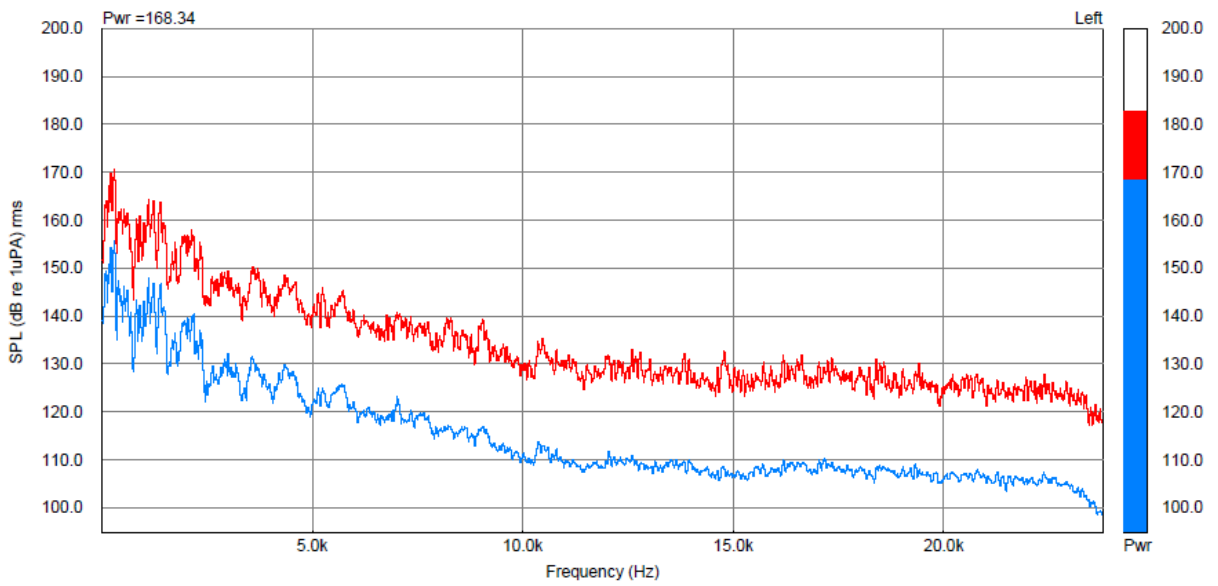
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4 - Spectrum

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Near-field-meters

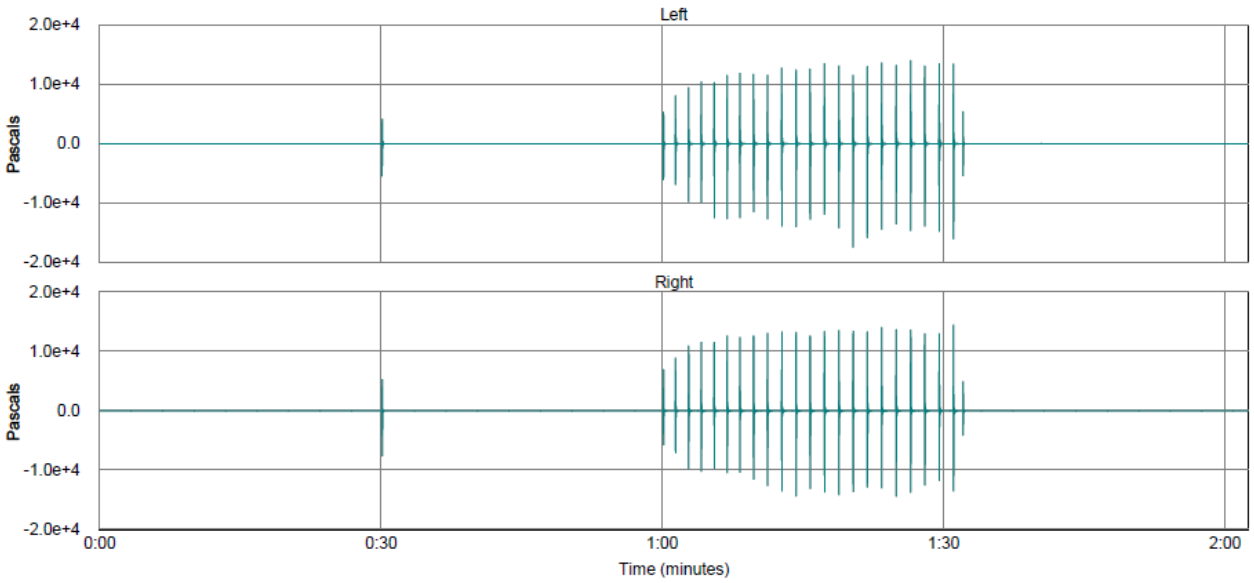
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5

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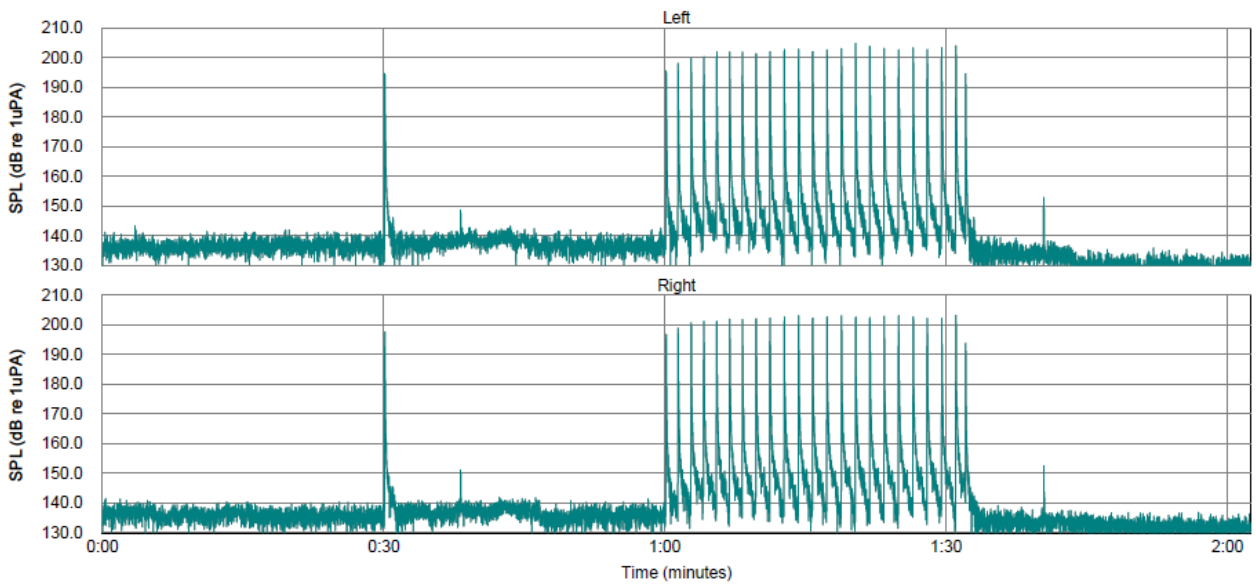
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5

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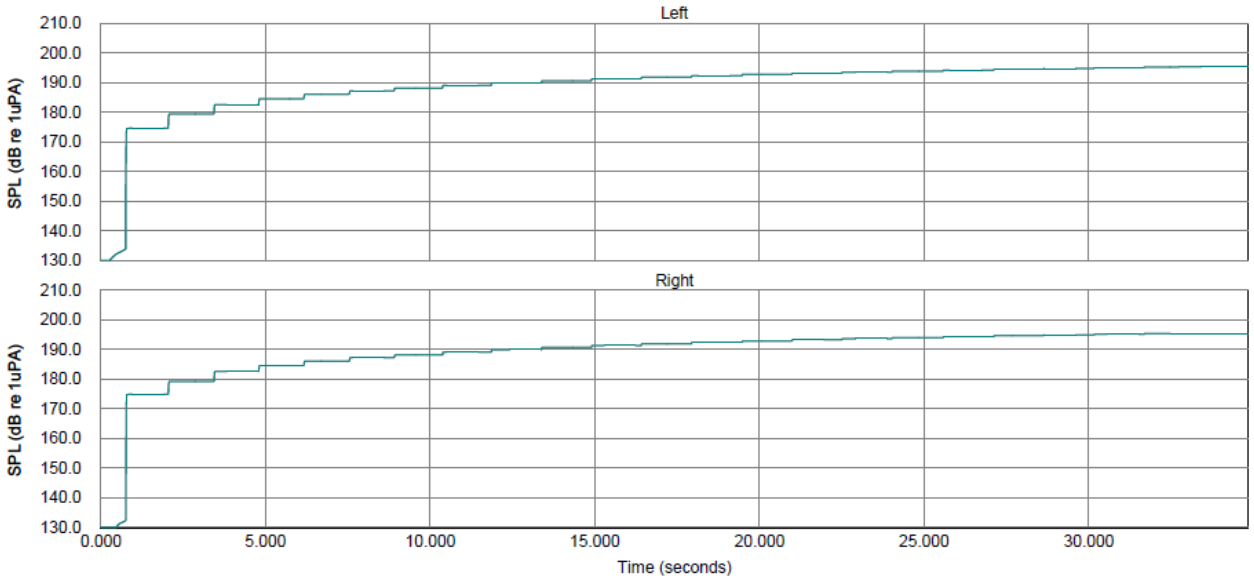
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5 - cSEL

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Fri Feb 16 13:52:19 2018



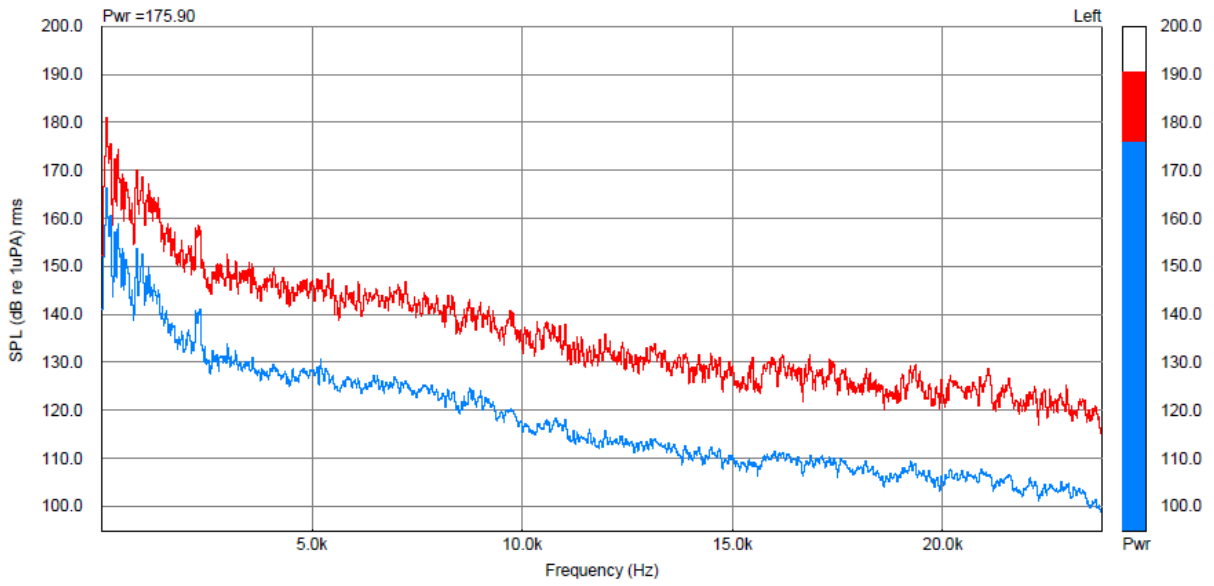
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5 - Spectrum

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Fri Feb 16 14:19:26 2018



Near-field-meters

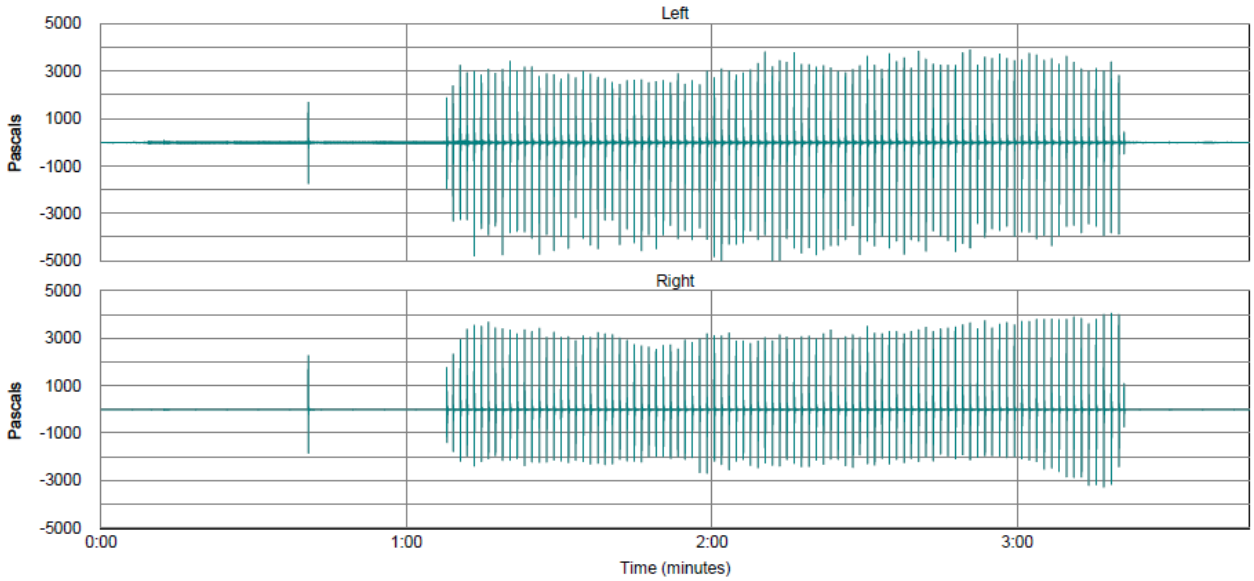
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A4

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Licensed To: Kevin Smith
Fri Feb 16 15:32:14 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

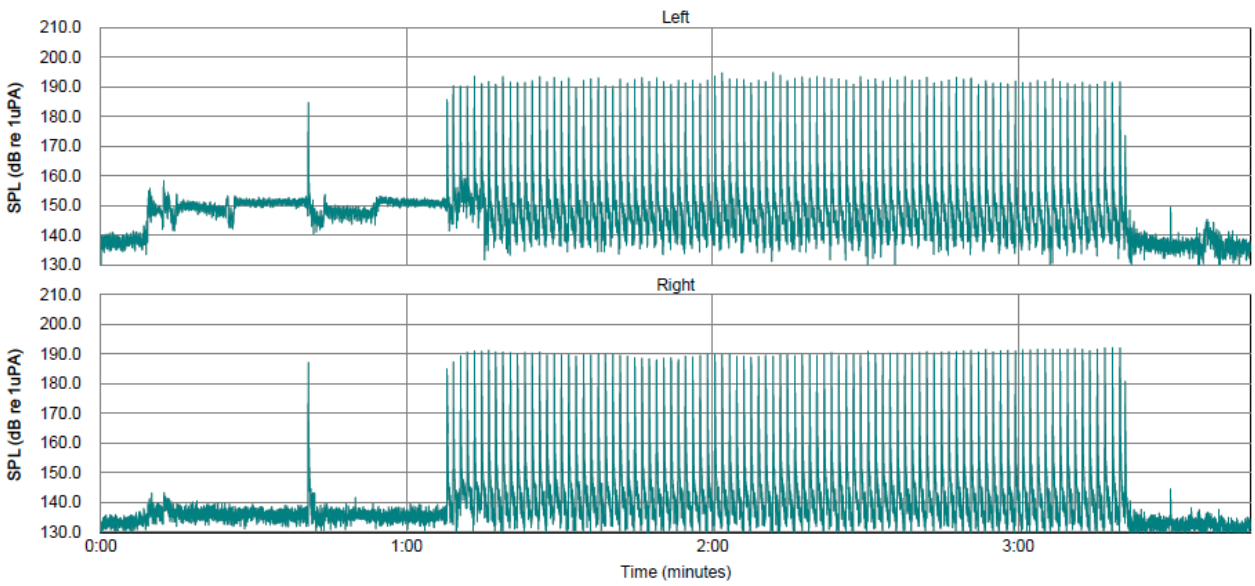
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A4

Printed By: SpectraPLUS-SC Sound Card Edition
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Fri Feb 16 15:28:45 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

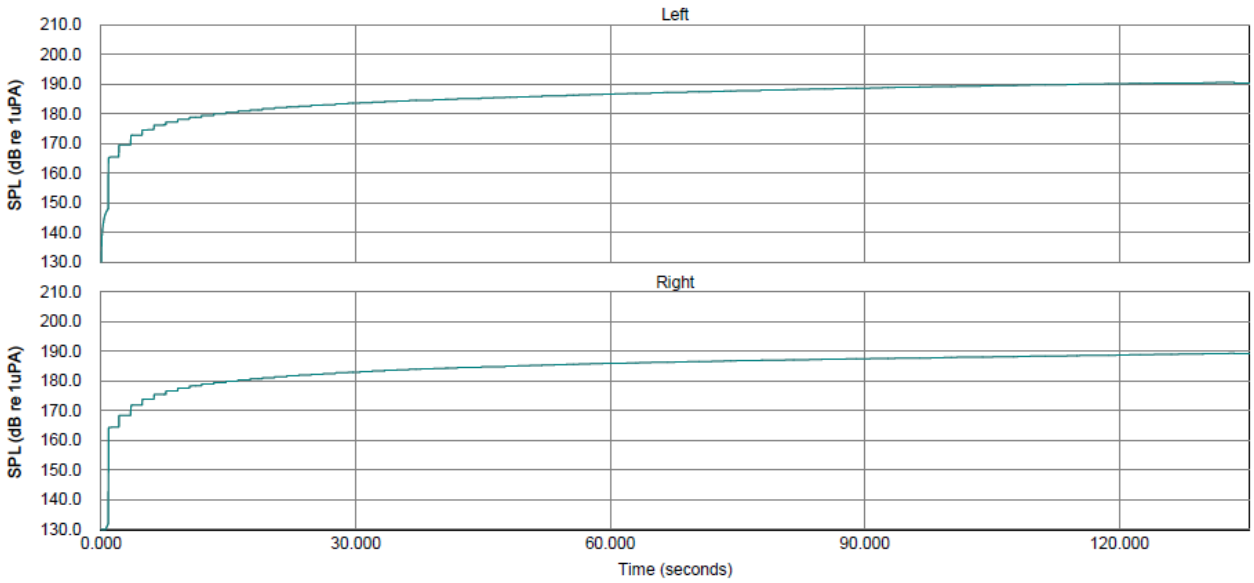
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A4 - cSEL

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Fri Feb 16 15:30:12 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

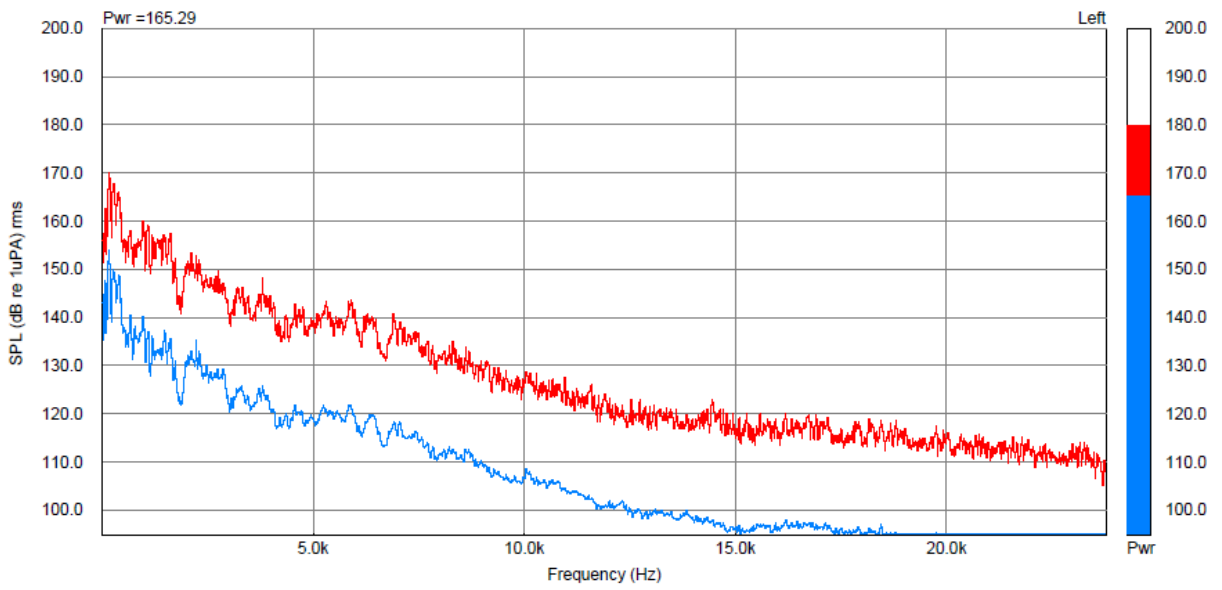
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 25, 2018 - Pile A4 - Spectrum

Printed By: SpectraPLUS-SC Sound Card Edition
Licensed To: Kevin Smith
Fri Feb 16 14:21:06 2018



Near-field-meters

Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

APPENDIX B

Hydro Acoustic Monitoring Data Sheet

Ancich Park – January 26th, 2018

HydroAcoustic Monitoring Data Sheet

Site: Ancich Park - Gig Harbor, WA.
Date: 1/26/2018
Pile Type: Galv. Steel (0.5" wall)
Pile Diameter: 24"
Substrate: Dense Silty-sand w/ Gravel
Mitigation: Single Sparger - Bubble curtain
Background Level (RMS): 134.5 dB re 1 uPa (1 Min)
BubbleCurtain Level (RMS): 138.3 dB re 1 uPa (1 Min)
Hydrophone 1 Depth: Mid-Water (adjusted)
Hydrophone 2 Depth: Mid-Water (adjusted)

Time (PST)		Pile	Impact or	No. of	Time	Average	Distance	Water Depth[4]		Peak (dB re 1 uPA)			$SEL_{90\%}$ (re 1 µPa2 · sec)[5]			Event	$RMS_{90\%}$ (dB re 1 uPA)[7]			Event	Notes
Start	Finish	ID	Vibratory	Blows[1]	To Drive (s)[2]	BPM	to Pile (m)[3]	At Pile (m)	At H-Phone (m)	Max	Min	Mean	Max Blow	Min Blow	$cSEL_{90\%}$	cSEL[6] (re 1µPa2 · sec	Max Blow	Min Blow	Mean	RMS[8] (dB re 1 uPA)	
10:05	10:08	C1	Impact	73	110	40	10.1	4.6	4.6	205.9	193.5	203.2	182.1	170.4	200.0	200.1	191.2	180.1	190.2	175.5	Maximum and Minimum
10:25	10:28	B4	Impact	38	54	42	12	4.6	4.6	202.6	187.5	198.6	176.7	165.7	192.1	192.1	180.5	173.1	180.1	170.6	Blow values not always
10:43	10:44	A5	Impact	23	32	43	10.5	3.1	3.7	203.2	193.8	201.6	183.1	172.2	195.2	195.4	189.2	182.1	188.5	176.2	same blow on near
10:51	10:52	A4[9]	Impact	93	137	41	9.4	3.1	3.7	194.8	185.0	190.1	167.5	163.9	188.7	190.6	1732	170.1	175.6	165.3	and far-feild
10:05	10:08	C1	Impact	73	110	40	20.1	4.6	5.5	202.2	190.8	199.7	179.5	166.3	197.1	197.4	188.8	176.1	187.5	172.9	Maximum and Minimum
10:25	10:28	B4	Impact	38	54	42	21	4.6	5.5	198.1	187.8	195.8	172.6	163.9	189.1	189.8	177.5	171.0	177.2	168.3	Blow values not always
10:43	10:44	A5	Impact	23	32	43	14	3.1	4.6	204.8	194.7	201.7	182.8	171.8	194.4	194.6	188.6	181.7	188.1	176	same blow on near
10:51	10:52	A4[9]	Impact	93	137	41	15	3.1	4.6	192.2	185.8	192.0	167.7	163.7	187.5	189.3	174.2	165.2	174.2	163.9	and far-feild

[1] Does not include Soft Start (S.S.) Blows

[2] Steady Pile Driving

[3] 10 meter Hydrophone adjusted to range. Far-field hydrophone positioned opportunistically. Note: Occassions of obstructed line of sight to either hydrophone due to other installed piles.

[4] Water depth at pile depth estimate provided by Contractor. Hydrophone Station depth MLLW determined by CTD Cast. Corrected based on tide predictions for site. Hydrophone adjusted to mid-water level.

[5] SEL90% Determined for the waveform producing 90% of the energy on the Maximumstrike and Minimum strike. Event cSEL90% is a cummulative sum of the SEL90% waveforms for the event without hammer reset time.

[6] Event cSELis the cummulative Sound Exposure Level over the entire event including hammer reset time.

[7] RMS90% Determined for the waveform producing 90% of the energy on the Maximumstrike and Minimum strike.RMS mean is the reulting RMS value of the RMS90% waveforms for the event without hammer reset time.

[8] Event RMS is the RMS value of the pressure wavforms produced through the entirety of the impact event including hammer reset time.

[9] Obstructed line of site between pile and hydrophones due to Pile A5.

APPENDIX C

Photos

Ancich Park Pile Driving – January 26th, 2018



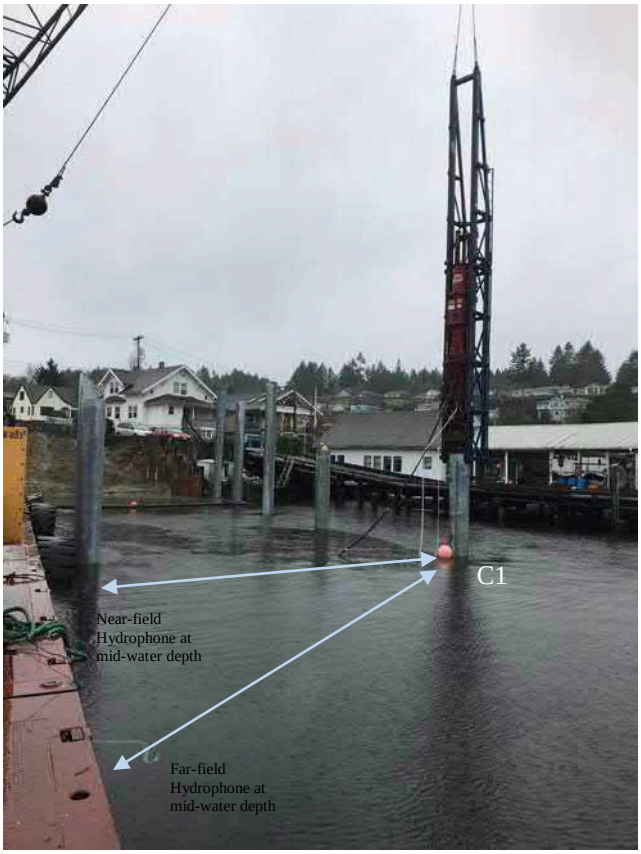
Delmag 32 impact hammer



Bubble Curtain Sparger (2”x 2” tube)



Pile Driving B4 (Bubble curtain ON)



Hydrophone locations on barge (adjusted)



Monitored Piles at Ancich Site (C1,B4, A5, B3).

APPENDIX IV – MACROVEGETATION SURVEY

360-385-4073
info@msaenvironmental.com

380 Jefferson Street
Port Townsend WA 98368

Homeport Marina Habitat Report
(to accompany map dated 7/13/2022)

Introduction

Davido Consulting Group requested a habitat survey of all submerged aquatic vegetation surrounding a proposed floating moorage structure. The project site is located at 3589 Harborview Drive, Gig Harbor, WA in Gig Harbor Bay (Figure 1). The purpose of this survey was to identify and document all flora, fauna, substrate types, depths, and other qualitative information required for submitting federal, state, and local permit applications for this project.

On June 14, 2022 from approximately 10:00 am to 3:00 pm, Amy Leitman and Darby Flanagan of Marine Surveys & Assessments (MSA) surveyed the subtidal zone using SCUBA along 21 survey transects in the area of the proposed structure. Weather was calm and sunny; water visibility was 5 ft.

Figure 1. Vicinity map of project location (credit: Pierce County PublicGIS)



Survey Methods & Findings

The survey transect baseline was established along the end of the existing overwater structure on site. Twenty-one (21) transects in total were surveyed from north to south, or when looking at the water from shore, from left to right (T1 to T21) in the area of the proposed structure plus a 25-ft buffer. Transects were 10 ft apart and 400 ft long in total.

The area of the survey ranged in elevation from -1.1 ft MLLW to -24.8 ft MLLW. For each transect, MSA divers navigated from the baseline, using a 300 ft survey tape with attached compass. Data related to the substrate, depth, and species coverage were recorded every 10 ft along each transect, using a slate and waterproof paper.

The substrate recorded within the survey area was mainly sand and mud throughout. Occurrences of attached *Saccharina* (5-30%) and *Gracilaria* (5-20%) were observed within the survey area. Total macroalgae percent cover was calculated to be approximately 3.7% of the proposed structure's footprint and 25-ft buffer. The full results can be seen in Table 1. A map of the results can be seen in Figure 5.

Invertebrates noted during the survey were anemones (*Metridium*), sea quills (*Stylatula*), and sea cucumbers. Small, silvery fish assumed to be forage fish were also observed.

Please note the depths in this report are for referencing habitat data only can have an error of +/- 1 ft; these depths should not be used for engineering purposes.

All protocols and methods used for this habitat survey are in compliance with guidance given by Washington Department of Fish and Wildlife (WDFW) published in *Eelgrass/Macroalgae Habitat Interim Survey Guidelines* (rev. 06/16/2008) and with the procedures outlined in the U.S. Army Corps of Engineers' (USACE) *Components of a Complete Eelgrass Delineation Report* (January 9, 2018).

Figure 2. Photo of the structure used as the survey baseline



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Figure 3. Photo of the inner tidal zone looking landward

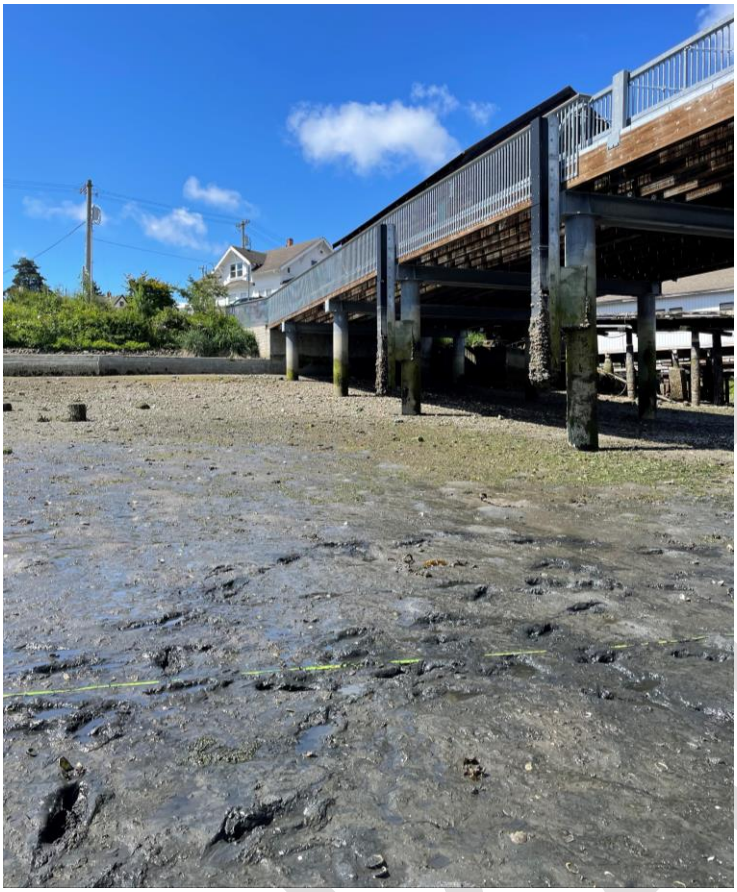


Figure 4. *Gracilaria* and *Saccharina* found in the survey area

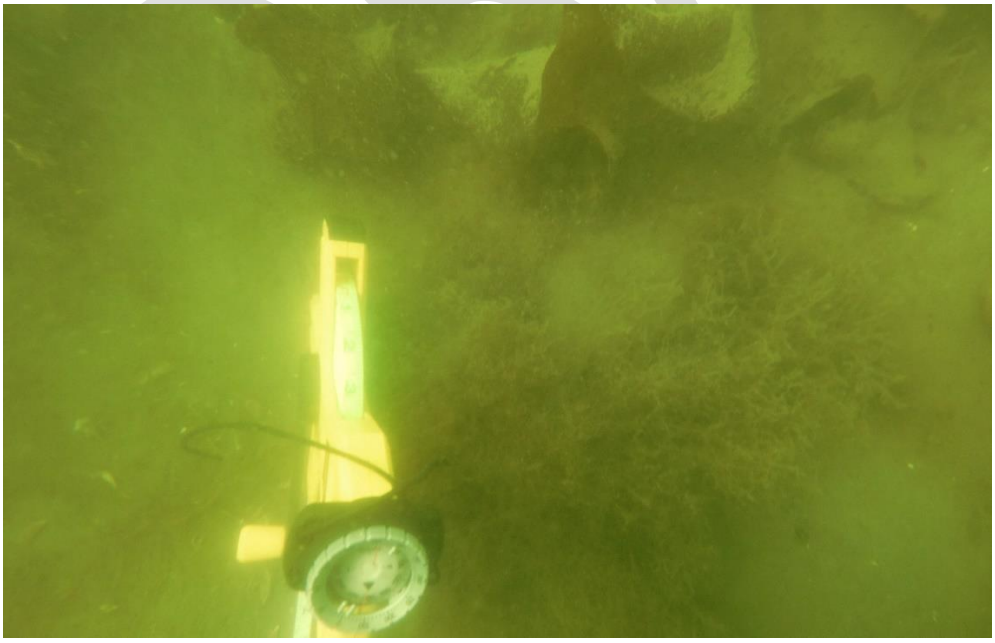


Figure 5. Habitat survey results map

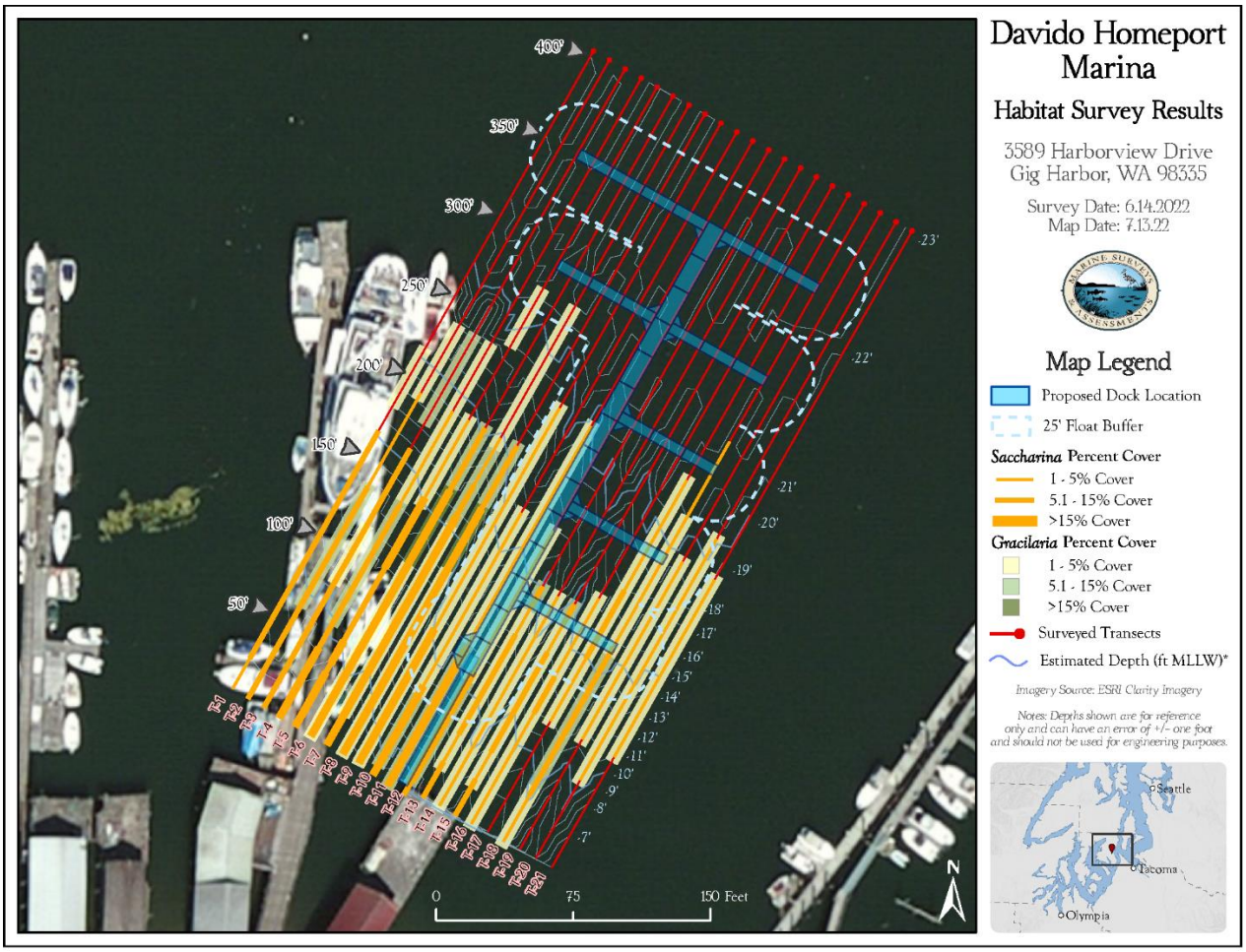


Table 1. Habitat survey results

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
1	0	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	9	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	10	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	20	-2.1	Sand/Mud/Cobble.	Saccharina 10%.
1	30	-2.1	Sand/Mud/Cobble.	Saccharina 10%.
1	40	-3.1	Sand/Mud/Cobble.	Saccharina 10%.
1	50	-3.1	Sand/Mud/Cobble.	Saccharina 10%.
1	60	-4.1	Sand/Mud/Cobble.	Saccharina 10%.
1	70	-4.1	Sand/Mud/Cobble.	Saccharina 10%.
1	80	-5.1	Sand/Mud/Cobble.	Saccharina 10%.
1	90	-5.1	Sand/Mud/Cobble.	Saccharina 10%.
1	100	-6.1	Sand/Mud/Cobble.	Saccharina 10%.
1	110	-6.1	Sand/Mud/Cobble.	Saccharina 10%.
1	120	-7.1	Sand/Mud/Cobble.	Saccharina 15%.
1	130	-7.1	Sand/Mud/Cobble.	Saccharina 15%.
1	140	-8.1	Sand/Mud/Cobble.	Saccharina 15%.
1	150	-9.1	Sand/Mud/Cobble; Diatom Film.	Saccharina 15%.
1	160	-10.1	Sand/Mud/Cobble; Diatom Film.	Barren
1	170	-11.2	Sand/Mud/Cobble; Diatom Film.	Barren
1	180	-12.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	190	-13.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	200	-14.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	210	-15.2	Sand/Mud; Diatom Film.	Barren
1	220	-15.2	Sand/Mud; Diatom Film.	Barren
1	230	-16.2	Sand/Mud; Diatom Film.	Barren
1	240	-16.2	Mud; Diatom Film.	Barren
1	250	-16.2	Mud; Diatom Film.	Barren
1	260	-19.2	Mud; Diatom Film.	Barren
1	270	-20.2	Mud; Diatom Film.	Barren
1	280	-20.2	Mud; Metridium, Diatom Film.	Barren
1	290	-21.2	Mud; Metridium, Diatom Film.	Barren
1	300	-21.2	Mud; Metridium, Diatom Film.	Barren
1	310	-22.2	Mud; Diatom Film.	Barren
1	320	-22.2	Mud; Diatom Film.	Barren
1	330	-22.2	Mud; Diatom Film.	Barren
1	340	-22.2	Mud; Diatom Film.	Barren
1	350	-23.3	Mud; Diatom Film.	Barren
1	360	-23.3	Mud.	Barren
1	370	-23.3	Mud.	Barren

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1	380	-23.3	Mud.	Barren
1	390	-23.3	Mud; Old outfall.	Barren
1	400	-24.3	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
2	0		Sand/Mud.	Saccharina 15%.
2	8	-1.5	Sand/Mud.	Saccharina 15%.
2	10	-1.5	Sand/Mud.	Saccharina 15%.
2	20	-2.5	Sand/Mud.	Saccharina 15%.
2	30	-3.5	Sand/Mud.	Saccharina 15%.
2	40	-3.5	Sand/Mud.	Saccharina 15%.
2	50	-4.5	Sand/Mud.	Saccharina 10%.
2	60	-4.5	Sand/Mud.	Saccharina 10%.
2	70	-5.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	80	-5.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	90	-6.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	100	-6.5	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	110	-7.5	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	120	-7.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	130	-8.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	140	-8.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	150	-9.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	160	-10.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	170	-11.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	180	-12.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	190	-13.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	200	-14.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	210	-15.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	220	-16.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	230	-16.4	Mud; Diatom Film.	Gracilaria 5%.
2	240	-19.4	Mud; Diatom Film.	Barren
2	250	-19.4	Mud; Diatom Film.	Barren
2	260	-20.4	Mud.	Barren
2	270	-21.4	Mud.	Barren
2	280	-21.4	Mud.	Barren
2	290	-22.4	Mud.	Barren
2	300	-22.3	Mud.	Barren
2	310	-23.3	Mud.	Barren
2	320	-23.3	Mud.	Barren
2	330	-23.3	Mud.	Barren
2	340	-23.3	Mud.	Barren

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2	350	-24.3	Mud.	Barren
2	360	-24.3	Mud.	Barren
2	370	-24.3	Mud.	Barren
2	380	-24.3	Mud.	Barren
2	390	-24.3	Mud; Old outfall.	Barren
2	400	-24.3	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
3	0		Sand/Mud/Cobble.	Saccharina 15%.
3	7	-1.5	Sand/Mud/Cobble.	Saccharina 15%.
3	10	-1.5	Sand/Mud/Cobble.	Saccharina 15%.
3	20	-2.5	Sand/Mud/Cobble.	Saccharina 10%.
3	30	-2.6	Sand/Mud/Cobble.	Saccharina 10%.
3	40	-3.6	Sand/Mud/Cobble.	Saccharina 10%.
3	50	-3.6	Sand/Mud/Cobble.	Saccharina 10%.
3	60	-4.6	Sand/Mud/Cobble.	Saccharina 10%.
3	70	-4.6	Sand/Mud/Cobble.	Saccharina 10%.
3	80	-5.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	90	-5.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	100	-6.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	110	-6.6	Sand/Mud/Cobble.	Saccharina 10%.
3	120	-7.6	Sand/Mud/Cobble.	Saccharina 15%.
3	130	-7.6	Sand/Mud/Cobble.	Saccharina 15%.
3	140	-8.6	Sand/Mud/Cobble.	Saccharina 15%.
3	150	-9.6	Sand/Mud/Cobble; Diatom Film.	Saccharina 15%.
3	160	-10.6	Sand/Mud/Cobble; Diatom Film.	Barren
3	170	-11.6	Sand/Mud/Cobble; Diatom Film.	Barren
3	180	-12.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	190	-13.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	200	-14.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	210	-15.7	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	220	-15.7	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	230	-16.7	Sand/Mud; Diatom Film.	Barren
3	240	-16.7	Mud; Diatom Film.	Barren
3	250	-16.7	Mud; Diatom Film.	Barren
3	260	-19.7	Mud; Diatom Film.	Barren
3	270	-20.7	Mud; Diatom Film.	Barren
3	280	-20.7	Mud; Metridium, Diatom Film.	Barren
3	290	-21.7	Mud; Metridium, Diatom Film.	Barren
3	300	-21.7	Mud; Metridium, Diatom Film.	Barren
3	310	-22.7	Mud; Diatom Film.	Barren

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3	320	-22.7	Mud; Diatom Film.	Barren
3	330	-22.7	Mud; Diatom Film.	Barren
3	340	-22.7	Mud; Diatom Film.	Barren
3	350	-23.7	Mud.	Barren
3	360	-23.7	Mud.	Barren
3	370	-23.7	Mud.	Barren
3	380	-23.8	Mud.	Barren
3	390	-23.8	Mud; Old outfall.	Barren
3	400	-24.8	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
4	0		Sand/Mud.	Saccharina 30%.
4	5	-2.0	Sand/Mud.	Saccharina 30%.
4	10	-2.0	Sand/Mud.	Saccharina 30%.
4	20	-3.0	Sand/Mud.	Saccharina 30%.
4	30	-4.0	Sand/Mud.	Saccharina 30%.
4	40	-4.0	Sand/Mud.	Saccharina 30%.
4	50	-5.0	Sand/Mud.	Saccharina 15%.
4	60	-5.0	Sand/Mud.	Saccharina 15%.
4	70	-6.0	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	80	-6.0	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	90	-6.9	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	100	-6.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	110	-7.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	120	-7.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	130	-8.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	140	-8.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	150	-9.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	160	-10.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	170	-11.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	180	-12.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	190	-13.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	200	-14.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	210	-15.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	220	-16.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	230	-16.9	Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	240	-19.9	Mud; Metridium, Diatom Film.	Barren
4	250	-19.9	Mud; Diatom Film.	Barren
4	260	-20.8	Mud; Diatom Film.	Barren
4	270	-21.8	Mud; Diatom Film.	Barren
4	280	-21.8	Mud; Diatom Film.	Barren

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4	290	-22.8	Mud; Diatom Film.	Barren
4	300	-22.8	Mud.	Barren
4	310	-23.8	Mud.	Barren
4	320	-23.8	Mud.	Barren
4	330	-23.8	Mud.	Barren
4	340	-23.8	Mud.	Barren
4	350	-24.8	Mud.	Barren
4	360	-24.8	Mud.	Barren
4	370	-24.8	Mud.	Barren
4	380	-24.8	Mud.	Barren
4	390	-24.8	Mud; Old outfall.	Barren
4	400	-24.8	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
5	0		Sand/Mud.	Saccharina 30%.
5	4	-2.0	Sand/Mud.	Saccharina 30%.
5	10	-2.0	Sand/Mud.	Saccharina 30%.
5	20	-2.0	Sand/Mud.	Saccharina 30%.
5	30	-3.0	Sand/Mud.	Saccharina 10%.
5	40	-4.0	Sand/Mud.	Saccharina 20%.
5	50	-5.0	Sand/Mud.	Saccharina 15%.
5	60	-6.0	Sand/Mud.	Saccharina 15%.
5	70	-6.1	Sand/Mud.	Saccharina 15%.
5	80	-6.1	Sand/Mud.	Saccharina 15%.
5	90	-6.1	Sand/Mud.	Saccharina 15%.
5	100	-7.1	Sand/Mud.	Saccharina 30%.
5	110	-8.1	Sand/Mud.	Saccharina 30%.
5	120	-9.1	Sand/Mud.	Saccharina 30%.
5	130	-9.1	Sand/Mud.	Saccharina 30%.
5	140	-10.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	150	-11.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	160	-11.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	170	-12.1	Sand/Mud; Metridium.	Saccharina 5%; Gracilaria 5%.
5	180	-13.1	Sand/Mud; Metridium.	Saccharina 5%; Gracilaria 5%.
5	190	-14.1	Sand/Mud; Metridium.	Barren
5	200	-15.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	210	-16.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	220	-17.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	230	-18.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	240	-19.2	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
5	250	-20.2	Mud; Metridium, Diatom Film.	Gracilaria 5%.

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5	260	-20.2	Mud; Metridium, Diatom Film.	Gracilaria 5%.
5	270	-21.2	Mud; Metridium, Diatom Film.	Barren
5	280	-22.2	Mud; Diatom Film.	Barren
5	290	-22.2	Mud; Diatom Film.	Barren
5	300	-23.2	Mud; Diatom Film.	Barren
5	310	-23.2	Mud; Diatom Film.	Barren
5	320	-23.2	Mud; Diatom Film.	Barren
5	330	-23.2	Mud.	Barren
5	340	-23.2	Mud.	Barren
5	350	-23.2	Mud.	Barren
5	360	-23.2	Mud.	Barren
5	370	-23.2	Mud.	Barren
5	380	-23.2	Mud.	Barren
5	390	-23.2	Mud; Old outfall.	Barren
5	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
6	0	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	5	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	10	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	20	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	30	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	40	-5.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	50	-6.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	60	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	70	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	80	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	90	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	100	-7.4	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
6	110	-8.4	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
6	120	-8.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	130	-9.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	140	-10.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	150	-11.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	160	-12.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	170	-13.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	180	-14.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	190	-15.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	200	-16.4	Sand/Mud; Metridium, Diatom Film.	Barren
6	210	-17.4	Sand/Mud; Metridium, Diatom Film.	Barren
6	220	-18.3	Sand/Mud; Metridium, Diatom Film.	Barren

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6	230	-18.3	Sand/Mud; Diatom Film.	Barren
6	240	-19.3	Sand/Mud; Diatom Film.	Barren
6	250	-19.3	Mud; Diatom Film.	Barren
6	260	-20.3	Mud; Diatom Film.	Barren
6	270	-21.3	Mud; Diatom Film.	Barren
6	280	-21.3	Mud; Diatom Film.	Barren
6	290	-21.3	Mud; Diatom Film.	Barren
6	300	-21.3	Mud; Diatom Film.	Barren
6	310	-22.3	Mud; Diatom Film.	Barren
6	320	-22.3	Mud; Diatom Film.	Barren
6	330	-22.3	Mud.	Barren
6	340	-22.3	Mud.	Barren
6	350	-22.3	Mud.	Barren
6	360	-22.3	Mud.	Barren
6	370	-22.3	Mud.	Barren
6	380	-22.3	Mud.	Barren
6	390	-22.3	Mud; Old outfall.	Barren
6	400	-22.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
7	0	-2.5	Sand/Mud.	Saccharina 30%.
7	10	-2.5	Sand/Mud.	Saccharina 30%.
7	20	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	30	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	40	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	50	-5.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	60	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	70	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	80	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	90	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	100	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	110	-8.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	120	-9.6	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	130	-9.6	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	140	-10.6	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
7	150	-11.6	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
7	160	-11.6	Sand/Mud.	Saccharina 5%; Gracilaria 10%.
7	170	-12.6	Sand/Mud; Metridium, Diatom Film.	Saccharina 5%; Gracilaria 10%.
7	180	-13.6	Sand/Mud; Metridium, Diatom Film.	Saccharina 5%; Gracilaria 5%.
7	190	-14.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	200	-15.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.

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7	210	-16.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	220	-17.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	230	-18.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	240	-19.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	250	-20.6	Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	260	-20.6	Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	270	-21.6	Mud; Metridium, Diatom Film.	Barren
7	280	-22.6	Mud; Diatom Film.	Barren
7	290	-22.7	Mud; Diatom Film.	Barren
7	300	-23.7	Mud; Diatom Film.	Barren
7	310	-23.7	Mud; Diatom Film.	Barren
7	320	-23.7	Mud; Diatom Film.	Barren
7	330	-23.7	Mud; Diatom Film.	Barren
7	340	-23.7	Mud.	Barren
7	350	-23.7	Mud.	Barren
7	360	-23.7	Mud.	Barren
7	370	-23.7	Mud.	Barren
7	380	-23.7	Mud.	Barren
7	390	-23.7	Mud; Old outfall.	Barren
7	400	-23.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
8	0	-3.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	5	-2.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	10	-2.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	20	-3.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	30	-4.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	40	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	50	-6.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	60	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	70	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	80	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	90	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	100	-7.9	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
8	110	-8.9	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
8	120	-8.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	130	-9.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	140	-10.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	150	-11.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	160	-12.9	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	170	-13.9	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.

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8	180	-14.8	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	190	-15.8	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	200	-16.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	210	-17.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	220	-18.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	230	-18.8	Sand/Mud; Diatom Film.	Barren
8	240	-19.8	Sand/Mud; Diatom Film.	Barren
8	250	-19.8	Mud; Diatom Film.	Barren
8	260	-20.8	Mud; Diatom Film.	Barren
8	270	-21.8	Mud; Diatom Film.	Barren
8	280	-21.8	Mud; Diatom Film.	Barren
8	290	-21.8	Mud; Diatom Film.	Barren
8	300	-21.8	Mud; Diatom Film.	Barren
8	310	-22.8	Mud; Diatom Film.	Barren
8	320	-22.8	Mud; Diatom Film.	Barren
8	330	-22.8	Mud.	Barren
8	340	-22.8	Mud.	Barren
8	350	-22.7	Mud.	Barren
8	360	-22.7	Mud.	Barren
8	370	-22.7	Mud.	Barren
8	380	-22.7	Mud.	Barren
8	390	-22.7	Mud; Old outfall.	Barren
8	400	-22.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
9	0		Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	1	-3.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	10	-4.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	20	-5.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	25	-6.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	30	-7.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	40	-7.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	50	-8.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	60	-9.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	70	-9.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	80	-10.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	90	-11.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	100	-11.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	110	-12.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	120	-12.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	130	-13.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.

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9	140	-14.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	150	-15.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	160	-15.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	170	-16.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	180	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	190	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	200	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	210	-18.1	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	220	-19.1	Mud; Diatom Film.	Barren
9	230	-19.1	Mud; Diatom Film.	Barren
9	240	-20.1	Mud; Diatom Film.	Barren
9	250	-21.1	Mud; Metridium, Diatom Film.	Barren
9	260	-21.1	Mud; Metridium, Diatom Film.	Barren
9	270	-21.1	Mud; Metridium, Diatom Film.	Barren
9	280	-22.1	Mud; Metridium, Diatom Film.	Barren
9	290	-22.1	Mud; Metridium, Diatom Film.	Barren
9	300	-22.1	Mud; Metridium, Diatom Film.	Barren
9	310	-23.1	Mud; Metridium, Diatom Film.	Barren
9	320	-23.2	Mud; Diatom Film.	Barren
9	330	-23.2	Mud; Diatom Film.	Barren
9	340	-23.2	Mud; Diatom Film.	Barren
9	350	-23.2	Mud; Diatom Film.	Barren
9	360	-23.2	Mud.	Barren
9	370	-23.2	Mud.	Barren
9	380	-23.2	Mud.	Barren
9	390	-23.2	Mud; Old outfall.	Barren
9	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
10	-2	-3.4	Sand/Mud.	Saccharina 30%.
10	0	-3.4	Sand/Mud.	Saccharina 30%.
10	5	-4.4	Sand/Mud.	Saccharina 30%.
10	10	-5.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	20	-5.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	30	-6.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	40	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	50	-8.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	60	-9.4	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
10	70	-10.4	Mud.	Saccharina 5%; Gracilaria 5%.
10	80	-10.4	Mud.	Saccharina 5%; Gracilaria 5%.
10	90	-11.4	Mud.	Saccharina 5%; Gracilaria 5%.

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10	100	-12.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	110	-13.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	120	-13.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	130	-14.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	140	-15.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	150	-16.3	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	160	-16.3	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	170	-17.3	Mud; Diatom Film.	Barren
10	180	-18.3	Mud; Metridium, Diatom Film.	Barren
10	190	-18.3	Mud; Metridium, Diatom Film.	Barren
10	200	-19.3	Mud; Metridium, Diatom Film.	Barren
10	210	-20.3	Mud; Diatom Film.	Barren
10	220	-20.3	Mud; Diatom Film.	Barren
10	230	-21.3	Mud; Diatom Film.	Barren
10	240	-21.3	Mud; Metridium, Diatom Film.	Barren
10	250	-22.3	Mud; Metridium, Diatom Film.	Barren
10	260	-22.3	Mud; Metridium, Diatom Film.	Barren
10	270	-22.3	Mud; Metridium, Diatom Film.	Barren
10	280	-22.3	Mud; Metridium, Diatom Film.	Barren
10	290	-23.3	Mud; Metridium, Diatom Film.	Barren
10	300	-23.3	Mud; Metridium, Diatom Film.	Barren
10	310	-23.3	Mud; Diatom Film.	Barren
10	320	-23.3	Mud; Diatom Film.	Barren
10	330	-23.2	Mud.	Barren
10	340	-23.2	Mud.	Barren
10	350	-23.2	Mud.	Barren
10	360	-23.2	Mud.	Barren
10	370	-23.2	Mud.	Barren
10	380	-23.2	Mud.	Barren
10	390	-23.2	Mud; Old outfall.	Barren
10	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
11	-3	-3.4	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	0	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	10	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	20	-5.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	25	-6.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	30	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	40	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	50	-8.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.

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11	60	-9.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.
11	70	-9.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.
11	80	-10.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	90	-11.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	100	-11.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	110	-12.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	120	-12.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	130	-13.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	140	-14.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	150	-15.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	160	-15.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	170	-16.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	180	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	190	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	200	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	210	-18.6	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	220	-19.6	Mud; Diatom Film.	Barren
11	230	-19.6	Mud; Diatom Film.	Barren
11	240	-20.6	Mud; Diatom Film.	Barren
11	250	-21.6	Mud; Metridium, Diatom Film.	Barren
11	260	-21.6	Mud; Metridium, Diatom Film.	Barren
11	270	-21.6	Mud; Metridium, Diatom Film.	Barren
11	280	-22.6	Mud; Metridium, Diatom Film.	Barren
11	290	-22.6	Mud; Metridium, Diatom Film.	Barren
11	300	-22.6	Mud; Metridium, Diatom Film.	Barren
11	310	-23.6	Mud; Metridium, Diatom Film.	Barren
11	320	-23.6	Mud; Diatom Film.	Barren
11	330	-23.6	Mud; Diatom Film.	Barren
11	340	-23.7	Mud; Diatom Film.	Barren
11	350	-23.7	Mud; Diatom Film.	Barren
11	360	-23.7	Mud.	Barren
11	370	-23.7	Mud.	Barren
11	380	-23.7	Mud.	Barren
11	390	-23.7	Mud; Old outfall.	Barren
11	400	-23.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
12	-4	-3.9	Sand/Mud.	Saccharina 10%.
12	0	-3.9	Sand/Mud.	Saccharina 10%.
12	5	-4.9	Sand/Mud.	Saccharina 10%.
12	10	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.

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12	20	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	30	-6.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	40	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	50	-8.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	60	-9.9	Sand/Mud.	Saccharina 20%; Gracilaria 10%.
12	70	-10.9	Mud.	Saccharina 20%; Gracilaria 10%.
12	80	-10.9	Mud.	Saccharina 5%; Gracilaria 5%.
12	90	-11.9	Mud.	Saccharina 5%; Gracilaria 5%.
12	100	-12.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	110	-13.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	120	-13.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	130	-14.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	140	-15.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	150	-16.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	160	-16.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	170	-17.8	Mud; Diatom Film.	Barren
12	180	-18.8	Mud; Metridium, Diatom Film.	Barren
12	190	-18.8	Mud; Metridium, Diatom Film.	Barren
12	200	-19.8	Mud; Metridium, Diatom Film.	Barren
12	210	-20.8	Mud; Diatom Film.	Barren
12	220	-20.8	Mud; Diatom Film.	Barren
12	230	-21.8	Mud; Diatom Film.	Barren
12	240	-21.8	Mud; Metridium, Diatom Film.	Barren
12	250	-22.8	Mud; Metridium, Diatom Film.	Barren
12	260	-22.8	Mud; Metridium, Diatom Film.	Barren
12	270	-22.8	Mud; Metridium, Diatom Film.	Barren
12	280	-22.8	Mud; Metridium, Diatom Film.	Barren
12	290	-23.8	Mud; Metridium, Diatom Film.	Barren
12	300	-23.8	Mud; Metridium, Diatom Film.	Barren
12	310	-23.7	Mud; Diatom Film.	Barren
12	320	-23.7	Mud; Diatom Film.	Barren
12	330	-23.7	Mud; Diatom Film.	Barren
12	340	-23.7	Mud; Diatom Film.	Barren
12	350	-23.7	Mud.	Barren
12	360	-23.7	Mud.	Barren
12	370	-23.7	Mud.	Barren
12	380	-23.7	Mud.	Barren
12	390	-23.7	Mud; Old outfall.	Barren
12	400	-23.7	Mud.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
13	0	-7.0	Sand/Mud.	Saccharina 10%.
13	10	-7.0	Sand/Mud.	Saccharina 10%.
13	20	-8.0	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	30	-8.0	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	40	-9.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	50	-9.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	60	-10.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	70	-11.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	80	-11.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	90	-11.9	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	100	-12.9	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	110	-12.9	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	120	-13.9	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
13	130	-14.9	Sand/Mud.	Barren
13	140	-14.9	Sand/Mud.	Barren
13	150	-15.9	Sand/Mud.	Barren
13	160	-16.9	Mud; Diatom Film.	Barren
13	170	-17.9	Mud; Diatom Film.	Barren
13	180	-17.9	Mud; Diatom Film.	Barren
13	190	-18.9	Mud; Diatom Film.	Barren
13	200	-19.9	Mud; Diatom Film.	Barren
13	210	-19.9	Mud; Diatom Film.	Barren
13	220	-20.9	Mud; Diatom Film.	Barren
13	230	-20.9	Mud; Diatom Film.	Barren
13	240	-21.9	Mud; Diatom Film.	Barren
13	250	-21.9	Mud; Diatom Film.	Barren
13	260	-21.8	Mud; Diatom Film.	Barren
13	270	-22.8	Mud; Metridium, Diatom Film.	Barren
13	280	-22.8	Mud; Metridium, Diatom Film.	Barren
13	290	-22.8	Mud; Metridium, Diatom Film.	Barren
13	300	-22.8	Mud; Metridium, Diatom Film.	Barren
13	310	-22.8	Mud; Metridium, Diatom Film.	Barren
13	320	-22.8	Mud; Metridium, Diatom Film.	Barren
13	330	-22.8	Mud; Diatom Film.	Barren
13	340	-22.8	Mud; Diatom Film.	Barren
13	350	-22.8	Mud; Diatom Film.	Barren
13	360	-22.8	Mud; Diatom Film.	Barren
13	370	-23.8	Mud; Diatom Film.	Barren
13	380	-23.8	Mud; Diatom Film.	Barren
13	390	-23.8	Mud; Old outfall, Diatom Film.	Barren
13	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
14	0	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	10	-8.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	20	-8.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	30	-9.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	40	-10.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	50	-10.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	60	-11.6	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	70	-12.6	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	80	-12.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	90	-13.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	100	-14.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	110	-15.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	120	-16.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	130	-16.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	140	-17.6	Mud; Debris, Diatom Film.	Barren
14	150	-17.6	Mud; Debris, Diatom Film.	Barren
14	160	-18.6	Mud; Diatom Film.	Barren
14	170	-18.6	Mud; Diatom Film.	Barren
14	180	-19.6	Mud; Diatom Film.	Barren
14	190	-20.6	Mud; Diatom Film.	Barren
14	200	-20.6	Mud; Diatom Film.	Barren
14	210	-22.6	Mud; Diatom Film.	Barren
14	220	-22.6	Mud; Diatom Film.	Barren
14	230	-22.7	Mud; Diatom Film.	Barren
14	240	-22.7	Mud; Diatom Film.	Barren
14	250	-22.7	Mud; Diatom Film.	Barren
14	260	-22.7	Mud; Diatom Film.	Barren
14	270	-22.7	Mud; Diatom Film.	Barren
14	280	-22.7	Mud; Diatom Film.	Barren
14	290	-22.7	Mud; Diatom Film.	Barren
14	300	-22.7	Mud; Diatom Film.	Barren
14	310	-23.7	Mud; Diatom Film.	Barren
14	320	-23.7	Mud; Diatom Film.	Barren
14	330	-23.7	Mud; Diatom Film.	Barren
14	340	-23.7	Mud; Diatom Film.	Barren
14	350	-23.7	Mud; Diatom Film.	Barren
14	360	-23.7	Mud; Diatom Film.	Barren
14	370	-23.7	Mud; Diatom Film.	Barren
14	380	-23.7	Mud; Diatom Film.	Barren
14	390	-23.7	Mud; Old outfall, Diatom Film.	Barren
14	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
15	0	-6.5	Sand/Mud; Debris.	Saccharina 10%.
15	10	-6.5	Sand/Mud; Debris.	Saccharina 10%.
15	20	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	30	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	40	-8.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	50	-8.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	60	-9.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	70	-10.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	80	-10.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	90	-11.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	100	-12.4	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	110	-12.4	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	120	-13.4	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 10%.
15	130	-14.4	Sand/Mud; Debris.	Barren
15	140	-14.4	Sand/Mud; Debris.	Barren
15	150	-15.4	Sand/Mud; Debris.	Barren
15	160	-16.4	Mud; Debris, Diatom Film.	Barren
15	170	-17.4	Mud; Debris, Diatom Film.	Barren
15	180	-17.4	Mud; Debris, Diatom Film.	Barren
15	190	-18.4	Mud; Debris, Diatom Film.	Barren
15	200	-19.4	Mud; Debris, Diatom Film.	Barren
15	210	-19.4	Mud; Debris, Diatom Film.	Barren
15	220	-20.4	Mud; Debris, Diatom Film.	Barren
15	230	-20.4	Mud; Debris, Diatom Film.	Barren
15	240	-21.4	Mud; Debris, Diatom Film.	Barren
15	250	-21.4	Mud; Debris, Diatom Film.	Barren
15	260	-21.4	Mud; Debris, Diatom Film.	Barren
15	270	-22.3	Mud; Metridium, Diatom Film.	Barren
15	280	-22.3	Mud; Metridium, Diatom Film.	Barren
15	290	-22.3	Mud; Metridium, Diatom Film.	Barren
15	300	-22.3	Mud; Metridium, Diatom Film.	Barren
15	310	-22.3	Mud; Metridium, Diatom Film.	Barren
15	320	-22.3	Mud; Metridium, Diatom Film.	Barren
15	330	-22.3	Mud; Diatom Film.	Barren
15	340	-22.3	Mud; Diatom Film.	Barren
15	350	-22.3	Mud; Diatom Film.	Barren
15	360	-22.3	Mud; Diatom Film.	Barren
15	370	-23.3	Mud; Diatom Film.	Barren
15	380	-23.3	Mud; Diatom Film.	Barren
15	390	-23.3	Mud; Old outfall, Diatom Film.	Barren
15	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
16	0	-7.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	10	-8.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	20	-8.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	30	-9.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	40	-10.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	50	-10.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	60	-11.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	70	-12.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	80	-12.1	Mud; Debris.	Saccharina 10%; Gracilaria 5%.
16	90	-13.1	Mud; Debris.	Saccharina 10%; Gracilaria 5%.
16	100	-14.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	110	-15.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	120	-16.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	130	-16.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	140	-17.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
16	150	-17.1	Mud; Debris, Diatom Film.	Barren
16	160	-18.1	Mud; Debris, Diatom Film.	Barren
16	170	-18.1	Mud; Debris, Diatom Film.	Barren
16	180	-19.1	Mud; Debris, Diatom Film.	Barren
16	190	-20.1	Mud; Diatom Film.	Barren
16	200	-20.1	Mud; Diatom Film.	Barren
16	210	-22.1	Mud; Diatom Film.	Barren
16	220	-22.2	Mud; Diatom Film.	Barren
16	230	-22.2	Mud; Diatom Film.	Barren
16	240	-22.2	Mud; Diatom Film.	Barren
16	250	-22.2	Mud; Diatom Film.	Barren
16	260	-22.2	Mud; Diatom Film.	Barren
16	270	-22.2	Mud; Diatom Film.	Barren
16	280	-22.2	Mud; Diatom Film.	Barren
16	290	-22.2	Mud; Diatom Film.	Barren
16	300	-22.2	Mud; Diatom Film.	Barren
16	310	-23.2	Mud; Diatom Film.	Barren
16	320	-23.2	Mud; Diatom Film.	Barren
16	330	-23.2	Mud; Diatom Film.	Barren
16	340	-23.2	Mud; Diatom Film.	Barren
16	350	-23.2	Mud; Diatom Film.	Barren
16	360	-23.2	Mud; Diatom Film.	Barren
16	370	-23.2	Mud; Diatom Film.	Barren
16	380	-23.3	Mud; Diatom Film.	Barren
16	390	-23.3	Mud; Old outfall, Diatom Film.	Barren
16	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
17	0	-7.0	Sand/Mud; Debris.	Barren
17	10	-7.0	Sand/Mud; Debris.	Barren
17	20	-8.0	Sand/Mud; Debris.	Barren
17	30	-8.0	Sand/Mud; Debris.	Barren
17	40	-9.0	Sand/Mud; Debris.	Barren
17	50	-10.0	Sand/Mud; Debris.	Barren
17	60	-11.0	Sand/Mud; Debris.	Barren
17	70	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	80	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	90	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	100	-14.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	110	-15.0	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
17	120	-15.9	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
17	130	-16.9	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 5%.
17	140	-16.9	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 5%.
17	150	-17.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	160	-18.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	170	-18.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	180	-19.9	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	190	-19.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	200	-20.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	210	-20.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	220	-20.9	Mud; Diatom Film.	Barren
17	230	-21.9	Mud; Diatom Film.	Barren
17	240	-21.9	Mud; Diatom Film.	Barren
17	250	-22.9	Mud; Diatom Film.	Barren
17	260	-22.9	Mud; Diatom Film.	Barren
17	270	-22.9	Mud; Diatom Film.	Barren
17	280	-22.8	Mud; Diatom Film.	Barren
17	290	-22.8	Mud; Diatom Film.	Barren
17	300	-22.8	Mud; Diatom Film.	Barren
17	310	-22.8	Mud; Diatom Film.	Barren
17	320	-22.8	Mud; Diatom Film.	Barren
17	330	-23.8	Mud; Diatom Film.	Barren
17	340	-23.8	Mud; Diatom Film.	Barren
17	350	-23.8	Mud; Diatom Film.	Barren
17	360	-23.8	Mud; Diatom Film.	Barren
17	370	-23.8	Mud; Diatom Film.	Barren
17	380	-23.8	Mud; Old outfall, Diatom Film.	Barren
17	390	-23.8	Mud; Diatom Film.	Barren
17	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
18	0	-8.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	10	-9.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	20	-9.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	30	-10.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	40	-10.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	50	-11.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	60	-11.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	70	-12.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	80	-12.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	90	-13.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	100	-14.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	110	-15.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	120	-15.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	130	-16.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	140	-17.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	150	-17.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	160	-18.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	170	-19.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	180	-19.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	190	-20.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	200	-20.7	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	210	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	220	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	230	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	240	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	250	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	260	-21.7	Mud; Diatom Film.	Barren
18	270	-21.7	Mud; Diatom Film.	Barren
18	280	-21.7	Mud; Diatom Film.	Barren
18	290	-22.7	Mud; Diatom Film.	Barren
18	300	-22.7	Mud; Diatom Film.	Barren
18	310	-22.7	Mud; Diatom Film.	Barren
18	320	-22.7	Mud; Diatom Film.	Barren
18	330	-23.7	Mud; Diatom Film.	Barren
18	340	-23.7	Mud; Diatom Film.	Barren
18	350	-23.7	Mud; Diatom Film.	Barren
18	360	-23.7	Mud; Diatom Film.	Barren
18	370	-23.8	Mud; Diatom Film.	Barren
18	380	-23.8	Mud; Old outfall, Diatom Film.	Barren
18	390	-23.8	Mud; Diatom Film.	Barren
18	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
19	0	-6.5	Sand/Mud; Debris.	Barren
19	10	-6.5	Sand/Mud; Debris.	Barren
19	20	-7.5	Sand/Mud; Debris.	Barren
19	30	-7.5	Sand/Mud; Debris.	Barren
19	40	-8.5	Sand/Mud; Debris.	Barren
19	50	-9.5	Sand/Mud; Debris.	Barren
19	60	-10.5	Sand/Mud; Debris.	Barren
19	70	-11.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	80	-12.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	90	-12.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	100	-13.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	110	-14.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	120	-15.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	130	-16.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	140	-16.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	150	-17.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	160	-18.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	170	-18.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	180	-19.4	Mud; Debris, Diatom Film.	Barren
19	190	-19.4	Mud; Diatom Film.	Barren
19	200	-20.4	Mud; Diatom Film.	Barren
19	210	-20.4	Mud; Diatom Film.	Barren
19	220	-20.4	Mud; Diatom Film.	Barren
19	230	-21.4	Mud; Diatom Film.	Barren
19	240	-21.4	Mud; Diatom Film.	Barren
19	250	-22.4	Mud; Diatom Film.	Barren
19	260	-22.4	Mud; Diatom Film.	Barren
19	270	-22.4	Mud; Diatom Film.	Barren
19	280	-22.4	Mud; Diatom Film.	Barren
19	290	-22.4	Mud; Diatom Film.	Barren
19	300	-22.3	Mud; Diatom Film.	Barren
19	310	-22.3	Mud; Diatom Film.	Barren
19	320	-22.3	Mud; Diatom Film.	Barren
19	330	-23.3	Mud; Diatom Film.	Barren
19	340	-23.3	Mud; Diatom Film.	Barren
19	350	-23.3	Mud; Diatom Film.	Barren
19	360	-23.3	Mud; Diatom Film.	Barren
19	370	-23.3	Mud; Diatom Film.	Barren
19	380	-23.3	Mud; Old outfall, Diatom Film.	Barren
19	390	-23.3	Mud; Diatom Film.	Barren
19	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
20	0	-8.0	Sand/Mud; Debris.	Barren
20	10	-9.0	Sand/Mud; Debris.	Barren
20	20	-9.1	Sand/Mud; Debris.	Barren
20	30	-10.1	Sand/Mud; Debris.	Barren
20	40	-10.1	Sand/Mud; Debris.	Barren
20	50	-11.1	Sand/Mud; Debris, Diatom Film.	Barren
20	60	-11.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	70	-12.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	80	-12.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	90	-13.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	100	-14.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	110	-15.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	120	-15.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	130	-16.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	140	-17.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	150	-17.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	160	-18.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	170	-19.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	180	-19.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	190	-20.2	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	200	-20.2	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	210	-21.2	Mud; Diatom Film.	Barren
20	220	-21.2	Mud; Diatom Film.	Barren
20	230	-21.2	Mud; Diatom Film.	Barren
20	240	-21.2	Mud; Diatom Film.	Barren
20	250	-21.2	Mud; Diatom Film.	Barren
20	260	-21.2	Mud; Diatom Film.	Barren
20	270	-21.2	Mud; Diatom Film.	Barren
20	280	-21.2	Mud; Diatom Film.	Barren
20	290	-22.2	Mud; Diatom Film.	Barren
20	300	-22.2	Mud; Diatom Film.	Barren
20	310	-22.2	Mud; Diatom Film.	Barren
20	320	-22.2	Mud; Diatom Film.	Barren
20	330	-23.2	Mud; Diatom Film.	Barren
20	340	-23.2	Mud; Diatom Film.	Barren
20	350	-23.3	Mud; Diatom Film.	Barren
20	360	-23.3	Mud; Diatom Film.	Barren
20	370	-23.3	Mud; Diatom Film.	Barren
20	380	-23.3	Mud; Old outfall, Diatom Film.	Barren
20	390	-23.3	Mud; Diatom Film.	Barren
20	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
21	0	-6.0	Sand/Mud; Debris.	Barren
21	10	-6.0	Sand/Mud; Debris.	Barren
21	20	-7.0	Sand/Mud; Debris.	Barren
21	30	-7.0	Sand/Mud; Debris.	Barren
21	40	-8.0	Sand/Mud; Debris.	Barren
21	50	-9.0	Sand/Mud; Debris.	Barren
21	60	-10.0	Sand/Mud; Debris.	Barren
21	70	-11.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	80	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	90	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	100	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	110	-14.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	120	-15.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	130	-16.0	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	140	-16.0	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	150	-16.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	160	-17.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	170	-17.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	180	-18.9	Mud; Debris, Diatom Film.	Barren
21	190	-18.9	Mud; Debris, Diatom Film.	Barren
21	200	-19.9	Mud; Debris, Diatom Film.	Barren
21	210	-19.9	Mud; Debris, Diatom Film.	Barren
21	220	-19.9	Mud; Debris, Diatom Film.	Barren
21	230	-20.9	Mud; Diatom Film.	Barren
21	240	-20.9	Mud; Diatom Film.	Barren
21	250	-21.9	Mud; Diatom Film.	Barren
21	260	-21.9	Mud; Diatom Film.	Barren
21	270	-21.9	Mud; Diatom Film.	Barren
21	280	-21.9	Mud; Diatom Film.	Barren
21	290	-21.9	Mud; Diatom Film.	Barren
21	300	-21.9	Mud; Diatom Film.	Barren
21	310	-21.8	Mud; Diatom Film.	Barren
21	320	-21.8	Mud; Diatom Film.	Barren
21	330	-22.8	Mud; Diatom Film.	Barren
21	340	-22.8	Mud; Diatom Film.	Barren
21	350	-22.8	Mud; Diatom Film.	Barren
21	360	-22.8	Mud; Diatom Film.	Barren
21	370	-22.8	Mud; Diatom Film.	Barren
21	380	-22.8	Mud; Old outfall, Diatom Film.	Barren
21	390	-22.8	Mud; Diatom Film.	Barren
21	400	-22.8	Mud; Diatom Film.	Barren

DRAFT

GIG HARBOR
"THE MARITIME CITY"

OFFICE USE ONLY

SUBMITTED: RECEIVED By MThomas City of Gig Harbor at 7:27 am, May 16, 2022

CASE NO.: PL-SDP-22-0005

MASTER PLANNING PERMIT APPLICATION

Check all permits you are applying for in the boxes provided. Submit this application form, the applicable materials listed in the corresponding checklist and fee.

■ Major Site Plan Review	☐ Preliminary Short Plat	■ Shoreline Substantial Development Permit	☐ Land Clearing
☐ Minor Site Plan Review	☐ Final Short Plat	☐ Shoreline Variance	☐ Nonconforming Review
■ Administrative Design Review	☐ Preliminary Plat	☐ Shoreline Conditional Use Permit	☐ Perf. Based Height Exception
☐ Alternative Design Review	☐ Preliminary Plat Revision	☐ Shoreline Exemption	☐ Temporary Trailer
☐ Alternative Landscape Plan	☐ Final Plat	☐ Shoreline Revision	☐ Administrative Interpretation
☐ Binding Site Plan	☐ Plat Alterations/Vacation	■ Flood Hazard	☐ Rezone
☐ Variance	☐ Preliminary PRD/PUD	☐ Critical Area Variance	☐ Height Restriction Area Amendment
☐ Conditional Use Permit	☐ Final PRD/PUD	☐ Reasonable Use Exception	☐ Comp. Plan Amendment
■ SEPA	☐ Final PRD/PUD Amendment	■ Critical Area Review	☐ Zoning Text Amendment
	☐ Boundary Line Adjustment		

Project Name:	Gig Harbor Commercial Fishing Homeport
Project Address:	3589 Harborview Dr, Gig Harbor, WA 98332
Tax Assessor Parcel Number(s): *Attach full legal description*	5970000244

APPLICANT/AGENT ■ **Primary Contact for Application**			
Name:	Steve Robert	**Phone:**	206.523.0024 x138
Street:	9706 4th Ave NE #300	**Fax:**	
City/State/Zip:	Seattle, WA 98115	**Email:**	steve@dcgengr.com

PROPERTY OWNER(S) ☐ **Applicant** ☐ **Primary Contract for Application**			
Name:	Jeff Langhelm	**Phone:**	(253) 851-6170
Street:	3510 Grandview Street	**Fax:**	
City/State/Zip	Gig Harbor, WA 98335	**Email:**	jlanghelm@gigharborwa.gov

Property Owner(s)

I do hereby affirm and certify, under penalty of perjury, that I am one (or more) of the owners or owner under contract of the herein described property and that the foregoing statements and answers are in all respects true and correct on my information and belief as to those matters, I believe it to be true.

Signature by Property Owner: _____ **Date:** May 9, 2022

PROJECT DESCRIPTION (PROVIDE DETAILED SUMMARY)

The City of Gig Harbor has recently completed multiple phases of development at the Ancich Waterfront Park including restoration of the historic Ancich Netshed and pier (NWS-2016-733; HPA 8645) and the Community Paddlers Dock (NWS-2018-981; HPA 23613 and 16330). The City is now proposing to install a commercial fishing dock off Ancich Pier. Mitigation was previously approved through an advanced review process (NWS-2021-187; HPA 24349 (HPA revoked)).

UTILITIES

Water Supply (name of utility provider):	**Sewage Disposal (name of utility provider):**
N/A	N/A

Access (Name of road or street from which access is or will be gained):

Harborview Drive

CRITICAL AREA INFORMATION

Wetlands on site ☐ Yes ■ No	**Slopes exceeding 15%** ■ Yes ☐ No	**Streams** ☐ Yes ■ No

Existing Land Use: Describe (or illustrate separately) all existing use structures and all critical areas within 300 feet of property lines.

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront. There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

Fee Deposits:

"I acknowledge that I have applied for a permit which requires a deposit for future services to be rendered, as required by section F of the City's adopted Fee Schedule. I understand that, as the applicant, I (we) shall bear all of the costs of these services and will be billed the act costs in excess of the deposit. If the actual costs are below the deposit, I will be refunded the difference." _____ (Initials)

Consolidated Permit Processing:

"As the applicant, I (we) elect to have all planning permits submitted concurrently and associated with our project processed collectively under the highest numbered permit procedure per **GHMC 19.01.002(B)**." _____ (Initials)

GIG HARBOR
"THE MARITIME CITY"

PLANNING DEPARTMENT
CHECKLIST FOR ALL PROJECTS

CHECKLIST FOR ALL PROJECTS | GHMC 19.02.002

- ☐ A completed project permit application form.
- ☐ A verified statement by the applicant that the property affected by the application is in the exclusive ownership of the applicant, or that the applicant has submitted the application with the consent of all owners of the affected property.
- ☐ A property and/or legal description of the site for all applications, as required by the applicable development regulations.
- ☐ The applicable fee.
- ☐ Evidence of adequate water supply as required by RCW 19.27.097 or a copy of an application for City of Gig Harbor water concurrency determination; and
- ☐ Evidence of sewer availability or an application for a city of Gig Harbor sewer concurrency determination.

SUBMITTAL OPTIONS:

PAPER COPY OPTION:

- ☐ 5 complete sets of submittal materials including wetland reports and traffic reports. Plan sets are to be the same size sheets collated and bound, (preferred size of 24"x36"). Please provide 2 sets of reduced size 11"x17". Please tile sheets if needed to meet required scale.

  If your project requires multiple permits, only 5 sets, plus 2 reduced sets, are required. Please combine the requirements of all permits into the bound sets.

ELECTRONIC PLAN REVIEW OPTION:

- ☐ The City of Gig Harbor is pleased to offer electronic plan review. Please read this Client Assistance Memo and email a complete Intake Request Form to: planningintake@cityofgigharbor.net

This checklist is intended as a guide for applicants and is not a substitute for the applicable code sections.

RECEIVED
By MThomas City of Gig Harbor at 7:08 am, May 16, 2022

AFFIDAVIT
AGENT AUTHORITY

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 07

STATE OF WASHINGTON }
COUNTY OF PIERCE }SS
CITY OF GIG HARBOR }

I/we, Jeff Langhelm, City of Gig Harbor being duly sworn, deposed and say that I am/we are the owners of the property legally described below, and that Steve Robert, Davido Consulting Group has my/our permission to act as my/our agent in my/our behalf for this application for the processing of applications and associated documentation for the subject party with the City of Gig Harbor.

Legal Description:

Section 05 Township 21 Range 02 Quarter 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

Owner's Signature	Date	Owner's Signature	Date
	May 9, 2022		

Mailing Address: 3510 Grandview Street
Gig Harbor, WA 98335

Phone: (253) 851-6170
Email: jlanghelm@gigharborwa.gov

RECEIVED
By MThomas City of Gig Harbor at 7:32 am, May 16, 2022

CITY OF GIG HARBOR
SHORELINE PERMIT(S) APPLICATION

CITY USE ONLY
Case Number:
Date Received;
Receipt: By:

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 08

- [ ] Shoreline Exemption
- [ ] Shoreline Revision
- [x] Shoreline Management Substantial Development
- [ ] Shoreline Variance
- [ ] Shoreline Conditional Use

To the Applicant: This is an application for a shoreline Management Development Permit and is authorized by the Shoreline Management Act of 1971. It is suggested that you check with the appropriate local, state or federal officials to determine whether your project falls within any other Permit system, since a Permit under the Shoreline Management Act will not excuse the applicant from compliance with any other local, state or federal ordinances, regulations or statues applicable to the project

Name of project / proposal: Gig Harbor Commercial Fishing Homeport

Applicant: Jeff Langhelm
(Name)

3510 Grandview Street — (253) 851-6170
Street Address — Phone

Gig Harbor, WA — 98335
City & State — Zip

Owner: Same as applicant
(Name)

Street Address — Phone

City & State — Zip

I(We): Jeff Langhelm
(Name)

Signature — May 9, 2022
Date

Signature — Date

I do hereby affirm and certify, under penalty of perjury, that I am one (or more) of the owners or owner under contract of the herein described property and that the foregoing statements and answers are in al respects true and correct on my information and belief as to those matters, I believe it to be true.

Property Location:
Address: 3589 Harborview Drive, Gig Harbor, WA 98332

Section: 5 Township: 21 Range: 02

Assessor's Tax Parcel Number: 5970000244

Full Legal Description (attach separate sheet if too long)

Attached.

Total Square Footage of the Site:
Uplands: 17,550 SF
Private Tidelands: 50,000 SF

Total Lineal Feet of Shoreline: 205 LF

Property Information

Zoning Designation: Waterfront Millville

Slopes exceeding 15%? 23% Driveway

Shoreline Master Program Designation: Historic Working Waterfront

Fee Deposits:

- [x] "I acknowledge that I have applied for a permit which requires a deposit for future services to be rendered, as required by section F of the City's adopted Fee Schedule. I understand that, as the applicant, I (we) shall bear all the costs of these services and will be billed the actual costs in excess of the deposit. If the actual costs are below the deposit, I will be refunded the difference." _____ (Initials)

Consolidated Permit Processing:

- [x] "As the applicant, I (we) elect to have all planning permits submitted concurrently and associated with our project processed collectively under the highest numbered permit procedure per GHMC 19.01.002(B)" _____ (Initials)

Existing land use: *Describe (or illustrate separately) existing land use, including location of all existing structures and setbacks(in feet) from property lines.*

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront. The property to the west contains a marina and is used for fishing activities and services. One property to the east is a single-family home and the second property to the east is a marina. There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

Summary of Request (list type of uses)

The City of Gig Harbor has recently completed multiple phases of development at the Ancich Waterfront Park including restoration of the historic Ancich Netshed and pier (NWS-2016-733; HPA 8645) and the Community Paddlers Dock (NWS-2018-981; HPA 23613 and 16330). The City is now proposing to install a commercial fishing dock off Ancich Pier. Mitigation was previously approved through an advanced review process (NWS-2021-187; HPA 24349 (HPA revoked)).

APPLICATION REQUIREMENTS FOR SHORELINE PERMIT, CONDITIONAL USE, AND VARIANCE APPLICATIONS

A complete application for a shoreline management substantial development, conditional use or variance permit shall contain, at a minimum, the information described in WAC 173-27-180, which is attached to this application form.

Legal Description

Section 05 Township 21 Range 02 Quarter 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

Property Description

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront.

Address: 3659 Harborview Drive, Gig Harbor, WA, 98332
Tax Parcel: 5970000244
Latitude and Longitude: 47.33417 N lat. / -122.58684 W long.

GIG HARBOR
"THE MARITIME CITY"

SHORELINE PERMIT CHECKLIST

SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT
SHORELINE VARIANCE
SHORELINE CONDITIONAL USE PERMIT
SHORELINE EXEMPTION
SHORELINE REVISION

SHORELINE PERMIT CHECKLIST | 8.2 & 8.3 SMP & WAC 173.27.180

In addition to the information requested on the application the applicant shall provide, at minimum the following information:

SITE PLAN DRAWN TO SCALE NO SMALLER THAN ONE INCH EQUALS 30-FEET INCLUDING:

- ☒ Site boundary, including property dimensions, extending from the street frontage (as applicable) to the outer harbor line, all state lease lands (existing and proposed), structures on adjacent properties from the ordinary high-water mark to the outer harbor line, tideland leases and ownerships, and harborline lease areas on adjacent properties and the identification of the name of the shoreline (water body) that the site of the proposal is associated with;
  ☐ N/A ☐ Submitted on sheet(s) _____
- ☒ A general description of the proposed project that includes the proposed use or uses and the activities necessary to accomplish the project;
  ☐ N/A ☐ Submitted on sheet(s) _____
- ☒ A general description of the property as it now exists including its physical characteristics and improvements and structures;
  ☐ N/A ☐ Submitted on sheet(s) _____
- ☐ A delineation of all wetland areas that will be altered or used as a part of the development;
  ☒ N/A ☐ Submitted on sheet(s) _____
- ☒ The ordinary high-water mark of all water bodies located adjacent to or within the boundary of the project. This may be an approximate location provided, that for any development where a determination of consistency with the applicable regulations requires a precise location of the ordinary high water mark the mark shall be located precisely and the biological and hydrological basis for the location as indicated on the plans shall be included in the development plan. Where the ordinary high-water mark is neither adjacent to or within the boundary of the project, the plan shall indicate the distance and direction to the nearest ordinary high-water mark of a shoreline;
  ☐ N/A ☐ Submitted on sheet(s) _____
- ☒ Typical cross section or sections showing:
  1. Existing ground elevation ☐ N/A ☐ Submitted on sheet(s) _____
  2. Proposed ground elevation ☐ N/A ☐ Submitted on sheet(s) _____
  3. Height of existing structures ☐ N/A ☐ Submitted on sheet(s) _____
  4. Height of proposed structures ☐ N/A ☐ Submitted on sheet(s) _____
- ☐ Where appropriate, proposed land contours using five-foot intervals in water area and ten-foot intervals on areas landward of ordinary height water mark, if development involves grading, cutting, filling, or other alteration of land contours.
  ☒ N/A ☐ Submitted on sheet(s) _____
- ☒ Show dimensions and location of existing structures which will be maintained.
  ☐ N/A ☐ Submitted on sheet(s) _____
- ☐ Show dimensions and locations of proposed structures; parking and landscaping.
  ☒ N/A ☐ Submitted on sheet(s) _____

☐ Identify source composition, and volume of fill material.
☒ N/A ☐ Submitted on sheet(s) _____

☐ Identify composition and volume of any extracted materials, and identify proposed disposal area.
☒ N/A ☐ Submitted on sheet(s) _____

☒ The dimensions and location of proposed utilities, such as sewer, septic tanks and drain fields, water, gas and electricity and sewage pump-out facilities if being installed.
☐ N/A ☐ Submitted on sheet(s) _____

☐ If the development proposes septic tanks, they must comply with the local and state health regulations.
☒ N/A ☐ Submitted on sheet(s) _____

☒ Shoreline designation according to the Master Program.
☐ N/A ☐ Submitted on sheet(s) _____

☐ Show which areas are shorelines and which are shorelines of state-wide significance.
☒ N/A ☐ Submitted on sheet(s) _____

☒ Vicinity map.
☐ N/A ☐ Submitted on sheet(s) _____

☒ Indicate site location using natural points of reference (roads, state highways, prominent landmarks, etc.)
☐ N/A ☐ Submitted on sheet(s) _____

☐ If the development involves the removal of any soils by dredging or otherwise, identify the proposed disposal site is beyond the confines of the vicinity map showing the precise location of the disposal site and its distance to the nearest city or town.
☒ N/A ☐ Submitted on sheet(s) _____

☒ Give brief narrative description of the general nature of the improvements and land use within 1000 feet in all directions from development site.
☐ N/A ☐ Submitted on sheet(s) _____

☒ A general indication of the character of vegetation found on the site;
☐ N/A ☐ Submitted on sheet(s) _____

☐ On all variance applications, the plans shall clearly indicate where development could occur without approval of a variance, the physical features and circumstances on the property that provide a basis for the request, and the location of adjacent structures and uses;
☒ N/A ☐ Submitted on sheet(s) _____

☒ No net loss Shoreline Ecological Functions Evaluation Form;
☐ N/A ☐ Submitted on sheet(s) _____

☒ Plans for development of areas on or off the site as mitigation for impacts associated with the proposed project shall be included and contain information consistent with the requirements of the Shoreline Master Program;
☐ N/A ☐ Submitted on sheet(s) _____

TREE, LANDSCAPE AND SCREENING PLANS | GHMC 17.78.030

A plan of the proposed landscaping and screening shall be incorporated into plans submitted for site plan review or projects which require hearing examiner review. The plans shall be drawn to scale and contain the following, in addition to the significant tree survey and tree retention survey required by **GHMC 17.98.040**:

☒ Parking and vehicle use areas, driveways and walkways;
☐ N/A ☐ Submitted on sheet(s) _____

☒ Buildings or structures, existing and proposed;

☐ N/A ☐ Submitted on sheet(s) _____

☐ All proposed new landscaping, including the location of marine vegetation conservation strip area, if required pursuant to Shoreline Master Program Subsection 6.2.3.2. If required, the marine vegetation conservation strip shall comply with the planting requirements of Shoreline Master Program Subsections 6.2.4 and 6.2.5 as applicable. Landscape plan shall include the location, species, diameter or size of plants using both botanical and common names. Drawings shall reflect the ultimate size of plant materials. Alternatively, a schematic landscape plan can be submitted showing planting zones. Each planting zone shall include typical shrub and groundcover species and typical size and spacing at planting. All landscape plans shall include the location, species, and diameter or size of all proposed trees;

☒ N/A ☐ Submitted on sheet(s) _____

☐ Schematic irrigation plan showing irrigation zones and proposed irrigation techniques within each zone as set forth in **GHMC 17.78.045(C)**;

☒ N/A ☐ Submitted on sheet(s) _____

☐ Identification of tree protection techniques.

☒ N/A ☐ Submitted on sheet(s) _____

This checklist is intended as a guide for applicants and is not a substitute for the applicable code sections.

Landscape Plans

A. Parking and Vehicle Use Areas, Driveways, and Walkways – N/A
B. Building or Structures, Existing and Proposed

Existing: There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

Proposed: New float and gangway installation and removal of remainder of Jerkovich Pier as mitigation.

C. Proposed New Landscaping – N/A
D. Schematic Irrigation Plan – N/A
E. Identification of Tree Protection Techniques – N/A

Site Layout Plan

1. Site boundary, extending from the street frontage (as applicable) to the outer harbor line, all state lease lands (existing and proposed), structures on adjacent properties from OHW to the outer harbor line, tideland leases and ownerships, and harborline lease areas on adjacent properties.

   See Sheet 2 and 4

2. Property dimensions in vicinity of project.

   - The property has 125' of street frontage.
   - The property is 260 feet wide at the DNR Lease Line
   - The property is about 300 from the Right-of-way to DNR Lease Line.
   - The property is about 100 feet from right-of-way to OHW.

3. Ordinary high water mark.

   See Sheet 6

4. Typical cross section or sections showing:

   a. Existing ground elevation

      See Sheet 2

   b. Proposed ground elevation

      See Sheet 4

   c. Height of existing structures

      See Sheet 2

   d. Height of proposed structures

      See Sheet 6

5. Where appropriate, proposed land contours using five-foot intervals in water area and ten-foot intervals on areas landward of ordinary height water mark, if development involves grading, cutting, filling, or other alteration of land contours.

   See sheet 3

6. Show dimensions and location of existing structures which will be maintained.

   See Sheet 3

7. Show dimensions and locations of proposed structures; parking and landscaping.

   See 3

8. Identify source composition, and volume of fill material.

   There is no proposed fill.

9. Identify composition and volume of any extracted materials, and identify proposed disposal area.

   There is no proposed extraction.

10. Location of proposed utilities, such as sewer, septic tanks and drain fields, water, gas and electricity and sewage pump-out facilities if being installed.

    See Sheet 3

11. If the development proposes septic tanks, they must comply with local and state health regulations

    There will be no septic tanks on site.

12. Shoreline designation according to the Master Program

    Waterfront Millville, Historic Working Waterfront

13. Show which areas are shorelines and which are shorelines of state-wide significance.

    All ~205 linear feet of site shoreline are shown in image below; none of which is included within the determination of 'shorelines with statewide significance.'



Vicinity Map

1. Indicate site location using natural points of reference (roads, state highways, prominent landmarks, etc.)

   Directions from Northbound WA-16 after crossing the Tacoma Narrows Bridge:

   1. Take the exit ramp right towards Wollochet Drive NW (City Center)
   2. Keep straight on to Stinson Ave.
   3. Turn right onto Harborview Drive.
   4. Travel approximately 100 feet, Ancich Park will be on the left.

   Approximately 5.5 miles

   Directions from Eddon Boat Park:

   1. Head east on Harborview Dr. for 0.1 miles
2. If the development involves the removal of any soils by dredging or otherwise, identify

   There is no removal of soils.

3. Give brief narrative description of the general nature of the improvements and land use within 1,000 feet in all directions from development site.

   North: Gig Harbor Bay

   West: Waterfront Zone and Residential Low

   East: Waterfront Zone and Gig Harbor Bay

   South: Residential Low

WAC 173-27-180 - Application Requirements for Substantial Development

1) The name, address and phone number of the applicant. The applicant should be the owner of the property or the primary proponent of the project and not the representative of the owner or primary proponent.

   Name: Jeff Langhelm, City of Gig Harbor

   Address: 3510 Grandview Street, Gig Harbor, WA 98335

   Phone Number: (253) 851-6170

2) The name, address and phone number of the applicant's representative if other than the applicant.

   Name: Steve Robert, Davido Consulting Group

   Address: 9706 4th Ave NE #300, Seattle, WA 98115

   Phone Number: 206.523.0024 x138

3) The name, address and phone number of the property owner, if other than the applicant.

   Same as applicant

4) Location of the property. This shall, at a minimum, include the property address and identification of the section, township and range to the nearest quarter, quarter section or latitude and longitude to the nearest minute. All applications for projects located in open water areas away from land shall provide a longitude and latitude location.

   Address: 3589 Harborview Dr, Gig Harbor, WA, 98332

   Section: 5

   Township: 21

   Range: 02

   Tax Parcels: 5970000244

   Latitude and Longitude: 47.33417 N lat. / -122.58684 W long.

5) Identification of the name of the shoreline (water body) that the site of the proposal is associated with. This should be the water body from which jurisdiction of the act over the project is derived.

   Gig Harbor

6) A general description of the proposed project that includes the proposed use or uses

   1. Float Installation

   A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

   - (6) 60' Finger Floats
   - (1) 80' Finger Float

(20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. Mitigation

Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See attached Mitigation Plan for details.

7) A general description of the property as it now exists including its physical characteristics and improvements and structures.

There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

8) A general description of the vicinity of the proposed project including identification of the adjacent uses, structures and improvements, intensity of development and physical characteristics.

The area is within Gig Harbor's Historic Working Waterfront. To both the east and west, the upland areas of the park are bordered by single family homes. Adjacent properties to the north and south are used as small private marinas.

General nature of the improvements and land use within 1,000 feet in all directions from development site:

North: Gig Harbor Bay

West: Waterfront Zone and Residential Low

East: Waterfront Zone and Gig Harbor Bay

South: Residential Low

9) A site development plan consisting of maps and elevation drawings, drawn to an appropriate scale to depict clearly all required information, photographs and text which shall include:

a. The boundary of the parcel(s) of land upon which the development is proposed.

See sheet 3

b. The ordinary high water mark of all water bodies located adjacent to or within the boundary of the project. This may be an approximate location provided, that for any development where a determination of consistency with the applicable regulations requires a precise location of the ordinary high water mark the mark shall be located precisely and the biological and hydrological basis for the location as indicated on the plans shall be included in the development plan. Where the ordinary high water mark is neither adjacent to or within the boundary of the project, the plan shall indicate the distance and direction to the nearest ordinary high water mark of a shoreline.

See sheet 6

c. Existing and proposed land contours. The contours shall be at intervals sufficient to accurately determine the existing character of the property and the extent of proposed change to the land that is necessary for the development. Areas within the boundary that will not be altered by the development may be indicated as such and contours approximated for that area.

Existing contours, see sheets 4 and 5

d. A delineation of all wetland areas that will be altered or used as a part of the development.

There are no wetlands associated with this development.

e. A general indication of the character of vegetation found on the site.

Upland:

Upland vegetation consists of a City maintained vegetated buffer along a concrete vertical bulkhead. Land use in the surrounding area is primarily urban and residential.

Tidal:

A macrovegetation survey of the area is due to occur in June of 2022. Previous surveys found benthic sugar kelp, but no eelgrass was found.

f. The dimensions and locations of all existing and proposed structures and improvements including but not limited to; buildings, paved or graveled areas, roads, utilities, septic tanks and drainfields, material stockpiles or surcharge, and stormwater management facilities.

See sheet 3.

g. Where applicable, a landscaping plan for the project.

N/A

h. Where applicable, plans for development of areas on or off the site as mitigation

See mitigation plan and drawing set.

i. Quantity, source and composition of any fill material that is placed on the site whether temporary or permanent.

There is no cut or fill proposed.

j. Quantity, composition and destination of any excavated or dredged material.

There is no proposed dredging.

k. A vicinity map showing the relationship of the property and proposed development or use to roads, utilities, existing developments and uses on adjacent properties.

See sheet 1

l. Where applicable, a depiction of the impacts to views from existing residential uses and public areas.

Existing residential views will be minimally impacted by the new fishing dock. Views will be enhanced by removal of the remainder of Jerkovich Pier.

m. On all variance applications the plans shall clearly indicate where development could occur without approval of a variance, the physical features and circumstances on the property that provide a basis for the request, and the location of adjacent structures and uses.

There are no requested variances.

GIG HARBOR
"THE MARITIME CITY"

COMMUNITY DEVELOPMENT
PLANNING DIVISION

DETERMINATION OF COMPLETE APPLICATION

Tuesday, May 24, 2022

TO: City of Gig Harbor, 3510 Grandview Street, Gig Harbor, WA 98335

DCG Engineers, c/o Steve Robert, 9706 4th Ave NE, Suite #300, Seattle, WA 98115

RE: Shoreline Substantial Development Permit | PL-SDP-22-0004/ Major Site Plan Review | PL-SPR-22-0007/PL-DR-22-0040 and PL-SEPA-22-0014

FOR: GIG HARBOR COMMERCIAL FISHING HOMEPORT

Your application for the above referenced project has been reviewed by the Planning Division. Based on the required elements for a complete application (GHMC 19.02.002), the application is considered:

☒ **Complete.** ☐ **Incomplete.** See items below:

Your application is considered complete at this time.

If you have any questions on this matter, please contact: Cindy Andrews at (253) 851-6170 or Candrews@gigharborwa.gov

GIG HARBOR

"THE MARITIME CITY"

COMMUNITY DEVELOPMENT
PLANNING DIVISION

CITY OF GIG HARBOR

NOTICE OF APPLICATION
June 7th, 2022

GIG HARBOR COMMERCIAL FISHING HOMEPORT
Type III Permit

Permit Number(s): PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014

Date Application was Submitted: May 17, 2022

Date of Notice of Complete Application: May 24, 2022

Name of Applicant: City of Gig Harbor, 3510 Grandview Street., Gig Harbor, WA 98335

Name of Agent: DCG Engineers, c/o Steve Robert, 9706 4th Ave NE, Suite #300, Seattle, WA 98115

Project Location: 3589 Harborview Dr., site is located north side of Harborview Dr., approximately 275 feet east of the intersection with Novak St. Sec 05, Tw 21, R 02, QTR 33. Parcel – 5970000244

Description of Proposed Project: The City of Gig Harbor proposes to install a new float system from the existing Ancich Pier at Ancich Waterfront Park. The floats would be used as additional moorage for the local commercial fishing fleet. The float system would consist of a 280-foot floating dock, six 60-foot finger floats, and one 80-foot finger float. The floats will be held in place by twenty steel guide piles. Required mitigation will include the demolition of the remaining portion of the Jerkovich pier.

Project Permits Included with Application: Shoreline Substantial Development Permit, Major Site Plan Review, Design Review and SEPA Review.

Further Studies Being Required by Applicable Official: None at this time.

Other Required Permits Not Included in Application: Building Permit, USACE Section 10 Permit, Hydraulic Project Approval

Existing Environmental Documents which Evaluate Proposed Project:
SEPA Environmental Checklist, prepared by Jeff Langhelm, dated May 9, 2022
Critical Area Report, prepared by Davido Consulting Group, Inc, dated May 2022;

Tentative Public Meeting or Public Hearing Date: A hearing date has not been scheduled for this application.

Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or anytime thru the Permit Portal. An open record public hearing will be held on this project, at this time the hearing has not been scheduled. A copy of the staff report on this project proposal will be available seven days prior to the public hearing.

Interested persons may comment on the above stated application or may request any notice of public hearing or a copy of the decision on this application or participate in any public hearing. Requests for notification or written comments must be submitted to the Planning Division by no later than **July 7th, 2022**. All public comments or requests must be received at the Planning Division by no later than 5:00pm on the last date of the comment period.

Questions regarding the above stated application should be made to Carl de Simas, Principal Planner, City of Gig Harbor Planning Division, 3510 Grandview St., Gig Harbor, WA 98335, or by calling (253)851-6170. Additional permit information can also be found at www.cityofgigharbor.net by clicking "Permit Portal" and entering the above permit numbers in "My Portal".

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 11

City of Gig Harbor
Transmittal Form

Routing for: **NOA** **SEPA** **NOPH** **NOPM** **NOD** **Notice Date: June 7th, 2022**
Project: **HENIINGTON PLACE MARINA REPLACEMENT-REPAIR**

PL-SDP-22-0005, PL-SPR-22-0007, PL-DR-22-0040, PL-SEPA-22-0014

Planner: **CARL DE SIMAS**

Routed to: ☐ Public Works–Operations ☐ Building and Fire Safety
City Depts. ☐ Public Works–Engineering ☐ Other_____

SEPA Agencies: ☑ Washington Department of Ecology, SEPA Register
(**NOA**, **SEPA**) ☑ Washington Department of Commerce, attn: Review Team
Electronic Mail ☑ Pierce Transit Land Use Review, attn: Kelly Haden, Monica Adams
☑ Washington State Department of Fish & Wildlife, attn: SEPA Desk
☑ Washington State Department of Natural Resources, attn: SEPA Center
☑ Washington State DAHP, attn: Gretchen Kaehler
☑ Puyallup Tribe of Indians Historic Preservation, attn: Judy Wright
☑ Puyallup Tribe Cultural Resources, attn: Brandon Reynon/Jeffrey Thomas
☑ PenMet Parks, attn: Elaine Sorenson
☑ Pierce County Fire District Number 5, attn: Eric Watson/Eric Waters
☑ Suquamish Tribe, attn: Dennis Lewarch
☑ Peninsula School District, attn: Vicki Smith
☑ Pierce County Planning and Land Services
☑ Washington State Department of Transportation, attn: Dale Severson / SEPA Reviews
☑ Squaxin Island Tribe, attn: Rhonda Foster
☑ Muckleshoot Tribe, attn: Laura Murphy
☑ Washington Department of Corrections, attn: Eric Heinitz
☑ Puget Sound Partnership, attn: Marsha Engel

Other Parties: ☑ **Applicant/Owner**/Agent (**NOA**, **NOPH, NOPM, SEPA, NOD**) **MDNS)**
1st Class Mail ☑ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
☑ Parks Commission via Terri Reed (NOA)
☑ **Property Owners within 300 feet of site: attached list (NOA, SEPA, NOPH, NOPM, NOD** for Type II permits only)
☐ Parties of Record: attached list (**NOPH**, NOPM, NOD)
☐ Pierce County (NOA for Plats adjacent to City Limits)
☐ Pierce County Assessor-Treasurer (**NOD**)
☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
☐ **TACOMA NEWS TRIBUNE**

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF MAILING

I, Cindy Andrews (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On June 7th, 2022 I mailed, a true and correct copy of the **Notice of Application** for the following:

Project Name: **GIG HARBOR COMMERCIAL FISHING HOMEPORT**

Project Location: **3589 HARBORVIEW DR**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-DR-22-0040, PL-SEPA-22-0014**

to the individuals/agencies identified on the attached transmittal form by United States Postal Service, inter-office routing, or electronic mail, as specified on the attached.

SIGNED at Gig Harbor, Washington, this 7th day of June, 2022

Cindy Andrews

DECLARANT (signature)

GIG HARBOR

"THE MARITIME CITY"

COMMUNITY DEVELOPMENT
PLANNING DIVISION

CITY OF GIG HARBOR

NOTICE OF APPLICATION
June 7th, 2022

GIG HARBOR COMMERCIAL FISHING HOMEPORT
Type III Permit

Permit Number(s): PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014

Date Application was Submitted: May 17, 2022

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Name of Applicant: City of Gig Harbor, 3510 Grandview Street., Gig Harbor, WA 98335

Name of Agent: DCG Engineers, c/o Steve Robert, 9706 4th Ave NE, Suite #300, Seattle, WA 98115

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Project Permits Included with Application: Shoreline Substantial Development Permit, Major Site Plan Review, Design Review and SEPA Review.

Further Studies Being Required by Applicable Official: None at this time.

Other Required Permits Not Included in Application: Building Permit, USACE Section 10 Permit, Hydraulic Project Approval

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Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or anytime thru the Permit Portal. An open record public hearing will be held on this project, at this time the hearing has not been scheduled. A copy of the staff report on this project proposal will be available seven days prior to the public hearing.

Interested persons may comment on the above stated application or may request any notice of public hearing or a copy of the decision on this application or participate in any public hearing. Requests for notification or written comments must be submitted to the Planning Division by no later than **July 7th, 2022**. All public comments or requests must be received at the Planning Division by no later than 5:00pm on the last date of the comment period.

Questions regarding the above stated application should be made to Carl de Simas, Principal Planner, City of Gig Harbor Planning Division, 3510 Grandview St., Gig Harbor, WA 98335, or by calling (253)851-6170. Additional permit information can also be found at www.cityofgigharbor.net by clicking "Permit Portal" and entering the above permit numbers in "My Portal".

RECEIVED
By MThomas City of Gig Harbor at 7:09 am, May 16, 2022

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

Gig Harbor Commercial Fishing Homeport

2. Name of applicant:

Jeff Langhelm, City of Gig Harbor

3. Address and phone number of applicant and contact person:

Applicant:
Jeff Langhelm, City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335
jlanghelm@gigharborwa.gov
(253) 851-6170

Contact Person:
Steve Robert, Davido Consulting Group
9706 4th Ave NE #300
Seattle, WA 98115
steve@dcgengr.com
(206) 523-0024 x138

4. Date checklist prepared:

May 5, 2022

5. Agency requesting checklist:

City of Gig Harbor

6. Proposed timing or schedule (including phasing, if applicable):

August 1, 2023 to February 15, 2024

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yes, mitigation plan including removal of the remaining Jerkovich Pier.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Critical Areas Report
- Biological Assessment
- Macrovegetation Survey
- Mitigation Plan

- JARPA

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known

10. List any government approvals or permits that will be needed for your proposal, if known.

- USACE Section 10 Permit
- Hydraulic Project Approval
- Shoreline Substantial Development
- Flood Hazard Analysis
- No Net Loss Analysis
- Transportation Concurrency Management Program
- Major Site Plan (General Permit Application)

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The City of Gig Harbor has recently completed multiple phases of development at the Ancich Waterfront Park including restoration of the historic Ancich Netshed and pier (NWS-2016-733; HPA 8645) and the Community Paddlers Dock (NWS-2018-981; HPA 23613 and 16330). The City is now proposing to install a commercial fishing dock off Ancich Pier. Mitigation was previously approved through an advanced review process (NWS-2021-187; HPA 24349 (HPA revoked)).

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Street address: 3589 Harborview Dr, Gig Harbor, WA 98332
Section: 05
Township: 21
Range: 02
Legal description:
-Section 05 Township 21 Range 02 Quarter 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6

& 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

23%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Harstine gravelly ashy sandy loam, 6 to 15 percent slopes.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

No filling, excavationg, or grading is proposed.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion is not expected.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 65%. There will be no additional impervious surface due to project construction.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Prior to start of any earthwork, a turbidity curtain will be installed in the water surrounding the project to contain turbidity during installation of the new structures.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Air emissions during construction will be restricted to construction equipment being used on site. The project will require a barge mounted crane. After the construction is complete, it is not anticipated that operation and maintenance will have any associated emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off site sources affecting the proposed project are known at this time.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

No extraordinary emission controls are proposed for this project at this time.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes, the project site is located in Gig Harbor (Puget Sound).

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

There is no proposed filling or dredging.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

N/A

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The new proposed structures contain permeable grating. Precipitation will fall directly through the grating into Gig Harbor.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials are not anticipated to enter ground or surface waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

None.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other

____shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
__X__other types of vegetation

Upland vegetation consists of a City maintained vegetated buffer along a concrete vertical bulkhead. Land use in the surrounding area is primarily urban and residential. A macrovegetation survey of the area is due to occur in June of 2022. Previous surveys found benthic sugar kelp but no eelgrass was found.

b. What kind and amount of vegetation will be removed or altered?

None.

c. List threatened and endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

e. List all noxious weeds and invasive species known to be on or near the site.

The following species have previously been found near the site: Japanese knotweed (*Polygonum cuspidatum*), Canadian thistle (*Cirsium arvense*), Himalayan blackberry (*Rubus armeniacus*), western dock (*Rumex occidentalis*), common tansy (*Tanacetum vulgare*), and field morning glory (*Convolvulus arvensis*).

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Gulls, harbor seals, salmonids, etc.

b. List any threatened and endangered species known to be on or near the site.

1. Southern resident killer whale (*Orcinus orca*)
2. Puget Sound Chinook (*Oncorhynchus tshawytscha*)
3. Puget Sound steelhead (*Oncorhynchus mykiss)*
4. Yelloweye rockfish *(Sebastes ruberrimus)*
5. Bocaccio *(Sebastes paucispinis)*
6. Bull trout (*Salvelinus confluentus*)
7. Marbled murrelet (*Brachyramphus marmoratus*)
8. Humpback Whale (*Megaptera novaeangliae*)

c. Is the site part of a migration route? If so, explain.

Pacific Flyway Migration Route

d. Proposed measures to preserve or enhance wildlife, if any:

Agency approved work windows will be strictly adhered to for in-water work. Turbidity curtains will reduce sedimentation impacts to species and a bubble curtain will be used during impact pile driving.

e. List any invasive animal species known to be on or near the site.

None known.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project has been designed to be of a low profile. The surrounding sites should not be adversely affected in their ability to collect sunlight for solar power.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No extraordinary energy control measures are proposed at this time.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.

None known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
The project is not anticipated to store, use, or produce any toxic or hazardous chemicals over its life.

4) Describe special emergency services that might be required.

None anticipated.

5) Proposed measures to reduce or control environmental health hazards, if any:

None.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Traffic on Harborview Drive and recreational power boating noise is present.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise from construction equipment is expected over the short-term while the project is being built. Construction noises will be created during daylight hours only. Public use noises may slightly increase due to increased use of the site, but not differ from noises already present at boat harbors.

2) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront. The property to the west contains a marina and is used for fishing activities and services. One property to the east is a single-family home and the second property to the east is a marina. The proposal will not affect current land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

d. Will any structures be demolished? If so, what?

The remaining portion of Jerkovich Pier will be demolished as mitigation for the project.

e. What is the current zoning classification of the site?

Waterfront Millville

f. What is the current comprehensive plan designation of the site?

Downtown Centers of Local Importance and Regional Business

g. If applicable, what is the current shoreline master program designation of the site?

Historic working waterfront

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes, marine nearshore.

i. Approximately how many people would reside or work in the completed project?

N/A

j. Approximately how many people would the completed project displace?

N/A

k. Proposed measures to avoid or reduce displacement impacts, if any:

NONE.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The guide piles on the main walk will be approximately 11 feet above OHWM (+12.8').

b. What views in the immediate vicinity would be altered or obstructed?

Views off of Ancich Pier will include the new fishing dock.

b. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposed dock will be illuminated for pedestrian and boater safety.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

Street and business lighting is nearby, but is not expected to affect the project site negatively.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

Walking, jogging, and other recreation associated with streets and open areas in an urban environment. In addition, kayaking, canoeing, and other forms of boating are adjacent to the site in Gig Harbor.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project does not displace any existing recreational uses and is meant to enhance water-based uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The project is centered around providing a better space to be used for commercial fishing.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

Yes. The Ancich Netshed is currently a structure near the project site. The netshed is a historic building that supported the historic fishing industry in Gig Harbor.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Consultation with the tribes and the department of archeology and historic preservation was completed for the Ancich Park project as well as archaeological surveys (Corps No. NWS-2016-733).

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

None.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Harborview Drive is adjacent to the project site. No changes are proposed to any roadways for the project.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The site is served by a nearby Pierce Transit stop. The stop is serviced by Pierce Transit route 100.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

N/A

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

N/A

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The utilities mentioned above will all be extended from their existing to the end of the main walk floating dock.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee Jeff Langhelm

Position and Agency/Organization Public Works Director

Date Submitted: May 9, 2022

D. Supplemental sheet for nonproject actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

Project Web Map



6/2/2022, 8:54:08 AM

1:4,514

0 0.03 0.05 0.1 mi

0 0.04 0.08 0.16 km

Address Points Gig Harbor Peninsula

Parcels Tile Map

Parcels

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, HxGN Content Program Copyright 2021., Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

City of Gig Harbor

The map features are approximate. All data is provided "as-is" and "with all faults." The City assumes no liability for variations ascertained by actual survey.

TaxParcelNumber	TaxpayerName	Delivery_Address	City_State Zipcode
Parcel: 0221053030	MALICH KENNETH A & BARBARA P	3515 ROSS AVE	GIG HARBOR, WA 983
Parcel: 0221053113	EUGENE AND HANS LLC	9167 NW KAISER RD	PORTLAND, OR 9723
Parcel: 0221053083	FRANICH JAMES M	3702 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 5973000030	GLEIN GARY A & LINDA D	3519 HARBORVIEW DR APT 3	GIG HARBOR, WA 983
Parcel: 0221053050	CITY OF GIG HARBOR	3510 GRANDVIEW ST	GIG HARBOR, WA 983
Parcel: 0221053071	BUJACICH DOCK LLC	3607 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5970000244	CITY OF GIG HARBOR	3510 GRANDVIEW ST	GIG HARBOR, WA 983
Parcel: 5970000161	HARBOR CONDOMINIUM ASSOCIATION	5500 OLYMPIC DR STE H105	GIG HARBOR, WA 983
Parcel: 0221053058	VANBERG RICHARD L & JEAN C	3616 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 5973000010	DOWD MICHAEL T & CHRISTINE A	3519 HARBORVIEW DR APT 1	GIG HARBOR, WA 983
Parcel: 5970000291	BERG CAROLYN S ET AL	3526 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 5970000191	UNKNOWN CONVERSION PARTY	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA
Parcel: 5973000020	BORIS WILLIAM O TTEE	3519 HARBORVIEW DR UNIT 2	GIG HARBOR, WA 983
Parcel: 0221053114	EUGENE AND HANS LLC	9167 NW KAISER RD	PORTLAND, OR 9723
Parcel: 0221053042	QUIGG PATRICK D & KATHLEEN A	1831 BEL AIRE AVE	ABERDEEN, WA 9852
Parcel: 5973000060	UNKNOWN CONVERSION PARTY	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA
Parcel: 5970000215	MULLAN LLC	PO BOX 7605	TACOMA, WA 98417
Parcel: 5970000372	MUELLER RAND A	3514 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 0221053095	BUJACICH JACK D JR & BUJACICH PATRICIA R CO-TTEE	3607 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5973000040	SMITH LELAND C & PETERSON PAMELA H	3519 HARBORVIEW DR UNIT 4	GIG HARBOR, WA 983
Parcel: 5970000263	KADZIK PAUL L & JANICE K	3518 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 0221053051	FAIRWAY HOLDINGS LLC	PO BOX 99695	LAKEWOOD, WA 984
Parcel: 5973000010	DOWD MICHAEL T & CHRISTINE A	3519 HARBORVIEW DR APT 1	GIG HARBOR, WA 983
Parcel: 5970000301	ALLEN KRISTINE J	3603 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5973000040	SMITH LELAND C & PETERSON PAMELA H	3519 HARBORVIEW DR UNIT 4	GIG HARBOR, WA 983
Parcel: 5973000020	BORIS WILLIAM O TTEE	3519 HARBORVIEW DR UNIT 2	GIG HARBOR, WA 983
Parcel: 5970000180	IVANOVICH PETER D	531 N 1ST AVE	IOWA CITY, IA 52245
Parcel: 0221053092	BUJACICH JACK D JR & BUJACICH PATRICIA R CO-TTEE	3607 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5973000030	GLEIN GARY A & LINDA D	3519 HARBORVIEW DR APT 3	GIG HARBOR, WA 983
Parcel: 5973010010	UNKNOWN CONVERSION PARTY	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA
Parcel: 0221053093	BUJACICH GEORGE P TTEE	3619 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5973000030	GLEIN GARY A & LINDA D	3519 HARBORVIEW DR APT 3	GIG HARBOR, WA 983
Parcel: 5970000271	ALLEN KRISTINE J	3603 ROSS AVE	GIG HARBOR, WA 983

Parcel: 5973000010	DOWD MICHAEL T & CHRISTINE A	3519 HARBORVIEW DR APT 1	GIG HARBOR, WA 983
Parcel: 5973000050	MILLVILLE MARINA LLC	3519 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 0221053003	LEE JOHN J & HAN S	9167 NW KAISER RD	PORTLAND, OR 9723
Parcel: 5970000310	MOORE JANE M & DENNIS D	3525 ROSS AVE	GIG HARBOR, WA 983
Parcel: 5970000230	BERG CAROLYN S	3526 HARBORVIEW DR	GIG HARBOR, WA 983
Parcel: 5973000020	BORIS WILLIAM O TTEE	3519 HARBORVIEW DR UNIT 2	GIG HARBOR, WA 983

332-1845
1-2731
332-2130
332-2183
335-1214
332-1856
335-1214
335
332-2129
332
332-2128

332
1-2731
0-1305

332-2128
332-1856
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332-2128
96-0695
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332-2183

332-1856
332-2183
332-1856

332
332-2183
1-2731
332-1845
332-2128
332

Received CD
6/7/22

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF POSTING

I, Brandon Cossishite (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On June 7th, 2022 I caused to be posted the notice board provided by the city for the Notice of Application on the following:

Project Name: **GIG HARBOR COMMERCIAL FISHING HOMEPORT**

Project Location: **3589 HARBORVIEW DR**

Permit Number(s): **PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014**

at the locations indicated below meeting the requirements of GHMC 19.03.001(A).

- ☒ At midpoint of the street fronting the site
- ☒ The top of the board is between 5'-6'

SIGNED at Gig Harbor, Washington, this 7th day of June, 2022.

DECLARANT (signature)

City of Gig Harbor
Transmittal Form

Routing for: **NOA SEPA NOPH NOPM NOD Notice Date: June 7th, 2022**
Project: **GIG HARBOR COMMERCIAL FISHING HOMEPORT**

PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014

Planner: **CARL DE SIMAS**

Routed to: ☐ Public Works–Operations ☐ Building and Fire Safety
City Depts. ☐ Public Works–Engineering ☐ Other_____

SEPA Agencies: ☐ Washington Department of Ecology, SEPA Register
(**NOA**, **SEPA**) ☐ Washington Department of Commerce, attn: Review Team
Electronic Mail ☐ Pierce Transit Land Use Review, attn: Kelly Haden, Monica Adams
☐ Washington State Department of Fish & Wildlife, attn: SEPA Desk
☐ Washington State Department of Natural Resources, attn: SEPA Center
☐ Washington State DAHP, attn: Gretchen Kaehler
☐ Puyallup Tribe of Indians Historic Preservation, attn: Judy Wright
☐ Puyallup Tribe Cultural Resources, attn: Brandon Reynon/Jeffrey Thomas
☐ PenMet Parks, attn: Elaine Sorenson
☐ Pierce County Fire District Number 5, attn: Eric Watson/Eric Waters
☐ Suquamish Tribe, attn: Dennis Lewarch
☐ Peninsula School District, attn: Vicki Smith
☐ Pierce County Planning and Land Services
☐ Washington State Department of Transportation, attn: Dale Severson / SEPA Reviews
☐ Squaxin Island Tribe, attn: Rhonda Foster
☐ Muckleshoot Tribe, attn: Laura Murphy
☐ Washington Department of Corrections, attn: Eric Heinitz
☐ Puget Sound Partnership, attn: Marsha Engel

Other Parties: ☐ **Applicant/Owner**/Agent (**NOA**, **NOPH, NOPM, SEPA, NOD**) **MDNS)**
1st Class Mail ☐ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
☐ Parks Commission via Terri Reed (NOA)
☐ **Property Owners within 300 feet of site: attached list** (**NOA, SEPA, NOPH**, **NOPM**, **NOD** for Type II permits only)
☐ Parties of Record: attached list (**NOPH**, NOPM, NOD)
☐ Pierce County (NOA for Plats adjacent to City Limits)
☐ Pierce County Assessor-Treasurer (**NOD**)
☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
☑ **TACOMA NEWS TRIBUNE**

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF PUBLISHING

I, Cindy Andrews declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On APRIL 18, 2022, I sent a true and correct copy of the **NOTICE OF APPLICATION** for publication in the **June 7th, 2022** edition of the Tacoma News Tribune for the following:

Project Name: **GIG HARBOR COMMERCIAL FISHING HOMEPORT**

Project Location: **3589 HARBORVIEW DR**

Permit Number(s): **PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014**

SIGNED at Gig Harbor, Washington, this 2nd day June 2022

Cindy Andrews

DECLARANT (signature)

GIG HARBOR

"THE MARITIME CITY"

COMMUNITY DEVELOPMENT
PLANNING DIVISION

CITY OF GIG HARBOR

NOTICE OF APPLICATION
June 7th, 2022

GIG HARBOR COMMERCIAL FISHING HOMEPORT
Type III Permit

Permit Number(s): PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SEPA-22-0014

Date Application was Submitted: May 17, 2022

Date of Notice of Complete Application: May 24, 2022

Name of Applicant: City of Gig Harbor, 3510 Grandview Street., Gig Harbor, WA 98335

Name of Agent: DCG Engineers, c/o Steve Robert, 9706 4th Ave NE, Suite #300, Seattle, WA 98115

Project Location: 3589 Harborview Dr., site is located north side of Harborview Dr., approximately 275 feet east of the intersection with Novak St. Sec 05, Tw 21, R 02, QTR 33. Parcel – 5970000244

Description of Proposed Project: The City of Gig Harbor proposes to install a new float system from the existing Ancich Pier at Ancich Waterfront Park. The floats would be used as additional moorage for the local commercial fishing fleet. The float system would consist of a 280-foot floating dock, six 60-foot finger floats, and one 80-foot finger float. The floats will be held in place by twenty steel guide piles. Required mitigation will include the demolition of the remaining portion of the Jerkovich pier.

Project Permits Included with Application: Shoreline Substantial Development Permit, Major Site Plan Review, Design Review and SEPA Review.

Further Studies Being Required by Applicable Official: None at this time.

Other Required Permits Not Included in Application: Building Permit, USACE Section 10 Permit, Hydraulic Project Approval

Existing Environmental Documents which Evaluate Proposed Project:
SEPA Environmental Checklist, prepared by Jeff Langhelm, dated May 9, 2022
Critical Area Report, prepared by Davido Consulting Group, Inc, dated May 2022;

Tentative Public Meeting or Public Hearing Date: A hearing date has not been scheduled for this application.

Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or anytime thru the Permit Portal. An open record public hearing will be held on this project, at this time the hearing has not been scheduled. A copy of the staff report on this project proposal will be available seven days prior to the public hearing.

Interested persons may comment on the above stated application or may request any notice of public hearing or a copy of the decision on this application or participate in any public hearing. Requests for notification or written comments must be submitted to the Planning Division by no later than **July 7th, 2022**. All public comments or requests must be received at the Planning Division by no later than 5:00pm on the last date of the comment period.

Questions regarding the above stated application should be made to Carl de Simas, Principal Planner, City of Gig Harbor Planning Division, 3510 Grandview St., Gig Harbor, WA 98335, or by calling (253)851-6170. Additional permit information can also be found at www.cityofgigharbor.net by clicking "Permit Portal" and entering the above permit numbers in "My Portal".

THANK YOU for your legal submission!

Your legal has been submitted for publication. Below is a confirmation of your legal placement. You will also receive an email confirmation.

ORDER DETAILS

Order Number:
IPL0075843
Order Status:
Submitted
Classification:
Legals & Public Notices
Package:
TAC - Legal Ads
Final Cost:
139.08
Payment Type:
Account Billed
User ID:
IPL0021041

ACCOUNT INFORMATION

CITY OF GIG HARBOR IP
3510 GRANDVIEW ST
GIG HARBOR, WA 98335-1214
253-851-8136
noemail@noemail.com
CITY OF GIG HARBOR

TRANSACTION REPORT

Date
June 2, 2022 11:58:15 AM EDT
Amount:
139.08

SCHEDULE FOR AD NUMBER IPL00758430

June 7, 2022
The News Tribune (Tacoma)

PREVIEW FOR AD NUMBER IPL00758430

CITY OF GIG HARBOR

NOTICE OF APPLICATION
June 7th, 2022

GIG HARBOR COMMERCIAL FISHING HOMEPORT
Type III Permit

Permit Number(s): PL-SDP-22-0005/PL-SPR-22-0007/PL-DR-22-0040/PL-SE-PA-22-0014
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Name of Agent: DCG Engineers, c/o Steve Robert, 9706 4th Ave NE, Suite #300, Seattle, WA 98115
Project Location: 3589 Harborview Dr., site is located north side of Harborview Dr., approximately 275 feet east of the intersection with Novak St. Sec 05, Tw 21, R 02, QTR 33. Parcel – 5970000244
Description of Proposed Project: The City of Gig Harbor proposes to install a new float system from the existing Ancich Pier at Ancich Waterfront Park. The floats would be used as additional moorage for the local commercial fishing fleet. The float system would consist of a 280-foot floating dock, six 60-foot finger floats, and one 80-foot finger float. The floats will be held in place by twenty steel guide piles. Required mitigation will include the demolition of the remaining portion of the Jerkovich pier.
Project Permits Included with Application: Shoreline Substantial Development Permit, Major Site Plan Review, Design Review and SEPA Review.
Further Studies Being Required by Applicable Official: None at this time.
Other Required Permits Not Included in Application: Building Permit, USACE Section 10 Permit, Hydraulic Project Approval
Existing Environmental Documents which Evaluate Proposed Project:
SEPA Environmental Checklist, prepared by Jeff Langhelm, dated May 9, 2022
Critical Area Report, prepared by Davido Consulting Group, Inc, dated May 2022;
Tentative Public Meeting or Public Hearing Date: A hearing date has not been scheduled for this application.

Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or anytime thru the Permit Portal. An open record public hearing will be held on this project, at this time the hearing has not been scheduled. A copy of the staff report on this project proposal will be available seven days prior to the public hearing.
Interested persons may comment on the above stated application or may request any notice of public hearing or a copy of the decision on this application or participate in any public hearing. Requests for notification or written comments must be submitted to the Planning Division by no later than July 7th, 2022. All public comments or requests must be received at the Planning Division by no later than 5:00pm on the last date of the comment period.
Questions regarding the above stated application should be made to Carl de Simas, Principal Planner, City of Gig Harbor Planning Division, 3510 Grandview St., Gig Harbor, WA 98335, or by calling (253)851-6170. Additional permit information can also be found at www.cityofgigharbor.net by clicking "Permit Portal" and entering the above permit numbers in "My Portal".
W00000000
Publication Dates

<< Click here to print a printer friendly version >>

RECEIVED
By C. ANDREWS at 2:25 pm, May 26, 2022

WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form[1,2] [help]

US Army Corps of Engineers ®
Seattle District

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

AGENCY USE ONLY

Date received:

Agency reference #:

Tax Parcel #(s):

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 12

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]
Gig Harbor Commercial Fishing Homeport

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Middle)			
Langhelm, Jeff			
2b. Organization (If applicable)			
City of Gig Harbor			
2c. Mailing Address (Street or PO Box)			
3510 Grandview Street			
2d. City, State, Zip			
Gig Harbor, WA 98335			
2e. Phone (1)	**2f.** Phone (2)	**2g.** Fax	**2h.** E-mail
(253) 851-6170			jlanghelm@gigharborwa.gov

[1]Additional forms may be required for the following permits:
- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

[2]To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias__resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

Nicol

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [help]

3a. Name (Last, First, Middle)			
Robert, Steve			
3b. Organization (If applicable)			
Davido Consulting Group			
3c. Mailing Address (Street or PO Box)			
9706 4th Ave NE #300			
3d. City, State, Zip			
Seattle, WA 98115			
3e. Phone (1)	**3f.** Phone (2)	**3g.** Fax	**3h.** E-mail
(206) 523-0024 x138			steve@dcgengr.com

Part 4–Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [help]

☒ Same as applicant. (Skip to Part 5.)

☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

☐ There are multiple upland property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.

☒ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete JARPA Attachment E to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
4b. Organization (If applicable)			
4c. Mailing Address (Street or PO Box)			
4d. City, State, Zip			
4e. Phone (1)	**4f.** Phone (2)	**4g.** Fax	**4h.** E-mail

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

☐ There are multiple project locations (e.g. linear projects). Complete the section below and use JARPA Attachment B for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]

☐ Private
☐ Federal
☒ Publicly owned (state, county, city, special districts like schools, ports, etc.)
☐ Tribal
☒ Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]

3589 Harborview Dr

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]

Gig Harbor, WA 98332

5d. County [help]

Pierce

5e. Provide the section, township, and range for the project location. [help]

¼ Section	Section	Township	Range
	05	21	02

5f. Provide the latitude and longitude of the project location. [help]

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

47.33417 N lat. / -122.58684 W long.

5g. List the tax parcel number(s) for the project location. [help]

- The local county assessor's office can provide this information.

5970000244

5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]

Name	Mailing Address	Tax Parcel # (if known)
Eugene and Hans LLC	9167 NW Kaiser Rd Portland, OR 97231	0221053114 & 0221053113
Berg Carolyn	3526 Harborview Dr Gig Harbor, WA 98332	5970000230
Mullan LLC	PO Box 7605 Tacoma, WA 98417	5970000215
Right-of-Way	Harborview Dr	

5i. List all wetlands on or adjacent to the project location. [help]

None

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [help]

Gig Harbor

5k. Is any part of the project area within a 100-year floodplain? [help]

☒ Yes ☐ No ☐ Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [help]

Upland:

Upland vegetation consists of a City maintained vegetated buffer along a concrete vertical bulkhead. Land use in the surrounding area is primarily urban and residential.

Tidal:

A macrovegetation survey of the area is due to occur in June of 2022. Previous surveys found benthic sugar kelp but no eelgrass was found.

5m. Describe how the property is currently used. [help]

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront.

5n. Describe how the adjacent properties are currently used. [help]

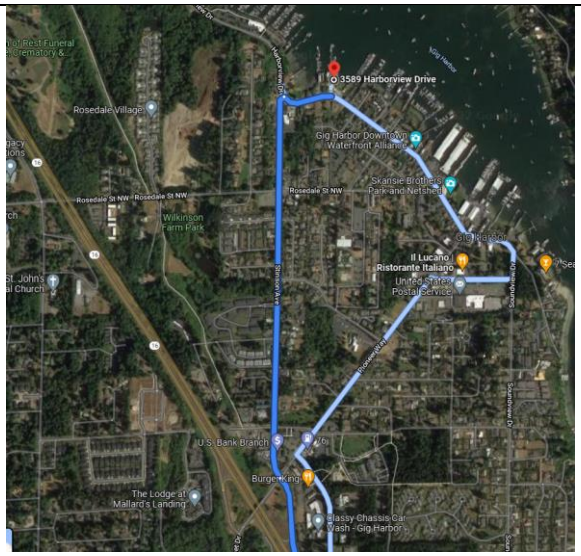
The property to the west contains a marina and is used for fishing activities and services. One property to the east is a single-family home and the second property to the east is a marina.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]

There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]

1. From WA-16 W take the Wollochet Dr NW exit toward City Center
2. Continue straight onto Stinson Ave
3. Turn right onto Harborview Dr
4. Destination will be on the left



Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]

The City of Gig Harbor has recently completed multiple phases of development at the Ancich Waterfront Park including restoration of the historic Ancich Netshed and pier (NWS-2016-733; HPA 8645) and the Community Paddlers Dock (NWS-2018-981; HPA 23613 and 16330). The City is now proposing to install a commercial fishing dock off Ancich Pier. Mitigation was previously approved through an advanced review process (NWS-2021-187; HPA 24349 (HPA revoked)).

6b. Describe the purpose of the project and why you want or need to perform it. [help]

Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The human powered craft dock is currently under construction (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet.

6c. Indicate the project category. (Check all that apply) [help]

☒ Commercial ☐ Residential ☐ Institutional ☐ Transportation ☐ Recreational
☐ Maintenance ☒ Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [help]

☐ Aquaculture	☐ Culvert	☐ Float	☐ Retaining Wall (upland)
☐ Bank Stabilization	☐ Dam / Weir	☐ Floating Home	☐ Road
☐ Boat House	☐ Dike / Levee / Jetty	☐ Geotechnical Survey	☐ Scientific Measurement Device
☐ Boat Launch	☐ Ditch	☐ Land Clearing	☐ Stairs
☐ Boat Lift	☒ Dock / Pier	☒ Marina / Moorage	☐ Stormwater facility
☐ Bridge	☐ Dredging	☐ Mining	☐ Swimming Pool
☐ Bulkhead	☐ Fence	☐ Outfall Structure	☐ Utility Line
☐ Buoy	☐ Ferry Terminal	☒ Piling/Dolphin	
☐ Channel Modification	☐ Fishway	☐ Raft	

☐ Other:

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

The proposed project consists of the following elements:

1. Float Installation

A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

- (6) 60' Finger Floats
- (1) 80' Finger Float

(20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. Mitigation

Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See attached Mitigation Plan for details.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [help]

- If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

Start Date: August 1, 2023 End Date: February 15, 2024 ☐ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

$2,585,667.77

6h. Will any portion of the project receive federal funding? [help]

- **If yes**, list each agency providing funds.

☐ Yes ☒ No ☐ Don't know

Part 7–Wetlands: Impacts and Mitigation

☐ Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [help]

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

☒ Not applicable

7b. Will the project impact wetlands? [help]

☐ Yes ☐ No ☐ Don't know

7c. Will the project impact wetland buffers? [help]

☐ Yes ☐ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [help]

- **If Yes**, submit the report, including data sheets, with the JARPA package.

☐ Yes ☐ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]

- **If Yes**, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☐ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]

- **If Yes**, submit the plan with the JARPA package and answer 7g.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

☐ Yes ☐ No ☐ Don't know

7g. Summarize what the mitigation plan is meant to accomplish and describe how a watershed approach was used to design the plan. [help]

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [help]

Activity (fill, drain, excavate, flood, etc.)	Wetland Name[1]	Wetland type and rating category[2]	Impact area (sq. ft. or Acres)	Duration of impact[3]	Proposed mitigation type[4]	Wetland mitigation area (sq. ft. or acres)

[1] If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.
[2] Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.
[3] Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.
[4] Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]

☐ Not applicable

The negative impacts resulting from this project are minor, temporary and associated with construction activity such as noise and turbidity, and are avoided by performing the work during the approved work window.

In order to avoid and minimize adverse impacts to the aquatic environment, the following Best Management Practices and construction measures will be employed to reduce the potential for construction-related impacts on species and their habitats.

1. Project will adhere to agency approved work windows so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
2. If required by governing agencies, water quality monitoring will be conducted during excavation activities,
3. All manmade construction debris will be collected and not allowed to enter waters of the state.
4. If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
5. All debris or spill material will be properly disposed of at an approved off-site disposal facility.
6. As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
7. Contractor will maintain a spill containment kit with floating sausage booms on site at all times.
8. A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
9. Vessels will not ground.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

☒ Yes ☐ No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable,** explain below why a mitigation plan should not be required.

☒ Yes ☐ No ☐ Don't know

Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See attached Mitigation Plan for details.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [help]

The overall goal of the conceptual mitigation plan is to improve habitat function and to strive for a net resource gain over present conditions.

8e. Summarize impact(s) to each waterbody in the table below. [help]

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name[1]	Impact location[2]	Duration of impact[3]	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
OVERWATER COVERAGE					
Gangway Installation (grating 45% net open area)	Gig Harbor	In-Water	Permanent	N/A	+527 SF (area not including overlap with float)
Float Installation (grating 45% net open area)	Gig Harbor	In-Water	Permanent	N/A	+5,854 SF
Jerkovich Pier Demolition (solid decking) (approved under NWS-2021-187)	Gig Harbor	In-Water	Permanent	N/A	-1,558.5 SF
				Net Change In Overwater Coverage	**+4,822.5 SF**
PILES					
Jerkovich Pier Pile Removal - 12" Creosote Treated Timber (approved under NWS-2021-187)	Gig Harbor	In-Water	Permanent	N/A	-32
12" Steel Pile Installation	Gig Harbor	In-Water	Permanent	N/A	+5
24" Steel Pile Installation	Gig Harbor	In-Water	Permanent	N/A	+20
				Net Change In Number of Piles	**-7**

[1] If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.
[2] Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.
[3] Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]

No fill is proposed.

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]

No excavation or dredging is proposed.

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]

Agency Name	Contact Name	Phone	Most Recent Date of Contact
City of Gig Harbor	Kimberly Mahoney	(253) 853-8253	January 2022
WDFW	Darrin Masters	(360) 764-9942	November 2021
USACE	Halie Endicott	(206) 764-6848	June 2021
DNR	Kirsten Miller	(206) 909-1304	

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]

- **If Yes,** list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d.

☐ Yes ☒ No

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

- Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.

Puget Sound Watershed – 17110019

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

- Go to https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up to find the WRIA #.

15 – Kitsap

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

- Go to https://ecology.wa.gov/Water-Shorelines/Water-quality/Freshwater/Surface-water-quality-standards/Criteria for the standards.

☒ Yes ☐ No ☐ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]

- If you don't know, contact the local planning department.
- For more information, go to: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases.

☒ Urban ☐ Natural ☐ Aquatic ☐ Conservancy ☐ Other: _____

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to http://www.dnr.wa.gov/forest-practices-water-typing for the Forest Practices Water Typing System.

☒ Shoreline ☐ Fish ☐ Non-Fish Perennial ☐ Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- **If No**, provide the name of the manual your project is designed to meet.

☒ Yes ☐ No

Name of manual: _____

9i. Does the project site have known contaminated sediment? [help]

- **If Yes**, please describe below.

☐ Yes ☒ No

9j. If you know what the property was used for in the past, describe below. [help]

The site was previously owned by the Ancich Family and was a mooring point for fishing vessels.

9k. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- **If Yes**, attach it to your JARPA package.

☒ Yes ☐ No

Completed for NWS-2016-733.

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

1. Puget Sound Chinook (*Oncorhynchus tshawytscha*)
2. Puget Sound steelhead trout (*Oncorhynchus mykiss*)
3. Coastal-Puget Sound bull trout (*Salvelinus confluentus*)
4. Georgia Basin bocaccio (*Sebastes paucispinis*)
5. Georgia Basin yelloweye rockfish (*Sebastes ruberrimus*)
6. Georgia Basin canary rockfish (*Sebastes pinniger*)
7. Marbled murrelet (*Brachyramphus marmoratus*)
8. Southern resident killer whale (*Orca orcinus*)
9. Humpback whale (*Megaptera novaeangliae*)

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

Priority Habitats Include:

1. Estuarine and Marine Wetland
2. Estuarine Zone

Priority Species include:

1. Resident Coastal Cutthroat (*Oncorhynchus clarki*)
2. Steelhead and Winter Steelhead (*Oncorhynchus mykiss*)
3. Fall Chum (*Oncorhynchus keta*)
4. Coho (*Oncorhynchus kisutch*)

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.oria.wa.gov/opas/.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

- For a list of addresses to send your JARPA to, click on agency addresses for completed JARPA.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to https://ecology.wa.gov/regulations-permits/SEPA-environmental-review.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☒ A SEPA determination is pending with the City of Gig Harbor (lead agency). The expected decision date is TBD.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]

☐ This project is exempt (choose type of exemption below).

☐ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt? _____

☐ Other: _____

☐ SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [help]

LOCAL GOVERNMENT

Local Government Shoreline permits:

☒ Substantial Development ☐ Conditional Use ☐ Variance

☐ Shoreline Exemption Type (explain): _____

Other City/County permits:

☒ Floodplain Development Permit ☒ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☒ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption – Attach Exemption Form

Washington Department of Natural Resources:

☒ Aquatic Use Authorization

Complete JARPA Attachment E and submit a check for $25 payable to the Washington Department of Natural Resources. **Do not send cash.**

Washington Department of Ecology:

☐ Section 401 Water Quality Certification ☐ Non-Federally Regulated Waters

FEDERAL AND TRIBAL GOVERNMENT

United States Department of the Army (U.S. Army Corps of Engineers):

☐ Section 404 (discharges into waters of the U.S.) ☒ Section 10 (work in navigable waters)

United States Coast Guard:

For projects or bridges over waters of the United States, contact the U.S. Coast Guard at: d13-pf-d13bridges@uscg.mil

☐ Bridge Permit ☐ Private Aids to Navigation (or other non-bridge permits)

United States Environmental Protection Agency:

☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) on tribal lands where tribes do not have treatment as a state (TAS)

Tribal Permits: (Check with the tribe to see if there are other tribal permits, e.g., Tribal Environmental Protection Act, Shoreline Permits, Hydraulic Project Permits**,** or other in addition to CWA Section 401 WQC)

☐ Section 401 Water Quality Certification (discharges into waters of the U.S.) where the tribe has treatment as a state (TAS).

Part 11–Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [help]

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Jeff Langhelm		
Applicant Printed Name	Applicant Signature	Date

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Steve Robert		
Authorized Agent Printed Name	Authorized Agent Signature	Date

11c. Property Owner Signature (if not applicant) [help]

Not required if project is on existing rights-of-way or easements (provide copy of easement with JARPA).

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner Printed Name	Property Owner Signature	Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-011 rev. 09/2018

RECEIVED
By C. ANDREWS at 2:23 pm, May 26, 2022

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 13

US Army Corps of Engineers ®
Seattle District

AGENCY USE ONLY

Date received: _____ ☐ Town

☐ Application Fee Received: ☐ Fee N/A

☐ New Application; ☐ Renewal Application

Type/Prefix #: _____; NaturE Use Code: _____

LM Initials & BP#: _____

RE Assets Finance BP#: _____

New Application Number: _____

Trust(s): _____; County: _____

AQR Plate #(s): _____

Gov Lot #(s): _____

Tax Parcel #(s): _____

WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) [help]

Attachment E:
Aquatic Use Authorization on Department of Natural Resources (DNR)-managed aquatic lands [help]

Complete this attachment and submit it with the completed JARPA form only if you are applying for an Aquatic Use Authorization with DNR. Call (360) 902-1100 or visit http://www.dnr.wa.gov/programs-and-services/aquatics/leasing-and-land-transactions for more information.

- DNR recommends you discuss your proposal with a DNR land manager before applying for regulatory permits. Contact your regional land manager for more information on potential permit and survey requirements. You can find your regional land manager by calling (360) 902-1100 or going to http://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-districts-and-land-managers-map. [help]

- The applicant may not begin work on DNR-managed aquatic lands until DNR grants an Aquatic Use Authorization.
- Include a $25 non-refundable application processing fee, payable to the "Washington Department of Natural Resources." (Contact your Land Manager to determine if and when you are required to pay this fee.) [help]

DNR may reject the application at any time prior to issuing the applicant an Aquatic Use Authorization. [help]

Use black or blue ink to enter answers in white spaces below.

1. Applicant Name (Last, First, Middle)

Langhelm, Jeff

2. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]

Gig Harbor Commercial Fishing Homeport

3. Phone Number and Email

(253) 853-8253; JLanghelm@gigharborwa.gov

4. Which of the following applies to Applicant? Check one and, if applicable, attach the written authority – bylaws, power of attorney, etc. [help]

☐ Corporation	☐ Individual
☐ Limited Partnership	☐ Marital Community (Identify spouse):
☐ General Partnership	_____
☐ Limited Liability Company	☒ Government Agency
Home State of Registration:	☐ Other (Please Explain):
_____	_____

5. Washington UBI (Unified Business Identifier) number, if applicable: [help]

6. Are you aware of any existing or previously expired Aquatic Use Authorizations at the project location?

☒ Yes ☐ No ☐ Don't know

If Yes, Authorization number(s): **22-A02571**

7. Do you intend to sublease the property to someone else?

☐ Yes ☒ No

If Yes, contact your Land Manager to discuss subleasing.

8. If fill material was used previously on DNR-managed aquatic lands, describe below the type of fill material and the purpose for using it. [help]

N/A

To be completed by DNR and a copy returned to the applicant.

Signature for projects on DNR-managed aquatic lands:

Applicant must obtain the signature of DNR Aquatics District Manager OR Assistant Division Manager if the project is located on DNR-managed aquatic lands.

I, a designated representative of the Dept. of Natural Resources, am aware that the project is being proposed on Dept. of Natural Resources-managed aquatic lands and agree that the applicant or his/her representative may pursue the necessary regulatory permits. My signature does not authorize the use of DNR-managed aquatic lands for this project.

Printed Name	**Signature**	**Date**
Dept. of Natural Resources District Manager or Assistant Division Manager	Dept. of Natural Resources District Manager or Assistant Division Manager	

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA Publication ORIA-16-016 rev. 10/2016

From: Shaun Dinubilo
To: Cindy Andrews
Subject: RE: GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005
Date: Monday, June 13, 2022 10:19:40 AM

Hello Cindy,

Thank you for contacting the Squaxin Island Tribe Cultural Resources Department regarding the above listed project for our review and comment. We have no specific cultural resource concerns for this project. However, if DAHP recommends a survey, or any other additional recommendations, we concur with DAHP's recommendations. We would prefer to receive an electronic copy by email once completed. If any archaeological or cultural resources are uncovered during implementation, please halt work in the area of discovery and contact DAHP and the Squaxin Island Tribe's Archaeologist, Shaun Dinubilo via email at sdinubilo@squaxin.us.

Shaun Dinubilo
Archaeologist
Cultural Resource Department
Squaxin Island Tribe
200 S.E. Billy Frank Jr. Way
Shelton, WA 98584
Office Phone: 360-432-3998
Cell Phone: 360-870-6324
Email: sdinubilo@squaxin.us
Email is my perferred method of communication.

As per 43 CFR 7.18[a][1]) of the Archaeological Resource Protection Act, Section 304 of the National Historic Preservation Act, and RCW 42.56.300 of the Washington State Public Records Act- Archaeological Sites, all information concerning the location, character, and ownership of any cultural resource must be withheld from public disclosure.

From: Cindy Andrews <candrews@gigharborwa.gov>
Sent: Tuesday, June 7, 2022 8:35 AM
To: Adonais Clark (aclark@co.pierce.wa.us) <aclark@co.pierce.wa.us>; Alec, Wrolson, Puyallup Tribe <Alec.Wrolson@PuyallupTribe-nsn.gov>; Andrew Strobel, Puyallup Tribe <Andrew.Strobel@PuyallupTribe-nsn.gov>; aosullivan@suquamish.nsn.us; Brad Beach <beach.brad@nisqually-nsn.gov>; Carol <CarolAnn.Hawks@PuyallupTribe-nsn.gov>; Char Naylor, Puyallup Tribe <Char.Naylor@PuyallupTribe-nsn.gov>; David Winfrey, Puyallup Tribe <David.Winfrey@PuyallupTribe-nsn.gov>; Department of Natural Resources SEPA Center (sepacenter@dnr.wa.gov) <sepacenter@dnr.wa.gov>; dwilliams@suquamish.nsn.us;

efheinitz@doc1.wa.gov; ewatson@piercefire.org; Jennifer Keating, Puyallup Tribe <Jennifer.M.Keating@puyalluptribe-nsn.gov>; JOE CUSHMAN <cushman.joe@nisqually-nsn.gov>; Kristen Miller <kirsten.miller@dnr.wa.gov>; Lois Boome, Puyallup Tribe <Lois.Boome@PuyallupTribe-nsn.gov>; Michael Prentice <michaelp@penlight.org>; Muckleshoot Tribe - Laura Murphy (laura.murphy@muckleshoot.nsn.us) <laura.murphy@muckleshoot.nsn.us>; Nancy Games, Puyallup Tribe <nancy.games@puyalluptribe-nsn.gov>; Nicole Jones-Vogel - PenMet Parks <njones-vogel@penmetparks.org>; OR-SEPA-REVIEW@wsdot.wa.gov; Puget Sound Partnership - Marsha Engel (marsha.engel@psp.wa.gov) <marsha.engel@psp.wa.gov>; reviewteam@commerce.wa.gov; Rhonda Foster <rfoster@squaxin.us>; Robert Barandon, Puyallup Tribe <Robert.B.Barandon@puyalluptribe-nsn.gov>; Russ Ladley, Puyallup Tribe <Russ.Ladley@PuyallupTribe-nsn.gov>; sepa <sepa@dahp.wa.gov>; SEPA <SEPAReview@PuyallupTribe-nsn.gov>; sepaunit@ecy.wa.gov; Sharon Silver (sharons@penlight.org) <sharons@penlight.org>; Shaun Dinubilo <sdinubilo@squaxin.us>; Shital Saini <shital@penlight.org>; smithv@psd401.net; Stacie Snuffin - PenMet Parks <SSnuffin@PenMetParks.org>; Suquamish Tribe - Dennis Lewarch (dlewarch@suquamish.nsn.us) <dlewarch@suquamish.nsn.us>; Tina Vaslet Pierce Transit (tvaslet@piercetransit.org) <tvaslet@piercetransit.org>; Zachary Meyer <ZMEY461@ECY.WA.GOV>
Subject: GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005

The City of Gig Harbor has issued an NOA including the SEPA checklist for the GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005 project, I have included above the Notice of Application and associated SEPA checklist and also a link to the City of Gig Harbor Permit Portal for all of the project information submitted to date. Please provide your comments no later than July 7, 2022 and please let me know if you have any questions.

Best Regards
Cindy Andrews
Planning Technician
City of Gig Harbor
CAndrews@gigharborwa.gov
Phone - 253-853-7625

From: Jennifer M. Keating
To: Cindy Andrews
Cc: Brandon Reynon
Subject: RE: GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005
Date: Thursday, June 16, 2022 9:51:50 AM
Attachments: image001.png

Good morning Cindy,
As you likely are aware, the proposed project location is in very close proximity to the Twalwalcut village site, satellite village site, multiple burial sites, and numerous confirmed archaeological sites. Due to the extremely high probability for impacting cultural resources, the Puyallup Tribe is requesting a cultural resource survey, including in-water work, prior to any ground disturbance. Please let us know if there are any questions or concerns.

Thank you,

Jennifer M. Keating
Land Use Planner &
Asst. Tribal Historic Preservation Officer
Puyallup Tribe of Indians
Office of Planning & Land Services
Ph. (253) 549-5397

From: Cindy Andrews [mailto:candrews@gigharborwa.gov]
Sent: Tuesday, June 07, 2022 8:35 AM
To: Adonais Clark (aclark@co.pierce.wa.us) <aclark@co.pierce.wa.us>; Alec Wrolson <Alec.Wrolson@PuyallupTribe-nsn.gov>; Andrew Strobel <Andrew.Strobel@PuyallupTribe-nsn.gov>; aosullivan@suquamish.nsn.us; Brad Beach <beach.brad@nisqually-nsn.gov>; Carol Ann Hawks <CarolAnn.Hawks@PuyallupTribe-nsn.gov>; Char Naylor <Char.Naylor@PuyallupTribe-nsn.gov>; David Winfrey <David.Winfrey@PuyallupTribe-nsn.gov>; Department of Natural Resources SEPA Center (sepacenter@dnr.wa.gov) <sepacenter@dnr.wa.gov>; dwilliams@suquamish.nsn.us; efheinitz@doc1.wa.gov; ewatson@piercefire.org; Jennifer M. Keating <Jennifer.M.Keating@puyalluptribe-nsn.gov>; JOE CUSHMAN <cushman.joe@nisqually-nsn.gov>; Kristen Miller <kirsten.miller@dnr.wa.gov>; Lois Boome <Lois.Boome@PuyallupTribe-nsn.gov>; Michael Prentice <michaelp@penlight.org>; Muckleshoot Tribe - Laura Murphy (laura.murphy@muckleshoot.nsn.us) <laura.murphy@muckleshoot.nsn.us>; Nancy Shippentower-Games <nancy.games@puyalluptribe-nsn.gov>; Nicole Jones-Vogel - PenMet Parks <njones-vogel@penmetparks.org>; OR-SEPA-REVIEW@wsdot.wa.gov; Puget Sound Partnership - Marsha Engel (marsha.engel@psp.wa.gov) <marsha.engel@psp.wa.gov>; reviewteam@commerce.wa.gov; Rhonda Foster at Squaxin Island Tribe <rfoster@squaxin.us>; Robert B. Barandon

<Robert.B.Barandon@puyalluptribe-nsn.gov>; Russ Ladley <Russ.Ladley@PuyallupTribe-nsn.gov>; sepa <sepa@dahp.wa.gov>; SEPA Review <SEPAReview@PuyallupTribe-nsn.gov>; sepaunit@ecy.wa.gov; Sharon Silver (sharons@penlight.org) <sharons@penlight.org>; Shaun Dinubilo <sdinubilo@squaxin.us>; Shital Saini <shital@penlight.org>; smithv@psd401.net; Stacie Snuffin - PenMet Parks <SSnuffin@PenMetParks.org>; Suquamish Tribe - Dennis Lewarch (dlewarch@suquamish.nsn.us) <dlewarch@suquamish.nsn.us>; Tina Vaslet Pierce Transit (tvaslet@piercetransit.org) <tvaslet@piercetransit.org>; Zachary Meyer <ZMEY461@ECY.WA.GOV>
Subject: GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005

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Best Regards
Cindy Andrews
Planning Technician
City of Gig Harbor
CAndrews@gigharborwa.gov
Phone - 253-853-7625

RECEIVED
By C. ANDREWS at 9:06 am, Jun 17, 2022

Nisqually Indian Tribe
4820 She-Nah-Num Dr. S.E.
Olympia, WA 98513
(360) 456-5221

June 17, 2022

To: Carl de Simas, Principal Planner
City of Gig Harbor
Planning Division
3510 Grandview St.
Gig Harbor, WA 98335

Re: PL-SDP-22-0005

The "driving" of twenty (20) steel guide piles to support the designed float system has an increased likelihood of destroying cultural resources important to the Medicine Creek Treaty Tribes. Due to this project's proximity to a documented village site, the Nisqually Indian Tribe's THPO would like the City of Gig Harbor to require a thorough cultural resources assessment before any development permits are issued.

Please keep us informed if there are any Inadvertent Discoveries of Archaeological Resources/Human Burials.

Sincerely,

Brad Beach, THPO
Nisqually Indian Tribe
360-528-1084
360-456-5221 ext 1277
beach.brad@nisqually-nsn.gov

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775, Olympia, WA 98504-7775 • 360-407-6300

July 7, 2022

Cindy Andrews, SEPA Contact
City of Gig Harbor
Community Development and Planning Division
300 Grandview Street
Gig Harbor, WA 98335

Dear Cindy Andrews

Thank you for the opportunity to comment on the prethreshold consultation for the Gig Harbor Commercial Fishing Homeport Project (PL-SEPA-22-0014) as proposed by City of Gig Harbor. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

SOLID WASTE MANAGEMENT: Derek Rockett (360) 407-6287

All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from your local jurisdictional health department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the local jurisdictional health department for proper management of these materials.

TOXICS CLEANUP: Sandy Smith (360) 999-9588

This property is within a quarter mile of three known or suspected contaminated sites. The sites are Eddon Boat Park, Facility Site Identification (FSID) 1301959; Nikolich Property, FSID 20826; and Harborview Drive Property, FSID 74514. To search and access information about these sites see https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites.

If contamination is discovered or occurs during proposed dock demolition or construction, testing of the potentially contaminated media must be conducted. If contamination of soil, sediment, or water is readily apparent, or is revealed by testing, the Department of Ecology must be notified. Contact the Environmental Report Tracking System Coordinator at the Southwest Regional Office at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Sandy Smith with the Toxics Cleanup Program at the Southwest Regional Office at (360) 999-9588.

WATER QUALITY/WATERSHED RESOURCES UNIT:
Evan Wood (360) 407-7320

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or stormdrains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

Construction Stormwater General Permit:
The following construction activities require coverage under the Construction Stormwater General Permit:

1. Clearing, grading and/or excavation that results in the disturbance of one or more acres **and** discharges stormwater to surface waters of the State; and
2. Clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more **and** discharge stormwater to surface waters of the State.
    a) This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, **and** discharge to surface waters of the State; and
3. Any size construction activity discharging stormwater to waters of the State that Ecology:
    a) Determines to be a significant contributor of pollutants to waters of the State of Washington.
    b) Reasonably expects to cause a violation of any water quality standard.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted. For additional information on contaminated construction sites, please contact Carol Serdar at Carol.Serdar@ecy.wa.gov, or by phone at (360) 742-9751.

Additionally, sites that discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorous, or to waterbodies covered by a TMDL may need to meet additional sampling and record keeping requirements. See condition S8 of the Construction Stormwater General Permit for a description of these requirements. To see if your site discharges to a TMDL or 303(d)-listed waterbody, use Ecology's Water Quality Atlas at: https://fortress.wa.gov/ecy/waterqualityatlas/StartPage.aspx.

The applicant may apply online or obtain an application from Ecology's website at: http://www.ecy.wa.gov/programs/wq/stormwater/construction/ - Application. Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(GMP:202203147)

cc: Derek Rockett, SWM
Sandy Smith, TCP
Evan Wood, WQ

RECEIVED
By MThomas City of Gig Harbor at 2:48 pm, Feb 02, 2026

D|C|G civil structural

MEMORANDUM

TO: Cindy Andrews
City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335

FROM: Drew McDonald, PE
Davido Consulting Group, Inc.
9706 4th Ave NE #300
Seattle, WA 98115

DATE: April 4, 2025

RE: GIG HARBOR COMMERCIAL FISHING HOMEPORT - PL-SDP-22-0005

Dear Aaron Hulst,

The purpose of this memo is to justify the updated and attached Transportation Concurrency Management Program for the Homeport Project that is consistent with the Gig Harbor Municipal Code.

The Homeport Dock Project is anticipated to add 1 peak hour trip. Because of the reasons outlined below, the City is proposing to pay the transportation impact fee only and not perform any mitigation.

1. The project is located at the already developed Ancich Waterfront Park. The existing netshed building and the staging stall for cars are already present. The additional use point (the new dock) primarily draws in existing users from the existing netshed building and surrounding marinas. Please note that the Ancich Waterfront Park TCRC and TIA did not account for the number of slips being added in this phase of the project site development.

2. Users will not typically arrive to the site during peak hours, but rather outside the pm peak hours to use homeport dock.

3. The TCRC application for the Homeport dock is intended to only identify the additional trips that may be generated due to new users.

4. Trip generation for non-boat storage building was developed as follows:

    a. The ITE trip generation manual 11th edition land use category for Homeport floats is Marina/LUC420; however the Homeport floats will not have any other use such as retail space and restaurant space as identified in LUC420.

    b. The Homeport Dock has 17 berths and a peak hour average trip generation rate of 0.05 trips per berth per LUC420 PM. Therefore, the additional PM peak hour trips based on LUC420 and the above information is: 17*0.05=0.85.

    c. The City proposes using 1.0 new peak hour trips since there is no retail or restaurant use and the earlier Phase work already accounted for PM peak hour trips for users of the park.

Sincerely,



Drew McDonald, PE
Design Lead | Marine Group

City of Gig Harbor

Transportation Concurrency Management Program
Capacity Reservation Certificate Application

Submit completed application to:
City of Gig Harbor Public Works Department
3510 Grandview Street, Gig Harbor, Washington 98335
(253) 851-6170

$90.00 Paid (Commercial Only) _____

Today's Date 05/16/2022

Gig Harbor Project # PL-SDP-22-0005

1. Applicant (Developer ◯ or Owner (X)) please select one

Name Jeff Langhelm Company City of Gig Harbor Telephone (253) 851-6170

Address 3510 Grandview Street City/State/Zip Gig Harbor, WA 98335

2. Property Owner (If other than applicant)

Name _____ Company _____ Telephone _____

Address _____ City/State/Zip _____

Project Name Gig Harbor Commercial Fishing Homeport

Project Address 3589 Harborview Dr, Gig Harbor **Total Acreage** 0.783

3. Parcel # 5970000244 (Attach a Legal Description and site plan)

4. Property Description (check one)

Note: Applicants are responsible for accurate land use designations. The issuance of a Capacity Reservation Certificate does not constitute land use or development approval.

Existing			Proposed		
☐ Short Plat	☐ Commercial/Industrial	☐ Mixed use	☐ Short Plat	☒ Commercial/Industrial	☐ Mixed use
☐ Sub-division	☐ Multi-family (3+ units)	☐ Single-Family	☐ Sub-division	☐ Multi-family (3+ units)	☐ Single-Family

Phasing Information

A. Number of new dwelling units N/A B. Commercial building area in gross square feet N/A

5. Number of New PM Peak hour trips 1

☒ **Proposed Site Design Information** (attach Legal Description and a site plan depicting proposed road/driveway access point(s) for the development)

6. Land Use Codes: GHMC 19.10.011

(Most recent edition of *Trip Generation* from the Institute of Transportation Engineers)

Upon submission and acceptance of this completed Transportation CRC application, the Director shall conduct a Traffic Model Run and issue a Traffic Report for those applications meeting the requirements of the City of Gig Harbor Municipal Code, Section 19.10.003(B)(1). In performing the concurrency evaluation for transportation facilities, the Director shall determine, based on the conclusion of the Traffic Report, whether a proposed development can be accommodated within the existing or planned capacity of City transportation facilities.

If the Director determines that the proposed development will cause the Level of Service (LOS) of a city-owned transportation facility to decline below the Standards adopted in the transportation element of the city's comprehensive plan, and improvements or strategies to accommodate the impacts of development are not planned to be made concurrent with development, a Transportation CRC and the underlying development permit, if such an application has been made, shall be denied. Upon denial, the applicant may perform one of the following:

1. Appeal the findings of the Traffic Report in accordance with GHMC 19.10.021;
2. Offer alternative data and/or perform an independent traffic impact analysis at the applicant's sole expense in

support of alternative conclusions. Any study shall be in accordance with GHMC 19.10.027;

3. Modify the development proposal to lessen the traffic impacts and/or identify voluntary transportation improvements as mitigation to be provided by the applicant at the applicant's cost and re-apply for capacity review. Re-application shall require re-payment of the Traffic Report preparation fee in accordance with GHMC 19.10.011(B); or
4. Withdraw the CRC application.

☒ Intent of Request for Credit: GHMC 19.12.083

A. Credit Allowed. The Director shall reduce the calculated proportionate share for a particular development by giving credit for the benefit factors described in this section.

B. Procedure for Obtaining Credit, Time to Request Credit. **Request for credits** against impact fees will not be considered unless the developer makes the request in writing, concurrent with submission of the application for the underlying development permit triggering the impact fee. For example, credit for impact fees relating to a preliminary plat must be submitted concurrent with submission of the application for the preliminary plat application, not the final plat or building permits for development in the plat.

C. Benefit Factors. The Director will consider the following benefit factors when determining whether an impact fee credit is appropriate:

1. Developer's Dedication of Land and/or Construction of System Improvements. The value of any dedication of land for, improvement to, or new construction of any system improvements provided by the developer, to facilities required by the city that are identified in the capital facilities plan and that are required by the city as a condition of approving the development activity, as long as the following conditions are satisfied.
   a. The system improvements are located on land owned by the city; and
   b. A designated public owner is responsible for permanent, continuing maintenance and operation of the system improvements; and
   c. The Director determines that the system improvements correspond to the type(s) of transportation system improvements that are reasonably related to the development as determined pursuant to this chapter; and
   d. The Director determines an analysis of supply and demand data of the Six-Year Transportation Improvement Plan (TIP) that the proposed transportation system improvements better meet the city's need for transportation system improvements than would payment of funds to mitigate the transportation impacts of the development;
   e. In the determination of credit toward the impact fee, the Director shall also consider the extent to which the proposed dedication or conveyance meets the following criteria:
      i. The land should result in an integral element of the Gig Harbor road system;
      ii. The land is suitable for future transportation facilities;
      iii. The land is of appropriate size and of an acceptable configuration;
      iv. The land has public access via a public street or an easement of an equivalent width and accessibility;
      v. The land is located in or near areas designated by the city on land use plans for park, trail or recreational purposes;
      vi. The land provides linkage between Gig Harbor and/or other publicly owned recreation and transportation properties;
      vii. The land has been surveyed or adequately marked with survey monuments, or is otherwise readily distinguishable from adjacent privately-owned property;
      viii. The land has no known physical problems associated with it, such as the presence of hazardous waste, drainage, erosion or flooding problems which the director or superintendent determines would cause inordinate demands on public resources for maintenance and operation;
      ix. The land has no known safety hazards;
      x. The developer is able to provide documentation, as nearly as practicable, of the land's compliance with the criteria of this subsection, and of clear title;
      xi. The developer is able to provide and fund a long-term method, acceptable to the Director, for the management and maintenance of the land, if applicable.

D. Requirement for System Improvement Plan. When the Director has agreed to a developer's proposal to satisfy some or all of the impact fee through the purchase, installation and/or improvement of transportation facilities, the developer shall prepare and submit a system improvement plan to the Director, for approval prior to recordation of a plat or short plat for subdivisions, and prior to issuance of a building permit for all other developments.

E. Amount of Credit. The credit against the impact fee shall be equal to the fair market value of the purchased/dedicated property or equal to the cost of the completed system improvements. In those situations in which a developer has not yet installed or constructed system improvements and **requests a credit** for the system improvement(s), the City Engineer shall estimate the cost of the system improvements, which shall be the credit allowed to the developer in the decision on the amount of the impact fee. If a credit is granted for a system improvement that has not been constructed, the developer shall pay the full impact fee without the credit, at the time established in GHMC 19.12.110. After construction and/or installation of the system improvement, the developer may **request the credit** granted by the engineer under this subsection, and the city shall refund the difference of the impact fee to reflect the credit; provided, that if the city and the property owner have entered into a development agreement on or before the effective date of the ordinance codified in this section, and the agreement requires the construction of such improvements, the city may allow a credit to be subtracted from the impact fee paid at the time established in GHMC 19.12.100.

F. PRDs, PUDs and Mobile Home Parks. A developer of a planned residential development, a planned unit development or a mobile home park may receive credit only for park, school and transportation facilities provided in addition to those normally required under SEPA for such developments pursuant to Chapter 18.04 GHMC.

G. Credit to Apply Proportionately to Units. The amount of credit determined pursuant to this subsection shall be credited proportionately among all of the units in the development, and the impact fee for each unit for which a permit or approval is applied shall be reduced accordingly.

H. Limits on Credit Requests. Applicants may not request that an impact fee credit be provided for a proposed development based on taxes, user fees, assessments, improvements, payments or other benefit factors applicable to property that is not included within the proposed development.

I. Local Improvement Districts. Applicants shall receive credit against the impact fee equal to the amount of an LID assessment paid for transportation-related system improvements identified by the Director as increasing transportation system capacity.

J. Appeals of Credits. The Director shall issue a written decision on the developer's request for a credit of the impact fee calculation, which shall explain why the credit was granted or denied. The developer may request reconsideration and appeal the impact fee amount and credit pursuant to GHMC 19.12.170. If the procedures in GHMC 19.12.170 are not timely followed to request an appeal of the credit, the Director's decision on the impact fee credit shall be final. (Ord. 1079 § 2, 2007).

Signature: _____ **Date:** May 9, 2022

(Property Owner signature)

☒ I, the property owner, authorize my agent to receive all original correspondence (initial) _____

Agent's Name Steve Robert Address 9706 4th Ave NE #300 Seattle, WA 98115

Questions?

Please call (253) 851-6170 if you have any questions about the Concurrency Management Program.

FOR CITY USE ONLY:

City Road Segment: _____

Approved Reservation Capacity: _____P.M. Peak Hour trips

City Engineer Approval: _____ Date: _____

Legal Description

Section 05 Township 21 Range 02 Quarter 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

Property Description

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront.

Address: 3659 Harborview Drive, Gig Harbor, WA, 98332
Tax Parcel: 5970000244
Latitude and Longitude: 47.33417 N lat. / -122.58684 W long.

Note:
The Ancich Waterfront Park TCRC and TIA did not account for the number of slips being added in this phase of the project site development.

City of Gig Harbor Commercial Fishing Homeport

Transportation Impact Fee and Concurrency Consideration

11th edition Institute of Transportation Engineers (ITE) manual was used to estimate the number of trips that would be generated by the site. The pertinent information from the 11th edition of the ITE manual is attached.

The land use code for Marina (420) was used to estimate the trip generation rate. The average rate is 0.05 Vehicle Trip Generation per Berth.

As the site is being designed to Berth 17 commercial vessels, 0.05 is multiplied by 17 to obtain the estimate for PM peak hour trips. This brings the park use to an estimated PM peak hour trip generation rate of 0.9.

For the purpose of concurrency, this project will be reserving 1 PM peak hour trip with a transportation CRC application.

The transportation impact fee of $6,085 is calculated by multiplying the 1 PM peak hour trip by the current impact fee rate of $6,085.

Total site trips = 1 PM peak hour trips

The transportation impact fee = $6,085

RECEIVED
By MThomas City of Gig Harbor at 2:52 pm, Feb 02, 2026

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 16

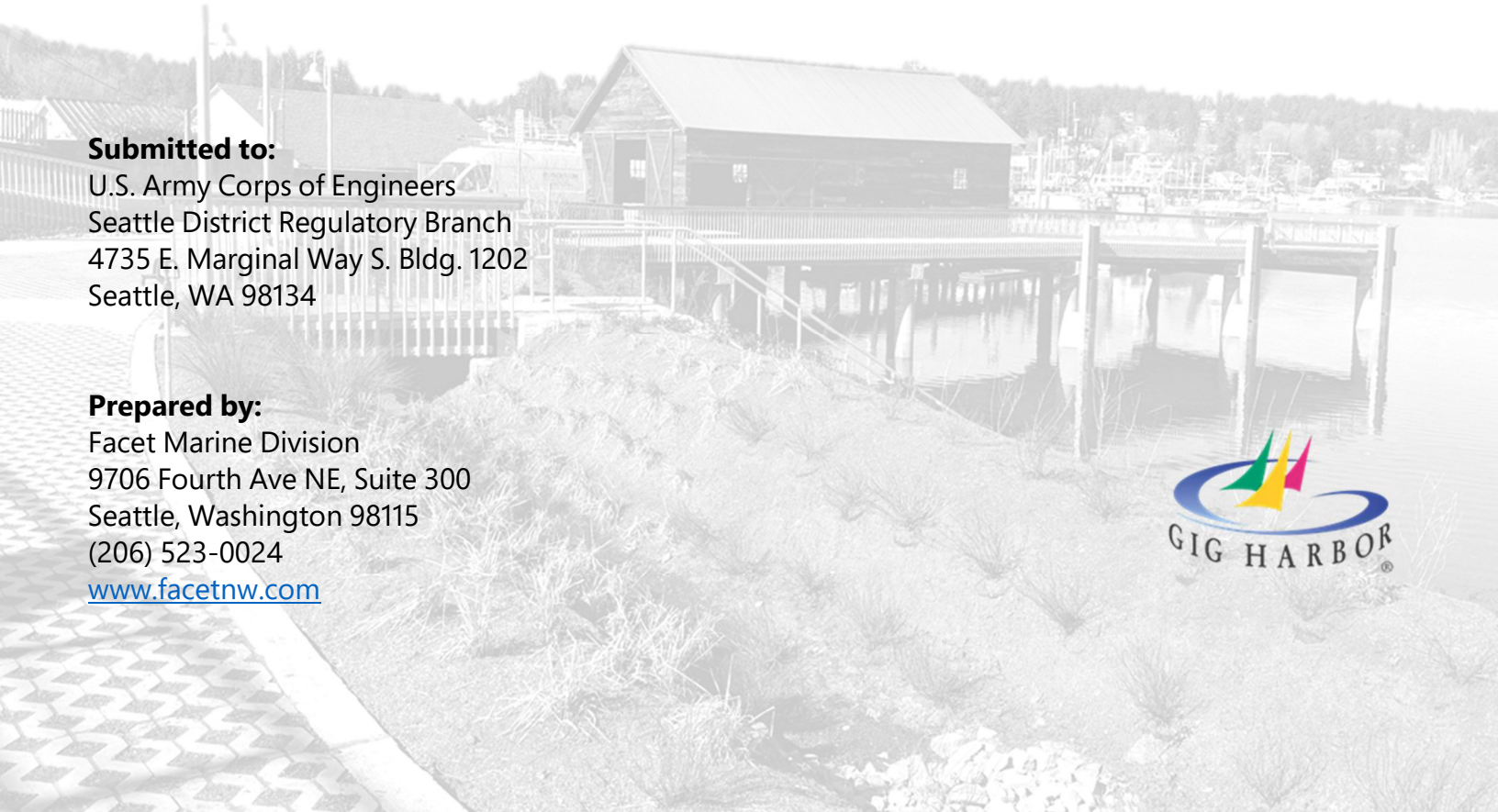
FACET
Formerly DCG / Watershed

Mitigation Plan Revision 6

FOR THE

City of Gig Harbor Commercial Fishing Homeport at Ancich Waterfront Park

AUGUST 2025



Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Facet Marine Division
9706 Fourth Ave NE, Suite 300
Seattle, Washington 98115
(206) 523-0024
www.facetnw.com

GIG HARBOR

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ACRONYMS AND ABBREVIATIONS

Agencies	U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Washington Department of Ecology, and other local/state regulatory agencies that have jurisdiction
CFR	Code of Federal Regulations
City	City of Gig Harbor
CY	Cubic Yards
HDPE	High-density polyethylene
LSZ	Lower Shore Zone
NOAA	National Oceanic and Atmospheric Administration
SAV	Submerged Aquatic Vegetation
SMA	Shoreline Management Act
SWMMWW	Stormwater Management Manual for Western Washington
UHMW	Ultra High Molecular Weight Polyethylene
USACE	United States Army Corps of Engineers
WAC	Washington Administrative Code (WAC)
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology

REVISION 5

Mitigation plan updates are being provided in August of 2025 after the Design team and the City worked with the USACE, NOAA, and USFWS project reviewers towards a feasible strategy. The reviewers expressed concern about the feasibility of the proposed kelp plantings that accounted for most of the credits generated to offset project impacts, as determined by the Puget Sound Nearshore Conservation Calculator. The previous revision to the report was to remove references to beach nourishment and outfall restoration. This revision adds back beach nourishment and outfall restoration components. No proposed design elements have been revised as part of this revision since the proposed condition was previously designed with avoidance and minimal impact as the main driving factors.

1. INTRODUCTION

In 2013, the City of Gig Harbor (hereafter, City) passed Resolution 949 to capture the visioning process for Ancich Waterfront Park. The park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human-powered crafts and for commercial fishermen will be provided. Construction on the human-powered craft dock was recently completed (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet.

Additionally, the City has a vested interest in the stewardship of the harbor, shoreline, and the overall environmental health in its waterbodies. The City has long understood this need to protect and restore this sensitive environment as the City's culture, history, and identity are built around this natural resource. Protection of the harbor is critical for the sustainability of local fishing, boating and public enjoyment. With this said, the City is excited to include mitigation as part of this project, allowing mitigation efforts to balance project impacts by improving the harbor while providing this proposed access to the harbor.

We have identified several needs in the area that we see offsetting some of the potential impacts of the proposed Commercial Fishing Homeport. These needs are the removal of the existing Jerkovich Pier and restoration of the existing Maritime Pier Outfall including beach nourishment. These mitigation efforts will ensure the community and habitat of Gig Harbor will be healthy and sustainably managed by balancing the impact of Homeport with ecological lift.

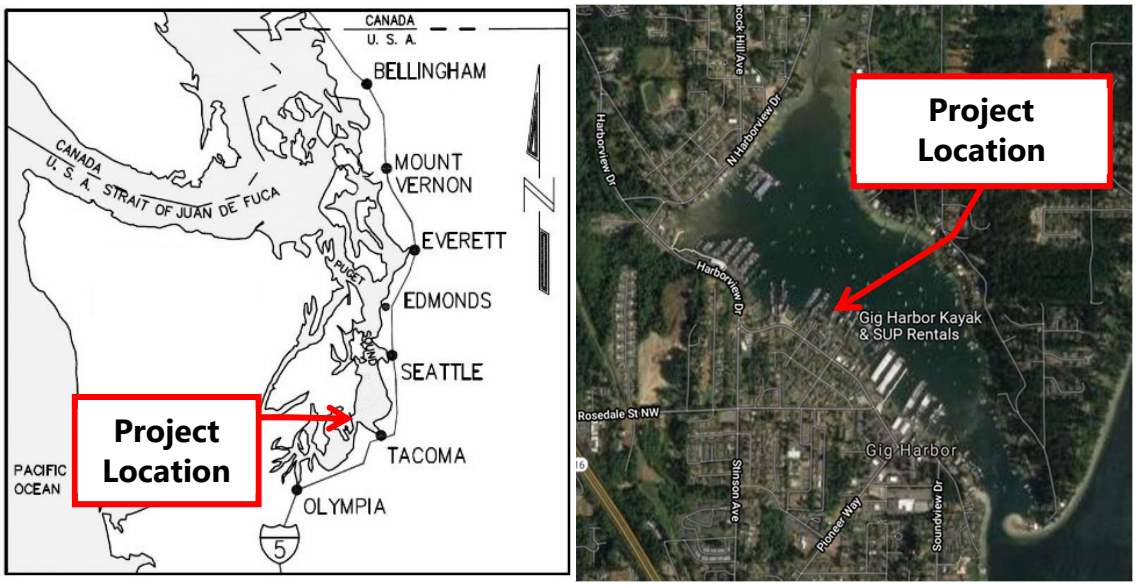


Figure 1. Vicinity and Site Maps

2. PROJECT OVERVIEW

2.1. Existing Conditions

Ancich Waterfront Park is positioned in a heavily residentially developed, commercially developed, and heavily trafficked area of Gig Harbor. The property has a buffer of native shoreline plantings, a concrete bulkhead, two large piers, upland impervious and partially impervious walkway areas, an upland building used for storage of canoes and kayaks and is situated between existing marinas. A habitat survey performed in June 2022 by Marine Surveys & Assessments (MSA) identified *Saccharina* and *Gracilaria* species in the project area (please see the attached macrovegetation survey for further details). Additionally, there is no documented forage fish spawning at the project site. However, surf smelt spawning is documented approximately 0.30 mile from the site, across the water on the northeast side of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2. Proposed Conditions and Project Design

The proposed project consists of the elements listed in this section. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2.1. Float Installation

A main walk floating dock will be installed with an overall length of 280' for access. Finger floats will be attached to the main walk floats using a tri-frame structural attachment to create boat slips. All floats will be fully grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

(6) 60' Finger Floats
(1) 80' Finger Float

2.2.2. Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to the previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only.

2.2.3. Guide Pile and Fender Pile Installation

(16) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels.

(4) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an

impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2.2.4. Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing locations to the end of the main walk floating dock.

2.2.5. Proposed Mitigation

The proposed mitigation will be installed as part of this project. Please see Section 4 - Mitigation Plan for more details. This mitigation shall include the demolition of the existing Jerkovich Pier, the restoration of a stormwater outfall, and the addition of beach nourishment along the shoreline of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

3. MITIGATION SEQUENCE

The Washington Department of Fish and Wildlife (WDFW) requires mitigation sequencing as outlined in WAC 220-660-030.102. The U.S. Army Corps of Engineers (USACE) requires mitigation sequencing as stated in 33 CFR 320.4(r)(1). Mitigation sequencing is the hierarchical process of avoiding impacts, minimizing unavoidable impacts, and mitigating for resources lost. The following section describes how this project meets the regulatory requirements by employing mitigation sequencing and analyzing alternatives set forth in WAC 220-660-370.3.b.

3.1. Avoidance and Minimization

The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant to avoid, reduce intensity, or otherwise minimize potential impacts:

- Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
- If required by governing agencies, water quality monitoring will be conducted during excavation activities.
- All man-made construction debris will be collected and will not be allowed to enter waters of the state.
- If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
- All debris or spill material will be properly disposed of at an approved off-site disposal facility.
- As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
- Contractor will maintain a spill containment kit with floating sausage booms on site.
- A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
- Vessels will not run aground.

3.2. Alternatives Analysis

A feasibility study was completed for the proposed commercial fishing homeport in September of 2020. This study considered five different alternatives based on cost, capacity needs, environmental impact, safety, traffic, and conformance to the historic working waterfront. The design selected was the best alternative that met the goals of the community with a minimal number of disadvantages.

Environmentally friendly alternatives were considered during project design. These items are summarized in the table below.

Table 1. Environmentally Friendly Alternatives

Design Element	Benefit
Design and layout	Minimize overwater coverage by designing for specific fisherman fleet parameters
Grated surfaces for floats	Allows for light penetration into the aquatic environment
Grounding avoidance	Design prevents floats from resting on substrate and scouring marine vegetation
Rub rails will be treated timber faced with UHMW	To prevent contact between boats and treated timber and protect rub rail from impact and abrasion
Limited lighting	Prevent light pollution for the community and nearshore habitat

3.3. Mitigation Measures

A compensatory mitigation plan has been developed to help offset the impacts to the shoreline caused by the project. The mitigation plan will follow the requirements set forth in 33 CFR Parts 325 and 332.

3.3.1. Impact Analysis

To quantify the habitat impacts for the proposed structure, the NOAA Fisheries Puget Sound Nearshore Conservation Calculator was used. This calculator was designed to determine how much restoration is needed to offset the impacts of development on the existing habitat. All aspects of the proposed structure and mitigation were inserted into the calculator. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements. The mitigation plan in Section 4 was developed based on the debit and credit scenarios presented while utilizing the calculator tool.

4. MITIGATION PLAN

The objective of this compensatory mitigation plan is to provide no net loss of habitat and function within the ecological service area associated with Gig Harbor. This ecological service area is defined as the watershed drainage into Gig Harbor and the Gig Harbor waterbody. This will be achieved by removing the Jerkovich Pier and restoring a stormwater outfall. The stormwater outfall restoration includes beach nourishment. The compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding, to the maximum extent possible, a loss of resources caused by the proposed project. The proposed mitigation components are not sufficient to cover the debit generated by the Calculator. Therefore, any remaining debit will be balanced by purchasing credits from a conservation bank. The mitigation plan meets the requirements of the 2008 compensatory mitigation rule, as set forth in 33 CFR 332.4(c).

4.1. Overwater Structure Removal

4.1.1. Site Selection Criteria

On-site mitigation will occur by removing the Jerkovich Pier, which is a creosote structure, at Ancich Waterfront Park. This mitigation effort is in the project's associated ecological service area and contributes to offsetting any net loss of resources caused by the proposed project.

4.1.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation.

4.1.3. Mitigation Work Plan

The existing Jerkovich Pier will be removed. This will remove 32 creosote-treated timber piles that are 12-inches in diameter. Additionally, 1,558.5 square feet of solid asphalt decking will be removed. The timber piles will be removed with a vibratory hammer and will be properly disposed of after removal. The estimated amount of creosote to be removed is sixteen tons. See the NOAA Conservation Calculator for final approved mitigation amounts.

4.1.4. Maintenance Plan

The removal of Jerkovich Pier is a one-time action that will not require maintenance.

4.1.5. Performance Standards

Jerkovich Pier piles and material will be removed and properly disposed of. Disposal documents and photos will be provided for this work.

4.1.6. Monitoring

Monitoring for this proposed mitigation work is a one-time action that will not require continued monitoring. Disposal documents and photos will be provided for this work.

4.1.7. Long-Term Management Plan

Long-term management is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.8. Adaptive Management Plan

An adaptive management plan is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

4.2. Outfall Restoration and Beach Nourishment

4.2.1. Site Selection Criteria

Compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding any net loss of resources caused by the proposed project. The stormwater outfall at Maritime Pier in Gig Harbor, approximately 0.5 miles south of the project site has been identified as an opportune mitigation option. This outfall was selected due to its current degraded state and on the recommendation of WDFW. The outfall has created a plunge pool and contributed to sediment erosion into Gig Harbor (Figures 2 and 3). Please see the outfall restoration plan in Appendix I for more details.



Figure 2. Maritime Pier Stormwater Outfall (looking northwest)



Figure 3. Plunge Pool below Maritime Pier Stormwater Outfall

4.2.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation. The beach nourishment will also be protected by the Washington State Shoreline Management Act (SMA) and the City of Gig Harbor Shoreline Master Program which carries out the policies outlined in the SMA.

4.2.3. Mitigation Work Plan

The existing outfall shall be restored to conform to the requirements of the Washington Department of Ecology (WDOE) Stormwater Management Manual for Western Washington (SWMMWW). The outfall has failed to provide energy dissipation and has led to the development of a plunge pool that is several feet deep (Figure 3 above). As a result, sediment erosion is carried into Gig Harbor. When this material is carried into the harbor, turbidity occurs which can affect light penetration and lead to negative impacts on ecological productivity and habitat quality. Shoreline erosion at this outfall can be seen from aerial images.



Figure 4. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2006)



Figure 5. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2016)

The proposed restoration will include adding beach nourishment to fill the plunge pool and designing the outlet to provide energy dissipation during high flow events. Long-term benefits of this restoration include additional habitat for aquatic species and an increase in water quality within Gig Harbor.

Beach nourishment was selected for mitigation to add habitat along the highly developed shoreline of Gig Harbor. This mitigation technique will help to stabilize the stormwater outfall at Maritime Pier to limit sediment runoff into the water and replace the loss of existing material that was washed away. A total of 600 cubic yards (CY) of beach nourishment will be applied along the shoreline where the stormwater outfall restoration occurs.

4.2.4. Maintenance Plan

The stormwater outfall is designed to be a one-time action that is self-sustainable. However, as a high energy area, maintenance may be needed if stabilization efforts are unsuccessful. Maintenance may include the addition of new beach nourishment in the future. Additionally, the City will maintain the outfall per the requirements of the SWMMWW.

4.2.5. Performance Standards

Photos of the stormwater outfall before and after restoration will be used to document the restoration at the site. Receipts of purchased materials will be provided to confirm the proposed 600 CY of beach nourishment that will be added to the shoreline. Photo documentation will also serve to support this mitigation effort.

4.2.6. Monitoring

After the stormwater outfall is restored and beach nourishment is applied, monitoring will occur each year following the project for three years to ensure proper stormwater outfall operation and acceptable

beach conditions after nourishment. If these mitigation measures fail to meet the project requirements within the monitoring period, contingencies must be implemented, and additional monitoring will be required.

4.2.7. Long-Term Management Plan

Long-term management is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.8. Adaptive Management Plan

An adaptive management plan is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

5. CONCLUSION

The proposed Commercial Fishing Homeport was designed to provide educational opportunities and moorage to the local fishing fleet. The Puget Sound Nearshore Conservation Calculator was used to determine the habitat impacts as a result of the overwater structure. To compensate for these impacts, mitigation compliant with 33 CFR 332.4(c) will occur at both on and off-site locations within the same watershed. These habitat improvements will include the removal of the Jerkovich Pier, the restoration of a stormwater outfall at Maritime Pier, and the placement of beach nourishment along the Gig Harbor shoreline. Any remaining calculated impacts will be offset by purchasing sufficient credits from an approved conservation bank.

6. REFERENCES

NOAA Fisheries. Puget Sound Nearshore Conservation Calculator. 2020. Accessed via *https://www.fisheries.noaa.gov/resource/tool-app/puget-sound-nearshore-conservation-calculator*

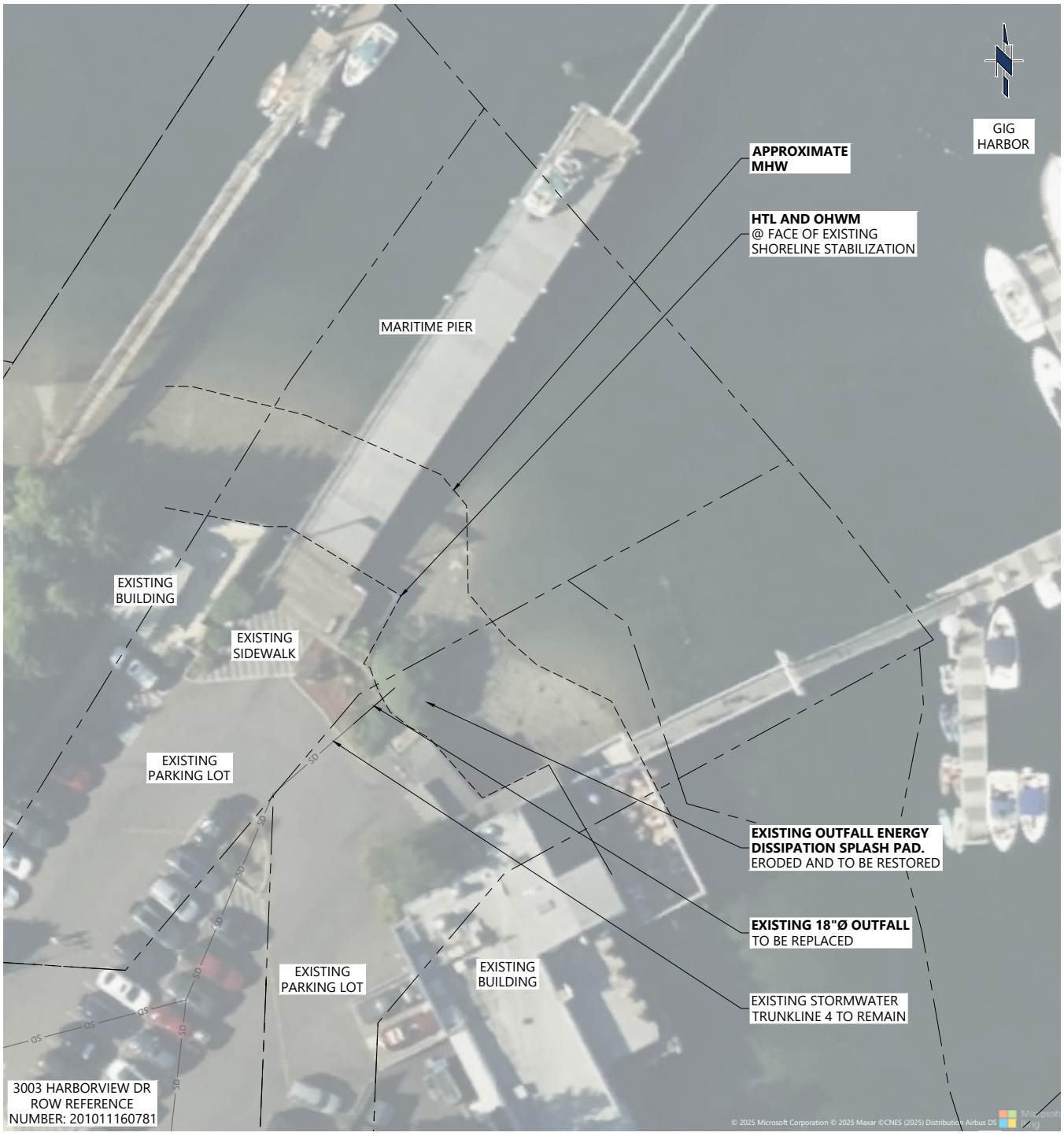
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Washington State Legislature. Washington Administrative Code (WAC). 2022. Accessed via *https://app.leg.wa.gov/WAC/default.aspx*

WDFW's Cumulative Risk Model. Washington State Aquatic Habitat Guidelines Program. 2014. Accessed via *https://wdfw.wa.gov/sites/default/files/publications/01583/wdfw01583.pdf*

APPENDIX I: Outfall Restoration Plan



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
www.facetnw.com P: 206.523.0024

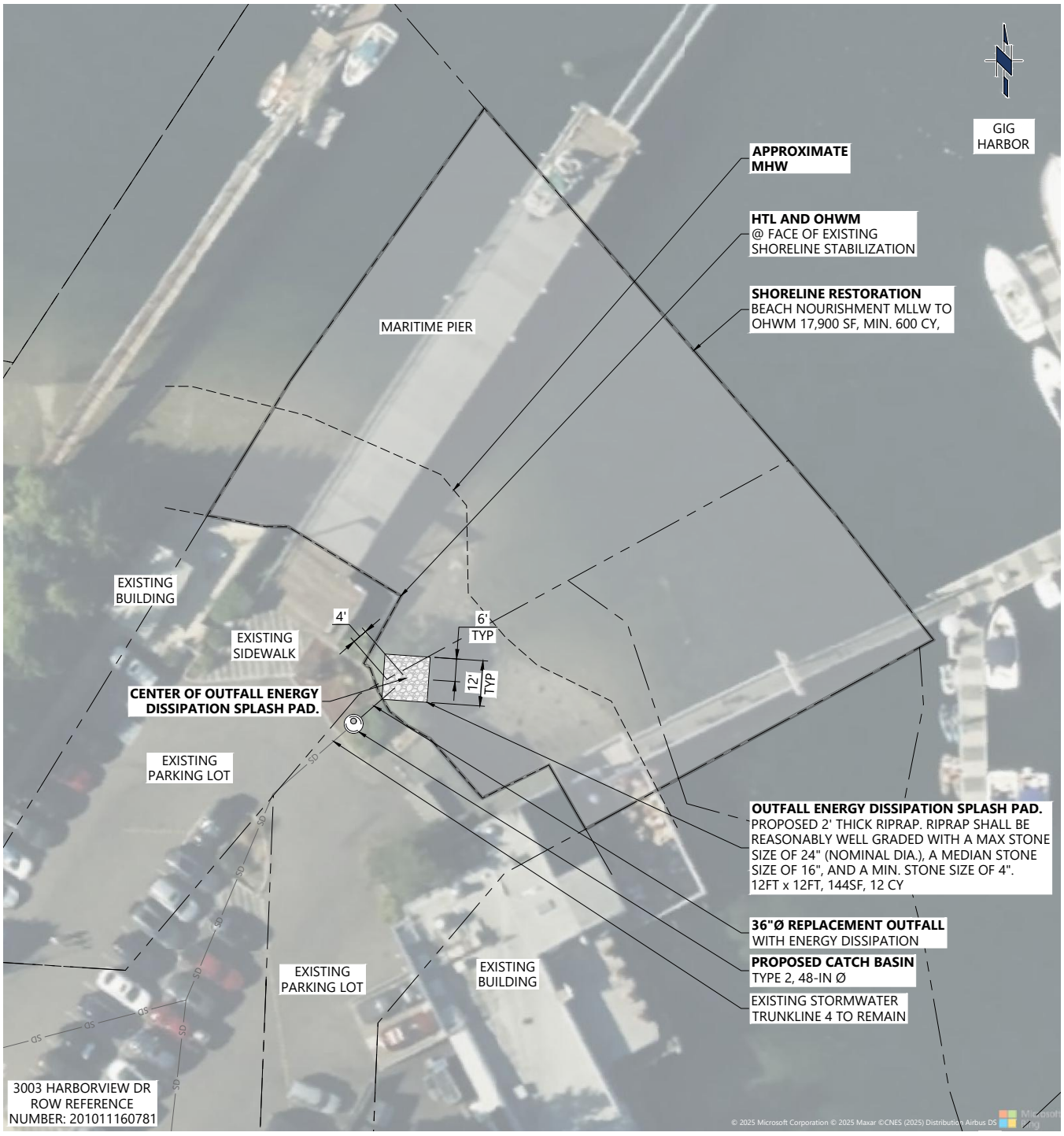
PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 1 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21120164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CGGH - MARITIME PIER OUTFALL RESTORATION.DWG



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
www.facetnw.com P: 206.523.0024

PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

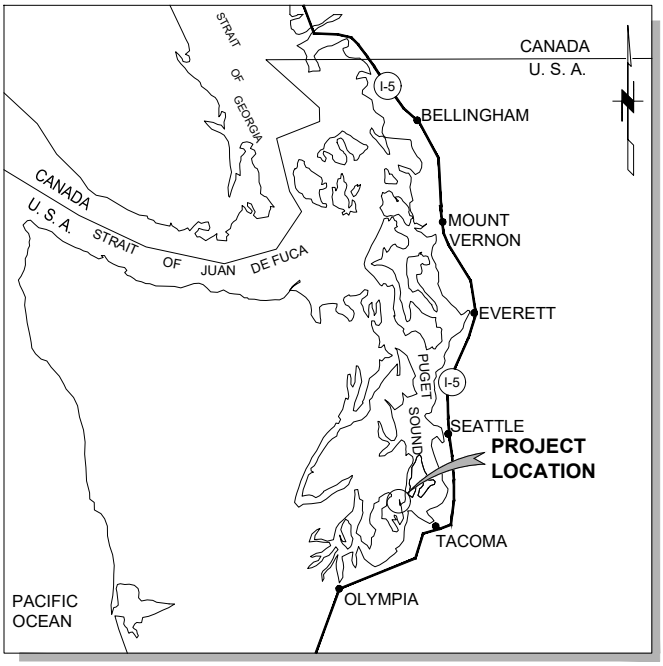
IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 2 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21120164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CGGH - MARITIME PIER OUTFALL RESTORATION.DWG

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By MThomas City of Gig Harbor at 2:50 pm, Feb 02, 2026
Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 17



VICINTIY MAP
NTS



PROJECT LOCATION
NTS

CITY OF GIG HARBOR
MAYOR: TRACIE MARKLEY

PUBLIC WORKS DIRECTOR: JEFF LANGHELM

CITY ADMINISTRATOR: KATRINA KNUTSON

CITY COUNCIL MEMBERS:
JENI WOOCK, ROGER HENDERSON,
BRENDA LYKINS, MARY BARBER,
JULIE MARTIN, LE RODENBERG,
AND SETH STORSET

VERTICAL DATUM CONVERSION
(FEMA BFE = +14 NAVD 88)

MLLW	NGVD 29	NAVD 88	DATUM PLANE
+17.00	+10.54	+14.00	– FEMA FLOOD ELEV.
+13.80	+7.34	+10.80	– HIGHEST OBSERVED
+13.59	+7.13	+10.59	– HIGH TIDE LINE
+12.80	+6.34	+9.80	– ORDINARY HIGH WATER
+11.80	+5.34	+8.80	– MEAN HIGHER HIGH WATER
+11.00	+4.54	+8.00	– MEAN HIGH WATER
+6.90	+0.44	+3.90	– MEAN TIDE LEVEL
+2.80	-3.66	-0.20	– MEAN LOW WATER
0.00	-6.46	-3.00	– MEAN LOWER LOW WATER
-4.30	-10.76	-7.30	– LOWEST OBSERVED

SOURCES:
MLLW: US ARMY CORPS OF ENGINEERS' SOUTH PUGET SOUND REGION TIDAL DATUM #72 - GIG HARBOR.

NGVD 29 AND NAVD 88: NOAAs VERTICAL DATUM TRANSFORMATION (v3.3) AT JERISICH DOCK (LAT 47.3310, LONG -122.5816).

HTL: HTL IS 13.59' MLLW, BASED IN THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

SHEET INDEX

No.	SHEET TITLE
1	TITLE SHEET AND SHEET INDEX
2	EXISTING AND DEMOLITION PLAN
3	OVERALL SITE PLAN
4	PROPOSED DOCK SOUTH PLAN VIEW
5	PROPOSED DOCK NORTH PLAN VIEW
6	PROPOSED SECTION VIEW
7	GANGWAY SECTION
8	FLOAT SECTIONS
9	MITIGATION PLAN

PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

TITLE SHEET
AND SHEET INDEX

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Seattle, WA 98115
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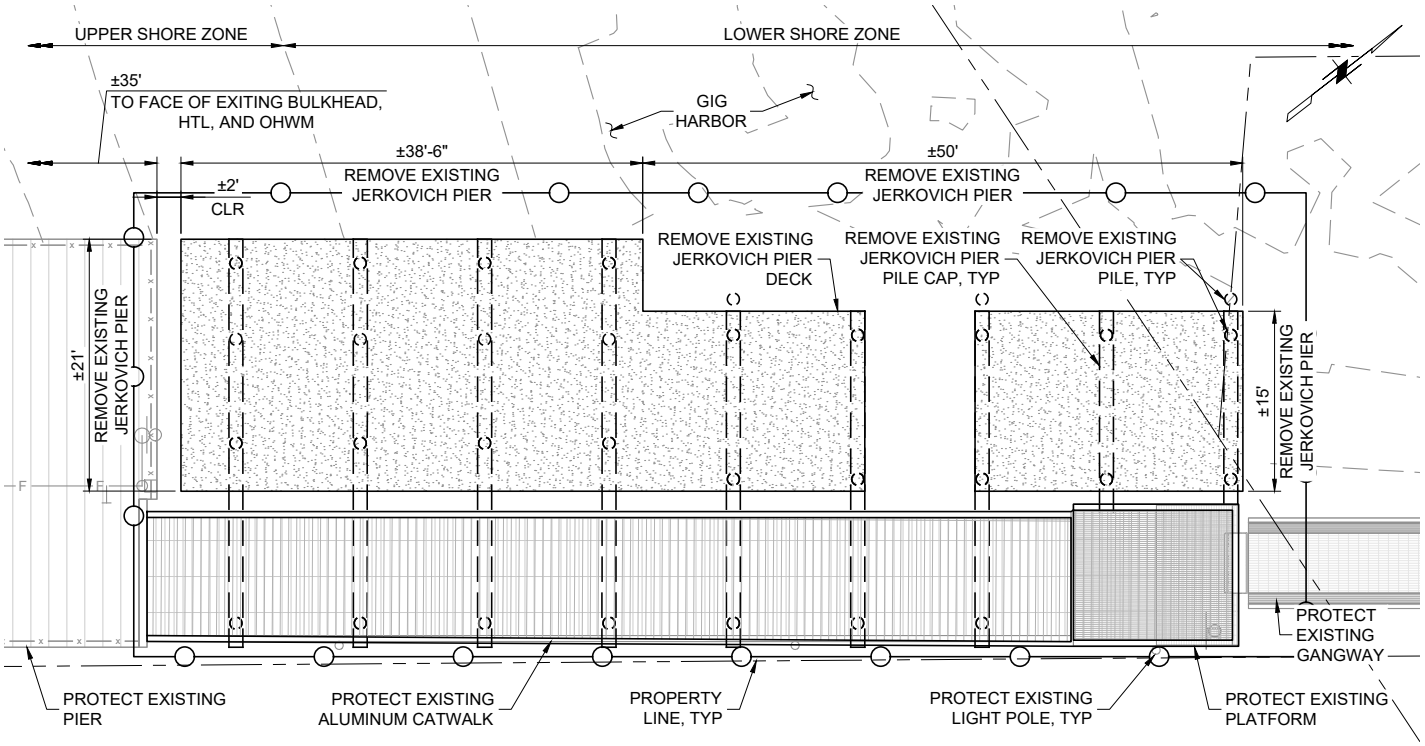
PROPOSED:
INSTALL A NEW GANGWAY
AND FLOATING DOCK WITH UTILITIES FOR COMMERCIAL FISHING VESSELS.

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 1 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21213\0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
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ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

EXISTING AND DEMOLITION PLAN

8 4 0 8 16
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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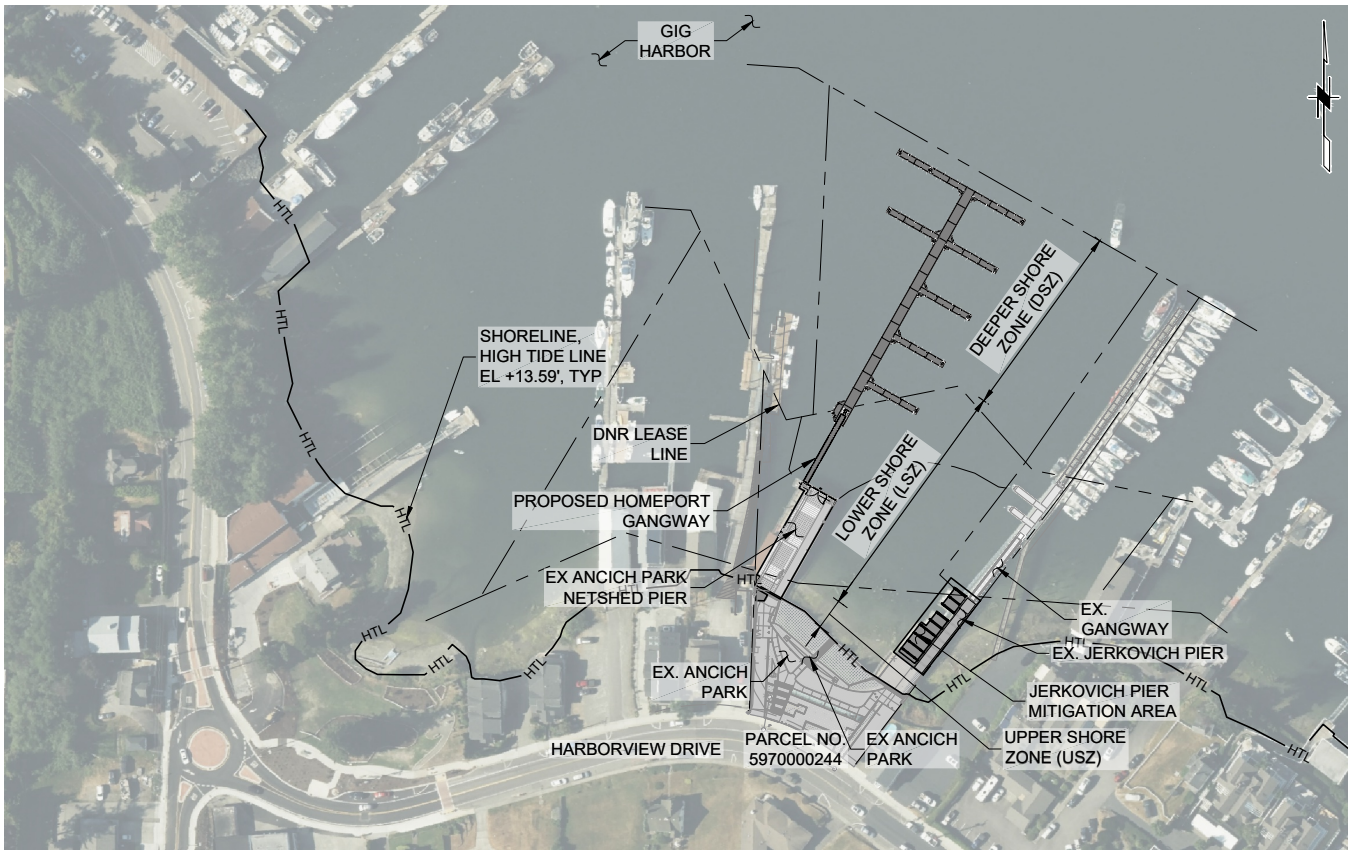
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INSTALL A NEW GANGWAY
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IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 2 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21213.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



PROJECT INFORMATION

PROJECT ADDRESS
3589 HARBORVIEW DR, GIG HARBOR, WA 98332

PARCEL NO.
5970000244, WM-ZONING (HR)

LEGAL DESCRIPTION
SECTION 05 TOWNSHIP 21N RANGE 02E QUARTER 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

PROJECT NOTES
NO PROPOSED SITE GRADING OR EARTHWORK.
SEE SITE SPECIFIC GEOTECH REPORT BY PND ENGINEERS SEPTEMBER 2016.
PROJECT IS IN SHORELINE JURISDICTION.
CONTRACTOR TO PROTECT EXPOSED SOILS DURING CONSTRUCTION.
ALL EQUIPMENT ACCESS WILL BE VIA BARGE.

DATUMS
ALL HORIZONTAL CONTROL IS RELATIVE TO EXISTING STRUCTURES.
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

PURPOSE:
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NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OVERALL SITE PLAN

100 50 0 100 200
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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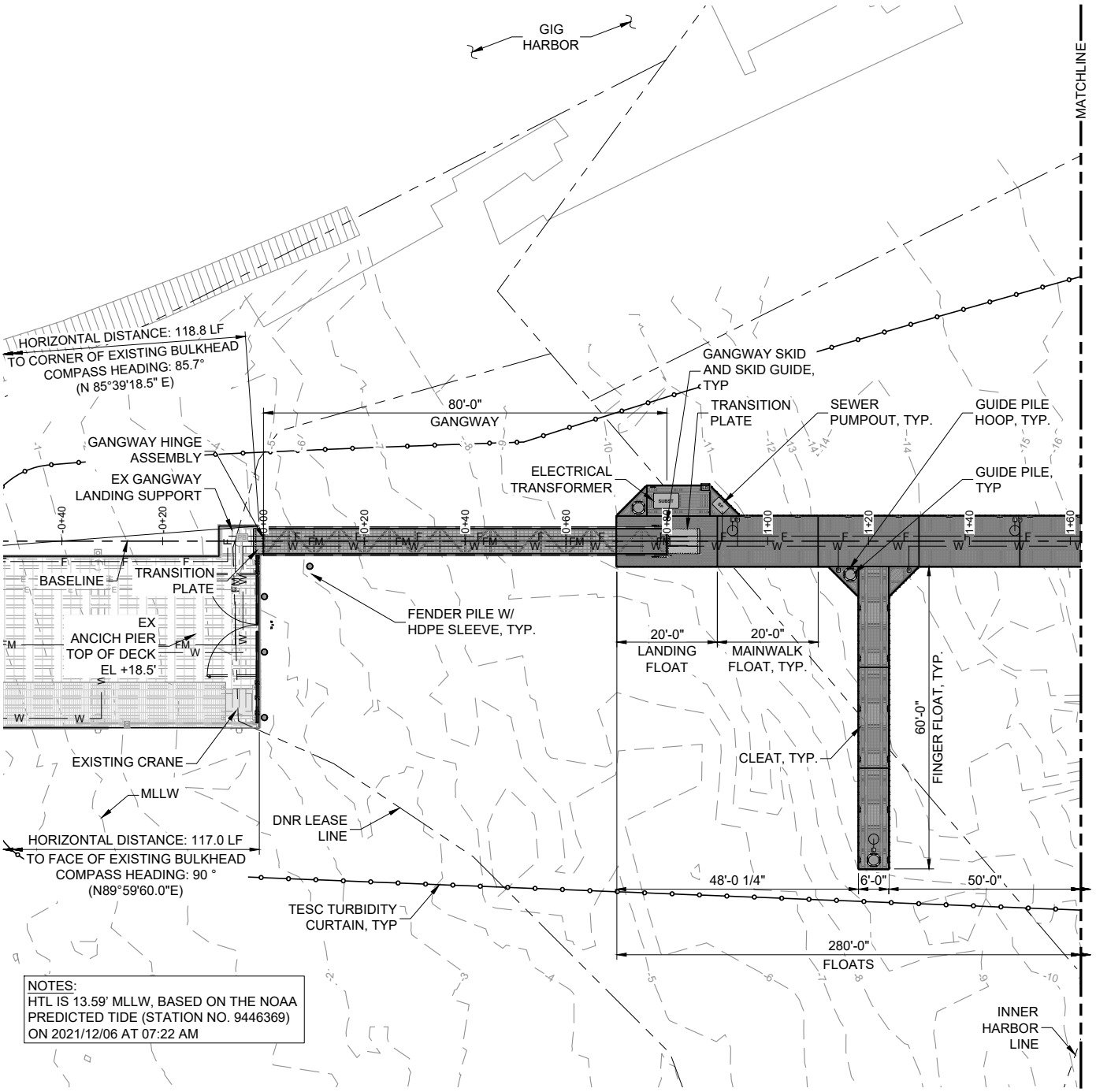
PROPOSED:
INSTALL A NEW GANGWAY
AND FLOATING DOCK WITH UTILITIES FOR COMMERCIAL FISHING VESSELS.

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 3 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21264.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED DOCK SOUTH PLAN VIEW

15 7.5 0 15 30
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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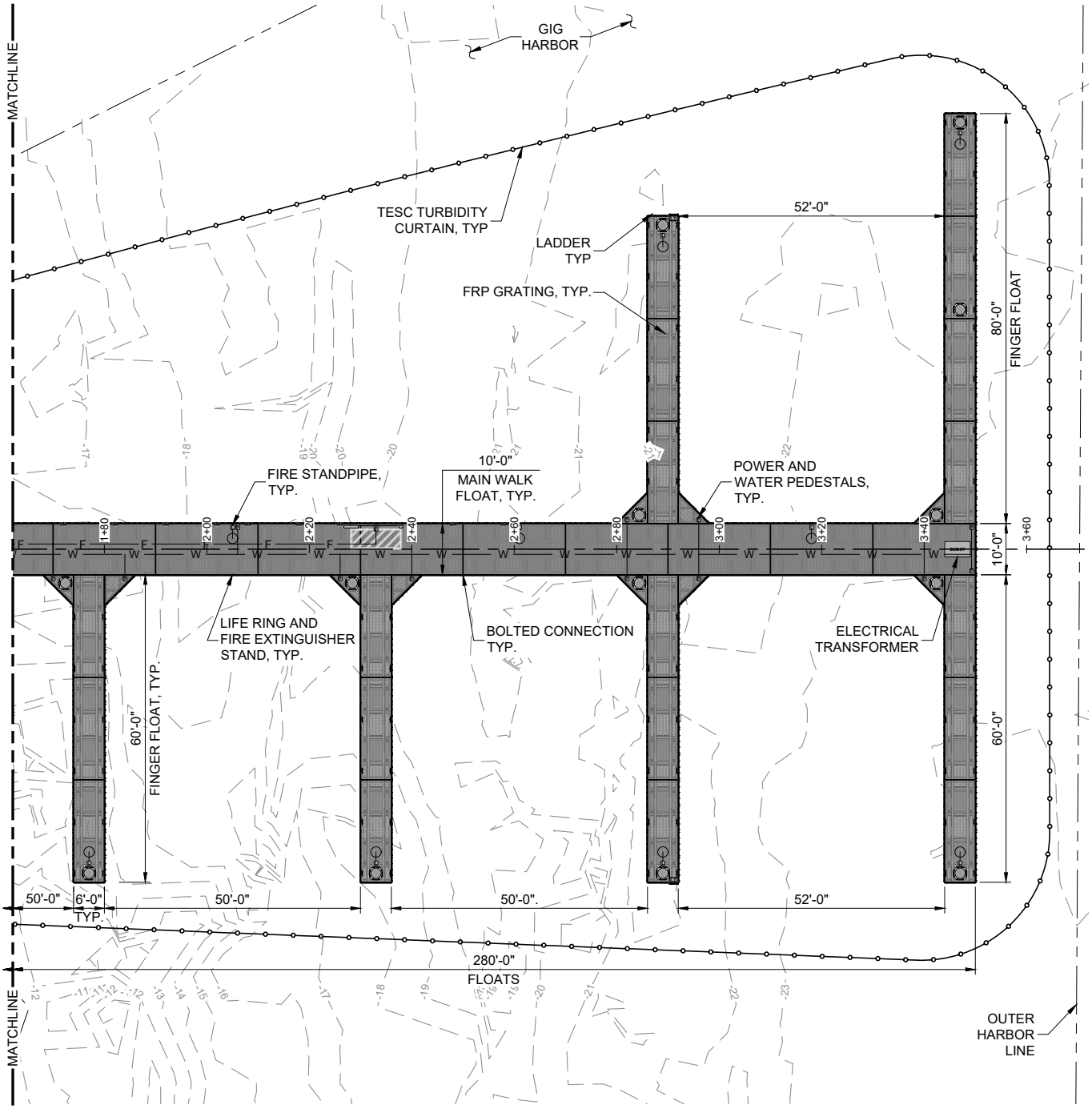
PROPOSED:
INSTALL A NEW GANGWAY AND FLOATING DOCK WITH UTILITIES FOR COMMERCIAL FISHING VESSELS.

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 4 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED DOCK
NORTH PLAN VIEW

15 7.5 0 15 30
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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Seattle, WA 98115
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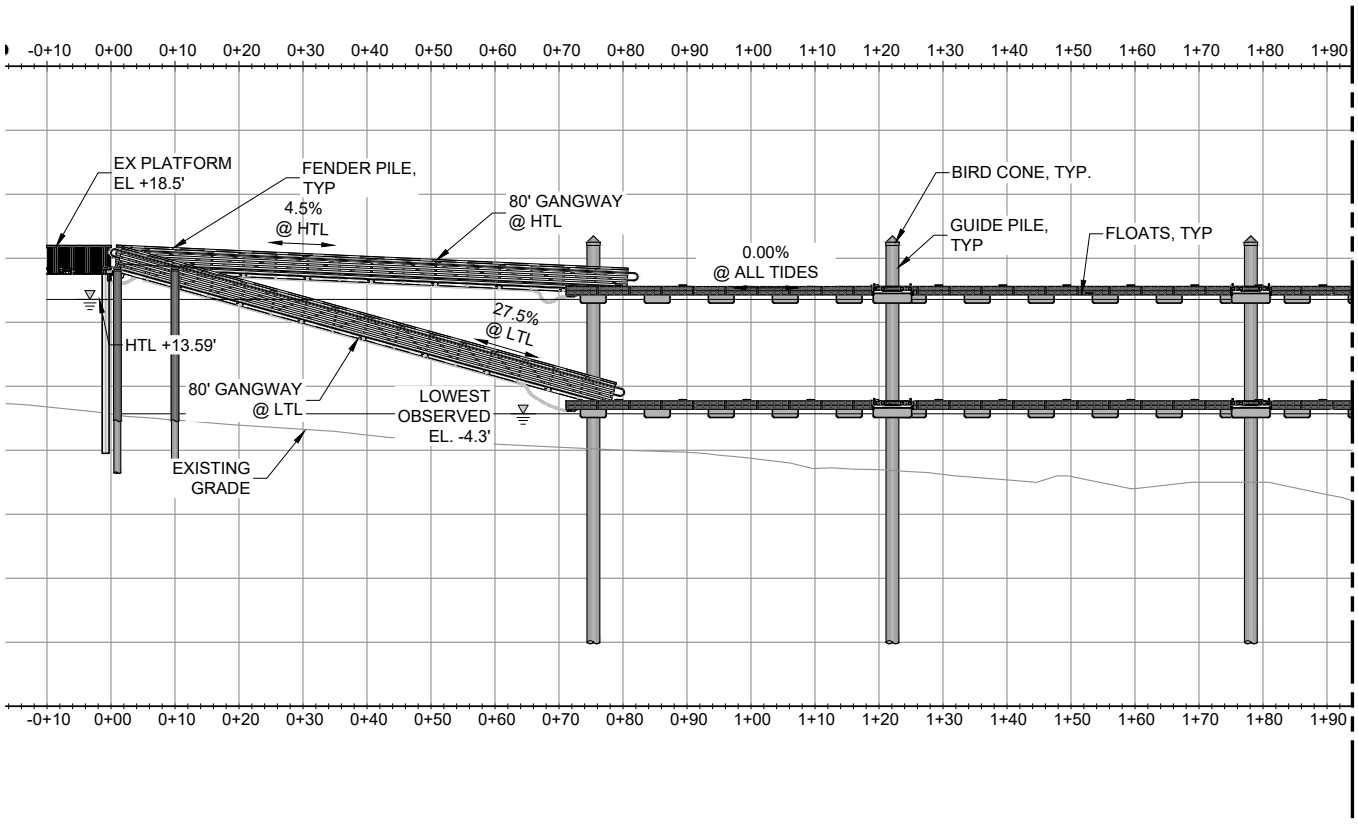
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IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 5 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21213.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



NOTES:
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM

FINGER FLOAT PILES NOT SHOWN FOR CLARITY

PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED SECTION VIEW

10 5 0 10 20
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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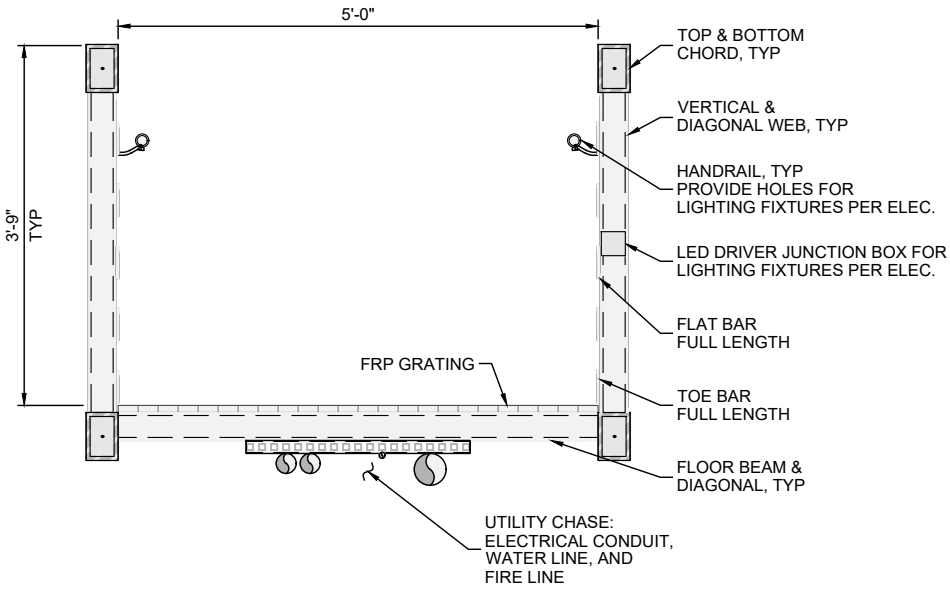
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IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 6 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



GANGWAY SECTION

PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
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APPLICATION BY:
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ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

GANGWAY SECTION

1 ½ 0 1 2
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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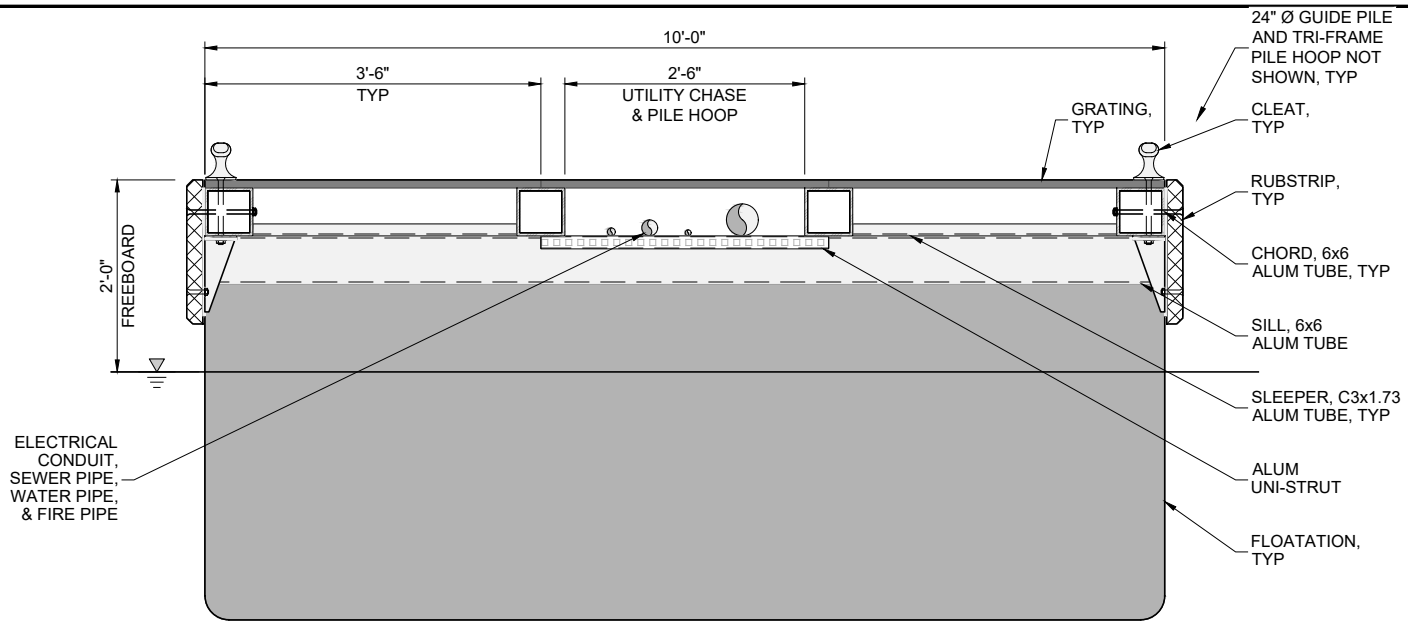
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IN: GIG HARBOR
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PIERCE COUNTY
S08 T21 R02
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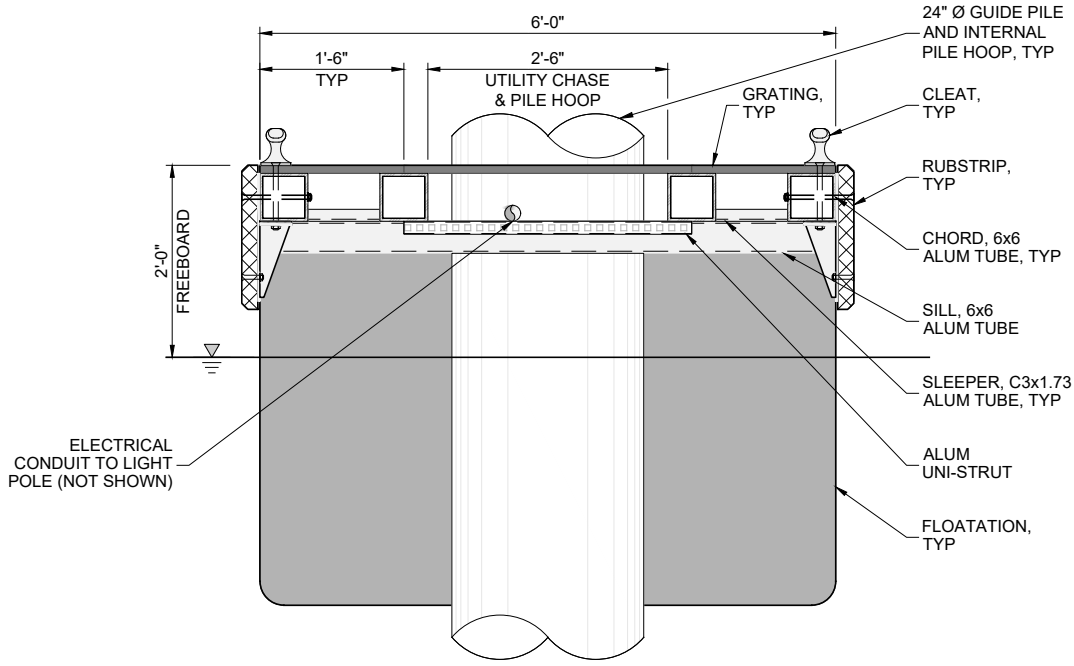
DATE: AUGUST 2025
SHEET: 7 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



MAINWALK FLOAT SECTION



FINGER FLOAT SECTION

PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
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CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

FLOAT SECTION

1 ½ 0 1 2
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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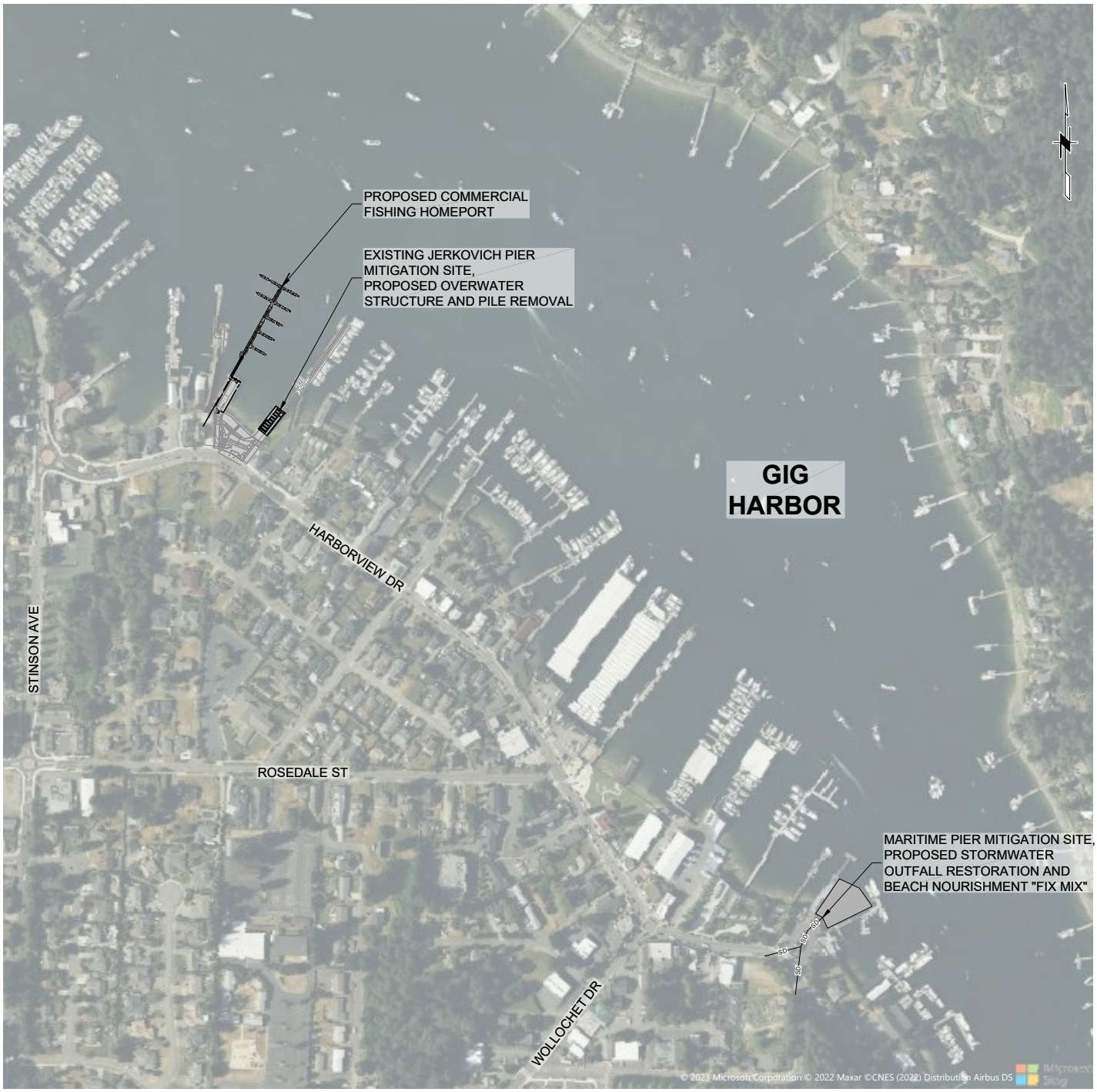
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PARCEL: ROW

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PURPOSE:
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CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

MITIGATION SITE PLAN

250 125 0 250 500
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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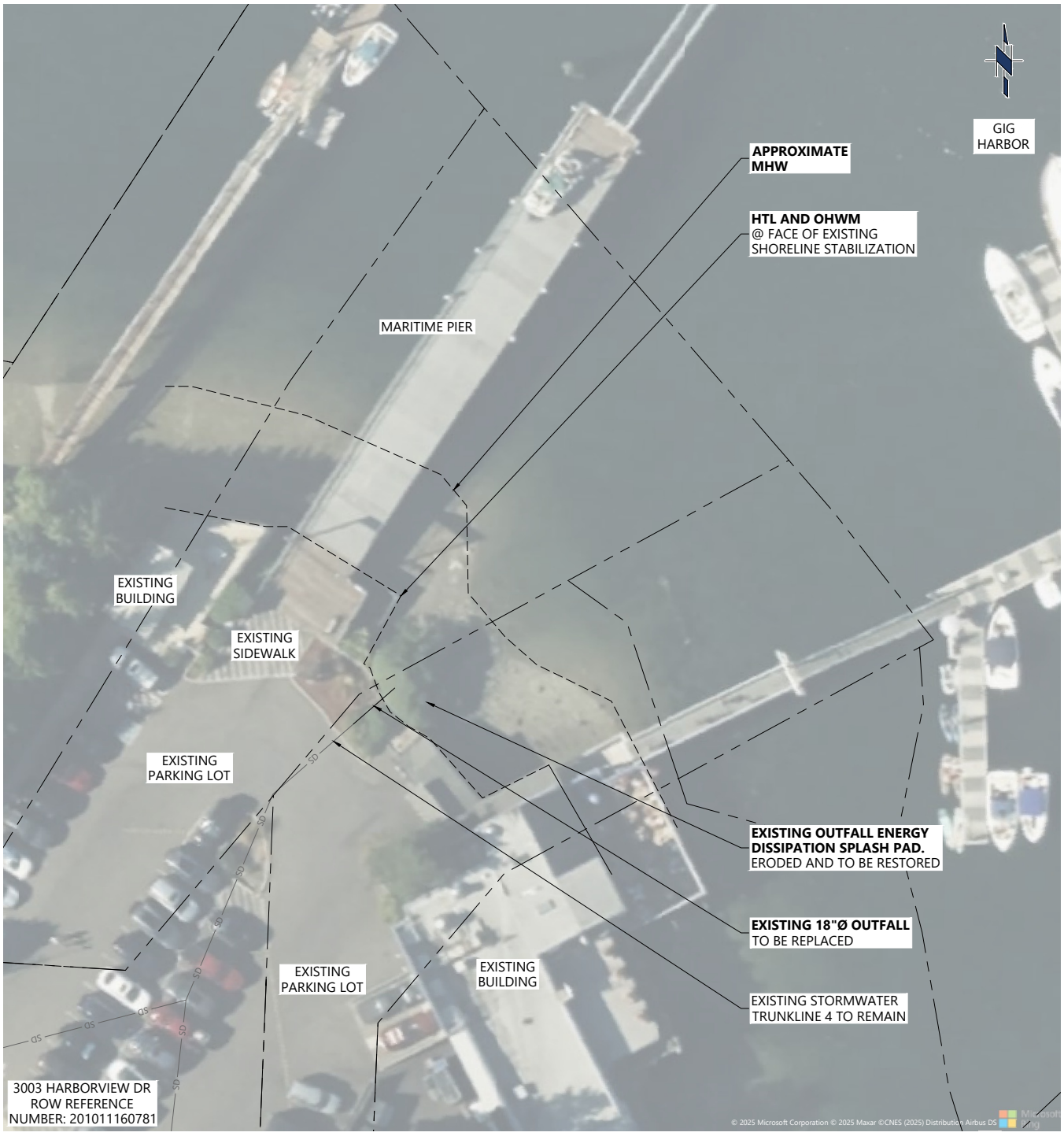
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DATE: AUGUST 2025
SHEET: 9 OF 11

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PURPOSE:
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ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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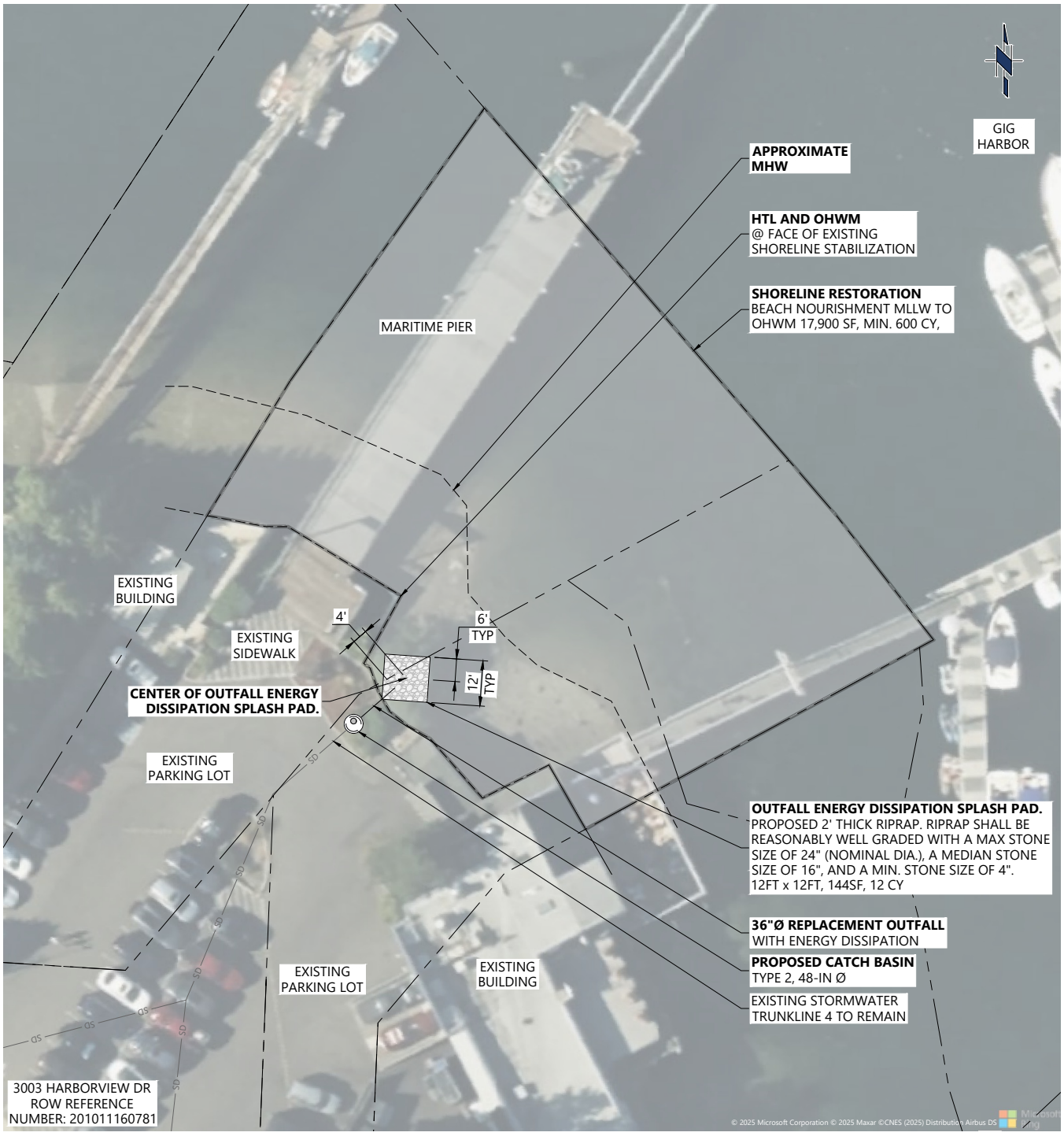
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IN: GIG HARBOR
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PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 10 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - MARITIME PIER OUTFALL RESTORATION.DWG



PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION PROPOSED PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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9706 4th Ave NE, Suite 300
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www.facetnw.com P: 206.523.0024

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IN: GIG HARBOR
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S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 11 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2022\112\22112.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - MARITIME PIER OUTFALL RESTORATION.DWG

PUGETSOUND PARTNERSHIP

Section II

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 18

Conservation Credit Purchase Form

Partnership Nearshore Credits: A NOAA-approved conservation credit provider

This form facilitates the process for federal permittees to purchase conservation credits from Puget Sound Partnership (Partnership) to offset Endangered Species Act (ESA) impacts resulting from the maintenance, replacement, expansion, or new construction of structures in the Puget Sound nearshore.

What type of "credits" does the Partnership provide?

Puget Sound Partnership provides conservation credits for obligations under Endangered Species Act (ESA) consultations. If other federal, local, or state agencies also require mitigation, and that mitigation was not already included in the conservation calculator, it is the applicant's responsibility to clarify with those agencies whether the conservation credits provided by Puget Sound Partnership would meet those obligations. For example, Partnership Nearshore Credits may not be used to satisfy compensatory mitigation obligations under Section 404 of the Clean Water Act.

Conservation Credit Purchase Process

The overall process to purchase conservation credits from Partnership (and the way this form facilitates that process) is illustrated in the figure below.

ATTENTION:
Federal permit applicants must work with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) – first to avoid and minimize impacts on site, and then to finalize the number of conservation offsets needed for unavoidable impacts – before attempting to purchase nearshore conservation credits from the Partnership. NMFS must finalize all conservation calculators prior to any credit purchase agreement.



S1 = Section 1 S2 = Section 2 S3 = Section 3

Form Instructions

- Each section of this form is used by a single entity during each step in the credit purchase process, and the responsible entity is named and in bold text at the beginning of each section.
- When populating a section, all boxes must be populated.

Section II: Conservation Credit Pre-Sale Agreement

The credit pre-sale terms outlined in this section are completed by the **Partnership** to provide the permittee a formal offer to sell conservation credits to the permittee according to the terms and conditions below pending receipt of the credit purchase price from the permittee. If the permittee agrees to purchase conservation credits from Partnership on the terms and conditions below, the **permittee** signs and returns this section to the Partnership for the **Partnership** to countersign. The permittee must include a copy of completed Sections I and II of this form with payment to purchase credits.

CREDIT PRE-SALE TERMS

Buyer Organization Name: City of Gig Harbor

Buyer Mailing Address: 3510 Grandview St City: Gig Harbor Zip: 98335

Buyer Permit Project Name: Gig Harbor Commercial Fishing Homeport Permit Project Number: WCRO-2023-00546

Number of Partnership Credits to be Purchased: 340 Per Credit Purchase Price: $1,411.00

Total Purchase Price: $479,740.00 Pre-Sale Expiration Date: 9/16/2026

Successors and Assigns
This agreement shall inure to the benefit of and be binding upon the successors and assigns of the buyer and the Partnership.

Applicable Law
This agreement shall be construed and enforced in accordance with the laws of the State of Washington.

Notices
Any notice or demand permitted or required by this agreement shall be made in writing and delivered to the Buyer Mailing Address listed above or the Partnership's address listed under the Partnership Commitment to Sale Credits below with conformation of transmission. Any such notice or demand shall be effective and deemed received on the date delivered, as indicated on receipt confirmation.

Entire Agreement
This agreement contains the entire understanding between the buyer and the Partnership. This agreement shall not be binding upon the buyer and Partnership until executed by an authorized agent of the buyer and Partnership, and an executed copy of this agreement has been delivered to the buyer and Partnership.

Amendments and Waivers
This agreement may not be amended, modified, altered, or changed in any respect whatsoever, except by a further agreement in writing duly executed by the buyer and the Partnership.

Credit Pre-Sale Terms

The buyer listed above agrees to purchase the Number of Credits to Purchase listed above according to the credit pre-sale terms listed above and prior to the Pre-Sale Expiration Date listed above if the buyer's permit is approved by NOAA Fisheries. The buyer agrees that this conservation credit pre-sale agreement is terminated if the buyer fails to deliver the Purchase Price above on or before the Pre-sale Expiration Date listed above, and upon which neither the buyer or Partnership shall have no further rights or obligations hereunder.

Name of Authorized Agent: Katrina Knutson

Authorized Agent Signature: Katrina Knutson (Oct 1, 2025 15:55:40 PDT) Date: 10/01/2025

Payment Instructions

Checks should be made payable to:
Recreation and Conservation Office

and sent to:
Recreation and Conservation Office
PO Box 40917
Olympia, WA 98504-0917

Partnership Commitment To Sell Credits

Puget Sound Partnership, whose mailing address is PO Box WT-41, Olympia, WA 98504-7000, agrees to sell the Number of Credits to Purchase listed above according to the credit pre-sale terms listed above and receipt of the Purchase Price listed above prior to the Pre-Sale Expiration Date listed above. Partnership agrees that it will comply with all terms and conditions set forth in the Partnership's memorandum of understanding with NOAA Fisheries and USFWS to generate the Number of Credits to Purchase listed above. Upon receipt of payment, of the Purchase Price listed above, Partnership shall provide the buyer within 30 days thereafter documentation as required by the Services to effectuate the purchase of credits. The Partnership agrees to reduce the Number of Credits to Purchase listed above and the Purchased Price pro rata if the regulatory agency requirement is decreased at no penalty to the buyer. If the Number of Credits to Purchase listed above is reduced, the Partnership will provide an addendum to this agreement at the request of the buyer.

Name of Authorized Agent: Ahren Stroming

Authorized Agent Signature: Ahren Stroming (Oct 1, 2025 15:57:18 PDT) Date: 10/01/2025

Link to Section I
(Internal Agency Use Only)

Link to Section III
(Internal Agency Use Only)

Blue cells contain section headings	
Rose cells contain questions that need to be answered to fill out calculator	
Grey cells contain units requested for entry	
Yellow cells indicate user entry fields	
Green cells contain additional explanations and resource links	
Maroon cells contain summary values	
Action Agency Reference #	**NWS-2022-472**
FWS or NMFS #	**WCRO-2023-00546**
Project Name:	The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport
Prepared on and by:	Lia Protopapadakis F. 7/10/2025

Puget Sound Nearshore Habitat Conservation Calculator

	Version 1.5b - annotated	2/24/2023

This tool determines long-term habitat impacts and benefits for projects in the Salish Sea nearshore. Details about the use of this Conservation Calculator can be found in the User Guide, FAQs, and training materials, which are all available on the Puget Sound Nearshore Habitat Conservation Calculator Webpage

		Conservation Credits/Debits	DSAYs (Discounted Service Acre Years)
Overwater Structures	Debit	-464	-4.64
	Credit (includes creosote removal)	60	0.60
	Balance	-404	-4.04
Shoreline Armoring	Debit	0	0.00
	Credit from Armor Removal	0	0.00
	Credit from Creosote Removal	0	0.00
	Balance	0	0.00
[illegible]	**Balance**	0	0.00
Boatramps, Jetties, Rubble	Debit	0	0.00
	Credit	0	0.00
	Balance	0	0.00
Beach Nourishment	**Conservation Offsets**	65	0.65
Riparian Enhancement/Degradation	**Balance**	0	0.00
SAV Planting	**Conservation Credit**	0	0.00
Habitat Loss / Remaining Conservation Offsets Needed		-340	-3.40

Final August 13, 2025 PM NMFS

Total -340

Is this a standalone restoration project?*	**No**		

* Standalone restoration actions are actions that can be executed outside of a replacement or construction of new structures. They have no negative long term habitat impacts. A standalone restoration action solely restores or improves habitat functions. It does not introduce new or temporally extend adverse effects aside from construction-related effects. Standalone restoration projects include removal of a structure (that has adverse effects) without its replacement.

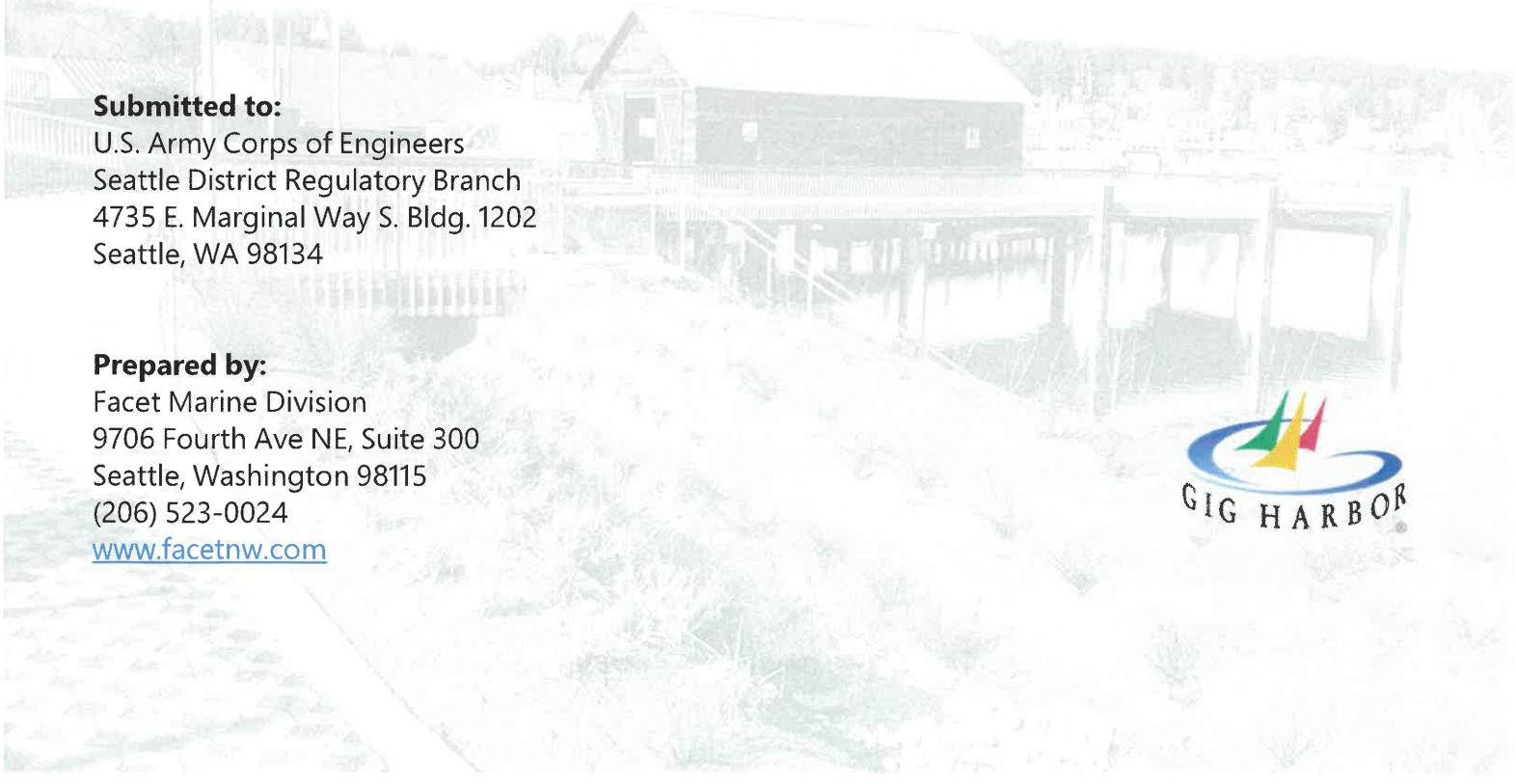
FACET
Formerly DCG / Watershed

Mitigation Plan Revision 6

FOR THE

City of Gig Harbor Commercial Fishing Homeport at Ancich Waterfront Park

AUGUST 2025



Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Facet Marine Division
9706 Fourth Ave NE, Suite 300
Seattle, Washington 98115
(206) 523-0024
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GIG HARBOR

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ACRONYMS AND ABBREVIATIONS

Agencies	U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Washington Department of Ecology, and other local/state regulatory agencies that have jurisdiction
CFR	Code of Federal Regulations
City	City of Gig Harbor
CY	Cubic Yards
HDPE	High-density polyethylene
LSZ	Lower Shore Zone
NOAA	National Oceanic and Atmospheric Administration
SAV	Submerged Aquatic Vegetation
SMA	Shoreline Management Act
SWMMWW	Stormwater Management Manual for Western Washington
UHMW	Ultra High Molecular Weight Polyethylene
USACE	United States Army Corps of Engineers
WAC	Washington Administrative Code (WAC)
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology

REVISION 5

Mitigation plan updates are being provided in August of 2025 after the Design team and the City worked with the USACE, NOAA, and USFWS project reviewers towards a feasible strategy. The reviewers expressed concern about the feasibility of the proposed kelp plantings that accounted for most of the credits generated to offset project impacts, as determined by the Puget Sound Nearshore Conservation Calculator. The previous revision to the report was to remove references to beach nourishment and outfall restoration. This revision adds back beach nourishment and outfall restoration components. No proposed design elements have been revised as part of this revision since the proposed condition was previously designed with avoidance and minimal impact as the main driving factors.

1. INTRODUCTION

In 2013, the City of Gig Harbor (hereafter, City) passed Resolution 949 to capture the visioning process for Ancich Waterfront Park. The park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human-powered crafts and for commercial fishermen will be provided. Construction on the human-powered craft dock was recently completed (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet.

Additionally, the City has a vested interest in the stewardship of the harbor, shoreline, and the overall environmental health in its waterbodies. The City has long understood this need to protect and restore this sensitive environment as the City's culture, history, and identity are built around this natural resource. Protection of the harbor is critical for the sustainability of local fishing, boating and public enjoyment. With this said, the City is excited to include mitigation as part of this project, allowing mitigation efforts to balance project impacts by improving the harbor while providing this proposed access to the harbor.

We have identified several needs in the area that we see offsetting some of the potential impacts of the proposed Commercial Fishing Homeport. These needs are the removal of the existing Jerkovich Pier and restoration of the existing Maritime Pier Outfall including beach nourishment. These mitigation efforts will ensure the community and habitat of Gig Harbor will be healthy and sustainably managed by balancing the impact of Homeport with ecological lift.

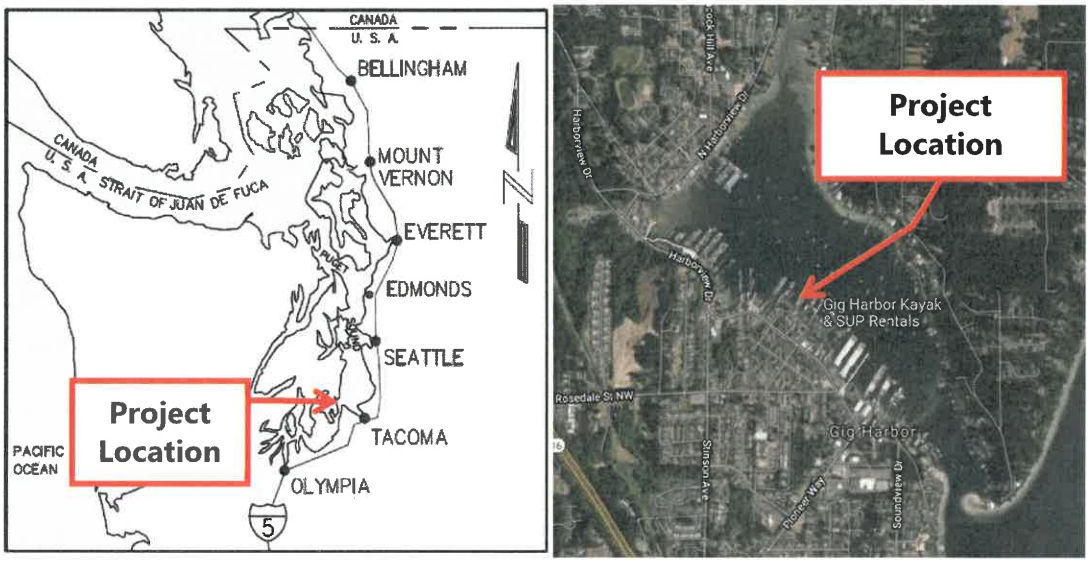


Figure 1. Vicinity and Site Maps

2. PROJECT OVERVIEW

2.1. Existing Conditions

Ancich Waterfront Park is positioned in a heavily residentially developed, commercially developed, and heavily trafficked area of Gig Harbor. The property has a buffer of native shoreline plantings, a concrete bulkhead, two large piers, upland impervious and partially impervious walkway areas, an upland building used for storage of canoes and kayaks and is situated between existing marinas. A habitat survey performed in June 2022 by Marine Surveys & Assessments (MSA) identified *Saccharina* and *Gracilaria* species in the project area (please see the attached macrovegetation survey for further details). Additionally, there is no documented forage fish spawning at the project site. However, surf smelt spawning is documented approximately 0.30 mile from the site, across the water on the northeast side of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2. Proposed Conditions and Project Design

The proposed project consists of the elements listed in this section. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2.1. Float Installation

A main walk floating dock will be installed with an overall length of 280' for access. Finger floats will be attached to the main walk floats using a tri-frame structural attachment to create boat slips. All floats will be fully grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

(6) 60' Finger Floats
(1) 80' Finger Float

2.2.2. Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to the previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only.

2.2.3. Guide Pile and Fender Pile Installation

(16) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels.

(4) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an

impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2.2.4. Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing locations to the end of the main walk floating dock.

2.2.5. Proposed Mitigation

The proposed mitigation will be installed as part of this project. Please see Section 4 - Mitigation Plan for more details. This mitigation shall include the demolition of the existing Jerkovich Pier, the restoration of a stormwater outfall, and the addition of beach nourishment along the shoreline of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

3. MITIGATION SEQUENCE

The Washington Department of Fish and Wildlife (WDFW) requires mitigation sequencing as outlined in WAC 220-660-030.102. The U.S. Army Corps of Engineers (USACE) requires mitigation sequencing as stated in 33 CFR 320.4(r)(1). Mitigation sequencing is the hierarchical process of avoiding impacts, minimizing unavoidable impacts, and mitigating for resources lost. The following section describes how this project meets the regulatory requirements by employing mitigation sequencing and analyzing alternatives set forth in WAC 220-660-370.3.b.

3.1. Avoidance and Minimization

The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant to avoid, reduce intensity, or otherwise minimize potential impacts:

- Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
- If required by governing agencies, water quality monitoring will be conducted during excavation activities.
- All man-made construction debris will be collected and will not be allowed to enter waters of the state.
- If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
- All debris or spill material will be properly disposed of at an approved off-site disposal facility.
- As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
- Contractor will maintain a spill containment kit with floating sausage booms on site.
- A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
- Vessels will not run aground.

3.2. Alternatives Analysis

A feasibility study was completed for the proposed commercial fishing homeport in September of 2020. This study considered five different alternatives based on cost, capacity needs, environmental impact, safety, traffic, and conformance to the historic working waterfront. The design selected was the best alternative that met the goals of the community with a minimal number of disadvantages.

Environmentally friendly alternatives were considered during project design. These items are summarized in the table below.

Table 1. Environmentally Friendly Alternatives

Design Element	Benefit
Design and layout	Minimize overwater coverage by designing for specific fisherman fleet parameters
Grated surfaces for floats	Allows for light penetration into the aquatic environment
Grounding avoidance	Design prevents floats from resting on substrate and scouring marine vegetation
Rub rails will be treated timber faced with UHMW	To prevent contact between boats and treated timber and protect rub rail from impact and abrasion
Limited lighting	Prevent light pollution for the community and nearshore habitat

3.3. Mitigation Measures

A compensatory mitigation plan has been developed to help offset the impacts to the shoreline caused by the project. The mitigation plan will follow the requirements set forth in 33 CFR Parts 325 and 332.

3.3.1. Impact Analysis

To quantify the habitat impacts for the proposed structure, the NOAA Fisheries Puget Sound Nearshore Conservation Calculator was used. This calculator was designed to determine how much restoration is needed to offset the impacts of development on the existing habitat. All aspects of the proposed structure and mitigation were inserted into the calculator. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements. The mitigation plan in Section 4 was developed based on the debit and credit scenarios presented while utilizing the calculator tool.

4. MITIGATION PLAN

The objective of this compensatory mitigation plan is to provide no net loss of habitat and function within the ecological service area associated with Gig Harbor. This ecological service area is defined as the watershed drainage into Gig Harbor and the Gig Harbor waterbody. This will be achieved by removing the Jerkovich Pier and restoring a stormwater outfall. The stormwater outfall restoration includes beach nourishment. The compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding, to the maximum extent possible, a loss of resources caused by the proposed project. The proposed mitigation components are not sufficient to cover the debit generated by the Calculator. Therefore, any remaining debit will be balanced by purchasing credits from a conservation bank. The mitigation plan meets the requirements of the 2008 compensatory mitigation rule, as set forth in 33 CFR 332.4(c).

4.1. Overwater Structure Removal

4.1.1. Site Selection Criteria

On-site mitigation will occur by removing the Jerkovich Pier, which is a creosote structure, at Ancich Waterfront Park. This mitigation effort is in the project's associated ecological service area and contributes to offsetting any net loss of resources caused by the proposed project.

4.1.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation.

4.1.3. Mitigation Work Plan

The existing Jerkovich Pier will be removed. This will remove 32 creosote-treated timber piles that are 12-inches in diameter. Additionally, 1,558.5 square feet of solid asphalt decking will be removed. The timber piles will be removed with a vibratory hammer and will be properly disposed of after removal. The estimated amount of creosote to be removed is sixteen tons. See the NOAA Conservation Calculator for final approved mitigation amounts.

4.1.4. Maintenance Plan

The removal of Jerkovich Pier is a one-time action that will not require maintenance.

4.1.5. Performance Standards

Jerkovich Pier piles and material will be removed and properly disposed of. Disposal documents and photos will be provided for this work.

4.1.6. Monitoring

Monitoring for this proposed mitigation work is a one-time action that will not require continued monitoring. Disposal documents and photos will be provided for this work.

4.1.7. Long-Term Management Plan

Long-term management is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.8. Adaptive Management Plan

An adaptive management plan is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

4.2. Outfall Restoration and Beach Nourishment

4.2.1. Site Selection Criteria

Compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding any net loss of resources caused by the proposed project. The stormwater outfall at Maritime Pier in Gig Harbor, approximately 0.5 miles south of the project site has been identified as an opportune mitigation option. This outfall was selected due to its current degraded state and on the recommendation of WDFW. The outfall has created a plunge pool and contributed to sediment erosion into Gig Harbor (Figures 2 and 3). Please see the outfall restoration plan in Appendix I for more details.



Figure 2. Maritime Pier Stormwater Outfall (looking northwest)



Figure 3. Plunge Pool below Maritime Pier Stormwater Outfall

4.2.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation. The beach nourishment will also be protected by the Washington State Shoreline Management Act (SMA) and the City of Gig Harbor Shoreline Master Program which carries out the policies outlined in the SMA.

4.2.3. Mitigation Work Plan

The existing outfall shall be restored to conform to the requirements of the Washington Department of Ecology (WDOE) Stormwater Management Manual for Western Washington (SWMMWW). The outfall has failed to provide energy dissipation and has led to the development of a plunge pool that is several feet deep (Figure 3 above). As a result, sediment erosion is carried into Gig Harbor. When this material is carried into the harbor, turbidity occurs which can affect light penetration and lead to negative impacts on ecological productivity and habitat quality. Shoreline erosion at this outfall can be seen from aerial images.



Figure 4. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2006)



Figure 5. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2016)

The proposed restoration will include adding beach nourishment to fill the plunge pool and designing the outlet to provide energy dissipation during high flow events. Long-term benefits of this restoration include additional habitat for aquatic species and an increase in water quality within Gig Harbor.

Beach nourishment was selected for mitigation to add habitat along the highly developed shoreline of Gig Harbor. This mitigation technique will help to stabilize the stormwater outfall at Maritime Pier to limit sediment runoff into the water and replace the loss of existing material that was washed away. A total of 600 cubic yards (CY) of beach nourishment will be applied along the shoreline where the stormwater outfall restoration occurs.

4.2.4. Maintenance Plan

The stormwater outfall is designed to be a one-time action that is self-sustainable. However, as a high energy area, maintenance may be needed if stabilization efforts are unsuccessful. Maintenance may include the addition of new beach nourishment in the future. Additionally, the City will maintain the outfall per the requirements of the SWMMWW.

4.2.5. Performance Standards

Photos of the stormwater outfall before and after restoration will be used to document the restoration at the site. Receipts of purchased materials will be provided to confirm the proposed 600 CY of beach nourishment that will be added to the shoreline. Photo documentation will also serve to support this mitigation effort.

4.2.6. Monitoring

After the stormwater outfall is restored and beach nourishment is applied, monitoring will occur each year following the project for three years to ensure proper stormwater outfall operation and acceptable

beach conditions after nourishment. If these mitigation measures fail to meet the project requirements within the monitoring period, contingencies must be implemented, and additional monitoring will be required.

4.2.7. Long-Term Management Plan

Long-term management is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.8. Adaptive Management Plan

An adaptive management plan is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

5. CONCLUSION

The proposed Commercial Fishing Homeport was designed to provide educational opportunities and moorage to the local fishing fleet. The Puget Sound Nearshore Conservation Calculator was used to determine the habitat impacts as a result of the overwater structure. To compensate for these impacts, mitigation compliant with 33 CFR 332.4(c) will occur at both on and off-site locations within the same watershed. These habitat improvements will include the removal of the Jerkovich Pier, the restoration of a stormwater outfall at Maritime Pier, and the placement of beach nourishment along the Gig Harbor shoreline. Any remaining calculated impacts will be offset by purchasing sufficient credits from an approved conservation bank.

6. REFERENCES

NOAA Fisheries. Puget Sound Nearshore Conservation Calculator. 2020. Accessed via *https://www.fisheries.noaa.gov/resource/tool-app/puget-sound-nearshore-conservation-calculator*

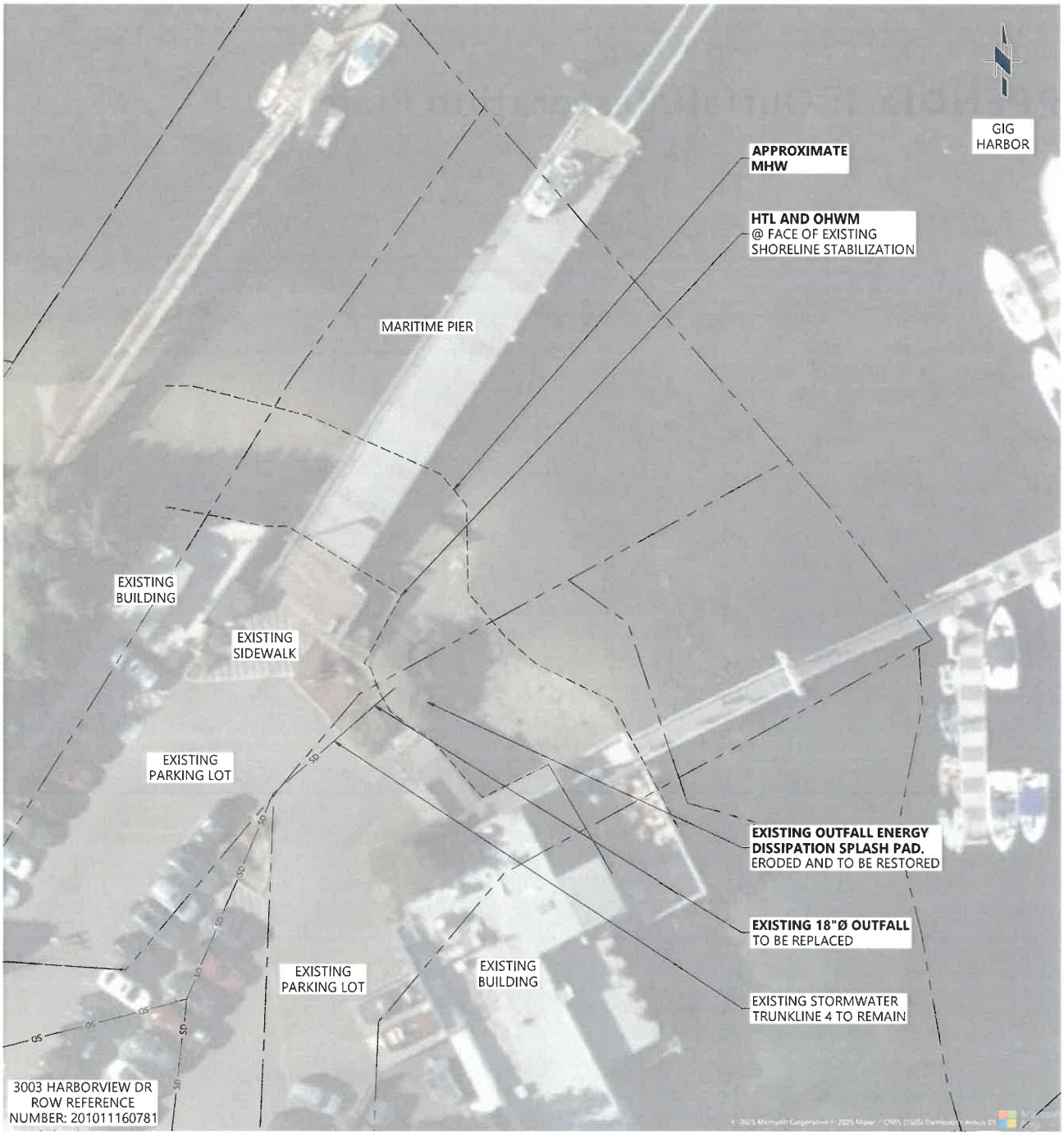
USACE. Compensatory Mitigation for Losses of Aquatic Resources. 2008. Accessed via *https://www.nap.usace.army.mil/Portals/39/docs/regulatory/regs/33cfr332.pdf*

Washington Department of Ecology (Ecology). Shoreline Photo Viewer. Accessed via *https://apps.ecology.wa.gov/shorephotoviewer/*

Washington State Legislature. Washington Administrative Code (WAC). 2022. Accessed via *https://app.leg.wa.gov/WAC/default.aspx*

WDFW's Cumulative Risk Model. Washington State Aquatic Habitat Guidelines Program. 2014. Accessed via *https://wdfw.wa.gov/sites/default/files/publications/01583/wdfw01583.pdf*

APPENDIX I: Outfall Restoration Plan



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR. GIG HARBOR, WA 98332 MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
www.facetnw.com P: 206.523.0024

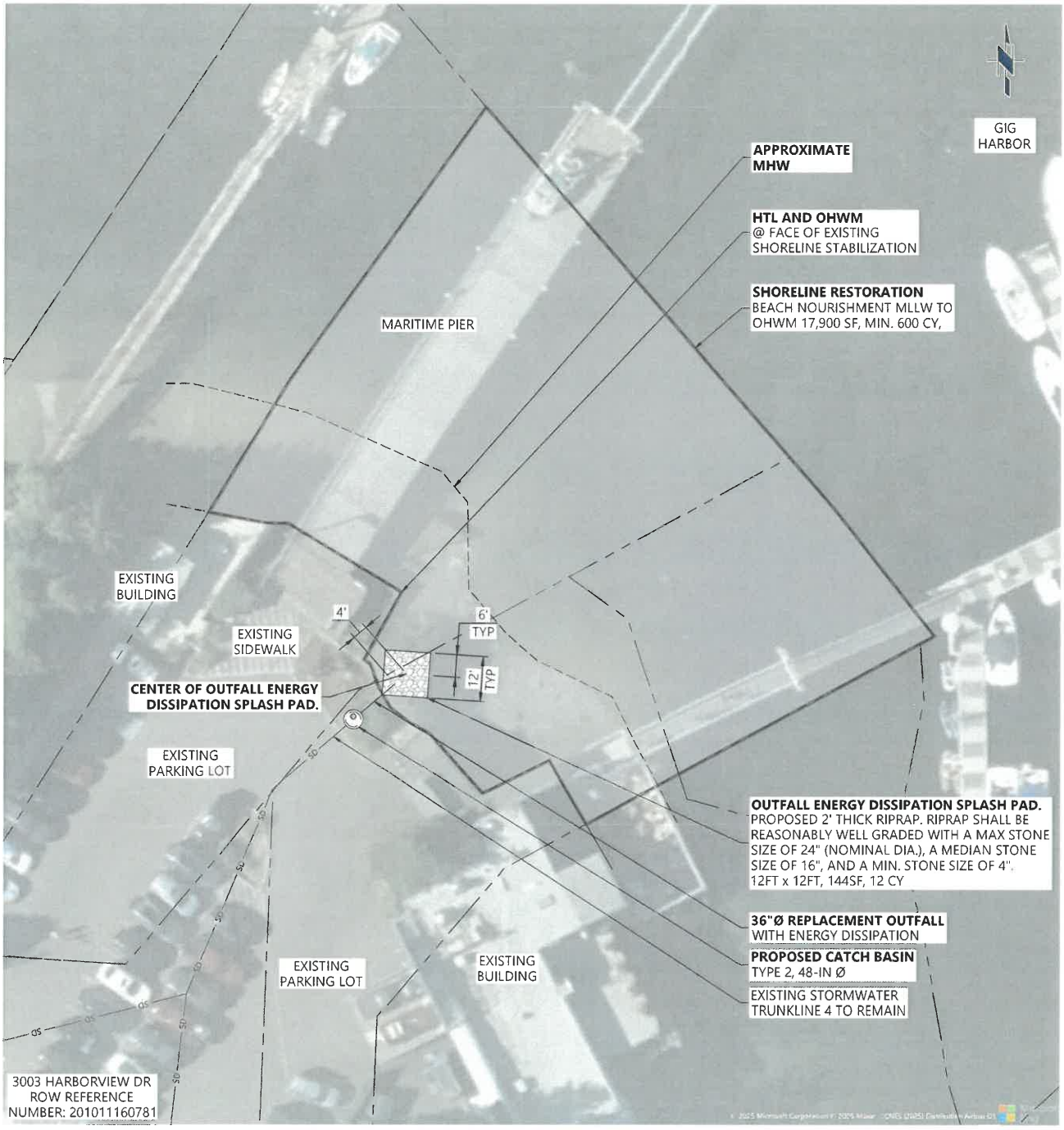
PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 1 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\212112.01\64.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - MARITIME PIER OUTFALL RESTORATION.DWG



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR. GIG HARBOR, WA 98332 MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
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PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 2 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.0164.00 GIG HARBOR COMMERCIAL HOME\PORTD\WG\DRAWING\COGH - MARITIME PIER OUTFALL RESTORATION.DWG

RECEIVED
By MThomas City of Gig Harbor at 2:52 pm, Feb 02, 2026

FACET
Formerly DCG / Watershed

January 8, 2026

City of Gig Harbor
3510 Grandview St
Gig Harbor, WA 98335

CITY OF GIG HARBOR COMMERCIAL FISHING HOMEPORT PERMITTING NARRATIVE

Facet (formerly DCG/Watershed) is pleased to submit a permitting narrative for the City of Gig Harbor commercial fishing homeport project. The project will require permits from the City of Gig Harbor (CoGH), U.S. Army Corps of Engineers (USACE), and Washington Department of Fish & Wildlife (WDFW).

City of Gig Harbor

Permit Number: CPP-2204
Reviewer: Stephanie Seibel
The permit required to be issued by the CoGH is a shoreline substantial development permit. The initial submittal to CoGH was a draft submittal on 3/18/2022. Revised submittals were completed on 5/7/2022, 1/9/2023, and 1/16/2023.

USACE

Permit Number: NWS-2022-472
Reviewer: (Lia Protopapadakis) (USACE), Phyllis Meyers (NMFS)
The permits required to be issued by the USACE are Section 10 and Section 404 permits. The initial USACE submittal was (6/9/2022). A mitigation plan was submitted on 10/1/2022, with revisions submitted on 2/28/2023 and 12/20/2024. The NMFS consultation number for the project is WCRO-2023-00546. Once NMFS approves the mitigation for this project, the USACE can issue the Section 10 and Section 404 permits.

On January 8th 2026, the NMFS issued the Biological Opinion for the project. The opinion made no jeopardy determination, and that adverse species/habitat impacts are offset by the proposed project mitigation.

WDFW

Permit Number: None.
Reviewer: Unassigned.
The WDFW Hydraulic Project Approval (HPA) application has yet to be submitted. This permit application will be submitted upon the completion of the SEPA determination by CoGH. Mitigation for this project was previously approved through a revoked HPA – 24349.
Thank you for the opportunity to provide this narrative of the permit history for this project. If you have any questions about the information within this document, feel free contact us.

Sincerely,

Drew McDonald, PE
E: DMcDonald@facetnw.com

RECEIVED
By MThomas City of Gig Harbor at 2:51 pm, Feb 02, 2026
Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 20

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
201 NE Lloyd Boulevard, Suite 1100
ortland, OR 97232

Refer to NMFS No:
WCRO-2023-00546

January 8, 2026

P. Allen Atkins
Chief, Regulatory Branch
US Army Corps of Engineers, Seattle District
4735 East Marginal Way South, BLDG 1202
Seattle, WA 98134-2388

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal in Gig Harbor, Washington. USACE ESA/EFH Consultation Request NWS-2022-472.

Dear Mr. Atkins:

Thank you for your letter of April 26, 2023, requesting initiation of consultation with NOAA's National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 et seq.) for the City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal.

Thank you, also, for your request for consultation pursuant to the essential fish habitat (EFH) provisions in Section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act [16 U.S.C. 1855(b)] for this action. We have concluded that the action would adversely affect EFH designated under the Pacific Coast Salmon Fishery Management Plan, the Coastal Pelagic Species Fisheries Management Plan and the Pacific Coast Groundfish Fishery Management Plan (https://www.pcouncil.org/fishery-management-plans/). Gig Harbor is also an EFH Habitat Area of Particular Concern. EFH conservation recommendations (EFH CRs) are provided in Section 3.

After reviewing the proposed action, we have concluded that the proposed action is likely to adversely affect, but it is not likely to jeopardize the continued existence of Puget Sound (PS) Chinook Salmon *(Oncorhynchus tshawytscha)*, PS steelhead *(O. mykiss),* Puget Sound/Georgia Basin bocaccio *(Sebastes paucispinis),* or Southern Resident Killer Whales (SRKW) *(Orcinus orca)*. The proposed action is not likely to adversely affect Puget Sound/Georgia Basin yelloweye rockfish *(Sebastes ruberrimus*), or the Mexico Distinct Population Segment (DPS) of Humpback Whale (*Megaptera novaeangliae).* Further, we conclude that the proposed action is likely to adversely affect designated critical habitat of PS Chinook salmon, SRKW, and Puget Sound/Georgia Basin bocaccio, but is not likely to result in the destruction or adverse modification of the designated critical habitat for any listed species. Critical Habitat has not

been designated for Puget Sound steelhead, Puget Sound/Georgia Basin yelloweye rockfish, or Humpback whale in the action area.

As required by section 7 of the ESA, NMFS is providing an incidental take statement with the opinion. The incidental take statement describes reasonable and prudent measures NMFS finds necessary or appropriate to minimize the impact of incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the federal action agency must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the ESA's prohibition against the take of listed species.

This document also includes the results of our analysis of the action's likely effects on EFH pursuant to section 305(b) of the MSA), and includes two conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on EFH. Section 305(b) (4) (B) of the MSA requires Federal agencies to provide a detailed written response to NMFS within 30 days after receiving these recommendations.

Please contact Phyllis Meyers in our Lacey, Washington office at Phyllis.meyers@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,



Kathleen Wells
Assistant Regional Administrator
National Marine Fisheries West Coast Region
Oregon and Washington Coastal Area Office

cc: Lia Protopapadakis, COE
Jeff Langhelm, City of Gig Harbor
Drew McDonald, Facet NW

Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion [and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the

City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal in Gig Harbor, Washington

NMFS Consultation Number: WCRO-2023-00546

Action Agency: US Army Corps of Engineers

Affected Species and NMFS' Determinations:

ESA-Listed Species	Status	Is Action Likely to Adversely Affect Species?	Is Action Likely to Jeopardize the Species?	Is Action Likely to Adversely Affect Critical Habitat?	Is Action Likely to Destroy or Adversely Modify Critical Habitat?
Puget Sound steelhead (*Oncorhynchus mykiss*)	Threatened	Yes	No	NA	No
Puget Sound Chinook salmon (*O. tshawytscha*)	Threatened	Yes	No	Yes	No
Southern Resident Killer Whale *(Orcinus orca)*	Endangered	Yes	No	Yes	No
Mexico DPS Humpback Whale (*Megaptera novaeangliae)*	Threatened	No	No	NA	No
Puget Sound/Georgia Basin bocaccio (*Sebastes paucispinis)*	Endangered	Yes	No	Yes	No
Puget Sound/Georgia Basin yelloweye rockfish (*Sebastes ruberrimus)*	Threatened	No	No	NA	No

Fishery Management Plan That Identifies EFH in the Project Area	Does Action Have an Adverse Effect on EFH?	Are EFH Conservation Recommendations Provided?
Pacific Coast Salmon	Yes	Yes
Coastal Pelagic Species	Yes	Yes
Groundfish Species	Yes	Yes

Consultation Conducted By: National Marine Fisheries Service, West Coast Region

Issued By: Kathleen Wells

Kathleen Wells
Assistant Regional Administrator
Oregon Washington Coastal Office

Date: January 8, 2026

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1. INTRODUCTION

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3, below.

1.1. Background

The National Marine Fisheries Service (NMFS) prepared the biological opinion (opinion) and incidental take statement (ITS) portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.), as amended, and implementing regulations at 50 CFR part 402.

We also completed an essential fish habitat (EFH) consultation on the proposed action, in accordance with section 305(b)(2) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 et seq.) and implementing regulations at 50 CFR part 600.

We completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (DQA) (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available at the NOAA Library Institutional Repository [https://repository.library.noaa.gov/welcome]. A complete record of this consultation is on file at the Lacey, Washington office.

1.2. Consultation History

The US Army Corps of Engineers (USACE) requested consultation with NMFS in a letter dated April 26, 2023.

The consultation request included a Biological Assessment (BA) and a mitigation plan. Mitigation included removing the derelict Jerkovich Pier, which was approved for advance mitigation in the completed ESA consultation for NWS-2021-187 with NMFS on June 30, 2021 through the Fish Passage and Restoration Programmatic consultation WCRO-2014-00004-3417.

The USACE determined that the proposed project would adversely affect EFH used by Pacific salmon, groundfish, and coastal pelagic species. An assessment of potential impacts to EFH is also included with the BA. NMFS concurs with this determination and an EFH consultation is included in Section 3 of this opinion.

A NMFS biologist visited the site and took photographs on October 26th.

Representatives of the City and NMFS communicated via email November 7, 2023, and in on-line meetings November 29, 2023 and January 17, 2024, and subsequently exchanged emails to clarify project details.

On February 28, 2024, NMFS received a copy of a submerged aquatic vegetation survey report (Marine Surveys and Assessments, 2022). The aquatic vegetation (kelp) in the project area

defines the edge of the Lower Shore zone. Using the depth at which vegetation was surveyed placed a large portion of the proposed dock in the Lower Shore Zone.

The USACE advised NMFS on February 29, 2024 that their intention was to include humpbacks whales in the consultation request.

On March 18, 2024, NMFS provided output from the Nearshore Calculator with a debit of 503 conservation credits. The Nearshore Calculator is described in more detail in section 2.1.

The USACE agreed to pause the consultation on April 11, 2024 while additional details of the project could be developed and provided.

On December 20, 2024, a representative of the City requested that permitting proceed for the project as it was originally proposed, but with the addition of a kelp-planting mitigation plan to compensate for impacts.

On March 31, 2025, representatives of NMFS and the USACE met to discuss the proposed kelp mitigation plan.

On June 13, 2025, NMFS sent the USACE a letter stating that the information received was insufficient for proceeding with consultation.

On August 13, 2025, and with new information, the USACE and NMFS agreed to revisions to the Nearshore Calculator inputs and a revised debit of 340 conservation credits was provided by NMFS

The USACE provided a revised mitigation plan on August 25, 2025 and a commitment to purchase conservation credits in the form of a pre-sale agreement on October 9, 2025.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 Fed. Reg. 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act. 89 Fed. Reg. at 24268; 84 Fed. Reg. at 45015. We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this biological opinion and incidental take statement would not have been any different under the 2019 regulations or pre-2019 regulations.

1.3. Proposed Federal Action

Under the ESA, "action" means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (see 50 CFR 402.02). Under MSA, federal action means any action authorized, funded, or undertaken, or proposed to be authorized, funded or undertaken by a federal agency (50 CFR 600.910).

The proposed action is for the USACE to issue permits in accordance with its authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, to the City of Gig Harbor for the expansion of its marina. Eight weeks of in-water work are expected.

The City of Gig Harbor (City) proposes to make modifications to its public marina in Gig Harbor, a bay near the Narrows Bridge in Puget Sound, Washington. Modifications include adding a dock for commercial fishing boats and removing a derelict pier and its creosote-treated support structure. Modifications to a stormwater system are also proposed. As described above, the Jerkovich pier removal was previously consulted on (Fish Passage and Restoration Programmatic consultation WCRO-2014-00004-3417) and is not considered as a proposed federal action in this opinion. Except as it was accepted as advanced mitigation and its analyzed effects are factored into the conservation calculator, it will not be described further.

We considered, under the ESA, whether or not the proposed action would cause any other activities and determined an increase in moorage capacity at the marina would likely result in the loss of submerged aquatic vegetation (SAV) and additional vessels. Adverse impacts associated with the loss of SAV and the use and operation of vessels is also addressed.

As described in the BA (DCG, 2022), a floating dock would be installed with an overall length of 280'. Finger floats would be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats would be 100 percent grated to allow for light penetration. Approximately 5767 square feet (sf) of new floating structure is proposed, in addition to a gangway that is 80 feet by 5 feet. These sum to approximately 6247 sf of new overwater surface (the gangway would overlap the floats at the end). This includes a gangway, a main walk floating dock and seven finger floats. The floats are proposed to be anchored with 16 steel guide piles 24 inches in diameter. All piles would be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. If the driving conditions are difficult, the piles would be installed completely with an impact hammer. Pile driving would be completed from a barge. The barge would not ground out. Floats would be fabricated offsite, brought in via barge, and lowered into place with a crane. In an exchange of emails on March 14, 2025, the applicant stated that a bubble curtain would be used during impact pile driving.

An 80-feet long by 5-feet wide aluminum gangway would be fabricated offsite, brought in via barge and lifted into position. It would be attached to previously installed landing support on the Ancich Pier and would be designed for pedestrian foot traffic only. Four 12.75-inch-diameter steel fender piles would be installed along the gangway and in front of the Ancich Pier. These smaller piles are depicted on the drawings and in the BA as 12-inch-diameter but on February 21, 2024 the applicant communicated that they were changed to 12.75-inch in the final design. They would have HDPE sleeves to protect the piles and vessels from impact damage. Existing utilities on site include water, sewer, electric, and fire suppression. These connections would all be extended from their existing location to the end of the main walk floating dock.

The applicant is proposing to modify an existing stormwater outfall southeast of the overwater structure. An 18-foot outfall and its deteriorated splash pad near the Maritime Pier would be replaced with a 36-inch outfall and a 12-foot by 12-foot splash pad comprised of 12 cubic yards of 2-foot riprap. In addition, 600 cubic yards of clean beach nourishment fill would be placed on

approximately 0.41 acre of the shoreline between the high tide line and mean high water at and near the outfall.

The applicant proposed to implement a Marine Mammal Monitoring Plan, included as Appendix III to the BA (DCG, 2022).

The applicant also plans to purchase 340 conservation credits from the Puget Sound partnership to address nearshore impacts (DCG, 2023). The output of the nearshore calculator is available as an attachment.

A stormwater outfall at Maritime Pier in Gig Harbor, approximately 0.5 miles south of the proposed pier, has created a plunge pool in the intertidal zone. Project proponents included modifications to this stormwater system to address concerns about fish being entrained in this pool, as well as contaminants in the discharge.

2. ENDANGERED SPECIES ACT BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT

The ESA establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat upon which they depend. As required by section 7(a)(2) of the ESA, each Federal agency must ensure that its actions are not likely to jeopardize the continued existence of endangered or threatened species or to adversely modify or destroy their designated critical habitat. Per the requirements of the ESA, Federal action agencies consult with NMFS, and section 7(b)(3) requires that, at the conclusion of consultation, NMFS provide an opinion stating how the agency's actions would affect listed species and their critical habitats. If incidental take is reasonably certain to occur, section 7(b)(4) requires NMFS to provide an ITS that specifies the impact of any incidental taking and includes reasonable and prudent measures (RPMs) and terms and conditions to minimize such impacts.

The USACE determined the proposed action is not likely to adversely affect Puget Sound/Georgia Basin yelloweye rockfish and Mexico DPS Humpback Whale. Our concurrence is documented in the "Not Likely to Adversely Affect" Determinations section (Section 2.12).

2.1. Analytical Approach

This biological opinion includes both a jeopardy analysis and an adverse modification analysis. The jeopardy analysis relies upon the regulatory definition of "jeopardize the continued existence of" a listed species, which is "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02). Therefore, the jeopardy analysis considers both survival and recovery of the species.

This biological opinion also relies on the regulatory definition of "destruction or adverse modification," which "means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species" (50 CFR 402.02).

The designations of critical habitat for PS Chinook salmon, PS/Georgia Basin bocaccio, and SRKW use the term primary constituent element (PCE) or essential features. The 2016 final rule (81 FR 7414; February 11, 2016) that revised the critical habitat regulations (50 CFR 424.12) replaced this term with physical or biological features (PBFs). The shift in terminology does not change the approach used in conducting a "destruction or adverse modification" analysis, which is the same regardless of whether the original designation identified PCEs, PBFs, or essential features. In this biological opinion, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The ESA Section 7 implementing regulations define effects of the action using the term "consequences" (50 CFR 402.02). As explained in the preamble to the final rule revising the definition and adding this term (84 FR 44976, 44977; August 27, 2019), that revision does not change the scope of our analysis, and in this opinion, we use the terms "effects" and "consequences" interchangeably.

We use the following approach to determine whether a proposed action is likely to jeopardize listed species or destroy or adversely modify critical habitat:

- Evaluate the range-wide status of the species and critical habitat expected to be adversely affected by the proposed action.
- Evaluate the environmental baseline of the species and critical habitat.
- Evaluate the effects of the proposed action on species and their critical habitat using an exposure–response approach.
- Evaluate cumulative effects.
- In the integration and synthesis, add the effects of the action and cumulative effects to the environmental baseline, and, in light of the status of the species and critical habitat, analyze whether the proposed action is likely to: (1) directly or indirectly reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species; or (2) directly or indirectly result in an alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.
- If necessary, suggest a reasonable and prudent alternative to the proposed action.

The applicant proposes to use a vibratory hammer initially. An impact hammer would be used if needed to achieve design goals. To quantify effects for this proposal, we used the multi-species pile driving calculator developed by NMFS for biologists to estimate where pile-driving thresholds may be exceeded. Criteria for injury to fish from pile driving were adopted in a multiagency agreement (NMFS et al., 2008). We ran the pile-driving calculator four times to determine the likely effects from two sizes of piles driven by two types of drivers.

For this consultation, NMFS also evaluated the project using a Habitat Equivalency Analysis (HEA)[1] and the Puget Sound Nearshore Habitat Values Model (NHVM) adapted from Ehinger et

[1] A common "habitat currency" to quantify habitat impacts or gains can be calculated using Habitat Equivalency Analysis (HEA) methodology when used with a tool to consistently determine the habitat value of the affected area before and after impact. NMFS selected HEA as a means to identify section 7 project related habitat losses, gains,

al. 2015 via the Puget Sound Nearshore Habitat Conservation Calculator (Conservation Calculator) (Ehinger et al., 2015). This model was used to quantify the enduring in-water and intertidal habitat effects of the proposed action on ESA-listed salmonids. Impacts are expressed in Discounted Service Acre Years (DSAYs)*100. The Conservation Calculator does not evaluate construction effects (example: pile driving or turbidity), freshwater effects, nor does it evaluate impacts caused by stormwater or pollution generating impervious surfaces (PGIS).

The Conservation Calculator is also a tool for demonstrating sufficient conservation offsets and demonstrating no long-term net loss for projects consulted under the Salish Sea Nearshore Programmatic (NMFS, 2022b). Output from the Conservation Calculator accounts for the following consequences of the action:

- Beneficial aspects of proposed projects, including any positive nearshore effects that would result from removing a structure, or piece of a structure, prior to the end of any remaining "useful life period";
- Minimization incorporated through project design improvements (e.g., credit is given for removing creosote-treated piles);
- Adverse effects that would occur for the duration of a new "useful life period" that would result from proposed expanded, new, or repaired or replaced structures (or components of existing structures).

The Conservation Calculator was used to evaluate the enduring effects of the over or in-water structures, and nearshore structures. The Conservation Calculator does not evaluate construction effects (example: pile driving or turbidity), but only the continued/future existence of the structure on the habitat (example: square footage of overwater structure being repaired or replaced). Ecological equivalency that forms the basis of HEA is a concept that uses a common currency to express and assign a value to functional habitat loss and gain. Ecological equivalency is traditionally a service-to-service approach where the ecological functions and services for a species or group of species lost from an impacting activity can be fully offset by the services gained from a conservation activity. In this case, we use this approach to calculate the "cost" and "benefit" of certain enduring effects of the proposed action, as well as the impacts of the existing environmental baseline, using the NHVM. NMFS has a webpage with general information, frequently asked questions, and a downloadable Conservation Calculator and User Guide here: https://www.fisheries.noaa.gov/west-coast/habitat-conservation/puget-sound-nearshore-habitat-conservation-calculator. We describe the output of the Conservation Calculator in the Effects of the Action (Section 2.5).

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and quantify appropriate mitigation because of its long use by NOAA in natural resource damage assessment to scale compensatory restoration (Dunford et al. 2004; Thur 2006) and extensive independent literature on the model (Milon and Dodge 2001; Cacela et al. 2 2005; Strange et al. 2002). In Washington State, NMFS has also expanded the use of HEA to calculate conservation credits available from fish conservation banks (NMFS 2008, NMFS 2015b)), from which "withdrawals" can be made to address mitigation for adverse impacts to ESA species and their designated critical habitat.

2.2. Range-wide Status of the Species and Critical Habitat

One factor affecting the status of ESA-listed species considered in this opinion, and aquatic animals and their habitats at large, is exposure to increasing environmental variation due to shifts in average weather conditions. Increasing environmental variation is likely to play a role in determining the abundance and distribution of ESA-listed species, and the conservation value of their designated critical habitats, in the Pacific Northwest. These shifts will not be spatially homogeneous across the Pacific Northwest.

There is a large and growing body of literature on past, present, and future impacts of increasing environmental variation on sea level rise, frequency of severe weather events, and changes in air and water temperatures. Major ecological realignments are already occurring in response to these shifts (IPCC, 2022). Long-term trends in warming have continued at global, national, and regional scales. The 10 warmest years in the historical record (1890-2023) have all occurred in the past decade, with NOAA, NASA, and the World Meteorological Organization stating 2024 was the world's warmest year on record (NASA, 2025; NOAA, 2025; World Meteorological Organization, 2025).

Increasing temperatures and the potential loss of biodiversity represent profound threats to ecosystem functionality (IPCC, 2022). These two factors are often examined in isolation, but likely have interacting effects on ecosystem function. Updated projections of increasing temperature are similar to or greater than previous projections (IPCC, 2021). Retaining and restoring habitat complexity, access to flow and cold-water refuges, and improving growth opportunities in both freshwater and marine environments are strongly advocated in the recent literature (Siegel & Crozier, 2019, 2020).

Increasing environmental variability due to shifts in average weather conditions continues to adversely impact critical habitat, creating limiting factors and threats to the recovery of the ESA-listed species considered in this opinion. Shifts in average weather conditions will likely result in an increase in stream temperature and a decrease in summer flow. NMFS assumes that the environmental baseline is not meeting all of the biological requirements of individuals of all salmon and steelhead species considered in this opinion. This is due to one or more impaired aquatic habitat functions related to any of the habitat factors limiting the recovery of the species in that area. Non-federal plans to address increasing environmental variability are largely unknown but may have localized benefits that extend to ESA-listed species and designated critical habitat within the Pacific Northwest as a whole. When these influences are considered collectively, we expect trends in habitat quality to remain flat or degrade gradually over time. Likewise, we also expect the quality and function of the physical and biological features (PBFs) of critical habitat to remain flat or gradually decline over time. Retaining and restoring habitat complexity, access to flow and cold-water climate refuges, and maximizing growth in freshwater and marine environments are strongly advocated in the recent literature (Siegel & Crozier, 2019, 2020).

Vulnerability to Environmental Variation

One factor affecting the status of ESA-listed species considered in this opinion, and aquatic animals and their habitats at large, is exposure to increasing variation and shifts in average weather conditions. This variation influences marine conditions in ways that relate to Pacific salmon and steelhead, explained in more detail below.

Marine and Estuarine Environments

A recent study projects nearly complete loss of existing tidal wetlands along the U.S. West Coast due to sea level rise (Thorne et al., 2018). California and Oregon showed the greatest threat to tidal wetlands (100 percent), while 68 percent of Washington tidal wetlands are expected to be submerged. Coastal development and steep topography prevent horizontal migration of most wetlands, causing the net contraction of this crucial habitat. Rising ocean temperatures, stratification, ocean acidity, hypoxia, algal toxins, and other oceanographic processes would alter the composition and abundance of a vast array of oceanic species. In particular, there would be shifts in both predators and prey of Pacific salmon, salmon life history traits, and relative abundance. For example, a study of small planktivorous fish (Gliwicz et al., 2018) found that higher ambient temperatures increased the distance at which fish reacted to prey. Perhaps the most dramatic change in physical ocean conditions would occur through ocean acidification and deoxygenation. It is unclear how sensitive salmon and steelhead might be to the direct effects of ocean acidification because of their tolerance of a wide pH range in freshwater (Ou et al., 2015; Williams et al., 2019), however, impacts of ocean acidification and hypoxia on sensitive species (e.g., plankton, crabs, rockfish, groundfish) would likely affect salmon indirectly through their interactions as predators and prey.

Effects on salmon and steelhead

Crozier et al. (2019) recently completed a vulnerability assessment for listed Pacific salmon and steelhead and based on three components: 1) biological sensitivity, which is a function of individual species characteristics; 2) climate exposure, which is a function of geographical location and projected future conditions; and 3) adaptive capacity, which describes the ability of a species to adapt to changing environmental conditions. The listed salmon and steelhead in the Central/South Puget Sound basin were assessed as having low productivity. In the most recent status review (Ford, 2022) none of the PS Chinook salmon populations in the Central/South Sound MPG have had productivities above zero for natural-origin spawners, meaning they failed to replace themselves. The long-term abundance of adult steelhead returning to many Puget Sound rivers has fallen substantially since estimates began for many populations in the late 1970s and early 1980s. There has been some improvement in abundance and productivity for five of the eight winter-run DIPs in the Central & South Puget Sound MPG but the run sizes ranged from a low of 6 returning adults from 2015 through 2019 in the Cedar River to high of 1368 in the Nisqually. The recovery goals for these rivers (at a productivity rate of 1) are 4,000 for the Cedar River and 20,500 for the Nisqually River (NMFS, 2019). For these species, overall vulnerability is driven by a number of different factors including damage of habitat resulting from development and water quality degradation.

In freshwater, year-round increases in stream temperature and variations in flow would affect physiological, behavioral, and demographic processes in salmonids, and change the species with which they interact. Increasing freshwater temperatures are likely to affect incubation and emergence timing for eggs. Although several factors impact inter-gravel temperature and oxygen (e.g., groundwater influence), in the locations where the greatest warming occurs, increasing temperature may affect egg survival, as well as sensitivity of eggs to thermal stress (Crozier et al., 2021). Increasing temperature and variations in flow regimes may alter the amount of habitat and food available for juvenile rearing, and this in turn could lead to a restriction in the distribution of juveniles, further decreasing productivity through density dependence. For migrating adults, variations in freshwater flows and temperatures would likely increase exposure to stressful temperatures for many populations, and alter migration travel times and increase thermal stress accumulation for those with early-returning (i.e., spring- and summer-run) phenotypes associated with longer freshwater holding times (Crozier, 2020; FitzGerald, 2020). Rising river temperatures increase the energetic cost of migration and the risk of *en-route* or pre-spawning mortality of adults with long freshwater migrations. Some populations may be able to make use of cool-water refuges and run-timing plasticity to reduce thermal exposure (Barnett et al., 2020; Keefer et al., 2018).

Variation in winter precipitation would likely affect incubation and/or rearing stages of most salmonid populations. Alterations in the intensity of cool season precipitation, snow accumulation, and runoff could influence migration cues for fall, winter, and spring adult migrants, such as coho and steelhead. Egg survival rates may suffer from more intense flooding that scours or buries redds. Shifts in the hydrological regime, such as from mostly snow to more rain, could drive changes in life history, potentially threatening diversity within an ESU/DPS (Beechie et al., 2006). Increases in summer temperature and decreases in summer flow would affect both juvenile and adult stages in some populations, especially those with yearling life histories and summer migration patterns (Crozier et al., 2019; Crozier & Zabel, 2006; Crozier et al., 2010).

2.2.1. Status of the Species

Table 1, below provides a summary of listing and recovery plan information, status summaries and limiting factors for the species addressed in this opinion. More information can be found in recovery plans and status reviews for these species. Acronyms appearing in the table include DPS (Distinct Population Segment), ESU (Evolutionarily Significant Unit), MPG (Multiple Population Grouping), and TRT (Technical Recovery Team).

Table 1. Listing classification and date, recovery plan reference, most recent status review, status summary, and limiting factors for each species considered in this opinion.

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
Puget Sound Chinook salmon	Threatened 6/28/05 (70 FR 37159)	Shared Strategy for Puget Sound 2007 (NMFS, 2006)	(Ford, 2022; NMFS, 2016a)	This ESU comprises 22 populations distributed over five geographic areas. All Puget Sound Chinook salmon populations continue to remain well below the TRT planning ranges for recovery escapement levels. Most populations also remain consistently below the spawner–recruit levels identified by the TRT as necessary for recovery. Across the ESU, most populations have increased somewhat in abundance since the last status review in 2016, but have small negative trends over the past 15 years. Productivity remains low in most populations. Overall, the Puget Sound Chinook salmon ESU remains at "moderate" risk of extinction.	● Degraded floodplain and in-river channel structure ● Degraded estuarine conditions and loss of estuarine habitat ● Degraded riparian areas and loss of in-river large woody debris ● Excessive fine-grained sediment in spawning gravel ● Degraded water quality and temperature ● Degraded nearshore conditions ● Impaired passage for migrating fish ● Severely altered flow regime
Puget Sound Steelhead	Threatened 5/11/07	(NMFS, 2019)	(Ford, 2022; NMFS, 2016a)	This DPS comprises 32 populations. Viability of has improved somewhat since the PSTRT concluded that the DPS was at very low viability, as were all three of its constituent MPGs, and many of its 32 DIPs (Hard et al. 2015). Increases in spawner abundance were observed in a number of populations over the last five years within the Central & South Puget Sound and the Hood Canal & Strait of Juan de Fuca MPGs, primarily among smaller populations. There were also declines for summer- and winter-run populations in the Snohomish River basin. In fact, all summer-run steelhead populations in the Northern Cascades	● Continued destruction and modification of habitat ● Widespread declines in adult abundance despite significant reductions in harvest ● Threats to diversity posed by use of two hatchery steelhead stocks ● Declining diversity in the DPS, including the uncertain but weak status of summer-run fish ● A reduction in spatial structure ● Reduced habitat quality ● Urbanization ● Dikes, hardening of banks with riprap, and channelization

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
				MPG are likely at a very high demographic risk.	
Puget Sound/ Georgia Basin DPS of Bocaccio	Endangered 04/28/10	(NMFS, 2017)	(NMFS, 2016c)	Though bocaccio were never a predominant segment of the multi-species rockfish population within the Puget Sound/Georgia Basin, their present-day abundance is likely a fraction of their pre-contemporary fishery abundance. Most bocaccio within the DPS may have been historically spatially limited to several basins within the DPS. They were apparently historically most abundant in the Central and South Sound with no documented occurrences in the San Juan Basin until 2008. The apparent reduction of populations of bocaccio in the Main Basin and South Sound represents a further reduction in the historically spatially limited distribution of bocaccio, and adds significant risk to the viability of the DPS.	● Over harvest ● Water pollution ● Climate-induced changes to rockfish habitat ● Small population dynamics
Southern resident killer whale	Endangered 11/18/05	(NMFS, 2008a)	(NMFS, 2022a)	The Southern Resident killer whale DPS is composed of a single population that ranges as far south as central California and as far north as southeast Alaska. While some of the downlisting and delisting criteria have been met, the biological downlisting and delisting 63 criteria, including sustained growth over 14 and 28 years, respectively, have not been met. The SRKW DPS has not grown; the overall status of the population is not consistent with a healthy, recovered population. Considering the status and continuing threats, the Southern Resident	● Quantity and quality of prey ● Exposure to toxic chemicals ● Disturbance from sound and vessels ● Risk from oil spills

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
				killer whales remain in danger of extinction.	

Puget Sound Chinook are the naturally spawned Chinook salmon originating from rivers flowing into Puget Sound from the Elwha River eastward, including rivers in Hood Canal, South Sound, North Sound and the Strait of Georgia, as well as Chinook salmon from several artificial propagation programs. Puget Sound Chinook salmon are a group of 31 historically quasi-independent populations, 22 of which are extant (Ruckelshaus et al., 2006). The populations are distributed in five geographic regions, or major population groups (MPGs). Gig Harbor is in the vicinity of the Central/South Sound MPG. This group includes Chinook populations in the Nisqually, Puyallup, White, Green, Cedar and Sammamish Rivers. Since being listed as threatened in 1999, there have been several status reviews. In 2015 most populations further declined in abundance, and this decline had been persistent over the previous seven-to-ten years. Productivity remained low in most populations. The addition of the data to 2018 shows even more substantially either flat or negative trends in Puget Sound Chinook natural-origin population abundances (Ford, 2022). The recovery goal for the Puyallup River is to have 18,000 natural origin (non-hatchery) adult Chinook return to spawn in the river. For the years 2015 through 2019 the average has been 577. For the Nisqually River, the goal is to have 13,000 Chinook return to spawn. The average was 766 for the years 2015 through 2019.

For Puget Sound steelhead, NMFS evaluated the population viability of 20 of the 32 demographically independent populations and three major population groups (Hard et al., 2015). It also completed a report identifying historical populations (Myers et al., 2015). Populations are based on genetic, environmental, and life history characteristics. They display winter, summer, or summer/winter run timing (Myers et al., 2015). Puget Sound steelhead are currently at "very low" viability.

As with other rockfish, bocaccio fertilize their eggs internally and extrude their young as larvae that are about 4 to 5 mm in length. The timing of larval parturition in bocaccio is uncertain, but likely occurs within a five- to six-month window that is centered near March (Greene & Godersky, 2012; NMFS, 2017; Palsson et al., 2009). Larvae are throughout the water column (Weis, 2004), and also under free-floating algae, seagrass, and detached kelp (Love et al., 2002; Schaffer, 1995). Unique oceanographic conditions within Puget Sound likely result in most larvae staying within the basin where they are released rather than being broadly dispersed (Drake et al., 2010).

Young-of-year bocaccio occur on shallow rocky reefs and nearshore areas, often associated with macroalgae, especially kelps (Laminariales), and sandy areas that support seagrasses (Love et al., 2002; Moser, 1967). They form aggregations near the bottom in association with drift algae and throughout the water column in association with canopy-forming kelps. It is likely that nearshore habitats used by juvenile bocaccio and other juvenile rockfish species offers a beneficial mix of warmer temperatures, food, and refuge from predators (Love et al., 1991).

The SRKW population was listed as endangered in 2005 under the ESA and are considered depleted under the Marine Mammal Protection Act. A 5-year review under the ESA completed in 2016 concluded that SRKWs should remain listed as endangered and includes recent information on the population, threats, and new research results and publications (NMFS, 2016b). NMFS considers SRKWs to be highly at-risk. The population has relatively high mortality and low reproduction unlike other resident killer whale populations that have generally

been increasing since the 1970s (Carretta et al., 2019). Limiting factors in the SRKW recovery plan include reduced prey, high levels of contaminants, and disturbances from vessels and sound (NMFS, 2008a).

Reduced fecundity contributes to the SRKWs failure to recover. The rate of successful pregnancy in the wild population is significantly lower than those of other killer whale populations (Wasser et al., 2017). This is likely associated with lack of food and is addressed in the critical habitat section below. At the time of writing this biological opinion, there are 73 SRKWs. Of those, fewer than half are females of reproductive age. The very small size of the population contributes to the risk of extinction. But the caloric needs for reproduction likely reduces the reproduction rate. These whales rely on PS Chinook salmon for food.

2.2.2. Status of the Critical Habitat

This section describes the status of designated critical habitat affected by the proposed action by examining the condition and trends of the essential physical and biological features of that habitat throughout the designated areas. These features are essential to the conservation of the ESA-listed species because they support one or more of the species' life stages (e.g., sites with conditions that support spawning, rearing, migration and foraging).

For most salmon and steelhead, NMFS's critical habitat analytical review teams (CHARTs) ranked watersheds within designated critical habitat at the scale of the fifth-field hydrologic unit code (HUC5) in terms of the conservation value they provide to each ESA-listed species that they support (NMFS 2005). The conservation rankings were high, medium, or low. To determine the conservation value of each watershed to species viability, the CHARTs evaluated the quantity and quality of habitat features, the relationship of the area compared to other areas within the species' range, and the significance to the species of the population occupying that area. Even if a location had poor habitat quality, it could be ranked with a high conservation value if it were essential due to factors such as limited availability, a unique contribution of the population it served, or is serving another important role.

The PBFs of critical habitat affected by the proposal for PS Chinook salmon, juvenile bocaccio and SRKW are addressed in Section 2.5, Effects of the Action. Essential PBFs for adult bocaccio are benthic habitats or sites deeper than 30 m (98ft) that possess or are adjacent to areas of complex bathymetry. All of Gig Harbor is shallower than these depths and for this reason, critical habitat for adult bocaccio is not addressed in this biological opinion. Steelhead use estuarine habitat for migration and feeding. However, critical habitat in marine areas has not been designated for Puget Sound steelhead.

A summary of the status of critical habitats, considered in this opinion, is provided in Table 2, below.

Table 2. Critical habitat, designation date, federal register citation, and status summary for critical habitat considered in this opinion.

Species	Designation Date and Federal Register Citation	Critical Habitat Status Summary
Puget Sound Chinook salmon	9/02/05 70 FR 52630	Critical habitat for Puget Sound Chinook salmon includes 1,683 miles of streams, 41 square mile of lakes, and 2,182 miles of nearshore marine habitat in Puget Sounds. The Puget Sound Chinook salmon ESU has 61 freshwater and 19 marine areas within its range. Of the freshwater watersheds, 41 are rated high conservation value, 12 low conservation value, and eight received a medium rating. Of the marine areas, all 19 are ranked with high conservation value.
Puget Sound/Georgia Basin DPS of bocaccio	11/13/2014 79 FR68042	Critical habitat for bocaccio includes 590.4 square miles of nearshore habitat and 414.1 square miles of deepwater habitat. Critical habitat is not designated in areas outside of United States jurisdiction; therefore, although waters in Canada are part of the DPSs' ranges for all three species, critical habitat was not designated in that area. Based on the natural history of bocaccio and their habitat needs, NMFS identified two physical or biological features, essential for their conservation: 1) Deepwater sites (>30 meters) that support growth, survival, reproduction, and feeding opportunities; 2) Nearshore juvenile rearing sites with sand, rock and/or cobbles to support forage and refuge. Habitat threats include degradation of rocky habitat, loss of eelgrass and kelp, introduction of non-native species that modify habitat, and degradation of water quality as specific threats to rockfish habitat in the Georgia Basin.
Southern resident killer whale	08/02/21 86 FR 41668	Critical habitat includes approximately 2,560 square miles of marine inland waters of Washington: 1) the Summer Core Area in Haro Strait and waters around the San Juan Islands; 2) Puget Sound; and 3) the Strait of Juan de Fuca. Six additional areas include 15,910 square miles of marine waters between the 20-feet (ft) (6.1-meter (m)) depth contour and the 656.2-ft (200-m) depth contour from the U.S. international border with Canada south to Point Sur, California. We have excluded the Quinault Range Site. Based on the natural history of the Southern Residents and their habitat needs, NMFS identified three PCEs, or physical or biological features, essential for the conservation of Southern Residents: 1) Water quality to support growth and development; 2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and 3) passage conditions to allow for migration, resting, and foraging. Water quality in Puget Sound, in general, is degraded. Some pollutants in Puget Sound persist and build up in marine organisms including Southern Residents and their prey resources, despite bans in the 1970s of some harmful substances and cleanup efforts. The primary concern for direct effects on whales from water quality is oil spills, although oil spills can also have long-lasting impacts on other habitat features In regards to passage, human activities can interfere with movements of the whales and impact their passage. In particular, vessels may present obstacles to whales' passage, causing the

Species	Designation Date and Federal Register Citation	Critical Habitat Status Summary
		whales to swim further and change direction more often, which can increase energy expenditure for whales and impacts foraging behavior. Reduced prey abundance, particularly Chinook salmon, is also a concern for critical habitat.

2.3. Action Area

"Action area" means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02).

For this consultation, the action area encompasses the area in which sound exposure level (SEL) is anticipated to exceed the thresholds for behavioral effects for listed species addressed in this consultation. In-water noise from pile-driving would ensonify all of Gig Harbor. Gig Harbor is within the Puget Sound Chinook South/Central Puget Sound Basin biogeographic region (NWFSC, 2015).



Figure 1. The Action Area includes all of the Gig Harbor embayment north of the red line. The proposed new pier is centrally located. Proposed stormwater outfall modifications are closer to the south end of the bay.



Figure 2. Zoomed-in locations for the newly proposed pier and the Jerkovich Pier.

2.4. Environmental Baseline

The "environmental baseline" refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

PS Chinook salmon and PS steelhead use the action area for migration and rearing, and bocaccio use the action area for rearing.

Table 3. General timing of species in Gig Harbor.

Species	Larval	Juvenile	Adult	Exceptions
PS Chinook salmon	NA	spring-summer	August-September for most populations	Some juveniles year-round
PS steelhead	NA	Spring -briefly	July-September	Adults may be present year-round (Quinn, 2005)
Bocaccio	January-April	Spring-summer	NA	
SRKW	NA	winter	winter	May be present year-round

SRKW are most often sighted in the Gig Harbor area in the fall and winter. November, December and January are when they are most likely to be present according to the SRKW sightings dashboard (noaa.maps.arcgis.com, Figure 3). Humpback whales are in Puget Sound year-round but are not likely to be in Gig Harbor because of the shallow depth and small size of the basin.

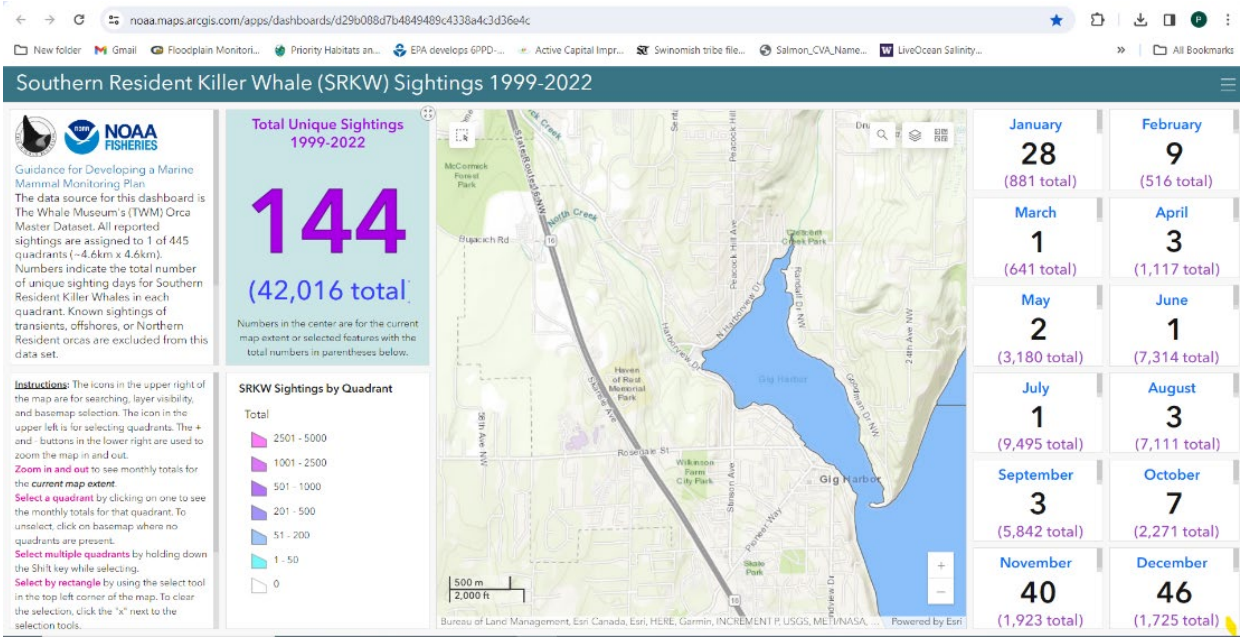


Figure 3. SRKW sightings 1999-2022.

PS Chinook salmon and PS steelhead are present in the action area according to Washington Department of Fish and Wildlife's Salmonscape mapping system (https://apps.wdfw.wa.gov/salmonscape/), and text in the BA prepared for this consultation. Chinook salmon presence is documented in Crescent Creek. Steelhead use both Crescent Creek and Donkey Creek. Both of these streams flow into Gig Harbor.

Critical habitat is designated for PS Chinook salmon, bocaccio and SRKW in the action area, as depicted in Figures 4, 5 and 6 below.

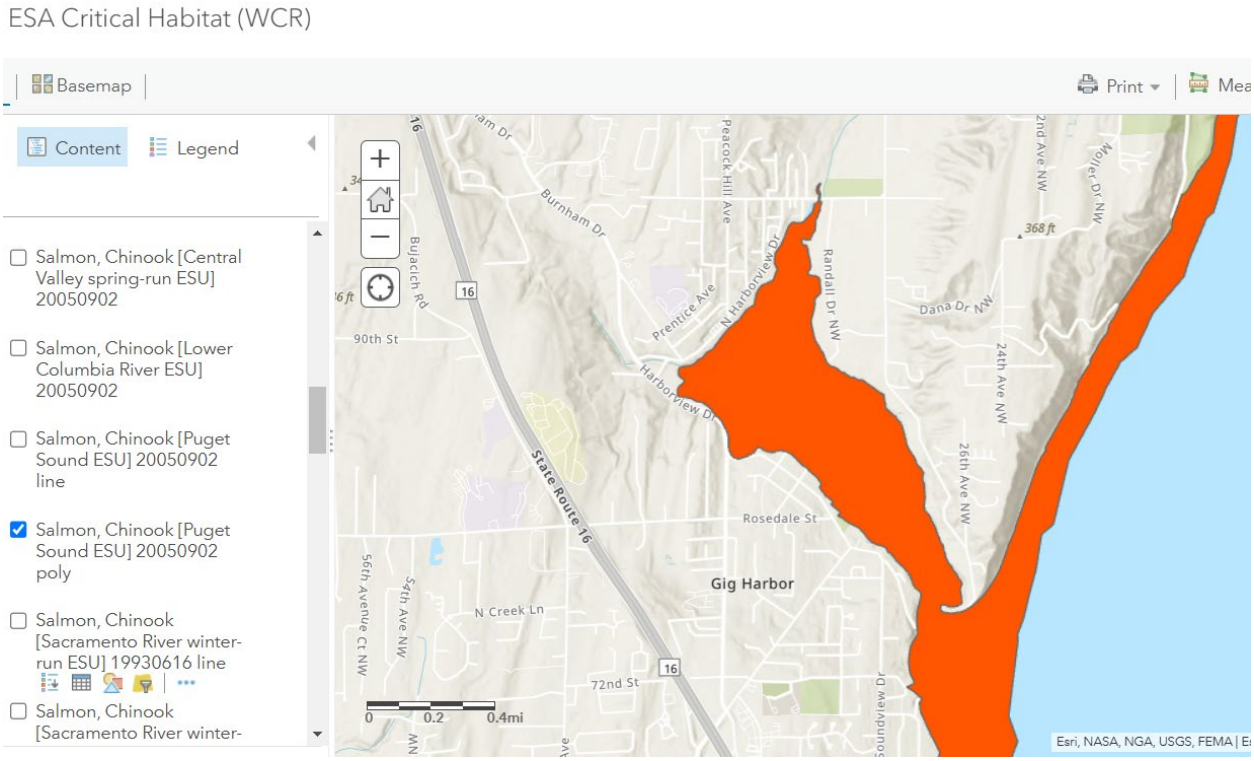


Figure 4. Critical Habitat for PS Chinook is designated in all of Gig Harbor.

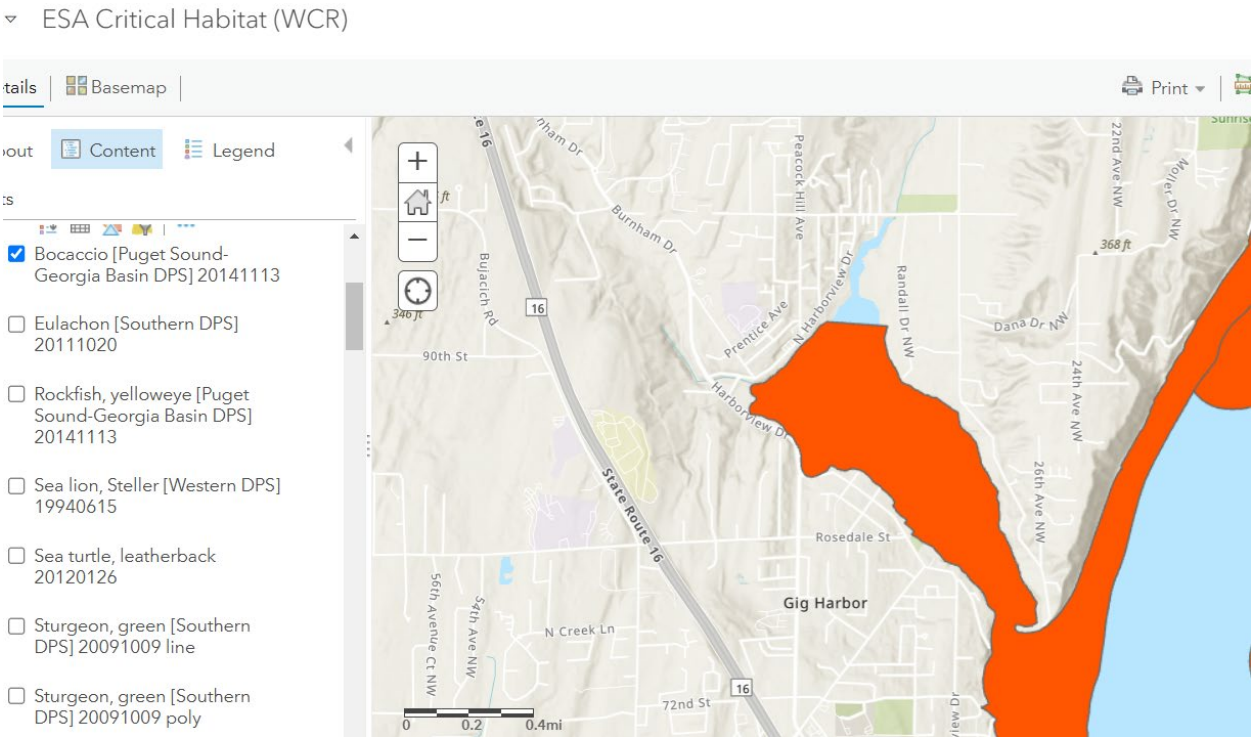


Figure 5. Critical Habitat is designated for bocaccio in all but the northern end of Gig Harbor.

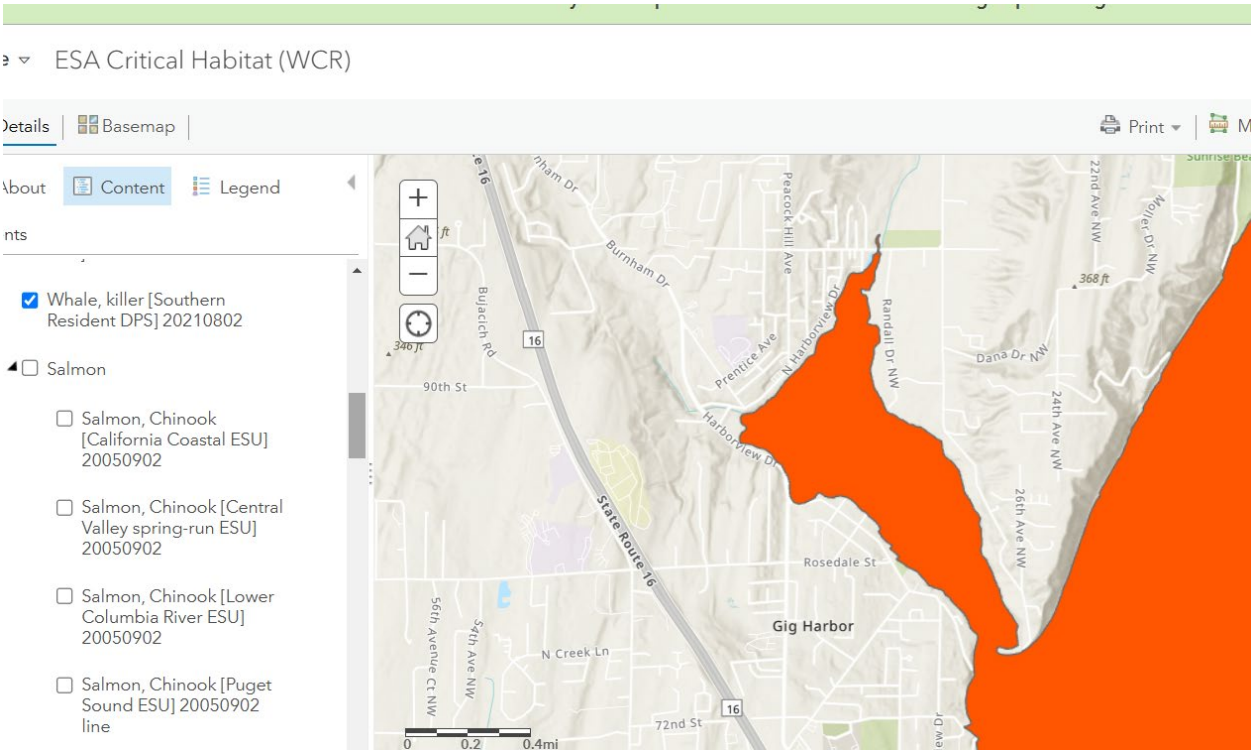


Figure 6. Critical Habitat for SRKW is designated in all of Gig Harbor.

Gig Harbor is a nursery for juvenile fish rearing because it is shallow, sheltered, and has SAV. Gig Harbor is also used for migration of adult PS Chinook salmon and PS steelhead. Two major creeks drain into Gig Harbor, including Crescent Creek and North Creek. These creeks are also known to be used by coho salmon, cutthroat trout, fall chum, fall chinook, and winter steelhead (WDFW, 2020).

Gig Harbor is located in the central Puget Sound region. It is likely that salmon from rivers that discharge into Puget Sound south of the Tacoma Narrows, including the Nisqually and Puyallup rivers, visit Gig Harbor while rearing in Puget Sound and making their way to the Pacific Ocean. In addition to the local populations, Chinook salmon from throughout the Salish sea are likely to rear in Gig Harbor as has been observed in similar embayments. For example, Chinook salmon in Sinclair Inlet originated from at least 15 different locations that were as far away as the Chilliwak River in the Fraser River Basin (Fresh et al., 2006). The results of this study illustrate that juvenile Chinook salmon travel to and use estuarine and nearshore rearing habitat throughout Puget Sound, and not only in areas associated with natal rivers or streams.

Puget Sound shore zones provide important habitat for juvenile PS Chinook salmon and bocaccio in part because they are ecologically productive. Nearshore areas in Puget Sound are nurseries for many fish species. Macroalgae and eelgrass provide structure for feeding, predation refuge, and buffer against currents to enable energy conservation for juvenile bocaccio (Love et al. 1991). The recovery plan for rockfish in Puget Sound (NMFS, 2017) states: “Areas with floating and submerged kelp (families *Chordeace, Alariaceae, Lessoniacea, Costariaceae,* and

Laminaricea) support the highest densities of most juvenile rockfish species (Hayden-Spear, 2006; Matthews, 1989; Springer et al., 2010). Kelp is photosynthetic and requires high ambient light levels and a lack of fine sediment in the water column (Mumford, 2007). There are 23 annual or perennial species of kelp in Puget Sound, two of which have a floating canopy and the rest non-floating stipitate or prostrate canopies (Mumford 2007)."

Some areas around Puget Sound have shown a large decrease in kelp (Berry et al., 2021). Areas with floating and submerged kelp (families Chordaceae, Alariaceae, Lessoniacea, Costariaceae, and Laminaricea) support the highest densities of most juvenile rockfish species (Carr, 1991; Hayden-Spear, 2006; Matthews, 1989). Kelp habitat provides structure for feeding, predation refuge, and reduced currents that enable energy conservation for juveniles (Love et al., 1991). Loss of nearshore habitat quality is a threat to rockfish, but the factors driving this loss vary throughout the DPSs. The severity of this threat as very low in Canada, low in the San Juan Islands, moderate in Hood Canal, and high in the Main Basin and South Sound (NMFS, 2017).

At the site for the proposed action within Gig Harbor, the intertidal zone is gradually sloping, with a substrate of gravels transitioning to silty sand sub-tidally. A vegetation survey in June 2022 (Marine Surveys and Assessments, 2022) found occurrences of attached *Saccharina* (5-30 percent) and *Gracilaria* (5-20 percent) within the project area. (*Saccharina* is a genus with 24 species of brown algae in the family *Laminaricea*. *Gracilaria* is a genus of red algae in the family *Gracilariaceae*). Total macroalgae percent cover was calculated to be approximately 3.7 percent of the proposed structure's footprint and 25-ft buffer. Invertebrates seen during the survey were anemones (*Metridium*), sea quills (*Stylatula*), and sea cucumbers. Small, silvery fish assumed to be forage fish were also observed. Eelgrass (*Zostera spp.*) is present in Gig Harbor however its extent is not clear (Sherman & DeBruyckere, 2018). Surf smelt spawning is documented approximately 0.30 mile from the site of the proposed action on the northeast side of Gig Harbor according to the mitigation plan (DCG, 2023).

Within Gig Harbor, the intertidal zone generally extends from +13.6 feet Mean Lower Low Water (MLLW) to -3.9 feet MLLW. Some of this intertidal shore zone has been filled and armored. A concrete bulkhead, the bottom of which is at +9 feet MLLW is present at the landward end of the proposed dock. Text in the BA describes the shoreline of Gig Harbor as substantially altered with fill in the intertidal zone, bulkheads, and over-water structures. One of these structures is the Jerkovich Pier.

The Washington Department of Ecology Water Quality Atlas at this website (https://apps.ecology.wa.gov/waterqualityatlas/wqa/map)[2], lists several water quality problems in Gig Harbor. Fecal coliform contamination is Category 5, which means the water is polluted and requires cleanup. Other contaminants detected and of concern include polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). These assessments do not include many contaminants in urban runoff known to be harmful to salmon such as 6PPD-quinone.

Stormwater runoff from the built environment remains one of the great challenges of modern water pollution control, as this source of contamination is a principal contributor to water quality impairment of waterbodies nationwide (National Research Council, 2009). Impervious surfaces,

[2] accessed on May 14, 2025.

including buildings, roads and parking lots, alter the natural infiltration of vegetation and soil, and accumulate many pollutants in dust that settles from automobile tires, exhaust, brakes, wear of concrete, asphalt and composite surfaces as well as leaks from engines and other mechanisms. Precipitation mobilizes these contaminants and transports them in runoff to aquatic environments. Motor vehicles, the primary source of transportation-related pollutants from impervious surfaces, contribute many known toxicants including those from tire wear (including 6PPD-quinone), copper and other metals from brake pads, and phenanthrene and other PAHs in exhaust. Stormwater may also include additional contaminants depending on the surrounding land use and proximity to industrial facilities (NWFSC, 2022).

2.5. Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action (see 50 CFR 402.02). A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered the factors set forth in 50 CFR 402.17(a) and (b).

2.5.1. Effects on Critical Habitat

Critical habitat is designated in Gig Harbor for PS Chinook salmon, bocaccio and SRKW. Only two of the PBFs for PS Chinook salmon would be affected by the proposed action.

For PS Chinook salmon, the proposed action would affect PBFs 4 and 5:

> PBF 4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh-and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. These features are essential to conservation because without them juveniles cannot reach the ocean in a timely manner and use the variety of habitats that allow them to avoid predators, compete successfully, and complete the behavioral and physiological changes needed for life in the ocean. Similarly, these features are essential to the conservation of adults because they provide a final source of abundant forage that will provide the energy stores needed to make the physiological transition to fresh water, migrate upstream, avoid predators, and develop to maturity upon reaching spawning areas.
>
> PBF 5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels. As in the case with freshwater migration corridors and estuarine areas, nearshore marine features are essential to conservation because without them juveniles cannot successfully transition from natal

streams to offshore marine areas. We have focused our designation on nearshore areas in Puget Sound because of its unique and relatively sheltered fjord-like setting (as opposed to the more open coastlines of Washington and Oregon).

PBFs essential to the conservation of juvenile bocaccio are settlement habitats located in the nearshore with substrates such as sand, rock and/or cobble compositions that also support kelp (families *Chordaceae*, *Alariaceae*, *Lessoniacea*, *Costariaceae*, and *Laminaricea*). These are essential for conservation because these features enable forage opportunities and refuge from predators and enable behavioral and physiological changes needed for juveniles to occupy deeper adult habitats. PBFs of juvenile bocaccio critical habitats include: (1) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities; and (2) water quality and sufficient levels of dissolved oxygen to support growth and survival.

PBFs for SRKWs are: (1) Water quality to support growth and development; (2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) passage conditions to allow for migration, resting, and foraging.

The effects of the proposed action on SRKW, Chinook salmon and bocaccio designated critical habitat include the following and are discussed in more detail below.

- Likely loss of prey quality and quantity.
- Vessels can present obstacles to pathways, causing organisms to swim farther and change direction more often, which can increase energy expenditure and impact foraging.
- Water quality degradation during construction activities introduces sediment into the water column, as well as contaminants from equipment and from disturbing contaminated sediment associated with creosote-treated wood.
- For juvenile Chinook salmon and bocaccio, burial of prey organisms during placement of beach nourishment and rock placement for outfall stabilization would reduce the amount of prey available and could also change foraging and migration behavior, thus reducing food availability while simultaneously increasing metabolic needs. In Puget Sound, the sediment used for beach nourishment is typically designed to function as spawning substrate for forage fish. If successful, sediment used in beach nourishment is repopulated with invertebrates and forage fish eggs (Lambert & Chamberlin, 2023). When successful, the prey community for juvenile Chinook salmon and bocaccio may eventually recover. In areas where large rock is placed, the loss of prey for foraging juvenile listed fish would be permanent.
- The proposed pier would shade SAV. As a result, vegetation would receive less light, and likely perish. Benthic communities and forage species that reside in vegetated areas also perish or greatly diminish when SAV is shaded.
- Shadows and structures from the pier would restrict or block fish movement, migration and the composition of species on-site.
- Water quality improvement from the removal of creosote-treated wood and additional stormwater treatment prior to discharge at the Maritime Pier Stormwater Outfall is expected to have a beneficial effect over the long term.

- Water quality and habitat degradation from the operation and maintenance of vessels that use the new pier is expected to be adverse.

Table 4. PBFs of designated critical habitat impacted by the proposed action.

	Construction-related water quality effects	**Burial of prey from fill in the intertidal zone**	**Degraded rearing conditions from over-water structure**	**Interrupting migration**	**Vessel impacts to habitat & water quality**	**Vessel impacts on foraging**
PS Chinook salmon PBF 4	X	X	X	X	X	X
PS Chinook Salmon PBF 5	X	X	X	X	X	X
Juvenile bocaccio PBF 1	X	X	X		X	
Juvenile bocaccio PBF 2	X	X	X		X	X
SRKW PBF 1					X	
SRKW PBF 2	X	X	X	X	X	X
SRKW PBF 3						X

Construction-related sediment disturbance and water quality impacts

The proposed project would increase turbidity, decrease dissolved oxygen, and increase toxic contaminants. Turbidity and decreased dissolved oxygen in the water column would affect the PBFs of designated critical habitat for PS Chinook salmon and juvenile bocaccio. Temporary water quality reductions would result from incidental discharge of lubricants and leaks from the vessels, construction equipment and from the introduction of sediment and sediment contaminants into the water column as a result of construction disturbance during pile installation. Specifically, the proposed project would increase turbidity, resuspend or suspend toxic contaminants, and decrease dissolved oxygen. These effects to critical habitat are expected to persist during in-water work and return to baseline shortly after work ceases. Turbidity, suspended contaminants, and dissolved oxygen degradation from construction would be short term, lasting hours to weeks.

Among prey fishes, short-term and intermittent exposure to reduced water quality could result in minor reductions in forage species via gill damage. Suspended sediment would eventually settle in the pier construction vicinity. Some of this sediment may smother benthic prey species, and if the sediments are contaminated, sublethal toxicity of benthic prey species could occur within 200 feet of these non-dredging activities.

Stormwater outfall-related fill in the intertidal zone

There is substantial uncertainty with respect to the biological benefits of the proposed beach nourishment. Beach nourishment is the purposeful addition of sediment to a beach. In Puget Sound, beach nourishment is used for a multitude of purposes including erosion management (Lambert & Chamberlin, 2023). Research in Puget Sound demonstrates that nourishment can be effective at maintaining beach habitat conditions as part of larger-scale restoration and soft shore

erosion control projects, particularly when paired with armor removal, backshore plantings, and the addition of logs. In Puget Sound, the ecological benefits of beach nourishment are mixed and inconsistent. While the use of beach nourishment as part of a suite of restoration tools is promising, the use of nourishment as a stand-alone ecologically beneficial action is not well supported (Lambert & Chamberlin, 2023). For example, Lambert and Chamberlin (2023) found in some cases, the results have had adverse ecological impacts. The authors wrote,

> "empirical evidence for direct benefits to biota provided by beach nourishment are rare. The overwhelming majority of studies indicate negative impacts or, at best, no change to biotic conditions after nourishment actions."

Before nourishment, invertebrate communities at mean low water were similar between armored and unarmored sites, but nourishment caused heterogeneous changes, particularly by reducing ulvoid algae, barnacles, shore crabs, and periwinkles (which live on or under cobbles) and increasing varnish clams, softshell clams, and ghost shrimp which rely on sediment.

Lambert and Chamberlin (2023) found that material moves, often very rapidly, away from the placement site. Their case studies suggest that armor-associated nourishment typically moves off-site faster than would occur on unarmored shorelines. We don't know whether material added, at the outfall location in Gig Harbor, would drift laterally along the intertidal zone, or offshore. The site is armored.

Despite the findings of Lambert and Chamberlin (2023), beach nourishment has benefitted benthic communities in many cases. Thus, we provided credit in the nearshore calculator for the proposed beach nourishment at the location of the stormwater outfall. However, the proposed beach nourishment may not be immediately beneficial to critical habitat for Puget Sound Chinook salmon and bocaccio for the following reasons:

- Benthic and other prey organisms would be less abundant, at least temporarily, after placement of 600 cubic yards of material;
- The outfall is located at a site with shoreline armoring. Armored sites appear less likely to benefit from beach nourishment that other shore areas; and
- The outfall discharges stormwater. Beach nourishment would not address on-going water quality degradation associated with contaminants in stormwater.

<u>New overwater structure effects on SAV and prey production</u>

The high score or impact from the nearshore calculator for the proposed action is tied to the extremely high value of SAV and kelp in estuarine habitat and the damage piers do to this type of habitat. SAV habitats have been shown to have some of the highest primary productivity in the marine environment (Foster & Schiel, 1985; Pausch et al., 2024) and provide a significant contribution to the marine and estuarine food webs (Fresh, 2006; Mumford, 2007). Within these systems, SAV, which includes kelp, play critical roles. Replacing the loss of this type of habitat is instrumental to maintaining PCEs or PBFs of designated critical habitat for listed species in Gig Harbor. Loss of prey and refuge from predation are anticipated to result from the proposed action, at least until a newly established area with SAV or kelp replaces those critically important

functions. Less food and higher rates of predation both affect the survival of fish to adulthood and reproduction.

Overwater structures adversely affect fish habitats in a variety of ways, including construction related impacts, changes in ambient light conditions, alteration of the wave and current energy regime, and through activities associated with the use and operation of the facilities, such as increased vessel traffic and pollutants. Overwater structures create shade which reduces the light levels below the structure (PFMC, 2014). The shadow cast by an overwater structure affects both the plant and animal communities below the structure. Distributions of plants, invertebrates, and fishes have been found to be severely limited in under-dock environments when compared to adjacent, unshaded vegetated habitats. Light is an important factor affecting established aquatic plants. Under-pier light levels have been found to fall below threshold amounts for the photosynthesis of diatoms, benthic algae, eelgrass, and associated epiphytes and other autotrophs. These photosynthesizers are an essential part of nearshore habitat and the estuarine and nearshore food webs that support many species of marine and estuarine fishes. Eelgrass and other macrophytes can be reduced or eliminated, even by partial shading of the substrate, and have little chance to recover (PFMC, 2014). Decreases or changes in the epibenthos density, diversity, and assemblage at overwater structures are likely caused by vessel traffic, reduced or compromised benthic vegetation, as well as physical and biological habitat alterations (Haas et al., 2002).

PBFs of rearing habitat for bocaccio and PS Chinook salmon would be diminished by the loss of SAV and benthic communities in Gig Harbor. We anticipate SAV and epibenthic forage would diminish due to the shade produced by overwater structures and from the shade of vessels moored at the new pier.

In the marine nearshore, there is substantial evidence that over-water structures impede the nearshore movements of juvenile salmonids (Able et al., 1998; Heiser & Finn 1970; Simenstad et al., 1999; Southard et al., 2006; Toft et al., 2007; Vucelick et al., 2006). In the Puget Sound nearshore, 35-millimeter to 45-millimeter juvenile chum and pink salmon were reluctant to pass under docks (Heiser & Finn 1970). Southard et al. (2006) snorkeled underneath ferry terminals and found that juvenile salmon were not underneath the terminals at high tides when the water was closer to the structure, but only moved underneath the terminals at low tides when more light penetrated the edges. These findings show that overwater structures can disrupt juvenile migration in the Puget Sound nearshore, reducing the value of the critical habitat for its designated purpose of juvenile salmonid migration in estuarine and nearshore ocean environments. Littoral areas are important for juvenile salmonid migration (Ward et al., 1994) and an important part of designated critical habitat for PS Chinook salmon. An implication of juvenile salmon avoiding overwater structures is that some of them would swim around the structure (Nightingale & Simenstad, 2001). This behavioral modification would cause them to temporarily use deeper habitat, where preferred food may be less abundant, increase energy costs and increase exposure to piscivorous predation that generally avoid the shallowest nearshore waters that outmigrant juvenile salmonids prefer—especially in the earliest periods of their marine residency. When juvenile salmonids temporarily leave the relative safety of the shallow water, their risk to being preyed upon by other fish increases. This has been shown in the marine

environment where juvenile salmonid consumption by piscivorous predators increased fivefold when juvenile pink salmon were forced to leave the shallow nearshore (Willette, 2001).

Fish rely on visual cues for spatial orientation, prey capture, schooling, predator avoidance, and migration. The reduced-light conditions found under an overwater structure limit the ability of fish, especially juveniles and larvae, to perform these essential activities. The shadow cast by an overwater structure may increase predation on fish by creating a light/dark interface that allows predators to remain in a darkened area (barely visible to prey) and watch for prey to swim against a bright background (Helfman, 1981). Prey species moving around the structure are unable to see predators in the dark area under the structure and are more susceptible to predation. Furthermore, the reduced vegetation densities associated with overwater structures decrease refugia from predators (PFMC 2014).

In-water structures provide perching platforms for avian predators such as double- crested cormorants (*Phalacrocorax auritis*), from which they can launch feeding forays or dry their plumage. Because their plumage becomes wet when diving, cormorants spend considerable time drying out feathers (Harrison, 1983) on pilings and other structures near feeding grounds (Harrison, 1984).

Pilings can alter adjacent substrates by increasing shell deposition from piling communities and changing substrate bathymetry. Changes in substrate type can alter the nature of the flora and fauna native to a given site. In the case of pilings, native species-dominated communities typically associated with sand, gravel, mud, and eelgrass substrates are replaced by communities associated with shell hash substrates (PFMC, 2014).

Overwater structures and associated substrate provide increased opportunity for non-native species colonization and exacerbate the increase in their abundance and distribution (Bulleri & Chapman, 2010). Glasby et al. (2007) argue that artificial structures, such as floating docks and pilings, provide entry points for invasion and increase the spread and establishment of non-native species in estuaries (Glasby et al., 2007). In the San Francisco Estuary, the Smithsonian Institute conducts Rapid Assessment Surveys to determine non-native species distribution on overwater structures. Of the 294 distinct non-native taxa observed, 60 percent were found on floating docks, 20 percent on intertidal benthos, and 13 percent from benthic grabs (Cohen et al., 2005).

Altered visual cues, changed communities, and predation are thought to be responsible for the observed reductions in juvenile fish populations found under piers and the reduced growth and survival of fishes held in cages under piers when compared to open habitats (Able et al., 1998; Duffy-Anderson & Able, 1999).

We anticipate that the new pier would generate additional vessel use, moorage and maintenance operations. Impacts from additional vessels would affect PBFs for adult and juvenile PS Chinook salmon and for juvenile bocaccio by adding vessel traffic, noise, propeller wash, and contaminants. Recreational and commercial vessel use resulting from the proposed action may be most concentrated in Gig Harbor but the vessels can travel throughout the Puget Sound region.

Vessels may interact with the aquatic environment by a variety of mechanisms, including emissions and exhaust, hull and propeller contact, turbulence from the propulsion system, waves produced by movement, noise, and movement itself (Asplund, 2000). Consequences of vessel traffic include sediment resuspension, water pollution, disturbance to fish and wildlife, destruction of aquatic plants, and shoreline erosion (Asplund, 2000). Klein (1997), citing several EPA studies, reported that vessel traffic in waters less than 8.2 feet in depth result in substantial impacts to submerged vegetation and benthic communities. Klein (1997) also indicated that sediment resuspension is substantial if a vessel operates in less than 7.2 feet of water and that a slight increase in depth prevented the resuspension of sediment. Turbidity from vessel propeller wash decreases light levels (Eriksson et al., 2004). Decreased ambient light typically results in lower shoot density and biomass of SAV (Shafer, 1999; Shafer, 2002).

Loss of Prey Quality and Quantity for SRKW

One of the three PBFs for SRKW is, "Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth." The proposed action is anticipated to affect SRKW critical habitat by reducing their preferred prey, Chinook salmon. A reduction in survival of salmon and steelhead, discussed in the following section (effects to species) would reduce quality and quantity of prey for SRKW.

In light of the small population size of SRKW, reduced prey availability is associated with increased extinction risk of the species (NMFS 2022). NMFS selected SRKWs for its Species in the Spotlight initiative out of all the species NMFS protects under the ESA. It is one of only 10 for which immediate, targeted actions can stabilize the population and prevent extinction. Prey reductions affect the fitness of individual whales and their ability to both survive and reproduce. Reduced fitness of individuals increases the mortality and extinction risk of Southern Residents and reduces the likelihood of recovery of the DPS. Sufficient quantity, quality, and availability of prey are an essential feature of the critical habitat designated for SRKW.

Vessel traffic effect on SRKW Critical Habitat

The third PBF for SRKW is conditions to allow for migration, resting, and foraging. Vessel movements and noise from vessels are expected as short-term consequences from construction activities, and long term from additional vessel traffic from the new pier. There is a growing body of evidence documenting effects from vessels on small cetaceans and other marine mammals. Research has shown that SRKWs spend more time traveling and performing surface active behaviors and less time foraging in the presence of all vessel types, including kayaks, and that noise from motoring vessels up to 400 meters away has the potential to affect the echolocation abilities of foraging whales (Holt, 2008; Lusseau et al., 2009; Noren et al., 2009; Williams et al., 2010).

Killer whales rely on their highly developed acoustic sensory system for navigating, locating prey, and communicating with other individuals. While in inland waters of Washington and British Columbia, SRKWs are the principal target species for the commercial whale watch industry (Hoyt, 2001; O'Connor et al., 2009) and encounter a variety of other vessels in their urban environment (e.g., recreational, fishing, ferries, military, shipping). Several main threats from vessels include direct vessel strikes which can result in injury or mortality (Gaydos &

Raverty, 2007), the masking of echolocation and communication signals by anthropogenic sound, and behavioral changes (NMFS, 2008b).

2.5.2. Effects on Listed Species

Effects of the proposed action on species are based, in part, on habitat effects, as described above. The in-water work window has been designed to minimize exposure of juvenile salmonids, but short- and long-term effects are still likely. Individual Chinook salmon and bocaccio would be exposed to the habitat effects described above, including water quality reductions, reduced prey, disruption of habitat-forming processes within the nearshore environment, noise, shade, and increased predation. SRKW would be exposed to noise and reduced prey.

Noise from pile driving

Pile driving generates sound pressure waves. Three metrics are commonly used in evaluating hydroacoustic impacts on fish:

- Peak sound pressure level (LPEAK).
- Root mean square (RMS).
- Sound exposure level (SEL).

Tissue damage can occur when underwater sound pressure passes through tissue into a gas void (a swim bladder) because gas is more compressible. When a fish is exposed to a sound pressure wave, gas in the swim bladder expands more than surrounding tissue during periods of under pressure and contracts more than surrounding tissue during periods of overpressure. This expansion and contraction can result in swim bladder tissue damage, including rupture of the swim bladder (Molnar et al., 2020).

Impact pile driving (with a hammer) can generate high peak pressures. Impact pile driving may be used for the proposed action however, piles would be driven with a vibratory hammer as far as possible.

NMFS has identified 206 dB as the threshold for injury to fish from exposure to a single impulse. In addition to this peak pressure metric, NMFS uses sound exposure level (SEL) to estimate the onset of injury for fish exposed to sounds. SEL thresholds are 187 dB SEL for fish 2 grams or larger, or 183 dB SEL for fish under 2 grams. The discussion in Stadler and Woodbury (Stadler & Woodbury, 2009) indicate that these thresholds likely overestimate the potential effects of exposure to impulsive sounds. Further, Stadler and Woodbury's assessment did not consider non-impulsive sound, which is believed to be less injurious to fish than impulsive sound. Therefore, application of the criteria to non-impulsive sounds is also likely to overestimate the potential effects in fish. However, these criteria represent the best available information.

NMFS has developed a calculator to estimate the sound levels likely to be produced while driving different types of piles with impact and vibratory piles drivers. The BA provided information from a previous pile-driving operation in the same area that helped ground-truth the assumptions we entered into the calculator for the 24-inch steel piles driven with an impact hammer. The pile-driving calculator was used to estimate sound from driving two different piles sizes with two different types of pile drivers. In-water noise from impact pile-driving 24-inch

steel piles would be the action's stressor with the greatest range of effect. For impact driving, a daily maximum of 1500 pile strikes would occur. A bubble curtain would be installed around all impact-driven piles.

In 2018 pile driving was conducted in the same area to install four piles for the Ancich Park Restoration Project. These piles were installed with both vibratory and impact hammers. The impact portion of the work was conducted in one day. Based on that experience, we anticipate that 4 or more piles can be installed per day. Thus, for sixteen 24-inch diameter piles, the work may take approximately four days for vibratory driving and up to four additional days for impact driving. The 12.75-inch diameter piles may take another two days. We approximate 10 days, or two weeks for pile driving work.

The effects caused by a fish's exposure to noise vary with the hearing characteristics of the fish, the frequency, intensity, and duration of the exposure, and the context under which the exposure occurs. At low levels, effects may include the onset of behavioral disturbances such as acoustic masking (Codarin et al., 2009), startle responses and altered swimming (Neo et al., 2014), abandonment or avoidance of the area of acoustic effect (Mueller, 1980; Picciulin et al., 2010; Sebastianutto et al., 2011; Xie et al., 2008) and increased vulnerability to predators (Simpson et al., 2016). At higher intensities and or longer exposure durations, the effects may rise to include temporary hearing damage (Scholik & Yan, 2002) and increased stress (Graham & Cooke, 2008). At even higher levels, exposure may lead to physical injury that can range from the onset of permanent hearing damage and mortality.

Based on our calculations, peak pressure from a single strike, attenuated by a bubble curtain, is not expected to exceed 198 dB beyond 9.6 feet from the pile being driven. This is well below the single-strike threshold for the onset of injury to fish. However, SEL is estimated to be 204 dB. This may overestimate the SEL actually generated by the proposed action. The number of strikes for earlier impact pile driving in the vicinity was only 227 for four piles in less than one hour. We used 1500 strikes per day specified in Table 4 of the BA. The SEL generated by our calculator predicts that within 430 feet of the pile being driven, fish 2 grams or larger would be injured. Fish smaller than 2 grams would be injured within 794 feet. Behavioral response would occur within 7,068 feet (1.3 miles) which encompasses most of Gig Harbor. The likelihood of injury, and the intensity of injury for individual fish would increase with increased proximity to the pile driving.

The timing proposed for pile driving avoids adult Chinook migration times. It is also expected to avoid adult steelhead migration timing. However, some steelhead and Chinook salmon reside in Puget Sound year-round. Exposure to harmful pile-driving noise is possible. Juvenile Chinook salmon rearing in Gig Harbor in the winter are likely to be larger than 2 grams. The larger size of steelhead or juvenile salmon limits the area in which physical injury is anticipated to within 430 feet of the pile being driven. Behavioral modifications of juvenile salmonids in response to impact pile driving would likely reduce foraging efficiency and loss of fitness throughout Gig Harbor. Behavioral modifications of juvenile salmonids could result in a lower rate of survival.

The number of Puget Sound Chinook salmon and steelhead that would be in the action area during construction and thus impacted by pile-driving sounds and/or construction-related water

quality degradation is unquantifiable with any degree of certainty. However, timing of the work relative to expected number of these species in the action area during the planned winter construction would be small, and only a small subset of the exposed individuals would be meaningfully affected. Although noise from pile driving will harm individual fish, the PS Chinook salmon and steelhead that would be meaningfully affected by exposure to work-related noise would represent a small subset of their cohort. However, population-level effects are not anticipated.

The timing of the in-water work is expected to occur when larval bocaccio are absent. However, some juvenile bocaccio may be present in the action area during pile driving. If present, juvenile bocaccio would be larger than 2 grams. This size limits the area in which physical injury is anticipated to an area within 430 feet of the pile being driven. Behavioral modifications throughout Gig Harbor would likely reduce foraging efficiency and loss of fitness. These could result in a lower rate of survival for the fish in area during pile driving. Although noise from pile driving will harm individual fish, the number of bocaccio in this area during pile driving would be too low to detect population level effects.

Toxic contaminants

Operating construction equipment in aquatic environments can result in leaks and spills of fuels, lubricants, and other fluids that can enter the water. Many fluids commonly used in construction equipment and vessels are petroleum-based hydrocarbons that contain PAHs, PCBs, other organic compounds, and metals. PS Chinook salmon and other fish can uptake contaminants directly through their gills, and through dietary exposure (Karrow et al., 1999; Lee & Dobbs, 1972; McCain et al., 1990; Meador, 2006; Neff, 1982; Spromberg et al., 2016; Varanasi et al., 1993). Depending on the pollutant, its concentration, and or the duration of exposure, exposed fish may experience effects that can range from avoidance of an affected area, to reduced growth, altered immune function, and mortality (Brette et al., 2014; Feist et al., 2011; Göbel et al., 2007; Incardona et al., 2005; Incardona et al., 2004; Incardona et al., 2006; McIntyre et al., 2012; Meador, 2006; Sandahl et al., 2007; Spromberg et al., 2016). PAHs can cause reduced growth, increased susceptibility to infection, and increased mortality in juvenile salmonids (Meador, 2006; Varanasi et al., 1993). Gill tissues are highly susceptible to damage because they actively pass large volumes of water and are thereby exposed to PAHs present in water. Other effects include damage to the skin, fins, and eyes, as well as damage to internal organs as liver tumors. However, the project includes BMPs specifically intended to reduce the risk and intensity of discharges and spills. In the event of a spill or discharge, the applicant has committed to take immediate action to remove contaminants.

Callier et al. (2009) looked for metal contaminants in sediments in and around marinas and in benthic communities. An increasing gradient of contamination from outside to the innermost marina sites were observed. The lowest macrofaunal abundance was recorded at the innermost sites as well. Metal contaminants included copper, zinc, cadmium and lead. Sediment samples that were analyzed with bioassays using *Fucus serratus* indicated differences in sediment toxicity between sites and show that the sites presenting the highest level of metal in were the most toxic for the zygote germination. A significant correlation between the sediment copper, zinc and cadmium concentrations and the sediment elutriate toxicity (LC50) was observed.

Benthic communities were also analyzed. The study showed that species composition in contaminated areas is limited to pollution-tolerant species.

Zinc is found in vehicle emissions, motor oils, lubricants, tires, fuel oils, and as sacrificial anodes on boats. Zinc interacts with an array of chemicals, and aquatic conditions of reduced pH, reduced dissolved oxygen, low dissolved organic carbon, and elevated temperatures increase zinc toxicity, causing altered patterns of accumulation, metabolism, and toxicity (Eisler, 1993; Farag et al., 1998). Many aquatic invertebrates (prey) and some fish can be adversely affected by ingesting zinc-contaminated particulates (Farag et al., 1998). Toxicity of zinc when mixed with other metals is mostly additive; however, zinc and copper interact synergistically such that zinc-copper mixtures have enhanced toxicity for freshwater fish and amphipods (Skidmore, 1964).

Copper bio-accumulates in invertebrates and fish (Feist et al., 2005; Layshock et al., 2021), is redox-active, and interacts with or alters many compounds in mixtures, as noted for zinc above (Gauthier et al., 2015). Copper synergistically interacts with PAHs such that copper-PAH mixtures are highly toxic. Copper weakens cell membranes increasing absorption of PAHs; copper chelates or hastens and preserves the bio-accumulative toxicity of PAHs; and PAHs in turn increase the bio-accumulative and redox properties of copper (Gauthier et al. 2015). Sub-lethal effects of copper include avoidance at very low concentrations (Hecht et al., 2007) and reduced chemosensory function at slightly higher concentrations, which in turn causes maladaptive behaviors such as the inability to avoid copper or detect chemical alarm signals (McIntyre et al., 2012). Sandahl et al. (2007) demonstrated that copper concentration as low as 2 micrograms/liter can significantly impair the olfactory system of salmonids and hinder predator avoidance behavior. Thus, any fish exposed to even small concentrations of copper may experience diminished predator avoidance and be at greater risk of predation.

Callier et al. (2009) pointed out that marinas are contaminated by a mixture of organic and inorganic chemicals, including tributyltin, other biocides found in antifouling paints, PCBs, chromated copper arsenate, petroleum hydrocarbons and PAHs. These findings are supported by Alzieu (Alzieu, 2000) and Carbery (Carbery, 2006). Poulson et al. (Poulsen et al., 2021) analyzed the effects of PAH contamination on mussels in a fishing harbor. Their physiological condition was found to decrease with increasing proximity to the harbor. The highest concentrations were found at a pier used by small boats. Analysis indicated a mixed PAH source from light fuel oils and creosote. Correlations between the mussels' morphological condition and the PAH pollution were found to be significant. Results indicate that pollution sources in harbors have significant effects on the local environment.

There are two pathways for PAH exposure to listed fish species in the action area, direct uptake through the gills and dietary exposure (Karrow et al., 1999; Lee & Dobbs, 1972; McCain et al., 1990; Meador, 2006; Neff et al., 1976; Varanasi et al., 1993). Fish rapidly uptake PAHs through their gills and food but also efficiently remove them from their body tissues (Lee & Dobbs, 1972; Neff et al., 1976). Juvenile Chinook salmon prey, including amphipods and copepods, uptake PAHs from contaminated sediments (Landrum et al., 1984; Landrum & Scavia, 1983; Neff, 1982). The primary response of exposed salmonids, from both uptake through their gills and dietary exposure, are immunosuppression and reduced growth (Varanasi et al., 1993).

NOAA research on oil spills and urban stormwater are increasingly converging on a risk framework where certain PAHs (Figure 7; described in more detail below) cause a well-described syndrome involving the abnormal development of the heart, eye and jaw structure, and energy reserves of larval fish (Harding et al., 2020).

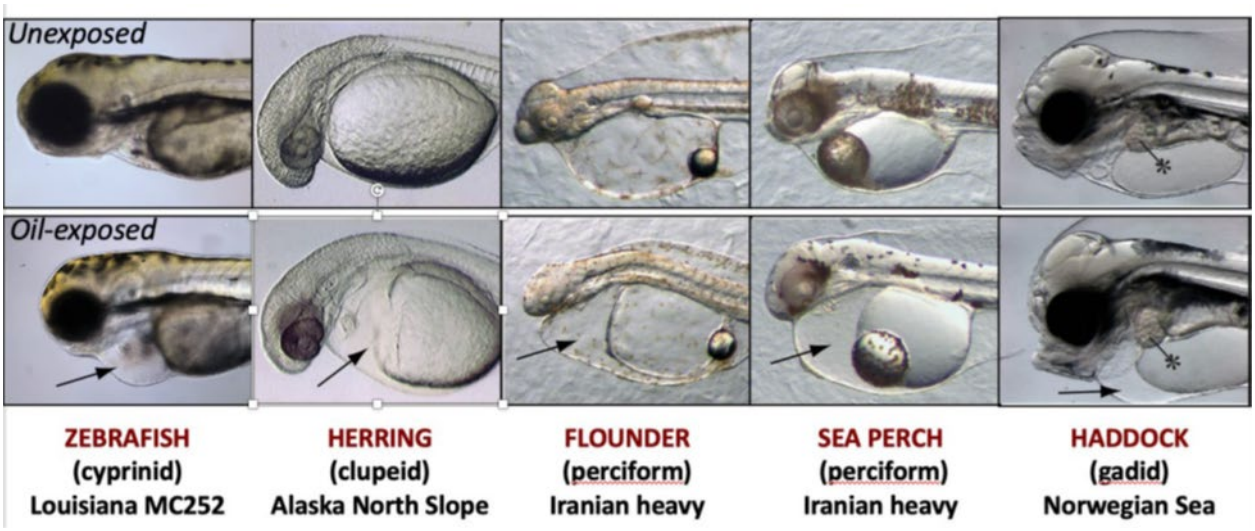


Figure 7. Examples of PAH-induced developmental abnormalities in a wide range of fish species (freshwater to marine, tropical to temperate).

Figure 7 illustrates our current understanding of PAH toxicity to fish embryos and larvae and is drawn from several NOAA-F studies, representing major lessons learned from the Exxon Valdez and Deepwater Horizon disasters, and has been widely confirmed by independent research groups around the world. The primary form of toxicity is a loss of cardiac function, as exemplified by circulatory failure and accumulation of fluid in the pericardial space around the heart (arrows). The pattern of excess fluid (edema) varies according to the anatomy of each species. Related abnormalities include small eyes, jaw deformities, and a dysregulation of the lipid stores, or yolk, the animal needs to survive to first feeding. This suite of defects, while sublethal, would almost invariably lead to ecological death. Consequently, "delayed-in-time" toxicity is a common risk concern for fish that spawn in PAH-contaminated habitats.

Individual Chinook salmon and bocaccio are likely to be harmed by toxic contaminants as a consequence of pile removal and associated structural elements of the dock. However, population level responses are unlikely because of the short duration of exposure and limited spatial extent of contaminant plumes.

Turbidity

Water quality is considered adversely impaired by suspended sediments when turbidity is increased by 20 Nephlometric Turbidity Units (NTU) for a period of 4 hours or more (Berg & Northcote, 1985; Robertson et al., 2006). The effects of turbidity on fish are species and size dependent. In general, severity typically increases with sediment concentration and duration of exposure, and decreases with the increasing size of the fish. Bjornn & Reiser (1991) report that adult and larger juvenile salmonids appear to be little affected by the high concentrations of

suspended sediments that may be mobilized during storm and snowmelt runoff episodes. However, empirical data from numerous studies report the onset of minor physiological stress in juvenile and adult salmon after one hour of continuous exposure to suspended sediment concentration levels between about 1,100 and 3,000 mg/L, or to three hours of exposure to 400 mg/L, and seven hours of exposure to concentration levels as low as 55 mg/L (Newcombe & Jensen, 1996). The authors reported that serious non-lethal effects such as major physiological stress and reduced growth were reported after seven hours of continuous exposure to 400 mg/L and 24 hours of continuous exposures to concentration levels as low as about 150 mg/L.

The effects of suspended sediment on fish increase in severity with sediment concentration and exposure time and can progressively include behavioral avoidance and/or disorientation, physiological stress (e.g., coughing), gill abrasion, and, at extremely high concentrations, death. Newcombe and Jensen (1996) analyzed numerous reports on documented fish responses to suspended sediment in streams and estuaries, and identified a scale of ill effects based on sediment concentration and duration of exposure. Studies show that salmonids have an ability to detect and distinguish turbidity and other water quality gradients (Quinn, 2005; Simenstad, 1988), and that larger juvenile salmonids are more tolerant to suspended sediment than smaller juveniles (Newcombe & Jensen, 1996; Servizi & Martens, 1991). Increases of TSS can also produce localized reductions in dissolved oxygen. Sub-lethal effects of dissolved oxygen levels below saturation can include metabolic, feeding, growth, behavioral, and productivity effects.

Propeller wash would also mobilize bottom sediments. In a study on the turbidly caused by large tugboats operating in Navy harbors (Wang et al., 2016), at about 13 minutes, the plume extended about 550 yards (500 m), where the TSS concentration was about 80 mg/L. The plume persisted for hours and extended far from the event, but the TSS concentration fell to 30 mg/L within 1 hour and to 15 mg/L within 3 hours. The exact extent of turbidly plumes from tugboat operations for this project are unknown, but it is extremely unlikely that they would exceed those described above. Based on that information, and on the consultations for similar projects in the region, sediment mobilization from project-related tugboat propeller wash would likely consist of relatively low-concentration plumes that could extend to about 300 feet temporarily. The most likely responses in Chinook salmon exposed to action-related turbidity would be temporary behavioral effects such as avoidance of the plume, gill flaring, and slightly reduced feeding rates. These responses could cause some combination of migration delays, increased vulnerability to predators, and or reduce feeding efficiency that would be sufficient to reduce the long-term survival for some subset of the juveniles that would be exposed.

The planned use of a turbidity curtain would limit exposure to project-related turbidity; however, in areas where turbidity is elevated, temporary behavioral disturbance that would likely include some combination of areal avoidance, respiratory distress, reduced feeding rates, and reduced swimming performance is expected. At close proximity and extended exposure durations, exposed individuals may experience long-term fitness impacts such as reduced growth and altered immune function that could reduce their long-term survival.

We cannot estimate the number of individuals that would experience adverse effects from suspended sediment with any meaningful level of accuracy. Not all exposed individuals would experience direct adverse effects. We expect that some individuals of listed fish species would

experience sublethal effects such as stress and reduced prey consumption, some may respond with avoidance behaviors, and some may be injured. Those that engage in avoidance behaviors or with raised cortisol levels may have decreased predator detection and avoidance.

Vessel traffic

There are few published studies that assess mortality from vessel traffic on fishes, but studies thus far indicate that ichthyoplankton, which could include larval rockfish, may be susceptible to mortality because they are unable to swim away from traffic and thus may be harmed by propellers and turbulence. One study found low overall mortality from traffic, but that larvae loss was size dependent and that smaller larvae were more susceptible to mortality (Tonnes et al., 2016).

Some fish that encounter boating noise would likely startle and briefly move away from the area. A study of motorboat noise on damselfish noted an increase in mortality by predation (Simpson et al., 2016). While some fish species have been noted to not respond to outboard engines, others respond with increased stress levels, and sufficient avoidance as to decrease density (Whitfield & Becker, 2014), while others experience reduced forage success (Voellmy et al., 2014) either by reducing foraging behavior, or because of less effective foraging behavior. When fish startle and avoid preferred habitats, both the predator and prey detection may be impaired for a short period of time following that response.

Juvenile salmonids are likely to respond to episodes of motorboat noise with a stress and startle reaction that can diminish both predator and prey detection for a short period of time with each episode. We expect all life history stages of PS Chinook salmon, and steelhead, and juvenile PS/GB bocaccio would be exposed to vessel traffic and would experience sublethal physiological stress.

Effects of noise from pile driving and vessel operation on SRKW.

Sounds from vessels involved in construction vessels and the addition in the number of vessels operating in the action area as a result of the new pier, would be an effect of the action. Effects of noise exposure on marine organisms can be characterized by the following (Richardson et al. 1995):

- Behavioral reactions—Range from brief startle responses, to changes or interruptions in feeding, diving, or respiratory patterns, to cessation of vocalizations, to temporary or permanent displacement from habitat.
- Masking—Reduction in ability to detect communication or other relevant sound signals due to elevated levels of background noise.

Recent evidence indicates there is a higher energetic cost of surface-active behaviors and vocal effort resulting from vessel disturbance in the Salish Sea (Holt, 2021; Noren et al., 2012; Noren et al., 2009). Several studies in inland waters of Washington State and British Columbia have linked interactions of vessels and Northern and Southern Resident killer whales with short-term behavioral changes (Ferrara et al., 2017). These studies concluded that vessel traffic may affect foraging efficiency, communication, and/or energy expenditure through the physical presence of the vessels, underwater noise created by the vessels, or both.

Vessel sounds in inland waters are from large ships, ferries, tankers and tugs, as well as from whale watch vessels, and smaller recreational vessels. Commercial sonar systems designed for fish finding, depth sounding, and sub-bottom profiling are widely used on recreational and commercial vessels and are often characterized by high operating frequencies, low power, narrow beam patterns, and short pulse length (NRC, 2003). Frequencies fall between 1 and 500 kiloHertz (kHz), which is within the hearing range of some marine mammals including killer whales and may have masking effects (i.e., sound that precludes the ability to detect and transmit biological signals used for communication and foraging).

Fishing vessels found in close proximity to the whales and vessels that were actively fishing were responsible for 7 percent of the incidents inconsistent with the Be Whale Wise Guidelines and federal regulations in 2020 (Frayne, 2021). The majority of vessels in close proximity to SRKW in inland waters are commercial whale watching vessels and recreational whale watching vessels and the average number of vessels accompanying whales can be high during the summer months (i.e., from 2013 to 2017 an average of 12 to 17 vessels (Seely, 2020)).

Potential effects to whales from pile driving would be minimized with the successful implementation of the Marine Mammal Monitoring Plan included as Appendix III to the BA.

Reduction of SRKW prey

The proposed action is likely to affect salmon growth and survival and therefore availability of prey. SRKW need to maintain their energy balance all year long to support daily activities (foraging, traveling, resting, socializing) as well as gestation, lactation, and growth. Maintaining their energy balance and body condition is also important because when stored fat is metabolized, lipophilic contaminants may become more mobilized in the bloodstream, with potentially harmful health effects (Mongillo et al., 2016). SRKWs are top predators that show a strong preference for salmonids in inland waters, particularly Chinook salmon (Ford et al., 2010; Hanson et al., 2010). According to NMFS (2022) steelhead, chum, and Pacific halibut have also been detected as prey organisms. Foraging on chum and coho salmon, steelhead, big skate and lingcod was also detected in recent fecal samples (Hanson et al., 2021). These data indicate that the whale diet diversifies when Chinook salmon is less abundant (Ford et al., 2016; Hanson et al., 2021; Hilborn et al., 2012). Warlick et al. (2020) continued to find that Chinook salmon is the primary prey for all SRKW pods in the summer months, followed by coho and other salmonids. The reduction of prey as a consequence of the proposed action will harm individual SRKW, but is unlikely to diminish the population of SRKW.

2.6. Cumulative Effects

"Cumulative effects" are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation [50 CFR 402.02 and 402.17(a)]. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Some continuing non-Federal activities are reasonably certain to contribute to environmental variability effects within the action area. However, it is difficult if not impossible to distinguish between the action area's future environmental conditions caused by environmental variation

that are properly part of the environmental baseline *vs.* cumulative effects. These future environmental conditions in the action area are described earlier in the discussion of environmental baseline (Section 2.4).

Boating is integral to the proposed action. Vessel operations and discharges affect critical habitats and species. These effects are addressed in the effects of the action section. Continued habitat loss and degradation of water quality from development and chronic inputs of point and non-point source pollutants would likely continue into the future. Recreational and commercial use of the waters within the action area are also likely to increase as the human population grows.

2.7. Integration and Synthesis

The Integration and Synthesis section is the final step in assessing the risk that the proposed action poses to species and critical habitat. In this section, we add the effects of the action (Section 2.5) to the environmental baseline (Section 2.4) and the cumulative effects (Section 2.6), taking into account the status of the species and critical habitat (Section 2.2), to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

2.7.1. Critical Habitat

Nearshore habitats with aquatic vegetation have a high level of primary productivity and make excellent rearing habitats for small fish. Plants provide structure used by many small organisms. Vegetated nearshore areas, with their high level of diversity and abundance, are considered to be fish nurseries (Beck et al., 2003). Loss of SAV and the associated lost productivity is expected to diminished forage in the action area for PS Chinook salmon and bocaccio. This loss of forage and the longer-term impacts of water quality degradation, would reduce prey for SRKW also.

The loss of habitat functions for fish is believed to be one of the major causes for the decline of Chinook populations in Puget Sound (NMFS, 2007). More specifically, the loss of estuary and nearshore habitat functions are listed as one of the major factors limiting the recovery of salmon in Puget Sound Salmon Recovery Plan. Within nearshore marine ecosystems, SAV and macroalgae, including kelp, play critical roles (Pausch et al., 2024).

For the physical presence of the proposed overwater structure on critical habitat, NMFS used an objective standardized calculator to estimate impact. We calculated 340 conservation offsets are needed to address the habitat loss. SAV in the project area was documented in a survey provided February 28, 2024. The depth in which vegetation is present defines the lower shore zone, which is an important parameter in the nearshore calculator. The presence of kelp greatly increased the conservation offsets generated by the calculator for this proposal.

The expected loss of the kelp bed at the project location would be long term. The anticipated effects of additional vessels and vessel operations to critical habitat would also be long term.

Implementation of the mitigation plan (DCG, 2023), provided in August of 2025 is anticipated to offset these long-term impacts. While the SAV under the newly constructed pier diminishes, and while mitigation is implemented, there will likely be a temporal loss of ecological functions important for juvenile bocaccio and juvenile PS Chinook salmon.

As previously stated, the nearshore calculator was developed to address impacts to salmon habitat. However, designated critical habitat for bocaccio share many physical and biological features of critical habitat for Puget Sound Chinook. Bocaccio critical habitat includes, "Nearshore juvenile rearing sites with sand, rock and/or cobbles to support forage and refuge. Habitat threats include degradation of rocky habitat, loss of eelgrass and kelp, introduction of non-native species that modify habitat, and degradation of water quality."

Once constructed, the new pier is expected to remain in the aquatic environment for a 40- to 50-year useful life period. Thus, multiple cohorts of the multiple populations of PS Chinook salmon, PS steelhead, PS/GB bocaccio rockfish, and SRKW would experience the long-term habitat modifications associated with the presence of the structures. The recovery plan specifically lists the number of piers and docks in Puget Sound, the number of slips for small boats and the fact that a third of Puget Sound shorelines have been modified with bulkheads or other armoring, as *threats* to the function of the nearshore and marine environments for salmon provided in the 2007 recovery plan. The adverse effects of the proposed action would exacerbate limiting factors identified in the recovery plans for PS Chinook salmon and SRKWs. For SRKWs, loss of prey is one of three major threats identified in this species' recovery plan. The proposed actions would degrade the quality of the prey PBF of critical habitat, further reducing available prey. By supporting boating and vessel traffic into the future, the proposed actions would also modestly exacerbate the other two major limiting factors, toxic chemicals that accumulate in top predators and impacts from sound and vessels.

However, a reduction in the productivity and availability of benthic and epibenthic prey organisms is anticipated to result from beach nourishment as well. Adverse effects of beach nourishment are anticipated to be relatively temporary and limited to the area in which stormwater is discharged. This habitat may already be degraded by contaminants typically found in stormwater. As a result, the quality and quantity of prey organisms are the beach nourishment site are likely to be degraded already.

Construction-related effects are expected to occur over a few weeks within Gig Harbor. Avoidance and minimization measures and BMPs included as parts of the proposed action also serve to limit construction-related effects. A turbidity curtain would limit the area within which construction-related water quality degradation would occur.

Severe reduction in the abundance of Chinook salmon continues to impair recovery of SRKW. Past and ongoing land and water use practices have degraded SR killer whale critical habitat throughout the Puget Sound basin. Urbanization, shoreline development, and point and non-point stormwater and wastewater discharges have reduced water quality across the region. Shoreline industries and high levels of vessel traffic have increase ambient noise levels, and anthropogenic impacts on Chinook salmon and other fish species have reduced the availability and quality of forage resources for SR killer whales.

This proposal would add a new municipal pier over aquatic habitat that has been designated as critical habitat for PS Chinook salmon, bocaccio and SRKW. We have used the nearshore calculator to quantify impacts. The nearshore calculator is currently designed to address effects to salmon habitat. The output resulted in the need for 464 conservation offsets. The high score was reduced by ~60 conservation offsets by the planned removal of the Jerkovich Pier. An additional ~65 conservation offsets were subtracted for the proposed beach nourishment at the location of the stormwater outfall under our presumption of some benefits to the intertidal community. The final output of the project calculator is -340 Conservation Debits or -3.40 Discounted Service Acre Years (DSAYs).

Together the effect of the action, when added to the environmental baseline and cumulative effects, would not appreciably diminish the value of critical habitat for the conservation of PS salmonids or bocaccio. We draw the same conclusions for SRKW. These conclusions are based on the factors analyzed in the above paragraphs as well as the following: (1) habitats that are disturbed as a consequence of the proposed action are a small proportion of the available critical habitat for each species; (2) disturbed habitats would not significantly reduce available PBFs for any of the species considered in this opinion; and (3) the purchase of 340 conservation credits from the Puget Sound partnership to address nearshore impacts will offset localized impacts of the proposed action. Despite degraded baseline conditions, uncertainty from environmental variation, and cumulative effects, the additive effects of the action do not appreciably diminish the value of critical habitat for the conservation of these designated critical habitats in the action area.

2.7.2. Listed Species

Our analysis addresses the effects of the proposed action on food availability, additional noise, increased exposure to contaminants and behavioral modifications.

Ocean-type Chinook salmon migrate to sea during their first year of life, normally within three months after emergence from gravel, spend most of their life in coastal waters, and return to their natal river in the fall (Groot & Margolis, 1991). Most runs of Chinook salmon in the Puget Sound region exhibit ocean-type life history (Myers et al., 1998). Their early marine life is a critical period when larger size and faster growth have been linked to elevated overall marine survival. Greene and Beechie, (2004) studied the density-dependent mechanisms on recovery of ocean-type PS Chinook salmon. Their findings indicate that nearshore habitat relationships may play significant roles for salmon populations (Greene & Beechie, 2004). Duffy (2009) found that Chinook salmon must feed and grow at high rates during May-July of their first marine year to increase overall marine survival. These findings highlight the importance of local feeding conditions in Puget Sound during spring and summer, and suggest that declines in marine survival since the 1980's may have been caused by reductions in food availability for Chinook salmon during early marine life. Spring growth of juvenile Chinook salmon appeared to be food-limited in some years, and low feeding rates corresponded to poor marine survival (Duffy, 2009).

The loss of estuarine rearing habitat has contributed to the reduction in survival of PS Chinook salmon in Puget Sound. The reduction in survival of PS Chinook salmon has contributed to the poor survival of SRKW. Thus, the productivity in nearshore habitats is directly linked to the

Viable Salmonid Population (VSP) parameters of PS Chinook salmon and effects to SRKW, explained below.

Those working to develop and maintain projects in the nearshore, such as marinas and docks which impact this habitat in Puget Sound, have options to pursue their projects while minimizing degradation of crucial shoreline habitat overall. For example, purchasing conservation offsets through a habitat conservation bank may help to offset impacts associated with construction projects in the nearshore.

Recovery plans developed for Puget Sound salmon and steelhead call for protecting and restoring nearshore habitat. The first step is to avoid habitat losses as shoreline development and maintenance projects continue to support the region's growth and economy. To offset project-related habitat impacts and avoid net loss of nearshore habitat, the proposed action includes removing creosote pilings and improvements to nearshore habitat elsewhere. We have drawn on the latest habitat science to provide tools that objectively determine how much restoration is needed to offset the impacts of development on this habitat and the species that depend on it, a nearshore calculator (Ehinger et al., 2015). The calculator determines changes in habitat value in a common currency that represents habitat impacts as debits, and habitat improvements as credits. For the proposed action, debits will be offset with an equivalent number of credits, avoiding further net loss of nearshore habitat. Credits may come from improvements undertaken as part of the same project or from improvements in other areas in the Puget Sound region.

The effect of sounds from pile driving were analyzed in this biological opinion. NMFS used a second objective standardized calculator to estimate impacts from pile driving. Sound attenuation was factored in because the project proponent plans to use a bubble curtain. Using the conservative proxy levels in the calculator, peak pressures are expected to be below the threshold for injury from an individual impact, even as close as 10 feet of the pile being driven. However, estimated anticipated SEL, or cumulative level, exceeds thresholds for injury. The short duration of the work, in addition to the proposed timing (when salmon are not abundant), would limit the potential for PS Chinook salmon, PS steelhead and bocaccio to be exposed to a harmful level of sound from pile driving.

The Marine Mammal Monitoring Plan is anticipated to reduce to a large degree the exposure of SRKW to harmful noise. Criteria for monitoring and stop-work on sighting of SRKW is intended to ensure, to the degree possible, that SRKW would not experience duration or intensity of pile driving, either impact or vibratory, that would result in disturbance or harm to any individual of this species.

Our analysis determined that marine vessels impact listed species in several ways. They degrade water and sediment quality thus exposing fish and whales to harmful contaminants. They disturb feeding and migration, and in this way contribute to nutritional problems facing these species. They cause injury through blunt force trauma resulting from collisions and propeller strikes. These vessel-related effects can be minimized through compliance with vessel regulations adopted in recent years.

The status of the listed species addressed in this opinion warranted their listing on the Endangered Species Act and their abundance, diversity, productivity, and spatial structure have not improved since listing (Ford 2022, NMFS 2019). Widespread negative trends in natural-origin spawner abundance across the ESU have been observed since 1980 (Ford 2022).

A viable salmonid population is an independent population of any Pacific salmonid, in the genus *Oncorhynchus,* that has a negligible risk of extinction due to threats from demographic stressors, environmental variation, and genetic diversity changes over a 100-year time frame. Four parameters form the key to evaluating population viability status. They are abundance, productivity, spatial structure, and diversity. NMFS focuses on these parameters for three reasons. First, they are reasonable predictors of extinction risk (viability). Second, they reflect general processes that are important to all populations of all species. Third, the parameters are measurable (McElhany et al., 2000).

The proposed action falls within the geographic area of the Central/South Puget Sound MPG for both PS Chinook salmon and PS steelhead. Overall, the Puget Sound Chinook salmon ESU remains at "moderate" risk of extinction, and viability is largely unchanged from the prior review. Abundance remains low (Ford, 2022). Steelhead populations in the Central and South Puget Sound MPG exhibited positive increases in their five-year abundances for the most recent status review (Ford, 2022); however, their 15-year abundance trends are slightly negative and they are still a fraction of recovery goals for these populations.

The impact to the population groups of the different species addressed in this opinion are limited by the small number of individuals potentially affected. A limited number of adult PS Chinook salmon, PS steelhead, and SRKW would be affected. There is uncertainty about how many juvenile salmonids would be impacted because the foraging area, at least for PS Chinook salmon as illustrated by a study in nearby Sinclair Inlet (Fresh et al., 2006), is expansive. The impact of reduced prey due to nearshore habitat modifications would be offset by the mitigation plan included as part of the proposal. Any residual reduction of prey in the south/central Puget Sound region would be long term.

In summary, the most recent mitigation plan (Facet, 2025) for the proposed action offsets adverse effects on food availability to listed species addressed in this biological opinion. BMPs and the Marine Mammal Monitoring Plan are expected to minimize adverse sound-related effects to PS Chinook salmon, PS steelhead, bocaccio, and SRKW. The limited duration and the timing of construction would further minimize the potential for adverse constructed-related effects. Compliance with the Vessel Sewage No Discharge Zone for Puget Sound, Washington Administrative Code Chapter 173-228, adopted in 2018, and compliance with the federal law that, as of January 1, 2025 (www.bewhalewise.org) requires boaters to remain at least 1000 yards from SRKW in Puget Sound, would both minimize adverse effects of marine vessels to listed species.

2.8. Conclusion

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, the effects of other activities caused by the proposed action, and the cumulative effects, it is NMFS' biological

opinion that the proposed action is not likely to jeopardize the continued existence of PS Chinook salmon, PS steelhead, bocaccio, or SRKW, or destroy or adversely modify designated critical habitat for PS Chinook salmon, bocaccio or SRKW. The proposed action is not likely to adversely affect Humpback Whales.

2.9. Incidental Take Statement

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Harass" is further defined by interim guidance as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

2.9.1. Amount or Extent of Take

In this biological opinion, NMFS determined that incidental take is reasonably certain to occur in the form of harm to PS Chinook salmon (juvenile and adult), PS steelhead (juvenile and adult), and PS/Georgia Basin bocaccio (larvae, and juvenile) from:

- exposure to construction-related water pollutants and noise,
- loss of prey from burial during construction,
- loss of food and shelter from reductions in SAV,
- reduced prey as a consequence of trophic impacts (SRKW),
- interruption of migration and increased predation from the shadows and structure of the newly constructed pier, and
- water quality and habitat degradation from the vessels using the new pier.

NMFS cannot predict with meaningful accuracy the number of listed species that are reasonably certain to be injured or killed annually by exposure to these stressors. The distribution and abundance of the fish that occur within the action area are affected by habitat quality, competition, predation, and the interaction of processes that influence genetic, population, and environmental characteristics. These biotic and environmental processes interact in ways that may be random or directional, and may operate across far broader temporal and spatial scales than are affected by a proposed action. Thus, the distribution and abundance of fish within the action area cannot be attributed entirely to habitat conditions, nor can NMFS precisely predict the number of fish that are reasonably certain to be injured or killed if their habitat is modified or degraded by the proposed action. Further, NMFS knows of no device or practicable technique

that would yield reliable counts of individuals that may be injured or killed annually by exposure to the proposed action's impacts.

In such circumstances, NMFS uses the causal link established between the activity and the likely extent and duration of changes in habitat conditions as surrogates to describe the extent of take as a numerical level of habitat disturbance. The most appropriate surrogates for take are action-related parameters that are directly related to the magnitude of the expected take.

- The size of the new pier, 6,247 square feet of new overwater surface, directly relates to predation potential, benthic prey suppression, and aquatic vegetation productivity. This surrogate indicator of take is both easily observable and causally linked to incidental take by the addition of over-water structure because the amount of take increases incrementally with the size of the structure. It functions as a measurable take surrogate because it can be readily monitored, thus reinitiation could be triggered by an increase in the coverage area of the structure.

- The area in which turbidity may exceed thresholds for harm is 300 feet. This surrogate indicator of take is both easily observable and causally linked to incidental take by water quality degradation because the amount of take increases incrementally with the size of the area affected by degraded water quality, in this case, the area in which turbidity thresholds are exceeded. It functions as a meaningful reinitiation trigger because it can be readily monitored.

Exceedance of any of the take surrogates described above would constitute an exceedance of authorized take and the reinitiation provisions of this Opinion would be triggered.

2.9.2. Effect of the Take

In the Opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action as modified by the RPA, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

2.9.3. Reasonable and Prudent Measures

"Reasonable and prudent measures" are measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

The USACE shall require the City of Gig Harbor to:

1. Ensure monitoring and reporting are implemented to confirm that the take exemption for the proposed action is not exceeded.

2. Minimize incidental take of PS Chinook salmon, steelhead and bocaccio from exposure to construction related turbidity and contaminants.

3. Ensure the mitigation plan is implemented.

2.9.4. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Federal action agency must comply (or must ensure that any applicant complies) with the following terms and conditions. The USACE and applicant have a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

The following terms and conditions implement reasonable and prudent measure 1:

1. The USACE shall require the applicant to develop and implement plans to collect and report monitoring results, including at a minimum:
   a) Documentation of the dates, method of pile installation, and pile type and size,
   b) providing water quality monitoring results,
   c) providing drawings for any deviations from construction plans submitted with the request for consultation.
   d) On the start date of the construction, the applicant (or designated agent) shall notify NMFS, via projectreports.wcr@noaa.gov, that construction has commenced and include:
      a. Email subject line: "NOTIFICATION OF START DATE **WCRO-2023-00546"**
      b. Date project construction began
      c. USACE NWS project number
      d. A written verification that all USACE-required best management practices (including implementation of a MMMP) are being implemented.
   e) Submit Reports. All reports shall contain the NMFS Number WCRO-2023-00546 and be sent by electronic copy to NOAA's reporting system email address at: projectreports.wcr@noaa.gov.

The following terms and conditions implement reasonable and prudent measure 2:

1. Ensure that signage regarding the no discharge zone is clearly posted at the new pier[3].,
2. Ensure the applicant provides routine weekly inspections of the pier to remedy contaminants or contaminant sources that are not properly contained.
3. Ensure the applicant is provided with enforceable conditions for moorage that prevent contaminant discharge,
4. Ensure that creosote-treated piles are cut 3 feet below the mudline prior to removal where removal in entirety cannot be physically achieved (i.e., where piles accidently break preventing their full removal).
5. Documentation of the lateral extent of the turbidity plumes, and measures taken to maintain them within 300 feet.

[3] Signs are available from the Washington Department of Ecology https://ecology.wa.gov/water-shorelines/puget-sound/no-discharge-zone/frequently-asked-questions

The following terms and conditions implement reasonable and prudent measure 3:

1. Ensure the applicant fully executes the agreement to purchase 340 conservation credits as described in the Conservation Credit Pre-Sale Agreement signed on October 1, 2025 and received from the USACE October 9, 2025.
2. Ensure the applicant implements the Jerkovich Pier removal and beach nourishment activities in accordance with NWS-2022-472 and NWS-2021-187.

2.10. Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, "conservation recommendations" are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

1. To further help recover threatened and endangered species, we recommend the City of Gig Harbor only allow moorage for vessels that can demonstrate compliance with NDZ (Chapter 173-228 WAC). Preventing the discharge of contaminants and protecting water quality would help increase the value of critical habitat for the threatened and endangered species and for their recovery.

2.11. Reinitiation of Consultation

This concludes formal consultation for The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

Under 50 CFR 402.16(a): "Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action."

2.12. "Not Likely to Adversely Affect" Determinations

NMFS concurs with Section 1 of the BA that the proposed action may affect but is not likely to adversely affect yelloweye rockfish *(Sebastes ruberrimus)* or humpback whales (*Megaptera novaeangliae*), or designated critical habitat for yelloweye rockfish. The action area does not have designated critical habitat for humpback whales. Gig harbor is too shallow for humpback whales, and adult yelloweye rockfish.

3. MAGNUSON–STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT RESPONSE

Section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the physical, biological, and chemical properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on EFH may result from actions occurring within EFH or outside of it and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH [CFR 600.905(b)].

This analysis is based, in part, on the EFH assessment provided by the USACE and descriptions of EFH for Pacific Coast groundfish (PFMC, 2023), coastal pelagic species (PFMC, 2024), and Pacific Coast salmon (PFMC, 2022); contained in the fishery management plans developed by the PFMC and approved by the Secretary of Commerce. Gig Harbor is also designated an Estuaries Habitat Area of Particular Concern (HAPC).

3.1. Essential Fish Habitat Affected by the Project

Gig Harbor is designated as a Habitat Area of Particular Concern (HAPC). HAPCs are considered high priority areas for conservation, management, or research because they are important to ecosystem function, sensitive to human activities, stressed by development, or are rare. These areas provide important ecological functions and/or are especially vulnerable to degradation and can be designated based on either specific habitat types or discrete areas. HAPCs are a discrete subset of essential fish habitat.

In Puget Sound, HAPCs include estuarine and seagrass areas because these habitats are ecologically important. Both are present in Gig Harbor and would be affected by the action as described in Section 2.

The adverse effects to EFH from the proposed action include:

1. Water quality degradation (turbidity and contaminant resuspension) from construction,
2. Effects associated with the loss of ecologically important SAV,
3. Effects associated with vessel-generated water quality degradation, sediment disturbance and startle response, and
4. Hydroacoustic effects described in Section 2.5. NMFS has identified 206 dB as the threshold for injury to fish from exposure to a single impulse. In addition to this peak

pressure metric, NMFS uses sound exposure level (SEL) to estimate the onset of injury for fish exposed to sounds. SEL thresholds are 187 dB SEL for fish 2 grams or larger, or 183 dB SEL for fish under 2 grams.

3.2. Essential Fish Habitat Conservation Recommendations

NMFS determined that the following conservation recommendations are necessary to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on EFH.

1. Regularly conduct street sweeping, at a minimum in late summer, on City-owned paved areas from which stormwater discharges into the action area. This recommendation will reduce the concentration of contaminants that reach the estuary from stormwater sources.

2. Avoid new overwater structures in areas within the City's jurisdiction. This recommendation will reduce predation on EFH species, reduce benthic prey loss, and reduce SAV loss.

3. Avoid the use of an impact driver when install replacement piles. This recommendation will minimize noise levels that could impair EFH species.

Fully implementing these EFH conservation recommendations would protect, by avoiding or minimizing the adverse effects described in section 3.2, above, for Pacific Coast salmon, Pacific Coast groundfish, and coastal pelagic species.

3.3. Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, the USACE must provide a detailed response in writing to NMFS within 30 days after receiving an EFH Conservation Recommendation. Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of NMFS' EFH Conservation Recommendations unless NMFS and the Federal agency have agreed to use alternative time frames for the Federal agency response. The response must include a description of the measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the Conservation Recommendations, the Federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects [50 CFR 600.920(k)(1)].

In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we ask that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

3.4. Supplemental Consultation

The USACE must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH Conservation Recommendations [50 CFR 600.920(l)].

4. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

The Data Quality Act (DQA) specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the opinion addresses these DQA components, documents compliance with the DQA, and certifies that this opinion has undergone pre-dissemination review.

4.1 Utility

Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users. The intended user of this opinion is the USACE. Other interested users include the City of Gig Harbor. Individual copies of this opinion were provided to the USACE and the City of Gig Harbor. The document will be available at the NOAA Library Institutional Repository [https://repository.library.noaa.gov/welcome]. The format and naming adhere to conventional standards for style.

4.2 Integrity

This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

4.3 Objectivity

Information Product Category: Natural Resource Plan

Standards: This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including the NMFS ESA Consultation Handbook, ESA regulations, 50 CFR 402.01 et seq., and the MSA implementing regulations regarding EFH, 50 CFR part 600.

Best Available Information: This consultation and supporting documents use the best available information, as referenced in the References section. The analyses in this opinion [*and EFH consultation, if applicable*] contain more background on information sources and quality.

Referencing: All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

Review Process: This consultation was drafted by NMFS staff with training in ESA [*and MSA implementation, if applicable*], and reviewed in accordance with West Coast Region ESA quality control and assurance processes.

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Formerly DCG/Watershed

Critical Areas Report – Rev. 2

GIG HARBOR COMMERCIAL FISHING HOMEPORT

JANUARY 2026

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1. Introduction

This Critical Areas Report was prepared for the Gig Harbor Commercial Fishing Homeport Project for the City of Gig Harbor (hereafter, City). The proposed project is located within Gig Harbor, Washington. This project will include the installation of a commercial fishing dock off Ancich Pier. The purpose of this investigation was to identify fish and wildlife habitat and assess potential impacts to these critical areas. This report addresses the regulations set forth in Chapter 6 of the Gig Harbor's Shoreline Master Program (SMP) as well as the necessary mitigation for all project impacts.

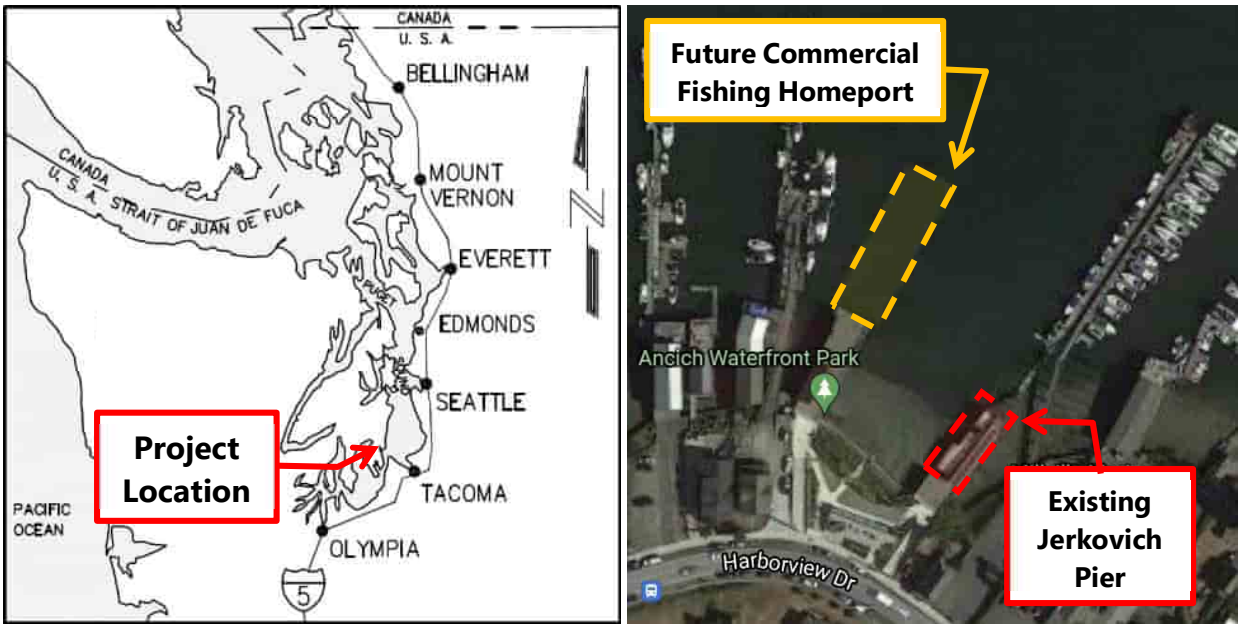


Figure 1. Vicinity and Site Maps

1.1 Project Description

The Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet. The proposed project consists of the elements listed below, followed by summary tables (Tables 1 and 2).

1.1.1 Float Installation

A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

- (6) 60' Finger Floats
- (1) 80' Finger Float

(16) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

1.1.2 Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (4) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

1.1.3 Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

1.1.4 Mitigation

On-site mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. Additional off-site mitigation will occur within the same watershed. See Mitigation Plan for details (Appendix III).

Table 1. Pile Removal and Installation Summary

Structure	Piles Removed	Piles Installed	Net Change in Number of Piles
Jerkovich Pier	32 creosote-treated timber piles, 12-inch diameter	0	-32
Floats	0	16 steel piles, 24-inch diameter	+16
Gangway	0	4 steel piles, 12-inch diameter	+4
Total	**-32**	**+20**	**-12**

Table 2. Overwater Coverage Summary

Structure	Net Change in Overwater Coverage
Jerkovich Pier Demolition	–1,558.5 SF (solid asphalt decking)
Gangway Installation	+527 SF (grating 45% net open area) (area not including overlap with float)
Floats Installation	+5,884 SF (grating 45% net open area))
Total	**+4,852.5 SF**

2. Literature Review

Facet staff conducted background research using a variety of online sources, literature, and maps to identify wetlands, streams, and site characteristics indicative of critical area features in the study area (Appendix I). Key sources of information included the following:

- Department of Ecology (Ecology) Water Quality Atlas
- Department of Natural Resources (DNR) Natural Heritage Program (NHP) Mapper
- Pierce County Critical Areas Map
- National Wetland Inventory (NWI) mapping
- Natural Resources Conservation Service (NRCS) soils mapping
- Washington Department of Fish and Wildlife's (WDFW) Priority Habitats and Species (PHS) Mapper
- WDFW SalmonScape Mapper

2.1 Wetlands

The City regulates wetlands per the City of Gig Harbor Municipal Code (GHMC) 18.08.050. Wetland maps prepared by the NWI (2022), WDFW PHS database (2022), and Pierce County Critical Area Map (2022) indicates the outermost area of Gig Harbor as estuarine and marine wetland.

2.2 Streams

The County regulates streams per GHMC 18.08.182. Pierce County Critical Area Map (2022), SalmonScape (2022), and NWI (2022) indicate two salmon-bearing streams, North Creek and Crescent Creek, that drain into the harbor to the northwest of the project site. These streams are approximately 0.30 and 0.50 miles away from the project site. These streams have not been assessed by the Water Quality Atlas (2022); however, they are hydrologically connected to the harbor which is listed as Category 1 for the parameter of temperature and Category 4C for the parameter of fish and shellfish habitat.

2.3 Wildlife Habitat Areas

Per GHMC 18.08.186, Fish and Wildlife Habitat Conservation Areas (FWHCA) are areas identified as being of critical importance in the maintenance and preservation of fish, wildlife and natural vegetation. No FWHCAs, rare plant species, or high-quality vegetation communities are mapped in the study area or vicinity (Natural Heritage Program, 2022). According to PHS Mapper (2022), there are no prioritized habitats or species present on the property. SalmonScape (2022) indicates the presence of salmon species in North Creek and Crescent Creek.

2.4 Soils

The NRCS soil survey map identifies one soil on the subject site, which is not listed as hydric per the NRCS Hydric Soils List. A summary of the map units is provided in Table 3. The DNR Natural Heritage Program Mapper also does not show any portion of the project site as containing hydric soils.

Table 3. Soil Unit Hydric Ratings

Map Unit Symbol	Map Unit Name	Unit Considered Hydric
16C	Harstine gravelly ashy sandy loam, 6 to 15 percent slopes	No

3. Habitat and Cumulative Impacts Assessment

3.1 Terrestrial Habitat

The site consists of 0.42 acres of upland and two piers that extend over the intertidal and subtidal area of Gig Harbor. A concrete bulkhead runs along the length of the shoreline on the property (approximately 200 linear feet). Upland vegetation consists of a City-maintained vegetated buffer along a concrete vertical bulkhead. Paved driveways with parking areas run along the eastern and western site boundaries. A personal/small non-motorized watercraft storage building is tucked into the existing hillside with a roof deck elevation matching the current sidewalk elevation. The building also has a chair lift to provide ADA access to the park below and to each pier from the building, as the adjacent driveways are not to code. The Ancich Pier to the west has been replaced with new materials, including steel piles and timber planks to support the historic Ancich Brothers' Netshed. The remaining portion of the Jerkovich Pier is in disrepair from the asphalt surfacing atop the timber decking causing many structural failures. The pier will be demolished as part of this project.

Dominant land use in the project vicinity is primarily urban and residential. The project area is zoned as Waterfront/Millville (GHMC 17.48). The action area is characteristic of an urban setting along a waterfront. Vehicle traffic is moderately heavy along Harborview Road, and vessel traffic primarily consists of recreational vessels.

3.2 Aquatic Habitat

The shoreline of Gig Harbor is substantially altered with bulkheads, docks, and marinas. Water quality assessments from the Washington Department of Ecology show that water quality in Gig Harbor is not currently impaired (Ecology 2022). Two major creeks drain into Gig Harbor, including Crescent Creek and North Creek. These creeks are known to be used by coho salmon, cutthroat trout, fall chum, fall chinook, and winter steelhead (WDFW, 2022).

The backshore is hardened with a concrete bulkhead, the bottom of which is at +9 feet MLLW. The intertidal zone is gradually sloping, with a substrate of gravels transitioning to silty sand sub-tidally. A full macrovegetation survey was completed by Marine Surveys & Assessments in 2022 (Appendix IV). A previous presence/absence macrovegetation survey performed in 2019 by Davido Consulting Group. Both surveys found benthic sugar kelp but no eelgrass habitat in the project vicinity.

3.3 Analysis of Effects

The effects of the project on ESA-listed species and their critical habitat are described in this section. The discussion describes how activities associated with the project will contribute to improvement, maintenance, or degradation of habitats used by listed species. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health.

3.3.1 Direct Impacts

Construction activities will likely have temporary direct impacts on habitat through increases in underwater sound from pier removal and increases in turbidity. Best management practices and mitigation methods will be used to minimize these effects. The level of disturbance and habitat alteration in the project area will be insignificant and discountable, especially when considered in relation to the activity already taking place in the developed harbor. While it is possible that species avoid the project area during demolition, they are not likely to abandon the site altogether.

Pile removal will result in new benthic habitat ready for colonization. These habitat improvements may benefit microorganisms such as zooplankton aggregation, but with no baseline data on their abundance, this will be an imperceptible impact of the project upon the prey food web.

A permanent and direct impact of the project will the removal of (32) 12-inch-diameter creosote-treated timber piles and upper intertidal shading will be reduced by approximately 1,558.5 square feet due to the removal of the remainder of the Jerkovich Pier, including its caps, stringers, and asphalt decking.

3.3.2 Indirect Impacts

Likely indirect effects of the proposed action on listed species may include disruption of prey fields and temporary behavioral responses to non-injurious noise from in-water construction activities. Physical elements of habitat will not be significantly affected by the proposed action. Underwater sounds will likely disaggregate schools of forage fish in the water column in the action area. Turbidity may also temporarily disperse prey in the water column, and burial of non-motile prey species will remove them from the prey field. Species may experience some energetic cost from dispersal of prey, resulting in

short-term expenditure of energy seeking other sources or browsing while waiting for prey to re-aggregate following noise and turbidity effects.

3.3.3 Cumulative Impacts

This section discusses how activities associated with project will contribute to improvement, maintenance, or degradation of habitats used by ESA-listed species in the project area. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health. Net effect is considered to be the overall effect on the species and habitat in the long term. If short term adverse conditions occur when few or no listed species are present in the action area, and if those conditions are no longer present when listed species return to the area, those conditions do not constitute adverse modification of the indicator of habitat quality.

Table 4. Effects of Project Activities on Habitats in the Project and Action Areas

Project Activities	Habitat Indicator	Effects of Action		
		Improve[1]	Maintain[2]	Degrade[3]
Construction Disturbances	Noise		X	
	Entrainment		X	
	Stranding		X	
Water Quality Disturbance	Turbidity		X	
	Chemical Contamination/Nutrients	X		
	Temperature		X	
	Dissolved Oxygen		X	
Sediment Disturbance	Sedimentation Sources/Rates		X	
	Sediment Quality		X	
Habitat Disturbance	Fish Access/Refugia		X	
	Depth		X	
	Substrate		X	
	Slope		X	
	Shoreline		X	
	Riparian Conditions		X	
	Flow and Hydrology/Current Patterns/ Saltwater-Freshwater Mixing Patterns		X	
	Overwater Structures			X
	Impervious Surface		X	
Biota Disturbance	Prey		X	
	Infauna		X	
	Aquatic/Wetland Vegetation		X	
	Nonindigenous Species		X	
	Ecological Diversity		X	

1. Action will contribute to long-term improvement, over existing conditions, of the habitat indicator.
2. Action will maintain existing conditions.
3. Action will contribute to long-term degradation, over existing conditions, of the habitat indicator.

4. Marine Shorelines, Vegetation Conservation & Critical Areas Protection

In order to aid the City in its stated goal of protecting "ecological processes and functions existing in the shoreline and nearshore area" the below sections of this report provide a response to each item detailed in Gig Harbor SMP Subsections 6.2.2 and 6.2.5.23.

4.1 No Net Loss and Mitigation Regulations

The below section provides a breakdown of Gig Harbor's SMP Subsection 6.2.2:

1) *Uses and developments that cause a net loss of ecological functions and processes shall be prohibited. All uses and development shall provide a report to the Shoreline Administrator that addresses no net loss of ecological function associated with a development proposal in a format approved by the City.*

   After review of the habitat assessment reports, including the Puget Sound Nearshore "Conservation Calculator", JARPA and Biological Assessment, it has been determined that there will be no net loss of ecological functions and processes as a result of the project. All effects will be compensated for on-site and off-site to the greatest extent possible. Remaining impacts will be offset by the purchase of mitigation credits at an approved mitigation bank. The City of Gig Harbor has a pre-sale agreement in place with Puget Sound Partnership to offset these impacts.

2) *All shoreline use and development, including preferred uses and uses that are exempt from permit requirements, shall be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological processes and functions.*

   All shoreline development will be maintained in a manner that maintains shoreline ecological processes and functions.

3) *Mitigation measures shall be applied in the following sequence of steps listed in order of priority.*
   a. *Avoiding the impact altogether by not taking a certain action or parts of an action, or altering the action to avoid impacts;*
   b. *Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering or by taking affirmative steps to avoid or reduce impacts;*
   c. *Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
   d. *Reducing or eliminating the impact over time by preservation and maintenance operations; and*
   e. *Compensating for the impact by replacing, enhancing, or providing similar substitute resources or environments and monitoring the impact and the mitigation project and taking appropriate corrective measures.*

      Options B, C, and E will be the course of action for this project. The new overwater structures will be grated to allow for light penetration to reduce the overall impact of the project. The shoreline environment on-site will be rehabilitated by removing the remaining portion of Jerkovich Pier. Additional off-site mitigation for project impacts will occur within

the same watershed. Remaining impacts will be offset by the purchase of mitigation credits at an approved mitigation bank. The City of Gig Harbor has a pre-sale agreement in place with Puget Sound Partnership to offset these impacts.

4) *Mitigation actions shall not have a significant adverse impact on other shoreline ecological functions.*

   Overall, the mitigation measures will achieve a net benefit to shoreline ecological functions of Gig Harbor beyond the level of existing degraded conditions and will not have a significant adverse impact on other shoreline ecological functions.

5) *When compensatory mitigation measures are required, all of the following shall apply:*
   a. *The quality and quantity of the replaced, enhanced, or substituted resources shall be the same or better than the affected resources; and*
   b. *The mitigation-site and associated vegetative planting shall be nurtured and maintained such that healthy native plant communities can grow and mature over time; and*
   c. *The mitigation shall be informed by pertinent scientific and technical studies, including, but not limited to, the Shoreline Inventory and Characterization Report, the Shoreline Restoration Plan and other background studies prepared in support of this Program; and*
   d. *The mitigation shall replace the functions as quickly as possible following the impacts to ensure no net loss; and*
   e. *The mitigation activity shall be monitored and maintained to ensure that it achieves its intended functions and values; and*
   f. *The City shall require the applicant/proponent to post a bond or provide other financial surety equal to the estimated cost of the mitigation in order to ensure the mitigation is carried out successfully. The bond/surety shall be refunded to the applicant/proponent upon completion of the mitigation activity and any required monitoring.*

   See the Mitigation Plan (Appendix III).

6) *When compensatory measures are appropriate pursuant to the mitigation priority sequence (Section 6.2.2 Regulation #3 above), preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, off-site compensatory mitigation provided within the same watershed or appropriate section of marine shoreline (e.g., reach or drift cell) is allowed when it provides greater and more sustainable benefits. When determining whether off-site mitigation provides greater and more sustainable benefits, the City shall consider limiting factors, critical habitat needs, and other factors identified by the Gig Harbor shoreline restoration plan, or an approved watershed or comprehensive resource management plan. Authorization of off-site compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions. Compliance with off-site mitigation requirements in Section 6.2.4 is required.*

   See the Mitigation Plan (Appendix III).

7) *To encourage shoreline property owners to remove bulkheads and perform other beneficial shoreline restoration actions in advance of shoreline development or redevelopment, as of November 25, 2013, the City may give mitigation credit to any beneficial restoration action that*

occurred on a proposed development site within 5 years of the proposed development/redevelopment activity provided that:

N/A.

4.2 Critical Area Regulations

The below section provides a breakdown of Gig Harbor's SMP Subsection 6.2.5.24:

1) *Critical fish and wildlife habitat areas are those areas identified as being of critical importance in the maintenance and preservation of fish, wildlife and natural vegetation. Areas which are identified or classified as fish and wildlife habitat areas subject to this section shall be subject to the requirements of this section.*

   Areas within project site that are classified as fish and wildlife habitat areas include the nearshore, which federal and state endangered, threatened and sensitive species of fish and wildlife have a primary association (Chinook salmon and steelhead). No other critical fish and wildlife habitat areas are present.

2) *General. Critical fish and wildlife habitat areas are identified as follows:*

   a. *Areas with which federal or state endangered, threatened and sensitive species of fish, wildlife and plants have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;*

      See the Biological Assessment (Appendix V).

   b. *Habitats and species of local importance, including:*

      i. *Areas with which state-listed monitor or candidate species or federally listed candidate species have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;*

         See the Biological Assessment (Appendix V).

      ii. *Special habitat areas which are infrequent in occurrence in the City of Gig Harbor and which provide specific habitats as follows:*

         1. *Old-growth forests;*
         2. *Snag-rich areas;*
         3. *Category 2 wetland areas;*
         4. *Significant stands of trees which provide roosting areas for endangered, threatened, rare or species of concern as identified by the Washington State Department of Wildlife;*

         These special habitat areas mentioned are not located within the project's action area.

   c. *Commercial and public recreational shellfish areas;*

      The site is not a commercial or public recreational shellfish area.

d. *Kelp and eelgrass beds;*

   A macrovegetation survey of the area has been completed (Appendix IV). Kelp has been mapped on-site. No eelgrass was discovered during the survey.

e. *Herring and smelt spawning areas;*

   The site is not a known herring or smelt spawning area.

f. *Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;*

   There are no naturally occurring ponds on-site.

g. *Lakes, ponds and streams planted with fish by a governmental agency, and agency-sponsored group or tribal entity;*

   There are no lakes, streams, or ponds on-site.

h. *State natural area preserves and natural resource conservation areas.*

   There are no natural area preserves or natural resources conservation areas.

3) *Classification. Critical fish and wildlife habitat areas are identified in the following documents:*

   a. *Puget Sound Environmental Atlas (Puget Sound Water Quality Authority);*

   b. *Coastal Zone Atlas of Washington, Volume IV, Pierce County (Washington State Department of Ecology);*

   c. *Commercial and Recreational Shellfish Areas in Puget Sound (Washington State Department of Health);*

   d. *The Department of Natural Resources stream typing maps and natural heritage database;*

   e. *The Washington State Department of Fish and Wildlife priority habitats and species program, the nongame database, and the Washington rivers information system.*

   Each of the reports and databases mentioned were checked for the presence of critical fish and wildlife habitat areas. Only the WDFW PHS website contained information documenting critical fish and wildlife habitat areas.

4) *Regulation*

   a. *Habitat Assessment. For all regulated activity proposed on a site which contains or is within 300 feet of critical fish and wildlife habitat, a habitat assessment shall be prepared by a qualified wildlife biologist. The habitat assessment shall include, at a minimum, the following:*

      i. *An analysis and discussion of species or habitats known or suspected to be located within 300 feet of the site;*

         The following Federally listed species may occur in the site vicinity:

         1. Southern Resident Killer Whale (*Orcinus orca*)
         2. Puget Sound Chinook (*Oncorhynchus tshawytscha*)
         3. Puget Sound Steelhead (*Oncorhynchus mykiss*)

4. Yelloweye Rockfish (*Sebastes ruberrimus*)
5. Bocaccio (*Sebastes paucispinis*)
6. Bull Trout (*Salvelinus confluentus*)
7. Marbled Murrelet (*Brachyramphus marmoratus*)
8. Humpback Whale (*Megaptera novaeangliae*)

Critical Habitat within the project area includes:

1. Puget Sound Chinook (*Oncorhynchus tshawytscha*)
2. Southern Resident Killer Whale (*Orcinus orca*)
3. Bocaccio (*Sebastes paucispinis*)

See Biological Assessment (Appendix V) for discussion of ESA listed species and critical habitat. This discussion also pertains to the following WDFW Priority habitats and species:

1. Priority Habitat of Nearshore Puget Sound.
2. Priority Species include marbled murrelet, Chinook, chum (*O. keta*), pink (*O. gorbuscha*), coho (*O. kisutch*) and sockeye salmon (*O. nerka*), various rockfish, Killer whale, sea otter (*Enhydra lutris*), and harbor seal (*Phoca vitulina*).

   Although some of these species are not specifically called out in the Biological Assessment, they occupy the same habitats and have similar life histories to the species discussed in the Biological Assessment. The impacts would be the same.

ii. A site plan which clearly delineates the critical fish and wildlife habitats found on or within 300 feet of the site.

See Figure 2 below. There are no other critical areas within 300 feet of the project site.

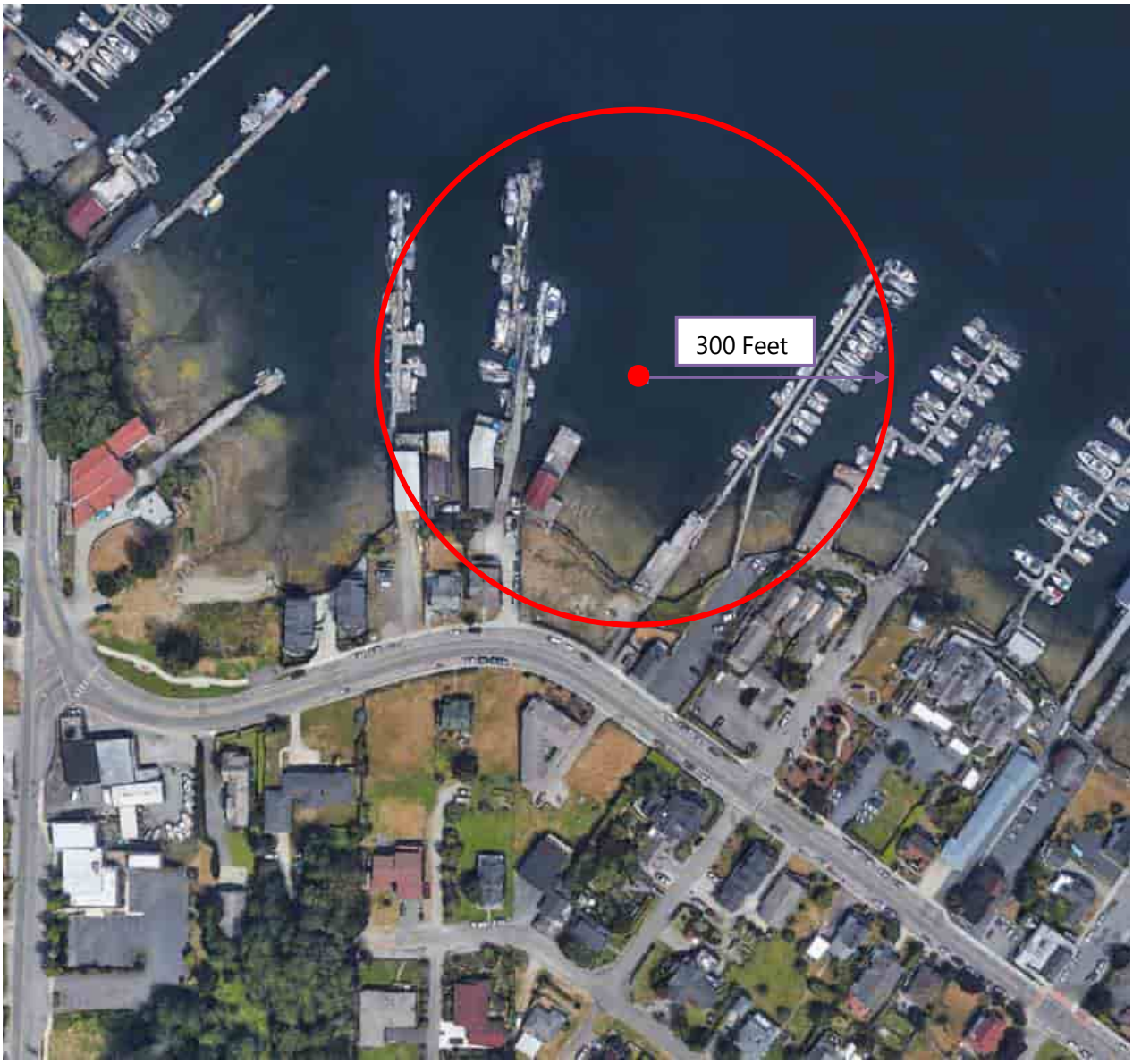


Figure 2. Critical Fish and Wildlife Habitats Found Within 300 Feet of the Site

b. *Habitat Assessment Review. A habitat assessment shall be forwarded for review and comment to agencies with expertise or jurisdiction on the proposal, including, but not limited to:*

   i. *Washington State Department of Fish and Wildlife;*
   ii. *Washington State Department of Natural Resources;*
   iii. *United States Fish and Wildlife Service.*

   Comments received by the requested review agencies within 45 days of the submittal of the assessment shall be considered by the Administrator. If it is determined, based upon the comments received, that critical fish and wildlife habitat does not occur on or within 300 feet of the site, the development may proceed without any additional requirements under this section. If it is determined that a critical fish and wildlife habitat is on or within 300 feet of the site, a habitat management plan shall be prepared.

Habitat Assessment Review, including a Biological Assessment and a Critical Areas Report, will be forwarded for review and comment to the above stated agencies.

c. *Habitat Management Plan. Habitat management plans required under this section shall be prepared in coordination with the Washington State Department of Fish and Wildlife by a qualified wildlife biologist. A habitat management plan shall contain, at a minimum, the following:*

   i. *Analysis and discussion on the project's effects on critical fish and wildlife habitat;*

      See the Biological Assessment (Appendix V).

   ii. *An assessment and discussion on special management recommendations which have been developed for species or habitat located on the site by any federal or state agency;*

      WDFW Aquatic Habitat Guidelines were used to guide restoration of the shoreline. No habitat management plans are proposed for this project.

   iii. *Proposed mitigation measures which could minimize or avoid impacts;*

      A mitigation plan has been prepared to offset impacts resulting from the project. The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant in order to avoid, reduce intensity, or otherwise minimize potential impacts:

      1. Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
      2. If required by governing agencies, water quality monitoring will be conducted during excavation activities,
      3. All manmade construction debris will be collected and not allowed to enter waters of the state.
      4. If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
      5. All debris or spill material will be properly disposed of at an approved off-site disposal facility.
      6. As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
      7. Contractor will maintain a spill containment kit with floating sausage booms on site at all times.
      8. A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
      9. Vessels will not ground.

iv. *Assessment and evaluation of the effectiveness of mitigation measures proposed;*

See the Mitigation Plan (Appendix III). There will be no net loss of ecological functions and processes as a result of the project.

v. *Assessment and evaluation of ongoing management practices which will protect critical fish and wildlife habitat after development of the project site, including proposed monitoring and maintenance programs;*

N/A.

vi. *Assessment of project impact or effect on water quality in Crescent, Donkey, or McCormick Creeks, and any proposed methods or practices to avoid degradation of water quality. Upon a review of the habitat management plan by appropriate federal and state agencies, comments received by the agencies within 45 days of the submittal of the proposed plan shall be considered by the City and, if mitigation is recommended, may be incorporated into conditions of project approval, as appropriate. If it is determined, based upon the comments received, that a project or proposal will result in the extirpation or isolation of a critical fish or wildlife species, including critical plant communities, the project or proposal may be denied.*

N/A.

5) *Buffer Requirements. If it is determined, based upon a review of the comments received on the habitat management plan, that a buffer would serve to mitigate impacts to a critical fish or wildlife habitat, an undisturbed buffer shall be required on the development site. The width of the buffer shall be based upon a recommendation of at least one of the appropriate review agencies but, in no case, shall exceed 150 feet, nor be less than 25 feet.*

N/A.

6) *Buffer Reduction. A buffer required under this section may be reduced or eliminated if the local conservation district has approved a best management plan (BMP) for the site which would provide protection to a critical fish or wildlife habitat.*

N/A.

7) *Compensatory mitigation shall be provided to offset impacts to critical fish and wildlife habitat and to meet the requirements of no net loss of shoreline functions. The applicant shall demonstrate that the compensatory mitigation achieves no net loss.*

Mitigation will take place per the description provided in the Mitigation Plan (Appendix III). No net loss of shoreline functions is expected, and long-term benefits are anticipated.

8) *Compensatory mitigation for impacts shall occur on-site, except where on-site mitigation is not scientifically feasible or practical due to physical features of the site and when off-site mitigation has a greater likelihood of providing equal or improved critical area functions than the impacted critical area. The burden of proof shall be on the applicant to demonstrate that these provisions can be met.*

On-site and off-site mitigation will take place per the description provided in the Mitigation Plan (Appendix III). Remaining impacts will be offset by the purchase of mitigation credits at an approved mitigation bank. The City of Gig Harbor has a pre-sale agreement in place with Puget Sound Partnership to offset these impacts.

9) *Off-site Mitigation. In cases in which it is determined that compensatory mitigation is allowed, the following shall apply:*
    a. *When compensatory mitigation cannot be provided on-site, off-site shoreline mitigation shall be provided in the following locations, listed in order of priority:*
        i. *In the shoreline jurisdiction associated with the same drift cell as the permitted activity. Impacts on sediment delivery such as shoreline armoring must be mitigated within the same drift cell as the permitted activity.*
        ii. *In the shoreline jurisdiction associated with the same body of water (i.e., Gig Harbor Bay and Gig Harbor Spit, Colvos Passage, Tacoma Narrows, and Henderson Bay, and freshwater streams) as the permitted activity; and*
        iii. *In the nearshore Puget Sound shoreline jurisdiction in the same sub-basin as the permitted activity.*
    b. *In determining appropriate areas for off-site mitigation, lower priority locations shall be applied only where higher priority locations are determined to be infeasible or inapplicable.*
    c. *Off-site mitigation ratios for in-water work shall be established in consultation with state and federal permitting agencies and approval of the Administrator.*
    d. *Off-site shoreline mitigation shall be provided with in-kind mitigation unless out-of-kind mitigation would provide greater ecological function than in-kind mitigation, as determined by the Administrator. The burden of proof that out-of-kind mitigation provides greater function is on the applicant who must provide an analysis from a qualified scientific expert.*

Off-site mitigation will occur as part of the permitted activity. All sections above were taken into consideration when determining mitigation location. All mitigation will occur within the City limits of Gig Harbor. Priority will be given to areas that fall within the same sub-basin where the impacts are occurring. See Mitigation Plan in Appendix III.

10) *Specific Habitats – Anadromous Fish.*
    a. *All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:*
        i. *Activities shall be timed to occur only during the allowable work window as designated by the Washington State Department of Fish and Wildlife for the applicable species;*
        ii. *An alternative alignment or location for the activity is not feasible;*
        iii. *The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas; and*

iv. *Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved critical area report.*

Activities will comply with the allowable work window as designated by the Washington State Department of Fish and Wildlife. The overall project and mitigation is designed so that it will improve the functions or values of the fish habitat. All mitigation is described in the Mitigation Plan.

b. *Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.*

There are no proposed structures that will prevent the migration of salmonids.

c. *Fills, when authorized by the master program, SEPA review or clearing and grading, shall not adversely impact anadromous fish or their habitat and shall mitigate any unavoidable impacts. Fill shall only be allowed for a water-dependent use, restoration, City utility activities and public access.*

Fill is not proposed.

5. Conclusion

The activities associated with the project and mitigation will not cause a net loss of ecological functions. Therefore, the Gig Harbor Commercial Fishing Homeport Project aids the City in its goal of protecting ecological processes and functions in Gig Harbor.

Within the limitations of schedule, scope of work, and seasonal constraints, Facet warrants that this study was conducted in accordance with generally accepted critical area investigation practices, including the technical guidelines and criteria in effect at the time this study was performed.

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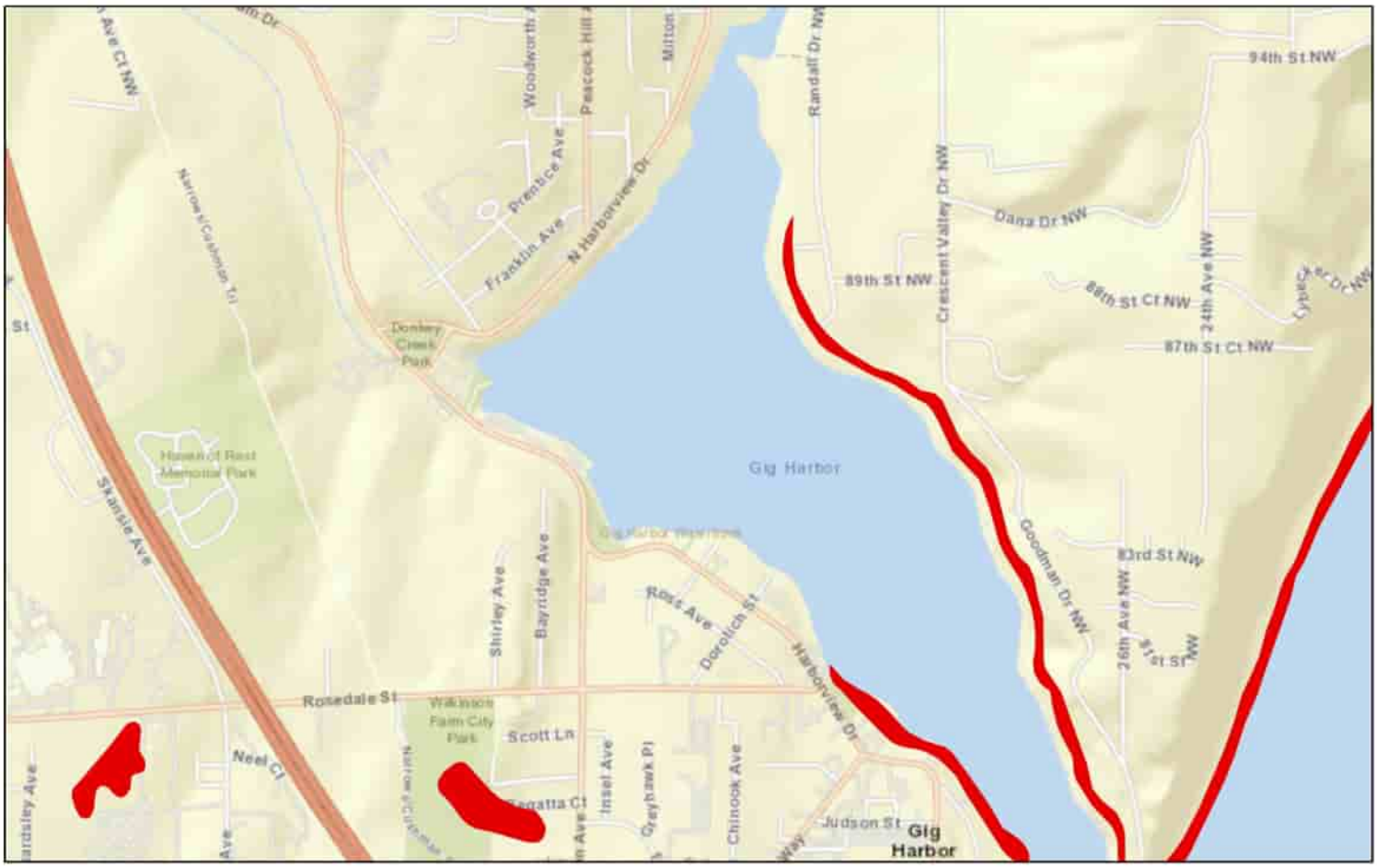
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APPENDIX I: Literature Review

WA Wetlands of High Conservation Value



4/22/2022, 11:25:32 AM

Counties

Hydric Soils

1:18,056

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),

Washington Natural Heritage Program

Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., NGA, USGS | Washington State Department of Natural Resources | Washington Natural Heritage Program http://www.dnr.wa.gov/natural-heritage-program |

U.S. Fish and Wildlife Service

National Wetlands Inventory

NWI



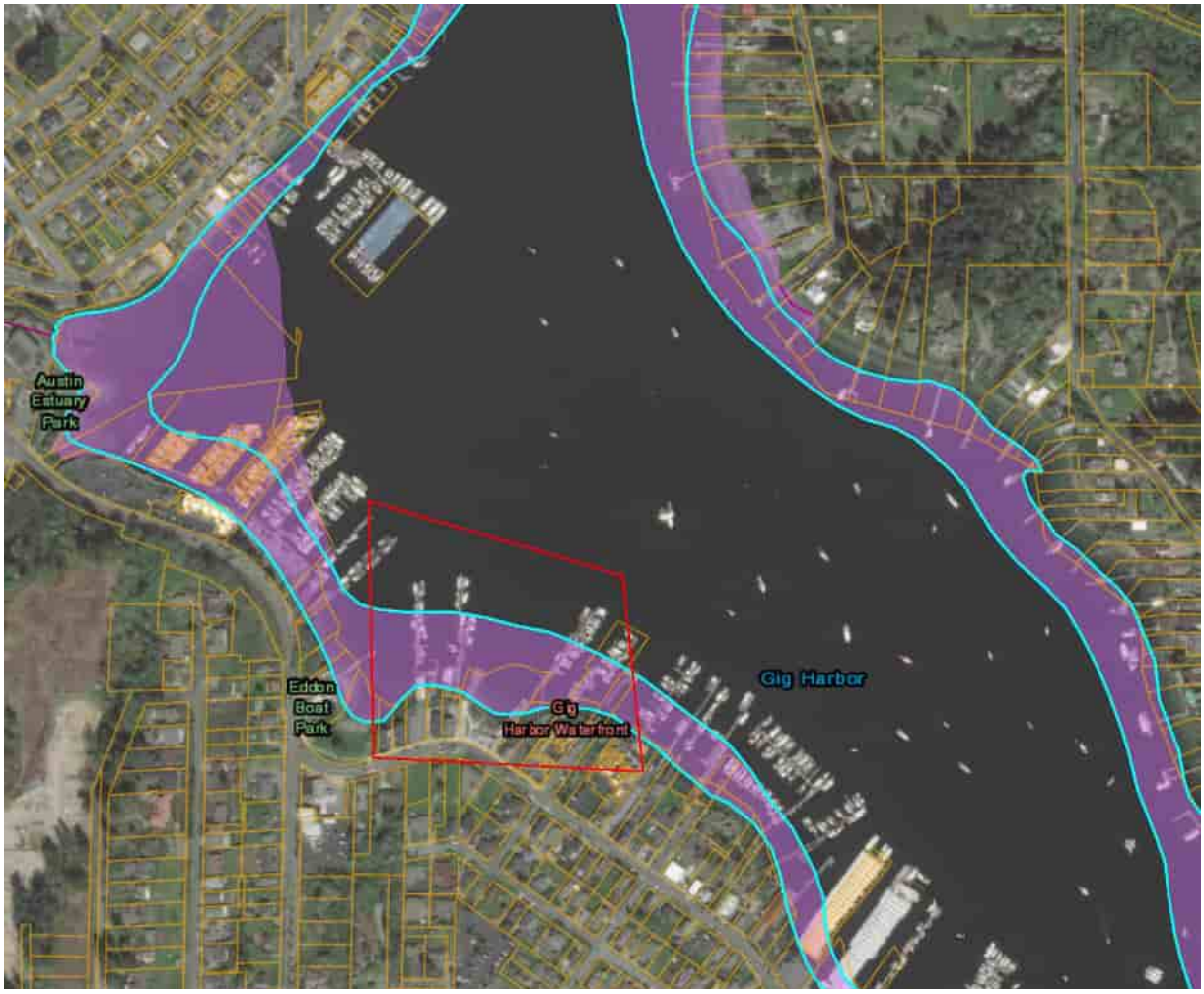
April 22, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper


Austin Estuary Park
Eddon Boat Park
Gig Harbor Waterfront
Gig Harbor



Report Date: 04/22/2022

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Sensitive Location
Estuarine and Marine Wetland	N/A	N/A	No

PHS Species/Habitats Details:

Estuarine and Marine Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Estuarine and Marine Wetland - NWI Code: E2USN
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necesssary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

PublicGIS



Legend

- Potential Wetland Review

Wetlands

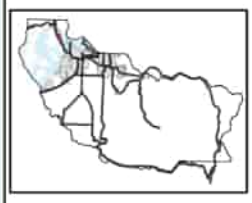
- Unconfirmed
- Yes
- No

Wetlands Delineation

- Delineated
- Verified
- Unverified
- Hydro Water Bodies

Hydro - Centerlines

- Hydro Centerline
- Pipe
- Hydric Soils
- Floodways
- Tax Parcels



N

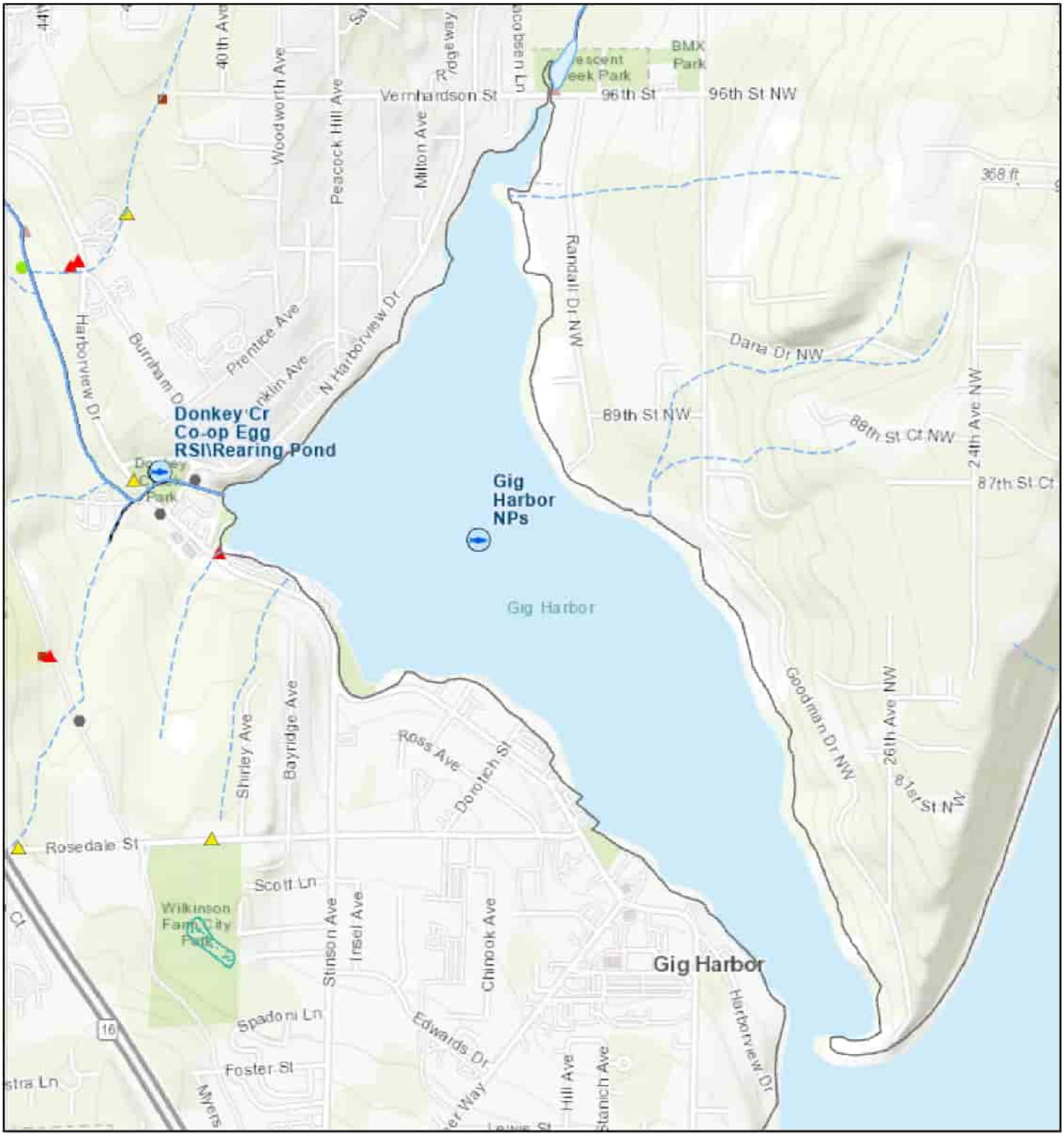
0 95 190 380 Feet

1:4,800

Disclaimer: The map features are approximate and have not been surveyed. Additional features not yet mapped may be present. Pierce County assumes no liability for variations ascertained by formal survey.

Date: 4/22/2022 10:56 AM

SalmonScape



April 22, 2022

1:18,056

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

All SalmonScape Species

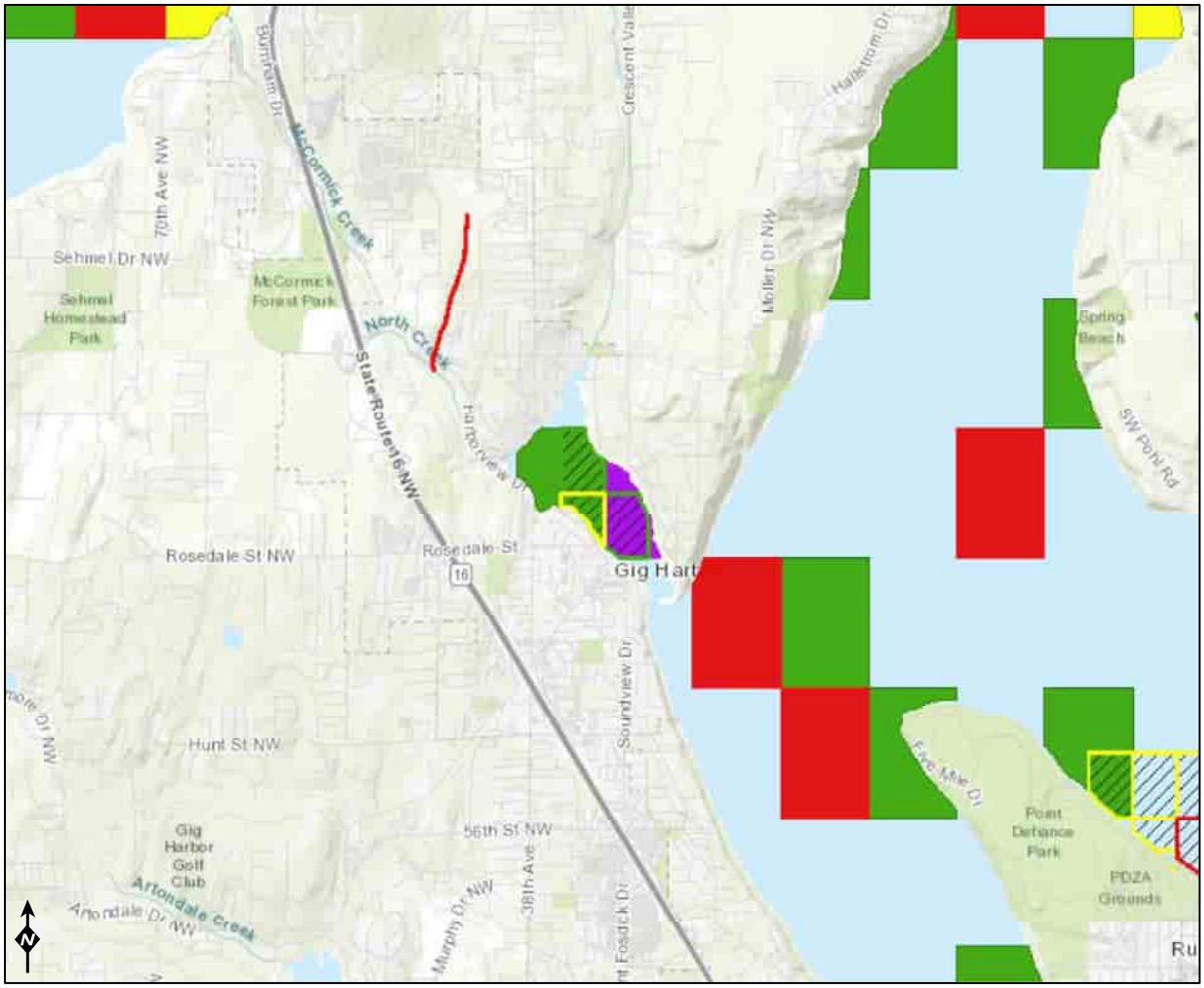
Hatcheries and Rearing

- Rearing Facility
- Unknown
- On a Non-Fish Bearing Stream
- Barrier, Unknown Percent Passable
- Total Fish Passage Blockage
- Partial Fish Passage Blockage
- Not a barrier

Restoration Division of the DFW Habitat Program, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, USGS/NHD, Dale Gombert (WDFW), WDFW

April 22, 2022

Water Quality Atlas



Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

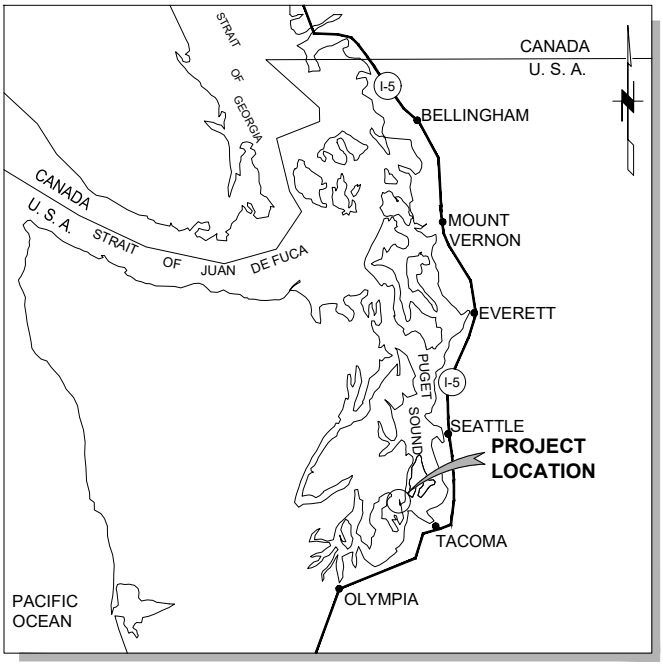
Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Miles
0 0.5 1 2

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and

DEPARTMENT OF ECOLOGY
State of Washington

APPENDIX II: Drawing Set



VICINTIY MAP

NTS



PROJECT LOCATION

NTS

CITY OF GIG HARBOR

MAYOR: TRACIE MARKLEY

PUBLIC WORKS DIRECTOR: JEFF LANGHELM

CITY ADMINISTRATOR: KATRINA KNUTSON

CITY COUNCIL MEMBERS:
JENI WOOCK, ROGER HENDERSON,
BRENDA LYKINS, MARY BARBER,
JULIE MARTIN, LE RODENBERG,
AND SETH STORSET

VERTICAL DATUM CONVERSION

(FEMA BFE = +14 NAVD 88)

MLLW	NGVD 29	NAVD 88	DATUM PLANE
+17.00	+10.54	+14.00	– FEMA FLOOD ELEV.
+13.80	+7.34	+10.80	– HIGHEST OBSERVED
+13.59	+7.13	+10.59	– HIGH TIDE LINE
+12.80	+6.34	+9.80	– ORDINARY HIGH WATER
+11.80	+5.34	+8.80	– MEAN HIGHER HIGH WATER
+11.00	+4.54	+8.00	– MEAN HIGH WATER
+6.90	+0.44	+3.90	– MEAN TIDE LEVEL
+2.80	-3.66	-0.20	– MEAN LOW WATER
0.00	-6.46	-3.00	– MEAN LOWER LOW WATER
-4.30	-10.76	-7.30	– LOWEST OBSERVED

SOURCES:
MLLW: US ARMY CORPS OF ENGINEERS' SOUTH PUGET SOUND REGION TIDAL DATUM #72 - GIG HARBOR.

NGVD 29 AND NAVD 88: NOAAs VERTICAL DATUM TRANSFORMATION (v3.3) AT JERISICH DOCK (LAT 47.3310, LONG -122.5816).

HTL: HTL IS 13.59' MLLW, BASED IN THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

SHEET INDEX

No.	SHEET TITLE
1	TITLE SHEET AND SHEET INDEX
2	EXISTING AND DEMOLITION PLAN
3	OVERALL SITE PLAN
4	PROPOSED DOCK SOUTH PLAN VIEW
5	PROPOSED DOCK NORTH PLAN VIEW
6	PROPOSED SECTION VIEW
7	GANGWAY SECTION
8	FLOAT SECTIONS
9	MITIGATION PLAN

PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

TITLE SHEET
AND SHEET INDEX

ISSUED FOR PERMIT - REV 1

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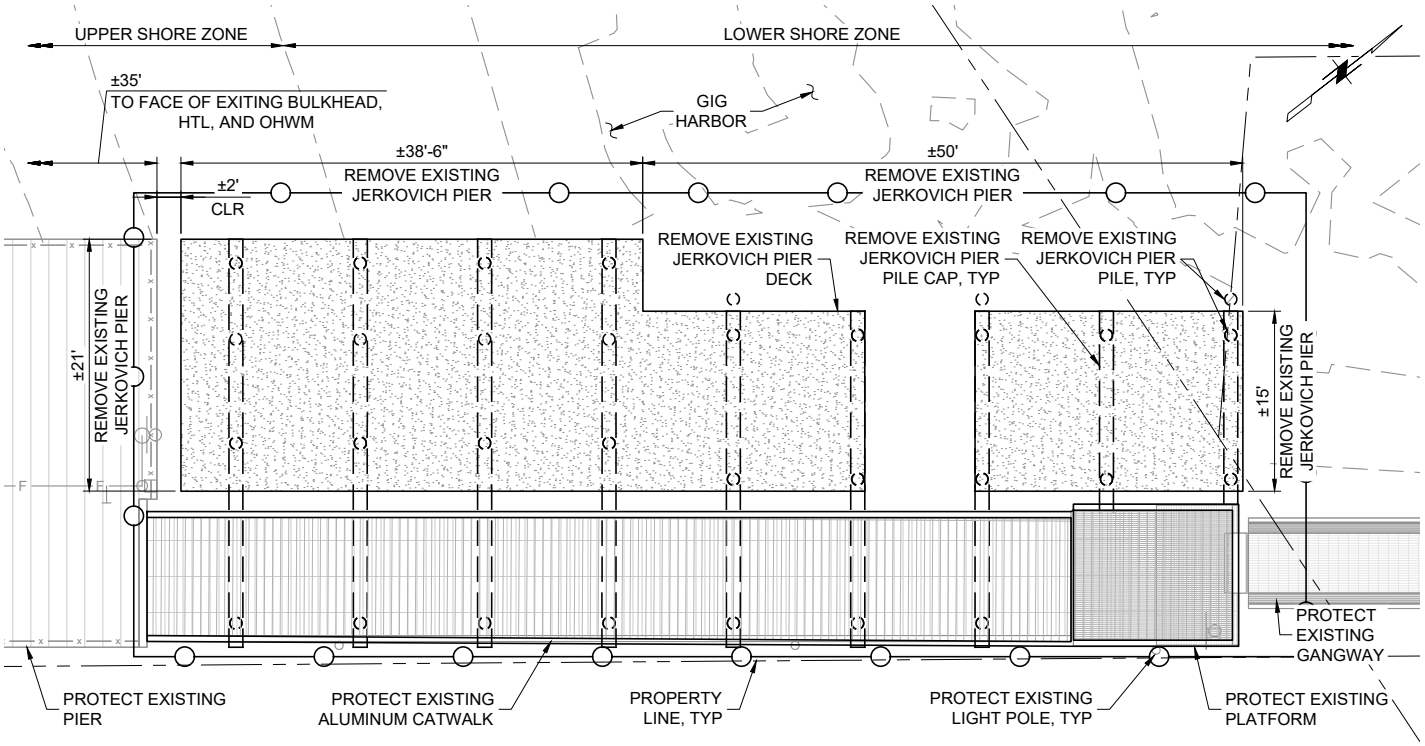
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IN: GIG HARBOR
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PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 1 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212\0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



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GIG HARBOR, WA 98332
MITIGATION PLAN

EXISTING AND DEMOLITION PLAN

8 4 0 8 16
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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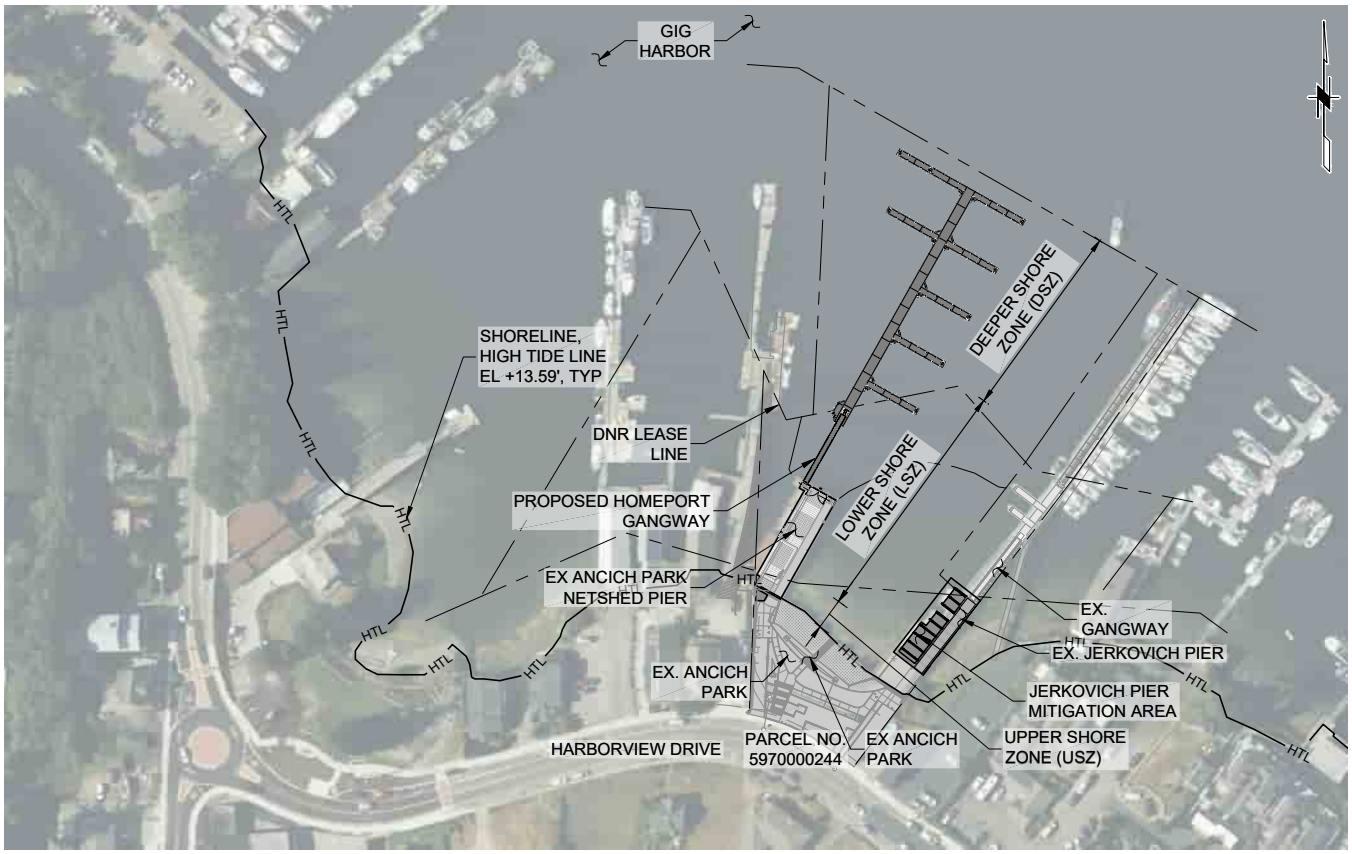
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SHEET: 2 OF 11

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PROJECT INFORMATION

PROJECT ADDRESS
3589 HARBORVIEW DR, GIG HARBOR, WA 98332

PARCEL NO.
5970000244, WM-ZONING (HR)

LEGAL DESCRIPTION
SECTION 05 TOWNSHIP 21N RANGE 02E QUARTER 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

PROJECT NOTES
NO PROPOSED SITE GRADING OR EARTHWORK.
SEE SITE SPECIFIC GEOTECH REPORT BY PND ENGINEERS SEPTEMBER 2016.
PROJECT IS IN SHORELINE JURISDICTION.
CONTRACTOR TO PROTECT EXPOSED SOILS DURING CONSTRUCTION.
ALL EQUIPMENT ACCESS WILL BE VIA BARGE.

DATUMS
ALL HORIZONTAL CONTROL IS RELATIVE TO EXISTING STRUCTURES.
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

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ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OVERALL SITE PLAN

100 50 0 100 200
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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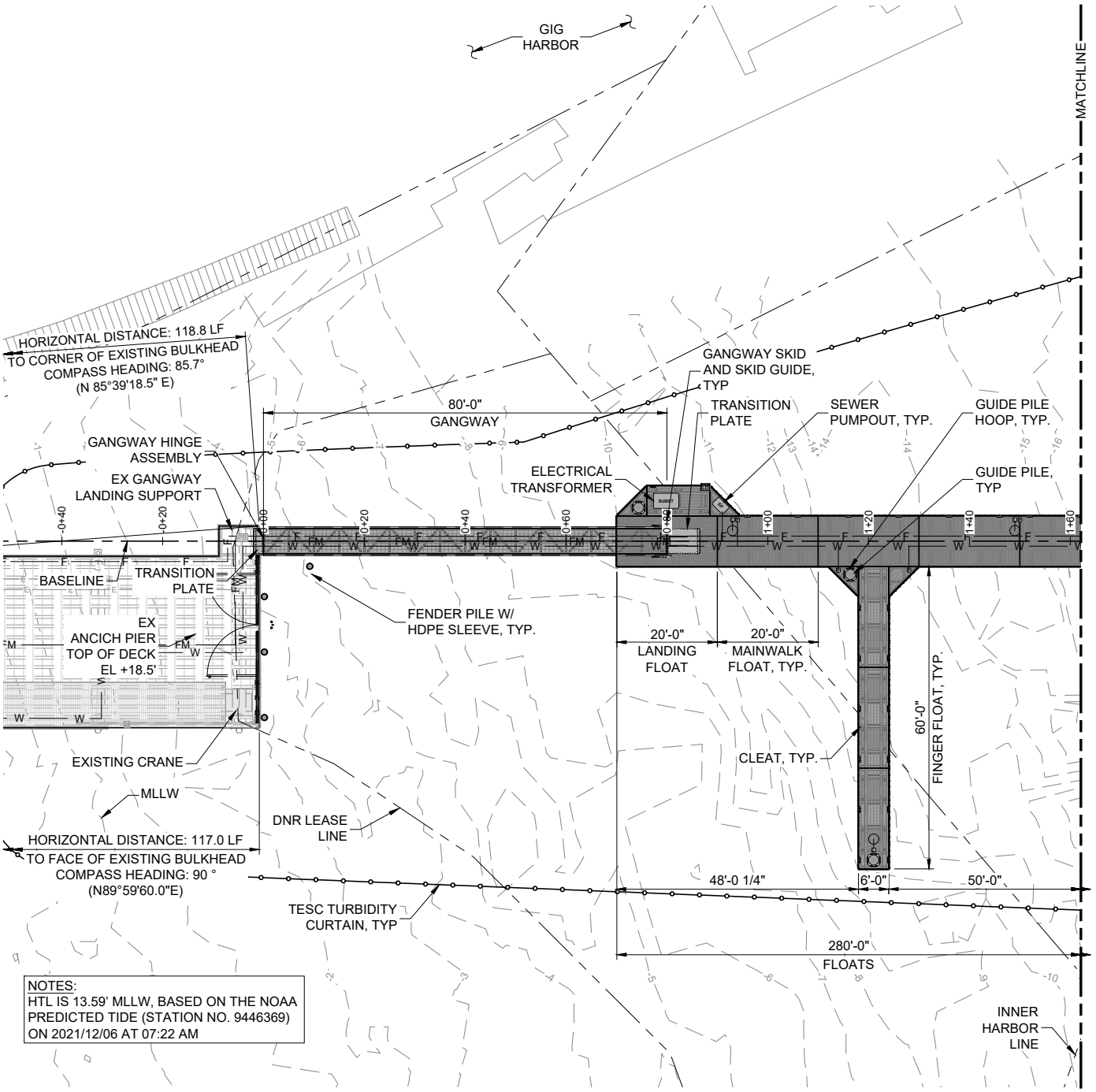
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IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 3 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

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PURPOSE:
PROVIDE HOMEPORT MOORAGE FOR THE RESIDENT COMMERCIAL FISHING FLEET OF GIG HARBOR

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED DOCK
SOUTH PLAN VIEW

15 7.5 0 15 30
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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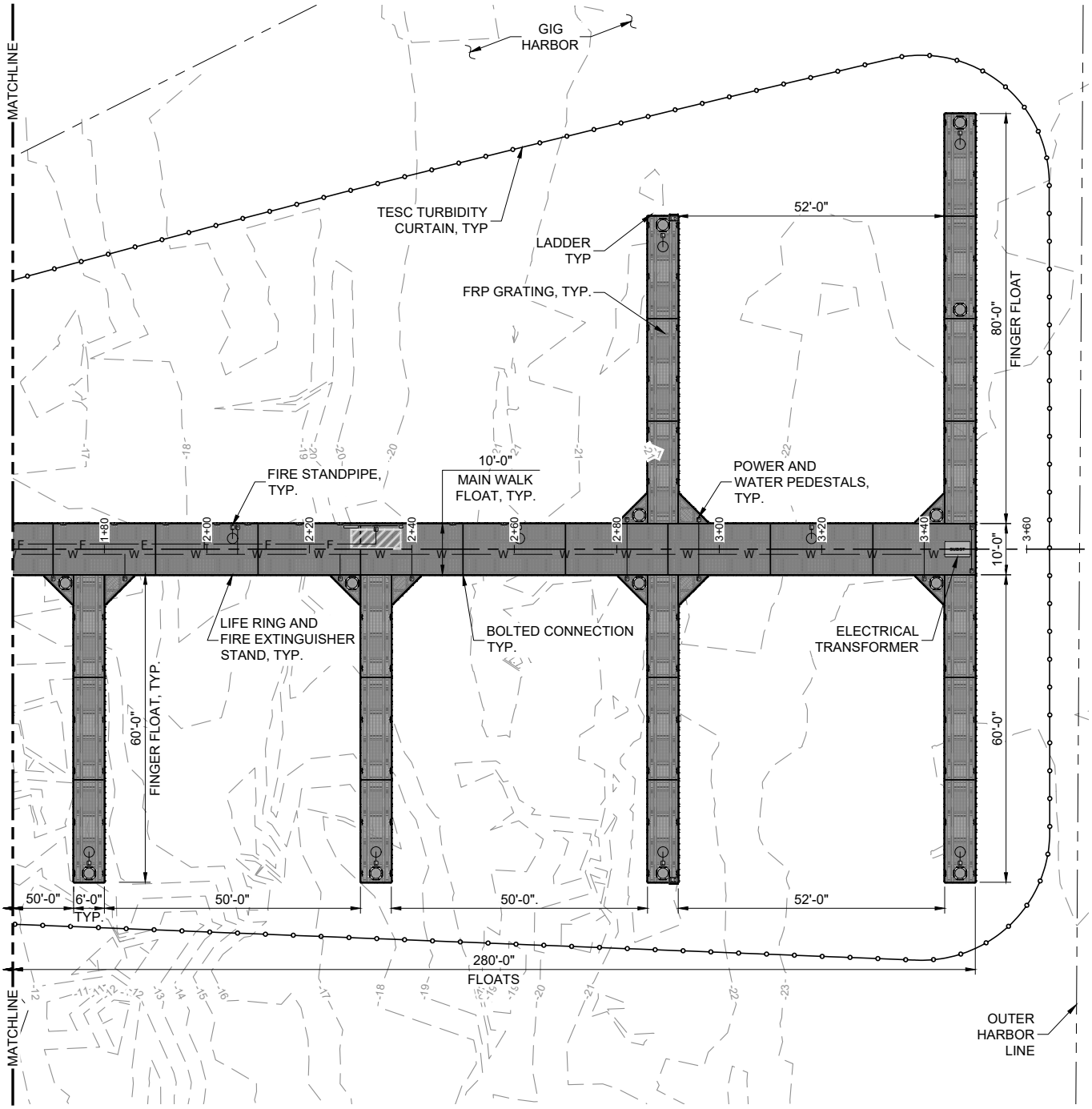
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PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 4 OF 11

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CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED DOCK
NORTH PLAN VIEW

15 7.5 0 15 30
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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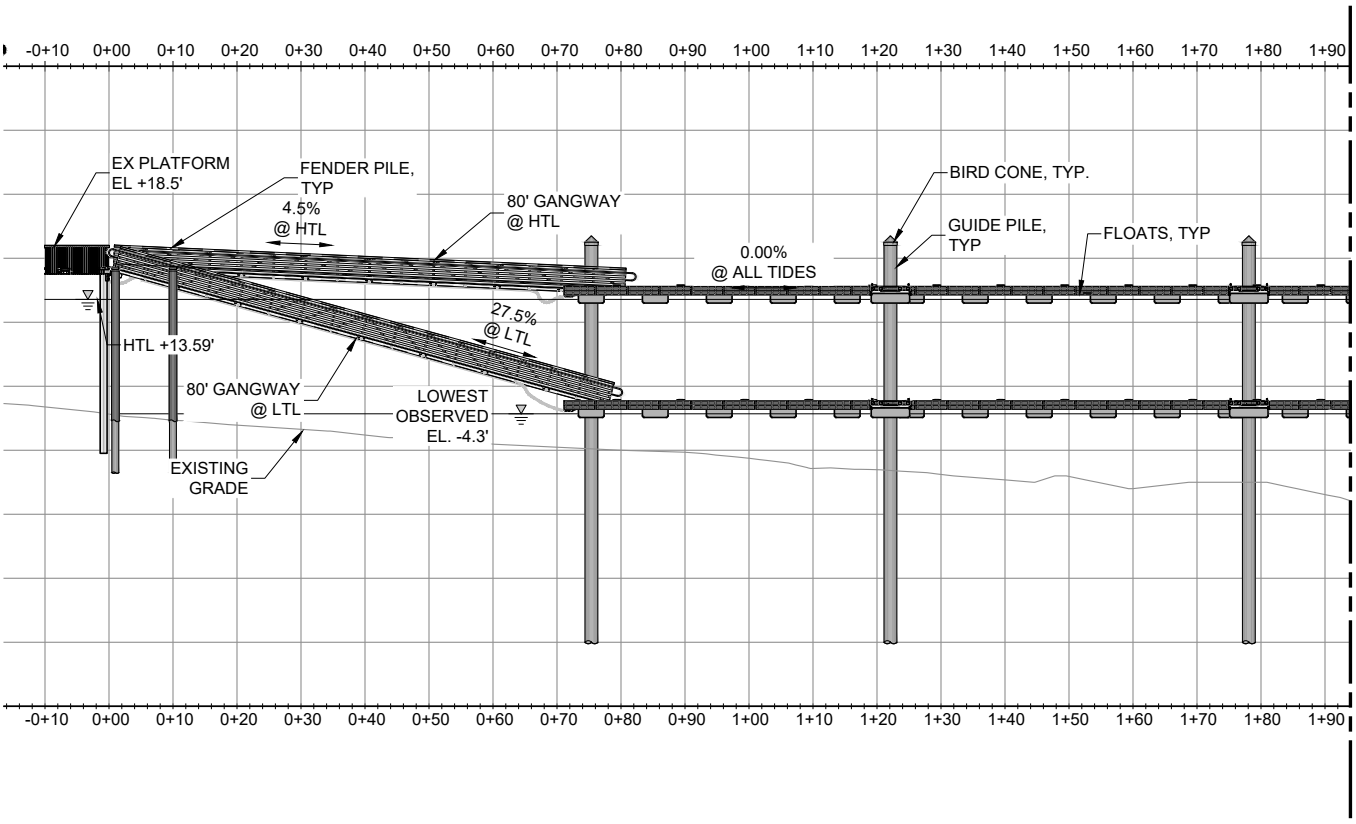
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IN: GIG HARBOR
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PARCEL: ROW

DATE: AUGUST 2025
SHEET: 5 OF 11

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NOTES:
HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM

FINGER FLOAT PILES NOT SHOWN FOR CLARITY

PURPOSE:
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DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

PROPOSED SECTION VIEW

10 5 0 10 20
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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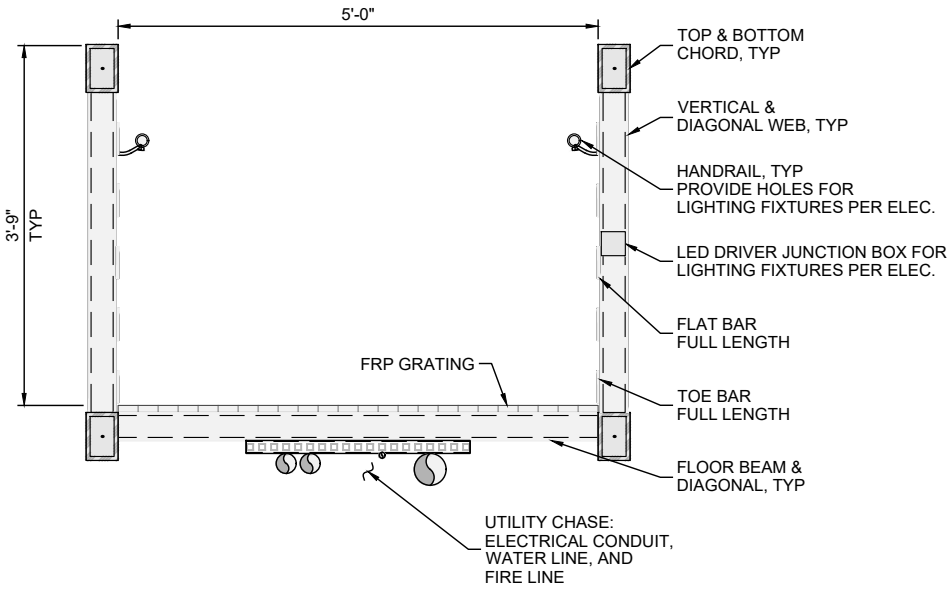
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GANGWAY SECTION

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3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

GANGWAY SECTION

1 ½ 0 1 2
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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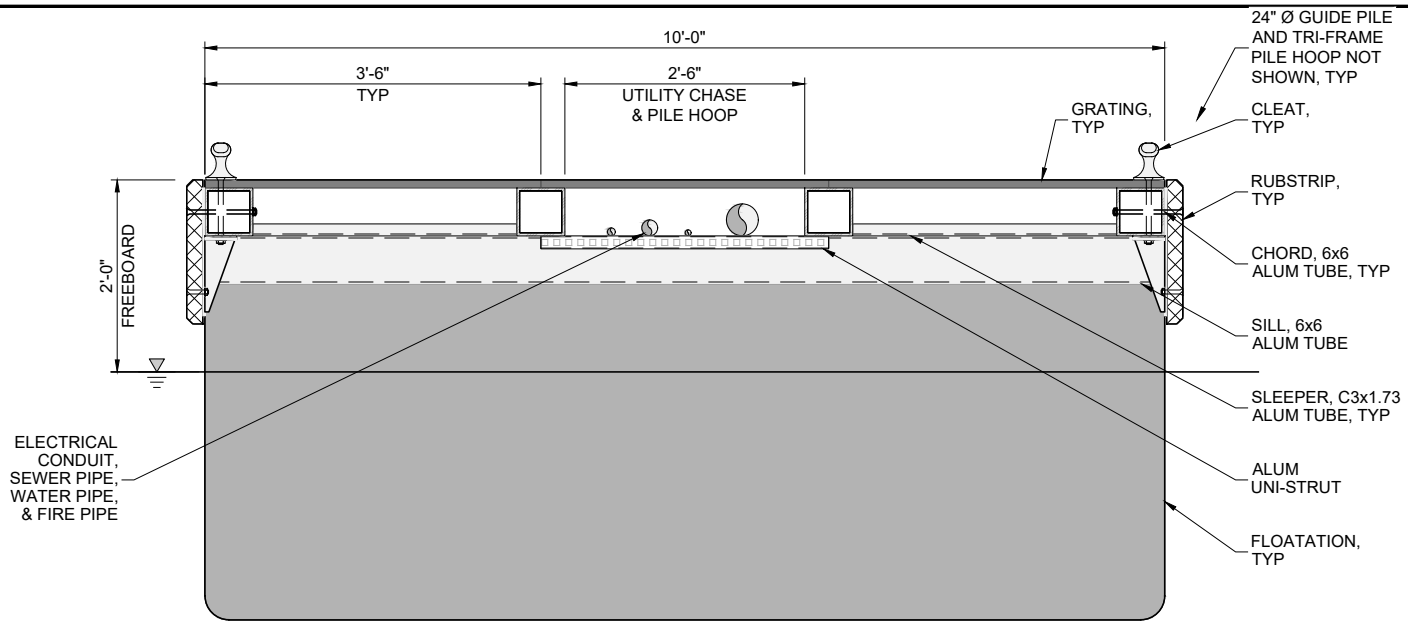
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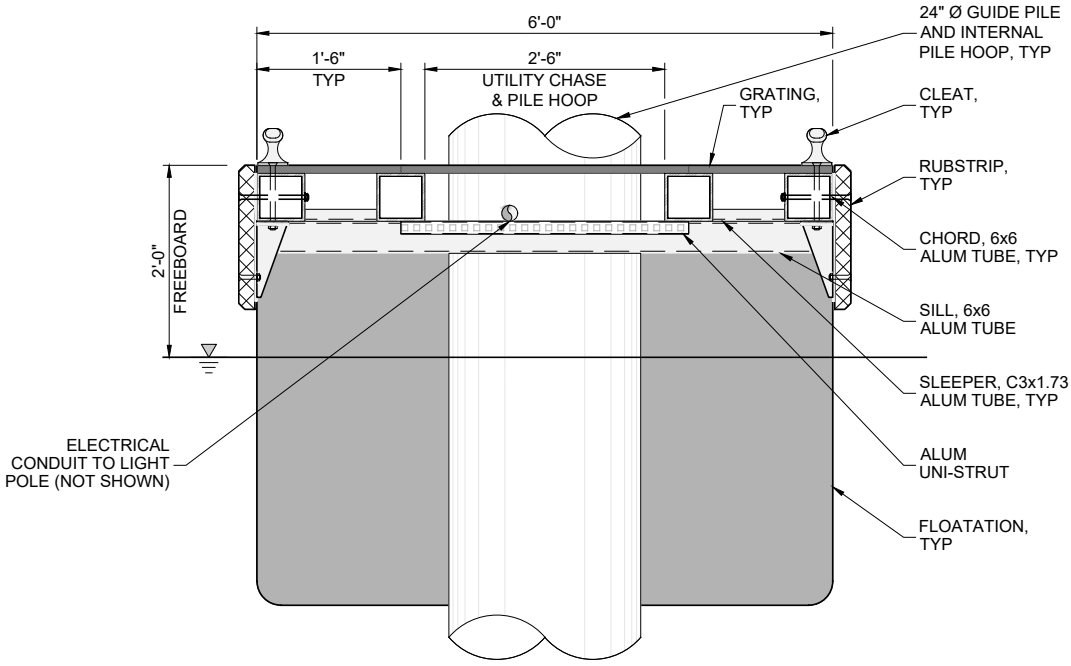
DATE: AUGUST 2025
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8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\ARCHIVE\HOMEPORT JARPA R2.DWG



MAINWALK FLOAT SECTION



FINGER FLOAT SECTION

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GIG HARBOR, WA 98332
MITIGATION PLAN

FLOAT SECTION

1 ½ 0 1 2
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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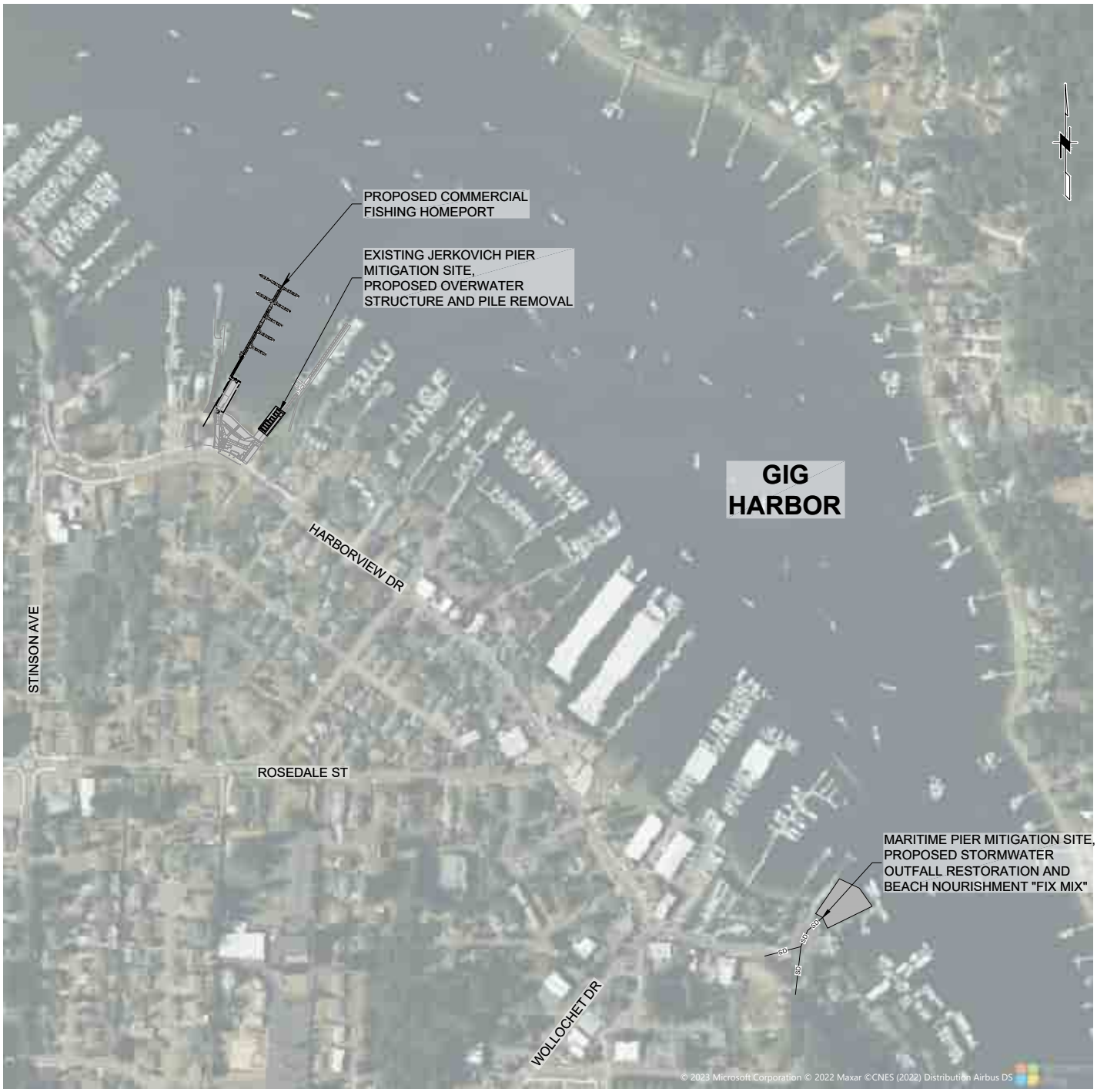
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MITIGATION PLAN

MITIGATION SITE PLAN

250 125 0 250 500
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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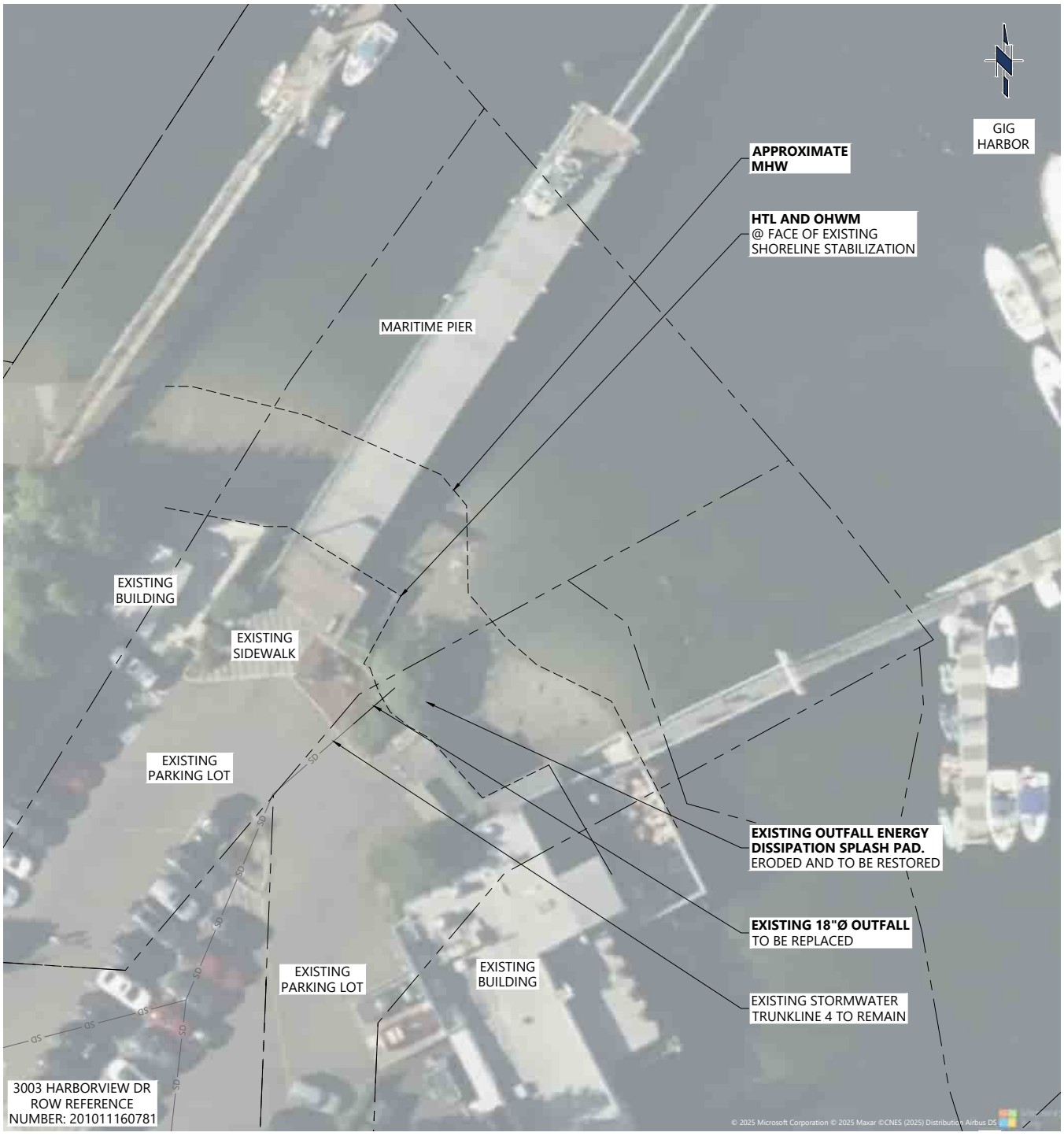
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GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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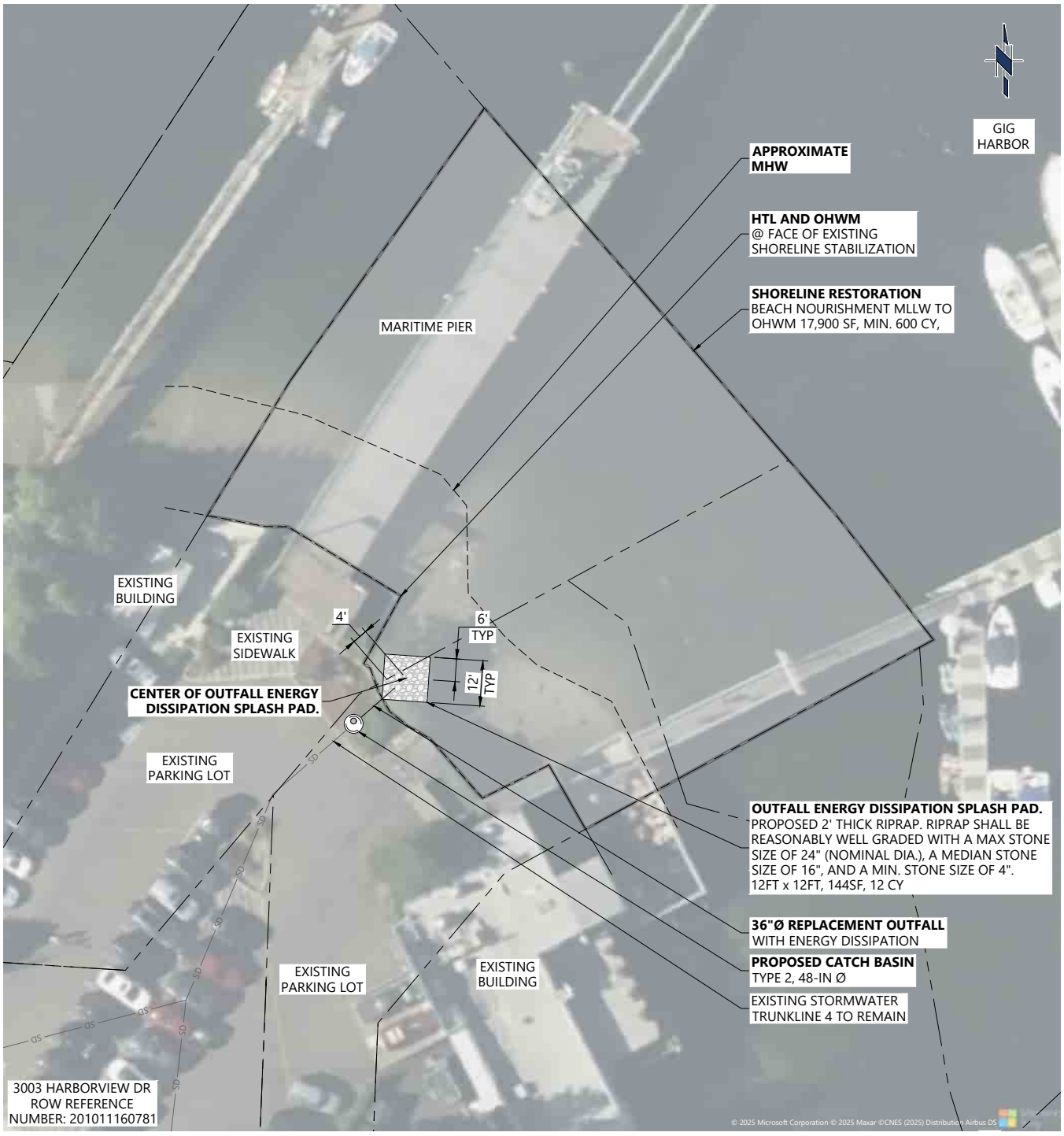
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GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION PROPOSED PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
www.facetnw.com P: 206.523.0024

PROPOSED:
INSTALL A NEW GANGWAY AND FLOATING DOCK WITH UTILITIES FOR COMMERCIAL FISHING VESSELS.

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 11 OF 11

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/28/25 - JSMITH - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - MARITIME PIER OUTFALL RESTORATION.DWG

APPENDIX III: Mitigation Plan

FACET
Formerly DCG / Watershed

Mitigation Plan Revision 6

FOR THE

City of Gig Harbor Commercial Fishing Homeport at Ancich Waterfront Park

AUGUST 2025



Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Facet Marine Division
9706 Fourth Ave NE, Suite 300
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GIG HARBOR

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ACRONYMS AND ABBREVIATIONS

Agencies	U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Washington Department of Ecology, and other local/state regulatory agencies that have jurisdiction
CFR	Code of Federal Regulations
City	City of Gig Harbor
CY	Cubic Yards
HDPE	High-density polyethylene
LSZ	Lower Shore Zone
NOAA	National Oceanic and Atmospheric Administration
SAV	Submerged Aquatic Vegetation
SMA	Shoreline Management Act
SWMMWW	Stormwater Management Manual for Western Washington
UHMW	Ultra High Molecular Weight Polyethylene
USACE	United States Army Corps of Engineers
WAC	Washington Administrative Code (WAC)
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology

REVISION 5

Mitigation plan updates are being provided in August of 2025 after the Design team and the City worked with the USACE, NOAA, and USFWS project reviewers towards a feasible strategy. The reviewers expressed concern about the feasibility of the proposed kelp plantings that accounted for most of the credits generated to offset project impacts, as determined by the Puget Sound Nearshore Conservation Calculator. The previous revision to the report was to remove references to beach nourishment and outfall restoration. This revision adds back beach nourishment and outfall restoration components. No proposed design elements have been revised as part of this revision since the proposed condition was previously designed with avoidance and minimal impact as the main driving factors.

1. INTRODUCTION

In 2013, the City of Gig Harbor (hereafter, City) passed Resolution 949 to capture the visioning process for Ancich Waterfront Park. The park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human-powered crafts and for commercial fishermen will be provided. Construction on the human-powered craft dock was recently completed (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet.

Additionally, the City has a vested interest in the stewardship of the harbor, shoreline, and the overall environmental health in its waterbodies. The City has long understood this need to protect and restore this sensitive environment as the City's culture, history, and identity are built around this natural resource. Protection of the harbor is critical for the sustainability of local fishing, boating and public enjoyment. With this said, the City is excited to include mitigation as part of this project, allowing mitigation efforts to balance project impacts by improving the harbor while providing this proposed access to the harbor.

We have identified several needs in the area that we see offsetting some of the potential impacts of the proposed Commercial Fishing Homeport. These needs are the removal of the existing Jerkovich Pier and restoration of the existing Maritime Pier Outfall including beach nourishment. These mitigation efforts will ensure the community and habitat of Gig Harbor will be healthy and sustainably managed by balancing the impact of Homeport with ecological lift.

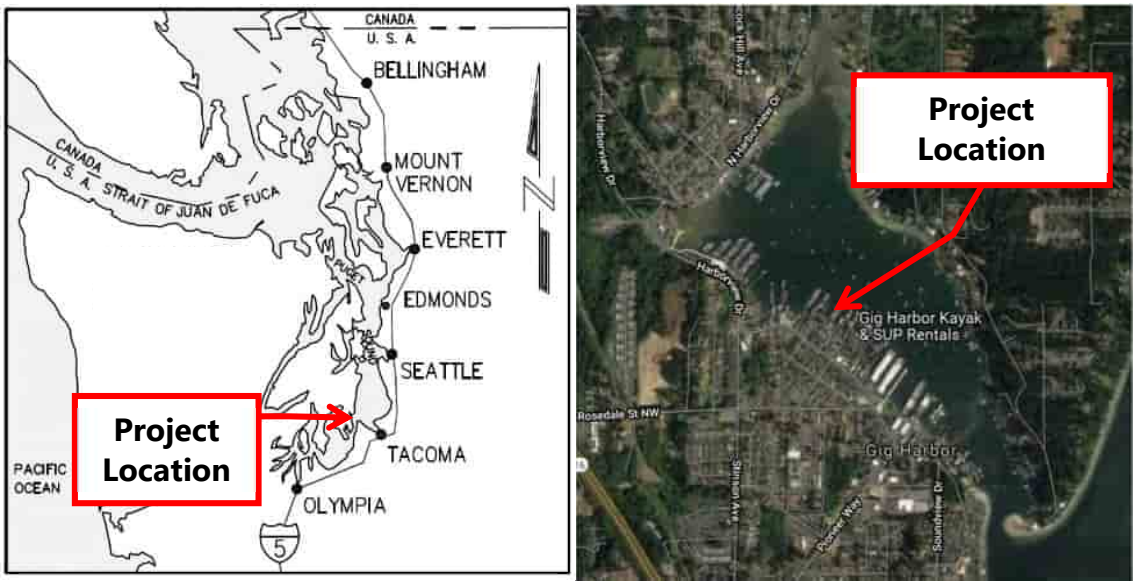


Figure 1. Vicinity and Site Maps

2. PROJECT OVERVIEW

2.1. Existing Conditions

Ancich Waterfront Park is positioned in a heavily residentially developed, commercially developed, and heavily trafficked area of Gig Harbor. The property has a buffer of native shoreline plantings, a concrete bulkhead, two large piers, upland impervious and partially impervious walkway areas, an upland building used for storage of canoes and kayaks and is situated between existing marinas. A habitat survey performed in June 2022 by Marine Surveys & Assessments (MSA) identified *Saccharina* and *Gracilaria* species in the project area (please see the attached macrovegetation survey for further details). Additionally, there is no documented forage fish spawning at the project site. However, surf smelt spawning is documented approximately 0.30 mile from the site, across the water on the northeast side of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2. Proposed Conditions and Project Design

The proposed project consists of the elements listed in this section. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

2.2.1. Float Installation

A main walk floating dock will be installed with an overall length of 280' for access. Finger floats will be attached to the main walk floats using a tri-frame structural attachment to create boat slips. All floats will be fully grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

(6) 60' Finger Floats
(1) 80' Finger Float

2.2.2. Gangway Installation

An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to the previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only.

2.2.3. Guide Pile and Fender Pile Installation

(16) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels.

(4) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an

impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2.2.4. Safety and Utilities

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing locations to the end of the main walk floating dock.

2.2.5. Proposed Mitigation

The proposed mitigation will be installed as part of this project. Please see Section 4 - Mitigation Plan for more details. This mitigation shall include the demolition of the existing Jerkovich Pier, the restoration of a stormwater outfall, and the addition of beach nourishment along the shoreline of Gig Harbor. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements.

3. MITIGATION SEQUENCE

The Washington Department of Fish and Wildlife (WDFW) requires mitigation sequencing as outlined in WAC 220-660-030.102. The U.S. Army Corps of Engineers (USACE) requires mitigation sequencing as stated in 33 CFR 320.4(r)(1). Mitigation sequencing is the hierarchical process of avoiding impacts, minimizing unavoidable impacts, and mitigating for resources lost. The following section describes how this project meets the regulatory requirements by employing mitigation sequencing and analyzing alternatives set forth in WAC 220-660-370.3.b.

3.1. Avoidance and Minimization

The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant to avoid, reduce intensity, or otherwise minimize potential impacts:

- Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
- If required by governing agencies, water quality monitoring will be conducted during excavation activities.
- All man-made construction debris will be collected and will not be allowed to enter waters of the state.
- If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
- All debris or spill material will be properly disposed of at an approved off-site disposal facility.
- As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
- Contractor will maintain a spill containment kit with floating sausage booms on site.
- A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
- Vessels will not run aground.

3.2. Alternatives Analysis

A feasibility study was completed for the proposed commercial fishing homeport in September of 2020. This study considered five different alternatives based on cost, capacity needs, environmental impact, safety, traffic, and conformance to the historic working waterfront. The design selected was the best alternative that met the goals of the community with a minimal number of disadvantages.

Environmentally friendly alternatives were considered during project design. These items are summarized in the table below.

Table 1. Environmentally Friendly Alternatives

Design Element	Benefit
Design and layout	Minimize overwater coverage by designing for specific fisherman fleet parameters
Grated surfaces for floats	Allows for light penetration into the aquatic environment
Grounding avoidance	Design prevents floats from resting on substrate and scouring marine vegetation
Rub rails will be treated timber faced with UHMW	To prevent contact between boats and treated timber and protect rub rail from impact and abrasion
Limited lighting	Prevent light pollution for the community and nearshore habitat

3.3. Mitigation Measures

A compensatory mitigation plan has been developed to help offset the impacts to the shoreline caused by the project. The mitigation plan will follow the requirements set forth in 33 CFR Parts 325 and 332.

3.3.1. Impact Analysis

To quantify the habitat impacts for the proposed structure, the NOAA Fisheries Puget Sound Nearshore Conservation Calculator was used. This calculator was designed to determine how much restoration is needed to offset the impacts of development on the existing habitat. All aspects of the proposed structure and mitigation were inserted into the calculator. Please see the Project Permit Drawings and Puget Sound Nearshore Conservation Calculator for an inventory of the project elements. The mitigation plan in Section 4 was developed based on the debit and credit scenarios presented while utilizing the calculator tool.

4. MITIGATION PLAN

The objective of this compensatory mitigation plan is to provide no net loss of habitat and function within the ecological service area associated with Gig Harbor. This ecological service area is defined as the watershed drainage into Gig Harbor and the Gig Harbor waterbody. This will be achieved by removing the Jerkovich Pier and restoring a stormwater outfall. The stormwater outfall restoration includes beach nourishment. The compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding, to the maximum extent possible, a loss of resources caused by the proposed project. The proposed mitigation components are not sufficient to cover the debit generated by the Calculator. Therefore, any remaining debit will be balanced by purchasing credits from a conservation bank. The mitigation plan meets the requirements of the 2008 compensatory mitigation rule, as set forth in 33 CFR 332.4(c).

4.1. Overwater Structure Removal

4.1.1. Site Selection Criteria

On-site mitigation will occur by removing the Jerkovich Pier, which is a creosote structure, at Ancich Waterfront Park. This mitigation effort is in the project's associated ecological service area and contributes to offsetting any net loss of resources caused by the proposed project.

4.1.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation.

4.1.3. Mitigation Work Plan

The existing Jerkovich Pier will be removed. This will remove 32 creosote-treated timber piles that are 12-inches in diameter. Additionally, 1,558.5 square feet of solid asphalt decking will be removed. The timber piles will be removed with a vibratory hammer and will be properly disposed of after removal. The estimated amount of creosote to be removed is sixteen tons. See the NOAA Conservation Calculator for final approved mitigation amounts.

4.1.4. Maintenance Plan

The removal of Jerkovich Pier is a one-time action that will not require maintenance.

4.1.5. Performance Standards

Jerkovich Pier piles and material will be removed and properly disposed of. Disposal documents and photos will be provided for this work.

4.1.6. Monitoring

Monitoring for this proposed mitigation work is a one-time action that will not require continued monitoring. Disposal documents and photos will be provided for this work.

4.1.7. Long-Term Management Plan

Long-term management is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.8. Adaptive Management Plan

An adaptive management plan is not proposed for the Jerkovich Pier removal due to the nature of the work being done. The removal of the structure requires a one-time action.

4.1.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

4.2. Outfall Restoration and Beach Nourishment

4.2.1. Site Selection Criteria

Compensatory mitigation efforts in the project's associated ecological service area contribute to avoiding any net loss of resources caused by the proposed project. The stormwater outfall at Maritime Pier in Gig Harbor, approximately 0.5 miles south of the project site has been identified as an opportune mitigation option. This outfall was selected due to its current degraded state and on the recommendation of WDFW. The outfall has created a plunge pool and contributed to sediment erosion into Gig Harbor (Figures 2 and 3). Please see the outfall restoration plan in Appendix I for more details.



Figure 2. Maritime Pier Stormwater Outfall (looking northwest)



Figure 3. Plunge Pool below Maritime Pier Stormwater Outfall

4.2.2. Site Protection

This mitigation site is City-owned property on the Gig Harbor shoreline. Ownership of the property by the City will ensure long-term protection of the compensatory mitigation. The beach nourishment will also be protected by the Washington State Shoreline Management Act (SMA) and the City of Gig Harbor Shoreline Master Program which carries out the policies outlined in the SMA.

4.2.3. Mitigation Work Plan

The existing outfall shall be restored to conform to the requirements of the Washington Department of Ecology (WDOE) Stormwater Management Manual for Western Washington (SWMMWW). The outfall has failed to provide energy dissipation and has led to the development of a plunge pool that is several feet deep (Figure 3 above). As a result, sediment erosion is carried into Gig Harbor. When this material is carried into the harbor, turbidity occurs which can affect light penetration and lead to negative impacts on ecological productivity and habitat quality. Shoreline erosion at this outfall can be seen from aerial images.



Figure 4. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2006)



Figure 5. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2016)

The proposed restoration will include adding beach nourishment to fill the plunge pool and designing the outlet to provide energy dissipation during high flow events. Long-term benefits of this restoration include additional habitat for aquatic species and an increase in water quality within Gig Harbor.

Beach nourishment was selected for mitigation to add habitat along the highly developed shoreline of Gig Harbor. This mitigation technique will help to stabilize the stormwater outfall at Maritime Pier to limit sediment runoff into the water and replace the loss of existing material that was washed away. A total of 600 cubic yards (CY) of beach nourishment will be applied along the shoreline where the stormwater outfall restoration occurs.

4.2.4. Maintenance Plan

The stormwater outfall is designed to be a one-time action that is self-sustainable. However, as a high energy area, maintenance may be needed if stabilization efforts are unsuccessful. Maintenance may include the addition of new beach nourishment in the future. Additionally, the City will maintain the outfall per the requirements of the SWMMWW.

4.2.5. Performance Standards

Photos of the stormwater outfall before and after restoration will be used to document the restoration at the site. Receipts of purchased materials will be provided to confirm the proposed 600 CY of beach nourishment that will be added to the shoreline. Photo documentation will also serve to support this mitigation effort.

4.2.6. Monitoring

After the stormwater outfall is restored and beach nourishment is applied, monitoring will occur each year following the project for three years to ensure proper stormwater outfall operation and acceptable

beach conditions after nourishment. If these mitigation measures fail to meet the project requirements within the monitoring period, contingencies must be implemented, and additional monitoring will be required.

4.2.7. Long-Term Management Plan

Long-term management is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.8. Adaptive Management Plan

An adaptive management plan is not proposed for this placement due to the nature of the work being done. The Beach Nourishment Placement is a one-time action.

4.2.9. Financial Assurances

The City will be responsible for the costs associated with construction, mitigation, and monitoring efforts and has accepted this responsibility. Due to the fact most of this mitigation effort shall be completed as part of the project construction, we believe that this is sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

5. CONCLUSION

The proposed Commercial Fishing Homeport was designed to provide educational opportunities and moorage to the local fishing fleet. The Puget Sound Nearshore Conservation Calculator was used to determine the habitat impacts as a result of the overwater structure. To compensate for these impacts, mitigation compliant with 33 CFR 332.4(c) will occur at both on and off-site locations within the same watershed. These habitat improvements will include the removal of the Jerkovich Pier, the restoration of a stormwater outfall at Maritime Pier, and the placement of beach nourishment along the Gig Harbor shoreline. Any remaining calculated impacts will be offset by purchasing sufficient credits from an approved conservation bank.

6. REFERENCES

NOAA Fisheries. Puget Sound Nearshore Conservation Calculator. 2020. Accessed via *https://www.fisheries.noaa.gov/resource/tool-app/puget-sound-nearshore-conservation-calculator*

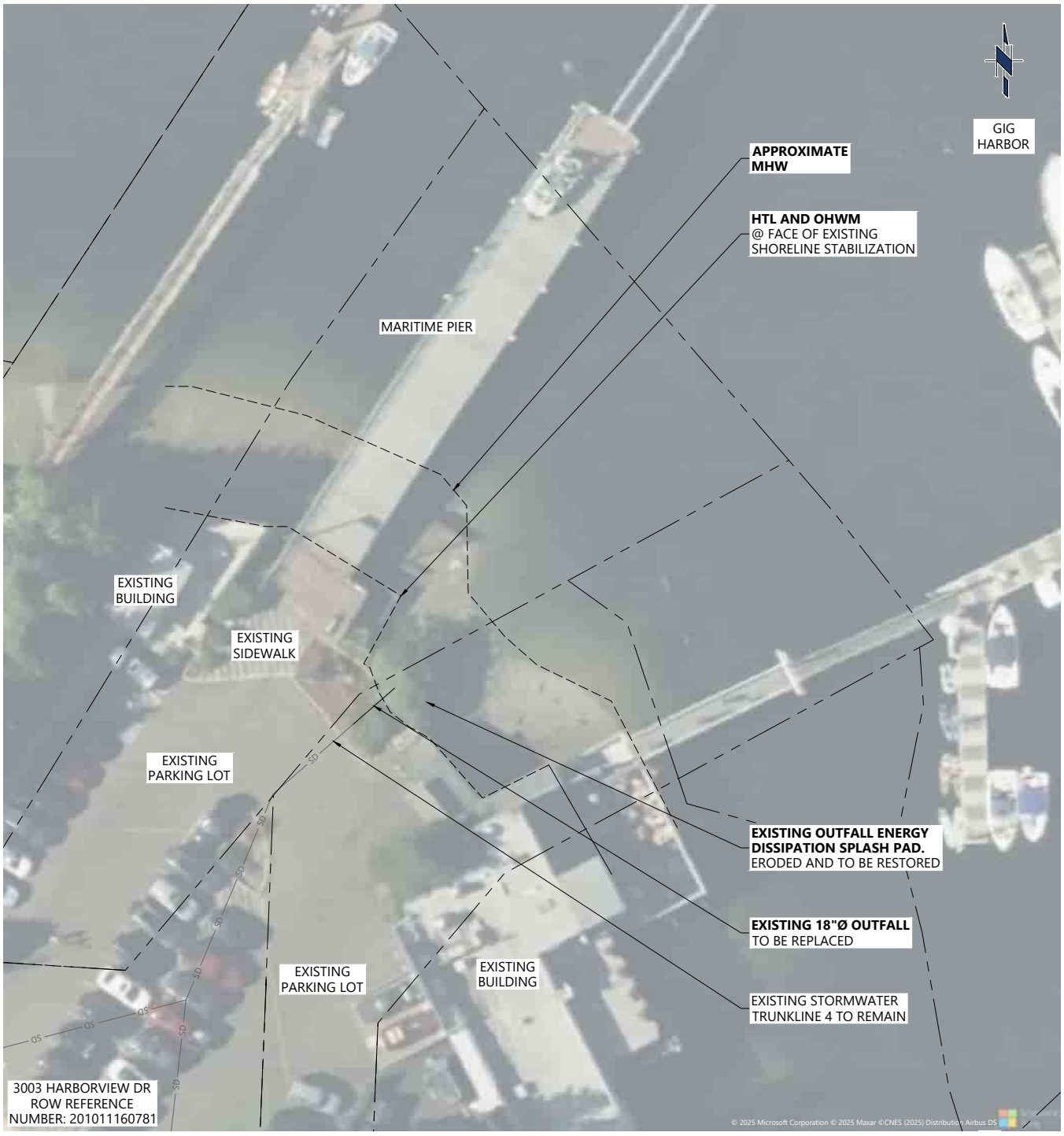
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WDFW's Cumulative Risk Model. Washington State Aquatic Habitat Guidelines Program. 2014. Accessed via *https://wdfw.wa.gov/sites/default/files/publications/01583/wdfw01583.pdf*

APPENDIX I: Outfall Restoration Plan



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

20 10 0 20 40
SCALE IN FEET

ISSUED FOR PERMIT - REV 1

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Seattle, WA 98115
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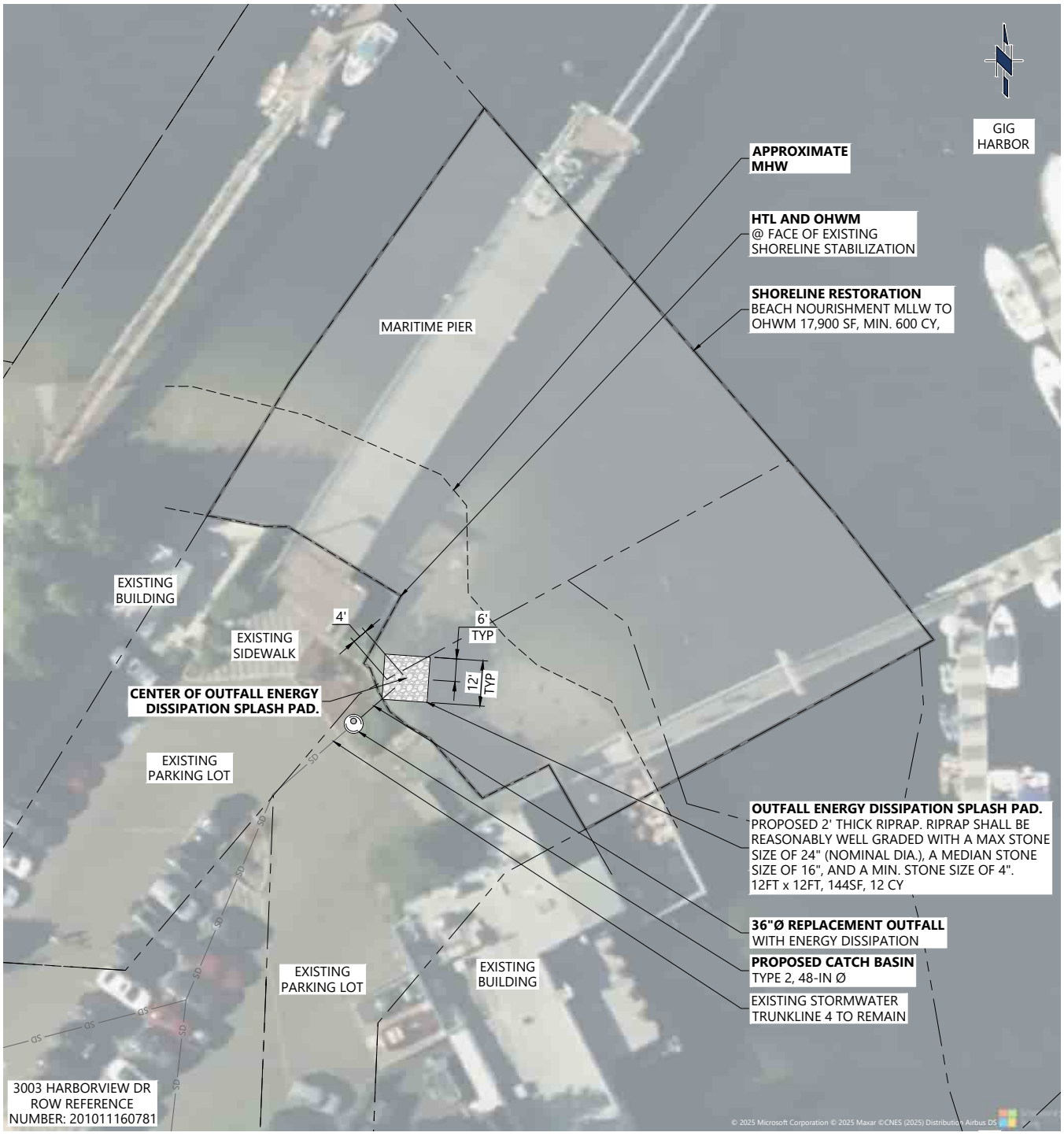
PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 1 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CGGH - MARITIME PIER OUTFALL RESTORATION.DWG



PURPOSE:
IMPROVE THE SHORELINE WITH OUTFALL REPLACEMENT AND SHORELINE RESTORATION

DATUM:
NAD83/2011

APPLICATION BY:
CITY OF GIG HARBOR

ADJACENT PROPERTY OWNERS:
SEE APPLICATION

3003 HARBORVIEW DR.
GIG HARBOR, WA 98332
MITIGATION PLAN

OUTFALL REPLACEMENT AND SHORELINE RESTORATION EXISTING PLAN

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SCALE IN FEET

ISSUED FOR PERMIT - REV 1

FACET
9706 4th Ave NE, Suite 300
Seattle, WA 98115
www.facetnw.com P: 206.523.0024

PROPOSED:
OUTFALL REPLACEMENT AND SHORELINE RESTORATION

IN: GIG HARBOR
AT: GIG HARBOR, WA, 98332
PIERCE COUNTY
S08 T21 R02
PARCEL: ROW

DATE: AUGUST 2025
SHEET: 2 OF 2

ANY CHANGES TO THE APPROVED PLAN NEEDS TO BE REVIEWED AND APPROVED

8/25/25 - DMCDONALD - Z:\SHARED\PROJECTS\ACTIVE\2021\12\21212.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CGGH - MARITIME PIER OUTFALL RESTORATION.DWG

APPENDIX IV: Macrovegetation Survey

360-385-4073
info@msaenvironmental.com

MARINE SURVEYS & ASSESSMENTS

380 Jefferson Street
Port Townsend WA 98368

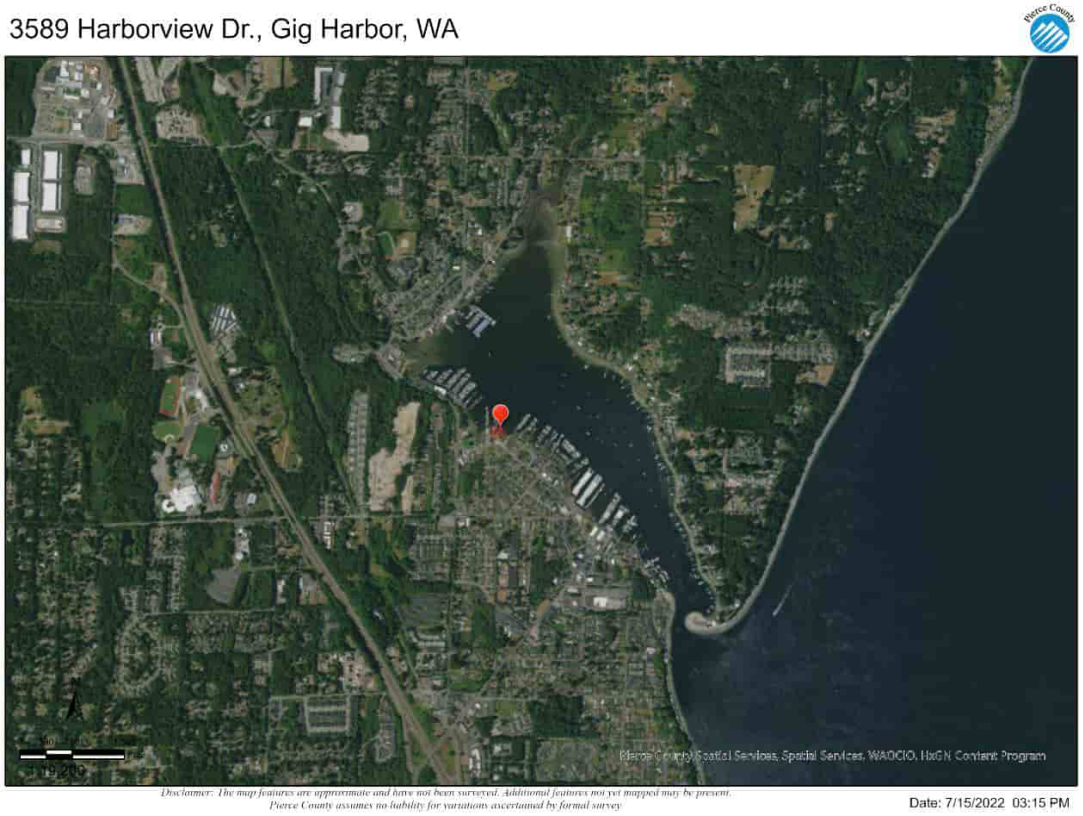
Homeport Marina Habitat Report
(to accompany map dated 7/13/2022)

Introduction

Davido Consulting Group requested a habitat survey of all submerged aquatic vegetation surrounding a proposed floating moorage structure. The project site is located at 3589 Harborview Drive, Gig Harbor, WA in Gig Harbor Bay (Figure 1). The purpose of this survey was to identify and document all flora, fauna, substrate types, depths, and other qualitative information required for submitting federal, state, and local permit applications for this project.

On June 14, 2022 from approximately 10:00 am to 3:00 pm, Amy Leitman and Darby Flanagan of Marine Surveys & Assessments (MSA) surveyed the subtidal zone using SCUBA along 21 survey transects in the area of the proposed structure. Weather was calm and sunny; water visibility was 5 ft.

Figure 1. Vicinity map of project location (credit: Pierce County PublicGIS)



Survey Methods & Findings

The survey transect baseline was established along the end of the existing overwater structure on site. Twenty-one (21) transects in total were surveyed from north to south, or when looking at the water from shore, from left to right (T1 to T21) in the area of the proposed structure plus a 25-ft buffer. Transects were 10 ft apart and 400 ft long in total.

The area of the survey ranged in elevation from -1.1 ft MLLW to -24.8 ft MLLW. For each transect, MSA divers navigated from the baseline, using a 300 ft survey tape with attached compass. Data related to the substrate, depth, and species coverage were recorded every 10 ft along each transect, using a slate and waterproof paper.

The substrate recorded within the survey area was mainly sand and mud throughout. Occurrences of attached *Saccharina* (5-30%) and *Gracilaria* (5-20%) were observed within the survey area. Total macroalgae percent cover was calculated to be approximately 3.7% of the proposed structure's footprint and 25-ft buffer. The full results can be seen in Table 1. A map of the results can be seen in Figure 5.

Invertebrates noted during the survey were anemones (*Metridium*), sea quills (*Stylatula*), and sea cucumbers. Small, silvery fish assumed to be forage fish were also observed.

Please note the depths in this report are for referencing habitat data only can have an error of +/- 1 ft; these depths should not be used for engineering purposes.

All protocols and methods used for this habitat survey are in compliance with guidance given by Washington Department of Fish and Wildlife (WDFW) published in *Eelgrass/Macroalgae Habitat Interim Survey Guidelines* (rev. 06/16/2008) and with the procedures outlined in the U.S. Army Corps of Engineers' (USACE) *Components of a Complete Eelgrass Delineation Report* (January 9, 2018).

Figure 2. Photo of the structure used as the survey baseline



DRAFT

Figure 3. Photo of the inner tidal zone looking landward

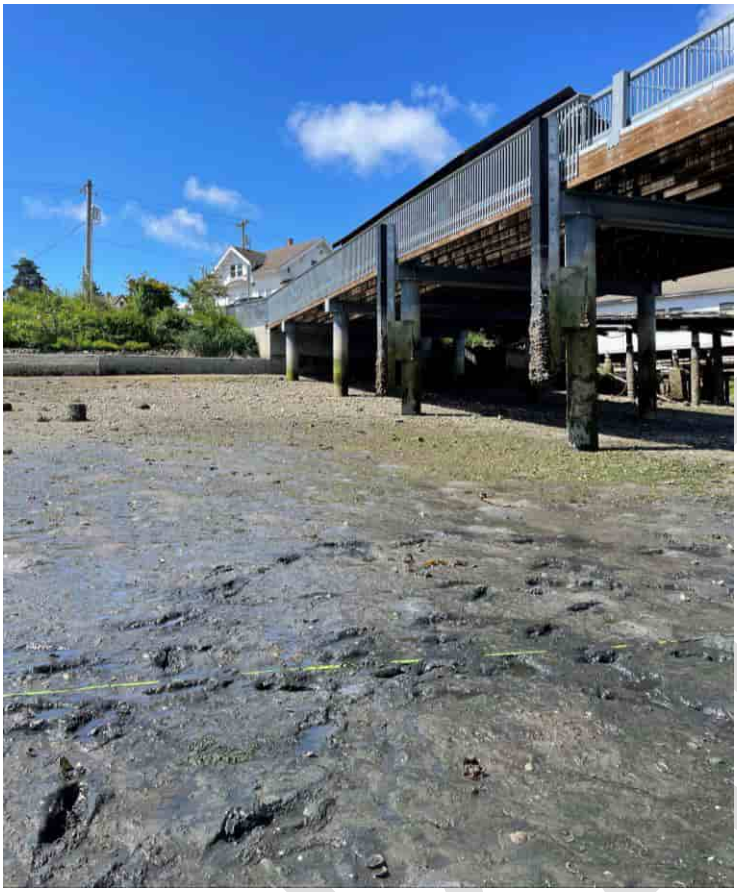


Figure 4. *Gracilaria* and *Saccharina* found in the survey area



Figure 5. Habitat survey results map

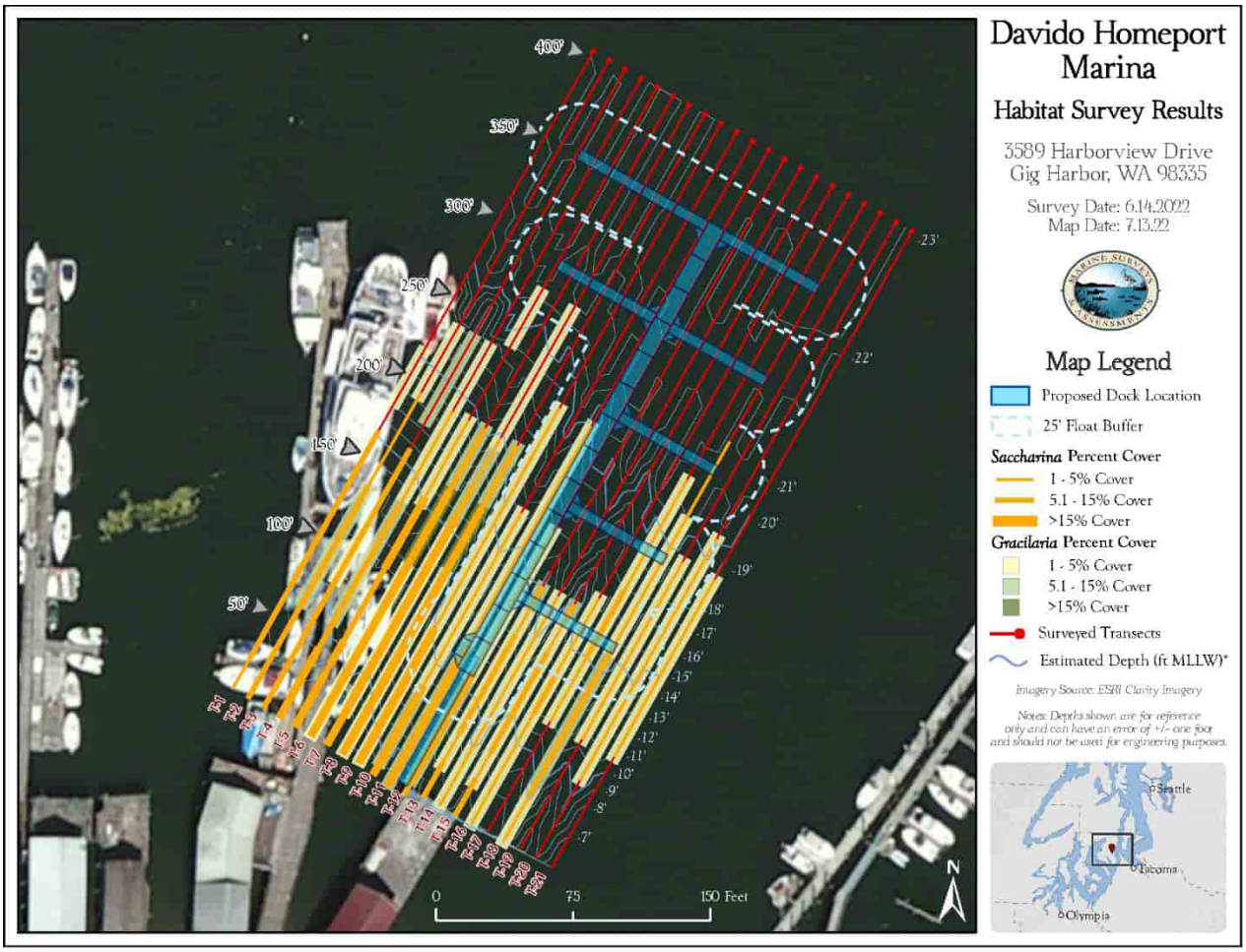


Table 1. Habitat survey results

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
1	0	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	9	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	10	-1.1	Sand/Mud/Cobble.	Saccharina 5%.
1	20	-2.1	Sand/Mud/Cobble.	Saccharina 10%.
1	30	-2.1	Sand/Mud/Cobble.	Saccharina 10%.
1	40	-3.1	Sand/Mud/Cobble.	Saccharina 10%.
1	50	-3.1	Sand/Mud/Cobble.	Saccharina 10%.
1	60	-4.1	Sand/Mud/Cobble.	Saccharina 10%.
1	70	-4.1	Sand/Mud/Cobble.	Saccharina 10%.
1	80	-5.1	Sand/Mud/Cobble.	Saccharina 10%.
1	90	-5.1	Sand/Mud/Cobble.	Saccharina 10%.
1	100	-6.1	Sand/Mud/Cobble.	Saccharina 10%.
1	110	-6.1	Sand/Mud/Cobble.	Saccharina 10%.
1	120	-7.1	Sand/Mud/Cobble.	Saccharina 15%.
1	130	-7.1	Sand/Mud/Cobble.	Saccharina 15%.
1	140	-8.1	Sand/Mud/Cobble.	Saccharina 15%.
1	150	-9.1	Sand/Mud/Cobble; Diatom Film.	Saccharina 15%.
1	160	-10.1	Sand/Mud/Cobble; Diatom Film.	Barren
1	170	-11.2	Sand/Mud/Cobble; Diatom Film.	Barren
1	180	-12.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	190	-13.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	200	-14.2	Sand/Mud; Diatom Film.	Gracilaria 5%.
1	210	-15.2	Sand/Mud; Diatom Film.	Barren
1	220	-15.2	Sand/Mud; Diatom Film.	Barren
1	230	-16.2	Sand/Mud; Diatom Film.	Barren
1	240	-16.2	Mud; Diatom Film.	Barren
1	250	-16.2	Mud; Diatom Film.	Barren
1	260	-19.2	Mud; Diatom Film.	Barren
1	270	-20.2	Mud; Diatom Film.	Barren
1	280	-20.2	Mud; Metridium, Diatom Film.	Barren
1	290	-21.2	Mud; Metridium, Diatom Film.	Barren
1	300	-21.2	Mud; Metridium, Diatom Film.	Barren
1	310	-22.2	Mud; Diatom Film.	Barren
1	320	-22.2	Mud; Diatom Film.	Barren
1	330	-22.2	Mud; Diatom Film.	Barren
1	340	-22.2	Mud; Diatom Film.	Barren
1	350	-23.3	Mud; Diatom Film.	Barren
1	360	-23.3	Mud.	Barren
1	370	-23.3	Mud.	Barren

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1	380	-23.3	Mud.	Barren
1	390	-23.3	Mud; Old outfall.	Barren
1	400	-24.3	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
2	0		Sand/Mud.	Saccharina 15%.
2	8	-1.5	Sand/Mud.	Saccharina 15%.
2	10	-1.5	Sand/Mud.	Saccharina 15%.
2	20	-2.5	Sand/Mud.	Saccharina 15%.
2	30	-3.5	Sand/Mud.	Saccharina 15%.
2	40	-3.5	Sand/Mud.	Saccharina 15%.
2	50	-4.5	Sand/Mud.	Saccharina 10%.
2	60	-4.5	Sand/Mud.	Saccharina 10%.
2	70	-5.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	80	-5.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	90	-6.5	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
2	100	-6.5	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	110	-7.5	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	120	-7.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	130	-8.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
2	140	-8.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	150	-9.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	160	-10.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	170	-11.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	180	-12.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	190	-13.4	Sand/Mud; Diatom Film.	Saccharina 5%.
2	200	-14.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	210	-15.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	220	-16.4	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
2	230	-16.4	Mud; Diatom Film.	Gracilaria 5%.
2	240	-19.4	Mud; Diatom Film.	Barren
2	250	-19.4	Mud; Diatom Film.	Barren
2	260	-20.4	Mud.	Barren
2	270	-21.4	Mud.	Barren
2	280	-21.4	Mud.	Barren
2	290	-22.4	Mud.	Barren
2	300	-22.3	Mud.	Barren
2	310	-23.3	Mud.	Barren
2	320	-23.3	Mud.	Barren
2	330	-23.3	Mud.	Barren
2	340	-23.3	Mud.	Barren

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2	350	-24.3	Mud.	Barren
2	360	-24.3	Mud.	Barren
2	370	-24.3	Mud.	Barren
2	380	-24.3	Mud.	Barren
2	390	-24.3	Mud; Old outfall.	Barren
2	400	-24.3	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
3	0		Sand/Mud/Cobble.	Saccharina 15%.
3	7	-1.5	Sand/Mud/Cobble.	Saccharina 15%.
3	10	-1.5	Sand/Mud/Cobble.	Saccharina 15%.
3	20	-2.5	Sand/Mud/Cobble.	Saccharina 10%.
3	30	-2.6	Sand/Mud/Cobble.	Saccharina 10%.
3	40	-3.6	Sand/Mud/Cobble.	Saccharina 10%.
3	50	-3.6	Sand/Mud/Cobble.	Saccharina 10%.
3	60	-4.6	Sand/Mud/Cobble.	Saccharina 10%.
3	70	-4.6	Sand/Mud/Cobble.	Saccharina 10%.
3	80	-5.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	90	-5.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	100	-6.6	Sand/Mud/Cobble.	Saccharina 10%; Gracilaria 5%.
3	110	-6.6	Sand/Mud/Cobble.	Saccharina 10%.
3	120	-7.6	Sand/Mud/Cobble.	Saccharina 15%.
3	130	-7.6	Sand/Mud/Cobble.	Saccharina 15%.
3	140	-8.6	Sand/Mud/Cobble.	Saccharina 15%.
3	150	-9.6	Sand/Mud/Cobble; Diatom Film.	Saccharina 15%.
3	160	-10.6	Sand/Mud/Cobble; Diatom Film.	Barren
3	170	-11.6	Sand/Mud/Cobble; Diatom Film.	Barren
3	180	-12.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	190	-13.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	200	-14.6	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	210	-15.7	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	220	-15.7	Sand/Mud; Diatom Film.	Gracilaria 10%.
3	230	-16.7	Sand/Mud; Diatom Film.	Barren
3	240	-16.7	Mud; Diatom Film.	Barren
3	250	-16.7	Mud; Diatom Film.	Barren
3	260	-19.7	Mud; Diatom Film.	Barren
3	270	-20.7	Mud; Diatom Film.	Barren
3	280	-20.7	Mud; Metridium, Diatom Film.	Barren
3	290	-21.7	Mud; Metridium, Diatom Film.	Barren
3	300	-21.7	Mud; Metridium, Diatom Film.	Barren
3	310	-22.7	Mud; Diatom Film.	Barren

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3	320	-22.7	Mud; Diatom Film.	Barren
3	330	-22.7	Mud; Diatom Film.	Barren
3	340	-22.7	Mud; Diatom Film.	Barren
3	350	-23.7	Mud.	Barren
3	360	-23.7	Mud.	Barren
3	370	-23.7	Mud.	Barren
3	380	-23.8	Mud.	Barren
3	390	-23.8	Mud; Old outfall.	Barren
3	400	-24.8	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
4	0		Sand/Mud.	Saccharina 30%.
4	5	-2.0	Sand/Mud.	Saccharina 30%.
4	10	-2.0	Sand/Mud.	Saccharina 30%.
4	20	-3.0	Sand/Mud.	Saccharina 30%.
4	30	-4.0	Sand/Mud.	Saccharina 30%.
4	40	-4.0	Sand/Mud.	Saccharina 30%.
4	50	-5.0	Sand/Mud.	Saccharina 15%.
4	60	-5.0	Sand/Mud.	Saccharina 15%.
4	70	-6.0	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	80	-6.0	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	90	-6.9	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
4	100	-6.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	110	-7.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	120	-7.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	130	-8.9	Sand/Mud; Diatom Film.	Saccharina 15%; Gracilaria 10%.
4	140	-8.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	150	-9.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	160	-10.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	170	-11.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	180	-12.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	190	-13.9	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
4	200	-14.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	210	-15.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	220	-16.9	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	230	-16.9	Mud; Metridium, Diatom Film.	Gracilaria 5%.
4	240	-19.9	Mud; Metridium, Diatom Film.	Barren
4	250	-19.9	Mud; Diatom Film.	Barren
4	260	-20.8	Mud; Diatom Film.	Barren
4	270	-21.8	Mud; Diatom Film.	Barren
4	280	-21.8	Mud; Diatom Film.	Barren

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4	290	-22.8	Mud; Diatom Film.	Barren
4	300	-22.8	Mud.	Barren
4	310	-23.8	Mud.	Barren
4	320	-23.8	Mud.	Barren
4	330	-23.8	Mud.	Barren
4	340	-23.8	Mud.	Barren
4	350	-24.8	Mud.	Barren
4	360	-24.8	Mud.	Barren
4	370	-24.8	Mud.	Barren
4	380	-24.8	Mud.	Barren
4	390	-24.8	Mud; Old outfall.	Barren
4	400	-24.8	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
5	0		Sand/Mud.	Saccharina 30%.
5	4	-2.0	Sand/Mud.	Saccharina 30%.
5	10	-2.0	Sand/Mud.	Saccharina 30%.
5	20	-2.0	Sand/Mud.	Saccharina 30%.
5	30	-3.0	Sand/Mud.	Saccharina 10%.
5	40	-4.0	Sand/Mud.	Saccharina 20%.
5	50	-5.0	Sand/Mud.	Saccharina 15%.
5	60	-6.0	Sand/Mud.	Saccharina 15%.
5	70	-6.1	Sand/Mud.	Saccharina 15%.
5	80	-6.1	Sand/Mud.	Saccharina 15%.
5	90	-6.1	Sand/Mud.	Saccharina 15%.
5	100	-7.1	Sand/Mud.	Saccharina 30%.
5	110	-8.1	Sand/Mud.	Saccharina 30%.
5	120	-9.1	Sand/Mud.	Saccharina 30%.
5	130	-9.1	Sand/Mud.	Saccharina 30%.
5	140	-10.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	150	-11.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	160	-11.1	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
5	170	-12.1	Sand/Mud; Metridium.	Saccharina 5%; Gracilaria 5%.
5	180	-13.1	Sand/Mud; Metridium.	Saccharina 5%; Gracilaria 5%.
5	190	-14.1	Sand/Mud; Metridium.	Barren
5	200	-15.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	210	-16.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	220	-17.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	230	-18.1	Sand/Mud; Metridium, Diatom Film.	Barren
5	240	-19.2	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
5	250	-20.2	Mud; Metridium, Diatom Film.	Gracilaria 5%.

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5	260	-20.2	Mud; Metridium, Diatom Film.	Gracilaria 5%.
5	270	-21.2	Mud; Metridium, Diatom Film.	Barren
5	280	-22.2	Mud; Diatom Film.	Barren
5	290	-22.2	Mud; Diatom Film.	Barren
5	300	-23.2	Mud; Diatom Film.	Barren
5	310	-23.2	Mud; Diatom Film.	Barren
5	320	-23.2	Mud; Diatom Film.	Barren
5	330	-23.2	Mud.	Barren
5	340	-23.2	Mud.	Barren
5	350	-23.2	Mud.	Barren
5	360	-23.2	Mud.	Barren
5	370	-23.2	Mud.	Barren
5	380	-23.2	Mud.	Barren
5	390	-23.2	Mud; Old outfall.	Barren
5	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
6	0	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	5	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	10	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	20	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	30	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	40	-5.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	50	-6.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	60	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	70	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	80	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	90	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
6	100	-7.4	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
6	110	-8.4	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
6	120	-8.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	130	-9.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	140	-10.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	150	-11.4	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
6	160	-12.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	170	-13.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	180	-14.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	190	-15.4	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
6	200	-16.4	Sand/Mud; Metridium, Diatom Film.	Barren
6	210	-17.4	Sand/Mud; Metridium, Diatom Film.	Barren
6	220	-18.3	Sand/Mud; Metridium, Diatom Film.	Barren

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6	230	-18.3	Sand/Mud; Diatom Film.	Barren
6	240	-19.3	Sand/Mud; Diatom Film.	Barren
6	250	-19.3	Mud; Diatom Film.	Barren
6	260	-20.3	Mud; Diatom Film.	Barren
6	270	-21.3	Mud; Diatom Film.	Barren
6	280	-21.3	Mud; Diatom Film.	Barren
6	290	-21.3	Mud; Diatom Film.	Barren
6	300	-21.3	Mud; Diatom Film.	Barren
6	310	-22.3	Mud; Diatom Film.	Barren
6	320	-22.3	Mud; Diatom Film.	Barren
6	330	-22.3	Mud.	Barren
6	340	-22.3	Mud.	Barren
6	350	-22.3	Mud.	Barren
6	360	-22.3	Mud.	Barren
6	370	-22.3	Mud.	Barren
6	380	-22.3	Mud.	Barren
6	390	-22.3	Mud; Old outfall.	Barren
6	400	-22.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
7	0	-2.5	Sand/Mud.	Saccharina 30%.
7	10	-2.5	Sand/Mud.	Saccharina 30%.
7	20	-2.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	30	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	40	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	50	-5.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	60	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	70	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	80	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	90	-6.5	Sand/Mud.	Saccharina 20%; Gracilaria 5%.
7	100	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	110	-8.5	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	120	-9.6	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	130	-9.6	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
7	140	-10.6	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
7	150	-11.6	Sand/Mud.	Saccharina 15%; Gracilaria 10%.
7	160	-11.6	Sand/Mud.	Saccharina 5%; Gracilaria 10%.
7	170	-12.6	Sand/Mud; Metridium, Diatom Film.	Saccharina 5%; Gracilaria 10%.
7	180	-13.6	Sand/Mud; Metridium, Diatom Film.	Saccharina 5%; Gracilaria 5%.
7	190	-14.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	200	-15.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.

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7	210	-16.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	220	-17.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	230	-18.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	240	-19.6	Sand/Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	250	-20.6	Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	260	-20.6	Mud; Metridium, Diatom Film.	Gracilaria 5%.
7	270	-21.6	Mud; Metridium, Diatom Film.	Barren
7	280	-22.6	Mud; Diatom Film.	Barren
7	290	-22.7	Mud; Diatom Film.	Barren
7	300	-23.7	Mud; Diatom Film.	Barren
7	310	-23.7	Mud; Diatom Film.	Barren
7	320	-23.7	Mud; Diatom Film.	Barren
7	330	-23.7	Mud; Diatom Film.	Barren
7	340	-23.7	Mud.	Barren
7	350	-23.7	Mud.	Barren
7	360	-23.7	Mud.	Barren
7	370	-23.7	Mud.	Barren
7	380	-23.7	Mud.	Barren
7	390	-23.7	Mud; Old outfall.	Barren
7	400	-23.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
8	0	-3.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	5	-2.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	10	-2.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	20	-3.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	30	-4.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	40	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	50	-6.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	60	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	70	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	80	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	90	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
8	100	-7.9	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
8	110	-8.9	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
8	120	-8.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	130	-9.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	140	-10.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	150	-11.9	Sand/Mud; Diatom Film.	Saccharina 20%; Gracilaria 20%.
8	160	-12.9	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	170	-13.9	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.

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8	180	-14.8	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	190	-15.8	Sand/Mud; Diatom Film.	Saccharina 10%; Gracilaria 10%.
8	200	-16.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	210	-17.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	220	-18.8	Sand/Mud; Metridium, Diatom Film.	Barren
8	230	-18.8	Sand/Mud; Diatom Film.	Barren
8	240	-19.8	Sand/Mud; Diatom Film.	Barren
8	250	-19.8	Mud; Diatom Film.	Barren
8	260	-20.8	Mud; Diatom Film.	Barren
8	270	-21.8	Mud; Diatom Film.	Barren
8	280	-21.8	Mud; Diatom Film.	Barren
8	290	-21.8	Mud; Diatom Film.	Barren
8	300	-21.8	Mud; Diatom Film.	Barren
8	310	-22.8	Mud; Diatom Film.	Barren
8	320	-22.8	Mud; Diatom Film.	Barren
8	330	-22.8	Mud.	Barren
8	340	-22.8	Mud.	Barren
8	350	-22.7	Mud.	Barren
8	360	-22.7	Mud.	Barren
8	370	-22.7	Mud.	Barren
8	380	-22.7	Mud.	Barren
8	390	-22.7	Mud; Old outfall.	Barren
8	400	-22.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
9	0		Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	1	-3.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	10	-4.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	20	-5.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	25	-6.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	30	-7.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	40	-7.0	Sand/Mud.	Saccharina 30%; Gracilaria 5%.
9	50	-8.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	60	-9.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	70	-9.0	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 5%.
9	80	-10.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	90	-11.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	100	-11.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	110	-12.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	120	-12.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	130	-13.0	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.

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9	140	-14.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	150	-15.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	160	-15.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	170	-16.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	180	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	190	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	200	-17.1	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	210	-18.1	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
9	220	-19.1	Mud; Diatom Film.	Barren
9	230	-19.1	Mud; Diatom Film.	Barren
9	240	-20.1	Mud; Diatom Film.	Barren
9	250	-21.1	Mud; Metridium, Diatom Film.	Barren
9	260	-21.1	Mud; Metridium, Diatom Film.	Barren
9	270	-21.1	Mud; Metridium, Diatom Film.	Barren
9	280	-22.1	Mud; Metridium, Diatom Film.	Barren
9	290	-22.1	Mud; Metridium, Diatom Film.	Barren
9	300	-22.1	Mud; Metridium, Diatom Film.	Barren
9	310	-23.1	Mud; Metridium, Diatom Film.	Barren
9	320	-23.2	Mud; Diatom Film.	Barren
9	330	-23.2	Mud; Diatom Film.	Barren
9	340	-23.2	Mud; Diatom Film.	Barren
9	350	-23.2	Mud; Diatom Film.	Barren
9	360	-23.2	Mud.	Barren
9	370	-23.2	Mud.	Barren
9	380	-23.2	Mud.	Barren
9	390	-23.2	Mud; Old outfall.	Barren
9	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
10	-2	-3.4	Sand/Mud.	Saccharina 30%.
10	0	-3.4	Sand/Mud.	Saccharina 30%.
10	5	-4.4	Sand/Mud.	Saccharina 30%.
10	10	-5.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	20	-5.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	30	-6.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	40	-7.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	50	-8.4	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
10	60	-9.4	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
10	70	-10.4	Mud.	Saccharina 5%; Gracilaria 5%.
10	80	-10.4	Mud.	Saccharina 5%; Gracilaria 5%.
10	90	-11.4	Mud.	Saccharina 5%; Gracilaria 5%.

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10	100	-12.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	110	-13.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	120	-13.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	130	-14.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	140	-15.4	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	150	-16.3	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	160	-16.3	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
10	170	-17.3	Mud; Diatom Film.	Barren
10	180	-18.3	Mud; Metridium, Diatom Film.	Barren
10	190	-18.3	Mud; Metridium, Diatom Film.	Barren
10	200	-19.3	Mud; Metridium, Diatom Film.	Barren
10	210	-20.3	Mud; Diatom Film.	Barren
10	220	-20.3	Mud; Diatom Film.	Barren
10	230	-21.3	Mud; Diatom Film.	Barren
10	240	-21.3	Mud; Metridium, Diatom Film.	Barren
10	250	-22.3	Mud; Metridium, Diatom Film.	Barren
10	260	-22.3	Mud; Metridium, Diatom Film.	Barren
10	270	-22.3	Mud; Metridium, Diatom Film.	Barren
10	280	-22.3	Mud; Metridium, Diatom Film.	Barren
10	290	-23.3	Mud; Metridium, Diatom Film.	Barren
10	300	-23.3	Mud; Metridium, Diatom Film.	Barren
10	310	-23.3	Mud; Diatom Film.	Barren
10	320	-23.3	Mud; Diatom Film.	Barren
10	330	-23.2	Mud.	Barren
10	340	-23.2	Mud.	Barren
10	350	-23.2	Mud.	Barren
10	360	-23.2	Mud.	Barren
10	370	-23.2	Mud.	Barren
10	380	-23.2	Mud.	Barren
10	390	-23.2	Mud; Old outfall.	Barren
10	400	-23.2	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
11	-3	-3.4	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	0	-3.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	10	-4.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	20	-5.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	25	-6.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	30	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	40	-7.5	Sand/Mud.	Saccharina 30%; Gracilaria 10%.
11	50	-8.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.

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11	60	-9.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.
11	70	-9.5	Sand/Mud; Diatom Film.	Saccharina 30%; Gracilaria 10%.
11	80	-10.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	90	-11.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	100	-11.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	110	-12.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	120	-12.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	130	-13.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	140	-14.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	150	-15.5	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	160	-15.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	170	-16.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	180	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	190	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	200	-17.6	Sand/Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	210	-18.6	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
11	220	-19.6	Mud; Diatom Film.	Barren
11	230	-19.6	Mud; Diatom Film.	Barren
11	240	-20.6	Mud; Diatom Film.	Barren
11	250	-21.6	Mud; Metridium, Diatom Film.	Barren
11	260	-21.6	Mud; Metridium, Diatom Film.	Barren
11	270	-21.6	Mud; Metridium, Diatom Film.	Barren
11	280	-22.6	Mud; Metridium, Diatom Film.	Barren
11	290	-22.6	Mud; Metridium, Diatom Film.	Barren
11	300	-22.6	Mud; Metridium, Diatom Film.	Barren
11	310	-23.6	Mud; Metridium, Diatom Film.	Barren
11	320	-23.6	Mud; Diatom Film.	Barren
11	330	-23.6	Mud; Diatom Film.	Barren
11	340	-23.7	Mud; Diatom Film.	Barren
11	350	-23.7	Mud; Diatom Film.	Barren
11	360	-23.7	Mud.	Barren
11	370	-23.7	Mud.	Barren
11	380	-23.7	Mud.	Barren
11	390	-23.7	Mud; Old outfall.	Barren
11	400	-23.7	Mud.	Barren

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
12	-4	-3.9	Sand/Mud.	Saccharina 10%.
12	0	-3.9	Sand/Mud.	Saccharina 10%.
12	5	-4.9	Sand/Mud.	Saccharina 10%.
12	10	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.

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12	20	-5.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	30	-6.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	40	-7.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	50	-8.9	Sand/Mud.	Saccharina 30%; Gracilaria 15%.
12	60	-9.9	Sand/Mud.	Saccharina 20%; Gracilaria 10%.
12	70	-10.9	Mud.	Saccharina 20%; Gracilaria 10%.
12	80	-10.9	Mud.	Saccharina 5%; Gracilaria 5%.
12	90	-11.9	Mud.	Saccharina 5%; Gracilaria 5%.
12	100	-12.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	110	-13.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	120	-13.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	130	-14.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	140	-15.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	150	-16.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	160	-16.8	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
12	170	-17.8	Mud; Diatom Film.	Barren
12	180	-18.8	Mud; Metridium, Diatom Film.	Barren
12	190	-18.8	Mud; Metridium, Diatom Film.	Barren
12	200	-19.8	Mud; Metridium, Diatom Film.	Barren
12	210	-20.8	Mud; Diatom Film.	Barren
12	220	-20.8	Mud; Diatom Film.	Barren
12	230	-21.8	Mud; Diatom Film.	Barren
12	240	-21.8	Mud; Metridium, Diatom Film.	Barren
12	250	-22.8	Mud; Metridium, Diatom Film.	Barren
12	260	-22.8	Mud; Metridium, Diatom Film.	Barren
12	270	-22.8	Mud; Metridium, Diatom Film.	Barren
12	280	-22.8	Mud; Metridium, Diatom Film.	Barren
12	290	-23.8	Mud; Metridium, Diatom Film.	Barren
12	300	-23.8	Mud; Metridium, Diatom Film.	Barren
12	310	-23.7	Mud; Diatom Film.	Barren
12	320	-23.7	Mud; Diatom Film.	Barren
12	330	-23.7	Mud; Diatom Film.	Barren
12	340	-23.7	Mud; Diatom Film.	Barren
12	350	-23.7	Mud.	Barren
12	360	-23.7	Mud.	Barren
12	370	-23.7	Mud.	Barren
12	380	-23.7	Mud.	Barren
12	390	-23.7	Mud; Old outfall.	Barren
12	400	-23.7	Mud.	Barren

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Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
13	0	-7.0	Sand/Mud.	Saccharina 10%.
13	10	-7.0	Sand/Mud.	Saccharina 10%.
13	20	-8.0	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	30	-8.0	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	40	-9.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	50	-9.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	60	-10.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	70	-11.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	80	-11.0	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	90	-11.9	Sand/Mud.	Saccharina 10%; Gracilaria 5%.
13	100	-12.9	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	110	-12.9	Sand/Mud.	Saccharina 5%; Gracilaria 5%.
13	120	-13.9	Sand/Mud.	Saccharina 10%; Gracilaria 10%.
13	130	-14.9	Sand/Mud.	Barren
13	140	-14.9	Sand/Mud.	Barren
13	150	-15.9	Sand/Mud.	Barren
13	160	-16.9	Mud; Diatom Film.	Barren
13	170	-17.9	Mud; Diatom Film.	Barren
13	180	-17.9	Mud; Diatom Film.	Barren
13	190	-18.9	Mud; Diatom Film.	Barren
13	200	-19.9	Mud; Diatom Film.	Barren
13	210	-19.9	Mud; Diatom Film.	Barren
13	220	-20.9	Mud; Diatom Film.	Barren
13	230	-20.9	Mud; Diatom Film.	Barren
13	240	-21.9	Mud; Diatom Film.	Barren
13	250	-21.9	Mud; Diatom Film.	Barren
13	260	-21.8	Mud; Diatom Film.	Barren
13	270	-22.8	Mud; Metridium, Diatom Film.	Barren
13	280	-22.8	Mud; Metridium, Diatom Film.	Barren
13	290	-22.8	Mud; Metridium, Diatom Film.	Barren
13	300	-22.8	Mud; Metridium, Diatom Film.	Barren
13	310	-22.8	Mud; Metridium, Diatom Film.	Barren
13	320	-22.8	Mud; Metridium, Diatom Film.	Barren
13	330	-22.8	Mud; Diatom Film.	Barren
13	340	-22.8	Mud; Diatom Film.	Barren
13	350	-22.8	Mud; Diatom Film.	Barren
13	360	-22.8	Mud; Diatom Film.	Barren
13	370	-23.8	Mud; Diatom Film.	Barren
13	380	-23.8	Mud; Diatom Film.	Barren
13	390	-23.8	Mud; Old outfall, Diatom Film.	Barren
13	400	-23.8	Mud; Diatom Film.	Barren

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Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
14	0	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	10	-8.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	20	-8.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	30	-9.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	40	-10.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	50	-10.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	60	-11.6	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	70	-12.6	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	80	-12.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	90	-13.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	100	-14.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	110	-15.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	120	-16.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	130	-16.6	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
14	140	-17.6	Mud; Debris, Diatom Film.	Barren
14	150	-17.6	Mud; Debris, Diatom Film.	Barren
14	160	-18.6	Mud; Diatom Film.	Barren
14	170	-18.6	Mud; Diatom Film.	Barren
14	180	-19.6	Mud; Diatom Film.	Barren
14	190	-20.6	Mud; Diatom Film.	Barren
14	200	-20.6	Mud; Diatom Film.	Barren
14	210	-22.6	Mud; Diatom Film.	Barren
14	220	-22.6	Mud; Diatom Film.	Barren
14	230	-22.7	Mud; Diatom Film.	Barren
14	240	-22.7	Mud; Diatom Film.	Barren
14	250	-22.7	Mud; Diatom Film.	Barren
14	260	-22.7	Mud; Diatom Film.	Barren
14	270	-22.7	Mud; Diatom Film.	Barren
14	280	-22.7	Mud; Diatom Film.	Barren
14	290	-22.7	Mud; Diatom Film.	Barren
14	300	-22.7	Mud; Diatom Film.	Barren
14	310	-23.7	Mud; Diatom Film.	Barren
14	320	-23.7	Mud; Diatom Film.	Barren
14	330	-23.7	Mud; Diatom Film.	Barren
14	340	-23.7	Mud; Diatom Film.	Barren
14	350	-23.7	Mud; Diatom Film.	Barren
14	360	-23.7	Mud; Diatom Film.	Barren
14	370	-23.7	Mud; Diatom Film.	Barren
14	380	-23.7	Mud; Diatom Film.	Barren
14	390	-23.7	Mud; Old outfall, Diatom Film.	Barren
14	400	-23.8	Mud; Diatom Film.	Barren

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Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
15	0	-6.5	Sand/Mud; Debris.	Saccharina 10%.
15	10	-6.5	Sand/Mud; Debris.	Saccharina 10%.
15	20	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	30	-7.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	40	-8.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	50	-8.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	60	-9.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	70	-10.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	80	-10.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	90	-11.5	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
15	100	-12.4	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	110	-12.4	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
15	120	-13.4	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 10%.
15	130	-14.4	Sand/Mud; Debris.	Barren
15	140	-14.4	Sand/Mud; Debris.	Barren
15	150	-15.4	Sand/Mud; Debris.	Barren
15	160	-16.4	Mud; Debris, Diatom Film.	Barren
15	170	-17.4	Mud; Debris, Diatom Film.	Barren
15	180	-17.4	Mud; Debris, Diatom Film.	Barren
15	190	-18.4	Mud; Debris, Diatom Film.	Barren
15	200	-19.4	Mud; Debris, Diatom Film.	Barren
15	210	-19.4	Mud; Debris, Diatom Film.	Barren
15	220	-20.4	Mud; Debris, Diatom Film.	Barren
15	230	-20.4	Mud; Debris, Diatom Film.	Barren
15	240	-21.4	Mud; Debris, Diatom Film.	Barren
15	250	-21.4	Mud; Debris, Diatom Film.	Barren
15	260	-21.4	Mud; Debris, Diatom Film.	Barren
15	270	-22.3	Mud; Metridium, Diatom Film.	Barren
15	280	-22.3	Mud; Metridium, Diatom Film.	Barren
15	290	-22.3	Mud; Metridium, Diatom Film.	Barren
15	300	-22.3	Mud; Metridium, Diatom Film.	Barren
15	310	-22.3	Mud; Metridium, Diatom Film.	Barren
15	320	-22.3	Mud; Metridium, Diatom Film.	Barren
15	330	-22.3	Mud; Diatom Film.	Barren
15	340	-22.3	Mud; Diatom Film.	Barren
15	350	-22.3	Mud; Diatom Film.	Barren
15	360	-22.3	Mud; Diatom Film.	Barren
15	370	-23.3	Mud; Diatom Film.	Barren
15	380	-23.3	Mud; Diatom Film.	Barren
15	390	-23.3	Mud; Old outfall, Diatom Film.	Barren
15	400	-23.3	Mud; Diatom Film.	Barren

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Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
16	0	-7.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	10	-8.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	20	-8.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	30	-9.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	40	-10.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	50	-10.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	60	-11.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	70	-12.1	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	80	-12.1	Mud; Debris.	Saccharina 10%; Gracilaria 5%.
16	90	-13.1	Mud; Debris.	Saccharina 10%; Gracilaria 5%.
16	100	-14.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	110	-15.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	120	-16.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	130	-16.1	Mud; Debris.	Saccharina 5%; Gracilaria 5%.
16	140	-17.1	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
16	150	-17.1	Mud; Debris, Diatom Film.	Barren
16	160	-18.1	Mud; Debris, Diatom Film.	Barren
16	170	-18.1	Mud; Debris, Diatom Film.	Barren
16	180	-19.1	Mud; Debris, Diatom Film.	Barren
16	190	-20.1	Mud; Diatom Film.	Barren
16	200	-20.1	Mud; Diatom Film.	Barren
16	210	-22.1	Mud; Diatom Film.	Barren
16	220	-22.2	Mud; Diatom Film.	Barren
16	230	-22.2	Mud; Diatom Film.	Barren
16	240	-22.2	Mud; Diatom Film.	Barren
16	250	-22.2	Mud; Diatom Film.	Barren
16	260	-22.2	Mud; Diatom Film.	Barren
16	270	-22.2	Mud; Diatom Film.	Barren
16	280	-22.2	Mud; Diatom Film.	Barren
16	290	-22.2	Mud; Diatom Film.	Barren
16	300	-22.2	Mud; Diatom Film.	Barren
16	310	-23.2	Mud; Diatom Film.	Barren
16	320	-23.2	Mud; Diatom Film.	Barren
16	330	-23.2	Mud; Diatom Film.	Barren
16	340	-23.2	Mud; Diatom Film.	Barren
16	350	-23.2	Mud; Diatom Film.	Barren
16	360	-23.2	Mud; Diatom Film.	Barren
16	370	-23.2	Mud; Diatom Film.	Barren
16	380	-23.3	Mud; Diatom Film.	Barren
16	390	-23.3	Mud; Old outfall, Diatom Film.	Barren
16	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
17	0	-7.0	Sand/Mud; Debris.	Barren
17	10	-7.0	Sand/Mud; Debris.	Barren
17	20	-8.0	Sand/Mud; Debris.	Barren
17	30	-8.0	Sand/Mud; Debris.	Barren
17	40	-9.0	Sand/Mud; Debris.	Barren
17	50	-10.0	Sand/Mud; Debris.	Barren
17	60	-11.0	Sand/Mud; Debris.	Barren
17	70	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	80	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	90	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	100	-14.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
17	110	-15.0	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
17	120	-15.9	Sand/Mud; Debris.	Saccharina 10%; Gracilaria 5%.
17	130	-16.9	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 5%.
17	140	-16.9	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 5%.
17	150	-17.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	160	-18.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	170	-18.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	180	-19.9	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	190	-19.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	200	-20.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	210	-20.9	Mud; Diatom Film.	Saccharina 5%; Gracilaria 5%.
17	220	-20.9	Mud; Diatom Film.	Barren
17	230	-21.9	Mud; Diatom Film.	Barren
17	240	-21.9	Mud; Diatom Film.	Barren
17	250	-22.9	Mud; Diatom Film.	Barren
17	260	-22.9	Mud; Diatom Film.	Barren
17	270	-22.9	Mud; Diatom Film.	Barren
17	280	-22.8	Mud; Diatom Film.	Barren
17	290	-22.8	Mud; Diatom Film.	Barren
17	300	-22.8	Mud; Diatom Film.	Barren
17	310	-22.8	Mud; Diatom Film.	Barren
17	320	-22.8	Mud; Diatom Film.	Barren
17	330	-23.8	Mud; Diatom Film.	Barren
17	340	-23.8	Mud; Diatom Film.	Barren
17	350	-23.8	Mud; Diatom Film.	Barren
17	360	-23.8	Mud; Diatom Film.	Barren
17	370	-23.8	Mud; Diatom Film.	Barren
17	380	-23.8	Mud; Old outfall, Diatom Film.	Barren
17	390	-23.8	Mud; Diatom Film.	Barren
17	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
18	0	-8.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	10	-9.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	20	-9.5	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	30	-10.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	40	-10.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	50	-11.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	60	-11.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	70	-12.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	80	-12.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	90	-13.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	100	-14.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	110	-15.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	120	-15.6	Sand/Mud; Debris, Diatom Film.	Saccharina 10%; Gracilaria 10%.
18	130	-16.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	140	-17.6	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	150	-17.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	160	-18.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	170	-19.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	180	-19.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	190	-20.6	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	200	-20.7	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
18	210	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	220	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	230	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	240	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	250	-21.7	Mud; Diatom Film.	Saccharina 5%.
18	260	-21.7	Mud; Diatom Film.	Barren
18	270	-21.7	Mud; Diatom Film.	Barren
18	280	-21.7	Mud; Diatom Film.	Barren
18	290	-22.7	Mud; Diatom Film.	Barren
18	300	-22.7	Mud; Diatom Film.	Barren
18	310	-22.7	Mud; Diatom Film.	Barren
18	320	-22.7	Mud; Diatom Film.	Barren
18	330	-23.7	Mud; Diatom Film.	Barren
18	340	-23.7	Mud; Diatom Film.	Barren
18	350	-23.7	Mud; Diatom Film.	Barren
18	360	-23.7	Mud; Diatom Film.	Barren
18	370	-23.8	Mud; Diatom Film.	Barren
18	380	-23.8	Mud; Old outfall, Diatom Film.	Barren
18	390	-23.8	Mud; Diatom Film.	Barren
18	400	-23.8	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
19	0	-6.5	Sand/Mud; Debris.	Barren
19	10	-6.5	Sand/Mud; Debris.	Barren
19	20	-7.5	Sand/Mud; Debris.	Barren
19	30	-7.5	Sand/Mud; Debris.	Barren
19	40	-8.5	Sand/Mud; Debris.	Barren
19	50	-9.5	Sand/Mud; Debris.	Barren
19	60	-10.5	Sand/Mud; Debris.	Barren
19	70	-11.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	80	-12.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	90	-12.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	100	-13.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	110	-14.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	120	-15.5	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
19	130	-16.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	140	-16.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	150	-17.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	160	-18.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	170	-18.4	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
19	180	-19.4	Mud; Debris, Diatom Film.	Barren
19	190	-19.4	Mud; Diatom Film.	Barren
19	200	-20.4	Mud; Diatom Film.	Barren
19	210	-20.4	Mud; Diatom Film.	Barren
19	220	-20.4	Mud; Diatom Film.	Barren
19	230	-21.4	Mud; Diatom Film.	Barren
19	240	-21.4	Mud; Diatom Film.	Barren
19	250	-22.4	Mud; Diatom Film.	Barren
19	260	-22.4	Mud; Diatom Film.	Barren
19	270	-22.4	Mud; Diatom Film.	Barren
19	280	-22.4	Mud; Diatom Film.	Barren
19	290	-22.4	Mud; Diatom Film.	Barren
19	300	-22.3	Mud; Diatom Film.	Barren
19	310	-22.3	Mud; Diatom Film.	Barren
19	320	-22.3	Mud; Diatom Film.	Barren
19	330	-23.3	Mud; Diatom Film.	Barren
19	340	-23.3	Mud; Diatom Film.	Barren
19	350	-23.3	Mud; Diatom Film.	Barren
19	360	-23.3	Mud; Diatom Film.	Barren
19	370	-23.3	Mud; Diatom Film.	Barren
19	380	-23.3	Mud; Old outfall, Diatom Film.	Barren
19	390	-23.3	Mud; Diatom Film.	Barren
19	400	-23.3	Mud; Diatom Film.	Barren

DRAFT

Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
20	0	-8.0	Sand/Mud; Debris.	Barren
20	10	-9.0	Sand/Mud; Debris.	Barren
20	20	-9.1	Sand/Mud; Debris.	Barren
20	30	-10.1	Sand/Mud; Debris.	Barren
20	40	-10.1	Sand/Mud; Debris.	Barren
20	50	-11.1	Sand/Mud; Debris, Diatom Film.	Barren
20	60	-11.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	70	-12.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	80	-12.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	90	-13.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	100	-14.1	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
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20	190	-20.2	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	200	-20.2	Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
20	210	-21.2	Mud; Diatom Film.	Barren
20	220	-21.2	Mud; Diatom Film.	Barren
20	230	-21.2	Mud; Diatom Film.	Barren
20	240	-21.2	Mud; Diatom Film.	Barren
20	250	-21.2	Mud; Diatom Film.	Barren
20	260	-21.2	Mud; Diatom Film.	Barren
20	270	-21.2	Mud; Diatom Film.	Barren
20	280	-21.2	Mud; Diatom Film.	Barren
20	290	-22.2	Mud; Diatom Film.	Barren
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20	340	-23.2	Mud; Diatom Film.	Barren
20	350	-23.3	Mud; Diatom Film.	Barren
20	360	-23.3	Mud; Diatom Film.	Barren
20	370	-23.3	Mud; Diatom Film.	Barren
20	380	-23.3	Mud; Old outfall, Diatom Film.	Barren
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20	400	-23.3	Mud; Diatom Film.	Barren

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Transect	Distance (ft) From Baseline	Elevation (Corrected to ft MLLW)	Substrate and Other Features Noted	Macroalgae Cover
21	0	-6.0	Sand/Mud; Debris.	Barren
21	10	-6.0	Sand/Mud; Debris.	Barren
21	20	-7.0	Sand/Mud; Debris.	Barren
21	30	-7.0	Sand/Mud; Debris.	Barren
21	40	-8.0	Sand/Mud; Debris.	Barren
21	50	-9.0	Sand/Mud; Debris.	Barren
21	60	-10.0	Sand/Mud; Debris.	Barren
21	70	-11.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	80	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	90	-12.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	100	-13.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
21	110	-14.0	Sand/Mud; Debris.	Saccharina 5%; Gracilaria 5%.
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21	130	-16.0	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
21	140	-16.0	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
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21	160	-17.9	Sand/Mud; Debris, Diatom Film.	Saccharina 5%; Gracilaria 5%.
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21	240	-20.9	Mud; Diatom Film.	Barren
21	250	-21.9	Mud; Diatom Film.	Barren
21	260	-21.9	Mud; Diatom Film.	Barren
21	270	-21.9	Mud; Diatom Film.	Barren
21	280	-21.9	Mud; Diatom Film.	Barren
21	290	-21.9	Mud; Diatom Film.	Barren
21	300	-21.9	Mud; Diatom Film.	Barren
21	310	-21.8	Mud; Diatom Film.	Barren
21	320	-21.8	Mud; Diatom Film.	Barren
21	330	-22.8	Mud; Diatom Film.	Barren
21	340	-22.8	Mud; Diatom Film.	Barren
21	350	-22.8	Mud; Diatom Film.	Barren
21	360	-22.8	Mud; Diatom Film.	Barren
21	370	-22.8	Mud; Diatom Film.	Barren
21	380	-22.8	Mud; Old outfall, Diatom Film.	Barren
21	390	-22.8	Mud; Diatom Film.	Barren
21	400	-22.8	Mud; Diatom Film.	Barren

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Davido Homeport Marina

Habitat Survey Results

3589 Harborview Drive
Gig Harbor, WA 98335

Survey Date: 6.14.2022
Map Date: 7.13.22

Map Legend

- Proposed Dock Location
- 25' Float Buffer

***Saccharina* Percent Cover**

- 1 - 5% Cover
- 5.1 - 15% Cover
- >15% Cover

***Gracilaria* Percent Cover**

- 1 - 5% Cover
- 5.1 - 15% Cover
- >15% Cover

- Surveyed Transects
- Estimated Depth (ft MLLW)*

Imagery Source: ESRI Clarity Imagery

Notes: Depths shown are for reference only and can have an error of +/- one foot and should not be used for engineering purposes.



APPENDIX V: Biological Assessment

Biological Assessment

for the

The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

March 2022

Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
4735 E. Marginal Way S. Bldg. 1202
Seattle, WA 98134

Prepared by:
Davido Consulting Group, Inc.
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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
City	City of Gig Harbor
dB	Decibel
DCG	Davido Consulting Group, Inc.
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PHS	Priority Habitats and Species
PSA	Proposed Similarity of Appearance
SEL	Sound Exposure Level
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WAC	Washington Administrative Code

1 INTRODUCTION

This Biological Assessment was prepared in accordance with Section 7(c) of the Endangered Species Act (ESA) regarding the potential effects on federally listed species and their habitats from the Commercial Fishing Homeport Project for the City of Gig Harbor (hereafter, City). The proposed project is located within Gig Harbor, Washington. This project will include the installation of a commercial fishing dock at Ancich Waterfront Park. As this work will occur in the nearshore of Gig Harbor, the proposed project has the potential to impact species listed as threatened or endangered under the ESA and/or their critical habitat (Table 1). Additionally, the effects of the proposed project on essential fish habitat (EFH), pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the 1996 Sustainable Fisheries Act, are analyzed in Appendix I.

Table 1. Summary of Proposed Action Effects on ESA Listed Species and Their Critical Habitat

Species	Listing Status	Agency	Species Effects Determination	Critical Habitat in Action Area	Critical Habitat Effects Determination
Coastal Puget Sound Bull Trout (*Salvelinus confluentus*)	Threatened	USFWS	Not Likely to Adversely Affect	No	--
Dolly Varden (*Salvelinus malma*)	PSA Threatened	USFWS	Not Likely to Adversely Affect	No	--
Georgia Basin Bocaccio (*Sebastes paucispinis*)	Endangered	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect
Georgia Basin Yelloweye Rockfish (*Sebastes ruberrimus*)	Threatened	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect
Humpback Whale (*Megaptera novaeangliae*)	Threatened	NMFS	Not Likely to Adversely Affect	No	--
Marbled Murrelet (*Brachyramphus marmoratus*)	Threatened	NMFS	Not Likely to Adversely Affect	No	--
Puget Sound Chinook (*Oncorhynchus tshawytscha*)	Threatened	NMFS	Likely to Adversely Affect	Yes	Likely to Adversely Affect
Puget Sound Steelhead Trout (*Oncorhynchus mykiss*)	Threatened	NMFS	Likely to Adversely Affect	No	--
Southern Resident Killer Whale (*Orca orcinus*)	Endangered	NMFS	Not Likely to Adversely Affect	Yes	Not Likely to Adversely Affect

The status and occurrence of anadromous populations of bull trout in Puget Sound are subject to scientific debate surrounding separation of anadromous bull trout from the closely related anadromous Dolly Varden char (Salvelinus malma). Until further resolution is possible, the Washington Department of Fish and Wildlife has made a decision to manage all Puget Sound stocks as if they were a single bull trout/Dolly Varden complex (WDFW 2000). Therefore, no further mention of Dolly Varden char will be made in this document.

Several ESA listed species that could possibly occur in the project area are not evaluated further due to their rare or unconfirmed occurrence and lack of suitable/critical habitat in the action area. Therefore, the proposed project will have **no effect** on the following species: Canada Lynx (*Lynx canadensis*), Eulachon (*Thaleichthys pacificus*), Golden Paintbrush (*Castilleja levisecta*), Gray Wolf (*Canis lupus*), Green Sturgeon (*Acipenser medirostris*), Grizzly Bear (*Ursus arctos*), Leatherback Sea Turtle (*Dermochelys coriacea*), Northern Spotted Owl (*Stix occidentalis caurina*), Oregon

Spotted Frog (*Rana pretiosa*), Streaked Horned Lark (*Eremophila alpestris strigata*), and Yellow-Billed Cuckoo (*Coccyzus americanus*).

2 PROJECT LOCATION

The project is located on the waterfront in Gig Harbor, Washington (Section 5 of Township 21 of Range 2). Water quality in Gig Harbor, despite high development levels, is unimpaired (WDOE 2018). Two salmon-bearing streams, North Creek and Crescent Creek, drain into the harbor to the northwest of the project site. The project area includes the intertidal and subtidal zones (Figure 1).

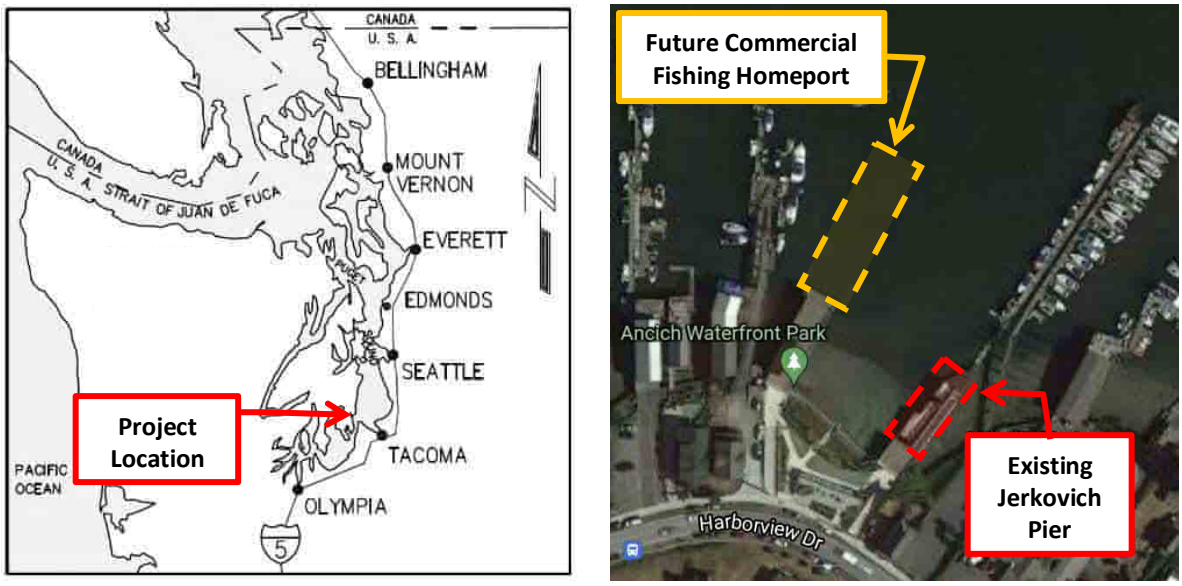


Figure 1. Vicinity and Site Maps

3 PROJECT DESCRIPTION

Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The human powered craft dock is currently under construction (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet. The proposed project consists of the elements listed below, followed by summary tables (Tables 2 and 3).

1. **Float Installation**
   A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

   - (1) 45' Finger Float
   - (5) 60' Finger Floats
   - (1) 80' Finger Float

   (20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a

barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. **Gangway Installation**
   An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. **Safety and Utilities**
   Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. **Mitigation**
   Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See Mitigation Plan for details.

Table 2. Pile Removal and Installation Summary

Structure	Piles Removed	Piles Installed	Net Change in Number of Piles
Jerkovich Pier	32 creosote-treated timber piles, 12-inch diameter	0	-32
Floats	0	20 steel piles, 24-inch diameter	+20
Gangway	0	5 steel piles, 12-inch diameter	+5
Total	**-32**	**+25**	**-7**

Table 3. Overwater Coverage Summary

Structure	Net Change in Overwater Coverage
Jerkovich Pier Demolition	–1,558.5 SF (solid asphalt decking)
Gangway Installation	+527 SF (grating 45% net open area) (area not including overlap with float)
Floats Installation	+5,854 SF (grating 45% net open area))
Total	**+4,822.5 SF**

3.1 Project Sequence

All in-water work will avoid the annual outmigration of juvenile salmonids and the breeding season for marbled murrelets. Per WAC Tidal Reference Area 4, the expected in-water work window is August 1 through February 15 of any year. The project is expected to occur over the course of one in-water work window, from August 1, 2023, to February 15, 2024. The City proposes the following general construction sequence, subject to adjustment by the construction contractor's means and methods:

1. Mobilize equipment
2. Demolish asphalt decking, caps, and stringers of Jerkovich Pier

3. Pull up to 10 timber piles per day with a vibratory hammer until all 32 are removed
4. Drive up to 10 steel guide piles per day with vibratory and impact hammer until all 25 are in place
5. Install floating dock
6. Install finger floats
7. Install gangway
8. Install utilities and dock accessories
9. Demobilize equipment

4 IMPACT AVOIDANCE AND MINIMIZATION MEASURES

The proposed project avoids impacts to the extent practicable, but some impacts cannot be avoided entirely as this project is dependent upon maritime access and construction activity. The following measures and best management practices will be incorporated by the applicant in order to avoid, reduce intensity, or otherwise minimize potential impacts:

- Project will adhere to agency approved work windows, so work occurs when few juvenile salmonids are present in the action area (August 1 - February 15).
- If required by governing agencies, water quality monitoring will be conducted during excavation activities,
- All manmade construction debris will be collected and not allowed to enter waters of the state.
- If debris or spill material accidentally enters the waterway, immediate actions will be taken to remove the material.
- All debris or spill material will be properly disposed of at an approved off-site disposal facility.
- As piles are pulled from the sediments, they will be quickly placed upland to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles will be properly disposed of at an approved upland disposal facility.
- Contractor will maintain a spill containment kit with floating sausage booms on site at all times.
- A turbidity curtain surrounding the site will be deployed prior to start of construction to minimize potential water quality impacts.
- Vessels will not ground.

5 ACTION AREA

The action area is defined by the ESA regulations (50 CFR 402.02) as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area is distinct from the project footprint and encompasses a larger area extending to where no measurable effects from the project are anticipated to occur. For this project, the action area includes the area within which project-related noise levels are ≥120 dB re 1 μ PA_{rms} (i.e., the point where no take from the project would occur) in accordance with the NMFS's threshold guidelines (Table 4).

Table 4. NMFS Interim Sound Threshold Guidance for Marine Mammals

Harassment Threshold		
Underwater (dB re: 1 µPa)		
Source	**Cetaceans**	**Pinnipeds**
Vibratory Installation (Non-impulsive Noise)	120	120
Impact Installation (Impulsive Noise)	160	160

NMFS has adopted the following Interim Criteria for injury and disturbance thresholds for fish (Stadler and Woodbury 2009) (Table 5):

Table 5. NMFS Interim Sound Threshold Guidance for Fish

	Pile Driving	
Hearing Group	**Peak SEL**	**Accumulated SEL**
Weight ≥ 2g	206 dB	187 dB
Weight < 2g	--	183 dB

USFWS has adopted the following waterborne injury threshold for marbled murrelets (Table 6):

Table 6. USFWS Interim Sound Threshold Guidance for Marbled Murrelets

	Impact Pile Driving	
Hearing Group	**Auditory Injury Threshold**	**Non-Auditory Injury Threshold**
Marbled Murrelets	202 dB SEL	208 dB SEL



Figure 2. Action Area in Red

Table 7 below calculates the disturbance zone based on the practical spreading loss model, per the interim guidance. The practical spreading loss model was used to determine the zones in which species have the potential to face behavioral disturbance from underwater noise. The formula for calculating practical spreading loss underwater is:

$$TL = GL \times \log \frac{R_1}{R_0}$$

Where TL is the transmission loss (dB) (i.e., the disturbance zone), GL is the geometric loss coefficient (15 is the only valued allowed without real-time sound source verification), R_1 is the range to the target sound pressure level (m), and R_0 is the distance from the source of the initial measurement (m).

The maximum travel distance of underwater sound traveling from the pile driving is approximately 0.42 mi (0.68 km). The action area is constrained by the harbor topography.

Table 7. In-Water Injury and Disturbance Zones

Pile Size	Duration[1]	Source Levels (10 m from Pile)[2]			Injury Zones and Acoustic Thresholds (meters)								Disturbance Zones (meters)		
		Peak (dB)	RMS (dB)	SEL (dB)	Fish, Peak	Fish (<2g)	Fish (≥2g)	Marbled Murrelet	Low-Frequency Cetacean	Mid-Frequency Cetacean	Phocid Pinniped	Otariid Pinniped	Fish	Marbled Murrelet	Marine Mammal
Vibratory Hammer															
Thresholds (dB SEL)					**206**	**187**	**183**	**N/A**	**199**	**198**	**201**	**219**	**N/A**	**N/A**	**120[3]**
12" (nom) steel	8 hrs/day	171	155	155	--	--	--	--	10.9	1.0	6.6	0.5	--	--	232.6
24" (nom) steel	8 hrs/day	181	153	153	--	--	--	--	11.1	1.0	6.8	0.5	--	--	51.3
12" timber	8 hrs/day	172	162	--	--	--	--	--	31.9	2.8	19.4	1.4	--	--	681.3
Impact Hammer															
Thresholds (dB SEL)					**206**	**187**	**183**	**202**	**183**	**185**	**185**	**203**	**150**	**150[4]**	**160**
12" (nom) steel	1,500 strikes/ day	192	169[5]	--	1	0	0	0	32.9	1.2	17.6	1.3	185	185	39.8
24" (nom) steel	1,500 strikes/ day	195	168[5]	164	1	39	21	0	39.3	1.4	21.0	1.5	26	48	513.4

1 Assumes up to 10 piles per day can be pulled or installed.
2 Source levels were obtained from Caltrans (2015) and measured 10m from the pile except for the 24' piles – these were measured 3m from the pile.
3 Ambient background levels at the site were recorded at 134.5 dB (Marine Mammal Monitoring Plan Attachment II).
4 USFWS considers this to be a guideline, not a threshold. In other words, murrelets may respond to sounds in this zone, but that response may not constitute an adverse effect.
5 WSDOT (2018) has established an average reduction of 8-32 dB RMS with the use of a bubble curtain. To be conservative, a reduction of 8 dB RMS was used for impact pile driving only.

6 SPECIES AND HABITAT INFORMATION

The ESA-listed species that may occur in the action area include Coastal Puget Sound bull trout, Georgia Basin bocaccio and yelloweye rockfish, humpback whale, marbled murrelet, Chinook salmon, steelhead trout, and Southern Resident Killer Whale. Critical habitat is present in the action area for Chinook salmon, Georgia Basin rockfishes, and Southern Resident Killer Whale.

6.1 Coastal Puget Sound Bull Trout

Gig Harbor bull trout are most likely from the White and Puyallup River Stocks, which includes an anadromous population (WRIA 10; WDFW 2004, Marks et al. 2014). However, there are no documented sightings or spawning habitat of bull trout in the action area. Only adult and sub-adult bull trout could potentially occupy the action area from spring through mid-summer (WDFW 2004). Following this season, bull trout migrate to freshwater river systems to overwinter. Therefore, it is unlikely bull trout will be present during construction (late-summer and into winter).

6.2 Georgia Basin Bocaccio and Yelloweye Rockfish

In central Puget Sound, bocaccio have historically been part of the recreational fishery with sharp population declines occurring in the late 1980s and 1990s. In Central Puget Sound and the Tacoma Narrows, available data on rockfish populations is based principally on recreational and some commercial harvest; much of which was collected in the 1960s and 1970s when the species were more common. Considering the absence of any bocaccio observations and lack of reports in the past decade, there is a strong possibility that the Distinct Population Segment has been extirpated from most of its range, although a few individuals may be present in reserves or areas where all fishing is prohibited (NOAA Fisheries Species Information 2018). Juvenile bocaccio settle onto shallow nearshore waters in rocky or cobble substrate that support kelp growth at 3 to 6 months of age and move to progressively deeper waters as they grow (Love et al., 1991). Adults typically occupy waters deeper than 120 feet (Love et al., 2002). Yelloweye rockfish are more frequently observed in north Puget Sound. Their distribution most frequently coincides with high-relief, complex, rocky habitats deeper than 120 feet (NOAA Fisheries Species Information 2018, and Love et al., 2002). These habitats are not present in the action area. Juvenile yelloweye rockfish do not typically occupy intertidal waters and shallow habitats (Love et al., 1991). According to the EFH database (2018), juveniles are associated with a minimum water depth of 45 feet. Habitat in the action area is not optimal for adult rockfish or juvenile yelloweye due to a lack of deep water. Habitat in the action area is not optimal for juvenile bocaccio due to a lack of substrate that supports kelp. Based on the current known range of rockfish (northern Puget Sound) and narrow inlet into the harbor it is unlikely that that rockfish larva of either species would be present during construction; therefore, the effects would be discountable on all rockfishes.

6.2.1 Critical Habitat

The PCEs from 50 CFR Part 226 determined essential to the conservation of juvenile bocaccio include:

(1) Juvenile settlement habitats located in the nearshore with substrates such as sand, rock and/or cobble compositions that also support kelp are essential for conservation because these features enable forage opportunities and refuge from predators and enable behavioral and physiological changes needed for juveniles to occupy deeper adult habitats. Several attributes of these sites determine the quality of the area and are useful in considering the conservation value of the associated feature and in determining whether the feature may require special management considerations or protection. These features also are relevant to evaluating the effects of an action in an ESA section 7 consultation if the specific area containing the site is designated as critical habitat. These attributes include:

> *(i) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities; and*

- **Existing Conditions:** As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that "continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor."
- **Effects to PCE:** The presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates in the action area. However, the long-term effect of overwater structures will be minimized with the addition of grating. Based on the small scale and brevity of habitat effects, it is expected that no appreciable loss of function will occur.

(ii) Water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction, and feeding opportunities.

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(2) Nearshore areas are contiguous with the shoreline from the line of extreme high water out to a depth no greater than 30 meters (98 ft) relative to mean lower low water.

- **Existing Conditions:** The action area is characteristic of an urban setting along a waterfront with a highly developed shoreline**.**
- **Effects to PCE:** The project will not alter the current discontinuous nature of the shoreline.

The PCEs from 50 CFR Part 226 determined essential to the conservation of adult bocaccio and adult and juvenile yelloweye rockfish include:

Benthic habitats and sites deeper than 30 m (98 ft) that possess or are adjacent to areas of complex bathymetry consisting of rock and or highly rugose habitat are essential to conservation because these features support growth, survival, reproduction, and feeding opportunities by providing the structure for rockfish to avoid predation, seek food and persist for decades. Several attributes of these sites determine the quality of the habitat and are useful in considering the conservation value of the associated feature, and whether the feature may require special management considerations or protection. These attributes are also relevant in the evaluation of the effects of a proposed action in an ESA section 7 consultation if the specific area containing the site is designated as critical habitat. These attributes include:

(1) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities.

- **Existing Conditions:** As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that "continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor."
- **Effects to PCE:** The presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates in the action area. However, the long-term effect of overwater structures will be minimized with the addition of grating. Based on the small scale and brevity of habitat effects, it is expected that no appreciable loss of function will occur.

(2) Water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction, and feeding opportunities; and

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(3) The type and amount of structure and rugosity that supports feeding opportunities and predator avoidance.

- **Existing Conditions:** Benthic habitats and sites deeper than 30 m (98 ft) that possess or are adjacent to areas of complex bathymetry consisting of rock and or highly rugose habitat are not present in the action area.
- **Effects to PCE:** This PCE will not change as a result of the project.

6.3 Humpback Whale

The humpback whale is distributed worldwide in all ocean basins. In the North Pacific, five District Population Segments (DPSs) breed in subtropical and tropical waters from Asia to Central America then migrate north to feed in highly productive North Pacific feeding grounds (Bettridge *et al.* 2015). Humpback whales use coastal habitats because of their productivity and typically remain within about 50 nautical miles of shore (Evans 1987; Calambokidis and Steiger 1995). Humpbacks are not routinely present in Puget Sound due to a lack of appropriate habitat and food availability. However, sightings in the spring and summer have increased in recent years, but none within Gig Harbor. Gig Harbor is relatively shallow, and its inlet constricted; hence their occurrence in the harbor is expected to be extremely rare.

6.4 Marbled Murrelet

Marbled murrelets are small marine birds in the alcidae family that nest in the coastal old-growth forests of the Pacific Northwest. The breeding season of the marbled murrelet generally begins in April, with most egg laying occurring in late May and early June. By the end of August, chicks have fledged and dispersed from nesting areas (Marks and Bishop 1999). Marbled murrelets differ from other seabirds in that its primary nesting habitat is old-growth coniferous forest within 50 to 75 miles of the coast. The nest typically consists of a depression on a moss-covered branch where a single egg is laid. When not nesting, the birds live at sea, spending their days feeding and then moving several miles offshore at night (SEI 1999). Information provided by the WDFW PHS program (WDFW PHS 2018) does not identify any nesting areas for marbled murrelets within the action area. The occurrence of marbled murrelets in the project and action areas is expected to be very low considering the developed nature of the area, the shallow habitat, and the lack of nesting habitat in or near the action area.

6.5 Puget Sound Chinook

Chinook salmon occurring in the action area most likely originate from Crescent Creek. Adults are expected to migrate through Gig Harbor from August to September and juveniles may enter the harbor between February and July to rear, forage, and begin migration to the Pacific Ocean. Through strict adherence to the work window, juvenile chinook will not be in the harbor during construction. Salmon from other stocks have been documented in the Gig Harbor estuary, including those from the White and Puyallup River stocks (WRIA 10) and the Nisqually River stocks (WRIA 11).

Juvenile salmon are known to be affected by overwater structures causing disorientation, schooling, and altered migration routes into deeper waters (and closer to predators) around the structures. It is also known that the presence of overwater structures slightly reduces production of benthic and epibenthic macroinvertebrates that juvenile Chinook salmon and other listed fish prey upon. This contrasts with adult Chinook salmon as they usually inhabit water much deeper than where the proposed structures will be located and do not frequent the nearshore.

6.5.1 Critical Habitat

(1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development;

- **Existing Conditions:** The action area does not encompass freshwater spawning sites.
- **Effects to PCE:** This PCE will not be affected.

(2) Freshwater rearing sites with:

(i) Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(ii) Water quality and forage supporting juvenile development; and

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(iii) Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

- **Existing Conditions:** The action area does not encompass freshwater rearing sites.
- **Effects to PCE:** This PCE will not be affected.

(3) Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival;

- **Existing Conditions:** The action area does not encompass freshwater migration corridors**.**
- **Effects to PCE:** This PCE will not be affected.

(4) Estuarine areas free of obstruction and excessive predation with:

(i) Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater;

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(ii) Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

- **Existing Conditions:** The condition of the nearshore water quality is limited by several factors, including developed shorelines; lack of complex habitat to provide cover in the form of overhanging large wood, and side channels; and the presence of non-natural overwater structures.

- **Effects to PCE:** The project will degrade this PCE through an increase in overwater coverage. The sharp underwater light contrasts from overwater structures can cause delays in migration from disorientation, fish schooling (dispersal resulting in a loss of refugia) and altered migration routes around the structures. An increase in overwater cover will continue to preclude colonization of aquatic vegetation. However, the long-term effect of overwater structures will be minimized with the addition of grating.

(iii) *Juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.*

- **Existing Conditions:** Based on expected diet of Chinook salmon, a disturbance of the benthic community is unlikely to adversely affect juvenile or adult salmonids because juvenile salmon feed on floating and drifting invertebrates and small fishes.
- **Effects to PCE:** This PCE will not be affected in the long term. Temporary impacts from an increase in turbidity may disrupt pre fields.

(5) *Nearshore marine areas free of obstruction and excessive predation with:*

(i) *Water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and*

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(ii) *Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.*

- **Existing Conditions:** The condition of the nearshore water quality is limited by several factors, including developed shorelines; lack of complex habitat to provide cover in the form of overhanging large wood and side channels; and the presence of non-natural overwater structures.
- **Effects to PCE:** The project will degrade this PCE through an increase in overwater coverage. The sharp underwater light contrasts from overwater structures can cause delays in migration from disorientation, fish schooling (dispersal resulting in a loss of refugia) and altered migration routes around the structures. However, the long-term effect of overwater structures will be minimized with the addition of grating.

(6) *Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.*

- **Existing Conditions:** The action area does not encompass an offshore area**.**
- **Effects to PCE:** This PCE will not be affected.

6.6 Puget Sound Steelhead Trout

The species exhibits perhaps the most complex suite of life-history traits of any of the Pacific salmon. Steelhead can be anadromous or freshwater residents and, in some circumstances, yield offspring of the opposite life-history form. The anadromous form can spend up to seven years in freshwater prior to smoltification, although two years is most common, and then spend up to four years in saltwater prior to first spawning. Unlike the Pacific salmon species,

steelhead are iteroparous (individuals can spawn more than once). Steelhead that would be present in the action area are most likely East Kitsap winter steelhead from WRIA 15 stocks (WDFW 2018). Spawning occurs in Crescent and North creeks, which drain into the northwest and southwest corners of Gig Harbor, respectively. The adult winter steelhead run is generally from December to February, and spawning occurs from March through June (Wydoski and Whitney 2003). Juvenile steelhead out-migrate from April through June and are not anticipated in the nearshore of the action area in large numbers because the majority of steelhead smolts migrate directly to the open ocean (i.e., they are not nearshore dependent) and do not rear extensively in the estuarine or coastal environments (Burgner et al. 1992). Therefore, through strict adherence to the work window, juvenile steelhead will not be in the harbor during construction. Similar to adult Chinook, steelhead usually inhabit water much deeper than where the proposed structures will be located and do not frequent the nearshore, but they may be in the action area.

6.7 Southern Resident Killer Whale

The Puget Sound Southern Resident Killer Whale spends more time in Puget Sound than transient orcas, travel in larger pods, and eat mostly fish (Krahn et al. 2004). These residents consist of three social groups, identified as the J, K, and L pods (NOAA Fisheries Species Information). In recent years, they have been regularly spotted as far south as central California during the winter months and as far north as Southeast Alaska (NOAA Fisheries Species Information). NOAA has designated three critical areas for Southern Resident Killer Whales by seasonal appearance. The action area is located in Area 2 - Fall/Winter (NMFS 2006). There have been sightings of killer whales in Puget Sound recently and mainly occur on the east side of Vashon Island. The majority of sightings occur in between October and December, and none have occurred within Gig Harbor proper. Occurrence in the harbor is expected to be rare due to the relatively shallow bathymetry and constricted inlet.

6.7.1 Critical Habitat

The PCEs from 50 CFR Part 226 determined essential to the conservation of Southern Resident DPS Killer Whales (Area 2 – Puget Sound Area) are:

(1) Water quality to support growth and development.

- **Existing Conditions:** The condition of water quality in the action area is limited by several factors, including developed shorelines and the presence of creosote-treated timber piles.
- **Effects to PCE:** The project could result in some short-term increases in turbidity during construction, thereby temporally affecting water quality, but this effect will remain within the harbor. However, an overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

(2) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development as well as overall population growth.

- **Existing Conditions:** The project area provide refuge and support to prey species. As the project is in a highly developed nearshore area, the quantity, quality, and availability of prey species is assumed to be severely degraded. This concurs with the statement by Frankenstein (2000) that “continuous cover of ulvoid macroalgae is impairing aquatic life from identified human causes at Gig Harbor.”
- **Effects to PCE:** Water quality improvements to the harbor through the removal of creosote contaminants will benefit salmon. The project will not significantly decrease the number of adult salmon in South Puget Sound, and thus has no mechanism to affect prey base.

(3) Passage conditions to allow for migration, resting, and foraging.

- **Existing Conditions:** Gig Harbor is relatively shallow, and its inlet constricted; hence migration, resting, and foraging are unlikely to occur in the harbor.

- **Effects to PCE:** This PCE will not be affected.

7 ENVIRONMENTAL BASELINE

7.1 Terrestrial Habitat

The site consists of 0.42 acres of upland and two piers that extend over the intertidal and subtidal area of Gig Harbor. A concrete bulkhead runs along the length of the shoreline on the property (approximately 200 linear feet). Upland vegetation consists of a City-maintained vegetated buffer along a concrete vertical bulkhead. Paved driveways with parking areas run along the eastern and western site boundaries. A personal/small non-motorized watercraft storage building is tucked into the existing hillside with a roof deck elevation matching the current sidewalk elevation. The building also has a chair lift to provide ADA access to the park below and to each pier from the building, as the adjacent driveways are not to code. The Ancich Pier to the west has been replaced with new materials, including steel piles and timber planks to support the historic Ancich Brothers' Netshed. The remaining portion of the Jerkovich Pier is in disrepair from the asphalt surfacing atop the timber decking causing many structural failures. The pier will be demolished as part of this project.

Dominant land use in the project vicinity is primarily urban and residential. The project area is zoned as Waterfront/Millville (City of Gig Harbor Municipal Code 17.48). The action area is characteristic of an urban setting along a waterfront. Vehicle traffic is moderately heavy along Harborview Road, and vessel traffic primarily consists of recreational vessels.

7.2 Aquatic Habitat

The shoreline of Gig Harbor is substantially altered with bulkheads, docks, and marinas. Water quality assessments from the Washington Department of Ecology show that water quality in Gig Harbor is not currently impaired (WDOE 2022). Two major creeks drain into Gig Harbor, including Crescent Creek and North Creek. These creeks are known to be used by coho salmon, cutthroat trout, fall chum, fall chinook, and winter steelhead (WDFW, 2022).

The backshore is hardened with a concrete bulkhead, the bottom of which is at +9 feet MLLW. The intertidal zone is gradually sloping, with a substrate of gravels transitioning to silty sand sub-tidally. A full macrovegetation survey is scheduled to occur on June 14, 2022. A previous presence/absence macrovegetation survey performed in 2019 by Davido Consulting Group found benthic sugar kelp but no eelgrass habitat in the project vicinity.

8 ANALYSIS OF EFFECTS

The effects of the project on ESA-listed species and their critical habitat are described in this section. The discussion describes how activities associated with the project will contribute to improvement, maintenance, or degradation of habitats used by listed species. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health.

8.1 Direct Impacts

Construction activities will likely have temporary direct impacts on habitat through increases in underwater sound from pier removal and increases in turbidity. Best management practices and mitigation methods will be used to minimize these effects. The level of disturbance and habitat alteration in the project area will be insignificant and discountable, especially when considered in relation to the activity already taking place in developed harbor. While it is possible that species avoid the project area during demolition, they are not likely to abandon the site altogether.

Pile removal will result in new benthic habitat ready for colonization. These habitat improvements may benefit microorganisms such as zooplankton aggregation, but with no baseline data on their abundance, this will be an imperceptible impact of the project upon the prey food web.

A permanent and direct impact of the project will the removal of (32) 12-inch-diameter creosote-treated timber piles and upper intertidal shading will be reduced by approximately 1,558.5 square feet due to the removal of the remainder of the Jerkovich Pier, including its caps, stringers, and asphalt decking.

8.2 Indirect Impacts

Likely indirect effects of the proposed action on listed species may include disruption of prey fields and temporary behavioral responses to non-injurious noise from in-water construction activities. Physical elements of habitat will not be significantly affected by the proposed action. Underwater sounds will likely disaggregate schools of forage fish in the water column in the action area. Turbidity may also temporarily disperse prey in the water column, and burial of non-motile prey species will remove them from the prey field. Species may experience some energetic cost from dispersal of prey, resulting in short-term expenditure of energy seeking other sources or browsing while waiting for prey to re-aggregate following noise and turbidity effects.

8.3 Cumulative Impacts

This section discusses how activities associated with project will contribute to improvement, maintenance, or degradation of habitats used by ESA-listed species in the project area. Potential disturbances caused by project activities are presented along with measurable indicators of habitat health. Net effect is considered to be the overall effect on the species and habitat in the long term. If short term adverse conditions occur when few or no listed species are present in the action area, and if those conditions are no longer present when listed species return to the area, those conditions do not constitute adverse modification of the indicator of habitat quality.

Table 8. Effects of Project Activities on Habitats in the Project and Action Areas

Project Activities	Habitat Indicator	Effects of Action		
		Improve[1]	Maintain[2]	Degrade[3]
Construction Disturbances	Noise		X	
	Entrainment		X	
	Stranding		X	
Water Quality Disturbance	Turbidity		X	
	Chemical Contamination/Nutrients	X		
	Temperature		X	
	Dissolved Oxygen		X	
Sediment Disturbance	Sedimentation Sources/Rates		X	
	Sediment Quality		X	
Habitat Disturbance	Fish Access/Refugia		X	
	Depth		X	
	Substrate		X	
	Slope		X	
	Shoreline		X	
	Riparian Conditions		X	
	Flow And Hydrology/Current Patterns/ Saltwater-Freshwater Mixing Patterns		X	
	Overwater Structures			X
	Disturbance		X	
Biota Disturbance	Prey (Epibenthic and Pelagic Zooplankton)		X	
	Prey (Forage Fish)		X	
	Infauna		X	
	Aquatic/Wetland Vegetation		X	
	Nonindigenous Species		X	
	Ecological Diversity		X	

1 Action will contribute to long-term improvement, over existing conditions, of the habitat indicator.
2 Action will maintain existing conditions.

3 Action will contribute to long-term degradation, over existing conditions, of the habitat indicator.

9 CONCLUSIONS AND EFFECT DETERMINATIONS

The effects determination is the conclusion of the analysis of potential direct or indirect effects of the proposed activity on listed species and critical habitat. The conclusions that could result from the effects analysis for the effects determination include:

- **No Effect.** The appropriate conclusion when the action agency determines its proposed action will not affect listed species or critical habitat.
- **May Affect, is Not Likely to Adversely Affect.** The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects on the species. Insignificant effects relate to the size of the impact and should never reach the scale at which take occurs. Discountable effects are those extremely unlikely to occur. Using best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.
- **May Affect, is Likely to Adversely Affect.** The appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial (see definition of "may affect, is not likely to adversely affect").

A key factor in making an effect determination and distinguishing between a significant and insignificant effect is determining whether the effect would be significant enough to cause a take.

9.1 Coastal Puget Sound Bull Trout

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect coastal Puget Sound bull trout because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect bull trout because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where bull trout are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, bull trout.

9.2 Georgia Basin Bocaccio and Yelloweye Rockfish

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect coastal Georgia Basin bocaccio and yelloweye rockfish and their critical habitat because of a slight reduction in benthic and epibenthic macroinvertebrates prey. However, the project is not likely to adversely affect rockfish due to a lack of preferred habitat and a very unlikely presence during the work window. Therefore, the effect determinations are that this project **may affect, but is not likely to adversely affect** bocaccio and yelloweye rockfish and their critical habitat.

9.3 Humpback Whale

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect humpback whales because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect humpback whales because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where humpback whales are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, humpback whales.

9.4 Marbled Murrelet

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect marbled murrelets because sound levels will exceed disturbance criteria during pile driving and removal operations. However, the project is not likely to adversely affect marbled murrelets because sound levels that exceed disturbance criteria will only occur within Gig Harbor, where marbled murrelets are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect**, marbled murrelets.

9.5 Puget Sound Chinook

Based on the guidance and definitions provided above and the previously discussed project effects, the project **is likely to adversely affect** Puget Sound Chinook salmon and their critical habitat due to an increase in nearshore overwater coverage disorienting, schooling, and altering migration patterns of juveniles and a slight reduction in benthic and epibenthic macroinvertebrates prey. However, the long-term effect of overwater structures will be minimized with the addition of grating. Additionally, overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

9.6 Puget Sound Steelhead Trout

Based on the guidance and definitions provided above and the previously discussed project effects, the project **is likely to adversely affect** Puget Sound steelhead trout due to a slight reduction in benthic and epibenthic macroinvertebrates prey. However, overall long-term improvement to water quality is expected with the removal of creosote-treated timber piles.

9.7 Southern Resident Killer Whale

Based on the guidance and definitions provided above and the previously discussed project effects, the project may affect Southern Resident Killer Whales and their critical habitat because waterborne sound levels will exceed disturbance criteria during pile driving and removal operations. But the project is not likely to adversely affect Southern Resident Killer Whales and their critical habitat because temporary sound levels that exceed disturbance criteria will only occur within Gig Harbor, where Southern Resident Killer Whales are very unlikely to be present during the proposed construction timeframe. Therefore, the effect determination is that this project **may affect, but is not likely to adversely affect** Southern Resident Killer Whales and their critical habitat.

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APPENDIX I – ESSENTIAL FISH HABITAT ASSESSMENT

ESSENTIAL FISH HABITAT ASSESSMENT

Action Agency: U.S. Army Corps of Engineers

Project Name: Ancich Waterfront Park Commercial Fishing Homeport

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies, such as the USACE, to consult with NOAA Fisheries on activities that may adversely affect essential fish habitat (EFH). The EFH provision aims to identify and protect habitats for federally managed fish species covered under Fishery Management Plans. The federally managed species that are documented in Gig Harbor include species from the following fisheries: Coastal Pelagic, Groundfish, and Salmonids (Table 11). For further discussion on the effects of the proposed action and conservation measures, please refer to the Biological Assessment.

Table 1. Essential Fish Habitat Species Documented in Gig Harbor

Coastal Pelagic Species	
Chub Mackerel, *Scomber japonicas*	Northern Anchovy, *Engraulis mordax*
Jack Mackerel, *Trachurus symmetricus*	Pacific Sardine, *Sardinops sagax*
Market Squid, *Loligo opalescens*	
Groundfish Species	
Arrowtooth Flounder, *Atheresthes stomias*	Pacific Sanddab, *Citharichthys sordidus*
Big Skate, *Raja binoculata*	Petrale Sole, *Eopsetta jordani*
Lingcod, *Ophiodon elongatus*	Quillback Rockfish, *S. maliger*
Black Rockfish, *Sebastes melanops*	Redbanded Rockfish, *S. babcocki*
Bocaccio, *S. paucispinis*	Redstripe Rockfish, *S. proriger*
Brown Rockfish, *S. auriculatus*	Rex Sole, *Errex zachirus*
Butter Sole, *Pleuronectes isolepis*	Rock Sole, *Pleuronectes bilineata*
Cabezon, *Scorpaenichthys marmoratus*	Rosethorn Rockfish, *S. helvomaculatus*
California Skate, *R. inornata*	Rosy Rockfish, *S. rosaceus*
Canary Rockfish, *S. pinniger*	Rougheye Rockfish, *S. aleutianus*
China Rockfish, *S. nebulosus*	Sablefish, *Anoplopoma fimbria*
Copper Rockfish, *S. caurinus*	Sand Sole, *Psettichthys melanostictus*
Curlfin Sole, *Pleuronichthys decurrens*	Sharpchin Rockfish, *S. zacentrus*
Darkblotched Rockfish, *S. crameri*	Shortspine Thornyhead, *Sebastolobus alascanus*
Dover Sole, *Microstomus pacificus*	Spiny Dogfish, *Squalus acanthias*
English Sole, *Pleuronectes vetulus*	Splitnose Rockfish, *S. diploproa*
Flathead Sole, *Hippoglossoides elassodon*	Spotted Ratfish, *Hydrolagus colliei*
Greenstriped Rockfish, *S. elongatus* s	Starry Flounder, *Platichthys stellatus*
Jack Mackerel, *Trachurus symmetricus*	Stripetail Rockfish, *S. saxicola*
Kelp Greenling, *Hexagrammos decagrammus*	Tiger Rockfish, *S. nigrocinctus*
Longnose Skate, *R. rhina*	Vermilion Rockfish, *S. miniatus*
Pacific Cod, *Gadus macrocephalus*	Yelloweye Rockfish, *S. ruberrimus*
Pacific Hake, *Merluccius productus*	Yellowtail Rockfish, *S. flavidus*
Pacific Ocean Perch, *S. alutus*	
Salmonid Species	
Chinook Salmon, *Oncorhynchus tshawytscha*	Puget Sound Pink Salmon, *O. gorbuscha*
Coho Salmon, *O. kisutch*	

Conclusion and Effect Determination

Based on the guidance above and the previously discussed project effects and conservation measures, this project will have **no adverse effect** on designated EFH in the project and action areas

APPENDIX II – DRAWING SET

APPENDIX III – MARINE MAMMAL MONITORING PLAN

Marine Mammal Monitoring Plan

for the

The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

March 2022

Submitted to:
U.S. Army Corps of Engineers
Seattle District Regulatory Branch
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Attachment II Hydroacoustic Monitoring Results for the Ancich Park Project (NWS-2016-733)

ACRONYMS AND ABBREVIATIONS

3MP	Marine Mammal Monitoring Plan
dB	Decibel
ESA	Endangered Species Act
NMFS	National Marine Fisheries Service
SEL	Sound Exposure Level
USACE	United States Army Corps of Engineers

1 INTRODUCTION

This marine mammal monitoring plan (3MP) has been prepared to fulfill National Marine Fishery Service (NMFS) requirements to monitor for marine mammals in the defined area of potential waterborne sound effects form the Ancich Waterfront Park Commercial Fishing Homeport Project for the City of Gig Harbor. The proposed project is located within Gig Harbor, Washington. This project will include the installation of a commercial fishing dock at Ancich Waterfront Park. This project does have the potential to impact species of marine mammals that are protected under Marine Mammal Protection Act in the Action Area as defined by the Biological Assessment (Table 1).

Table 1. Marine Mammal Species Likely to Occur in the Project Area

Common Name	Scientific Name
Dall's Porpoise	*Phocoenoides dalli*
Harbor Porpoise	*Phocoena phocoena*
Harbor Seal	*Phoca vitulina*
Humpback Whale	*Megaptera novaeangliae*
Southern Resident Killer Whale	*Orca orcinus*
Stellar Sea Lion	*Eumetopia jubatus*

2 PROJECT DESCRIPTION

Ancich Waterfront Park is classified as working waterfront with water dependent uses in the City shoreline code. As a part of Resolution 949 by the City Council, dock access and moorage facilities for both small, human powered crafts and commercial fisherman will be provided. The human powered craft dock is currently under construction (NWS-2018-981; HPA 23613 and 16330). The addition of the commercial fishing dock will provide educational opportunities (which support the historic context of the site) and additional moorage for the local fishing fleet. The proposed project consists of the elements listed below, followed by summary tables (Tables 2 and 3).

1. **Float Installation**
   A main walk floating dock will be installed with an overall length of 280'. Finger floats will be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats will be 100% grated to allow for light penetration. Based on the identified commercial fishing vessel fleet, the following finger floats were used:

   - (1) 45' Finger Float
   - (5) 60' Finger Floats
   - (1) 80' Finger Float

   (20) steel guide piles will be driven for the floats. The piles will be 24" in diameter to accommodate for the mooring of these large fishing vessels. All piles will be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. Alternatively, if the driving conditions are difficult, the piles will be installed completely with an impact hammer. Pile driving will be completed from a barge. The barge will not ground out. Floats will be fabricated offsite, brought in via barge, and lowered into place with a crane.

2. **Gangway Installation**
   An 80' aluminum gangway will be fabricated offsite, brought in via barge and lifted into position. It will be attached to previously installed landing support on the Ancich Pier and will be designed for pedestrian foot traffic only. (5) 12"-diameter steel fender piles will be installed along the gangway and in front of the Ancich Pier. They will have HDPE sleeves to protect the piles and vessels from impact damage.

3. **Safety and Utilities**
   Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

4. **Mitigation**
   Mitigation will include the demolition of the remaining portion of Jerkovich Pier. Removal of this pier was approved under NWS-2021-187 as advanced mitigation, but the pier has yet to be demolished. The HPA (24349) was reviewed, and a site visit performed by Darrin Masters, but the City ended up revoking their application. See Mitigation Plan for details.

Table 2. Pile Removal and Installation Summary

Structure	Piles Removed	Piles Installed	Net Change in Number of Piles
Jerkovich Pier	32 creosote-treated timber piles, 12-inch diameter	0	-32
Floats	0	20 steel piles, 24-inch diameter	+20
Gangway	0	5 steel piles, 12-inch diameter	+5
Total	**-32**	**+25**	**-7**

Table 3. Overwater Coverage Summary

Structure	Net Change in Overwater Coverage
Jerkovich Pier Demolition	–1,558.5 SF (solid asphalt decking)
Gangway Installation	+527 SF (grating 45% net open area) (area not including overlap with float)
Floats Installation	+5,854 SF (grating 45% net open area))
Total	**+4,822.5 SF**

2.1 Project Sequence

All in-water work will avoid the annual outmigration of juvenile salmonids and the breeding season for marbled murrelets. Per WAC Tidal Reference Area 4, the expected in-water work window is August 1 through February 15 of any year. The project is expected to occur over the course of one in-water work window, from August 1, 2023, to February 15, 2024. The City proposes the following general construction sequence, subject to adjustment by the construction contractor's means and methods:

1. Mobilize equipment
2. Demolish asphalt decking, caps, and stringers of Jerkovich Pier
3. Pull up to 10 timber piles per day with a vibratory hammer until all 32 are removed
4. Drive up to 10 steel guide piles per day with vibratory and impact hammer until all 25 are in place
5. Install floating dock
6. Install finger floats
7. Install gangway
8. Install utilities and dock accessories
9. Demobilize equipment

3 METHODOLOGY

A boat-based, trained observer will be located on-site before and during in-water construction activity at a location appropriate for monitoring marine mammals within and approaching the action area. During observation periods, the observer will continuously scan the area for marine mammals using binoculars and the naked eye. The observer will collect data including, but not limited to, environmental conditions (e.g., sea state, precipitation, glare), marine mammal sightings (e.g., species, numbers, location, behavior, responses to construction activity), and construction activity at the time of sighting. The observer will conduct observations, meet training requirements, fill out data forms, and report findings in accordance with this report. The observer will implement mitigation measures including monitoring of the proposed action area and shutdown procedures. They will be in continuous contact with the construction personnel via two-way radio. A cellular phone with local service will be used as back-up communications and for safety purposes. An employee of the construction contractor will be identified as the main point of contact for the observer.

3.1 Observer Qualifications

Monitoring will be conducted by one qualified, trained marine mammal observer. According to NOAA, the minimum qualifications for marine mammal observers are the following:

1. Visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars or spotting scope may be necessary to correctly identify the target.
2. Advanced education in biological science, wildlife management, mammalogy or related fields (Bachelor's degree or higher is preferred), or equivalent Alaska Native traditional knowledge.
3. Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
4. Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
5. Sufficient training, orientation or experience with vessel operation and pile driving operations to provide for personal safety during observations.
6. Writing skills sufficient to prepare a report of observations. Reports should include such information as the number, type, and location of marine mammals observed; the behavior of marine mammals in the area of potential sound effects during construction; dates and times when observations and in-water construction activities were conducted; dates and times when in-water construction activities were suspended because of marine mammals, etc.
7. Ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine mammals observed in the area, as needed.

3.2 Data Collection

The observer will use a Marine Mammal Observation Sheet (Attachment 1) to record any sightings. Observation sheets will be used to record the following:

- Date and time that permitted construction activity begins and ends;
- Weather parameters (e.g. percent cloud cover, percent glare, visibility) and sea state with the Beaufort Wind Force Scale;
- Species, numbers, and, if possible, sex and age class of observed marine mammals;
- Marine mammal behavior patterns observed, including bearing and direction of travel;
- Location of marine mammal, including distance from observer and distance from pile driving activities to marine mammals
- Record of whether an observation required the implementation of mitigation measures, including shutdown procedures and the duration of each shutdown; and
- Other human activity in the area.

3.3 Equipment

The following equipment will be required to conduct observations for this project:

- Appropriate personal protective equipment including, but not limited to, a life jacket and hearing protection;
- Portable radios and headsets for the observer to communicate with the contractor;
- Cellular phone for backup to radio communications;
- Contact information for the contractor, the U.S. Army Corps of Engineers (USACE) representative, and National Marine Fisheries Service (NMFS) representative;
- Daily tide tables for the project area;
- Watch or chronometer;
- Binoculars (quality 10x42 or better) or spotting scope (20-60 zoom or better) with a built-in rangefinder or reticles (or separate rangefinder);
- Hand-held GPS device, map and compass, or grid map to record locations of marine mammals;
- Copies of MMMP and/or other relevant permit requirement specifications in sealed clear plastic cover; and
- Notebook with pre-standardized Marine Mammal Observation Sheets on waterproof paper.

3.4 Observer Monitoring Location

In order to effectively monitor the pile driving and pulling shutdown zone (Figure 2), the marine mammal observer will be positioned at the best practical vantage point. The observer will be placed at a suitable location in order to observe the action area. This will allow for both an unobstructed view of the pile driving and pulling and the shutdown zone. The monitoring position of the observer will have the following characteristics:

- Unobstructed view of pile being driven;
- Unobstructed view of all water within the shutdown zone;
- Clear view of pile-driving operator or construction foreman in the event of radio failure; and
- Safe distance from pile driving activities in the construction area.

The observer will record all marine mammal sightings, provided it does not interfere with their effectiveness at carrying out the shutdown procedures. If visibility does not allow for full clearance of the observation zone, additional stations or vantage points will be sought.

The marine mammal shutdown zone (action area) will be monitored 30 minutes prior and during all pile driving activity. Pile driving and pulling will not be initiated or will be temporarily suspended until the animals have moved outside of the action area (as determined in Table 4) on its own.



Figure 1. Action Area in Red

Table 2 below calculates the disturbance zone based on the practical spreading loss model, per the interim guidance. The practical spreading loss model was used to determine the zones in which pinnipeds and cetaceans have the potential to face behavioral disturbance from underwater noise. The formula for calculating practical spreading loss underwater is:

$$TL = GL \times \log \frac{R_1}{R_0}$$

Where TL is the transmission loss (dB) (i.e., the disturbance zone), GL is the geometric loss coefficient (15 is the only valued allowed without real-time sound source verification), R_1 is the range to the target sound pressure level (m), and R_0 is the distance from the source of the initial measurement (m).

Table 4. In-water Injury and Disturbance Zones

Pile Size	Duration[1]	Source Levels (10m from pile)[2]			Injury Zones and Acoustic Thresholds (meters)				*Marine Mammal Disturbance Zone (meters)*
		Peak (dB)	RMS (dB)	SEL (dB)	Low-Frequency Cetacean	Mid-Frequency Cetacean	Phocid Pinniped	Otariid Pinniped	
Vibratory Hammer									
Thresholds (dB SEL)					**199**	**198**	**201**	**219**	**120[3]**
12" (nom) steel	8 hrs/day	171	155	155	10.9	1.0	6.6	0.5	232.6
24" (nom) steel	8 hrs/day	181	153	153	11.1	1.0	6.8	0.5	51.3
12" timber	8 hrs/day	172	162	--	31.9	2.8	19.4	1.4	681.3
Impact Hammer									
Thresholds (dB SEL)					**183**	**185**	**185**	**203**	**160**
12" (nom) steel	1,500 strikes/ day	192	169[4]	--	32.9	1.2	17.6	1.3	39.8
24" (nom) steel	1,500 strikes/ day	195	168[4]	164	39.3	1.4	21.0	1.5	39.3

3.5 Monitoring Techniques

The observer will collect sighting data and behaviors of marine mammal species that are spotted in the action area during periods of pile driving or pulling. The observer will have no other construction-related tasks while conducting monitoring. Observation necessitates that daylight is sufficient for the observer to visualize the entirety of the action area, so observations will commence and complete during daylight hours. Monitoring of shutdown and observation zones will take place from 30 minutes prior to initiation and through all pile driving and removal activities.

3.5.1 Pre-Activity Monitoring

The following survey methodology will be implemented prior to commencing permitted activities:

- Prior to the start of permitted activities, the observer will monitor the shutdown and monitoring zones for 30 minutes. They will ensure that no marine mammals are present within action area before permitted activities begin.
- The shutdown zone will be cleared when marine mammals have not been observed within zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft start cannot proceed until the animal has left the zone or has not been observed for 20 minutes.
- When the action area is cleared, the observer will radio the contractor. Permitted activities will not commence until the contractor receives verbal confirmation the zones are clear.

[1] Assumes up to 10 piles per day can be pulled or installed.
[2] Source levels were obtained from Caltrans (2015).
[3] Ambient background levels at the site were recorded at 134.5 dB (Attachment II).
[4] WSDOT (2018) has established an average reduction of 8-32 dB RMS with the use of a bubble curtain. To be conservative, a reduction of 8 dB RMS was used for impact pile driving only.

- In case of fog or reduced visibility, the observer must be able to see the entirety of shutdown and monitoring zones before permitted activities can be initiated.

3.5.2 Soft Start Procedures

When all marine mammals in the disturbance zone have been documented, the observer will instruct the contractor will instruct the contractor to initiate the ramp-up procedure for pile driving. This procedure consists of initiating the vibratory hammer for 15 seconds at reduced energy followed by a 1-minute waiting period. This procedure will be repeated for a total of three sequences before vibratory pile driving begins. For impact driving, a ramp up procedure of three soft starts using the weight of the hammer followed by a 1-minute waiting period will be required prior to driving. For impact driving to proof the piles, a ramp up procedure of three soft starts using the weight of the hammer will be required prior to driving.

3.5.3 During-Activity Monitoring

The following survey methodology will be implemented during permitted activities:

- The observer will search continuously for marine mammals with the naked eye and with the aid of binoculars and spotting scopes.
- All observations of marine mammals will be documented in a Marine Mammal Observation Sheet.
- When a marine mammal is observed, its location will be determined using a rangefinder to verify distance and a GPS or compass to verify heading.

3.5.4 Shutdown

If any cetaceans or pinnipeds are observed within the disturbance zones, or if entry into the zone is eminent, pile-driving activities will be immediately halted. The observer will immediately radio to alert the contractor, requiring an immediate “all-stop”. Pile-driving activities will resume when the animal has voluntarily left the disturbance zone or 20 minutes have passed without re-sighting the animal in the zone. The observer will continue to monitor the animal after it has left the disturbance zone.

3.5.5 Breaks in Work

During an in-water construction delay, the shutdown and monitoring zones will continue to be monitored. No exposures will be recorded for permitted species in the monitoring zone if there are no concurrent permitted construction activities.

If permitted activities cease for more than 30 minutes and monitoring has not continued, pre-activity monitoring and soft start procedures must recommence. This includes breaks due to scheduled or unforeseen construction practices or breaks due to permit-required shutdown. Following 30 minutes of monitoring, work can begin according to the pre-activity monitoring protocols. Work cannot begin if an animal is within the shutdown zone or if visibility is not clear throughout the shutdown and monitoring zones.

4 REPORTING

4.1 Modifications

In the event that the City needs to modify terms of this MMMP, the USACE and NMFS representatives will be promptly contacted for discussion of the requested modification.

4.2 Injured or Dead Marine Mammals

If the City finds an injured, sick, or dead marine mammal, a county representative will notify the NMFS representative and provide the species or description of the animal(s), condition of the animal or carcass, location, date and time of first discovery, observed behaviors (if alive), and photo or video (if available).

- If marine mammal's condition is a direct result of the project, notification will be made and work will stop until NMFS is able to review the circumstances of the prohibited take.
- If cause of death is unclear, the City shall immediately report the incident. Construction activities may continue while NMFS reviews the circumstances of the incident and makes a final determination on the cause of the reported injury or death. NMFS will work with the City to determine whether additional mitigation measures or modifications to the activities are appropriate.

Care should be taken in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death, if that occurs. In preservation of biological materials from a dead animal, the finder (i.e., marine mammal observer) has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed.

4.3 Monitoring Report

A monitoring report will be prepared upon request by the USACE and/or NMFS representatives.

5 REFERENCES

Buehler, David P.E.; Oestman, Rick; Reyff, James; Pommerenck, Kieth; Mitchell, Bill (2015). Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared for the California Department of Transportation, Sacramento, California. Cited as Caltrans (2015).

National Oceanic and Atmospheric Administration (2021). *Guidance for Developing a Marine Mammal Monitoring Plan*. NOAA Fisheries. Accessed February 2022. https://www.fisheries.noaa.gov/alaska/endangered-species-conservation/guidance-developing-marine-mammal-monitoring-plan#more-information

ATTACHMENT I – MARINE MAMMAL OBSERVATION SHEET

Marine Mammal Observation Record Form

Observer(s):

Project Name:

Boat Name/Location:

Time Effort Initiated:

Date:

Time Effort Completed:

Page_____of_____Pages

Sighting #	Sighting Time	Latitude	Longitude	Species	# of Animals	Distance/ Direction to Animal	Behavior Type(s)	Const Type	Distance to Pile	Weather Cond	Beauford Wind Scale	Notes

Behavior Codes

Code	Behavior	Definition
BR	Breaching	Leaps clear of water
CD	Change Direction	Suddenly changes direction of travel
CH	Chuff	Makes loud, forceful exhalation of air at surface
DI	Dive	Forward dives below surface
DE	Dead	Shows decomposition or is confirmed as dead by investigation
DS	Disorientation	An individual displaying multiple behaviors that have no clear direction or purpose
FI	Fight	Agonistic interactions between two or more individuals
FO	Foraging	Confirmed by food seen in mouth
MI	Milling	Moving slowly at surface, changing direction often, not moving in any particular direction
PL	Play	Behavior that does not seem to be directed towards a particular goal; may involve one, two or more individuals
PO	Porpoising	Moving rapidly with body breaking surface of water
SL	Slap	Vigorously slaps surface of water with body, flippers, tail etc.
SP	Spyhopping	Rises vertically in the water to "look" above the water
SW	Swimming	General progress in a direction. Note general direction of travel when last seen [Example: "SW (N)" for swimming north]
TR	Traveling	Traveling in an obvious direction. Note direction of travel when last seen [Example: "TR (N)" for traveling north]
UN	Unknown	Behavior of animal undetermined, does not fit into another behavior
AWA	Approach Work Area	Approaching the work area
LWA	Leave Work Area	Leaving the work area
Pinniped only		
EW	Enter Water (from haul out)	Enters water from a haul-out for no obvious reason
FL	Flush (from haul out)	Enters water in response to disturbance
HO	Haul out (from water)	Hauls out on land
RE	Resting	Resting onshore or on surface of water
LO	Look	Is upright in water "looking" in several directions or at a single focus
SI	Sink	Sinks out of sight below surface without obvious effort (usually from an upright position)
VO	Vocalizing	Animal emits barks, squeals, etc.
Cetacean only		
LG	Logging	Resting on surface of water with no obvious signs of movement

Visibility (NOTES SECTION)

Code	Distance Visible
B	Bad (<0.5km)
P	Poor (0.5 – 0.9km)
M	Moderate (0.9 – 3km)
G	Good (3 - 10km)
E	Excellent (>10km)

Attenuation Type (NOTES SECTION)

Code	Activity Type
SS	Soft Start
BC	Bubble Curtain
DE	Delay onset of In-Water Work
SD	Shut Down In-Water Work

Sighting Cues (NOTES SECTION)

Code	Distance Visible
BL	Blow
BO	Body
BR	Breach
DF	Dorsal Fin
SA	Surface Activity
OTHR	Other

Beaufort Wind Scale

Beaufort Number (Wind Force)	Wind Velocity (Knots)	Wind Description	Sea Conditions
0	<1	Calm	Smooth and mirror like
1	1-3	Light Air	Scaly ripples, no foam crests
2	4-6	Light Breeze	Small wavelets, glassy, no breaking
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps
4	11-16	Moderate Breeze	Small waves, numerous whitecaps

Construction Type

Code	Activity Type
V	Vibratory Pile Driving
I	Impact Pile Driving
ST	Stabbing
NOWC	No Over-Water Construction
NONE	No Construction
OTHR	Other

Marine Mammal Species

Code	Marine Mammal Species
CSL	California Sea Lion
DP	Dall's Porpoise
GW	Gray Whale
HP	Harbor Porpoise
HS	Harbor Seal
HW	Humpback Whale
KW	Killer Whale
MW	Minke Whale
SST	Steller Sea Lion

Weather Conditions

Code	Weather Condition
S	Sunny
PC	Partly Cloudy
L	Light Rain
R	Steady Rain
F	Fog
OC	Overcast
SN	Snow
HR	Heavy Rain

ATTACHMENT II – HYDROACOUSTIC MONITORING RESULTS FOR THE ANCICH PARK PROJECT (NWS-2016-733)

UNDERWATER SOUND LEVELS ASSOCIATED WITH PILE DRIVING DRING ANCICH PARK RESTORATION PROJECT GIG HARBOR, WASHINGTON



January 26th, 2018

For:

P|N|D Engineers, Inc.
Seattle, Washington

By:

Delphis Technical Support and Solutions, LLC.
13332 69th DR SE
Snohomish, WA 98296

DTSS Project No. DTSS 201710

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Appendices
(At end of text)

Title

A. **Output Plots for Individual Pile Driving Events**

B. **Hydro Acoustic Monitoring Data Sheet**

C. **Photos - Ancich Park Pile Driving – January 26th, 2018**

UNDERWATER SOUND LEVELS ASSOCIATED WITH PILE DRIVING DRING ANCICH PARK RESTORATION PROJECT

January 26th, 2018

Executive Summary

Four 24-inch diameter piles were monitored for noise generated while driving piles as part of the Ancich Park and Restoration Project on January 26th, 2018. These piles were driven into the sediment using impact pile driving methods. Where practical, the piles were driven using a vibratory hammer to reduce the number of blows needed to proof the piles. Piles monitored on January 26th had previously been driven into their respective positions and near embedment depth of 30-feet using a vibratory hammer. They required the impact driving to drive the piles approximately 1-foot to achieve the design compression capacity of 400 kips. All in-water activity was mitigated using a single-level bubble curtain. The cSEL did not exceeded the limit of 204 dB re 1 $\mu Pa^2 \cdot sec$ at 10-meters as NMFS directed for this site. Underwater acoustic measurements were recorded in mid-water depth as close to possible to 10-meters and concurrently at approximately 20-meters (or closer) from the pile being driven. The maximum cSEL recorded was 200 dB re 1 $\mu Pa^2 \cdot sec$ during 73 blows over 110 seconds on Pile C1. The highest peak SPL recorded from all pile driving events was 205.9 dB re 1 µPA while driving Pile C1 as measured from 10-meters. The total allowable daily blow count for this site is 750. Total Blow Count monitored for this report for impact pile driving was 227 plus seven (7) soft start blows. Approximately 350 blows were made throughout the day to include proofing piles in shallower, intertidal zone requiring about 20 blows each to drive them at least 1-foot (on-site engineer). No marine animals or stressed fish were observed near the pile driving activity.

1.0 INTRODUCTION

The project area is located within Gig Harbor in southern Puget Sound as shown in Figure 1. The Ancich Park Site is being developed from its current condition to a landscaped park featuring public boat storage, bathrooms, utilities, lighting, and landscaped as part of the Upland Park Improvements and Netshed Restoration Project currently underway by the City of Gig Harbor. In this process approximately (139) 12-inch creosote covered timber piles will be removed. The Ancich Pier will be demolished and replaced with new materials including steel piles and timber planks. Ten 24-inch new steel foundation piles will be driven. In this process approximately thirty-nine 12-inch creosote covered timber piles will be removed. Additionally, because the new piles will be steel, less piles will be installed than currently exist. Delphis Technical Support and Solutions, LLC (DTSS) was contracted by P|N|D Inc. to monitor acoustic levels produced while driving 24-inch diameter piles at the site. This technical report presents the results of underwater sound levels and ancillary metrics measured during the driving of four (4) 24-inch diameter steel pipe piles as part of the Ancich Pier on January 26th, 2018 using a Delmag-32 impact hammer.

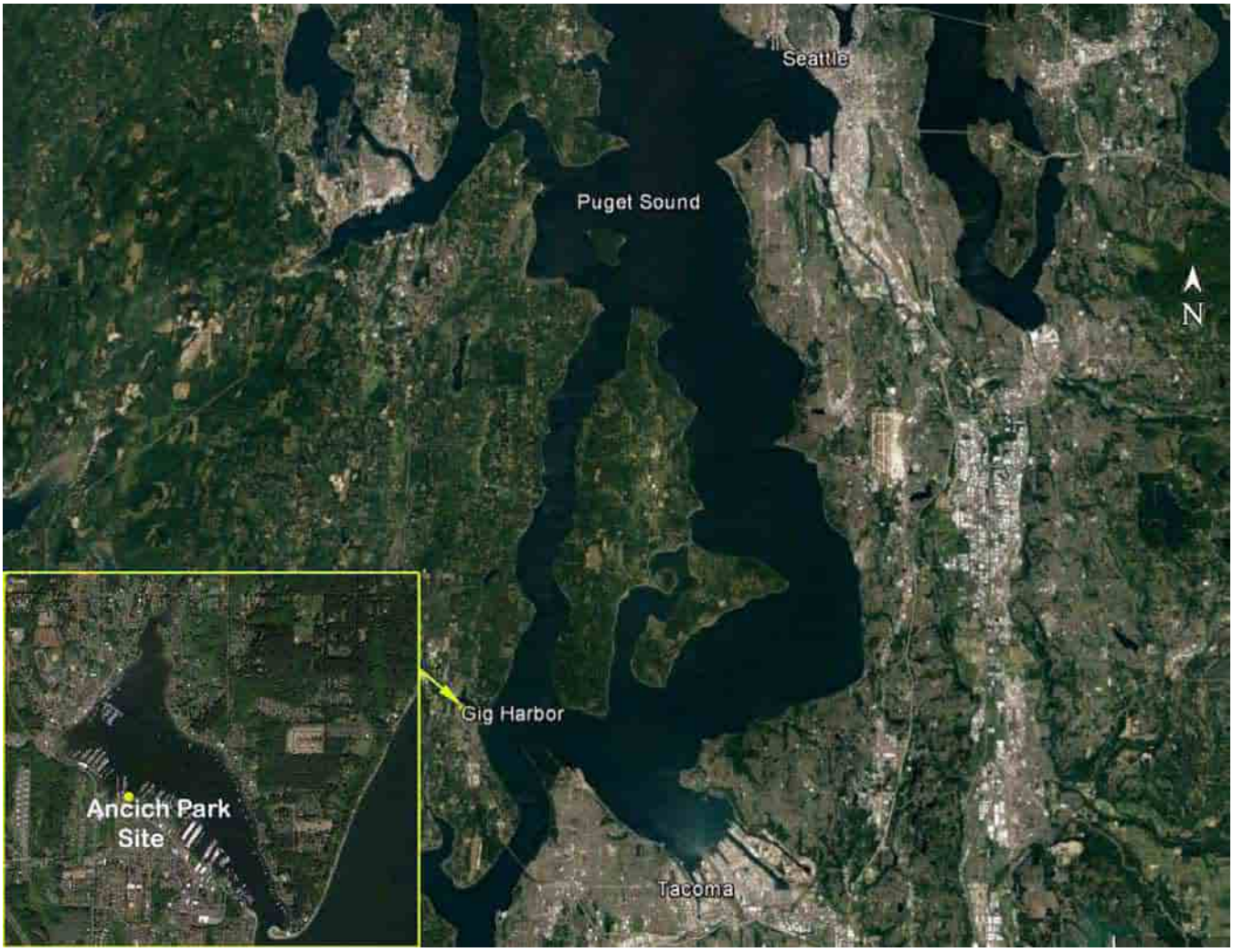


Figure 1 Ancich Park - Project location.

1.1 Characteristrics and Metrics of Underwater Sound

Several descriptors are used to describe underwater noise metrics. Two common descriptors are the instantaneous peak sound pressure level (SPL) and the Root Mean Square (RMS) pressure level during the impulse wave. For this monitoring effort, the following standard metrics have been used for reporting received sound pressure levels from impulsive pile-driving noise ancillary metrics unique to each site and each blow (see ANSI S1.1-1994).

Peak Pressure

The peak pressure is the instantaneous maximum or minimum overpressure observed during an impulsive event. This report presents this metric in Pascals (Pa) or decibels (dB) referenced to a pressure of 1 micropascal (dB re: 1 μPa).

The equation to calculate the sound pressure level in water is:

Sound Pressure Level (SPL) = 20 log (p/pref), where pref is the reference pressure

Root Mean Squared (RMS)

The RMS level is the square root of the squared pressure values divided by the duration. This level, presented in dB re: 1 μPa, is the mean square pressure level of the pulse (or overall duration). It has been used by National Marine Fisheries Service (NMFS) in criteria for judging impacts to marine mammals from underwater impulse-type sounds.

$RMS_{90\%}$ Sound Pressure Level

This metric is defined as the root-mean-square sound pressure level over a period T90 of the impulse waveform that contains 90% of the pulse energy measured in dB re1 μPa. This project reports $RMS_{90\%}$ for the maximum and minimum impulse waveforms during a steady pile driving event as well as the duration of all of blows per pile (hammer reset time removed from record).

Sound Exposure Level (SEL)

SEL is often used as a metric for a single acoustic event and is often used as an indication of the energy dose. SEL is calculated by summing the cumulative pressure squared (p^2), integrating over time, and normalizing to the time over which the pulse or event occurred. For a single pulse, the sound exposure is defined as the integral of the squared sound pressure over the duration of the pulse event (see section 3.54 of ANSI S1.1-1994): The units for SEL are dB re: 1 micropascal-squared-sec (re 1 $\mu Pa^2 \cdot sec$).

cSEL

The relationship between the SEL and the peak pressure is not consistent between pile strikes or between different types of piles for a given pile driving operation. The SEL for each impulsive noise event can be aggregated by summation to calculate the total SEL (or Cumulative-SEL) for the entire exposure duration. This metric is used to describe the noise dose which considers not only the peak pressure but also the duration of the exposure. This project reports cSEL for the maximum and minimum impulse waveforms as well as the aggregated summation of all of blows per pile.

$cSEL_{90\%}$

This metric is defined as the cumulative sound exposure level level over a period T90 of the impulse waveform that contains 90% of the pulse energy. This project reports $cSEL_{90\%}$ for the maximum and minimum impulse waveforms during a steady pile driving event as well as the aggregated summation of all of blows per pile (hammer reset time removed from record).

Continuous Noise or Background Level

Broadband ambient (background) noise levels from this study have been reported in terms of the 1 minute average continuous sound level (1 minute *RMS* dB re 1 uPA).

Figure 2 shows time series plot of a typical (mitigated) impulse waveform generated from a single hammer blow with some of the metrics as they relate to it.

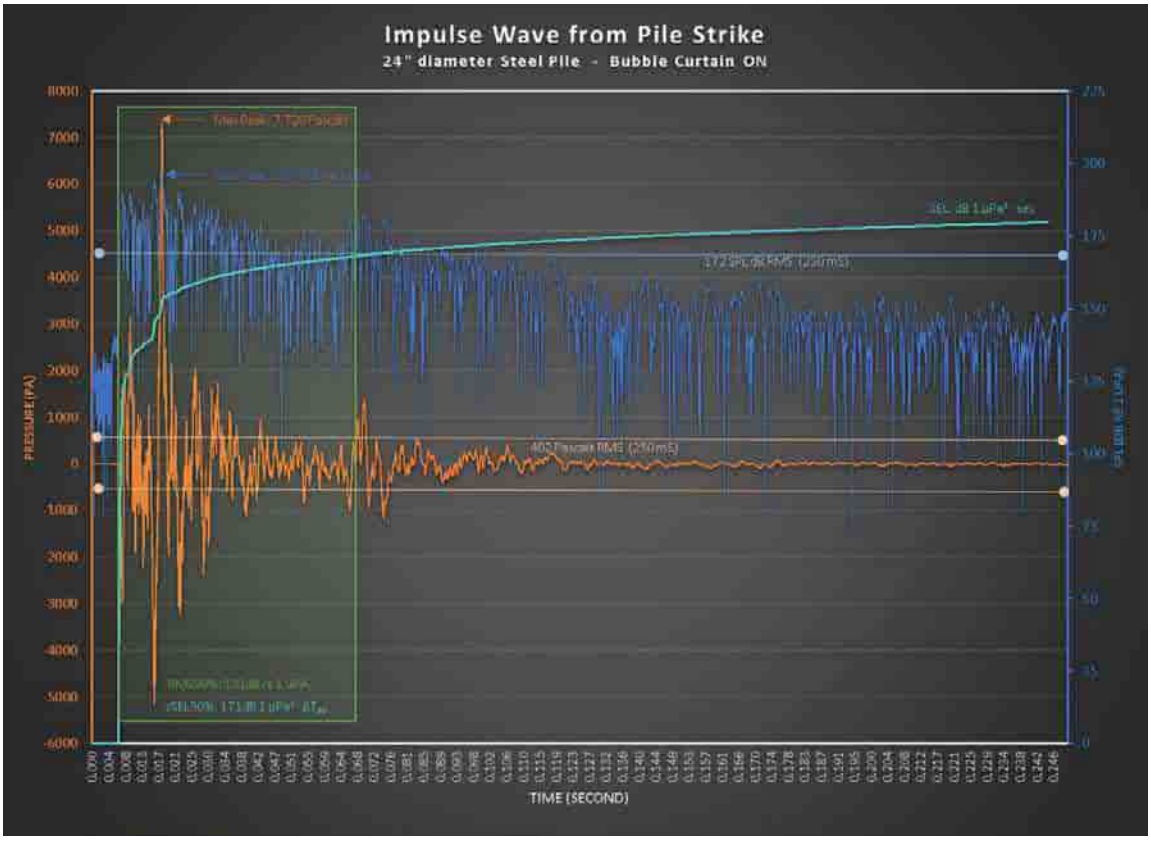


Figure 2 Measurements of an impulse wave associated with pile driving.

2.0 FIELD METHODS

2.1 Equipment

Acoustic Recording

Two (2) CR-1 hydrophones manufactured by Sensor Technology, LTD and assembled by Cetacean Research Technology were used to document the sound frequency spectrum and pressure levels generated by high impulse source levels such as those generated by the impact of the hammer on the pile transmitted through the water. These hydrophones were designed specifically with a 195 dB re 1v/mPa nominal sensitivity with overload pressure to 220 dB re 1mPa without the need for pre-amplification and calibrated over a frequency range of 10 Hz to 30 kHz. Each hydrophone has a maximum cable length of 30-meters.

The hydrophones were connected to their respective channels on a dual channel, DAQ-200 Precision Dynamic Signal Acquisition Interface manufactured by SpectraPLUS® interfaced directly into a field Toughbook laptop computer running SpectraPLUS-SC FFT Spectral Analysis System software.

Concurrent incoming analog signals are digitized from the hydrophone(s) and the real-time voltage signals are displayed on the computer as SPL and digitally stored for post-processing and analysis.

Note; this scope of work required the use of a hydrophone placed at 10-meters from the activity. A second hydrophone was placed at the same water depth at approximately twice the distance from the activity to observe any attenuation characteristics and to collect back-up data in case the primary hydrophone failed.

Positioning

A Bushnell Laser rangefinder was used to take a direct measurement from the pile to the monitoring location. Water depth was determined using the metered hydrophone anchor line as well as a CTD.

CTD Casts

A Hydrolab H20 equipped with conductivity, temperature, dissolved oxygen, turbidity and depth sensors was used to collect a profile of salinity/conductivity, temperature, and depth data to verify station depth and calculate the general speed of sound through the water column.

Air Measurements

A calibrated ExTech Type-II Sound Level Meter was used to record ambient air noise at the 10-meter location prior to pile driving, during vibratory pile driving, and during impact pile driving.

All equipment was mobilized, calibrated if required, and tested prior to their deployment to the site. The computer clock and CTD were coordinated to NIST time standard for Pacific Standard Time zone.

2.2 Site Overview

Ancich Park is located along the southern shore of Gig Harbor. Much of the area is restricted to public access due to the upland construction activity at the site. Arrangements were made to use the city skiff to record acoustic levels close to the pile from the water. However, a last-minute scheduling conflict arose limiting the amount of time the vessel operator could remain on site. Therefore, the best area to achieve a required distance of 10-meters from the hydrophone to the multiple pile driving events was along the starboard side of the contractor's barge while it was in engaged in the pile driving activity. Figure 3 shows the general hydrophone location relative to the four piles that were monitored (Google Earth image date 5/22/2017, does not show current condition of the site presently under construction). The barge provided better stability, shelter, and protection for the equipment than the open skiff, however, higher acoustic background levels are usually recorded so close to the barge. Typically, placing hydrophones at set distances are very opportunistic to get within the required distance and remain safe. The barge is restricted in its positioning and orientation while driving the piles due to depth or obstructions such as the previously installed rows of piles. Operating from the barge limited precise

placement of the near-field hydrophone at the desired 10-meter distance while measuring the acoustic levels produced from impact driving Piles C1 and B4. Note: Piles B1 thru B4 plus C1, and Piles A1 thru A5 had been previously driven close to their final penetration depth using a vibratory hammer on previous days and required approximately one-foot of impact hammering to proof the piles to their ratings. Both hydrophones were moved fore and aft along the side of the barge to attempt to achieve optimal ranges between the pile and the respective hydrophone. There were instances where line of sight between the hydrophone(s) and pile being driven may be obstructed by the new dock pilings. The seafloor slopes upward from about -4-feet MLLW to approximately +10-feet MLLW from the deeper C1 and A5 Piles to the shoreward B1 and A1 Piles (approximately 140-feet distance).



Figure 3 Ancich Pile Driving - Location of piles and hydrophones on barge.

Figure 4 shows the general layout of the deployed hydrophones with respect to the barge and piles during the monitoring. The depth of the hydrophone deployment location was sounded using the metered (1-ft increments) anchor line. The hydrophone mooring bracket was set at the desired mid-water elevation. To maintain a near constant orientation between the hydrophone and pile driving operation (no free turning, sagging, or strumming), the hydrophone is set at its vertical depth along the tight ¼" nylon-chord anchor line. With the top of the anchor tied to a fixed structure on the barge and the and weight on the bottom, the mooring bracket suspends the hydrophone perpendicularly, 1-ft away from the anchor line reducing any ringing or shading caused by suspension lines. Tension is checked periodically to compensate any change due to tide. The hydrophone is secure within the bracket and dampened from any contact of the hard surface using closed cell foam to prevent additional transient vibrations or signals transmitted thought the hard plastic from contaminating the data. Excess

hydrophone cable is placed into its foam case to isolate it from direct contact with the barge deck for similar reasons. The hydrophone cable is suspended from the surface and helps to maintain the orientation of the mooring bracket.

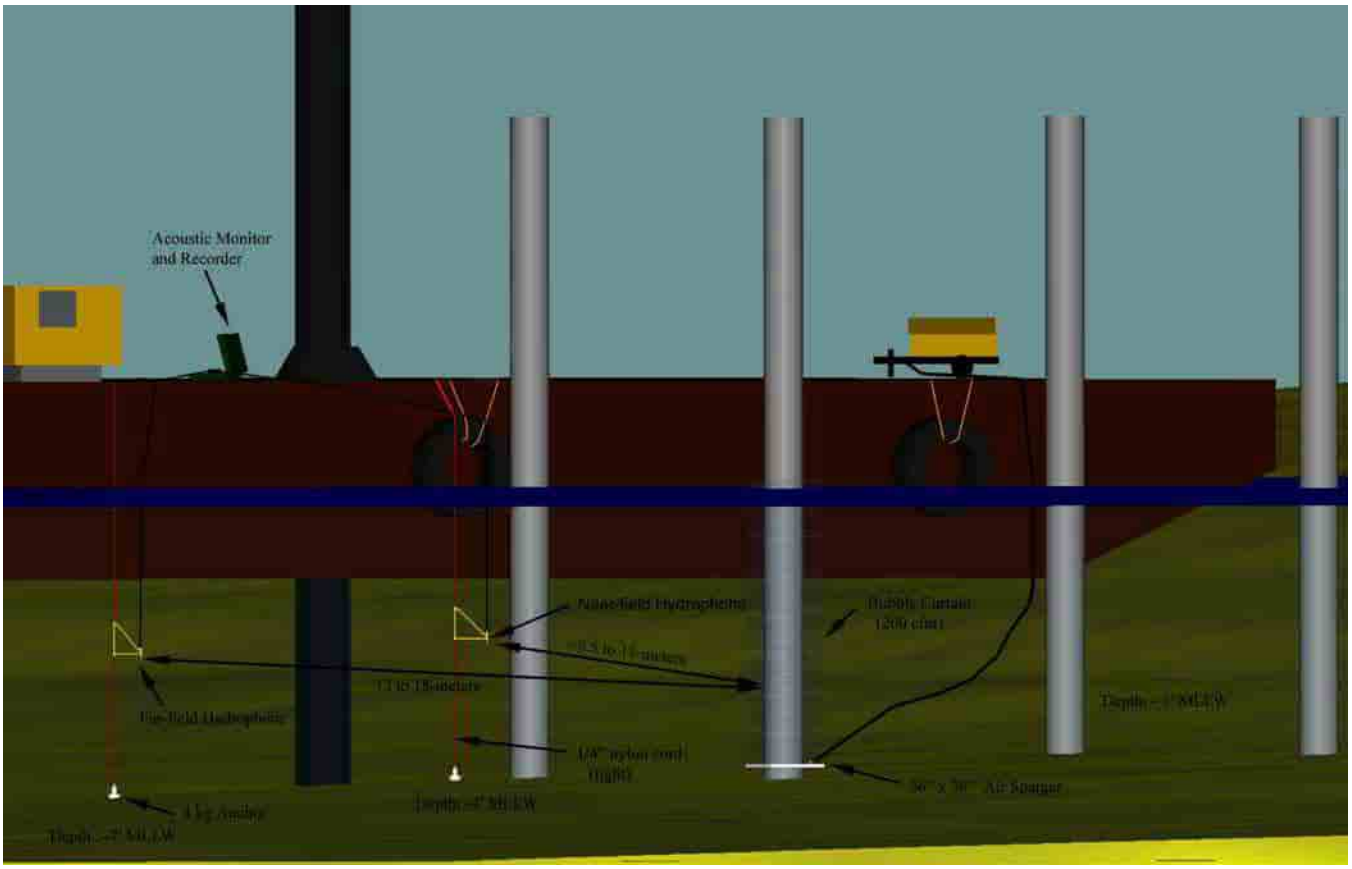


Figure 4 Hydrophone deployment and structures.

The near-field and far-field hydrophones are recorded concurrently on separate channels. The technician can observe the sound pressure levels and spectrum in real time on the monitor.

All impact pile driving was mitigated using a single-level bubble curtain expelling air at approximately 200 cfm.

2.3 Measurements

The technician would check the water level periodically to ensure the hydrophones were deployed at mid-water depth. Prior to starting any pile driving, the Contractor Lead would signal the acoustic technician they were ready. The technician would recheck the distance from pile to hydrophone was correct using the laser rangefinder then check the general area around each hydrophone for any debris or potential interference. The technician would start the recording just prior to the pile driving and before the bubble curtain was activated if possible to record the ramp up of activity from ambient to fully

active. The signals were monitored in real-time to ensure the hydrophones were collecting data at good levels (not over-pressure or under-pressure).

Each 24-bit, two channel recording had a sampling rate of 48,000 Hz (frequency limit 24,000 Hz) with an FFT size of 8192 samples. This provides a spectral resolution of 5.859 Hz.

Following the completion of the activity and shut down of the bubble curtain, the technician would stop the recording and quickly asses the general SPL of the activity as well as the cSEL to determine if additional mitigation was required. Data was saved and backed up on an external hard drive following each event.

2.4 Ancillary Measurements

Discrete air noise readings were taken at the 10-meter location with a Type-II Sound Level Meter to record the maximum A-weighted SPL from background, vibratory and impact pile driving. Results were recorded in logbook.

A CTD cast was conducted at the end of the day to collect a profile of salinity/ conductivity, temperature, and depth data to verify station depth and calculate the general speed of sound through the water column.

3.0 DATA PROCESSING

3.1 Signal Processing

All signals were recorded as broadband encompassing a frequency range from 11.7 Hz to 22.16 kHz. Most of the processing is performed in the field as the SpectraPLUS-SC FFT Spectral Analysis System software records and displays the data. Additional processing of each event included trimming each file to remove extra recording time such as the bubble curtain start up and soft start blows that are not included (per Engineer) as part of the blows per pile record or "event". From the trimmed record containing only the actual blows per pile, the maximum, minimum, and mean SPLs were extracted and plotted as a time series plot. SpectraPLUS-SC was used to determine the RMS and cSEL over the entire event.

The software was used to determine the T_{90} for each wave (approximately 45mS to 60mS) by trimming each pile strike impulse waveform per event to T_{90} and removing the hammer reset time (~1.4 seconds) between strikes then aggregated to determine $RMS_{90\%}$ and $cSEL_{90\%}$ for the entire event as well as the metrics from the maximum and minimum waveforms from each event. All data was processed as broadband between 12 Hz and 20 KHz.

Plots generated from the field data that include SPL amplitude as Linear and logarithmic times series plots as well as Spectrum and cSEL plots are included in Appendix A of this report.

4.0 RESULTS

4.1 Underwater Acoustic Results

Four (4) 24-inch piles were recorded overall that included that were driven using an impact hammer. All events were recorded on the near-field and far-field hydrophones. The time series plots in Figure 5 and Figure 6 summarize the Peak SPLs recorded for each strike during each event using an Impact Hammer.

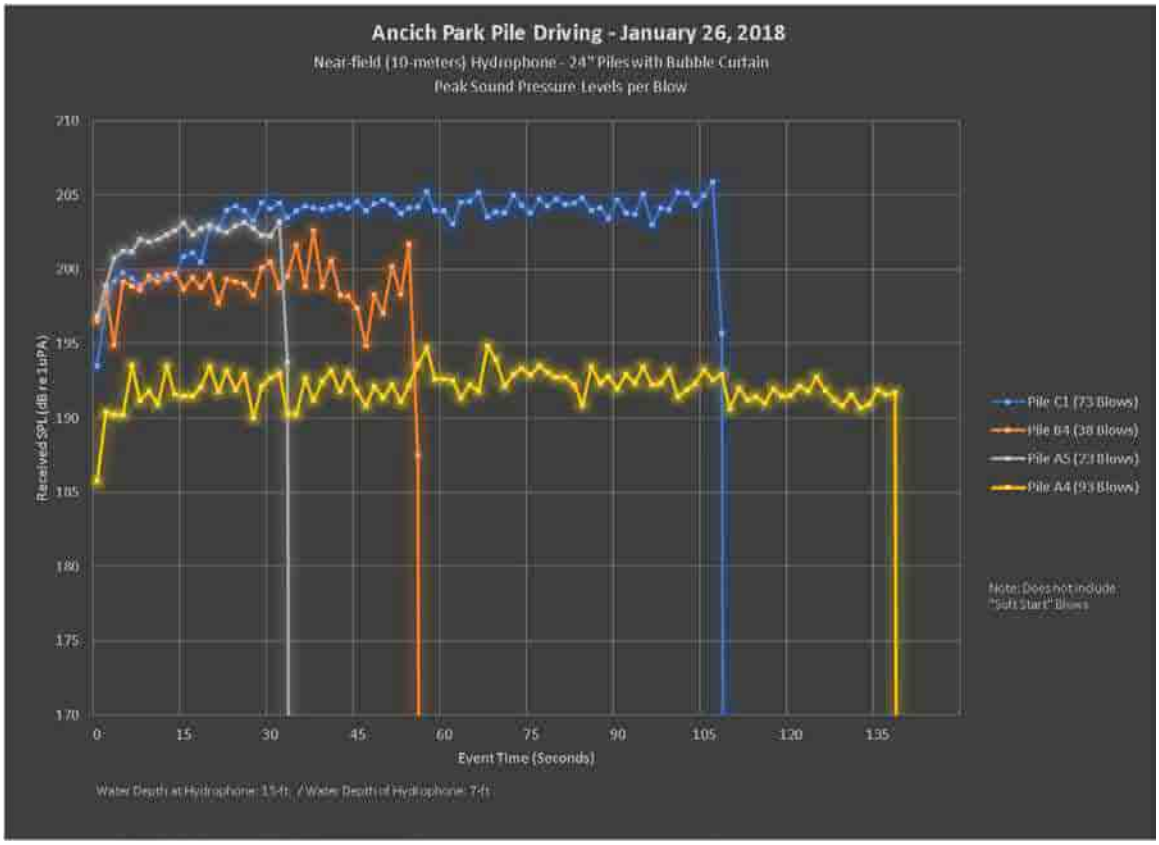


Figure 5 Peak SPLs at approximately 10-meters during impact pile driving.

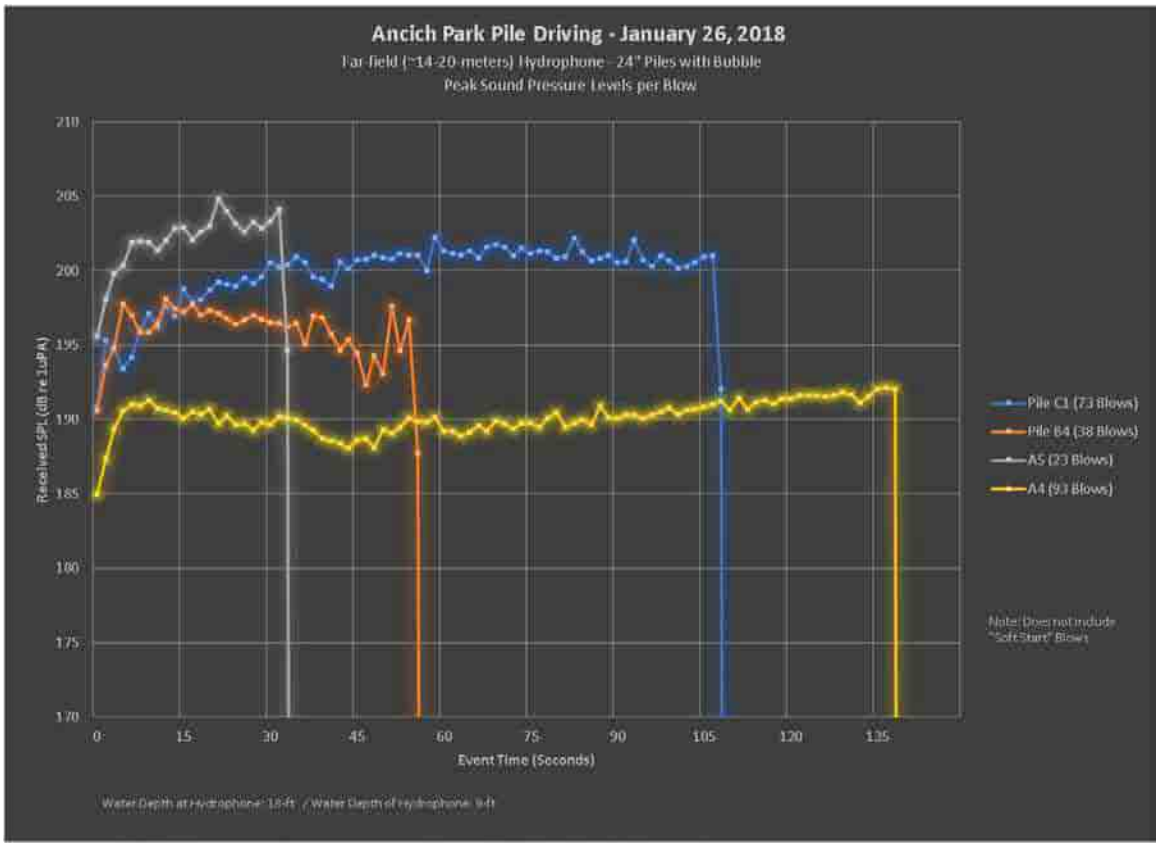


Figure 6 Peak SPLs at approximately 20-meters during impact pile driving.

An average background underwater noise level of 134.5 dB re 1 uPa (RMS over 1 Min) was measured on both hydrophones without any in-water work being performed. Since the hydrophone were placed near the barge at different locations, it is reasonable to assume they were receiving noise propagating from the barge at different levels. These levels were elevated to 138.3 dB re 1 uPa (1 Min) (RMS over 1 Min) when the bubble curtain was in operation. This also corresponded with the start-up of the hammer power-pack and air compressor on the barge deck and other activity such as crane operation.

The highest SPL recorded from the four measured pile driving events was 205.9 dB re 1 µPA while driving Pile C1 as measured from 10-meters. The SPL of the same strike was measured as 201.0 dB re 1 µPA at the far-field hydrophone and would be nearly consistent with the sound attenuation over a doubling distance assuming a loss of about 3 dB re 1 µPA using the cylindrical spreading law (TL=10 log(R); where TL is Transmission Loss and R is Range (m)) for shallow water. This trend is generally visible over most of the recorded events. Note: constant doubling distance hydrophone relationship could not be maintained during this monitoring effort. Obstructed line-of-sight from other structures such as installed piles, also affected received impulses on either hydrophone.

Out of the four (4) impact events, Pile C1 also produced the highest cSEL of 201.1 dB re 1 $\mu Pa^2 \cdot sec$ during 73 blows over 110 seconds.

The highest RMS recorded over the entire pile driving event was 176.2 dB re 1 uPA produced during 23 blows over 32 seconds while driving Pile A5.

The effectiveness of the bubble curtain used was probably limited in the shallow water as the SPLs are similar to 24-inch piles driven without mitigation. However, the cSEL did not exceeded the National Marine Fisheries Service cSEL limit of 204 re 1 $\mu Pa^2 \cdot$ sec per event requiring the Contractor to place a wood pad between the hammer and steel pile for all subsequent impact driving events. Extended out, continuous pile driving of C1 for approximately 9 minutes (approx. 350 blows) maintaining the same general levels would result in an cSEL of 204 dB re 1 $\mu Pa^2 \cdot$ sec. The allowable total daily blow count for this site is 750. Total Blow Count for impact pile driving was 227 plus seventeen (7) soft start blows. Piles B3 thru B1 and A3 thru A1 were embedded another 1-foot to their design capacity of 400 kips requiring approximately 20 blows each for another 120 blows this day. The shallowness of the water and positioning of the hydrophones on the barge would have resulted in poor data quality for those piles but they are not assumed to exceed the highest SPL recorded at C1 and its associated cSEL.

All reported acoustic metrics including SPLs produced during pile driving have been summarized and provided in Hydro Acoustic Monitoring Data Sheet in Appendix B.

4.2 Ancillary Data and Observations

Weather: Light rain occurred throughout the day.
Beaufort Scale: 0

Air Noise: Ambient On board barge, crane and compressors operating
66.7 dB-A weighted (Maximum over 60 seconds)
Impact Driving (steady at 10-meters, 24-inch pile)
102.0 dB-A weighted (Maximum over 60 seconds)

Visual Observations (Wildlife): No marine mammals were observed within the area.
No fish were observed around the piles before driving or distressed and on the surface following an event. Marine birds such as cormorants were observed diving near the marina to the east during pile driving operations and appeared to be unaffected by the noise levels.
The mitigation device (bubble curtain) was ON anytime during pile driving activities.

Conductivity, Temperature, Depth (CTD) Data: The water was well mixed from the surface to approximately 13-feet water depth due to the agitation created by the bubble-curtain. Water depth at the time of the CTD cast was 17-feet corrected to a station depth of -8-feet Mean Lower Low Water (MLLW) based on predicted tides for the area at the time of the cast. Temperature

ranged from 7.9° C on the surface to 8.8°C on the seafloor. Likewise, the salinity ranged from 24.4 PPT on the surface to 29 PPT near the seafloor. Figure 6 shows a plot of the sound velocity calculated from the salinity, temperature, and pressure data measured at the near field station using the Del Grosso sound velocity equation. Sound velocity at the hydrophone was approximately 4,850 ft/sec. Depending on the position of the near-field hydrophone relative to the pile, the time difference between the wave arrival from the near-field hydrophone and the same wave at the far-field hydrophone varied from 0.003 seconds to 0 .006 seconds, or 4.2-meters to 10.4-meters based on the sound velocity.

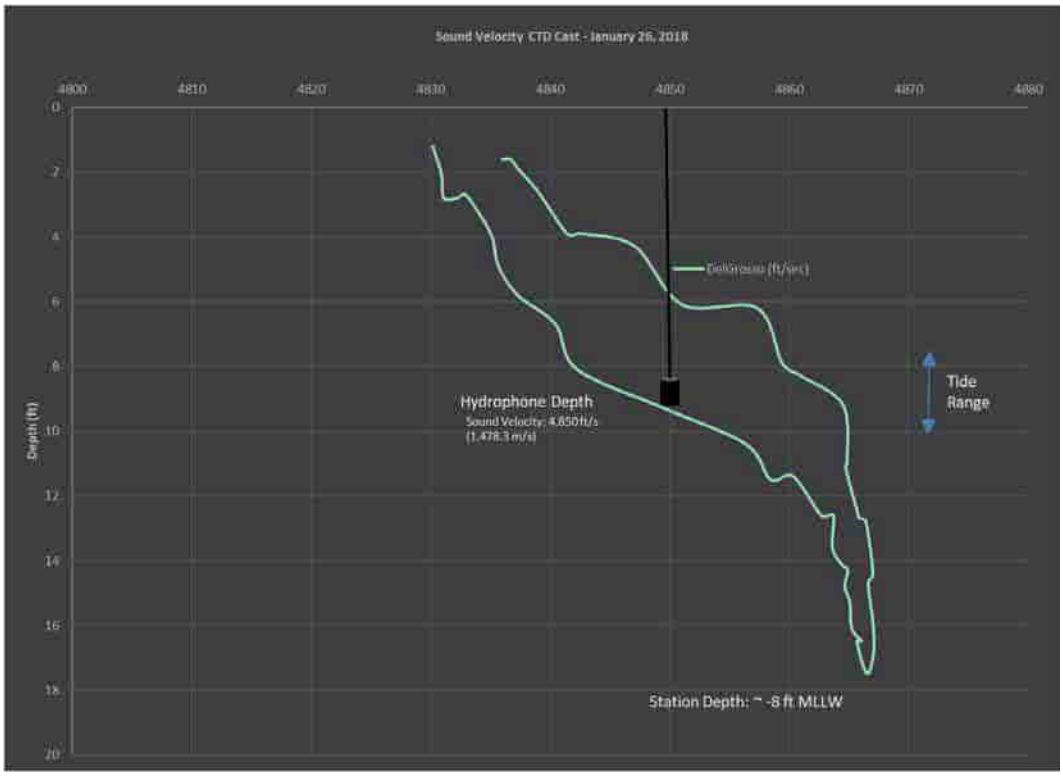


Figure 7 Sound velocity calculated from CTD cast values.

5.0 Data Quality

Collected data exceeded the scope of the monitoring effort for internal comparison and correlation. All data appeared to be within the general ranges expected produced during these types of pile driving operations. The data is of general good quality however is most likely contaminated slightly by the equipment and sounds generated by the barge. While the bubble curtain used did offer mitigation to some degree, the shallowness of the site and the low air delivery cfm does not really allow for a significant attenuation of the impulse wave. All acoustic data is archived for further review and processing.

APPENDIX A

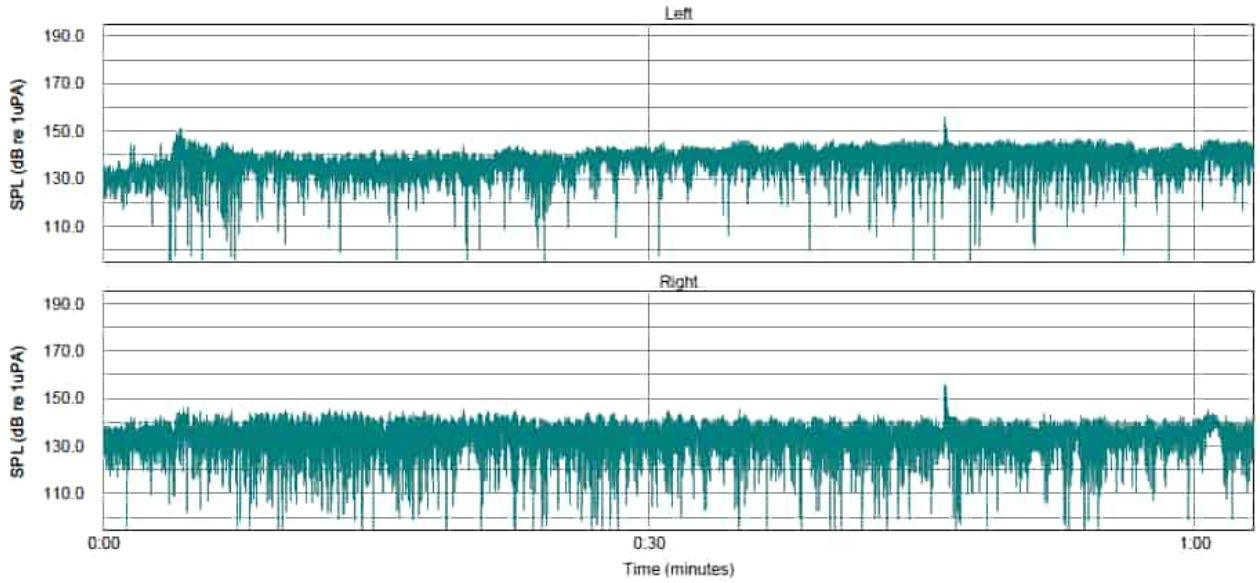
Output Plots for Individual Pile Driving Events

Time Series SPL (Amplitude Linear: Pascals)
Time Series SPL (Amplitude Logarithmic: dB re 1 µPa)
Time Series cSEL (re 1 $\mu Pa^2 \cdot sec$)
Spectrum (Average and Peak)

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Background

Printed By: SpectraPLUS-SC Sound Card Edition
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Fri Feb 16 12:54:28 2018



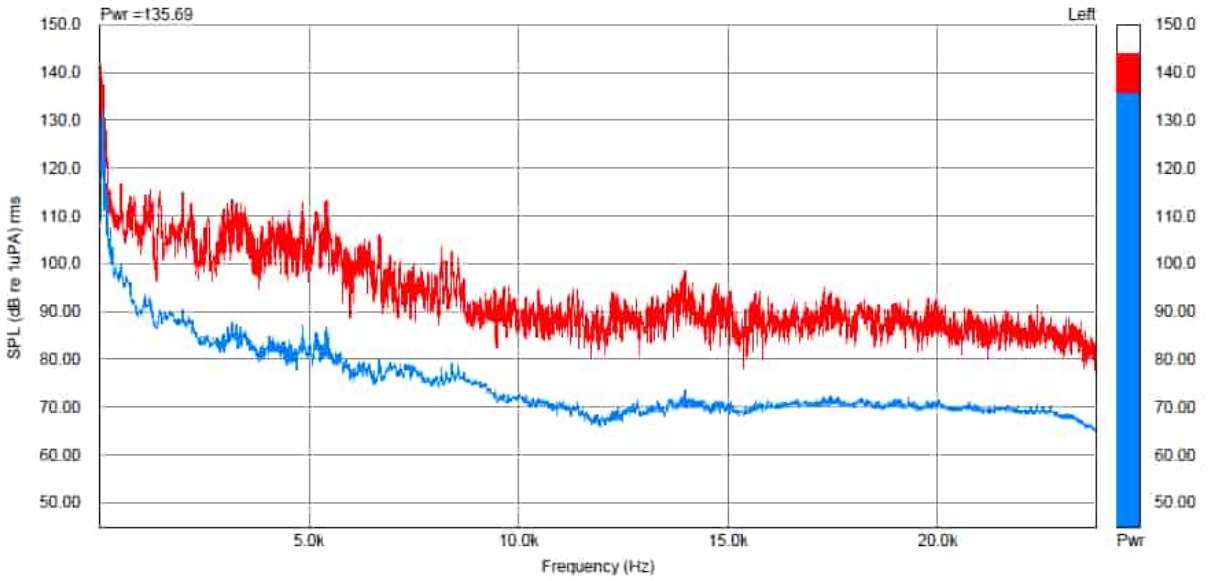
Background levels measured on barge. Machinery on.
Right Channel: 133.6 dB re 1 uPa RMS 1 minute
Left Channel: 135.7 dB re 1 uPa RMS 1 minute

Right Channel at 10- Meters
Left Channel at 20-meters

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Background - Spectrum

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Background levels measured on barge. Machinery on.

Right Channel: 133.6 dB re 1 uPa RMS 1 minute
Left Channel: 135.7 dB re 1 uPa RMS 1 minute

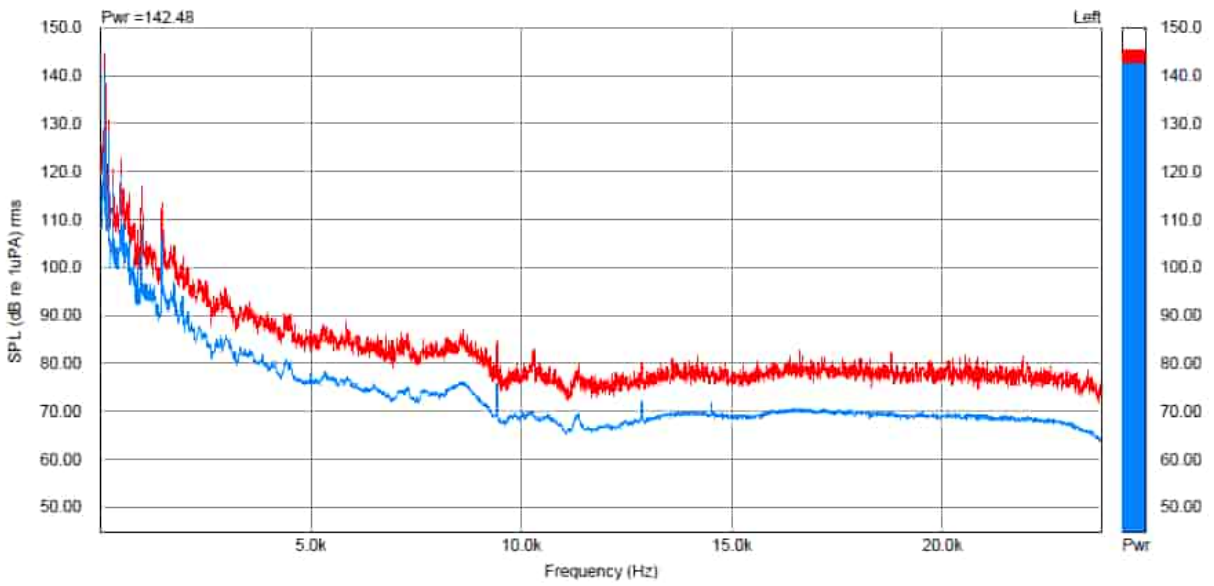
Hydrophone at mid-water depth

Red- Peak Hold over one minute
Blue- Average over one minute

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Bubble Curtain- Spectrum

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Bubble curtain levels measured on barge. Machinery on.

Right Channel: 142.1 dB re 1 uPa RMS 1 minute
Left Channel: 133.1 dB re 1 uPa RMS 1 minute

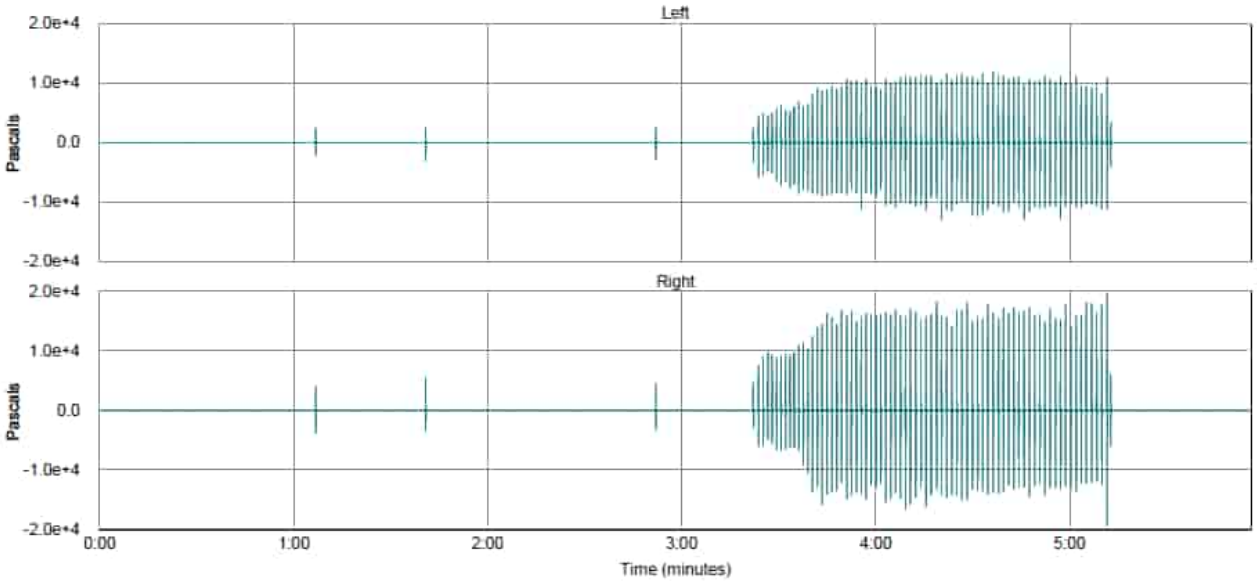
Hydrophone at mid-water depth

Red- Peak Hold over one minute
Blue- Average over one minute

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1

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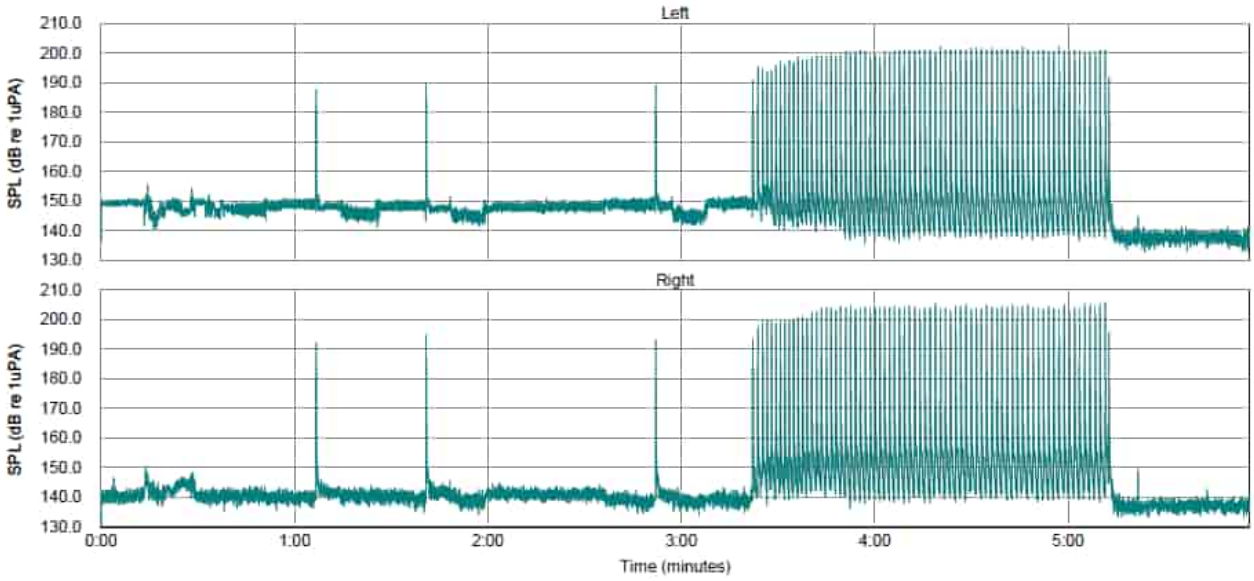
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1

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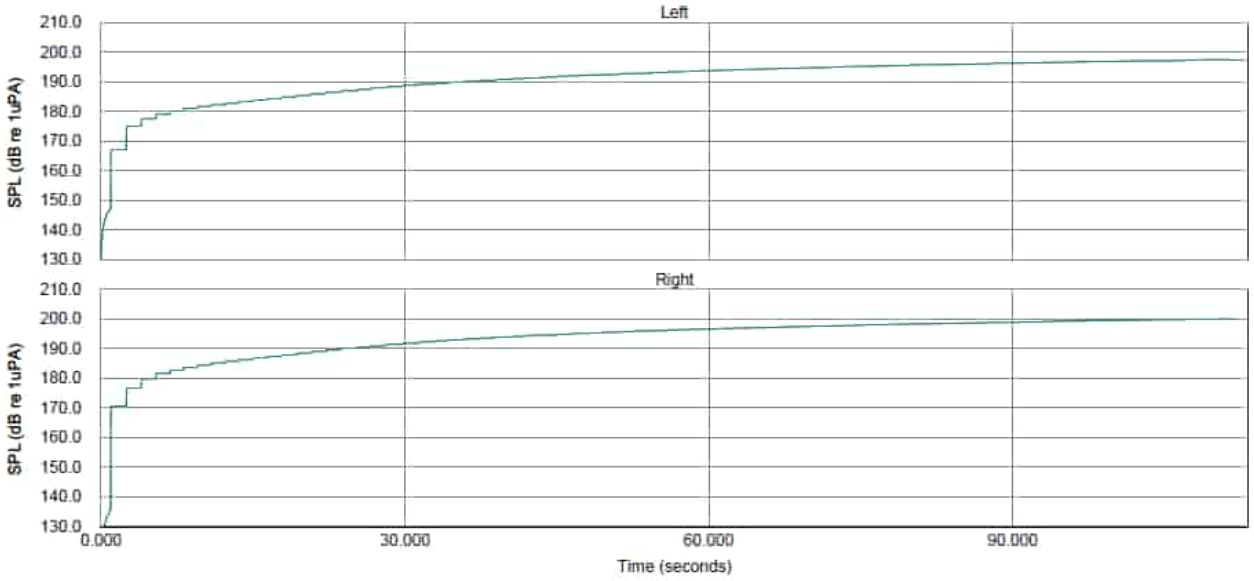
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile C1 - cSEL

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Licensed To: Kevin Smith
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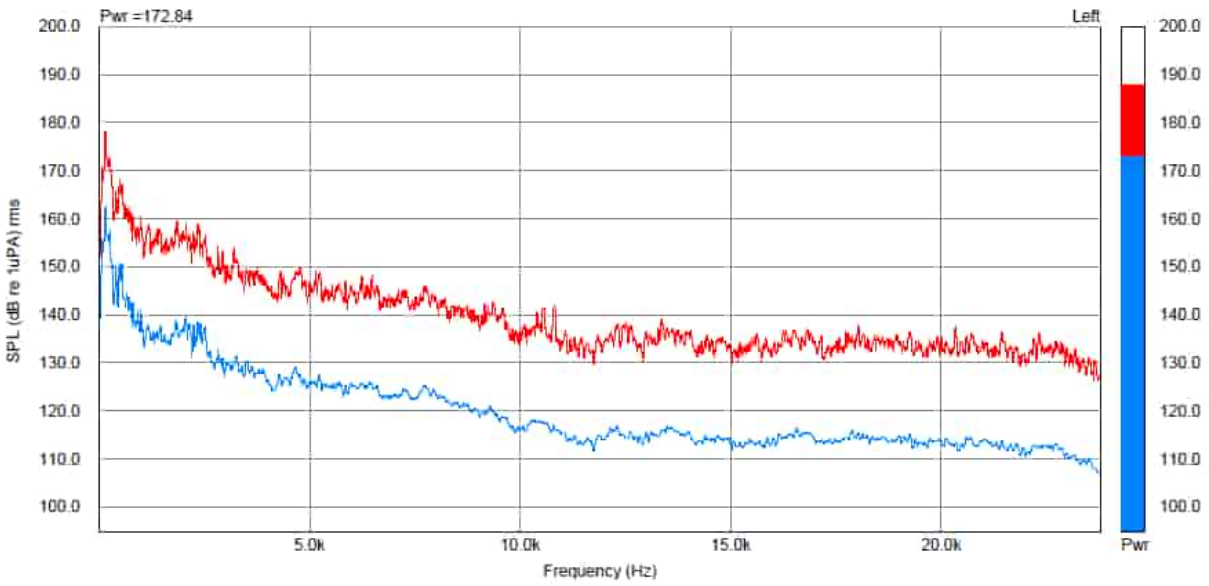
Right Channel at 10-meters. Peak pressure 19.7 kPa (205.9 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 12.9 kPa (202.2 dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Anacortes Park Pile Drive Monitoring
January 26, 2018 - Pile C1 - Spectrum

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Licensed To: Kevin Smith
Fri Feb 16 14:15:34 2018



Near-field-meters

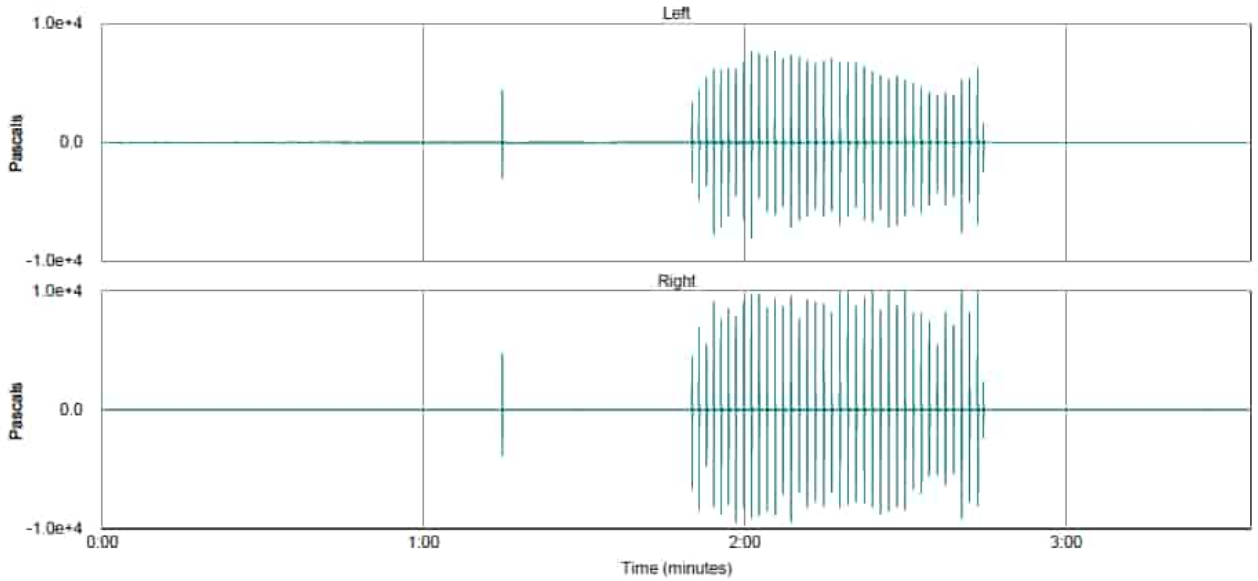
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4

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Licensed To: Kevin Smith
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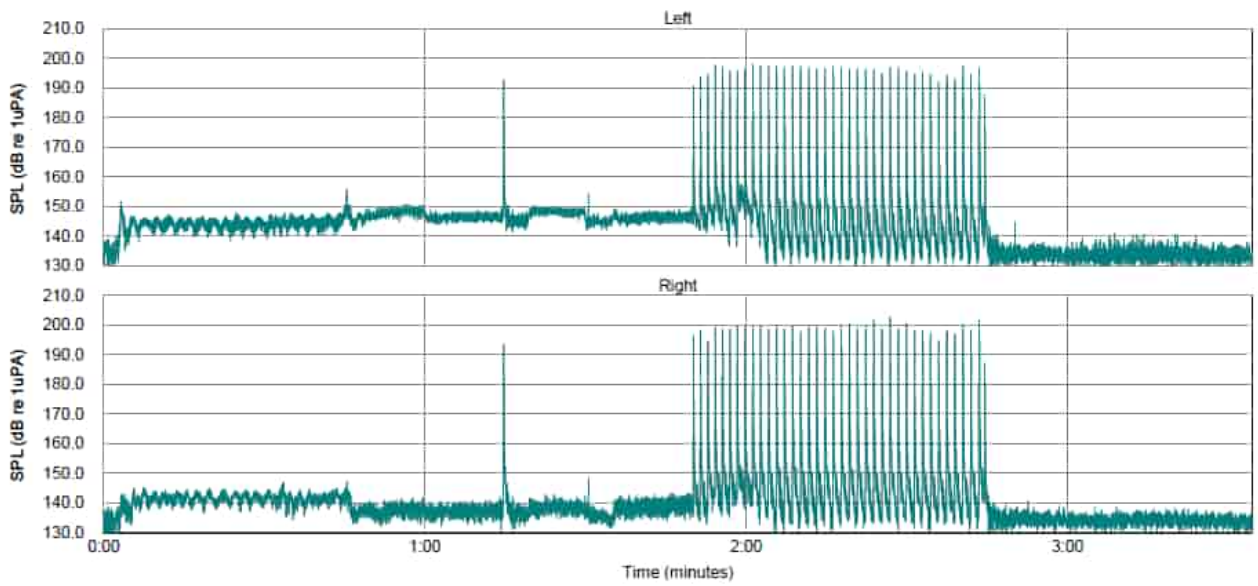
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4

Printed By: SpectraPLUS-SC Sound Card Edition
Licensed To: Kevin Smith
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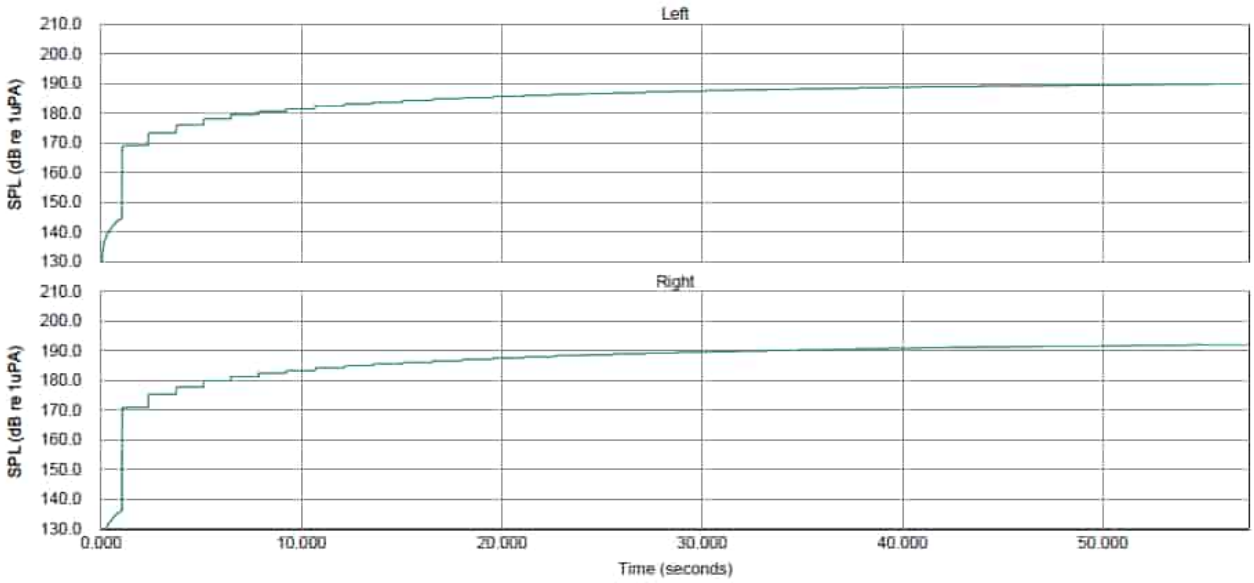
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4-cSEL

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Licensed To: Kevin Smith
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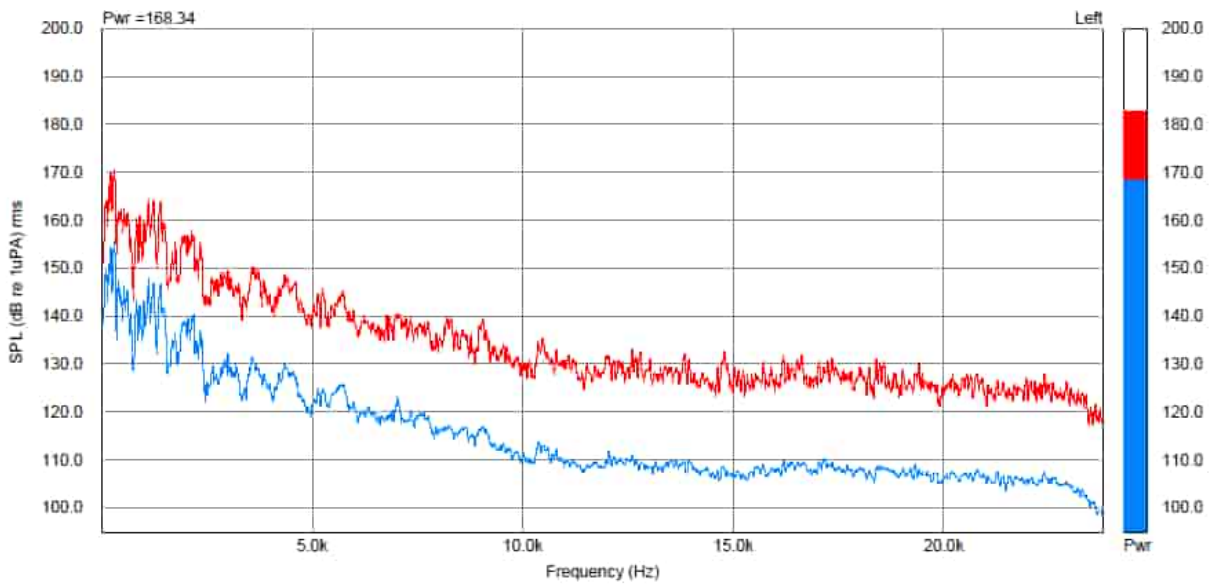
Right Channel at 10-meters. Peak pressure 13.5 kPa (202.6 dB re 1 uPa)
Left Channel: at 20-meters. Peak pressure 8.0 kPa (198.1dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile B4 - Spectrum

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Fri Feb 16 14:17:35 2018



Near-field-meters

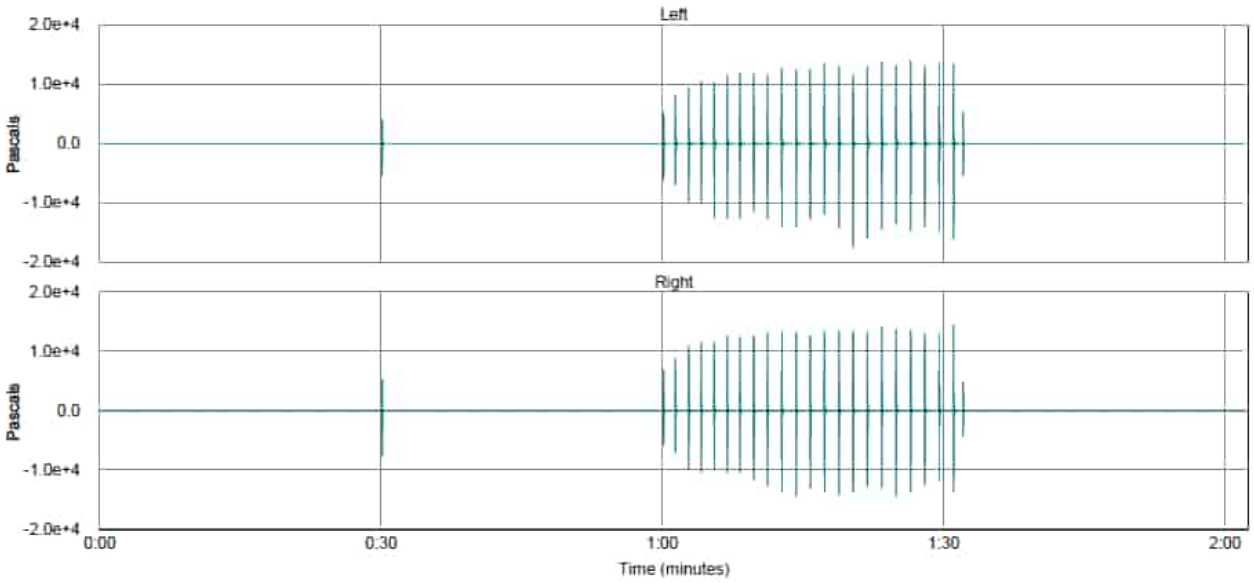
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5

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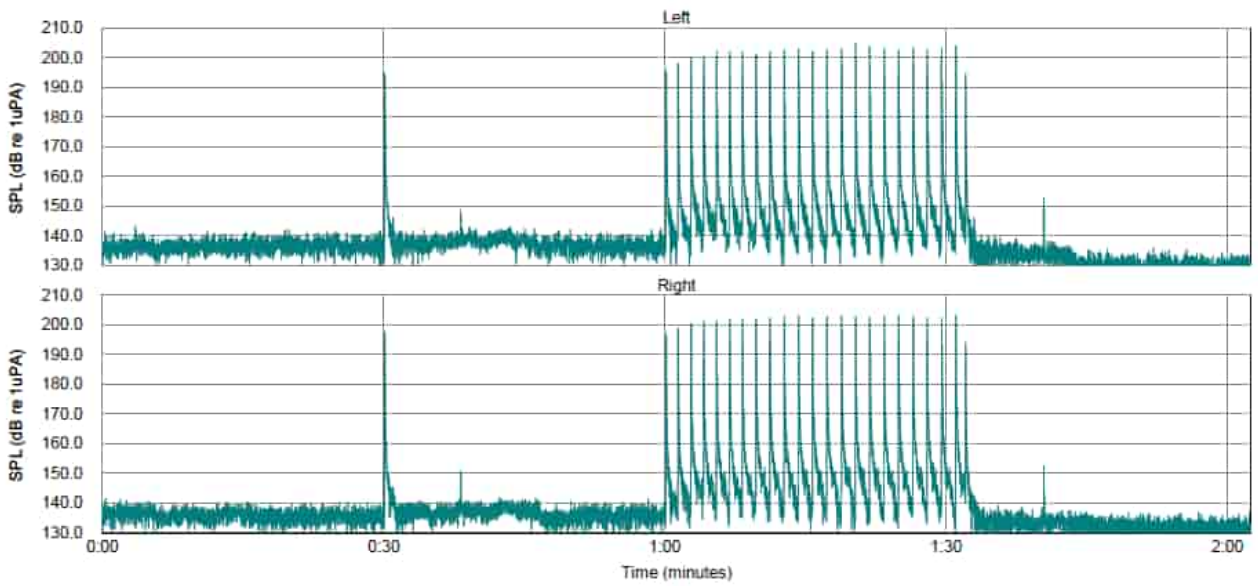
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5

Printed By: SpectraPLUS-SC Sound Card Edition
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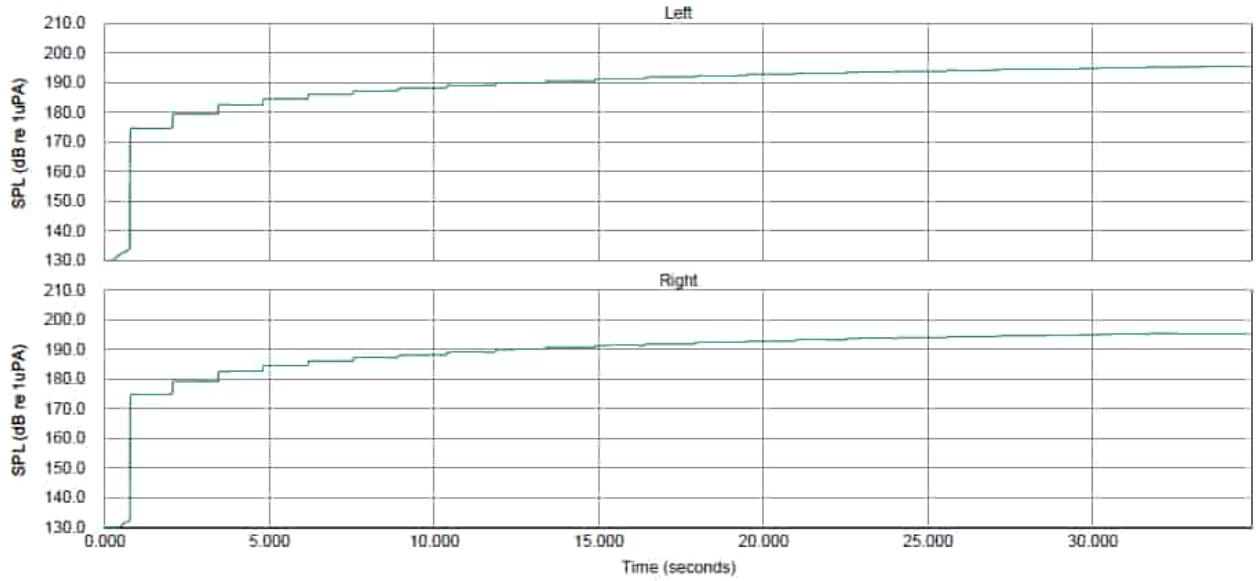
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A5 - cSEL

Printed By: SpectraPLUS-SC Sound Card Edition
Licensed To: Kevin Smith
Fri Feb 16 13:52:19 2018



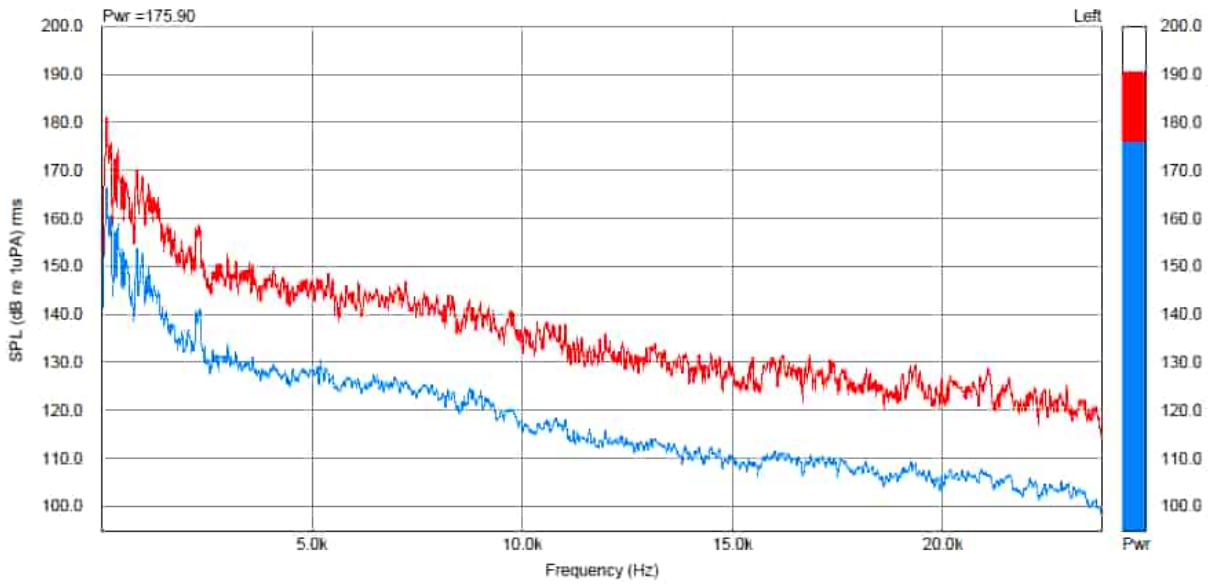
Right Channel at 10.5-meters. Peak pressure 14.5 kPa (203.2 dB re 1 uPa)
Left Channel: at 14-meters. Peak pressure 17.4 kPa (204.8 dB re 1uPa)

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Anacich Park Pile Drive Monitoring
January 26, 2018 - Pile A5 - Spectrum

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Licensed To: Kevin Smith
Fri Feb 16 14:19:26 2018



Near-field-meters

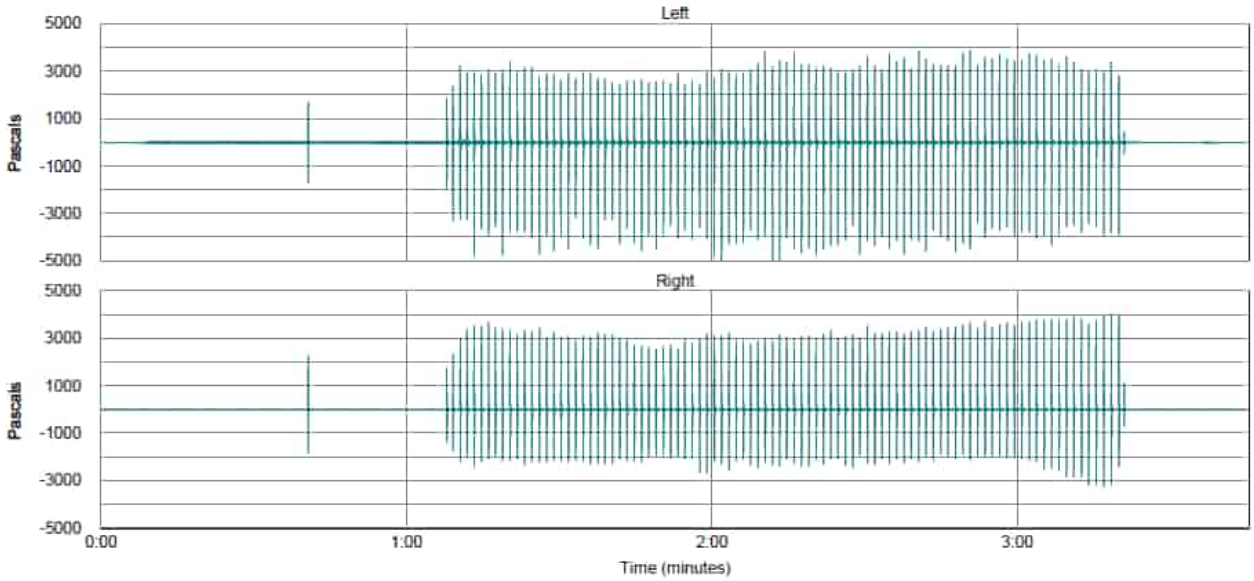
Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A4

Printed By: SpectraPLUS-SC Sound Card Edition
Licensed To: Kevin Smith
Fri Feb 16 15:32:14 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

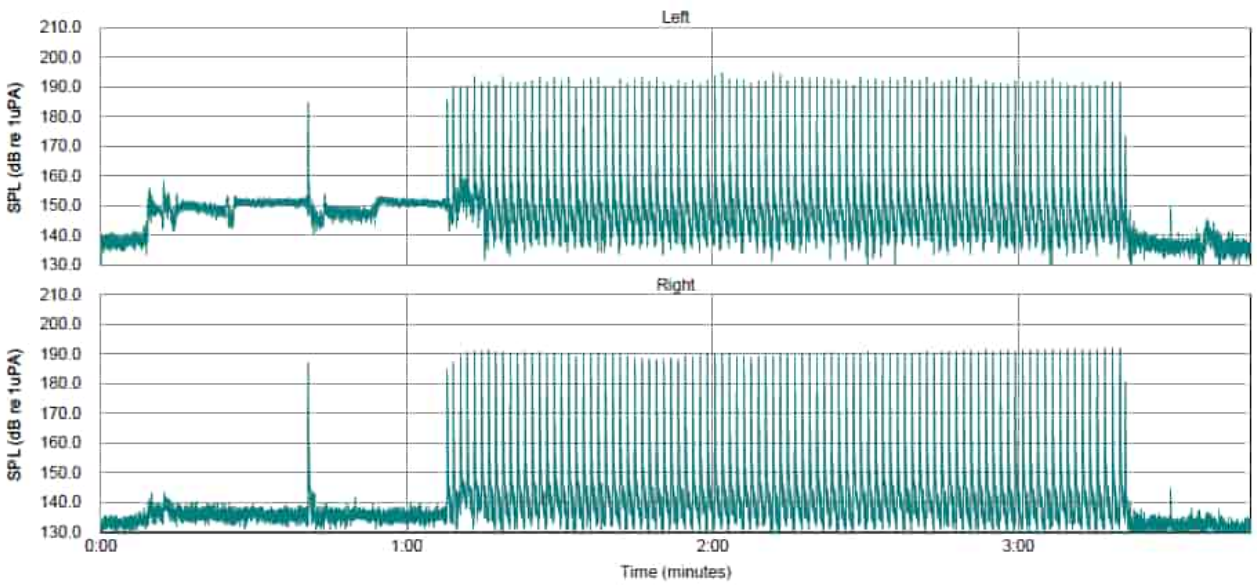
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Anacich Park Pile Drive Monitoring
January 26, 2018 - Pile A4

Printed By: SpectraPLUS-SC Sound Card Edition
Licensed To: Kevin Smith
Fri Feb 16 15:28:45 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

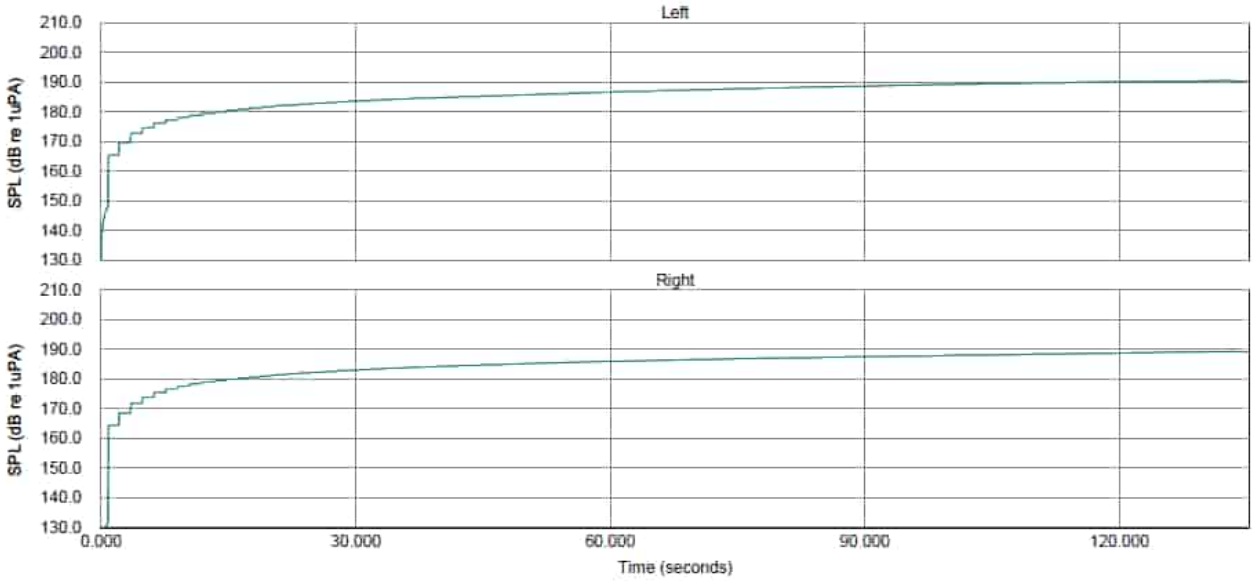
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Both Left & Right
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Ancich Park Pile Drive Monitoring
January 26, 2018 - Pile A4 - cSEL

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Fri Feb 16 15:30:12 2018



Left Channel at 9.4-meters. Peak pressure 5.5 kPa (194.8 dB re 1 uPa)
Right Channel: at 15-meters. Peak pressure 4.1 kPa (192.2 dB re 1uPa)

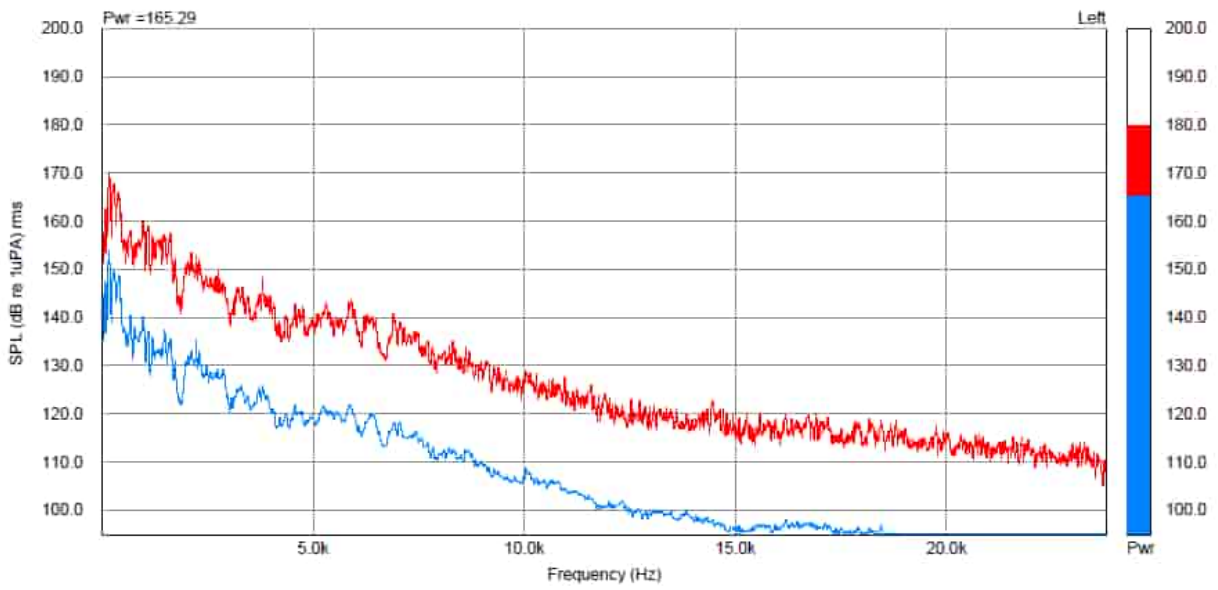
!!! Obstructed line of sight due to A5

Hydrophone at mid-water depth

Left Channel
Sampling Rate: 48000
FFT size: 8192
Averaging: 100
Window: Hanning

Anacich Park Pile Drive Monitoring
January 25, 2018 - Pile A4 - Spectrum

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Licensed To: Kevin Smith
Fri Feb 16 14:21:06 2018



Near-field-meters

Hydrophone at Mid-water depth

Red - Peak hold over duration of steady impact pile driving.
Blue - Average over duration of steady impact pile driving.

APPENDIX B

Hydro Acoustic Monitoring Data Sheet

Ancich Park – January 26th, 2018

HydroAcoustic Monitoring Data Sheet

Site: Ancich Park - Gig Harbor, WA.
Date: 1/26/2018
Pile Type: Galv. Steel (0.5" wall)
Pile Diameter: 24"
Substrate: Dense Silty-sand w/ Gravel
Mitigation: Single Sparger - Bubble curtain
Background Level (RMS): 134.5 dB re 1 uPa (1 Min)
BubbleCurtain Level (RMS): 138.3 dB re 1 uPa (1 Min)
Hydrophone 1 Depth: Mid-Water (adjusted)
Hydrophone 2 Depth: Mid-Water (adjusted)

Time (PST)		Pile	Impact or	No. of	Time	Average	Distance	Water Depth[4]		Peak (dB re 1 uPA)			$SEL_{90\%}$ (re 1 µPa2 · sec)[5]			Event	$RMS_{90\%}$ (dB re 1 uPA)[7]			Event	Notes
Start	Finish	ID	Vibratory	Blows[1]	To Drive (s)[2]	BPM	to Pile (m)[3]	At Pile (m)	At H-Phone (m)	Max	Min	Mean	Max Blow	Min Blow	$cSEL_{90\%}$	cSEL[6] (re 1µPa2 · sec	Max Blow	Min Blow	Mean	RMS[8] (dB re 1 uPA)	
10:05	10:08	C1	Impact	73	110	40	10.1	4.6	4.6	205.9	193.5	203.2	182.1	170.4	200.0	200.1	191.2	180.1	190.2	175.5	Maximum and Minimum
10:25	10:28	B4	Impact	38	54	42	12	4.6	4.6	202.6	187.5	198.6	176.7	165.7	192.1	192.1	180.5	173.1	180.1	170.6	Blow values not always
10:43	10:44	A5	Impact	23	32	43	10.5	3.1	3.7	203.2	193.8	201.6	183.1	172.2	195.2	195.4	189.2	182.1	188.5	176.2	same blow on near
10:51	10:52	A4[9]	Impact	93	137	41	9.4	3.1	3.7	194.8	185.0	190.1	167.5	163.9	188.7	190.6	1732	170.1	175.6	165.3	and far-feild
10:05	10:08	C1	Impact	73	110	40	20.1	4.6	5.5	202.2	190.8	199.7	179.5	166.3	197.1	197.4	188.8	176.1	187.5	172.9	Maximum and Minimum
10:25	10:28	B4	Impact	38	54	42	21	4.6	5.5	198.1	187.8	195.8	172.6	163.9	189.1	189.8	177.5	171.0	177.2	168.3	Blow values not always
10:43	10:44	A5	Impact	23	32	43	14	3.1	4.6	204.8	194.7	201.7	182.8	171.8	194.4	194.6	188.6	181.7	188.1	176	same blow on near
10:51	10:52	A4[9]	Impact	93	137	41	15	3.1	4.6	192.2	185.8	192.0	167.7	163.7	187.5	189.3	174.2	165.2	174.2	163.9	and far-feild

[1] Does not include Soft Start (S.S.) Blows

[2] Steady Pile Driving

[3] 10 meter Hydrophone adjusted to range. Far-field hydrophone positioned opportunistically. Note: Occassions of obstructed line of sight to either hydrophone due to other installed piles.

[4] Water depth at pile depth estimate provided by Contractor. Hydrophone Station depth MLLW determined by CTD Cast. Corrected based on tide predictions for site. Hydrophone adjusted to mid-water level.

[5] SEL90% Determined for the waveform producing 90% of the energy on the Maximumstrike and Minimum strike. Event cSEL90% is a cummulative sum of the SEL90% waveforms for the event without hammer reset time.

[6] Event cSELis the cummulative Sound Exposure Level over the entire event including hammer reset time.

[7] RMS90% Determined for the waveform producing 90% of the energy on the Maximumstrike and Minimum strike.RMS mean is the reulting RMS value of the RMS90% waveforms for the event without hammer reset time.

[8] Event RMS is the RMS value of the pressure wavforms produced through the entirety of the impact event including hammer reset time.

[9] Obstructed line of site between pile and hydrophones due to Pile A5.

APPENDIX C

Photos

Ancich Park Pile Driving – January 26th, 2018



Delmag 32 impact hammer



Bubble Curtain Sparger (2”x 2” tube)



Pile Driving B4 (Bubble curtain ON)



Hydrophone locations on barge (adjusted)



Monitored Piles at Ancich Site (C1,B4, A5, B3).

APPENDIX IV: NMFS Determination

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
201 NE Lloyd Boulevard, Suite 1100
ortland, OR 97232

Refer to NMFS No:
WCRO-2023-00546

January 8, 2026

P. Allen Atkins
Chief, Regulatory Branch
US Army Corps of Engineers, Seattle District
4735 East Marginal Way South, BLDG 1202
Seattle, WA 98134-2388

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal in Gig Harbor, Washington. USACE ESA/EFH Consultation Request NWS-2022-472.

Dear Mr. Atkins:

Thank you for your letter of April 26, 2023, requesting initiation of consultation with NOAA's National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 et seq.) for the City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal.

Thank you, also, for your request for consultation pursuant to the essential fish habitat (EFH) provisions in Section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act [16 U.S.C. 1855(b)] for this action. We have concluded that the action would adversely affect EFH designated under the Pacific Coast Salmon Fishery Management Plan, the Coastal Pelagic Species Fisheries Management Plan and the Pacific Coast Groundfish Fishery Management Plan (https://www.pcouncil.org/fishery-management-plans/). Gig Harbor is also an EFH Habitat Area of Particular Concern. EFH conservation recommendations (EFH CRs) are provided in Section 3.

After reviewing the proposed action, we have concluded that the proposed action is likely to adversely affect, but it is not likely to jeopardize the continued existence of Puget Sound (PS) Chinook Salmon *(Oncorhynchus tshawytscha)*, PS steelhead *(O. mykiss),* Puget Sound/Georgia Basin bocaccio *(Sebastes paucispinis),* or Southern Resident Killer Whales (SRKW) *(Orcinus orca)*. The proposed action is not likely to adversely affect Puget Sound/Georgia Basin yelloweye rockfish *(Sebastes ruberrimus*), or the Mexico Distinct Population Segment (DPS) of Humpback Whale (*Megaptera novaeangliae).* Further, we conclude that the proposed action is likely to adversely affect designated critical habitat of PS Chinook salmon, SRKW, and Puget Sound/Georgia Basin bocaccio, but is not likely to result in the destruction or adverse modification of the designated critical habitat for any listed species. Critical Habitat has not

been designated for Puget Sound steelhead, Puget Sound/Georgia Basin yelloweye rockfish, or Humpback whale in the action area.

As required by section 7 of the ESA, NMFS is providing an incidental take statement with the opinion. The incidental take statement describes reasonable and prudent measures NMFS finds necessary or appropriate to minimize the impact of incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the federal action agency must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the ESA's prohibition against the take of listed species.

This document also includes the results of our analysis of the action's likely effects on EFH pursuant to section 305(b) of the MSA), and includes two conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on EFH. Section 305(b) (4) (B) of the MSA requires Federal agencies to provide a detailed written response to NMFS within 30 days after receiving these recommendations.

Please contact Phyllis Meyers in our Lacey, Washington office at Phyllis.meyers@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,

Kathleen Wells
Assistant Regional Administrator
National Marine Fisheries West Coast Region
Oregon and Washington Coastal Area Office

cc: Lia Protopapadakis, COE
Jeff Langhelm, City of Gig Harbor
Drew McDonald, Facet NW

Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion [and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the

City of Gig Harbor's Ancich Waterfront Park Commercial Fishing Homeport proposal in Gig Harbor, Washington

NMFS Consultation Number: WCRO-2023-00546

Action Agency: US Army Corps of Engineers

Affected Species and NMFS' Determinations:

ESA-Listed Species	Status	Is Action Likely to Adversely Affect Species?	Is Action Likely to Jeopardize the Species?	Is Action Likely to Adversely Affect Critical Habitat?	Is Action Likely to Destroy or Adversely Modify Critical Habitat?
Puget Sound steelhead (*Oncorhynchus mykiss*)	Threatened	Yes	No	NA	No
Puget Sound Chinook salmon (*O. tshawytscha*)	Threatened	Yes	No	Yes	No
Southern Resident Killer Whale *(Orcinus orca)*	Endangered	Yes	No	Yes	No
Mexico DPS Humpback Whale (*Megaptera novaeangliae)*	Threatened	No	No	NA	No
Puget Sound/Georgia Basin bocaccio (*Sebastes paucispinis)*	Endangered	Yes	No	Yes	No
Puget Sound/Georgia Basin yelloweye rockfish (*Sebastes ruberrimus)*	Threatened	No	No	NA	No

Fishery Management Plan That Identifies EFH in the Project Area	Does Action Have an Adverse Effect on EFH?	Are EFH Conservation Recommendations Provided?
Pacific Coast Salmon	Yes	Yes
Coastal Pelagic Species	Yes	Yes
Groundfish Species	Yes	Yes

Consultation Conducted By: National Marine Fisheries Service, West Coast Region

Issued By: Kathleen Wells

Kathleen Wells
Assistant Regional Administrator
Oregon Washington Coastal Office

Date: January 8, 2026

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1. INTRODUCTION

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3, below.

1.1. Background

The National Marine Fisheries Service (NMFS) prepared the biological opinion (opinion) and incidental take statement (ITS) portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.), as amended, and implementing regulations at 50 CFR part 402.

We also completed an essential fish habitat (EFH) consultation on the proposed action, in accordance with section 305(b)(2) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 et seq.) and implementing regulations at 50 CFR part 600.

We completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (DQA) (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available at the NOAA Library Institutional Repository [https://repository.library.noaa.gov/welcome]. A complete record of this consultation is on file at the Lacey, Washington office.

1.2. Consultation History

The US Army Corps of Engineers (USACE) requested consultation with NMFS in a letter dated April 26, 2023.

The consultation request included a Biological Assessment (BA) and a mitigation plan. Mitigation included removing the derelict Jerkovich Pier, which was approved for advance mitigation in the completed ESA consultation for NWS-2021-187 with NMFS on June 30, 2021 through the Fish Passage and Restoration Programmatic consultation WCRO-2014-00004-3417.

The USACE determined that the proposed project would adversely affect EFH used by Pacific salmon, groundfish, and coastal pelagic species. An assessment of potential impacts to EFH is also included with the BA. NMFS concurs with this determination and an EFH consultation is included in Section 3 of this opinion.

A NMFS biologist visited the site and took photographs on October 26th.

Representatives of the City and NMFS communicated via email November 7, 2023, and in on-line meetings November 29, 2023 and January 17, 2024, and subsequently exchanged emails to clarify project details.

On February 28, 2024, NMFS received a copy of a submerged aquatic vegetation survey report (Marine Surveys and Assessments, 2022). The aquatic vegetation (kelp) in the project area

defines the edge of the Lower Shore zone. Using the depth at which vegetation was surveyed placed a large portion of the proposed dock in the Lower Shore Zone.

The USACE advised NMFS on February 29, 2024 that their intention was to include humpbacks whales in the consultation request.

On March 18, 2024, NMFS provided output from the Nearshore Calculator with a debit of 503 conservation credits. The Nearshore Calculator is described in more detail in section 2.1.

The USACE agreed to pause the consultation on April 11, 2024 while additional details of the project could be developed and provided.

On December 20, 2024, a representative of the City requested that permitting proceed for the project as it was originally proposed, but with the addition of a kelp-planting mitigation plan to compensate for impacts.

On March 31, 2025, representatives of NMFS and the USACE met to discuss the proposed kelp mitigation plan.

On June 13, 2025, NMFS sent the USACE a letter stating that the information received was insufficient for proceeding with consultation.

On August 13, 2025, and with new information, the USACE and NMFS agreed to revisions to the Nearshore Calculator inputs and a revised debit of 340 conservation credits was provided by NMFS

The USACE provided a revised mitigation plan on August 25, 2025 and a commitment to purchase conservation credits in the form of a pre-sale agreement on October 9, 2025.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 Fed. Reg. 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act. 89 Fed. Reg. at 24268; 84 Fed. Reg. at 45015. We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this biological opinion and incidental take statement would not have been any different under the 2019 regulations or pre-2019 regulations.

1.3. Proposed Federal Action

Under the ESA, "action" means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (see 50 CFR 402.02). Under MSA, federal action means any action authorized, funded, or undertaken, or proposed to be authorized, funded or undertaken by a federal agency (50 CFR 600.910).

The proposed action is for the USACE to issue permits in accordance with its authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, to the City of Gig Harbor for the expansion of its marina. Eight weeks of in-water work are expected.

The City of Gig Harbor (City) proposes to make modifications to its public marina in Gig Harbor, a bay near the Narrows Bridge in Puget Sound, Washington. Modifications include adding a dock for commercial fishing boats and removing a derelict pier and its creosote-treated support structure. Modifications to a stormwater system are also proposed. As described above, the Jerkovich pier removal was previously consulted on (Fish Passage and Restoration Programmatic consultation WCRO-2014-00004-3417) and is not considered as a proposed federal action in this opinion. Except as it was accepted as advanced mitigation and its analyzed effects are factored into the conservation calculator, it will not be described further.

We considered, under the ESA, whether or not the proposed action would cause any other activities and determined an increase in moorage capacity at the marina would likely result in the loss of submerged aquatic vegetation (SAV) and additional vessels. Adverse impacts associated with the loss of SAV and the use and operation of vessels is also addressed.

As described in the BA (DCG, 2022), a floating dock would be installed with an overall length of 280'. Finger floats would be attached to the main walk floats using a tri-frame structural attachment. The main walk and floats would be 100 percent grated to allow for light penetration. Approximately 5767 square feet (sf) of new floating structure is proposed, in addition to a gangway that is 80 feet by 5 feet. These sum to approximately 6247 sf of new overwater surface (the gangway would overlap the floats at the end). This includes a gangway, a main walk floating dock and seven finger floats. The floats are proposed to be anchored with 16 steel guide piles 24 inches in diameter. All piles would be driven with a vibratory hammer as far as possible and then proofed with an impact hammer. If the driving conditions are difficult, the piles would be installed completely with an impact hammer. Pile driving would be completed from a barge. The barge would not ground out. Floats would be fabricated offsite, brought in via barge, and lowered into place with a crane. In an exchange of emails on March 14, 2025, the applicant stated that a bubble curtain would be used during impact pile driving.

An 80-feet long by 5-feet wide aluminum gangway would be fabricated offsite, brought in via barge and lifted into position. It would be attached to previously installed landing support on the Ancich Pier and would be designed for pedestrian foot traffic only. Four 12.75-inch-diameter steel fender piles would be installed along the gangway and in front of the Ancich Pier. These smaller piles are depicted on the drawings and in the BA as 12-inch-diameter but on February 21, 2024 the applicant communicated that they were changed to 12.75-inch in the final design. They would have HDPE sleeves to protect the piles and vessels from impact damage. Existing utilities on site include water, sewer, electric, and fire suppression. These connections would all be extended from their existing location to the end of the main walk floating dock.

The applicant is proposing to modify an existing stormwater outfall southeast of the overwater structure. An 18-foot outfall and its deteriorated splash pad near the Maritime Pier would be replaced with a 36-inch outfall and a 12-foot by 12-foot splash pad comprised of 12 cubic yards of 2-foot riprap. In addition, 600 cubic yards of clean beach nourishment fill would be placed on

approximately 0.41 acre of the shoreline between the high tide line and mean high water at and near the outfall.

The applicant proposed to implement a Marine Mammal Monitoring Plan, included as Appendix III to the BA (DCG, 2022).

The applicant also plans to purchase 340 conservation credits from the Puget Sound partnership to address nearshore impacts (DCG, 2023). The output of the nearshore calculator is available as an attachment.

A stormwater outfall at Maritime Pier in Gig Harbor, approximately 0.5 miles south of the proposed pier, has created a plunge pool in the intertidal zone. Project proponents included modifications to this stormwater system to address concerns about fish being entrained in this pool, as well as contaminants in the discharge.

2. ENDANGERED SPECIES ACT BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT

The ESA establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat upon which they depend. As required by section 7(a)(2) of the ESA, each Federal agency must ensure that its actions are not likely to jeopardize the continued existence of endangered or threatened species or to adversely modify or destroy their designated critical habitat. Per the requirements of the ESA, Federal action agencies consult with NMFS, and section 7(b)(3) requires that, at the conclusion of consultation, NMFS provide an opinion stating how the agency's actions would affect listed species and their critical habitats. If incidental take is reasonably certain to occur, section 7(b)(4) requires NMFS to provide an ITS that specifies the impact of any incidental taking and includes reasonable and prudent measures (RPMs) and terms and conditions to minimize such impacts.

The USACE determined the proposed action is not likely to adversely affect Puget Sound/Georgia Basin yelloweye rockfish and Mexico DPS Humpback Whale. Our concurrence is documented in the "Not Likely to Adversely Affect" Determinations section (Section 2.12).

2.1. Analytical Approach

This biological opinion includes both a jeopardy analysis and an adverse modification analysis. The jeopardy analysis relies upon the regulatory definition of "jeopardize the continued existence of" a listed species, which is "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02). Therefore, the jeopardy analysis considers both survival and recovery of the species.

This biological opinion also relies on the regulatory definition of "destruction or adverse modification," which "means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species" (50 CFR 402.02).

The designations of critical habitat for PS Chinook salmon, PS/Georgia Basin bocaccio, and SRKW use the term primary constituent element (PCE) or essential features. The 2016 final rule (81 FR 7414; February 11, 2016) that revised the critical habitat regulations (50 CFR 424.12) replaced this term with physical or biological features (PBFs). The shift in terminology does not change the approach used in conducting a "destruction or adverse modification" analysis, which is the same regardless of whether the original designation identified PCEs, PBFs, or essential features. In this biological opinion, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The ESA Section 7 implementing regulations define effects of the action using the term "consequences" (50 CFR 402.02). As explained in the preamble to the final rule revising the definition and adding this term (84 FR 44976, 44977; August 27, 2019), that revision does not change the scope of our analysis, and in this opinion, we use the terms "effects" and "consequences" interchangeably.

We use the following approach to determine whether a proposed action is likely to jeopardize listed species or destroy or adversely modify critical habitat:

- Evaluate the range-wide status of the species and critical habitat expected to be adversely affected by the proposed action.
- Evaluate the environmental baseline of the species and critical habitat.
- Evaluate the effects of the proposed action on species and their critical habitat using an exposure–response approach.
- Evaluate cumulative effects.
- In the integration and synthesis, add the effects of the action and cumulative effects to the environmental baseline, and, in light of the status of the species and critical habitat, analyze whether the proposed action is likely to: (1) directly or indirectly reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species; or (2) directly or indirectly result in an alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.
- If necessary, suggest a reasonable and prudent alternative to the proposed action.

The applicant proposes to use a vibratory hammer initially. An impact hammer would be used if needed to achieve design goals. To quantify effects for this proposal, we used the multi-species pile driving calculator developed by NMFS for biologists to estimate where pile-driving thresholds may be exceeded. Criteria for injury to fish from pile driving were adopted in a multiagency agreement (NMFS et al., 2008). We ran the pile-driving calculator four times to determine the likely effects from two sizes of piles driven by two types of drivers.

For this consultation, NMFS also evaluated the project using a Habitat Equivalency Analysis (HEA)[1] and the Puget Sound Nearshore Habitat Values Model (NHVM) adapted from Ehinger et

[1] A common "habitat currency" to quantify habitat impacts or gains can be calculated using Habitat Equivalency Analysis (HEA) methodology when used with a tool to consistently determine the habitat value of the affected area before and after impact. NMFS selected HEA as a means to identify section 7 project related habitat losses, gains,

al. 2015 via the Puget Sound Nearshore Habitat Conservation Calculator (Conservation Calculator) (Ehinger et al., 2015). This model was used to quantify the enduring in-water and intertidal habitat effects of the proposed action on ESA-listed salmonids. Impacts are expressed in Discounted Service Acre Years (DSAYs)*100. The Conservation Calculator does not evaluate construction effects (example: pile driving or turbidity), freshwater effects, nor does it evaluate impacts caused by stormwater or pollution generating impervious surfaces (PGIS).

The Conservation Calculator is also a tool for demonstrating sufficient conservation offsets and demonstrating no long-term net loss for projects consulted under the Salish Sea Nearshore Programmatic (NMFS, 2022b). Output from the Conservation Calculator accounts for the following consequences of the action:

- Beneficial aspects of proposed projects, including any positive nearshore effects that would result from removing a structure, or piece of a structure, prior to the end of any remaining "useful life period";
- Minimization incorporated through project design improvements (e.g., credit is given for removing creosote-treated piles);
- Adverse effects that would occur for the duration of a new "useful life period" that would result from proposed expanded, new, or repaired or replaced structures (or components of existing structures).

The Conservation Calculator was used to evaluate the enduring effects of the over or in-water structures, and nearshore structures. The Conservation Calculator does not evaluate construction effects (example: pile driving or turbidity), but only the continued/future existence of the structure on the habitat (example: square footage of overwater structure being repaired or replaced). Ecological equivalency that forms the basis of HEA is a concept that uses a common currency to express and assign a value to functional habitat loss and gain. Ecological equivalency is traditionally a service-to-service approach where the ecological functions and services for a species or group of species lost from an impacting activity can be fully offset by the services gained from a conservation activity. In this case, we use this approach to calculate the "cost" and "benefit" of certain enduring effects of the proposed action, as well as the impacts of the existing environmental baseline, using the NHVM. NMFS has a webpage with general information, frequently asked questions, and a downloadable Conservation Calculator and User Guide here: https://www.fisheries.noaa.gov/west-coast/habitat-conservation/puget-sound-nearshore-habitat-conservation-calculator. We describe the output of the Conservation Calculator in the Effects of the Action (Section 2.5).

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and quantify appropriate mitigation because of its long use by NOAA in natural resource damage assessment to scale compensatory restoration (Dunford et al. 2004; Thur 2006) and extensive independent literature on the model (Milon and Dodge 2001; Cacela et al. 2 2005; Strange et al. 2002). In Washington State, NMFS has also expanded the use of HEA to calculate conservation credits available from fish conservation banks (NMFS 2008, NMFS 2015b)), from which "withdrawals" can be made to address mitigation for adverse impacts to ESA species and their designated critical habitat.

2.2. Range-wide Status of the Species and Critical Habitat

One factor affecting the status of ESA-listed species considered in this opinion, and aquatic animals and their habitats at large, is exposure to increasing environmental variation due to shifts in average weather conditions. Increasing environmental variation is likely to play a role in determining the abundance and distribution of ESA-listed species, and the conservation value of their designated critical habitats, in the Pacific Northwest. These shifts will not be spatially homogeneous across the Pacific Northwest.

There is a large and growing body of literature on past, present, and future impacts of increasing environmental variation on sea level rise, frequency of severe weather events, and changes in air and water temperatures. Major ecological realignments are already occurring in response to these shifts (IPCC, 2022). Long-term trends in warming have continued at global, national, and regional scales. The 10 warmest years in the historical record (1890-2023) have all occurred in the past decade, with NOAA, NASA, and the World Meteorological Organization stating 2024 was the world's warmest year on record (NASA, 2025; NOAA, 2025; World Meteorological Organization, 2025).

Increasing temperatures and the potential loss of biodiversity represent profound threats to ecosystem functionality (IPCC, 2022). These two factors are often examined in isolation, but likely have interacting effects on ecosystem function. Updated projections of increasing temperature are similar to or greater than previous projections (IPCC, 2021). Retaining and restoring habitat complexity, access to flow and cold-water refuges, and improving growth opportunities in both freshwater and marine environments are strongly advocated in the recent literature (Siegel & Crozier, 2019, 2020).

Increasing environmental variability due to shifts in average weather conditions continues to adversely impact critical habitat, creating limiting factors and threats to the recovery of the ESA-listed species considered in this opinion. Shifts in average weather conditions will likely result in an increase in stream temperature and a decrease in summer flow. NMFS assumes that the environmental baseline is not meeting all of the biological requirements of individuals of all salmon and steelhead species considered in this opinion. This is due to one or more impaired aquatic habitat functions related to any of the habitat factors limiting the recovery of the species in that area. Non-federal plans to address increasing environmental variability are largely unknown but may have localized benefits that extend to ESA-listed species and designated critical habitat within the Pacific Northwest as a whole. When these influences are considered collectively, we expect trends in habitat quality to remain flat or degrade gradually over time. Likewise, we also expect the quality and function of the physical and biological features (PBFs) of critical habitat to remain flat or gradually decline over time. Retaining and restoring habitat complexity, access to flow and cold-water climate refuges, and maximizing growth in freshwater and marine environments are strongly advocated in the recent literature (Siegel & Crozier, 2019, 2020).

Vulnerability to Environmental Variation

One factor affecting the status of ESA-listed species considered in this opinion, and aquatic animals and their habitats at large, is exposure to increasing variation and shifts in average weather conditions. This variation influences marine conditions in ways that relate to Pacific salmon and steelhead, explained in more detail below.

Marine and Estuarine Environments

A recent study projects nearly complete loss of existing tidal wetlands along the U.S. West Coast due to sea level rise (Thorne et al., 2018). California and Oregon showed the greatest threat to tidal wetlands (100 percent), while 68 percent of Washington tidal wetlands are expected to be submerged. Coastal development and steep topography prevent horizontal migration of most wetlands, causing the net contraction of this crucial habitat. Rising ocean temperatures, stratification, ocean acidity, hypoxia, algal toxins, and other oceanographic processes would alter the composition and abundance of a vast array of oceanic species. In particular, there would be shifts in both predators and prey of Pacific salmon, salmon life history traits, and relative abundance. For example, a study of small planktivorous fish (Gliwicz et al., 2018) found that higher ambient temperatures increased the distance at which fish reacted to prey. Perhaps the most dramatic change in physical ocean conditions would occur through ocean acidification and deoxygenation. It is unclear how sensitive salmon and steelhead might be to the direct effects of ocean acidification because of their tolerance of a wide pH range in freshwater (Ou et al., 2015; Williams et al., 2019), however, impacts of ocean acidification and hypoxia on sensitive species (e.g., plankton, crabs, rockfish, groundfish) would likely affect salmon indirectly through their interactions as predators and prey.

Effects on salmon and steelhead

Crozier et al. (2019) recently completed a vulnerability assessment for listed Pacific salmon and steelhead and based on three components: 1) biological sensitivity, which is a function of individual species characteristics; 2) climate exposure, which is a function of geographical location and projected future conditions; and 3) adaptive capacity, which describes the ability of a species to adapt to changing environmental conditions. The listed salmon and steelhead in the Central/South Puget Sound basin were assessed as having low productivity. In the most recent status review (Ford, 2022) none of the PS Chinook salmon populations in the Central/South Sound MPG have had productivities above zero for natural-origin spawners, meaning they failed to replace themselves. The long-term abundance of adult steelhead returning to many Puget Sound rivers has fallen substantially since estimates began for many populations in the late 1970s and early 1980s. There has been some improvement in abundance and productivity for five of the eight winter-run DIPs in the Central & South Puget Sound MPG but the run sizes ranged from a low of 6 returning adults from 2015 through 2019 in the Cedar River to high of 1368 in the Nisqually. The recovery goals for these rivers (at a productivity rate of 1) are 4,000 for the Cedar River and 20,500 for the Nisqually River (NMFS, 2019). For these species, overall vulnerability is driven by a number of different factors including damage of habitat resulting from development and water quality degradation.

In freshwater, year-round increases in stream temperature and variations in flow would affect physiological, behavioral, and demographic processes in salmonids, and change the species with which they interact. Increasing freshwater temperatures are likely to affect incubation and emergence timing for eggs. Although several factors impact inter-gravel temperature and oxygen (e.g., groundwater influence), in the locations where the greatest warming occurs, increasing temperature may affect egg survival, as well as sensitivity of eggs to thermal stress (Crozier et al., 2021). Increasing temperature and variations in flow regimes may alter the amount of habitat and food available for juvenile rearing, and this in turn could lead to a restriction in the distribution of juveniles, further decreasing productivity through density dependence. For migrating adults, variations in freshwater flows and temperatures would likely increase exposure to stressful temperatures for many populations, and alter migration travel times and increase thermal stress accumulation for those with early-returning (i.e., spring- and summer-run) phenotypes associated with longer freshwater holding times (Crozier, 2020; FitzGerald, 2020). Rising river temperatures increase the energetic cost of migration and the risk of *en-route* or pre-spawning mortality of adults with long freshwater migrations. Some populations may be able to make use of cool-water refuges and run-timing plasticity to reduce thermal exposure (Barnett et al., 2020; Keefer et al., 2018).

Variation in winter precipitation would likely affect incubation and/or rearing stages of most salmonid populations. Alterations in the intensity of cool season precipitation, snow accumulation, and runoff could influence migration cues for fall, winter, and spring adult migrants, such as coho and steelhead. Egg survival rates may suffer from more intense flooding that scours or buries redds. Shifts in the hydrological regime, such as from mostly snow to more rain, could drive changes in life history, potentially threatening diversity within an ESU/DPS (Beechie et al., 2006). Increases in summer temperature and decreases in summer flow would affect both juvenile and adult stages in some populations, especially those with yearling life histories and summer migration patterns (Crozier et al., 2019; Crozier & Zabel, 2006; Crozier et al., 2010).

2.2.1. Status of the Species

Table 1, below provides a summary of listing and recovery plan information, status summaries and limiting factors for the species addressed in this opinion. More information can be found in recovery plans and status reviews for these species. Acronyms appearing in the table include DPS (Distinct Population Segment), ESU (Evolutionarily Significant Unit), MPG (Multiple Population Grouping), and TRT (Technical Recovery Team).

Table 1. Listing classification and date, recovery plan reference, most recent status review, status summary, and limiting factors for each species considered in this opinion.

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
Puget Sound Chinook salmon	Threatened 6/28/05 (70 FR 37159)	Shared Strategy for Puget Sound 2007 (NMFS, 2006)	(Ford, 2022; NMFS, 2016a)	This ESU comprises 22 populations distributed over five geographic areas. All Puget Sound Chinook salmon populations continue to remain well below the TRT planning ranges for recovery escapement levels. Most populations also remain consistently below the spawner–recruit levels identified by the TRT as necessary for recovery. Across the ESU, most populations have increased somewhat in abundance since the last status review in 2016, but have small negative trends over the past 15 years. Productivity remains low in most populations. Overall, the Puget Sound Chinook salmon ESU remains at "moderate" risk of extinction.	● Degraded floodplain and in-river channel structure ● Degraded estuarine conditions and loss of estuarine habitat ● Degraded riparian areas and loss of in-river large woody debris ● Excessive fine-grained sediment in spawning gravel ● Degraded water quality and temperature ● Degraded nearshore conditions ● Impaired passage for migrating fish ● Severely altered flow regime
Puget Sound Steelhead	Threatened 5/11/07	(NMFS, 2019)	(Ford, 2022; NMFS, 2016a)	This DPS comprises 32 populations. Viability of has improved somewhat since the PSTRT concluded that the DPS was at very low viability, as were all three of its constituent MPGs, and many of its 32 DIPs (Hard et al. 2015). Increases in spawner abundance were observed in a number of populations over the last five years within the Central & South Puget Sound and the Hood Canal & Strait of Juan de Fuca MPGs, primarily among smaller populations. There were also declines for summer- and winter-run populations in the Snohomish River basin. In fact, all summer-run steelhead populations in the Northern Cascades	● Continued destruction and modification of habitat ● Widespread declines in adult abundance despite significant reductions in harvest ● Threats to diversity posed by use of two hatchery steelhead stocks ● Declining diversity in the DPS, including the uncertain but weak status of summer-run fish ● A reduction in spatial structure ● Reduced habitat quality ● Urbanization ● Dikes, hardening of banks with riprap, and channelization

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
				MPG are likely at a very high demographic risk.	
Puget Sound/ Georgia Basin DPS of Bocaccio	Endangered 04/28/10	(NMFS, 2017)	(NMFS, 2016c)	Though bocaccio were never a predominant segment of the multi-species rockfish population within the Puget Sound/Georgia Basin, their present-day abundance is likely a fraction of their pre-contemporary fishery abundance. Most bocaccio within the DPS may have been historically spatially limited to several basins within the DPS. They were apparently historically most abundant in the Central and South Sound with no documented occurrences in the San Juan Basin until 2008. The apparent reduction of populations of bocaccio in the Main Basin and South Sound represents a further reduction in the historically spatially limited distribution of bocaccio, and adds significant risk to the viability of the DPS.	● Over harvest ● Water pollution ● Climate-induced changes to rockfish habitat ● Small population dynamics
Southern resident killer whale	Endangered 11/18/05	(NMFS, 2008a)	(NMFS, 2022a)	The Southern Resident killer whale DPS is composed of a single population that ranges as far south as central California and as far north as southeast Alaska. While some of the downlisting and delisting criteria have been met, the biological downlisting and delisting 63 criteria, including sustained growth over 14 and 28 years, respectively, have not been met. The SRKW DPS has not grown; the overall status of the population is not consistent with a healthy, recovered population. Considering the status and continuing threats, the Southern Resident	● Quantity and quality of prey ● Exposure to toxic chemicals ● Disturbance from sound and vessels ● Risk from oil spills

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
				killer whales remain in danger of extinction.	

Puget Sound Chinook are the naturally spawned Chinook salmon originating from rivers flowing into Puget Sound from the Elwha River eastward, including rivers in Hood Canal, South Sound, North Sound and the Strait of Georgia, as well as Chinook salmon from several artificial propagation programs. Puget Sound Chinook salmon are a group of 31 historically quasi-independent populations, 22 of which are extant (Ruckelshaus et al., 2006). The populations are distributed in five geographic regions, or major population groups (MPGs). Gig Harbor is in the vicinity of the Central/South Sound MPG. This group includes Chinook populations in the Nisqually, Puyallup, White, Green, Cedar and Sammamish Rivers. Since being listed as threatened in 1999, there have been several status reviews. In 2015 most populations further declined in abundance, and this decline had been persistent over the previous seven-to-ten years. Productivity remained low in most populations. The addition of the data to 2018 shows even more substantially either flat or negative trends in Puget Sound Chinook natural-origin population abundances (Ford, 2022). The recovery goal for the Puyallup River is to have 18,000 natural origin (non-hatchery) adult Chinook return to spawn in the river. For the years 2015 through 2019 the average has been 577. For the Nisqually River, the goal is to have 13,000 Chinook return to spawn. The average was 766 for the years 2015 through 2019.

For Puget Sound steelhead, NMFS evaluated the population viability of 20 of the 32 demographically independent populations and three major population groups (Hard et al., 2015). It also completed a report identifying historical populations (Myers et al., 2015). Populations are based on genetic, environmental, and life history characteristics. They display winter, summer, or summer/winter run timing (Myers et al., 2015). Puget Sound steelhead are currently at "very low" viability.

As with other rockfish, bocaccio fertilize their eggs internally and extrude their young as larvae that are about 4 to 5 mm in length. The timing of larval parturition in bocaccio is uncertain, but likely occurs within a five- to six-month window that is centered near March (Greene & Godersky, 2012; NMFS, 2017; Palsson et al., 2009). Larvae are throughout the water column (Weis, 2004), and also under free-floating algae, seagrass, and detached kelp (Love et al., 2002; Schaffer, 1995). Unique oceanographic conditions within Puget Sound likely result in most larvae staying within the basin where they are released rather than being broadly dispersed (Drake et al., 2010).

Young-of-year bocaccio occur on shallow rocky reefs and nearshore areas, often associated with macroalgae, especially kelps (Laminariales), and sandy areas that support seagrasses (Love et al., 2002; Moser, 1967). They form aggregations near the bottom in association with drift algae and throughout the water column in association with canopy-forming kelps. It is likely that nearshore habitats used by juvenile bocaccio and other juvenile rockfish species offers a beneficial mix of warmer temperatures, food, and refuge from predators (Love et al., 1991).

The SRKW population was listed as endangered in 2005 under the ESA and are considered depleted under the Marine Mammal Protection Act. A 5-year review under the ESA completed in 2016 concluded that SRKWs should remain listed as endangered and includes recent information on the population, threats, and new research results and publications (NMFS, 2016b). NMFS considers SRKWs to be highly at-risk. The population has relatively high mortality and low reproduction unlike other resident killer whale populations that have generally

been increasing since the 1970s (Carretta et al., 2019). Limiting factors in the SRKW recovery plan include reduced prey, high levels of contaminants, and disturbances from vessels and sound (NMFS, 2008a).

Reduced fecundity contributes to the SRKWs failure to recover. The rate of successful pregnancy in the wild population is significantly lower than those of other killer whale populations (Wasser et al., 2017). This is likely associated with lack of food and is addressed in the critical habitat section below. At the time of writing this biological opinion, there are 73 SRKWs. Of those, fewer than half are females of reproductive age. The very small size of the population contributes to the risk of extinction. But the caloric needs for reproduction likely reduces the reproduction rate. These whales rely on PS Chinook salmon for food.

2.2.2. Status of the Critical Habitat

This section describes the status of designated critical habitat affected by the proposed action by examining the condition and trends of the essential physical and biological features of that habitat throughout the designated areas. These features are essential to the conservation of the ESA-listed species because they support one or more of the species' life stages (e.g., sites with conditions that support spawning, rearing, migration and foraging).

For most salmon and steelhead, NMFS's critical habitat analytical review teams (CHARTs) ranked watersheds within designated critical habitat at the scale of the fifth-field hydrologic unit code (HUC5) in terms of the conservation value they provide to each ESA-listed species that they support (NMFS 2005). The conservation rankings were high, medium, or low. To determine the conservation value of each watershed to species viability, the CHARTs evaluated the quantity and quality of habitat features, the relationship of the area compared to other areas within the species' range, and the significance to the species of the population occupying that area. Even if a location had poor habitat quality, it could be ranked with a high conservation value if it were essential due to factors such as limited availability, a unique contribution of the population it served, or is serving another important role.

The PBFs of critical habitat affected by the proposal for PS Chinook salmon, juvenile bocaccio and SRKW are addressed in Section 2.5, Effects of the Action. Essential PBFs for adult bocaccio are benthic habitats or sites deeper than 30 m (98ft) that possess or are adjacent to areas of complex bathymetry. All of Gig Harbor is shallower than these depths and for this reason, critical habitat for adult bocaccio is not addressed in this biological opinion. Steelhead use estuarine habitat for migration and feeding. However, critical habitat in marine areas has not been designated for Puget Sound steelhead.

A summary of the status of critical habitats, considered in this opinion, is provided in Table 2, below.

Table 2. Critical habitat, designation date, federal register citation, and status summary for critical habitat considered in this opinion.

Species	Designation Date and Federal Register Citation	Critical Habitat Status Summary
Puget Sound Chinook salmon	9/02/05 70 FR 52630	Critical habitat for Puget Sound Chinook salmon includes 1,683 miles of streams, 41 square mile of lakes, and 2,182 miles of nearshore marine habitat in Puget Sounds. The Puget Sound Chinook salmon ESU has 61 freshwater and 19 marine areas within its range. Of the freshwater watersheds, 41 are rated high conservation value, 12 low conservation value, and eight received a medium rating. Of the marine areas, all 19 are ranked with high conservation value.
Puget Sound/Georgia Basin DPS of bocaccio	11/13/2014 79 FR68042	Critical habitat for bocaccio includes 590.4 square miles of nearshore habitat and 414.1 square miles of deepwater habitat. Critical habitat is not designated in areas outside of United States jurisdiction; therefore, although waters in Canada are part of the DPSs' ranges for all three species, critical habitat was not designated in that area. Based on the natural history of bocaccio and their habitat needs, NMFS identified two physical or biological features, essential for their conservation: 1) Deepwater sites (>30 meters) that support growth, survival, reproduction, and feeding opportunities; 2) Nearshore juvenile rearing sites with sand, rock and/or cobbles to support forage and refuge. Habitat threats include degradation of rocky habitat, loss of eelgrass and kelp, introduction of non-native species that modify habitat, and degradation of water quality as specific threats to rockfish habitat in the Georgia Basin.
Southern resident killer whale	08/02/21 86 FR 41668	Critical habitat includes approximately 2,560 square miles of marine inland waters of Washington: 1) the Summer Core Area in Haro Strait and waters around the San Juan Islands; 2) Puget Sound; and 3) the Strait of Juan de Fuca. Six additional areas include 15,910 square miles of marine waters between the 20-feet (ft) (6.1-meter (m)) depth contour and the 656.2-ft (200-m) depth contour from the U.S. international border with Canada south to Point Sur, California. We have excluded the Quinault Range Site. Based on the natural history of the Southern Residents and their habitat needs, NMFS identified three PCEs, or physical or biological features, essential for the conservation of Southern Residents: 1) Water quality to support growth and development; 2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and 3) passage conditions to allow for migration, resting, and foraging. Water quality in Puget Sound, in general, is degraded. Some pollutants in Puget Sound persist and build up in marine organisms including Southern Residents and their prey resources, despite bans in the 1970s of some harmful substances and cleanup efforts. The primary concern for direct effects on whales from water quality is oil spills, although oil spills can also have long-lasting impacts on other habitat features In regards to passage, human activities can interfere with movements of the whales and impact their passage. In particular, vessels may present obstacles to whales' passage, causing the

Species	Designation Date and Federal Register Citation	Critical Habitat Status Summary
		whales to swim further and change direction more often, which can increase energy expenditure for whales and impacts foraging behavior. Reduced prey abundance, particularly Chinook salmon, is also a concern for critical habitat.

2.3. Action Area

"Action area" means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02).

For this consultation, the action area encompasses the area in which sound exposure level (SEL) is anticipated to exceed the thresholds for behavioral effects for listed species addressed in this consultation. In-water noise from pile-driving would ensonify all of Gig Harbor. Gig Harbor is within the Puget Sound Chinook South/Central Puget Sound Basin biogeographic region (NWFSC, 2015).



Figure 1. The Action Area includes all of the Gig Harbor embayment north of the red line. The proposed new pier is centrally located. Proposed stormwater outfall modifications are closer to the south end of the bay.



Figure 2. Zoomed-in locations for the newly proposed pier and the Jerkovich Pier.

2.4. Environmental Baseline

The "environmental baseline" refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

PS Chinook salmon and PS steelhead use the action area for migration and rearing, and bocaccio use the action area for rearing.

Table 3. General timing of species in Gig Harbor.

Species	Larval	Juvenile	Adult	Exceptions
PS Chinook salmon	NA	spring-summer	August-September for most populations	Some juveniles year-round
PS steelhead	NA	Spring -briefly	July-September	Adults may be present year-round (Quinn, 2005)
Bocaccio	January-April	Spring-summer	NA	
SRKW	NA	winter	winter	May be present year-round

SRKW are most often sighted in the Gig Harbor area in the fall and winter. November, December and January are when they are most likely to be present according to the SRKW sightings dashboard (noaa.maps.arcgis.com, Figure 3). Humpback whales are in Puget Sound year-round but are not likely to be in Gig Harbor because of the shallow depth and small size of the basin.

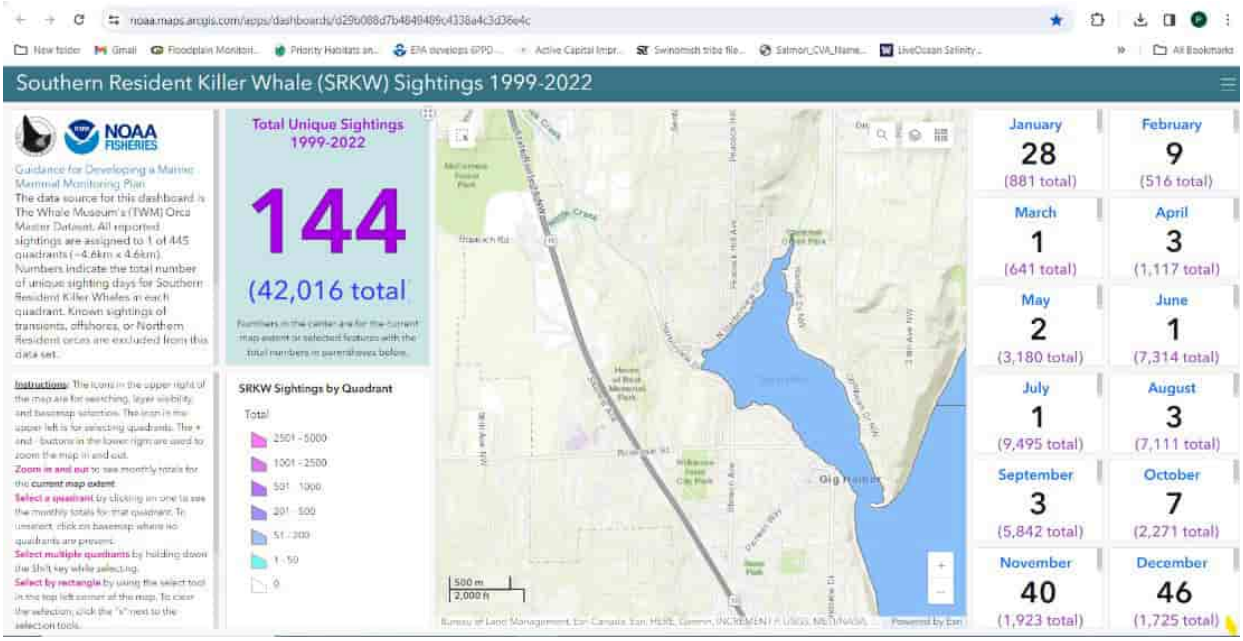


Figure 3. SRKW sightings 1999-2022.

PS Chinook salmon and PS steelhead are present in the action area according to Washington Department of Fish and Wildlife's Salmonscape mapping system (https://apps.wdfw.wa.gov/salmonscape/), and text in the BA prepared for this consultation. Chinook salmon presence is documented in Crescent Creek. Steelhead use both Crescent Creek and Donkey Creek. Both of these streams flow into Gig Harbor.

Critical habitat is designated for PS Chinook salmon, bocaccio and SRKW in the action area, as depicted in Figures 4, 5 and 6 below.

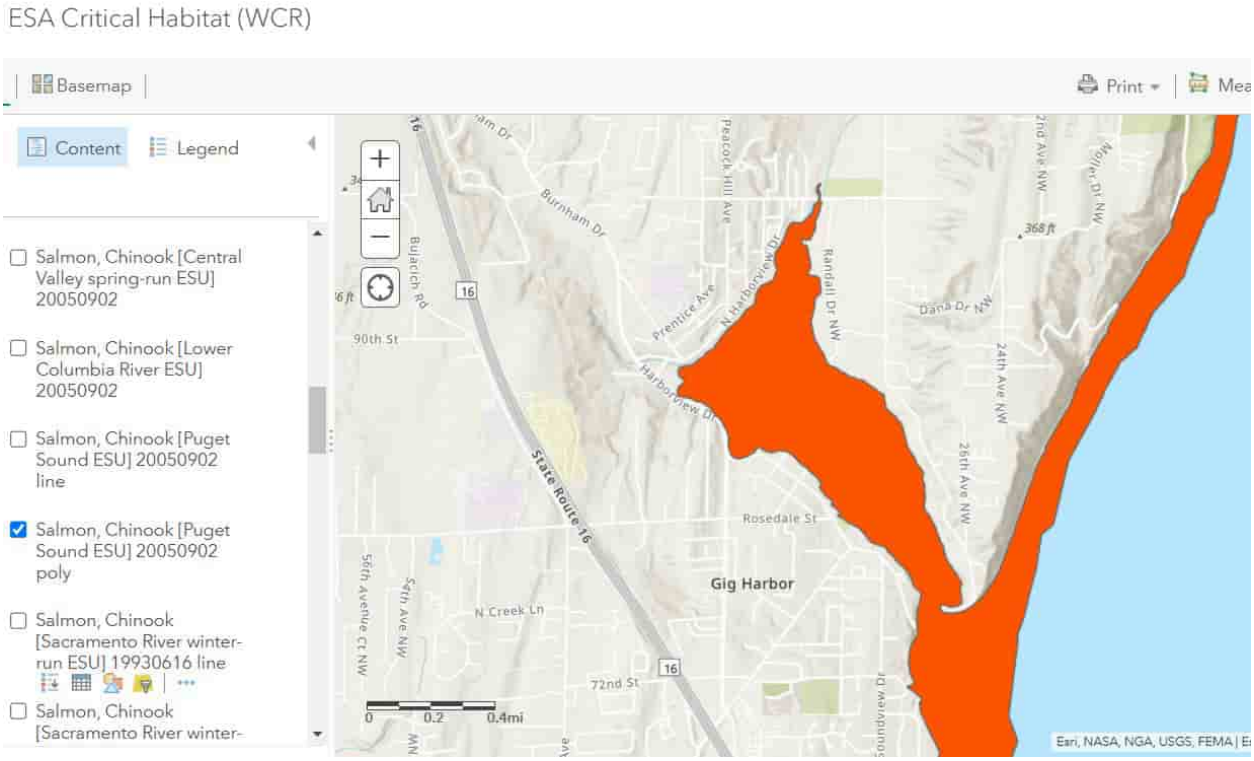


Figure 4. Critical Habitat for PS Chinook is designated in all of Gig Harbor.

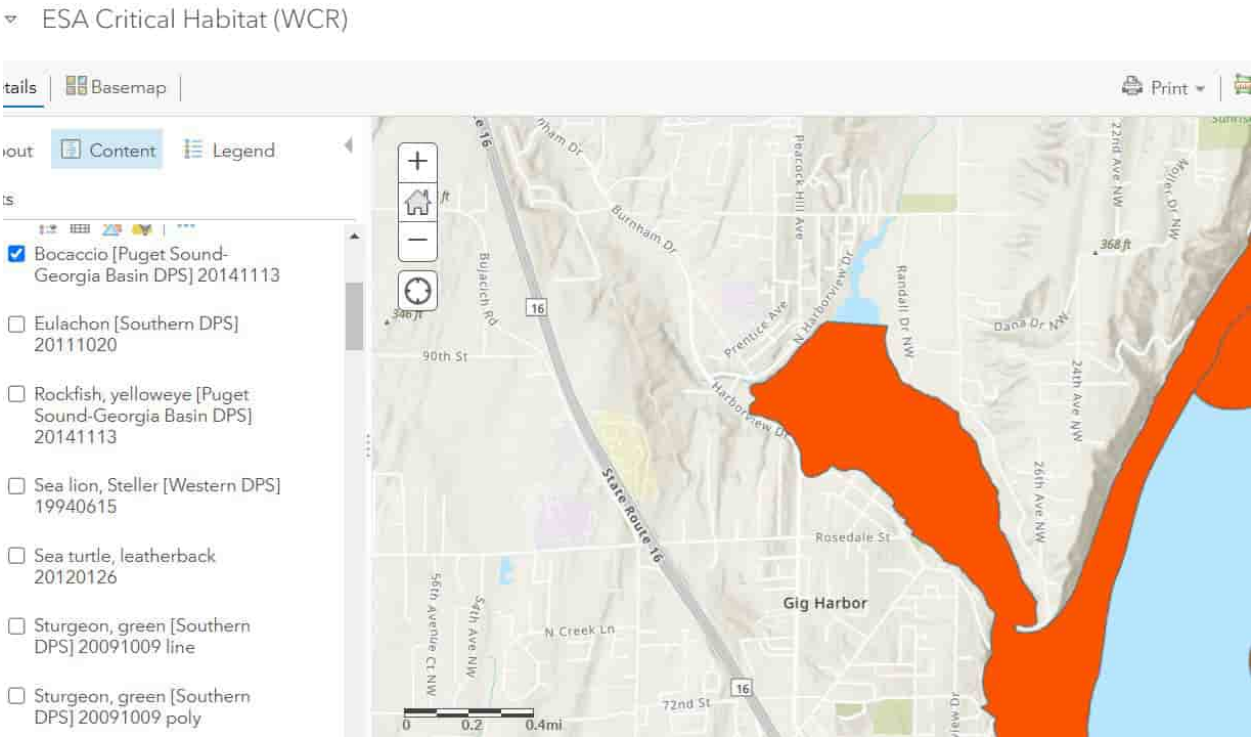


Figure 5. Critical Habitat is designated for bocaccio in all but the northern end of Gig Harbor.

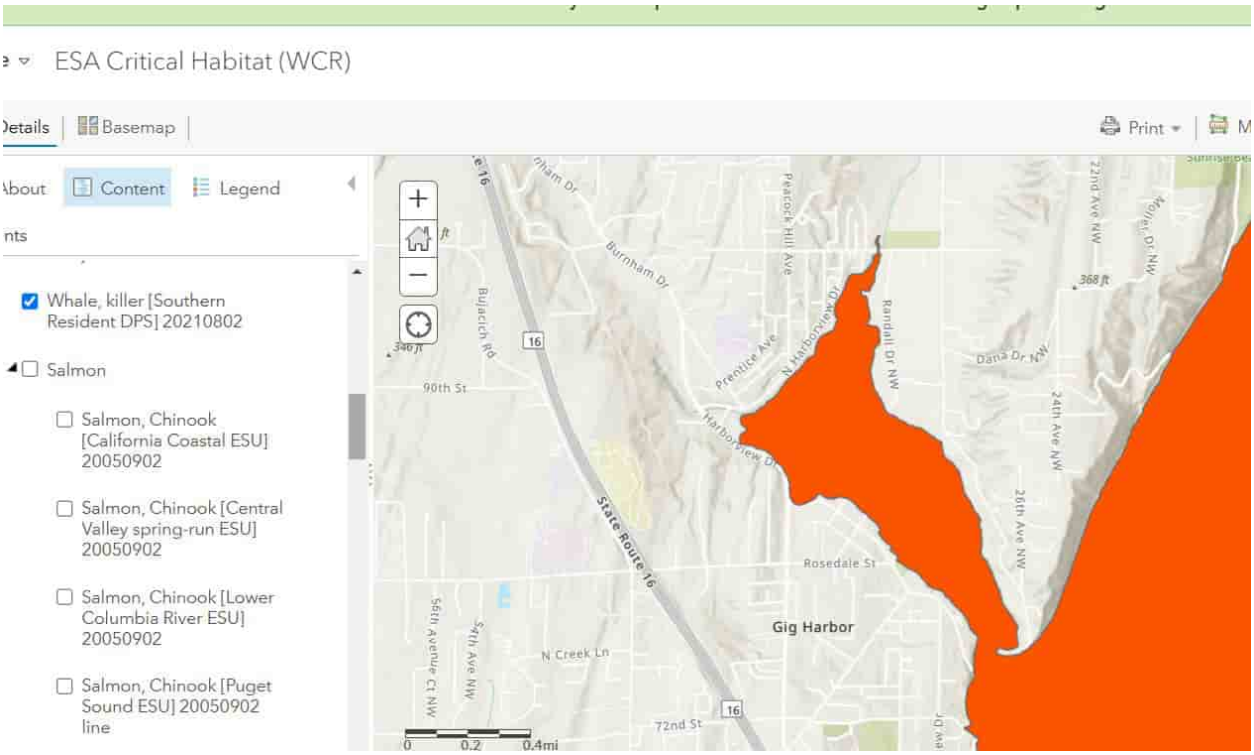


Figure 6. Critical Habitat for SRKW is designated in all of Gig Harbor.

Gig Harbor is a nursery for juvenile fish rearing because it is shallow, sheltered, and has SAV. Gig Harbor is also used for migration of adult PS Chinook salmon and PS steelhead. Two major creeks drain into Gig Harbor, including Crescent Creek and North Creek. These creeks are also known to be used by coho salmon, cutthroat trout, fall chum, fall chinook, and winter steelhead (WDFW, 2020).

Gig Harbor is located in the central Puget Sound region. It is likely that salmon from rivers that discharge into Puget Sound south of the Tacoma Narrows, including the Nisqually and Puyallup rivers, visit Gig Harbor while rearing in Puget Sound and making their way to the Pacific Ocean. In addition to the local populations, Chinook salmon from throughout the Salish sea are likely to rear in Gig Harbor as has been observed in similar embayments. For example, Chinook salmon in Sinclair Inlet originated from at least 15 different locations that were as far away as the Chilliwak River in the Fraser River Basin (Fresh et al., 2006). The results of this study illustrate that juvenile Chinook salmon travel to and use estuarine and nearshore rearing habitat throughout Puget Sound, and not only in areas associated with natal rivers or streams.

Puget Sound shore zones provide important habitat for juvenile PS Chinook salmon and bocaccio in part because they are ecologically productive. Nearshore areas in Puget Sound are nurseries for many fish species. Macroalgae and eelgrass provide structure for feeding, predation refuge, and buffer against currents to enable energy conservation for juvenile bocaccio (Love et al. 1991). The recovery plan for rockfish in Puget Sound (NMFS, 2017) states: “Areas with floating and submerged kelp (families *Chordeace, Alariaceae, Lessoniacea, Costariaceae,* and

Laminaricea) support the highest densities of most juvenile rockfish species (Hayden-Spear, 2006; Matthews, 1989; Springer et al., 2010). Kelp is photosynthetic and requires high ambient light levels and a lack of fine sediment in the water column (Mumford, 2007). There are 23 annual or perennial species of kelp in Puget Sound, two of which have a floating canopy and the rest non-floating stipitate or prostrate canopies (Mumford 2007)."

Some areas around Puget Sound have shown a large decrease in kelp (Berry et al., 2021). Areas with floating and submerged kelp (families Chordaceae, Alariaceae, Lessoniacea, Costariaceae, and Laminaricea) support the highest densities of most juvenile rockfish species (Carr, 1991; Hayden-Spear, 2006; Matthews, 1989). Kelp habitat provides structure for feeding, predation refuge, and reduced currents that enable energy conservation for juveniles (Love et al., 1991). Loss of nearshore habitat quality is a threat to rockfish, but the factors driving this loss vary throughout the DPSs. The severity of this threat as very low in Canada, low in the San Juan Islands, moderate in Hood Canal, and high in the Main Basin and South Sound (NMFS, 2017).

At the site for the proposed action within Gig Harbor, the intertidal zone is gradually sloping, with a substrate of gravels transitioning to silty sand sub-tidally. A vegetation survey in June 2022 (Marine Surveys and Assessments, 2022) found occurrences of attached *Saccharina* (5-30 percent) and *Gracilaria* (5-20 percent) within the project area. (*Saccharina* is a genus with 24 species of brown algae in the family *Laminaricea*. *Gracilaria* is a genus of red algae in the family *Gracilariaceae*). Total macroalgae percent cover was calculated to be approximately 3.7 percent of the proposed structure's footprint and 25-ft buffer. Invertebrates seen during the survey were anemones (*Metridium*), sea quills (*Stylatula*), and sea cucumbers. Small, silvery fish assumed to be forage fish were also observed. Eelgrass (*Zostera spp.*) is present in Gig Harbor however its extent is not clear (Sherman & DeBruyckere, 2018). Surf smelt spawning is documented approximately 0.30 mile from the site of the proposed action on the northeast side of Gig Harbor according to the mitigation plan (DCG, 2023).

Within Gig Harbor, the intertidal zone generally extends from +13.6 feet Mean Lower Low Water (MLLW) to -3.9 feet MLLW. Some of this intertidal shore zone has been filled and armored. A concrete bulkhead, the bottom of which is at +9 feet MLLW is present at the landward end of the proposed dock. Text in the BA describes the shoreline of Gig Harbor as substantially altered with fill in the intertidal zone, bulkheads, and over-water structures. One of these structures is the Jerkovich Pier.

The Washington Department of Ecology Water Quality Atlas at this website (https://apps.ecology.wa.gov/waterqualityatlas/wqa/map)[2], lists several water quality problems in Gig Harbor. Fecal coliform contamination is Category 5, which means the water is polluted and requires cleanup. Other contaminants detected and of concern include polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). These assessments do not include many contaminants in urban runoff known to be harmful to salmon such as 6PPD-quinone.

Stormwater runoff from the built environment remains one of the great challenges of modern water pollution control, as this source of contamination is a principal contributor to water quality impairment of waterbodies nationwide (National Research Council, 2009). Impervious surfaces,

[2] accessed on May 14, 2025.

including buildings, roads and parking lots, alter the natural infiltration of vegetation and soil, and accumulate many pollutants in dust that settles from automobile tires, exhaust, brakes, wear of concrete, asphalt and composite surfaces as well as leaks from engines and other mechanisms. Precipitation mobilizes these contaminants and transports them in runoff to aquatic environments. Motor vehicles, the primary source of transportation-related pollutants from impervious surfaces, contribute many known toxicants including those from tire wear (including 6PPD-quinone), copper and other metals from brake pads, and phenanthrene and other PAHs in exhaust. Stormwater may also include additional contaminants depending on the surrounding land use and proximity to industrial facilities (NWFSC, 2022).

2.5. Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action (see 50 CFR 402.02). A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered the factors set forth in 50 CFR 402.17(a) and (b).

2.5.1. Effects on Critical Habitat

Critical habitat is designated in Gig Harbor for PS Chinook salmon, bocaccio and SRKW. Only two of the PBFs for PS Chinook salmon would be affected by the proposed action.

For PS Chinook salmon, the proposed action would affect PBFs 4 and 5:

> PBF 4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh-and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. These features are essential to conservation because without them juveniles cannot reach the ocean in a timely manner and use the variety of habitats that allow them to avoid predators, compete successfully, and complete the behavioral and physiological changes needed for life in the ocean. Similarly, these features are essential to the conservation of adults because they provide a final source of abundant forage that will provide the energy stores needed to make the physiological transition to fresh water, migrate upstream, avoid predators, and develop to maturity upon reaching spawning areas.
>
> PBF 5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels. As in the case with freshwater migration corridors and estuarine areas, nearshore marine features are essential to conservation because without them juveniles cannot successfully transition from natal

streams to offshore marine areas. We have focused our designation on nearshore areas in Puget Sound because of its unique and relatively sheltered fjord-like setting (as opposed to the more open coastlines of Washington and Oregon).

PBFs essential to the conservation of juvenile bocaccio are settlement habitats located in the nearshore with substrates such as sand, rock and/or cobble compositions that also support kelp (families *Chordaceae*, *Alariaceae*, *Lessoniacea*, *Costariaceae*, and *Laminaricea*). These are essential for conservation because these features enable forage opportunities and refuge from predators and enable behavioral and physiological changes needed for juveniles to occupy deeper adult habitats. PBFs of juvenile bocaccio critical habitats include: (1) Quantity, quality, and availability of prey species to support individual growth, survival, reproduction, and feeding opportunities; and (2) water quality and sufficient levels of dissolved oxygen to support growth and survival.

PBFs for SRKWs are: (1) Water quality to support growth and development; (2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) passage conditions to allow for migration, resting, and foraging.

The effects of the proposed action on SRKW, Chinook salmon and bocaccio designated critical habitat include the following and are discussed in more detail below.

- Likely loss of prey quality and quantity.
- Vessels can present obstacles to pathways, causing organisms to swim farther and change direction more often, which can increase energy expenditure and impact foraging.
- Water quality degradation during construction activities introduces sediment into the water column, as well as contaminants from equipment and from disturbing contaminated sediment associated with creosote-treated wood.
- For juvenile Chinook salmon and bocaccio, burial of prey organisms during placement of beach nourishment and rock placement for outfall stabilization would reduce the amount of prey available and could also change foraging and migration behavior, thus reducing food availability while simultaneously increasing metabolic needs. In Puget Sound, the sediment used for beach nourishment is typically designed to function as spawning substrate for forage fish. If successful, sediment used in beach nourishment is repopulated with invertebrates and forage fish eggs (Lambert & Chamberlin, 2023). When successful, the prey community for juvenile Chinook salmon and bocaccio may eventually recover. In areas where large rock is placed, the loss of prey for foraging juvenile listed fish would be permanent.
- The proposed pier would shade SAV. As a result, vegetation would receive less light, and likely perish. Benthic communities and forage species that reside in vegetated areas also perish or greatly diminish when SAV is shaded.
- Shadows and structures from the pier would restrict or block fish movement, migration and the composition of species on-site.
- Water quality improvement from the removal of creosote-treated wood and additional stormwater treatment prior to discharge at the Maritime Pier Stormwater Outfall is expected to have a beneficial effect over the long term.

- Water quality and habitat degradation from the operation and maintenance of vessels that use the new pier is expected to be adverse.

Table 4. PBFs of designated critical habitat impacted by the proposed action.

	Construction-related water quality effects	**Burial of prey from fill in the intertidal zone**	**Degraded rearing conditions from over-water structure**	**Interrupting migration**	**Vessel impacts to habitat & water quality**	**Vessel impacts on foraging**
PS Chinook salmon PBF 4	X	X	X	X	X	X
PS Chinook Salmon PBF 5	X	X	X	X	X	X
Juvenile bocaccio PBF 1	X	X	X		X	
Juvenile bocaccio PBF 2	X	X	X		X	X
SRKW PBF 1					X	
SRKW PBF 2	X	X	X	X	X	X
SRKW PBF 3						X

Construction-related sediment disturbance and water quality impacts

The proposed project would increase turbidity, decrease dissolved oxygen, and increase toxic contaminants. Turbidity and decreased dissolved oxygen in the water column would affect the PBFs of designated critical habitat for PS Chinook salmon and juvenile bocaccio. Temporary water quality reductions would result from incidental discharge of lubricants and leaks from the vessels, construction equipment and from the introduction of sediment and sediment contaminants into the water column as a result of construction disturbance during pile installation. Specifically, the proposed project would increase turbidity, resuspend or suspend toxic contaminants, and decrease dissolved oxygen. These effects to critical habitat are expected to persist during in-water work and return to baseline shortly after work ceases. Turbidity, suspended contaminants, and dissolved oxygen degradation from construction would be short term, lasting hours to weeks.

Among prey fishes, short-term and intermittent exposure to reduced water quality could result in minor reductions in forage species via gill damage. Suspended sediment would eventually settle in the pier construction vicinity. Some of this sediment may smother benthic prey species, and if the sediments are contaminated, sublethal toxicity of benthic prey species could occur within 200 feet of these non-dredging activities.

Stormwater outfall-related fill in the intertidal zone

There is substantial uncertainty with respect to the biological benefits of the proposed beach nourishment. Beach nourishment is the purposeful addition of sediment to a beach. In Puget Sound, beach nourishment is used for a multitude of purposes including erosion management (Lambert & Chamberlin, 2023). Research in Puget Sound demonstrates that nourishment can be effective at maintaining beach habitat conditions as part of larger-scale restoration and soft shore

erosion control projects, particularly when paired with armor removal, backshore plantings, and the addition of logs. In Puget Sound, the ecological benefits of beach nourishment are mixed and inconsistent. While the use of beach nourishment as part of a suite of restoration tools is promising, the use of nourishment as a stand-alone ecologically beneficial action is not well supported (Lambert & Chamberlin, 2023). For example, Lambert and Chamberlin (2023) found in some cases, the results have had adverse ecological impacts. The authors wrote,

> "empirical evidence for direct benefits to biota provided by beach nourishment are rare. The overwhelming majority of studies indicate negative impacts or, at best, no change to biotic conditions after nourishment actions."

Before nourishment, invertebrate communities at mean low water were similar between armored and unarmored sites, but nourishment caused heterogeneous changes, particularly by reducing ulvoid algae, barnacles, shore crabs, and periwinkles (which live on or under cobbles) and increasing varnish clams, softshell clams, and ghost shrimp which rely on sediment.

Lambert and Chamberlin (2023) found that material moves, often very rapidly, away from the placement site. Their case studies suggest that armor-associated nourishment typically moves off-site faster than would occur on unarmored shorelines. We don't know whether material added, at the outfall location in Gig Harbor, would drift laterally along the intertidal zone, or offshore. The site is armored.

Despite the findings of Lambert and Chamberlin (2023), beach nourishment has benefitted benthic communities in many cases. Thus, we provided credit in the nearshore calculator for the proposed beach nourishment at the location of the stormwater outfall. However, the proposed beach nourishment may not be immediately beneficial to critical habitat for Puget Sound Chinook salmon and bocaccio for the following reasons:

- Benthic and other prey organisms would be less abundant, at least temporarily, after placement of 600 cubic yards of material;
- The outfall is located at a site with shoreline armoring. Armored sites appear less likely to benefit from beach nourishment that other shore areas; and
- The outfall discharges stormwater. Beach nourishment would not address on-going water quality degradation associated with contaminants in stormwater.

<u>New overwater structure effects on SAV and prey production</u>

The high score or impact from the nearshore calculator for the proposed action is tied to the extremely high value of SAV and kelp in estuarine habitat and the damage piers do to this type of habitat. SAV habitats have been shown to have some of the highest primary productivity in the marine environment (Foster & Schiel, 1985; Pausch et al., 2024) and provide a significant contribution to the marine and estuarine food webs (Fresh, 2006; Mumford, 2007). Within these systems, SAV, which includes kelp, play critical roles. Replacing the loss of this type of habitat is instrumental to maintaining PCEs or PBFs of designated critical habitat for listed species in Gig Harbor. Loss of prey and refuge from predation are anticipated to result from the proposed action, at least until a newly established area with SAV or kelp replaces those critically important

functions. Less food and higher rates of predation both affect the survival of fish to adulthood and reproduction.

Overwater structures adversely affect fish habitats in a variety of ways, including construction related impacts, changes in ambient light conditions, alteration of the wave and current energy regime, and through activities associated with the use and operation of the facilities, such as increased vessel traffic and pollutants. Overwater structures create shade which reduces the light levels below the structure (PFMC, 2014). The shadow cast by an overwater structure affects both the plant and animal communities below the structure. Distributions of plants, invertebrates, and fishes have been found to be severely limited in under-dock environments when compared to adjacent, unshaded vegetated habitats. Light is an important factor affecting established aquatic plants. Under-pier light levels have been found to fall below threshold amounts for the photosynthesis of diatoms, benthic algae, eelgrass, and associated epiphytes and other autotrophs. These photosynthesizers are an essential part of nearshore habitat and the estuarine and nearshore food webs that support many species of marine and estuarine fishes. Eelgrass and other macrophytes can be reduced or eliminated, even by partial shading of the substrate, and have little chance to recover (PFMC, 2014). Decreases or changes in the epibenthos density, diversity, and assemblage at overwater structures are likely caused by vessel traffic, reduced or compromised benthic vegetation, as well as physical and biological habitat alterations (Haas et al., 2002).

PBFs of rearing habitat for bocaccio and PS Chinook salmon would be diminished by the loss of SAV and benthic communities in Gig Harbor. We anticipate SAV and epibenthic forage would diminish due to the shade produced by overwater structures and from the shade of vessels moored at the new pier.

In the marine nearshore, there is substantial evidence that over-water structures impede the nearshore movements of juvenile salmonids (Able et al., 1998; Heiser & Finn 1970; Simenstad et al., 1999; Southard et al., 2006; Toft et al., 2007; Vucelick et al., 2006). In the Puget Sound nearshore, 35-millimeter to 45-millimeter juvenile chum and pink salmon were reluctant to pass under docks (Heiser & Finn 1970). Southard et al. (2006) snorkeled underneath ferry terminals and found that juvenile salmon were not underneath the terminals at high tides when the water was closer to the structure, but only moved underneath the terminals at low tides when more light penetrated the edges. These findings show that overwater structures can disrupt juvenile migration in the Puget Sound nearshore, reducing the value of the critical habitat for its designated purpose of juvenile salmonid migration in estuarine and nearshore ocean environments. Littoral areas are important for juvenile salmonid migration (Ward et al., 1994) and an important part of designated critical habitat for PS Chinook salmon. An implication of juvenile salmon avoiding overwater structures is that some of them would swim around the structure (Nightingale & Simenstad, 2001). This behavioral modification would cause them to temporarily use deeper habitat, where preferred food may be less abundant, increase energy costs and increase exposure to piscivorous predation that generally avoid the shallowest nearshore waters that outmigrant juvenile salmonids prefer—especially in the earliest periods of their marine residency. When juvenile salmonids temporarily leave the relative safety of the shallow water, their risk to being preyed upon by other fish increases. This has been shown in the marine

environment where juvenile salmonid consumption by piscivorous predators increased fivefold when juvenile pink salmon were forced to leave the shallow nearshore (Willette, 2001).

Fish rely on visual cues for spatial orientation, prey capture, schooling, predator avoidance, and migration. The reduced-light conditions found under an overwater structure limit the ability of fish, especially juveniles and larvae, to perform these essential activities. The shadow cast by an overwater structure may increase predation on fish by creating a light/dark interface that allows predators to remain in a darkened area (barely visible to prey) and watch for prey to swim against a bright background (Helfman, 1981). Prey species moving around the structure are unable to see predators in the dark area under the structure and are more susceptible to predation. Furthermore, the reduced vegetation densities associated with overwater structures decrease refugia from predators (PFMC 2014).

In-water structures provide perching platforms for avian predators such as double- crested cormorants (*Phalacrocorax auritis*), from which they can launch feeding forays or dry their plumage. Because their plumage becomes wet when diving, cormorants spend considerable time drying out feathers (Harrison, 1983) on pilings and other structures near feeding grounds (Harrison, 1984).

Pilings can alter adjacent substrates by increasing shell deposition from piling communities and changing substrate bathymetry. Changes in substrate type can alter the nature of the flora and fauna native to a given site. In the case of pilings, native species-dominated communities typically associated with sand, gravel, mud, and eelgrass substrates are replaced by communities associated with shell hash substrates (PFMC, 2014).

Overwater structures and associated substrate provide increased opportunity for non-native species colonization and exacerbate the increase in their abundance and distribution (Bulleri & Chapman, 2010). Glasby et al. (2007) argue that artificial structures, such as floating docks and pilings, provide entry points for invasion and increase the spread and establishment of non-native species in estuaries (Glasby et al., 2007). In the San Francisco Estuary, the Smithsonian Institute conducts Rapid Assessment Surveys to determine non-native species distribution on overwater structures. Of the 294 distinct non-native taxa observed, 60 percent were found on floating docks, 20 percent on intertidal benthos, and 13 percent from benthic grabs (Cohen et al., 2005).

Altered visual cues, changed communities, and predation are thought to be responsible for the observed reductions in juvenile fish populations found under piers and the reduced growth and survival of fishes held in cages under piers when compared to open habitats (Able et al., 1998; Duffy-Anderson & Able, 1999).

We anticipate that the new pier would generate additional vessel use, moorage and maintenance operations. Impacts from additional vessels would affect PBFs for adult and juvenile PS Chinook salmon and for juvenile bocaccio by adding vessel traffic, noise, propeller wash, and contaminants. Recreational and commercial vessel use resulting from the proposed action may be most concentrated in Gig Harbor but the vessels can travel throughout the Puget Sound region.

Vessels may interact with the aquatic environment by a variety of mechanisms, including emissions and exhaust, hull and propeller contact, turbulence from the propulsion system, waves produced by movement, noise, and movement itself (Asplund, 2000). Consequences of vessel traffic include sediment resuspension, water pollution, disturbance to fish and wildlife, destruction of aquatic plants, and shoreline erosion (Asplund, 2000). Klein (1997), citing several EPA studies, reported that vessel traffic in waters less than 8.2 feet in depth result in substantial impacts to submerged vegetation and benthic communities. Klein (1997) also indicated that sediment resuspension is substantial if a vessel operates in less than 7.2 feet of water and that a slight increase in depth prevented the resuspension of sediment. Turbidity from vessel propeller wash decreases light levels (Eriksson et al., 2004). Decreased ambient light typically results in lower shoot density and biomass of SAV (Shafer, 1999; Shafer, 2002).

Loss of Prey Quality and Quantity for SRKW

One of the three PBFs for SRKW is, "Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth." The proposed action is anticipated to affect SRKW critical habitat by reducing their preferred prey, Chinook salmon. A reduction in survival of salmon and steelhead, discussed in the following section (effects to species) would reduce quality and quantity of prey for SRKW.

In light of the small population size of SRKW, reduced prey availability is associated with increased extinction risk of the species (NMFS 2022). NMFS selected SRKWs for its Species in the Spotlight initiative out of all the species NMFS protects under the ESA. It is one of only 10 for which immediate, targeted actions can stabilize the population and prevent extinction. Prey reductions affect the fitness of individual whales and their ability to both survive and reproduce. Reduced fitness of individuals increases the mortality and extinction risk of Southern Residents and reduces the likelihood of recovery of the DPS. Sufficient quantity, quality, and availability of prey are an essential feature of the critical habitat designated for SRKW.

Vessel traffic effect on SRKW Critical Habitat

The third PBF for SRKW is conditions to allow for migration, resting, and foraging. Vessel movements and noise from vessels are expected as short-term consequences from construction activities, and long term from additional vessel traffic from the new pier. There is a growing body of evidence documenting effects from vessels on small cetaceans and other marine mammals. Research has shown that SRKWs spend more time traveling and performing surface active behaviors and less time foraging in the presence of all vessel types, including kayaks, and that noise from motoring vessels up to 400 meters away has the potential to affect the echolocation abilities of foraging whales (Holt, 2008; Lusseau et al., 2009; Noren et al., 2009; Williams et al., 2010).

Killer whales rely on their highly developed acoustic sensory system for navigating, locating prey, and communicating with other individuals. While in inland waters of Washington and British Columbia, SRKWs are the principal target species for the commercial whale watch industry (Hoyt, 2001; O'Connor et al., 2009) and encounter a variety of other vessels in their urban environment (e.g., recreational, fishing, ferries, military, shipping). Several main threats from vessels include direct vessel strikes which can result in injury or mortality (Gaydos &

Raverty, 2007), the masking of echolocation and communication signals by anthropogenic sound, and behavioral changes (NMFS, 2008b).

2.5.2. Effects on Listed Species

Effects of the proposed action on species are based, in part, on habitat effects, as described above. The in-water work window has been designed to minimize exposure of juvenile salmonids, but short- and long-term effects are still likely. Individual Chinook salmon and bocaccio would be exposed to the habitat effects described above, including water quality reductions, reduced prey, disruption of habitat-forming processes within the nearshore environment, noise, shade, and increased predation. SRKW would be exposed to noise and reduced prey.

Noise from pile driving

Pile driving generates sound pressure waves. Three metrics are commonly used in evaluating hydroacoustic impacts on fish:

- Peak sound pressure level (LPEAK).
- Root mean square (RMS).
- Sound exposure level (SEL).

Tissue damage can occur when underwater sound pressure passes through tissue into a gas void (a swim bladder) because gas is more compressible. When a fish is exposed to a sound pressure wave, gas in the swim bladder expands more than surrounding tissue during periods of under pressure and contracts more than surrounding tissue during periods of overpressure. This expansion and contraction can result in swim bladder tissue damage, including rupture of the swim bladder (Molnar et al., 2020).

Impact pile driving (with a hammer) can generate high peak pressures. Impact pile driving may be used for the proposed action however, piles would be driven with a vibratory hammer as far as possible.

NMFS has identified 206 dB as the threshold for injury to fish from exposure to a single impulse. In addition to this peak pressure metric, NMFS uses sound exposure level (SEL) to estimate the onset of injury for fish exposed to sounds. SEL thresholds are 187 dB SEL for fish 2 grams or larger, or 183 dB SEL for fish under 2 grams. The discussion in Stadler and Woodbury (Stadler & Woodbury, 2009) indicate that these thresholds likely overestimate the potential effects of exposure to impulsive sounds. Further, Stadler and Woodbury's assessment did not consider non-impulsive sound, which is believed to be less injurious to fish than impulsive sound. Therefore, application of the criteria to non-impulsive sounds is also likely to overestimate the potential effects in fish. However, these criteria represent the best available information.

NMFS has developed a calculator to estimate the sound levels likely to be produced while driving different types of piles with impact and vibratory piles drivers. The BA provided information from a previous pile-driving operation in the same area that helped ground-truth the assumptions we entered into the calculator for the 24-inch steel piles driven with an impact hammer. The pile-driving calculator was used to estimate sound from driving two different piles sizes with two different types of pile drivers. In-water noise from impact pile-driving 24-inch

steel piles would be the action's stressor with the greatest range of effect. For impact driving, a daily maximum of 1500 pile strikes would occur. A bubble curtain would be installed around all impact-driven piles.

In 2018 pile driving was conducted in the same area to install four piles for the Ancich Park Restoration Project. These piles were installed with both vibratory and impact hammers. The impact portion of the work was conducted in one day. Based on that experience, we anticipate that 4 or more piles can be installed per day. Thus, for sixteen 24-inch diameter piles, the work may take approximately four days for vibratory driving and up to four additional days for impact driving. The 12.75-inch diameter piles may take another two days. We approximate 10 days, or two weeks for pile driving work.

The effects caused by a fish's exposure to noise vary with the hearing characteristics of the fish, the frequency, intensity, and duration of the exposure, and the context under which the exposure occurs. At low levels, effects may include the onset of behavioral disturbances such as acoustic masking (Codarin et al., 2009), startle responses and altered swimming (Neo et al., 2014), abandonment or avoidance of the area of acoustic effect (Mueller, 1980; Picciulin et al., 2010; Sebastianutto et al., 2011; Xie et al., 2008) and increased vulnerability to predators (Simpson et al., 2016). At higher intensities and or longer exposure durations, the effects may rise to include temporary hearing damage (Scholik & Yan, 2002) and increased stress (Graham & Cooke, 2008). At even higher levels, exposure may lead to physical injury that can range from the onset of permanent hearing damage and mortality.

Based on our calculations, peak pressure from a single strike, attenuated by a bubble curtain, is not expected to exceed 198 dB beyond 9.6 feet from the pile being driven. This is well below the single-strike threshold for the onset of injury to fish. However, SEL is estimated to be 204 dB. This may overestimate the SEL actually generated by the proposed action. The number of strikes for earlier impact pile driving in the vicinity was only 227 for four piles in less than one hour. We used 1500 strikes per day specified in Table 4 of the BA. The SEL generated by our calculator predicts that within 430 feet of the pile being driven, fish 2 grams or larger would be injured. Fish smaller than 2 grams would be injured within 794 feet. Behavioral response would occur within 7,068 feet (1.3 miles) which encompasses most of Gig Harbor. The likelihood of injury, and the intensity of injury for individual fish would increase with increased proximity to the pile driving.

The timing proposed for pile driving avoids adult Chinook migration times. It is also expected to avoid adult steelhead migration timing. However, some steelhead and Chinook salmon reside in Puget Sound year-round. Exposure to harmful pile-driving noise is possible. Juvenile Chinook salmon rearing in Gig Harbor in the winter are likely to be larger than 2 grams. The larger size of steelhead or juvenile salmon limits the area in which physical injury is anticipated to within 430 feet of the pile being driven. Behavioral modifications of juvenile salmonids in response to impact pile driving would likely reduce foraging efficiency and loss of fitness throughout Gig Harbor. Behavioral modifications of juvenile salmonids could result in a lower rate of survival.

The number of Puget Sound Chinook salmon and steelhead that would be in the action area during construction and thus impacted by pile-driving sounds and/or construction-related water

quality degradation is unquantifiable with any degree of certainty. However, timing of the work relative to expected number of these species in the action area during the planned winter construction would be small, and only a small subset of the exposed individuals would be meaningfully affected. Although noise from pile driving will harm individual fish, the PS Chinook salmon and steelhead that would be meaningfully affected by exposure to work-related noise would represent a small subset of their cohort. However, population-level effects are not anticipated.

The timing of the in-water work is expected to occur when larval bocaccio are absent. However, some juvenile bocaccio may be present in the action area during pile driving. If present, juvenile bocaccio would be larger than 2 grams. This size limits the area in which physical injury is anticipated to an area within 430 feet of the pile being driven. Behavioral modifications throughout Gig Harbor would likely reduce foraging efficiency and loss of fitness. These could result in a lower rate of survival for the fish in area during pile driving. Although noise from pile driving will harm individual fish, the number of bocaccio in this area during pile driving would be too low to detect population level effects.

Toxic contaminants

Operating construction equipment in aquatic environments can result in leaks and spills of fuels, lubricants, and other fluids that can enter the water. Many fluids commonly used in construction equipment and vessels are petroleum-based hydrocarbons that contain PAHs, PCBs, other organic compounds, and metals. PS Chinook salmon and other fish can uptake contaminants directly through their gills, and through dietary exposure (Karrow et al., 1999; Lee & Dobbs, 1972; McCain et al., 1990; Meador, 2006; Neff, 1982; Spromberg et al., 2016; Varanasi et al., 1993). Depending on the pollutant, its concentration, and or the duration of exposure, exposed fish may experience effects that can range from avoidance of an affected area, to reduced growth, altered immune function, and mortality (Brette et al., 2014; Feist et al., 2011; Göbel et al., 2007; Incardona et al., 2005; Incardona et al., 2004; Incardona et al., 2006; McIntyre et al., 2012; Meador, 2006; Sandahl et al., 2007; Spromberg et al., 2016). PAHs can cause reduced growth, increased susceptibility to infection, and increased mortality in juvenile salmonids (Meador, 2006; Varanasi et al., 1993). Gill tissues are highly susceptible to damage because they actively pass large volumes of water and are thereby exposed to PAHs present in water. Other effects include damage to the skin, fins, and eyes, as well as damage to internal organs as liver tumors. However, the project includes BMPs specifically intended to reduce the risk and intensity of discharges and spills. In the event of a spill or discharge, the applicant has committed to take immediate action to remove contaminants.

Callier et al. (2009) looked for metal contaminants in sediments in and around marinas and in benthic communities. An increasing gradient of contamination from outside to the innermost marina sites were observed. The lowest macrofaunal abundance was recorded at the innermost sites as well. Metal contaminants included copper, zinc, cadmium and lead. Sediment samples that were analyzed with bioassays using *Fucus serratus* indicated differences in sediment toxicity between sites and show that the sites presenting the highest level of metal in were the most toxic for the zygote germination. A significant correlation between the sediment copper, zinc and cadmium concentrations and the sediment elutriate toxicity (LC50) was observed.

Benthic communities were also analyzed. The study showed that species composition in contaminated areas is limited to pollution-tolerant species.

Zinc is found in vehicle emissions, motor oils, lubricants, tires, fuel oils, and as sacrificial anodes on boats. Zinc interacts with an array of chemicals, and aquatic conditions of reduced pH, reduced dissolved oxygen, low dissolved organic carbon, and elevated temperatures increase zinc toxicity, causing altered patterns of accumulation, metabolism, and toxicity (Eisler, 1993; Farag et al., 1998). Many aquatic invertebrates (prey) and some fish can be adversely affected by ingesting zinc-contaminated particulates (Farag et al., 1998). Toxicity of zinc when mixed with other metals is mostly additive; however, zinc and copper interact synergistically such that zinc-copper mixtures have enhanced toxicity for freshwater fish and amphipods (Skidmore, 1964).

Copper bio-accumulates in invertebrates and fish (Feist et al., 2005; Layshock et al., 2021), is redox-active, and interacts with or alters many compounds in mixtures, as noted for zinc above (Gauthier et al., 2015). Copper synergistically interacts with PAHs such that copper-PAH mixtures are highly toxic. Copper weakens cell membranes increasing absorption of PAHs; copper chelates or hastens and preserves the bio-accumulative toxicity of PAHs; and PAHs in turn increase the bio-accumulative and redox properties of copper (Gauthier et al. 2015). Sub-lethal effects of copper include avoidance at very low concentrations (Hecht et al., 2007) and reduced chemosensory function at slightly higher concentrations, which in turn causes maladaptive behaviors such as the inability to avoid copper or detect chemical alarm signals (McIntyre et al., 2012). Sandahl et al. (2007) demonstrated that copper concentration as low as 2 micrograms/liter can significantly impair the olfactory system of salmonids and hinder predator avoidance behavior. Thus, any fish exposed to even small concentrations of copper may experience diminished predator avoidance and be at greater risk of predation.

Callier et al. (2009) pointed out that marinas are contaminated by a mixture of organic and inorganic chemicals, including tributyltin, other biocides found in antifouling paints, PCBs, chromated copper arsenate, petroleum hydrocarbons and PAHs. These findings are supported by Alzieu (Alzieu, 2000) and Carbery (Carbery, 2006). Poulson et al. (Poulsen et al., 2021) analyzed the effects of PAH contamination on mussels in a fishing harbor. Their physiological condition was found to decrease with increasing proximity to the harbor. The highest concentrations were found at a pier used by small boats. Analysis indicated a mixed PAH source from light fuel oils and creosote. Correlations between the mussels' morphological condition and the PAH pollution were found to be significant. Results indicate that pollution sources in harbors have significant effects on the local environment.

There are two pathways for PAH exposure to listed fish species in the action area, direct uptake through the gills and dietary exposure (Karrow et al., 1999; Lee & Dobbs, 1972; McCain et al., 1990; Meador, 2006; Neff et al., 1976; Varanasi et al., 1993). Fish rapidly uptake PAHs through their gills and food but also efficiently remove them from their body tissues (Lee & Dobbs, 1972; Neff et al., 1976). Juvenile Chinook salmon prey, including amphipods and copepods, uptake PAHs from contaminated sediments (Landrum et al., 1984; Landrum & Scavia, 1983; Neff, 1982). The primary response of exposed salmonids, from both uptake through their gills and dietary exposure, are immunosuppression and reduced growth (Varanasi et al., 1993).

NOAA research on oil spills and urban stormwater are increasingly converging on a risk framework where certain PAHs (Figure 7; described in more detail below) cause a well-described syndrome involving the abnormal development of the heart, eye and jaw structure, and energy reserves of larval fish (Harding et al., 2020).

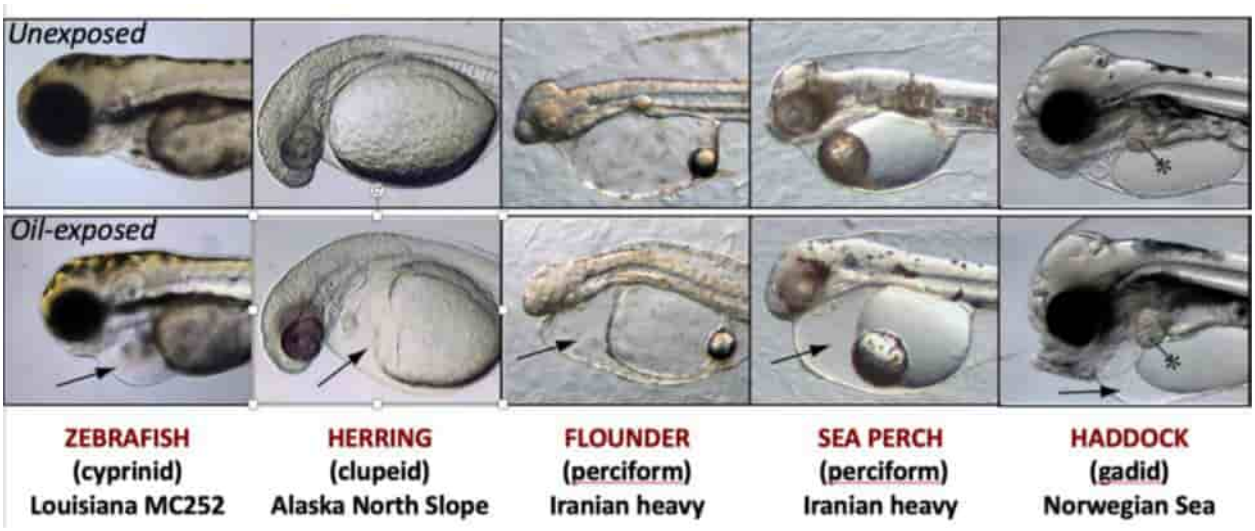


Figure 7. Examples of PAH-induced developmental abnormalities in a wide range of fish species (freshwater to marine, tropical to temperate).

Figure 7 illustrates our current understanding of PAH toxicity to fish embryos and larvae and is drawn from several NOAA-F studies, representing major lessons learned from the Exxon Valdez and Deepwater Horizon disasters, and has been widely confirmed by independent research groups around the world. The primary form of toxicity is a loss of cardiac function, as exemplified by circulatory failure and accumulation of fluid in the pericardial space around the heart (arrows). The pattern of excess fluid (edema) varies according to the anatomy of each species. Related abnormalities include small eyes, jaw deformities, and a dysregulation of the lipid stores, or yolk, the animal needs to survive to first feeding. This suite of defects, while sublethal, would almost invariably lead to ecological death. Consequently, “delayed-in-time” toxicity is a common risk concern for fish that spawn in PAH-contaminated habitats.

Individual Chinook salmon and bocaccio are likely to be harmed by toxic contaminants as a consequence of pile removal and associated structural elements of the dock. However, population level responses are unlikely because of the short duration of exposure and limited spatial extent of contaminant plumes.

Turbidity

Water quality is considered adversely impaired by suspended sediments when turbidity is increased by 20 Nephlometric Turbidity Units (NTU) for a period of 4 hours or more (Berg & Northcote, 1985; Robertson et al., 2006). The effects of turbidity on fish are species and size dependent. In general, severity typically increases with sediment concentration and duration of exposure, and decreases with the increasing size of the fish. Bjornn & Reiser (1991) report that adult and larger juvenile salmonids appear to be little affected by the high concentrations of

suspended sediments that may be mobilized during storm and snowmelt runoff episodes. However, empirical data from numerous studies report the onset of minor physiological stress in juvenile and adult salmon after one hour of continuous exposure to suspended sediment concentration levels between about 1,100 and 3,000 mg/L, or to three hours of exposure to 400 mg/L, and seven hours of exposure to concentration levels as low as 55 mg/L (Newcombe & Jensen, 1996). The authors reported that serious non-lethal effects such as major physiological stress and reduced growth were reported after seven hours of continuous exposure to 400 mg/L and 24 hours of continuous exposures to concentration levels as low as about 150 mg/L.

The effects of suspended sediment on fish increase in severity with sediment concentration and exposure time and can progressively include behavioral avoidance and/or disorientation, physiological stress (e.g., coughing), gill abrasion, and, at extremely high concentrations, death. Newcombe and Jensen (1996) analyzed numerous reports on documented fish responses to suspended sediment in streams and estuaries, and identified a scale of ill effects based on sediment concentration and duration of exposure. Studies show that salmonids have an ability to detect and distinguish turbidity and other water quality gradients (Quinn, 2005; Simenstad, 1988), and that larger juvenile salmonids are more tolerant to suspended sediment than smaller juveniles (Newcombe & Jensen, 1996; Servizi & Martens, 1991). Increases of TSS can also produce localized reductions in dissolved oxygen. Sub-lethal effects of dissolved oxygen levels below saturation can include metabolic, feeding, growth, behavioral, and productivity effects.

Propeller wash would also mobilize bottom sediments. In a study on the turbidly caused by large tugboats operating in Navy harbors (Wang et al., 2016), at about 13 minutes, the plume extended about 550 yards (500 m), where the TSS concentration was about 80 mg/L. The plume persisted for hours and extended far from the event, but the TSS concentration fell to 30 mg/L within 1 hour and to 15 mg/L within 3 hours. The exact extent of turbidly plumes from tugboat operations for this project are unknown, but it is extremely unlikely that they would exceed those described above. Based on that information, and on the consultations for similar projects in the region, sediment mobilization from project-related tugboat propeller wash would likely consist of relatively low-concentration plumes that could extend to about 300 feet temporarily. The most likely responses in Chinook salmon exposed to action-related turbidity would be temporary behavioral effects such as avoidance of the plume, gill flaring, and slightly reduced feeding rates. These responses could cause some combination of migration delays, increased vulnerability to predators, and or reduce feeding efficiency that would be sufficient to reduce the long-term survival for some subset of the juveniles that would be exposed.

The planned use of a turbidity curtain would limit exposure to project-related turbidity; however, in areas where turbidity is elevated, temporary behavioral disturbance that would likely include some combination of areal avoidance, respiratory distress, reduced feeding rates, and reduced swimming performance is expected. At close proximity and extended exposure durations, exposed individuals may experience long-term fitness impacts such as reduced growth and altered immune function that could reduce their long-term survival.

We cannot estimate the number of individuals that would experience adverse effects from suspended sediment with any meaningful level of accuracy. Not all exposed individuals would experience direct adverse effects. We expect that some individuals of listed fish species would

experience sublethal effects such as stress and reduced prey consumption, some may respond with avoidance behaviors, and some may be injured. Those that engage in avoidance behaviors or with raised cortisol levels may have decreased predator detection and avoidance.

Vessel traffic

There are few published studies that assess mortality from vessel traffic on fishes, but studies thus far indicate that ichthyoplankton, which could include larval rockfish, may be susceptible to mortality because they are unable to swim away from traffic and thus may be harmed by propellers and turbulence. One study found low overall mortality from traffic, but that larvae loss was size dependent and that smaller larvae were more susceptible to mortality (Tonnes et al., 2016).

Some fish that encounter boating noise would likely startle and briefly move away from the area. A study of motorboat noise on damselfish noted an increase in mortality by predation (Simpson et al., 2016). While some fish species have been noted to not respond to outboard engines, others respond with increased stress levels, and sufficient avoidance as to decrease density (Whitfield & Becker, 2014), while others experience reduced forage success (Voellmy et al., 2014) either by reducing foraging behavior, or because of less effective foraging behavior. When fish startle and avoid preferred habitats, both the predator and prey detection may be impaired for a short period of time following that response.

Juvenile salmonids are likely to respond to episodes of motorboat noise with a stress and startle reaction that can diminish both predator and prey detection for a short period of time with each episode. We expect all life history stages of PS Chinook salmon, and steelhead, and juvenile PS/GB bocaccio would be exposed to vessel traffic and would experience sublethal physiological stress.

Effects of noise from pile driving and vessel operation on SRKW.

Sounds from vessels involved in construction vessels and the addition in the number of vessels operating in the action area as a result of the new pier, would be an effect of the action. Effects of noise exposure on marine organisms can be characterized by the following (Richardson et al. 1995):

- Behavioral reactions—Range from brief startle responses, to changes or interruptions in feeding, diving, or respiratory patterns, to cessation of vocalizations, to temporary or permanent displacement from habitat.
- Masking—Reduction in ability to detect communication or other relevant sound signals due to elevated levels of background noise.

Recent evidence indicates there is a higher energetic cost of surface-active behaviors and vocal effort resulting from vessel disturbance in the Salish Sea (Holt, 2021; Noren et al., 2012; Noren et al., 2009). Several studies in inland waters of Washington State and British Columbia have linked interactions of vessels and Northern and Southern Resident killer whales with short-term behavioral changes (Ferrara et al., 2017). These studies concluded that vessel traffic may affect foraging efficiency, communication, and/or energy expenditure through the physical presence of the vessels, underwater noise created by the vessels, or both.

Vessel sounds in inland waters are from large ships, ferries, tankers and tugs, as well as from whale watch vessels, and smaller recreational vessels. Commercial sonar systems designed for fish finding, depth sounding, and sub-bottom profiling are widely used on recreational and commercial vessels and are often characterized by high operating frequencies, low power, narrow beam patterns, and short pulse length (NRC, 2003). Frequencies fall between 1 and 500 kiloHertz (kHz), which is within the hearing range of some marine mammals including killer whales and may have masking effects (i.e., sound that precludes the ability to detect and transmit biological signals used for communication and foraging).

Fishing vessels found in close proximity to the whales and vessels that were actively fishing were responsible for 7 percent of the incidents inconsistent with the Be Whale Wise Guidelines and federal regulations in 2020 (Frayne, 2021). The majority of vessels in close proximity to SRKW in inland waters are commercial whale watching vessels and recreational whale watching vessels and the average number of vessels accompanying whales can be high during the summer months (i.e., from 2013 to 2017 an average of 12 to 17 vessels (Seely, 2020)).

Potential effects to whales from pile driving would be minimized with the successful implementation of the Marine Mammal Monitoring Plan included as Appendix III to the BA.

Reduction of SRKW prey

The proposed action is likely to affect salmon growth and survival and therefore availability of prey. SRKW need to maintain their energy balance all year long to support daily activities (foraging, traveling, resting, socializing) as well as gestation, lactation, and growth. Maintaining their energy balance and body condition is also important because when stored fat is metabolized, lipophilic contaminants may become more mobilized in the bloodstream, with potentially harmful health effects (Mongillo et al., 2016). SRKWs are top predators that show a strong preference for salmonids in inland waters, particularly Chinook salmon (Ford et al., 2010; Hanson et al., 2010). According to NMFS (2022) steelhead, chum, and Pacific halibut have also been detected as prey organisms. Foraging on chum and coho salmon, steelhead, big skate and lingcod was also detected in recent fecal samples (Hanson et al., 2021). These data indicate that the whale diet diversifies when Chinook salmon is less abundant (Ford et al., 2016; Hanson et al., 2021; Hilborn et al., 2012). Warlick et al. (2020) continued to find that Chinook salmon is the primary prey for all SRKW pods in the summer months, followed by coho and other salmonids. The reduction of prey as a consequence of the proposed action will harm individual SRKW, but is unlikely to diminish the population of SRKW.

2.6. Cumulative Effects

"Cumulative effects" are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation [50 CFR 402.02 and 402.17(a)]. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Some continuing non-Federal activities are reasonably certain to contribute to environmental variability effects within the action area. However, it is difficult if not impossible to distinguish between the action area's future environmental conditions caused by environmental variation

that are properly part of the environmental baseline *vs.* cumulative effects. These future environmental conditions in the action area are described earlier in the discussion of environmental baseline (Section 2.4).

Boating is integral to the proposed action. Vessel operations and discharges affect critical habitats and species. These effects are addressed in the effects of the action section. Continued habitat loss and degradation of water quality from development and chronic inputs of point and non-point source pollutants would likely continue into the future. Recreational and commercial use of the waters within the action area are also likely to increase as the human population grows.

2.7. Integration and Synthesis

The Integration and Synthesis section is the final step in assessing the risk that the proposed action poses to species and critical habitat. In this section, we add the effects of the action (Section 2.5) to the environmental baseline (Section 2.4) and the cumulative effects (Section 2.6), taking into account the status of the species and critical habitat (Section 2.2), to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

2.7.1. Critical Habitat

Nearshore habitats with aquatic vegetation have a high level of primary productivity and make excellent rearing habitats for small fish. Plants provide structure used by many small organisms. Vegetated nearshore areas, with their high level of diversity and abundance, are considered to be fish nurseries (Beck et al., 2003). Loss of SAV and the associated lost productivity is expected to diminished forage in the action area for PS Chinook salmon and bocaccio. This loss of forage and the longer-term impacts of water quality degradation, would reduce prey for SRKW also.

The loss of habitat functions for fish is believed to be one of the major causes for the decline of Chinook populations in Puget Sound (NMFS, 2007). More specifically, the loss of estuary and nearshore habitat functions are listed as one of the major factors limiting the recovery of salmon in Puget Sound Salmon Recovery Plan. Within nearshore marine ecosystems, SAV and macroalgae, including kelp, play critical roles (Pausch et al., 2024).

For the physical presence of the proposed overwater structure on critical habitat, NMFS used an objective standardized calculator to estimate impact. We calculated 340 conservation offsets are needed to address the habitat loss. SAV in the project area was documented in a survey provided February 28, 2024. The depth in which vegetation is present defines the lower shore zone, which is an important parameter in the nearshore calculator. The presence of kelp greatly increased the conservation offsets generated by the calculator for this proposal.

The expected loss of the kelp bed at the project location would be long term. The anticipated effects of additional vessels and vessel operations to critical habitat would also be long term.

Implementation of the mitigation plan (DCG, 2023), provided in August of 2025 is anticipated to offset these long-term impacts. While the SAV under the newly constructed pier diminishes, and while mitigation is implemented, there will likely be a temporal loss of ecological functions important for juvenile bocaccio and juvenile PS Chinook salmon.

As previously stated, the nearshore calculator was developed to address impacts to salmon habitat. However, designated critical habitat for bocaccio share many physical and biological features of critical habitat for Puget Sound Chinook. Bocaccio critical habitat includes, "Nearshore juvenile rearing sites with sand, rock and/or cobbles to support forage and refuge. Habitat threats include degradation of rocky habitat, loss of eelgrass and kelp, introduction of non-native species that modify habitat, and degradation of water quality."

Once constructed, the new pier is expected to remain in the aquatic environment for a 40- to 50-year useful life period. Thus, multiple cohorts of the multiple populations of PS Chinook salmon, PS steelhead, PS/GB bocaccio rockfish, and SRKW would experience the long-term habitat modifications associated with the presence of the structures. The recovery plan specifically lists the number of piers and docks in Puget Sound, the number of slips for small boats and the fact that a third of Puget Sound shorelines have been modified with bulkheads or other armoring, as *threats* to the function of the nearshore and marine environments for salmon provided in the 2007 recovery plan. The adverse effects of the proposed action would exacerbate limiting factors identified in the recovery plans for PS Chinook salmon and SRKWs. For SRKWs, loss of prey is one of three major threats identified in this species' recovery plan. The proposed actions would degrade the quality of the prey PBF of critical habitat, further reducing available prey. By supporting boating and vessel traffic into the future, the proposed actions would also modestly exacerbate the other two major limiting factors, toxic chemicals that accumulate in top predators and impacts from sound and vessels.

However, a reduction in the productivity and availability of benthic and epibenthic prey organisms is anticipated to result from beach nourishment as well. Adverse effects of beach nourishment are anticipated to be relatively temporary and limited to the area in which stormwater is discharged. This habitat may already be degraded by contaminants typically found in stormwater. As a result, the quality and quantity of prey organisms are the beach nourishment site are likely to be degraded already.

Construction-related effects are expected to occur over a few weeks within Gig Harbor. Avoidance and minimization measures and BMPs included as parts of the proposed action also serve to limit construction-related effects. A turbidity curtain would limit the area within which construction-related water quality degradation would occur.

Severe reduction in the abundance of Chinook salmon continues to impair recovery of SRKW. Past and ongoing land and water use practices have degraded SR killer whale critical habitat throughout the Puget Sound basin. Urbanization, shoreline development, and point and non-point stormwater and wastewater discharges have reduced water quality across the region. Shoreline industries and high levels of vessel traffic have increase ambient noise levels, and anthropogenic impacts on Chinook salmon and other fish species have reduced the availability and quality of forage resources for SR killer whales.

This proposal would add a new municipal pier over aquatic habitat that has been designated as critical habitat for PS Chinook salmon, bocaccio and SRKW. We have used the nearshore calculator to quantify impacts. The nearshore calculator is currently designed to address effects to salmon habitat. The output resulted in the need for 464 conservation offsets. The high score was reduced by ~60 conservation offsets by the planned removal of the Jerkovich Pier. An additional ~65 conservation offsets were subtracted for the proposed beach nourishment at the location of the stormwater outfall under our presumption of some benefits to the intertidal community. The final output of the project calculator is -340 Conservation Debits or -3.40 Discounted Service Acre Years (DSAYs).

Together the effect of the action, when added to the environmental baseline and cumulative effects, would not appreciably diminish the value of critical habitat for the conservation of PS salmonids or bocaccio. We draw the same conclusions for SRKW. These conclusions are based on the factors analyzed in the above paragraphs as well as the following: (1) habitats that are disturbed as a consequence of the proposed action are a small proportion of the available critical habitat for each species; (2) disturbed habitats would not significantly reduce available PBFs for any of the species considered in this opinion; and (3) the purchase of 340 conservation credits from the Puget Sound partnership to address nearshore impacts will offset localized impacts of the proposed action. Despite degraded baseline conditions, uncertainty from environmental variation, and cumulative effects, the additive effects of the action do not appreciably diminish the value of critical habitat for the conservation of these designated critical habitats in the action area.

2.7.2. Listed Species

Our analysis addresses the effects of the proposed action on food availability, additional noise, increased exposure to contaminants and behavioral modifications.

Ocean-type Chinook salmon migrate to sea during their first year of life, normally within three months after emergence from gravel, spend most of their life in coastal waters, and return to their natal river in the fall (Groot & Margolis, 1991). Most runs of Chinook salmon in the Puget Sound region exhibit ocean-type life history (Myers et al., 1998). Their early marine life is a critical period when larger size and faster growth have been linked to elevated overall marine survival. Greene and Beechie, (2004) studied the density-dependent mechanisms on recovery of ocean-type PS Chinook salmon. Their findings indicate that nearshore habitat relationships may play significant roles for salmon populations (Greene & Beechie, 2004). Duffy (2009) found that Chinook salmon must feed and grow at high rates during May-July of their first marine year to increase overall marine survival. These findings highlight the importance of local feeding conditions in Puget Sound during spring and summer, and suggest that declines in marine survival since the 1980's may have been caused by reductions in food availability for Chinook salmon during early marine life. Spring growth of juvenile Chinook salmon appeared to be food-limited in some years, and low feeding rates corresponded to poor marine survival (Duffy, 2009).

The loss of estuarine rearing habitat has contributed to the reduction in survival of PS Chinook salmon in Puget Sound. The reduction in survival of PS Chinook salmon has contributed to the poor survival of SRKW. Thus, the productivity in nearshore habitats is directly linked to the

Viable Salmonid Population (VSP) parameters of PS Chinook salmon and effects to SRKW, explained below.

Those working to develop and maintain projects in the nearshore, such as marinas and docks which impact this habitat in Puget Sound, have options to pursue their projects while minimizing degradation of crucial shoreline habitat overall. For example, purchasing conservation offsets through a habitat conservation bank may help to offset impacts associated with construction projects in the nearshore.

Recovery plans developed for Puget Sound salmon and steelhead call for protecting and restoring nearshore habitat. The first step is to avoid habitat losses as shoreline development and maintenance projects continue to support the region's growth and economy. To offset project-related habitat impacts and avoid net loss of nearshore habitat, the proposed action includes removing creosote pilings and improvements to nearshore habitat elsewhere. We have drawn on the latest habitat science to provide tools that objectively determine how much restoration is needed to offset the impacts of development on this habitat and the species that depend on it, a nearshore calculator (Ehinger et al., 2015). The calculator determines changes in habitat value in a common currency that represents habitat impacts as debits, and habitat improvements as credits. For the proposed action, debits will be offset with an equivalent number of credits, avoiding further net loss of nearshore habitat. Credits may come from improvements undertaken as part of the same project or from improvements in other areas in the Puget Sound region.

The effect of sounds from pile driving were analyzed in this biological opinion. NMFS used a second objective standardized calculator to estimate impacts from pile driving. Sound attenuation was factored in because the project proponent plans to use a bubble curtain. Using the conservative proxy levels in the calculator, peak pressures are expected to be below the threshold for injury from an individual impact, even as close as 10 feet of the pile being driven. However, estimated anticipated SEL, or cumulative level, exceeds thresholds for injury. The short duration of the work, in addition to the proposed timing (when salmon are not abundant), would limit the potential for PS Chinook salmon, PS steelhead and bocaccio to be exposed to a harmful level of sound from pile driving.

The Marine Mammal Monitoring Plan is anticipated to reduce to a large degree the exposure of SRKW to harmful noise. Criteria for monitoring and stop-work on sighting of SRKW is intended to ensure, to the degree possible, that SRKW would not experience duration or intensity of pile driving, either impact or vibratory, that would result in disturbance or harm to any individual of this species.

Our analysis determined that marine vessels impact listed species in several ways. They degrade water and sediment quality thus exposing fish and whales to harmful contaminants. They disturb feeding and migration, and in this way contribute to nutritional problems facing these species. They cause injury through blunt force trauma resulting from collisions and propeller strikes. These vessel-related effects can be minimized through compliance with vessel regulations adopted in recent years.

The status of the listed species addressed in this opinion warranted their listing on the Endangered Species Act and their abundance, diversity, productivity, and spatial structure have not improved since listing (Ford 2022, NMFS 2019). Widespread negative trends in natural-origin spawner abundance across the ESU have been observed since 1980 (Ford 2022).

A viable salmonid population is an independent population of any Pacific salmonid, in the genus *Oncorhynchus,* that has a negligible risk of extinction due to threats from demographic stressors, environmental variation, and genetic diversity changes over a 100-year time frame. Four parameters form the key to evaluating population viability status. They are abundance, productivity, spatial structure, and diversity. NMFS focuses on these parameters for three reasons. First, they are reasonable predictors of extinction risk (viability). Second, they reflect general processes that are important to all populations of all species. Third, the parameters are measurable (McElhany et al., 2000).

The proposed action falls within the geographic area of the Central/South Puget Sound MPG for both PS Chinook salmon and PS steelhead. Overall, the Puget Sound Chinook salmon ESU remains at "moderate" risk of extinction, and viability is largely unchanged from the prior review. Abundance remains low (Ford, 2022). Steelhead populations in the Central and South Puget Sound MPG exhibited positive increases in their five-year abundances for the most recent status review (Ford, 2022); however, their 15-year abundance trends are slightly negative and they are still a fraction of recovery goals for these populations.

The impact to the population groups of the different species addressed in this opinion are limited by the small number of individuals potentially affected. A limited number of adult PS Chinook salmon, PS steelhead, and SRKW would be affected. There is uncertainty about how many juvenile salmonids would be impacted because the foraging area, at least for PS Chinook salmon as illustrated by a study in nearby Sinclair Inlet (Fresh et al., 2006), is expansive. The impact of reduced prey due to nearshore habitat modifications would be offset by the mitigation plan included as part of the proposal. Any residual reduction of prey in the south/central Puget Sound region would be long term.

In summary, the most recent mitigation plan (Facet, 2025) for the proposed action offsets adverse effects on food availability to listed species addressed in this biological opinion. BMPs and the Marine Mammal Monitoring Plan are expected to minimize adverse sound-related effects to PS Chinook salmon, PS steelhead, bocaccio, and SRKW. The limited duration and the timing of construction would further minimize the potential for adverse constructed-related effects. Compliance with the Vessel Sewage No Discharge Zone for Puget Sound, Washington Administrative Code Chapter 173-228, adopted in 2018, and compliance with the federal law that, as of January 1, 2025 (www.bewhalewise.org) requires boaters to remain at least 1000 yards from SRKW in Puget Sound, would both minimize adverse effects of marine vessels to listed species.

2.8. Conclusion

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, the effects of other activities caused by the proposed action, and the cumulative effects, it is NMFS' biological

opinion that the proposed action is not likely to jeopardize the continued existence of PS Chinook salmon, PS steelhead, bocaccio, or SRKW, or destroy or adversely modify designated critical habitat for PS Chinook salmon, bocaccio or SRKW. The proposed action is not likely to adversely affect Humpback Whales.

2.9. Incidental Take Statement

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Harass" is further defined by interim guidance as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

2.9.1. Amount or Extent of Take

In this biological opinion, NMFS determined that incidental take is reasonably certain to occur in the form of harm to PS Chinook salmon (juvenile and adult), PS steelhead (juvenile and adult), and PS/Georgia Basin bocaccio (larvae, and juvenile) from:

- exposure to construction-related water pollutants and noise,
- loss of prey from burial during construction,
- loss of food and shelter from reductions in SAV,
- reduced prey as a consequence of trophic impacts (SRKW),
- interruption of migration and increased predation from the shadows and structure of the newly constructed pier, and
- water quality and habitat degradation from the vessels using the new pier.

NMFS cannot predict with meaningful accuracy the number of listed species that are reasonably certain to be injured or killed annually by exposure to these stressors. The distribution and abundance of the fish that occur within the action area are affected by habitat quality, competition, predation, and the interaction of processes that influence genetic, population, and environmental characteristics. These biotic and environmental processes interact in ways that may be random or directional, and may operate across far broader temporal and spatial scales than are affected by a proposed action. Thus, the distribution and abundance of fish within the action area cannot be attributed entirely to habitat conditions, nor can NMFS precisely predict the number of fish that are reasonably certain to be injured or killed if their habitat is modified or degraded by the proposed action. Further, NMFS knows of no device or practicable technique

that would yield reliable counts of individuals that may be injured or killed annually by exposure to the proposed action's impacts.

In such circumstances, NMFS uses the causal link established between the activity and the likely extent and duration of changes in habitat conditions as surrogates to describe the extent of take as a numerical level of habitat disturbance. The most appropriate surrogates for take are action-related parameters that are directly related to the magnitude of the expected take.

- The size of the new pier, 6,247 square feet of new overwater surface, directly relates to predation potential, benthic prey suppression, and aquatic vegetation productivity. This surrogate indicator of take is both easily observable and causally linked to incidental take by the addition of over-water structure because the amount of take increases incrementally with the size of the structure. It functions as a measurable take surrogate because it can be readily monitored, thus reinitiation could be triggered by an increase in the coverage area of the structure.

- The area in which turbidity may exceed thresholds for harm is 300 feet. This surrogate indicator of take is both easily observable and causally linked to incidental take by water quality degradation because the amount of take increases incrementally with the size of the area affected by degraded water quality, in this case, the area in which turbidity thresholds are exceeded. It functions as a meaningful reinitiation trigger because it can be readily monitored.

Exceedance of any of the take surrogates described above would constitute an exceedance of authorized take and the reinitiation provisions of this Opinion would be triggered.

2.9.2. Effect of the Take

In the Opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action as modified by the RPA, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

2.9.3. Reasonable and Prudent Measures

"Reasonable and prudent measures" are measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

The USACE shall require the City of Gig Harbor to:

1. Ensure monitoring and reporting are implemented to confirm that the take exemption for the proposed action is not exceeded.

2. Minimize incidental take of PS Chinook salmon, steelhead and bocaccio from exposure to construction related turbidity and contaminants.

3. Ensure the mitigation plan is implemented.

2.9.4. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Federal action agency must comply (or must ensure that any applicant complies) with the following terms and conditions. The USACE and applicant have a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

The following terms and conditions implement reasonable and prudent measure 1:

1. The USACE shall require the applicant to develop and implement plans to collect and report monitoring results, including at a minimum:
   a) Documentation of the dates, method of pile installation, and pile type and size,
   b) providing water quality monitoring results,
   c) providing drawings for any deviations from construction plans submitted with the request for consultation.
   d) On the start date of the construction, the applicant (or designated agent) shall notify NMFS, via projectreports.wcr@noaa.gov, that construction has commenced and include:
      a. Email subject line: "NOTIFICATION OF START DATE **WCRO-2023-00546"**
      b. Date project construction began
      c. USACE NWS project number
      d. A written verification that all USACE-required best management practices (including implementation of a MMMP) are being implemented.
   e) Submit Reports. All reports shall contain the NMFS Number WCRO-2023-00546 and be sent by electronic copy to NOAA's reporting system email address at: projectreports.wcr@noaa.gov.

The following terms and conditions implement reasonable and prudent measure 2:

1. Ensure that signage regarding the no discharge zone is clearly posted at the new pier[3].,
2. Ensure the applicant provides routine weekly inspections of the pier to remedy contaminants or contaminant sources that are not properly contained.
3. Ensure the applicant is provided with enforceable conditions for moorage that prevent contaminant discharge,
4. Ensure that creosote-treated piles are cut 3 feet below the mudline prior to removal where removal in entirety cannot be physically achieved (i.e., where piles accidently break preventing their full removal).
5. Documentation of the lateral extent of the turbidity plumes, and measures taken to maintain them within 300 feet.

[3] Signs are available from the Washington Department of Ecology https://ecology.wa.gov/water-shorelines/puget-sound/no-discharge-zone/frequently-asked-questions

The following terms and conditions implement reasonable and prudent measure 3:

1. Ensure the applicant fully executes the agreement to purchase 340 conservation credits as described in the Conservation Credit Pre-Sale Agreement signed on October 1, 2025 and received from the USACE October 9, 2025.
2. Ensure the applicant implements the Jerkovich Pier removal and beach nourishment activities in accordance with NWS-2022-472 and NWS-2021-187.

2.10. Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, "conservation recommendations" are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

1. To further help recover threatened and endangered species, we recommend the City of Gig Harbor only allow moorage for vessels that can demonstrate compliance with NDZ (Chapter 173-228 WAC). Preventing the discharge of contaminants and protecting water quality would help increase the value of critical habitat for the threatened and endangered species and for their recovery.

2.11. Reinitiation of Consultation

This concludes formal consultation for The City of Gig Harbor Ancich Waterfront Park Commercial Fishing Homeport

Under 50 CFR 402.16(a): "Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action."

2.12. "Not Likely to Adversely Affect" Determinations

NMFS concurs with Section 1 of the BA that the proposed action may affect but is not likely to adversely affect yelloweye rockfish *(Sebastes ruberrimus)* or humpback whales (*Megaptera novaeangliae*), or designated critical habitat for yelloweye rockfish. The action area does not have designated critical habitat for humpback whales. Gig harbor is too shallow for humpback whales, and adult yelloweye rockfish.

3. MAGNUSON–STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT RESPONSE

Section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the physical, biological, and chemical properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on EFH may result from actions occurring within EFH or outside of it and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH [CFR 600.905(b)].

This analysis is based, in part, on the EFH assessment provided by the USACE and descriptions of EFH for Pacific Coast groundfish (PFMC, 2023), coastal pelagic species (PFMC, 2024), and Pacific Coast salmon (PFMC, 2022); contained in the fishery management plans developed by the PFMC and approved by the Secretary of Commerce. Gig Harbor is also designated an Estuaries Habitat Area of Particular Concern (HAPC).

3.1. Essential Fish Habitat Affected by the Project

Gig Harbor is designated as a Habitat Area of Particular Concern (HAPC). HAPCs are considered high priority areas for conservation, management, or research because they are important to ecosystem function, sensitive to human activities, stressed by development, or are rare. These areas provide important ecological functions and/or are especially vulnerable to degradation and can be designated based on either specific habitat types or discrete areas. HAPCs are a discrete subset of essential fish habitat.

In Puget Sound, HAPCs include estuarine and seagrass areas because these habitats are ecologically important. Both are present in Gig Harbor and would be affected by the action as described in Section 2.

The adverse effects to EFH from the proposed action include:

1. Water quality degradation (turbidity and contaminant resuspension) from construction,
2. Effects associated with the loss of ecologically important SAV,
3. Effects associated with vessel-generated water quality degradation, sediment disturbance and startle response, and
4. Hydroacoustic effects described in Section 2.5. NMFS has identified 206 dB as the threshold for injury to fish from exposure to a single impulse. In addition to this peak

pressure metric, NMFS uses sound exposure level (SEL) to estimate the onset of injury for fish exposed to sounds. SEL thresholds are 187 dB SEL for fish 2 grams or larger, or 183 dB SEL for fish under 2 grams.

3.2. Essential Fish Habitat Conservation Recommendations

NMFS determined that the following conservation recommendations are necessary to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on EFH.

1. Regularly conduct street sweeping, at a minimum in late summer, on City-owned paved areas from which stormwater discharges into the action area. This recommendation will reduce the concentration of contaminants that reach the estuary from stormwater sources.

2. Avoid new overwater structures in areas within the City's jurisdiction. This recommendation will reduce predation on EFH species, reduce benthic prey loss, and reduce SAV loss.

3. Avoid the use of an impact driver when install replacement piles. This recommendation will minimize noise levels that could impair EFH species.

Fully implementing these EFH conservation recommendations would protect, by avoiding or minimizing the adverse effects described in section 3.2, above, for Pacific Coast salmon, Pacific Coast groundfish, and coastal pelagic species.

3.3. Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, the USACE must provide a detailed response in writing to NMFS within 30 days after receiving an EFH Conservation Recommendation. Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of NMFS' EFH Conservation Recommendations unless NMFS and the Federal agency have agreed to use alternative time frames for the Federal agency response. The response must include a description of the measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the Conservation Recommendations, the Federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects [50 CFR 600.920(k)(1)].

In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we ask that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

3.4. Supplemental Consultation

The USACE must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH Conservation Recommendations [50 CFR 600.920(l)].

4. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

The Data Quality Act (DQA) specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the opinion addresses these DQA components, documents compliance with the DQA, and certifies that this opinion has undergone pre-dissemination review.

4.1 Utility

Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users. The intended user of this opinion is the USACE. Other interested users include the City of Gig Harbor. Individual copies of this opinion were provided to the USACE and the City of Gig Harbor. The document will be available at the NOAA Library Institutional Repository [https://repository.library.noaa.gov/welcome]. The format and naming adhere to conventional standards for style.

4.2 Integrity

This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

4.3 Objectivity

Information Product Category: Natural Resource Plan

Standards: This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including the NMFS ESA Consultation Handbook, ESA regulations, 50 CFR 402.01 et seq., and the MSA implementing regulations regarding EFH, 50 CFR part 600.

Best Available Information: This consultation and supporting documents use the best available information, as referenced in the References section. The analyses in this opinion [*and EFH consultation, if applicable*] contain more background on information sources and quality.

Referencing: All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

Review Process: This consultation was drafted by NMFS staff with training in ESA [*and MSA implementation, if applicable*], and reviewed in accordance with West Coast Region ESA quality control and assurance processes.

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By MThomas City of Gig Harbor at 2:29 pm, Feb 02, 2026

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

Gig Harbor Commercial Fishing Homeport

2. Name of applicant:

Jeff Langhelm, City of Gig Harbor

3. Address and phone number of applicant and contact person:

Applicant:
Jeff Langhelm, City of Gig Harbor
3589 Harborview Dr
Gig Harbor, WA 98332
jlanghelm@gigharborwa.gov
(253) 853-8253

Contact Person:
Steve Robert, Facet
9706 4th Ave NE #300
Seattle, WA 98115
SRobert@FacetNW.com
(206) 523-0024 x138

4. Date checklist prepared:

May 5, 2022, Revised February 2, 2026.

5. Agency requesting checklist:

City of Gig Harbor

6. Proposed timing or schedule (including phasing, if applicable):

August 1, 2026 to February 15, 2027

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Critical Areas Report
- Biological Assessment
- Macrovegetation Survey
- Mitigation Plan

- JARPA

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known

10. List any government approvals or permits that will be needed for your proposal, if known.

- USACE Section 10 Permit
- Hydraulic Project Approval
- Shoreline Substantial Development
- Flood Hazard Analysis
- No Net Loss Analysis
- Transportation Concurrency Management Program
- Major Site Plan (General Permit Application)

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The City of Gig Harbor has recently completed multiple phases of development at the Ancich Waterfront Park including restoration of the historic Ancich Netshed and pier (NWS-2016-733; HPA 8645) and the Community Paddlers Dock (NWS-2018-981; HPA 23613 and 16330). The City is now proposing to install a commercial fishing dock off Ancich Pier. Mitigation was previously approved through an advanced review process (NWS-2021-187; HPA 24349 (HPA revoked)). Proposed mitigation and project impacts can be sound in the mitigation plan and NOAA Final Opinion.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Street address: 3589 Harborview Dr, Gig Harbor, WA 98332
Section: 05
Township: 21
Range: 02
Legal description:
Section 05 Township 21 Range 02 Quarter 33 MILLVILLE PARCEL A OF ROS FOR BLA 2016-09-12-5001 DESC AS L 5 THRU 7 B 3 TOG/W 2ND CL TDLDS ABUTT THEREON SD L 6 & 7 TO EXTREME LOW TIDE WLY BDRY OF SD TDLDS DESC AS FOLL COM AT INTER OF C/L OF HARBOR VIEW AVE & W LI OF PLAT OF TOWN OF MILLVILLE TH N 02 DEG 23 MIN 15 SEC E 155.46 FT TO NW COR OF SD PLAT & BEG OF SD AGREED LI TH N 18 DEG 22 MIN 56 SEC E 111.51 FT M/L TO EXTREME LOW WATER ALSO TOG/W

POR OF LAND LOC WITHIN FRONT ST AS SHOWN ON PLAT ADJ TO & ABUTT SAID L 6 & 7 ON S LY N OF N LI HARBORVIEW DR FORMERLY FRONT ST TOG/W 2ND CL TDLDS ABUTT TO EXTREME LOW TIDE EXC ANY POR CYD BY AGREEMENT BLR 2009-12-09-0165 EASE OF REC COMB OF 024-3, 025-1 & 025- 2 SEG 2017-0174 JP 09/19/16 JP

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

23%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Harstine gravelly ashy sandy loam, 6 to 15 percent slopes.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

No filling, excavationg, or grading is proposed other than mitigation.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion is not expected.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 65%. There will be no additional impervious surface due to project construction.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Prior to start of any earthwork, a turbidity curtain will be installed in the water surrounding the project to contain turbidity during installation of the new structures.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Air emissions during construction will be restricted to construction equipment being used on site. The project will require a barge mounted crane. After the construction is complete, it is not anticipated that operation and maintenance will have any associated emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off site sources affecting the proposed project are known at this time.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

No extraordinary emission controls are proposed for this project at this time.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes, the project site is located in Gig Harbor (Puget Sound).

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

There is no proposed filling or dredging other than mitigation.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

N/A

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The new proposed structures contain permeable grating. Precipitation will fall directly through the grating into Gig Harbor.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials are not anticipated to enter ground or surface waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

None.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other

____evergreen tree: fir, cedar, pine, other
____shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
__X__other types of vegetation

Upland vegetation consists of a City maintained vegetated buffer along a concrete vertical bulkhead. Land use in the surrounding area is primarily urban and residential. A macrovegetation survey of the area is due to occur in June of 2022. Previous surveys found benthic sugar kelp but no eelgrass was found.

b. What kind and amount of vegetation will be removed or altered?

None.

c. List threatened and endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

e. List all noxious weeds and invasive species known to be on or near the site.

The following species have previously been found near the site: Japanese knotweed (*Polygonum cuspidatum*), Canadian thistle (*Cirsium arvense*), Himalayan blackberry (*Rubus armeniacus*), western dock (*Rumex occidentalis*), common tansy (*Tanacetum vulgare*), and field morning glory (*Convolvulus arvensis*).

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Gulls, harbor seals, salmonids, etc.

b. List any threatened and endangered species known to be on or near the site.

1. Southern resident killer whale (*Orcinus orca*)
2. Puget Sound Chinook (*Oncorhynchus tshawytscha*)
3. Puget Sound steelhead (*Oncorhynchus mykiss)*
4. Yelloweye rockfish *(Sebastes ruberrimus)*
5. Bocaccio *(Sebastes paucispinis)*
6. Bull trout (*Salvelinus confluentus*)
7. Marbled murrelet (*Brachyramphus marmoratus*)
8. Humpback Whale (*Megaptera novaeangliae*)

c. Is the site part of a migration route? If so, explain.

Pacific Flyway Migration Route

d. Proposed measures to preserve or enhance wildlife, if any:

Agency approved work windows will be strictly adhered to for in-water work. Turbidity curtains will reduce sedimentation impacts to species and a bubble curtain will be used during impact pile driving.

e. List any invasive animal species known to be on or near the site.

None known.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Life ring and fire extinguisher stands will be placed along the main dock to provide water rescue and suppress small fires. Existing utilities on site include water, sewer, electric, and fire suppression. These connections will all be extended from their existing to the end of the main walk floating dock.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project has been designed to be of a low profile. The surrounding sites should not be adversely affected in their ability to collect sunlight for solar power.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No extraordinary energy control measures are proposed at this time.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.

None known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
The project is not anticipated to store, use, or produce any toxic or hazardous chemicals over its life.

4) Describe special emergency services that might be required.

None anticipated.

5) Proposed measures to reduce or control environmental health hazards, if any:

None.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Traffic on Harborview Drive and recreational power boating noise is present.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise from construction equipment is expected over the short-term while the project is being built. Construction noises will be created during daylight hours only. Public use noises may slightly increase due to increased use of the site, but not differ from noises already present at boat harbors.

2) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The property is currently being utilized as a waterfront park that includes public watercraft storage, beach access, and a working netshed for local fishermen. The site is listed in the Gig Harbor Shoreline Master Program as Historic Working Waterfront. The property to the west contains a marina and is used for fishing activities and services. One property to the east is a single-family home and the second property to the east is a marina. The proposal will not affect current land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

There is a public watercraft storage facility on the south side of the property. To the northwest side of the property, the historic Ancich Netshed and pier lead out to the tidelands. On the east side of the parcel is the existing Jerkovich pier and the construction of the Community Paddler's Dock to be used for small, human powered crafts.

d. Will any structures be demolished? If so, what?

The remaining portion of Jerkovich Pier will be demolished as mitigation for the project.

e. What is the current zoning classification of the site?

Waterfront Millville

f. What is the current comprehensive plan designation of the site?

Downtown Centers of Local Importance and Regional Business

g. If applicable, what is the current shoreline master program designation of the site?

Historic working waterfront

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes, marine nearshore.

i. Approximately how many people would reside or work in the completed project?

N/A

j. Approximately how many people would the completed project displace?

N/A

k. Proposed measures to avoid or reduce displacement impacts, if any:

NONE.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The guide piles on the main walk will be approximately 11 feet above OHWM (+12.8').

b. What views in the immediate vicinity would be altered or obstructed?

Views off of Ancich Pier will include the new fishing dock.

b. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposed dock will be illuminated for pedestrian and boater safety.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

Street and business lighting is nearby, but is not expected to affect the project site negatively.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

Walking, jogging, and other recreation associated with streets and open areas in an urban environment. In addition, kayaking, canoeing, and other forms of boating are adjacent to the site in Gig Harbor.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project does not displace any existing recreational uses and is meant to enhance water-based uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The project is centered around providing a better space to be used for commercial fishing.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

Yes. The Ancich Netshed is currently a structure near the project site. The netshed is a historic building that supported the historic fishing industry in Gig Harbor.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Consultation with the tribes and the department of archeology and historic preservation was completed for the Ancich Park project as well as archaeological surveys (Corps No. NWS-2016-733).

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

None.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Harborview Drive is adjacent to the project site. No changes are proposed to any roadways for the project.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The site is served by a nearby Pierce Transit stop. The stop is serviced by Pierce Transit route 100.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

N/A

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

N/A

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The utilities mentioned above will all be extended from their existing to the end of the main walk floating dock.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee Jeff Langhelm

Position and Agency/Organization Public Works Director

Date Submitted: May 9 2022

D. Supplemental sheet for nonproject actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

RECEIVED
By MThomas City of Gig Harbor at 2:30 pm, Apr 13, 2026

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 23

FACET
Formerly DCG / Watershed

April 10, 2026

City of Gig Harbor
Planning Department
3510 Grandview St
Gig Harbor, WA 98335

City of Gig Harbor Commercial Fishing Homeport
SMP 6.2.5.24.8 Compliance Narrative

Dear City of Gig Harbor Planning Department,
Facet (formerly DCG/Watershed) is pleased to submit this SMP 6.2.5.24.8 Compliance Narrative.

SMP 6.2.5.24.8 Compliance

The full project mitigation plan demonstrates compliance to this section and the determination of required mitigation. Herein, a narrative is presented as to how the proposed mitigation meets the requirements of SMP 6.2.5.24.8 Off-site Mitigation. The SMP code is listed, followed by the project's compliance with the code.

SMP 6.2.5.24.8 Off-site Mitigation.

"In cases in which it is determined that compensatory mitigation is allowed, the following shall apply:"

SMP 6.2.5.24.8: Project Compliance

Applies to this project. Coordination with the federal, state, and city led to the determination that the full project mitigation cannot be provided on-site and off-site shoreline mitigation shall be provided. On-site mitigation is done to the extent feasible removing overwater structures, the remainder is achieved through mitigation credits.

SMP 6.2.5.24.8.a)

"a) When compensatory mitigation cannot be provided on-site, off-site shoreline mitigation shall be provided in the following locations, listed in order of priority:"

SMP 6.2.5.24.8.a): Project Compliance

Applies to this project. A Mitigation plan has been provided.

SMP 6.2.5.24.8.a)i)

"i) In the shoreline jurisdiction associated with the same drift cell as the permitted activity. Impacts on sediment delivery such as shoreline armoring must be mitigated within the same drift cell as the permitted activity."

SMP 6.2.5.24.8.a)i): Project Compliance

The proposed project includes mitigation within the shoreline jurisdiction associated with the same drift cell to the extent possible. The city is proposing on-site mitigation consisting of over-water structure removal, this is the extent of feasible on-site mitigation. The city is also proposing shoreline restoration further down the same drift

cell at the Maritime Pier site and has coordinated with the Washington Department of Fish and Wildlife to identify this mitigation/restoration opportunity. This project is not proposing any shoreline armoring.

SMP 6.2.5.24.8.a)ii)

"ii) In the shoreline jurisdiction associated with the same body of water (i.e., Gig Harbor Bay and Gig Harbor Spit, Colvos Passage, Tacoma Narrows, and Henderson Bay, and freshwater streams) as the permitted activity; and"

SMP 6.2.5.24.8.a)ii): Project Compliance

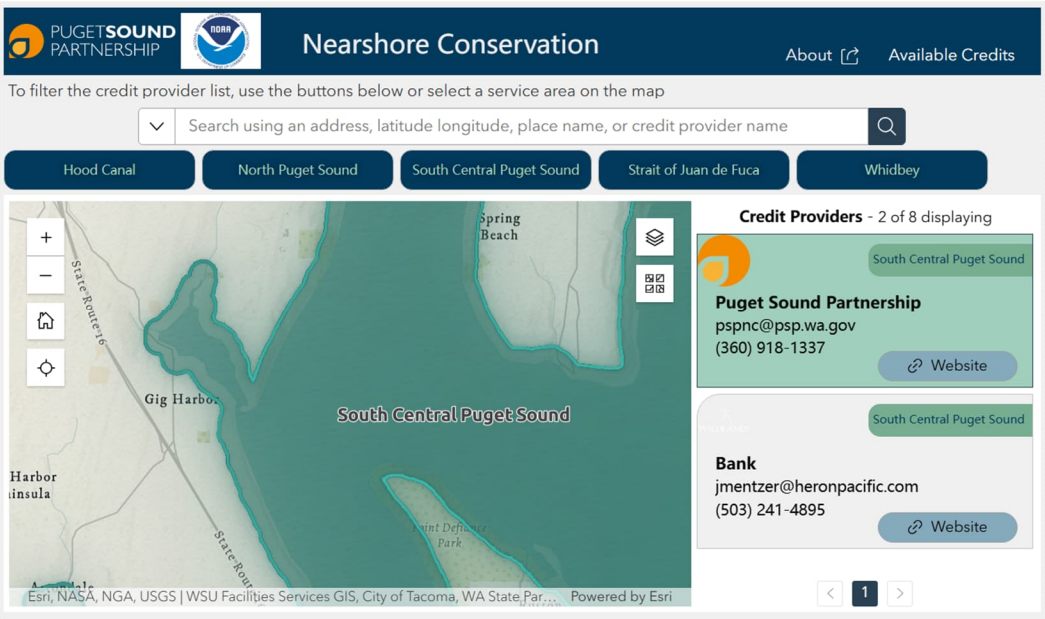
The proposed project includes mitigation within the shoreline jurisdiction associated with the same body of water to the extent possible. The city is proposing shoreline restoration at the Maritime Pier site and has coordinated with the state and federal authorities to identify this mitigation/restoration opportunity and compliance. The city explore additional potential submerged vegetation planting for mitigation, however, after close to 2 years of coordinating with the NMFS this approach was abandoned upon their recommendation and purchasing credits from a conservation bank was chosen as the most feasible alternative to mitigate project impacts.

SMP 6.2.5.24.8.a)iii)

"iii) In the nearshore Puget Sound shoreline jurisdiction in the same sub-basin as the permitted activity. "

SMP 6.2.5.24.8.a)iii): Project Compliance

The proposed project includes mitigation purchasing credits from a conservation bank. To identify that the mitigation completed to produce the mitigation credits is within the same nearshore Puget Sound shoreline jurisdiction sub-basin as the permitted activity, the published nearshore Puget Sound shoreline jurisdiction sub-basin map was utilized. The map shows that Gig Harbor is within the Puget Sound/Georgia Basin also know as the Salish Sea, and South Central Puget Sound Sub-Basin.



This map can be found at: WA PSP Nearshore Conservation Credits v2. The city worked with the USACE, NOAA, and NMFS to confirm that this was the correct nearshore Puget Sound shoreline jurisdiction sub-basin. Documentation of this confirmation is within the submitted NMFS biological opinion of the proposed project, see part 2.3. Action Area for this confirmation. Therefore, Puget Sound Partnership was selected as the appropriate conservation bank.

SMP 6.2.5.24.8.b)

"b) In determining appropriate areas for off-site mitigation, lower priority locations shall be applied only where higher priority locations are determined to be infeasible or inapplicable."

SMP 6.2.5.24.8.b): Project Compliance

Off-site mitigation ratios and requirements for in-water work were established in consultation with state and federal permitting agencies. The USACE and NMFS manage and confirm that the conservation bank is completing the appropriate mitigation to produce the mitigation credit. Please see the published Salish Sea Programmatic and the submitted NMFS biological opinion of the proposed project, for this confirmation, page 41.

"The calculator determines changes in habitat value in a common currency that represents habitat impacts as debits, and habitat improvements as credits. For the proposed action, debits will be offset with an equivalent number of credits, avoiding further net loss of nearshore habitat."

SMP 6.2.5.24.8.c)

"c) Off-site mitigation ratios for in-water work shall be established in consultation with state and federal permitting agencies and approval of the Administrator."

SMP 6.2.5.24.8.c): Project Compliance

Off-site mitigation ratios and requirements for in-water work were established in consultation with state and federal permitting agencies. The USACE and NMFS biological opinion and NMFS Salish Sea Nearshore mitigation calculator confirmed the required mitigation. Please see the submitted NMFS biological opinion of the proposed project for confirmation, page 41.

"The calculator determines changes in habitat value in a common currency that represents habitat impacts as debits, and habitat improvements as credits. For the proposed action, debits will be offset with an equivalent number of credits, avoiding further net loss of nearshore habitat."

SMP 6.2.5.24.8.d)

"d) Off-site shoreline mitigation shall be provided with in-kind mitigation unless out-of-kind mitigation would provide greater ecological function than in-kind GIG HARBOR SHORELINE MASTER PROGRAM CHAPTER 6 General Goals, Policies and Regulations 6-65 mitigation, as determined by the Administrator. The burden of proof that out-of-kind mitigation provides greater function is on the applicant who must provide an analysis from a qualified scientific expert."

SMP 6.2.5.24.8.d): Project Compliance

The USACE and NMFS manage and confirm that the conservation bank is completing the appropriate mitigation to produce the mitigation credit. To balance and regulate in-kind vs out-of-kind mitigation, the agencies utilize

the Salish Sea Programmatic and associated Nearshore mitigation calculator to confirm the required mitigation. With the acceptance of the proposed mitigation plan by the USACE and NMFS, they have confirmed that the purchasing conservation credits from the Puget Sound partnership addresses nearshore impacts:

> *"Together the effect of the action, when added to the environmental baseline and cumulative effects, would not appreciably diminish the value of critical habitat for the conservation of PS salmonids or bocaccio. We draw the same conclusions for SRKW. These conclusions are based on the factors analyzed in the above paragraphs as well as the following: (1) habitats that are disturbed as a consequence of the proposed action are a small proportion of the available critical habitat for each species; (2) disturbed habitats would not significantly reduce available PBFs for any of the species considered in this opinion; and (3) the purchase of 340 conservation credits from the Puget Sound partnership to address nearshore impacts will offset localized impacts of the proposed action. Despite degraded baseline conditions, uncertainty from environmental variation, and cumulative effects, the additive effects of the action do not appreciably diminish the value of critical habitat for the conservation of these designated critical habitats in the action area. "*

Conclusion

Please do not hesitate to reach out if you have any questions or require additional information for your review.

Sincerely,

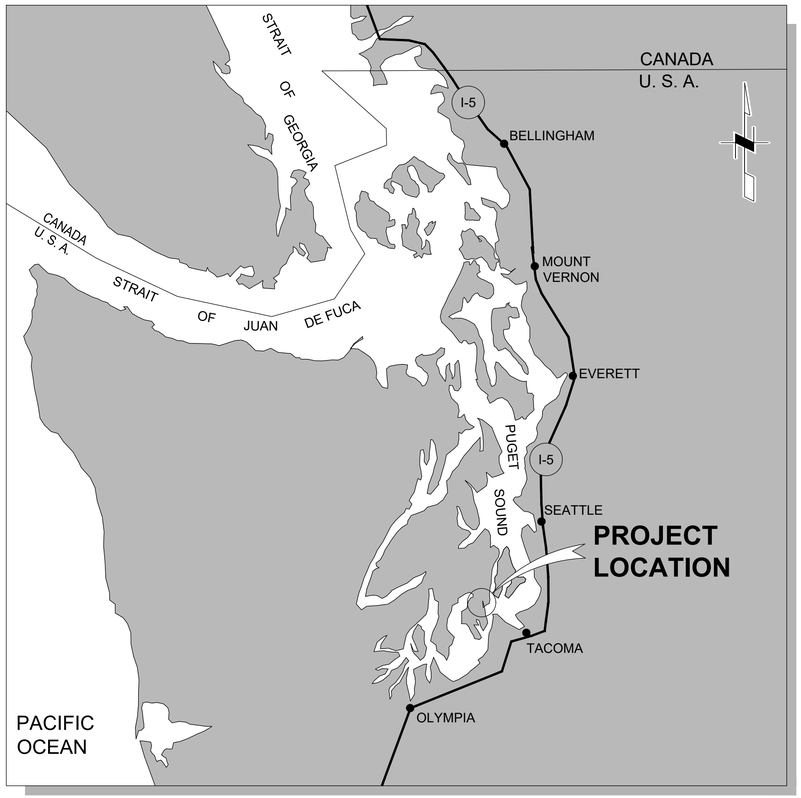


Drew McDonald, PE
E: DMcDonald@facetnw.com

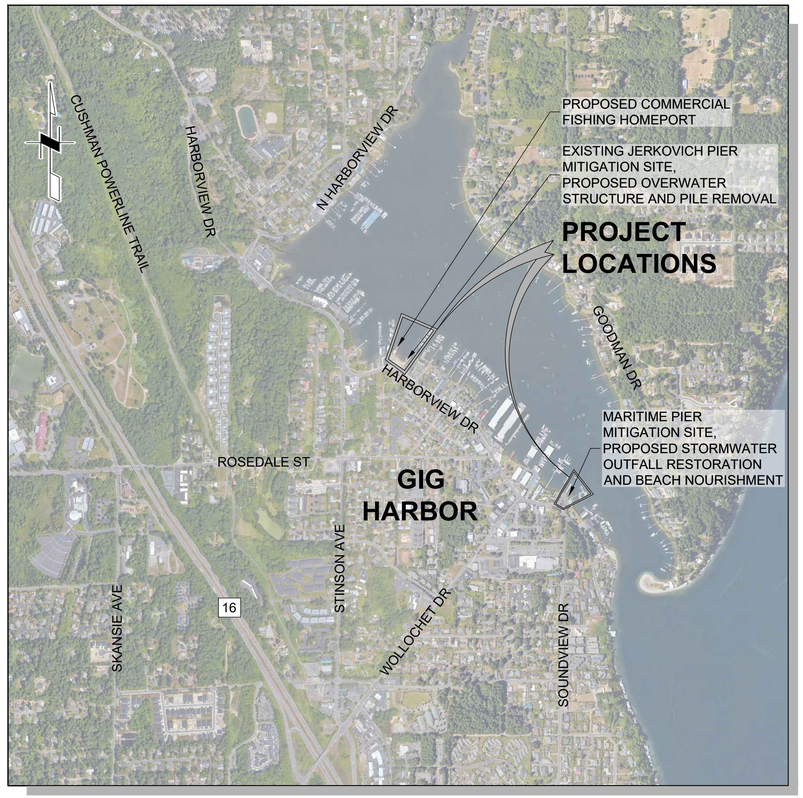
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By MThomas City of Gig Harbor at 2:23 pm, Apr 13, 2026

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 24

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
ISSUED FOR BID 2026



VICINITY MAP
NTS



PROJECT LOCATION MAP
NTS

MAYOR
MARY BARBER

PUBLIC WORKS DIRECTOR
JEFF LANGHELM

CITY ADMINISTRATOR
KATRINA KNUTSON

CITY COUNCIL MEMBERS
LORETO TESSICINI
PATRICK AMMANN
EMILY STONE
JULIE MARTIN
BEN CORONADO
LE RODENBERG
REID EKBERG

PROJECT ADDRESS

ANCICH WATERFRONT PARK - ANCICH PIER
3589 HARBORVIEW DR., GIG HARBOR, WA 98332
PARCEL: 5970000244

ANCICH WATERFRONT PARK - JERKOVICH PIER
3525 HARBORVIEW DR., GIG HARBOR, WA 98332
PARCEL: 5970000244

MARITIME PIER - JERKOVICH PIER
3003 HARBORVIEW DR., GIG HARBOR, WA 98332
PARCEL: 0221081187

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UTILITY LOCATIONS ARE APPROX.)

#	DATE	BY	REVISION
0	2/13/26	SMR	ISSUED FOR BID 2026
1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING CONDITIONS. ALL CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
4721
REGISTERED PROFESSIONAL ENGINEER
Steven M. Roberts 2026.04.10 13:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

TITLE SHEET, VICINITY MAP, AND PROJECT LOCATION MAP

DATE: APR. 2026
PLAN NUMBER: G1.01
SHEET: 1 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETSHARED\PROJECTS\ACTIVE\2021\12\2112.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWINGS\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

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G3.01	3	ANCICH WATERFRONT PARK EXISTING SITE PLAN
G4.01	4	ANCICH WATERFRONT PARK PROPOSED SITE PLAN
G5.01	5	TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS
PROPOSED UPLAND IMPROVEMENTS		
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C1.02	7	PROPOSED UPLAND IMPROVEMENTS DETAILED PLAN VIEW
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GANGWAY		
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S1.02	16	GANGWAY DETAILS
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S1.04	18	GANGWAY TRANSITION PLATES
FLOATING DOCK		
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S2.04	22	FLOATING DOCK FINGER FLOAT
S2.05	23	FLOATING DOCK SUBSTATION FLOAT
S2.06	24	FLOATING DOCK TRI-FRAME
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ABBREVIATIONS

Ø	DIAMETER
CONC	CONCRETE
CTRL	CONTROL
CS	COUNTERSINK
EX	EXISTING
FH	FLAT HEAD
FNDN	FOUNDATION
HH	HEX HEAD
HTL	HIGH TIDE LINE
MLLW	MEAN LOWER LOW WATER
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
PROP	PROPOSED
REQ'D	REQUIRED
RT	RECTANGULAR ALUMINUM SECTION
SP	SPECIFICATION (S)
SS	STAINLESS STEEL
SUBST	SUBSTATION
t	THICK
TESC	TEMPORARY EROSION SEDIMENT CONTROL
TYP	TYPICAL
UHMW	ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE
VIF	VERIFY IN FIELD
W/	WITH

VERTICAL DATUM INFORMATION

SOURCES:
MLLW: US ARMY CORPS OF ENGINEERS' SOUTH PUGET SOUND REGION TIDAL DATUM #72 - GIG HARBOR.

NGVD 29 AND NAVD 88: NOAAs VERTICAL DATUM TRANSFORMATION (v3.3) AT JERKOVICH DOCK (LAT 47.3310, LONG -122.5816).

HTL: HTL IS 13.59' MLLW, BASED IN THE NOAA PREDICTED TIDE (STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

VERTICAL DATUM CONVERSION

(FEMA BFE = +14 NAVD 88)

MLLW	NGVD 29	NAVD 88	DATUM PLANE
+17.00	+10.54	+14.00	FEMA FLOOD ELEV.
+13.80	+7.34	+10.80	HIGHEST OBSERVED
+13.59	+7.13	+10.59	HIGH TIDE LINE
+12.80	+6.34	+9.80	ORDINARY HIGH WATER
+11.80	+5.34	+8.80	MEAN HIGHER HIGH WATER
+11.00	+4.54	+8.00	MEAN HIGH WATER
+6.90	+0.44	+3.90	MEAN TIDE LEVEL
+2.80	-3.66	-0.20	MEAN LOW WATER
0.00	-6.46	-3.00	MEAN LOWER LOW WATER
-4.30	-10.76	-7.30	LOWEST OBSERVED

COMMERCIAL MOORAGE

THE CITY IS REQUIRED, UPON COMPLETION OF THE PROJECT AND PER SMP 7.11.11, TO MAINTAIN PROOF OF AN ACTIVE LICENSE FOR COMMERCIAL FISHING VESSELS OR AN ACTIVE CONTRACT FOR COMMERCIAL FISHING BOAT TENDERS.

MITIGATION AND RESTORATION REQUIREMENTS

A. THIS U.S. ARMY CORPS OF ENGINEERS (CORPS) PERMIT DOES NOT AUTHORIZE YOU TO TAKE A THREATENED OR ENDANGERED SPECIES, IN PARTICULAR THE PUGET SOUND CHINOOK SALMON, PUGET SOUND STEELHEAD TROUT, GEORGIA BASIN BOCACCIO ROCKFISH, GEORGIA BASIN YELLOWEYE ROCKFISH, SOUTHERN RESIDENT KILLER WHALE, COASTAL PUGET SOUND BULL TROUT, AND MARBLED MURRELET. IN ORDER TO LEGALLY TAKE A LISTED SPECIES, YOU MUST HAVE A SEPARATE AUTHORIZATION UNDER THE ENDANGERED SPECIES ACT (ESA; E.G., AN ESA SECTION 10 PERMIT, OR ESA SECTION 7 CONSULTATION BIOLOGICAL OPINION (BO) WITH NON-DISCRETIONARY "INCIDENTAL TAKE" PROVISIONS WITH WHICH YOU MUST COMPLY). THE ENCLOSED BO(S) PREPARED BY THE NATIONAL MARINE FISHERIES SERVICE (NMFS) DATED JANUARY 8, 2026, AND THE U.S. FISH AND WILDLIFE SERVICE (USFWS) DATED FEBRUARY 5, 2026, CONTAINS MANDATORY TERMS AND CONDITIONS TO IMPLEMENT THE REASONABLE AND PRUDENT MEASURES THAT ARE ASSOCIATED WITH THE SPECIFIED "INCIDENTAL TAKE" IN THE BO(S) (NMFS REFERENCE NUMBER WCRO-2023-00546, USFWS REFERENCE NUMBER 2023-0077374). YOUR AUTHORIZATION UNDER THIS CORPS PERMIT IS CONDITIONAL UPON YOUR COMPLIANCE WITH ALL OF THE MANDATORY TERMS AND CONDITIONS ASSOCIATED WITH INCIDENTAL TAKE OF THE ENCLOSED BO(S). THESE TERMS AND CONDITIONS ARE INCORPORATED BY REFERENCE IN THIS PERMIT. FAILURE TO COMPLY WITH THE TERMS AND CONDITIONS ASSOCIATED WITH INCIDENTAL TAKE OF THE BO(S), WHERE A TAKE OF THE LISTED SPECIES OCCURS, WOULD CONSTITUTE AN UNAUTHORIZED TAKE, AND IT WOULD ALSO CONSTITUTE NON-COMPLIANCE WITH YOUR CORPS PERMIT. THE USFWS/NMFS IS THE APPROPRIATE AUTHORITY TO DETERMINE COMPLIANCE WITH THE TERMS AND CONDITIONS OF ITS BO AND WITH THE ESA.

B. IN ORDER TO MEET THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT YOU MAY CONDUCT THE AUTHORIZED ACTIVITIES FROM AUGUST 1 THROUGH FEBRUARY 15 IN ANY YEAR THIS PERMIT IS VALID. YOU SHALL NOT CONDUCT WORK AUTHORIZED BY THIS PERMIT FROM 16 FEBRUARY THROUGH SEPTEMBER 30 IN ANY YEAR THIS PERMIT IS VALID. YOUR WORK WINDOW IS ALSO SUBJECT TO THE FORAGE FISH RESTRICTION DETAILED IN SPECIAL CONDITION "C" BELOW.

C. FORAGE FISH MAY BE SPAWNING IN THE MARITIME PIER PROJECT AREA DURING THE ALLOWED WORK WINDOW. IF WORK UNDER NWP 27 IS OCCURRING BETWEEN OCTOBER 1 AND FEBRUARY 15, IN ORDER TO MEET THE REQUIREMENTS OF THE ENDANGERED SPECIES ACT AND FOR THE PROTECTION OF PACIFIC HERRING, SAND LANCE, AND SURF SMELT, PRIOR TO CONSTRUCTION, YOU MUST HAVE AN APPROVED BIOLOGIST CONFIRM, IN WRITING, THAT NO FORAGE FISH ARE SPAWNING IN THE AREA. FOR INFORMATION ON APPROVED BIOLOGISTS FOR CONDUCTING FORAGE FISH SURVEYS, CONTACT THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW). IF A WDFW HABITAT BIOLOGIST HAS VOLUNTEERED TO CONDUCT A SURVEY AS PART OF THE HYDRAULIC PROJECT APPROVAL, THIS SURVEY MAY BE SUBMITTED TO THE U.S. ARMY CORPS OF ENGINEERS (CORPS). THE LETTER OR MEMORANDUM FROM THE APPROVED BIOLOGIST OR THE WDFW HABITAT BIOLOGIST MUST INCLUDE THE DATE OF THE INSPECTION, THE FORAGE FISH SPAWNING FINDINGS, AND MUST BE PROVIDED TO THE CORPS, SEATTLE DISTRICT, REGULATORY DIVISION VIA EMAIL TO LIA.PROTOPAPADAKIS.F@USACE.ARMY.MIL (WITH A COPY SENT TO NWS.COMPLIANCE@USACE.ARMY.MIL), PRIOR TO CONSTRUCTION. INCLUDE REFERENCE NUMBER NWS-2022-472. IF THE APPROVED BIOLOGIST OR WDFW HABITAT BIOLOGIST CONFIRMS THAT NO FORAGE FISH ARE SPAWNING IN THE PROJECT AREA, YOU HAVE TWO WEEKS FROM THE DATE OF THE INSPECTION TO COMPLETE ALL WORK WATERWARD OF THE HIGH TIDE LINE.

D. YOU SHALL IMPLEMENT AND ABIDE BY THE MITIGATION PLAN, MITIGATION PLAN REVISION 6 FOR THE CITY OF GIG HARBOR COMMERCIAL FISHING HOMEPORT AT ANCICH WATERFRONT PARK DATED AUGUST 2025 AND THE MITIGATION PLAN, COMPENSATORY MITIGATION PLAN FOR NWS-2021-187, DATED AUGUST 3, 2021.

E. MITIGATION SHALL BE CONSTRUCTED BEFORE THE WORK AUTHORIZED BY THIS LETTER OF PERMISSION.

F. A STATUS REPORT ON THE IMPLEMENTATION OF THE AUTHORIZED WORK AND ON THE CONSTRUCTION OF THE MITIGATION SHALL BE SUBMITTED ANNUALLY TO THE U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT, REGULATORY DIVISION (CORPS) BY MARCH 15TH EACH YEAR UNTIL MITIGATION CONSTRUCTION IS COMPLETE AS DETERMINED BY THE CORPS. THIS REPORT MUST PROMINENTLY DISPLAY THE REFERENCE NUMBERS NWS-2022-472 AND NWS-2021-187. THIS SUBMITTAL SHOULD BE ELECTRONICALLY SENT TO NWS.COMPLIANCE@USACE.ARMY.MIL.

G. AN AS-BUILT MITIGATION CONSTRUCTION REPORT AND AS-BUILT DRAWINGS OF THE MITIGATION AREAS SHALL BE SUBMITTED UPON COMPLETION OF MITIGATION CONSTRUCTION, IN LIEU OF THE STATUS REPORT DESCRIBED IN SPECIAL CONDITION "E." THIS REPORT MUST BE SUBMITTED TO THE U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT, REGULATORY DIVISION(CORPS) FOR REVIEW AND APPROVAL AND MUST PROMINENTLY DISPLAY THE REFERENCE NUMBERS NWS-2022-472 AND NWS-2021-187. THE YEAR MITIGATION CONSTRUCTION IS COMPLETED, AS DETERMINED BY THE CORPS, REPRESENTS YEAR 0 FOR MITIGATION MONITORING. THIS SUBMITTAL SHOULD BE ELECTRONICALLY SENT TO NWS.COMPLIANCE@USACE.ARMY.MIL.

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UTILITY LOCATIONS ARE APPROX.)

#	DATE	BY	REVISION
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1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
47721
REGISTERED
PROFESSIONAL ENGINEER
Steven M. Roberts 2026.04.10 14:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

SHEET INDEX AND ABBREVIATIONS

DATE: APR. 2026
PLAN NUMBER: G2.01
SHEET: 2 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21210164.00 GIG HARBOR COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

PROJECT INFORMATION

PROJECT ADDRESS

ANCICH WATERFRONT PARK - ANCICH PIER
3589 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

ANCICH WATERFRONT PARK - JERKOVICH PIER MITIGATION SITE
3525 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

MARITIME PIER - MARITIME PIER MITIGATION SITE
3003 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 0221081187 - WM-ZONING (HR)
SECTION 08 TOWNSHIP 21N RANGE 02E

PROJECT NOTES

NO PROPOSED UPLAND SITE GRADING OR EARTHWORK.

SEE SITE SPECIFIC GEOTECH REPORT BY PND ENGINEERS SEPTEMBER 2016.

PROJECT IS IN SHORELINE JURISDICTION.

CONTRACTOR TO PROTECT EXPOSED SOILS DURING CONSTRUCTION.

ALL EQUIPMENT ACCESS WILL BE VIA BARGE.

NO UPLAND CONSTRUCTION ENTRANCE IS REQUIRED.

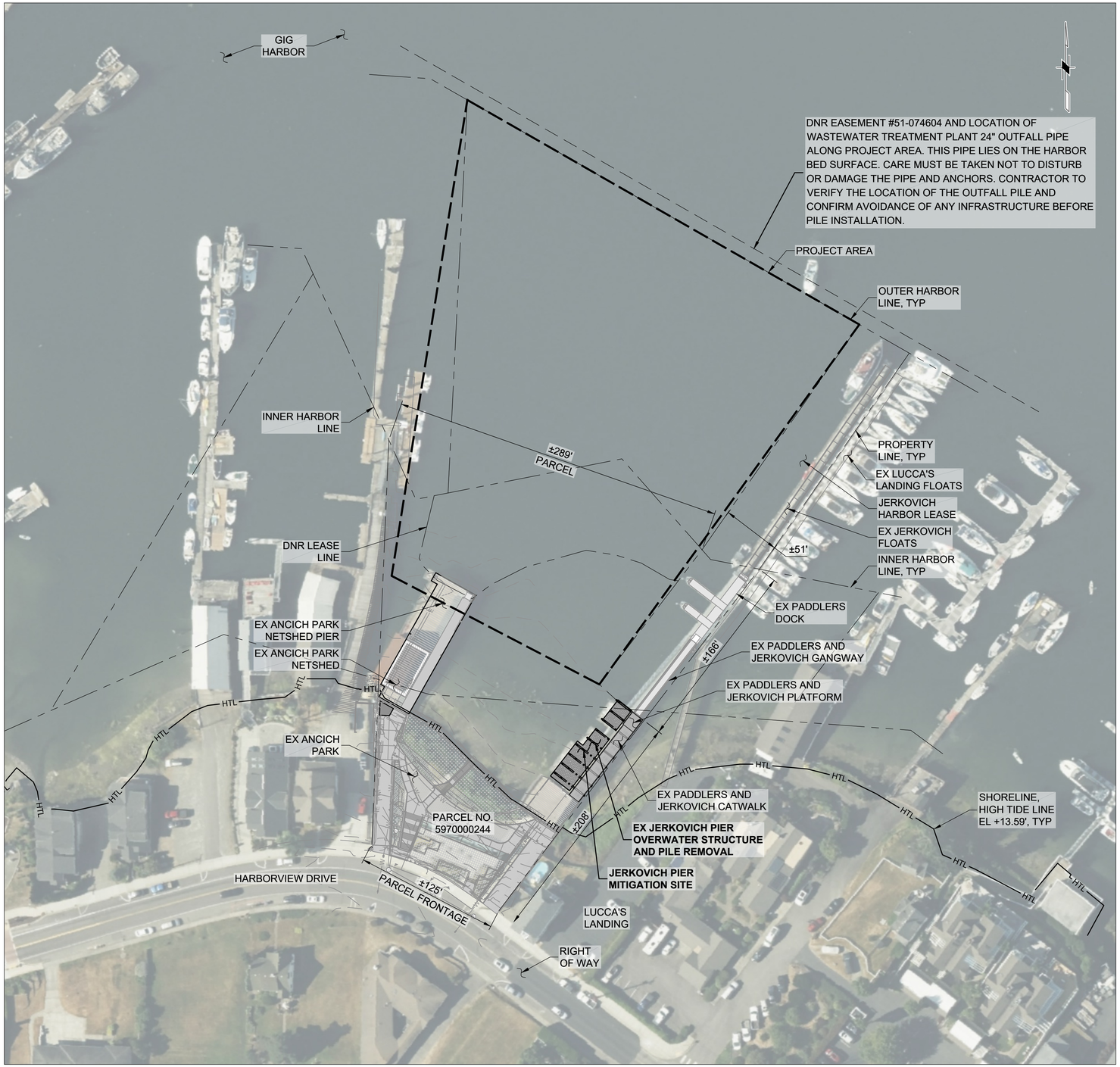
PROJECT DATUMS

ALL HORIZONTAL CONTROL IS RELATIVE TO EXISTING STRUCTURES. CONFIRM FOR NAD83/2011 WASHINGTON STATE PLANES, NORTH ZONE, US FOOT FOR NORTHING AND EASTINGS TO USE AS PROJECT CONTROL.

HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (GIG HARBOR, WA - STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

PROJECT CONTROL

PROJECT CONTROL POINT 1 IS LOCATED AT THE EDGE OF EXISTING ANCICH PIER CENTERED BETWEEN EXISTING GANGWAY ATTACHMENT LUGS.



ANCICH WATERFRONT PARK
EXISTING SITE PLAN

50 25 0 50 100
SCALE IN FEET

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

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2026.04.10 14:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

ANCICH WATERFRONT PARK EXISTING SITE PLAN

DATE: APR. 2026
PLAN NUMBER: G3.01
SHEET: 3 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21120164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWINGS\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

PROJECT INFORMATION

PROJECT ADDRESS

ANCICH WATERFRONT PARK - ANCICH PIER
3589 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

ANCICH WATERFRONT PARK - JERKOVICH PIER MITIGATION SITE
3525 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

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PARCEL: 0221081187 - WM-ZONING (HR)
SECTION 08 TOWNSHIP 21N RANGE 02E

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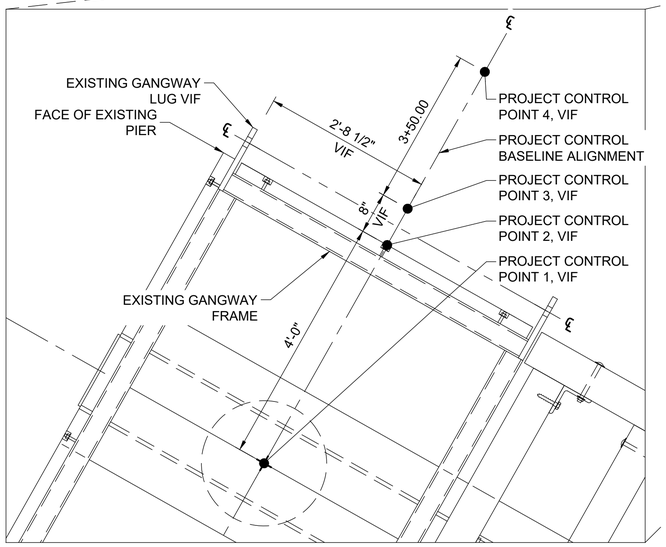
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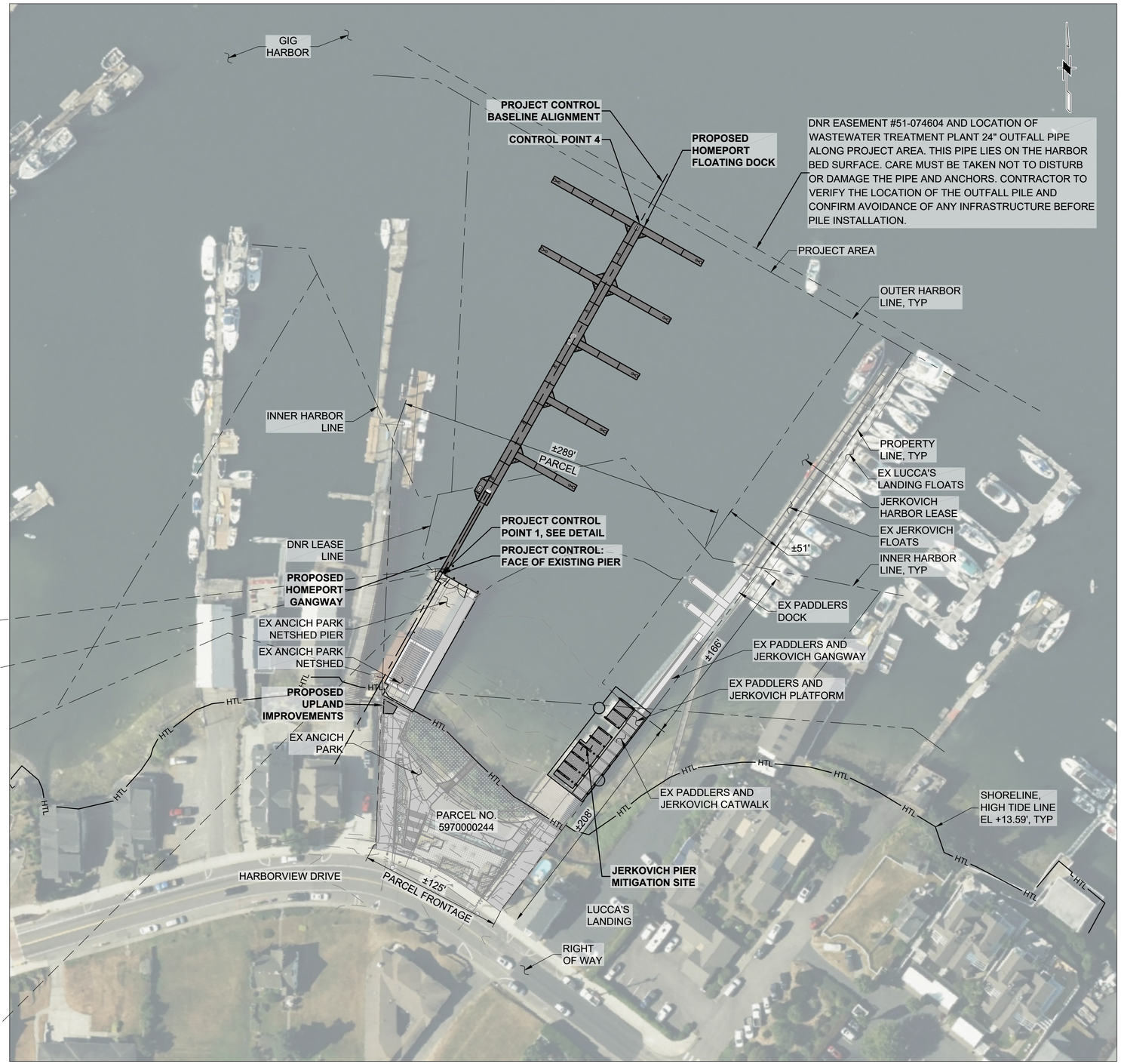
PROJECT CONTROL

POINT	DESCRIPTION	NORTHING	EASTING	STATION	OFFSET
1	EX PILE	736587.71	1123039.51	-0+04.66	0.00
2	EDGE EX PIER	736591.19	1123041.48	-0+00.66	0.00
3	END GANGWAY	736591.77	1123041.80	0+00.00	0.00
4	END FLOAT	736896.63	1123213.74	3+50.00	0.00



HORIZONTAL CONTROL PLAN

NTS



ANCICH WATERFRONT PARK PROPOSED SITE PLAN

50 25 0 50 100
SCALE IN FEET

Approved
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05.12.2026
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STEVEN MICHAEL ROBERTS — STATE OF WASHINGTON — 47121 — REGISTERED PROFESSIONAL ENGINEER
2026.04.10 14:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

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ANCICH WATERFRONT PARK PROPOSED SITE PLAN

DATE: APR. 2026

PLAN NUMBER: G4.01

SHEET: 4 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACET\SHARED\PROJECTS\ACTIVE\2021\12\21112.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

EROSION AND SEDIMENT CONTROL NOTES

1. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.

2. THE TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

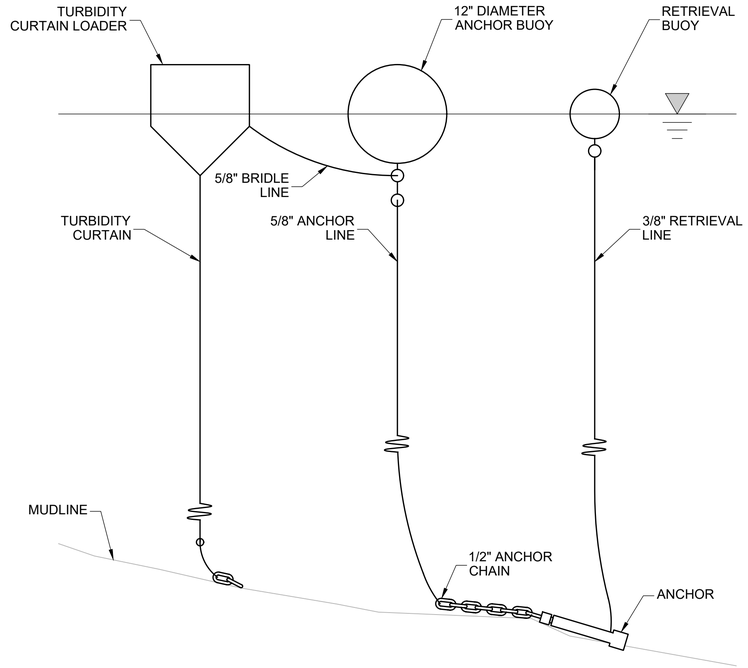
3. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., SILT BOOM, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.).

4. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES DURING THE WET SEASON.

5. ANY AREA NEEDING TESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.

6. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY-EIGHT (48) HOURS FOLLOWING A STORM EVENT.

7. THESE ARE GENERAL REQUIREMENTS, SEE SITE PLANS FOR PROJECT SPECIFIC CRITERIA AND NON APPLICABLE ELEMENTS.



A G5.01 **TURBIDITY CURTAIN**
NTS

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City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

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(UTILITY LOCATIONS ARE APPROX.)

#	DATE	BY	REVISION
0	2/13/26	SMR	ISSUED FOR BID 2026
1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
47721
REGISTERED PROFESSIONAL ENGINEER
2026.04.14 11:38:47 -7'00'

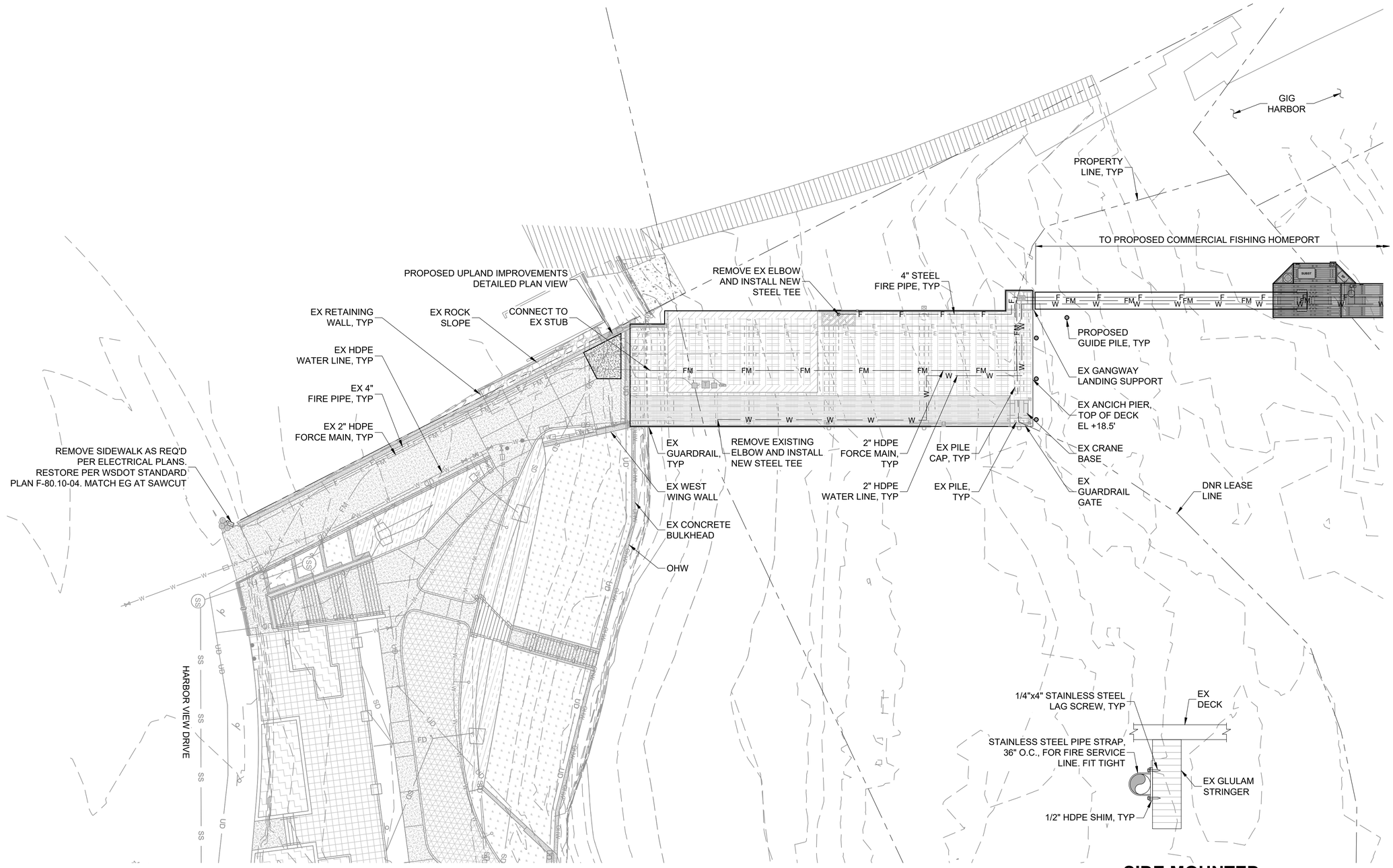
CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS

DATE: APR. 2026
PLAN NUMBER: G5.01
SHEET: 5 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21212.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CCOGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG



PROPOSED UPLAND IMPROVEMENTS SITE PLAN

8 4 0 8 16

SCALE IN FEET

SIDE MOUNTED UTILITY LINE HANGER

BOTTOM MOUNTED HANGER SIMILAR.
FIRE LINE SHOWN, OTHER LINES SIMILAR

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City of Gig Harbor
05.12.2026
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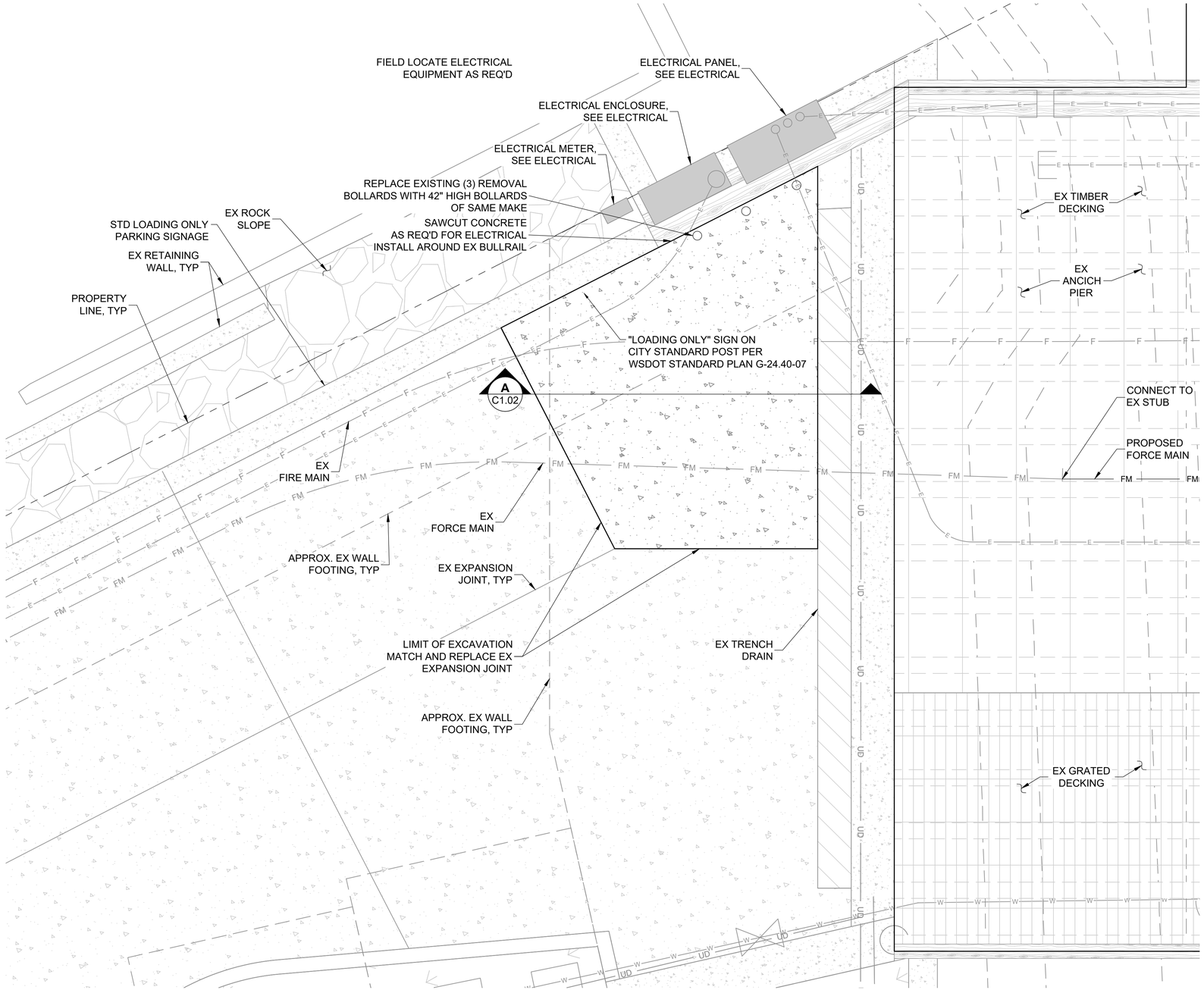
CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

PROPOSED UPLAND IMPROVEMENTS SITE PLAN

DATE: APR. 2026
PLAN NUMBER: C1.01
SHEET: 6 OF 39

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PROPOSED UPLAND IMPROVEMENTS DETAILED PLAN VIEW

4 2 0 4 8

SCALE IN FEET

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PROPOSED PIER IMPROVEMENTS

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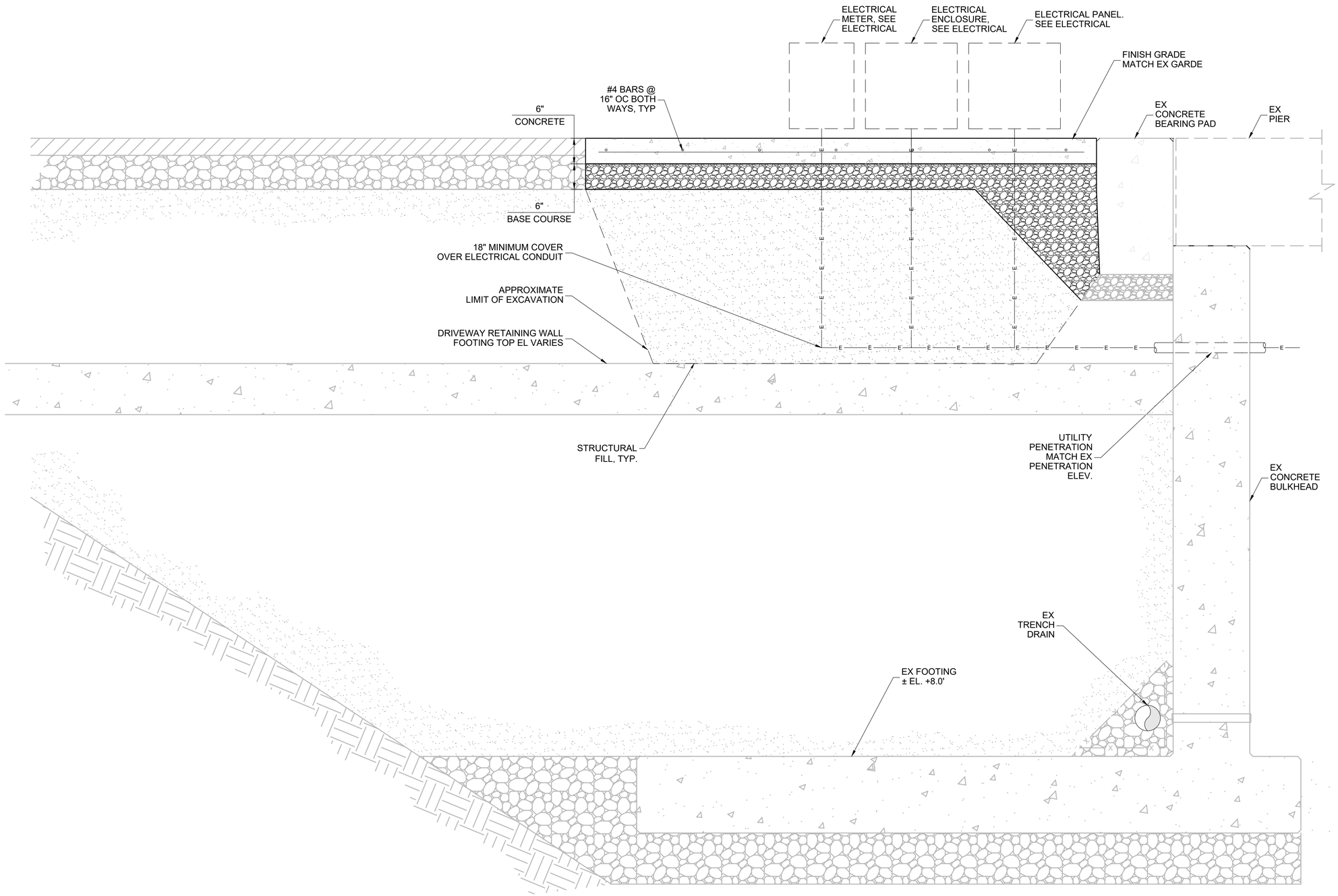
PROPOSED UPLAND IMPROVEMENTS DETAILED PLAN VIEW

DATE: APR. 2026

PLAN NUMBER: C1.02

SHEET: 7 OF 39

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A C1.03 **UTILITY EXCAVATION SECTION**

1 ½ 0 1 2

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COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

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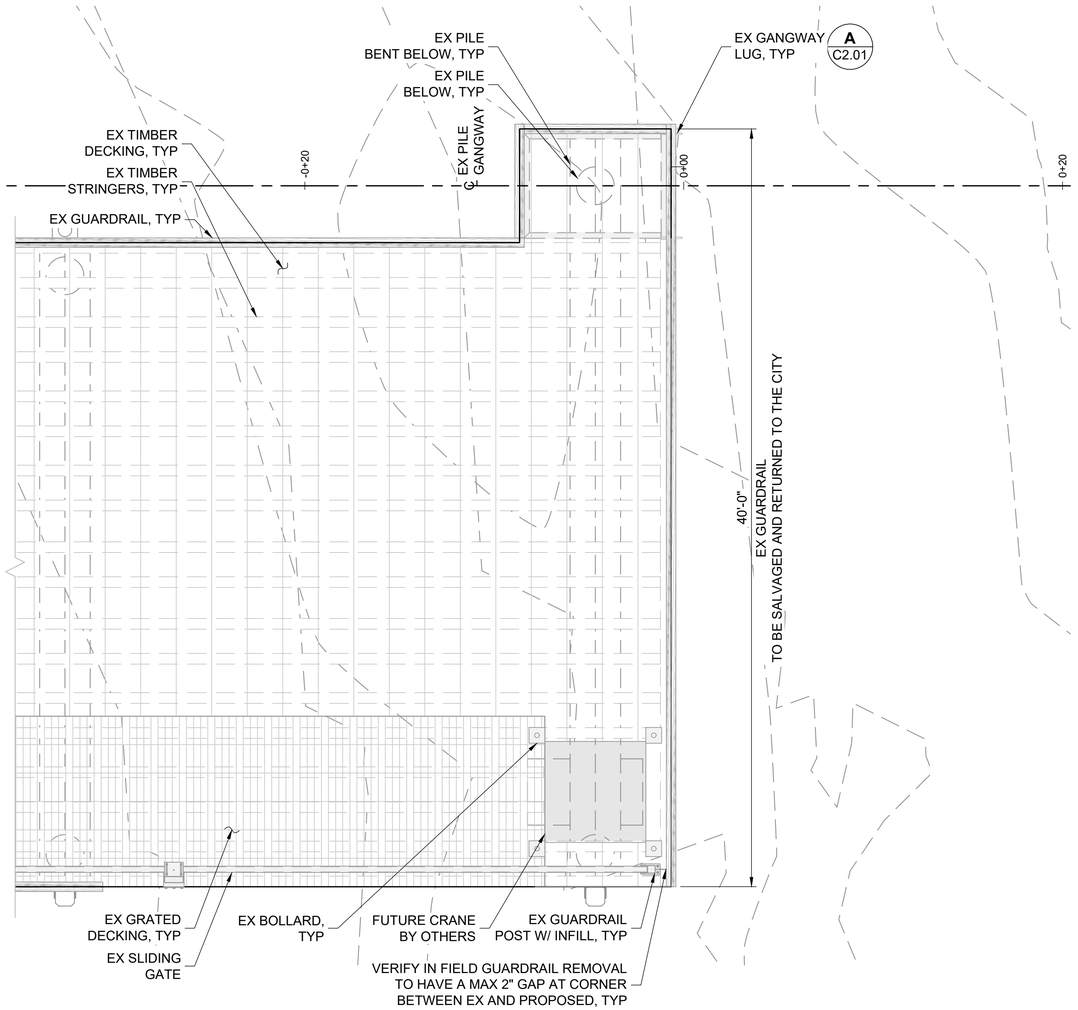
PROPOSED UPLAND IMPROVEMENTS DETAILS

DATE: APR. 2026

PLAN NUMBER: C1.03

SHEET: 8 OF 39

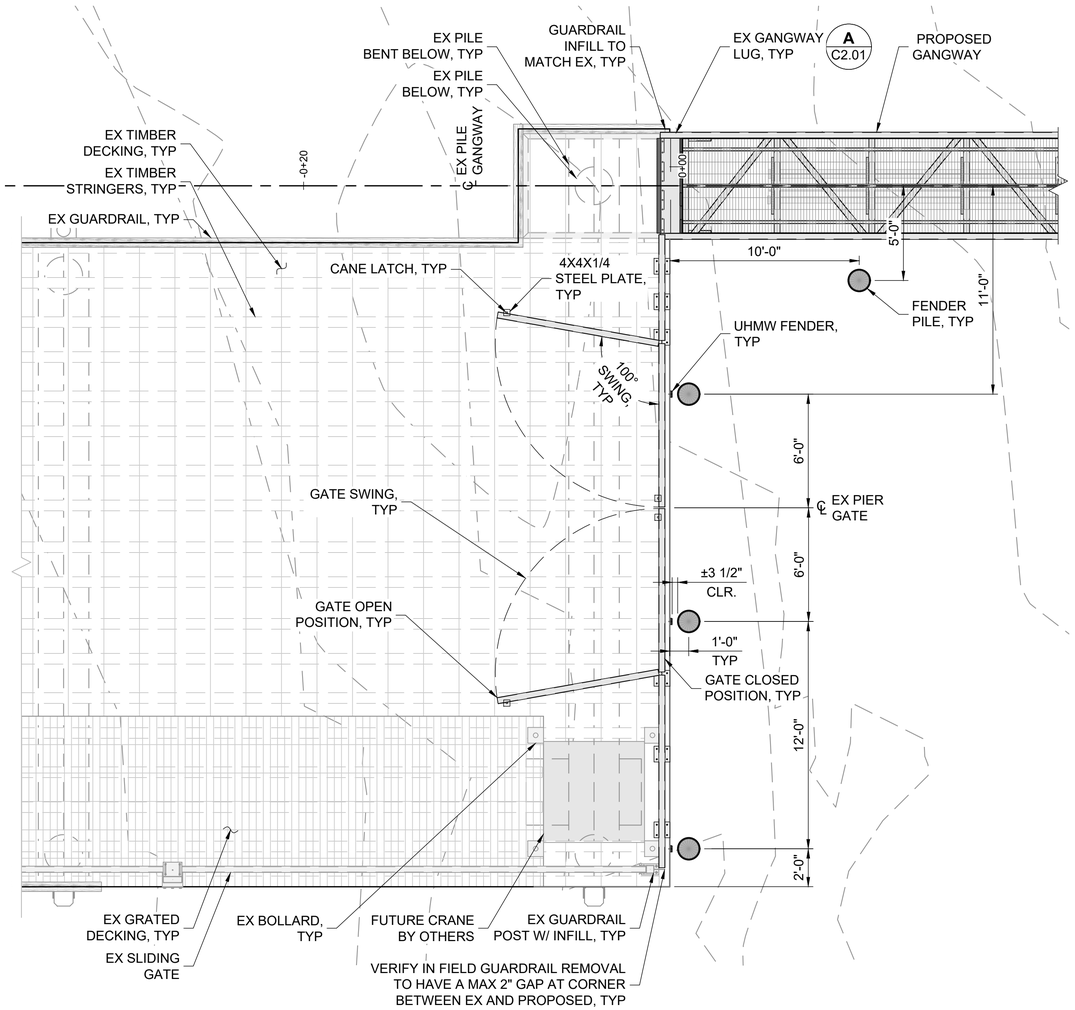
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EXISTING PIER PLAN

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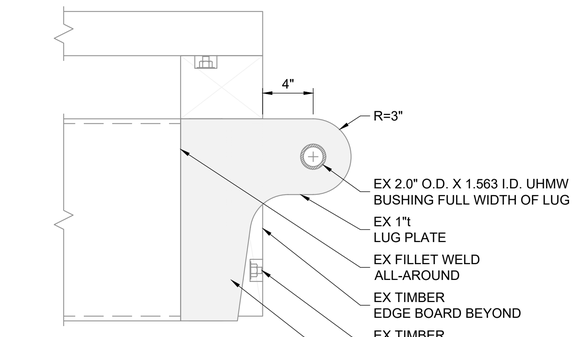
SCALE IN FEET



PROPOSED PIER PLAN

4 2 0 4 8

SCALE IN FEET

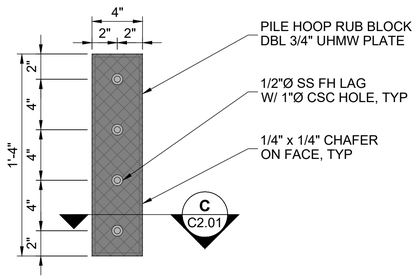


A C2.01 EX GANGWAY LUG

VIF

½ ¼ 0 ½ 1

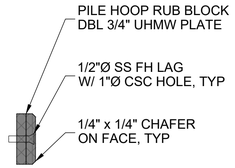
SCALE IN FEET



B C2.01 UHMW FENDER

½ ¼ 0 ½ 1

SCALE IN FEET



C C2.01 UHMW FENDER SECTION

½ ¼ 0 ½ 1

SCALE IN FEET

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05.12.2026
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PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

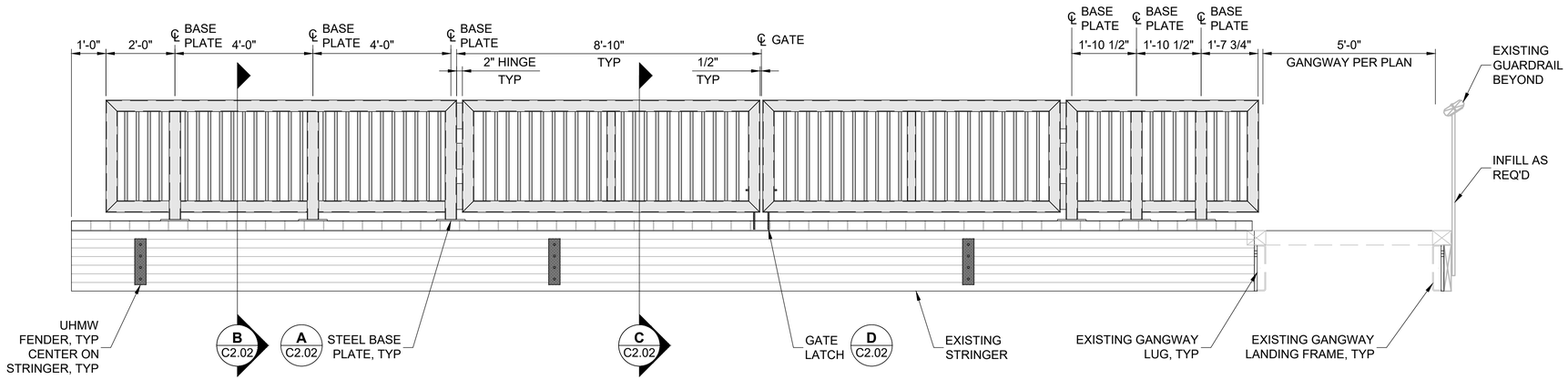
PROPOSED PIER IMPROVEMENTS
PLAN VIEW AND DETAILS

DATE: APR. 2026

PLAN NUMBER: C2.01

SHEET: 9 OF 39

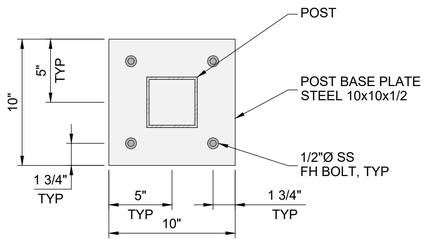
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PROPOSED STEEL GUARDRAIL AND GATE ELEVATION

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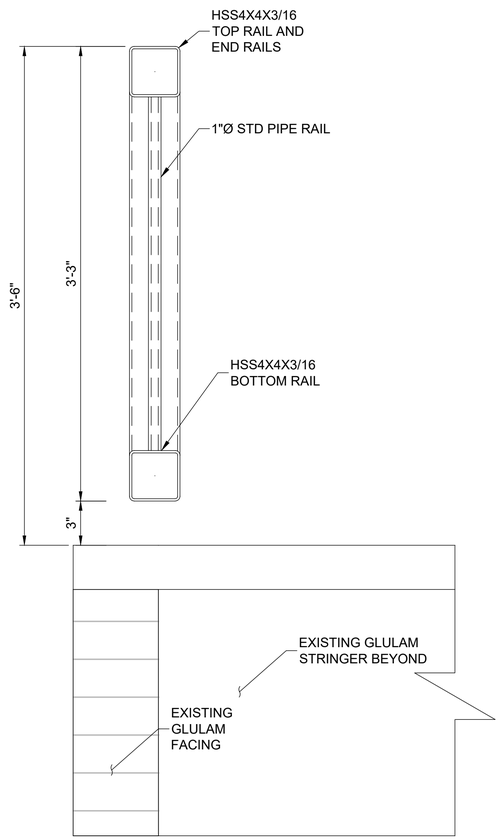
SCALE IN FEET



A C2.02 GUARDRAIL BASE PLATE

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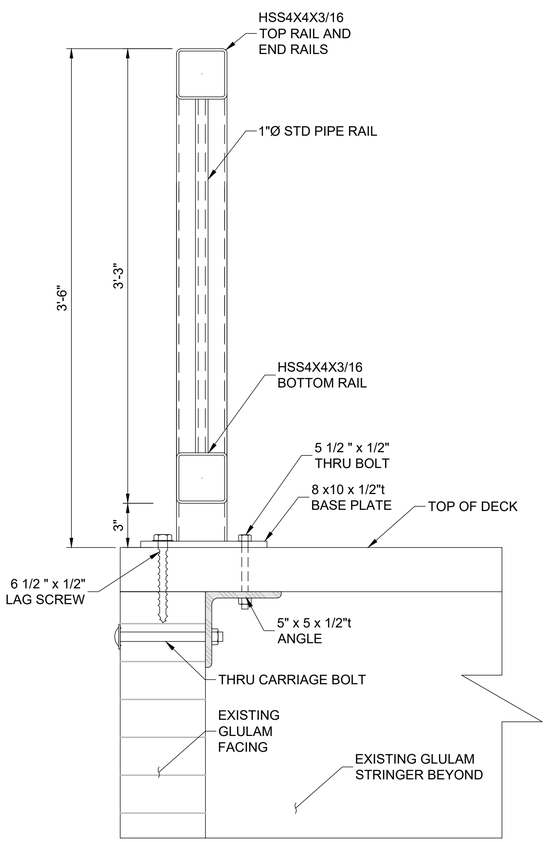
SCALE IN FEET



B C2.02 GATE/GUARDRAIL SECTION

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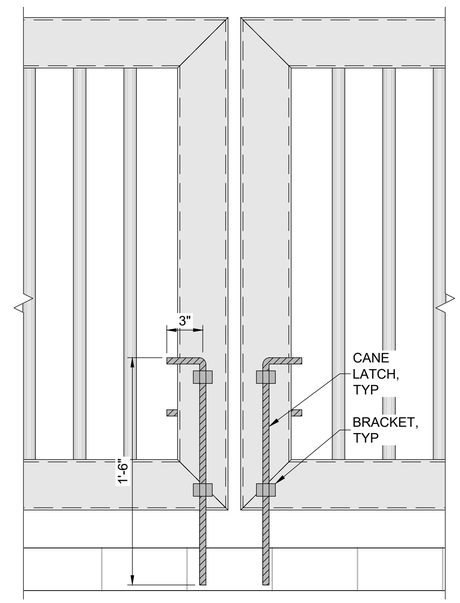
SCALE IN FEET



C C2.02 GATE/GUARDRAIL POST SECTION

1 ½ 0 1 2

SCALE IN FEET



D C2.02 GATE LATCH DETAIL

1 ½ 0 1 2

SCALE IN FEET

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Steven M. Roberts 2026.04.14 11:38:47 -07'00'

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PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

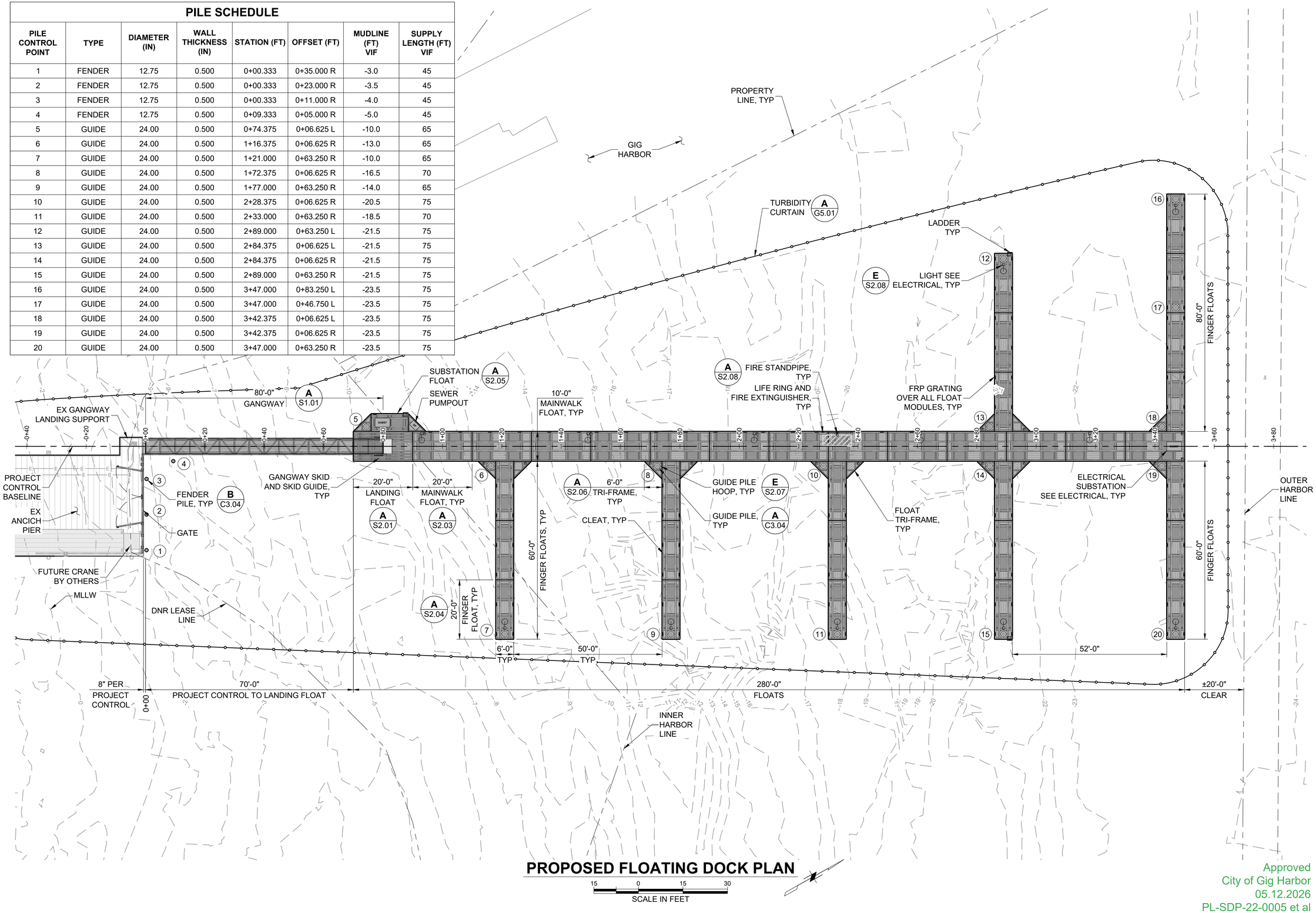
PROPOSED PIER IMPROVEMENTS PROPOSED GATE

DATE: APR. 2026
PLAN NUMBER: C2.02
SHEET: 10 OF 39

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PILE SCHEDULE

PILE CONTROL POINT	TYPE	DIAMETER (IN)	WALL THICKNESS (IN)	STATION (FT)	OFFSET (FT)	MUDLINE (FT) VIF	SUPPLY LENGTH (FT) VIF
1	FENDER	12.75	0.500	0+00.333	0+35.000 R	-3.0	45
2	FENDER	12.75	0.500	0+00.333	0+23.000 R	-3.5	45
3	FENDER	12.75	0.500	0+00.333	0+11.000 R	-4.0	45
4	FENDER	12.75	0.500	0+09.333	0+05.000 R	-5.0	45
5	GUIDE	24.00	0.500	0+74.375	0+06.625 L	-10.0	65
6	GUIDE	24.00	0.500	1+16.375	0+06.625 R	-13.0	65
7	GUIDE	24.00	0.500	1+21.000	0+63.250 R	-10.0	65
8	GUIDE	24.00	0.500	1+72.375	0+06.625 R	-16.5	70
9	GUIDE	24.00	0.500	1+77.000	0+63.250 R	-14.0	65
10	GUIDE	24.00	0.500	2+28.375	0+06.625 R	-20.5	75
11	GUIDE	24.00	0.500	2+33.000	0+63.250 R	-18.5	70
12	GUIDE	24.00	0.500	2+89.000	0+63.250 L	-21.5	75
13	GUIDE	24.00	0.500	2+84.375	0+06.625 L	-21.5	75
14	GUIDE	24.00	0.500	2+84.375	0+06.625 R	-21.5	75
15	GUIDE	24.00	0.500	2+89.000	0+63.250 R	-21.5	75
16	GUIDE	24.00	0.500	3+47.000	0+83.250 L	-23.5	75
17	GUIDE	24.00	0.500	3+47.000	0+46.750 L	-23.5	75
18	GUIDE	24.00	0.500	3+42.375	0+06.625 L	-23.5	75
19	GUIDE	24.00	0.500	3+42.375	0+06.625 R	-23.5	75
20	GUIDE	24.00	0.500	3+47.000	0+63.250 R	-23.5	75



PROPOSED FLOATING DOCK PLAN

15 0 15 30
SCALE IN FEET

Approved
City of Gig Harbor
05.12.2026
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CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

PROPOSED FLOATING DOCK PLAN

DATE: APR. 2026

PLAN NUMBER: C3.01

SHEET: 11 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTED\RVE\FACET\SHARED\PROJECTS\ACTIVE\2021\12\21120164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

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PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

PROPOSED FLOATING DOCK FEATURE AND UTILITY PLAN

DATE: APR. 2026

PLAN NUMBER: C3.02

SHEET: 12 OF 39

GIG HARBOR

PROPERTY LINE, TYP

EXISTING UPLAND FIRE STANDPIPE COVERAGE 150' RADIUS

PROPOSED FLOAT FIRE STANDPIPE COVERAGE 150' RADIUS

EXISTING ANCICH PIER

FLEXIBLE HOSE TRANSITIONS FOR ALL PIPES, TYP EACH END OF GANGWAY

2" HDPE SANITARY FORCE MAIN

SEWER PUMPOUT

3'-0" TYP

10'-0" TYP

LIGHT POLE, TYP

4" STEEL FIRE PIPE

LIFE RING STAND

8'-0"

FIRE EXTINGUISHER STAND

8'-0"

ELECTRICAL SUBSTATION SEE ELECTRICAL, TYP

OUTER HARBOR LINE

SLIP '1' (56'-0")

SLIP '5' (56'-0")

SLIP '9' (56'-0")

LADDER TYP

CITY SUPPLIED 24"H X 36"W WARNING SIGN TO BE INSTALLED ON DOCK PILES CLOSEST TO THE HARBOR LINE AND EXISTING WASTEWATER TREATMENT PLANT OUTFALL PIPE. SIGNS SHALL READ " WARNING UNDERWATER PIPE DO NOT ANCHOR WITHIN 50 YARDS"

SLIP '13' (60'-0")

SLIP '15' (60'-0")

SLIP '17' (80'-0")

SLIP '19' (80'-0")

2" HDPE WATER LINE, TYP

UTILITY PEDESTAL WITH SLIP SIGN, TYP

FIRE STANDPIPE

FIRE STANDPIPE STAGING AREA WITH SIGN, TYP

SLIP '2' (60'-0")

SLIP '4' (60'-0")

SLIP '6' (60'-0")

SLIP '8' (60'-0")

SLIP '10' (60'-0")

SLIP '12' (60'-0")

SLIP '14' (60'-0")

SLIP '16' (60'-0")

SLIP '18' (60'-0")

SLIP '20' (60'-0")

10'-0" TYP

1'-9" TYP

CLEAT AS SHOWN, TYP

DNR LEASE LINE

INNER HARBOR LINE

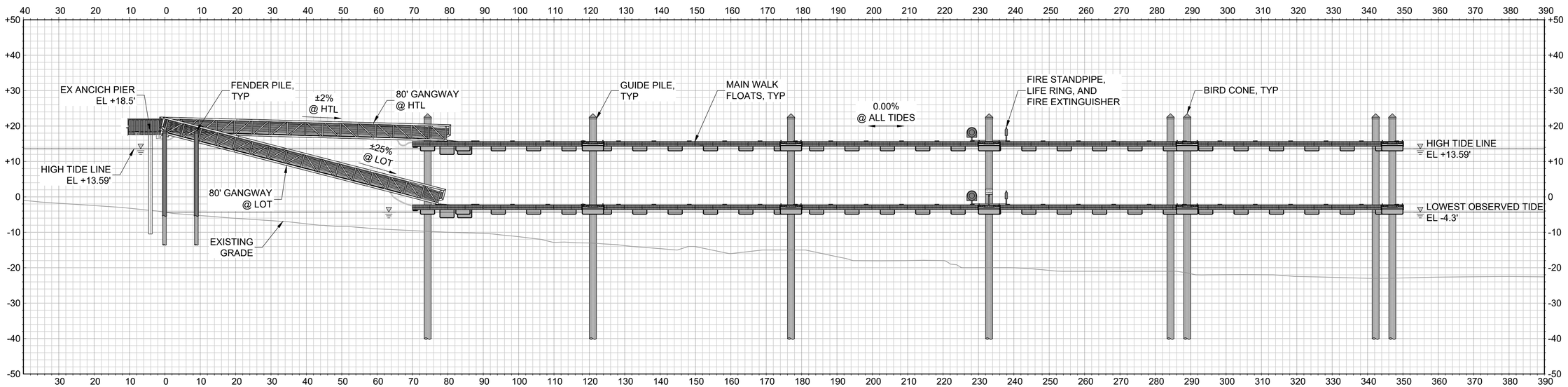
CITY SUPPLIED 24"H X 36"W WARNING SIGN TO BE INSTALLED ON DOCK PILES CLOSEST TO THE HARBOR LINE AND EXISTING WASTEWATER TREATMENT PLANT OUTFALL PIPE. SIGNS SHALL READ " WARNING UNDERWATER PIPE DO NOT ANCHOR WITHIN 50 YARDS"

PROPOSED FLOATING DOCK FEATURE AND UTILITY PLAN

15 0 15 30
SCALE IN FEET

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

4/10/26 - DREWMCDONALD - \\ENGY\TEDRIVE\FACET\SHARED\PROJECTS\ACTIVE\2021\122\121210164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CGOH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG



PROPOSED FLOATING DOCK PROFILE

15 0 15 30
SCALE IN FEET

Approved
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05.12.2026
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CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
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1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
47121
REGISTERED
PROFESSIONAL ENGINEER
2026.04.14 14:38:47 -07'00'

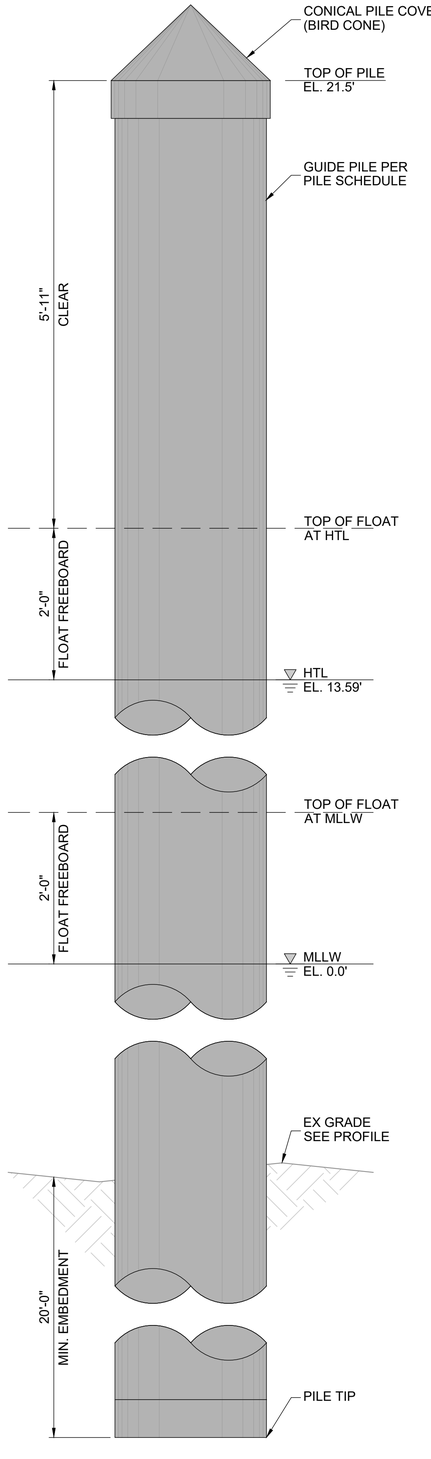
CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

PROPOSED FLOATING DOCK PROFILE

DATE: APR. 2026
PLAN NUMBER: C3.03
SHEET: 13 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETSHARED\PROJECTS\ACTIVE\2021\12\2112.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWINGS\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

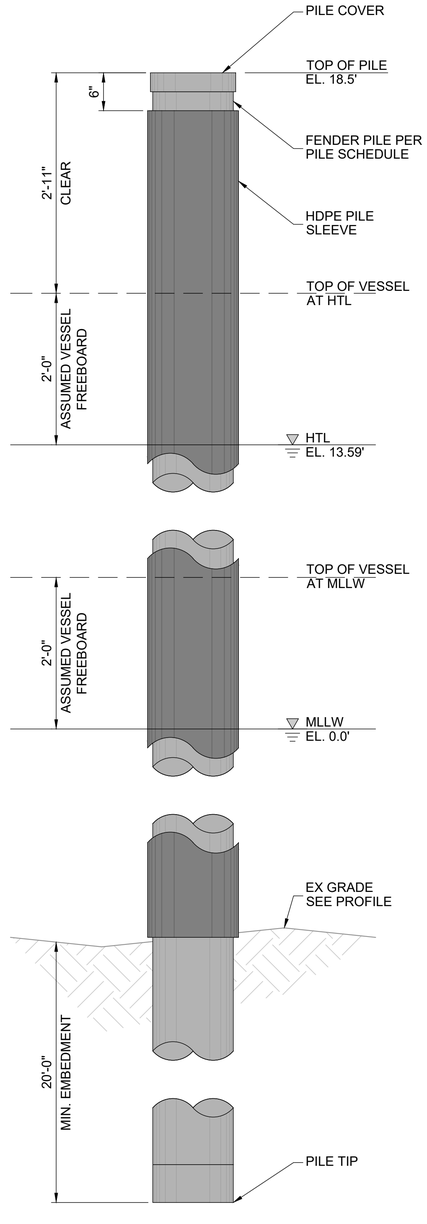


A C3.04

GUIDE PILE

1 1/2 0 1 2

SCALE IN FEET



B C3.04

FENDER PILE

1 1/2 0 1 2

SCALE IN FEET

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City of Gig Harbor
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CITY OF GIG HARBOR
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COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

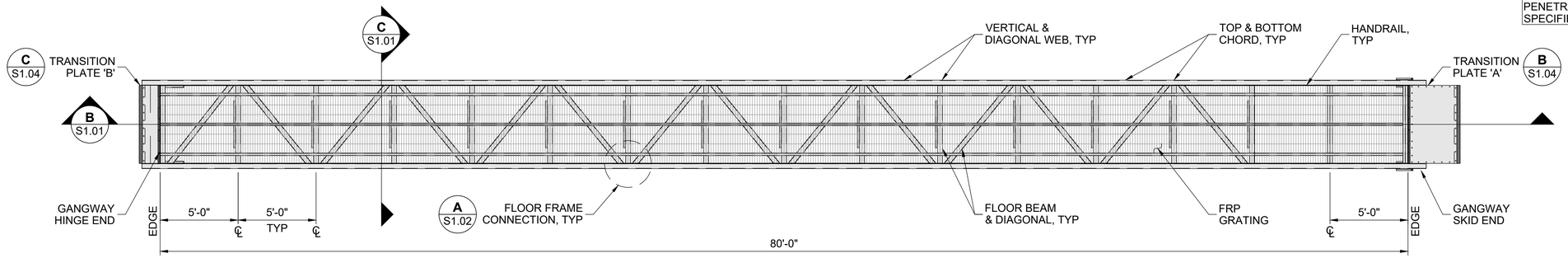
ISSUED FOR BID

PROPOSED FLOATING DOCK PILE DETAILS AND SCHEDULE

DATE: APR. 2026
PLAN NUMBER: C3.04
SHEET: 14 OF 39

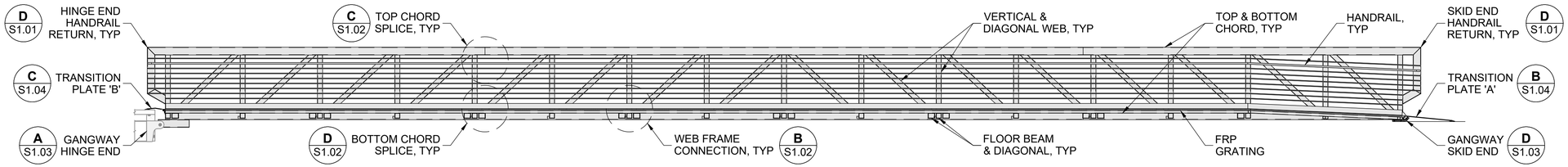
4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\121212.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\GCOGH - COMMERCIAL HOMEPORT - DWG

STRUCTURAL NOTES
ALL WELDS ARE COMPLETE JOINT PENETRATING WELDS UNLESS SPECIFIED OTHERWISE.



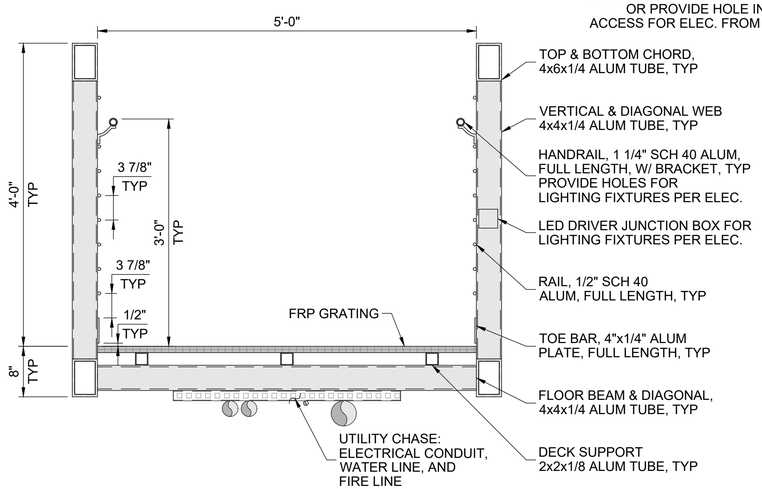
A C1.01 GANGWAY PLAN

4 2 0 4 8
SCALE IN FEET



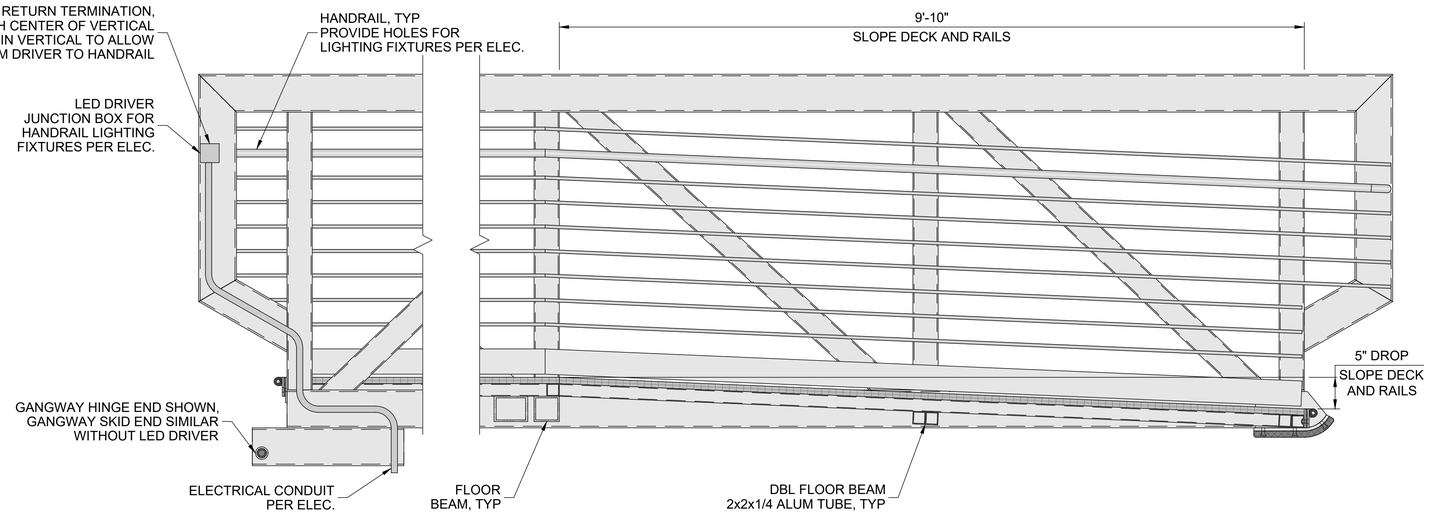
B S1.01 GANGWAY SECTION

4 2 0 4 8
SCALE IN FEET



C S1.01 GANGWAY SECTION

1 ½ 0 1 2
SCALE IN FEET



D S1.01 HANDRAIL RETURN

1 ½ 0 1 2
SCALE IN FEET

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COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

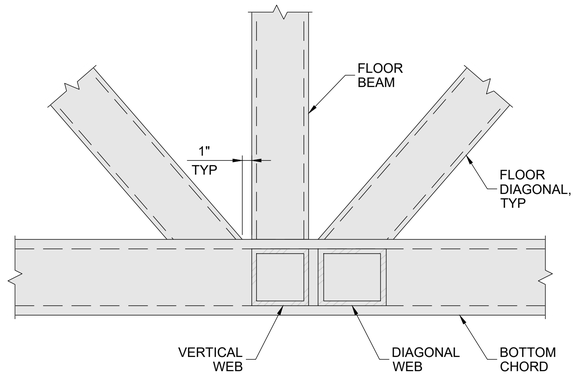
ISSUED FOR BID

GANGWAY PLAN, ELEVATION, AND SECTION

DATE: APR. 2026
PLAN NUMBER: S1.01
SHEET: 15 OF 39

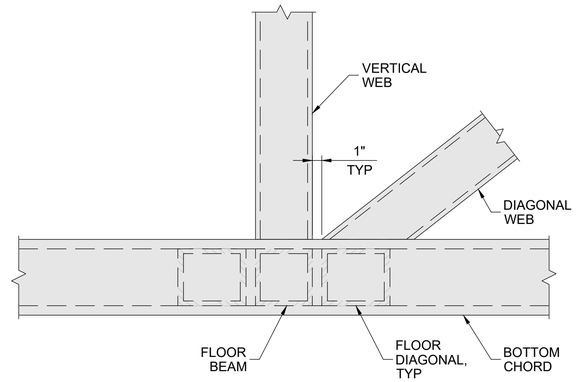
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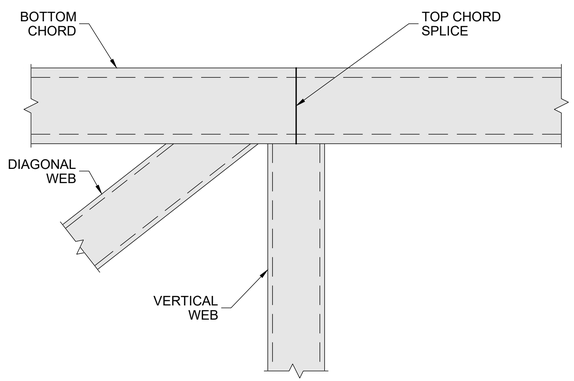
A S1.01 FLOOR FRAME CONNECTION
PLAN VIEW

3 0 3 6
SCALE IN INCHES

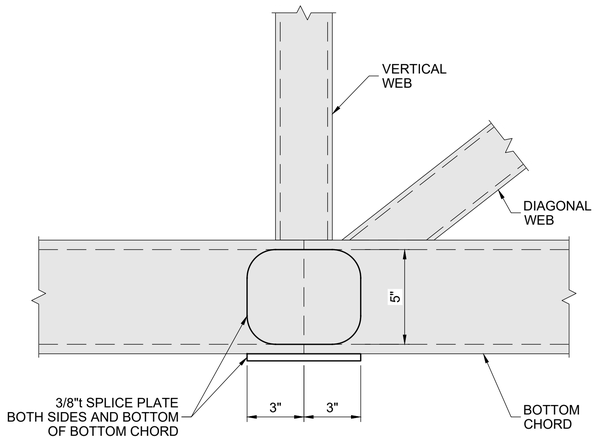


B S1.01 WEB FRAME CONNECTION
ELEVATION VIEW

3 0 3 6
SCALE IN INCHES



C S1.01 TOP CHORD SPLICE
3 0 3 6
SCALE IN INCHES



D S1.01 BOTTOM CHORD SPLICE
3 0 3 6
SCALE IN INCHES

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CITY OF GIG HARBOR
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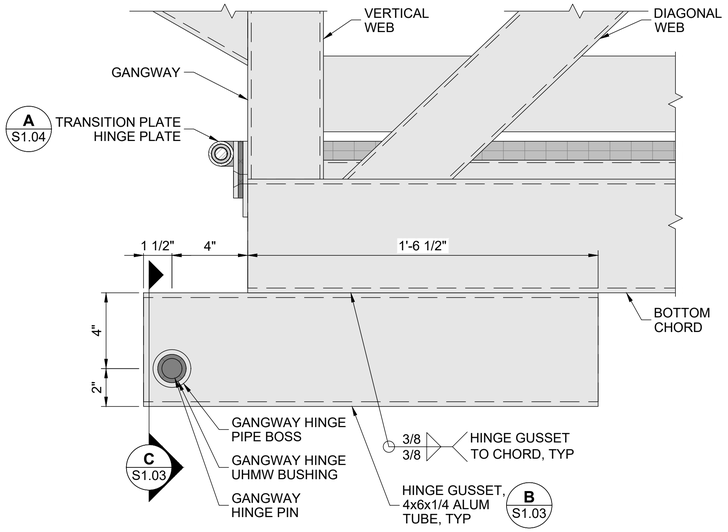
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GANGWAY DETAILS

DATE: APR. 2026
PLAN NUMBER: S1.02
SHEET: 16 OF 39

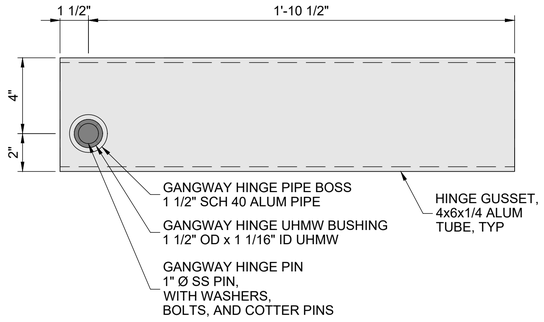
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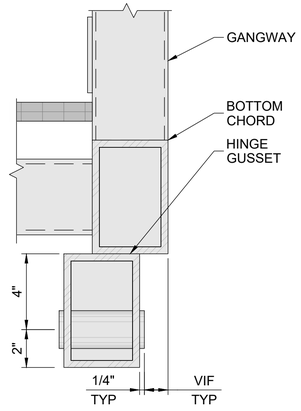
A S1.01 GANGWAY HINGE END

3 0 3 6
SCALE IN INCHES



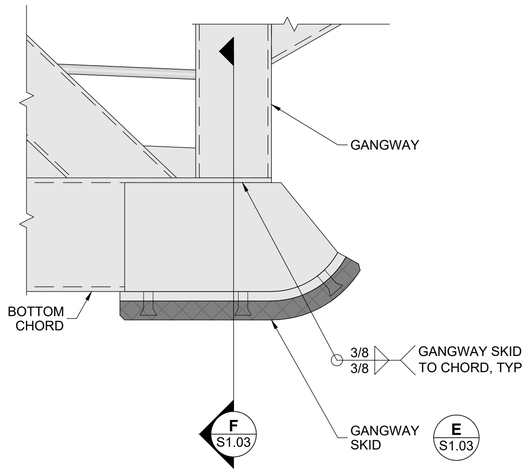
B S1.03 GANGWAY HINGE GUSSET DETAIL

3 0 3 6
SCALE IN INCHES



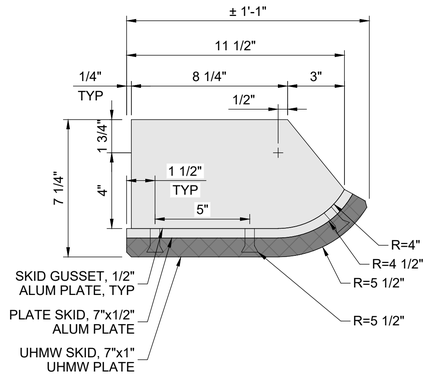
C S1.03 GANGWAY HINGE GUSSET SECTION

3 0 3 6
SCALE IN INCHES



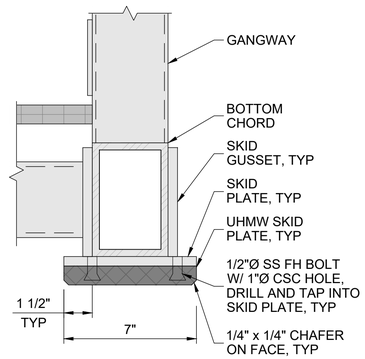
D S1.01 GANGWAY SKID END

3 0 3 6
SCALE IN INCHES



E S1.03 GANGWAY SKID GUSSET PLATE

3 0 3 6
SCALE IN INCHES



F S1.03 GANGWAY SKID SECTION

3 0 3 6
SCALE IN INCHES

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2026.04.14 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

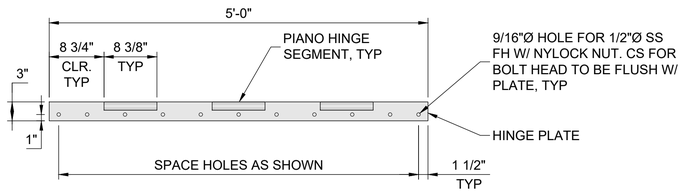
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GANGWAY
END DETAILS

DATE: APR. 2026
PLAN NUMBER: S1.03
SHEET: 17 OF 39

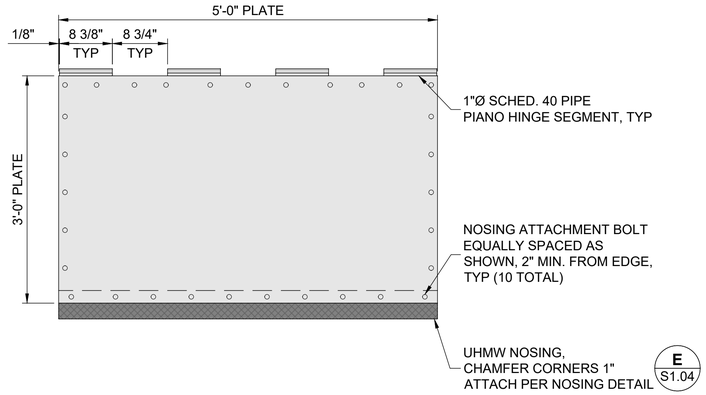
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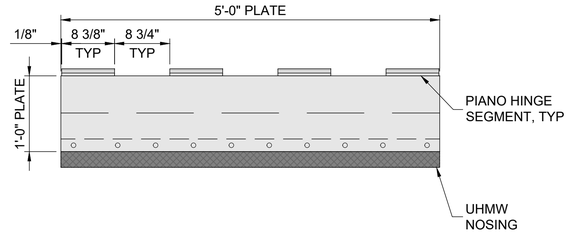
A TRANSITION PLATE HINGE PLATE
A S1.03

1 ½ 0 1 2
SCALE IN FEET



B TRANSITION PLATE 'A'
B S1.01

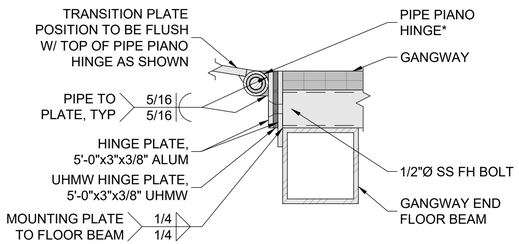
1 ½ 0 1 2
SCALE IN FEET



C TRANSITION PLATE 'B'
C S1.01

1 ½ 0 1 2
SCALE IN FEET

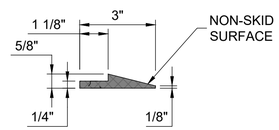
NOTE:
*PIPE PIANO HINGE
5/8"Ø x 5'-1" LONG SS HINGE PIN
w/ 1" O.D. x 11/16" I.D. x 5'-0" LONG UHMW SLEEVE.
DRILL EACH END OF SS ROD FOR 3/16"Ø SS COTTER PIN.
PROVIDE 1 1/2"Ø SS KEEPER WASHERS EA. END



D TRANSITION PLATE MOUNTING
D S1.04

3 0 3 6
SCALE IN INCHES

NOTE:
UHMW NOSING SHALL BE YELLOW IN COLOR, SOLID UHMW POLYETHYLENE PER SPECIFICATIONS. PROVIDE 3/16"Ø HOLE W/ 1 1/16"Ø x 5/16" DEEP CS AS SHOWN. ATTACH NOSING W/ #10 SS FLATHEAD PHILLIPS BOLT W/ "NYLOCK" NUT AND 1"Ø SS FENDER WASHER. TRIM BOLT AS REQ'D TO BE FLUSH W/ NUT. LOCATE BOLTS PER TRANSITION PLATE PLAN. CHAMFER BACK EDGE 1/8" AS SHOWN. FABRICATOR TO PROVIDE NON-SKID SURFACE ON TOP OF NOSING AS SHOWN. SUBMIT FOR APPROVAL.



E UHMW NOSING
E S1.04

3 0 3 6
SCALE IN INCHES

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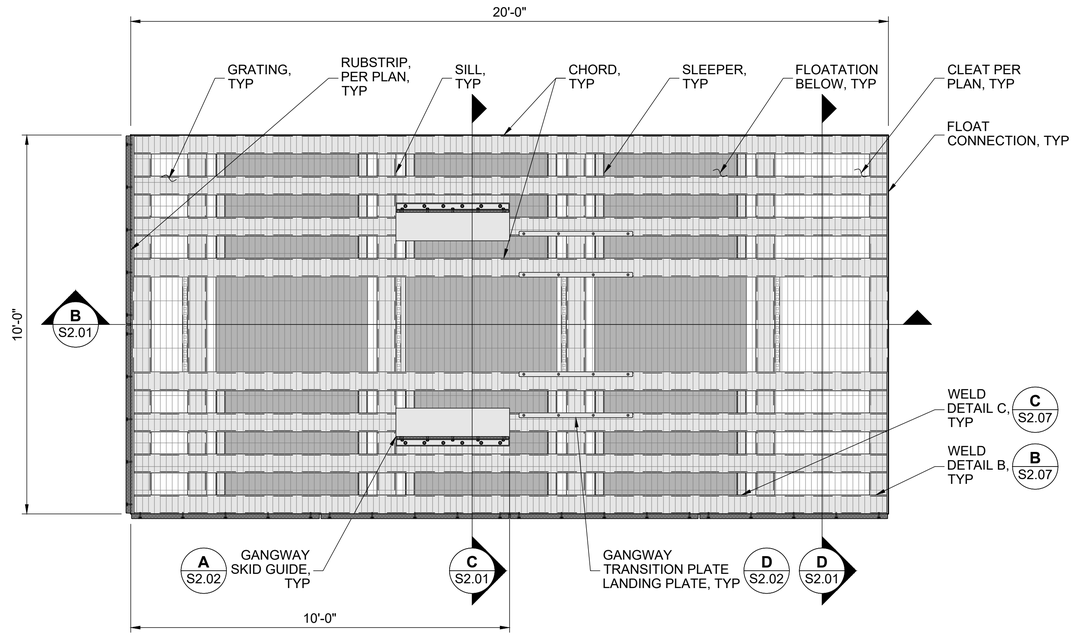
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GANGWAY TRANSITION PLATES

DATE: APR. 2026
PLAN NUMBER: S1.04
SHEET: 18 OF 39

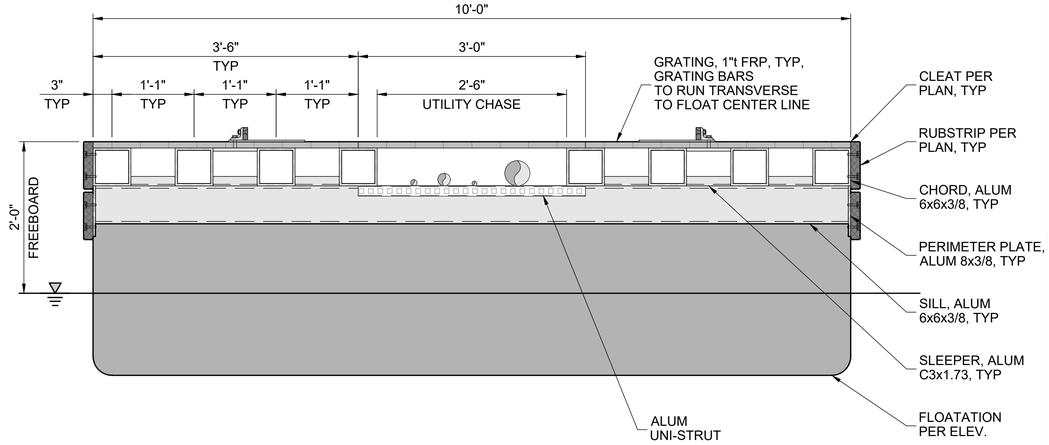
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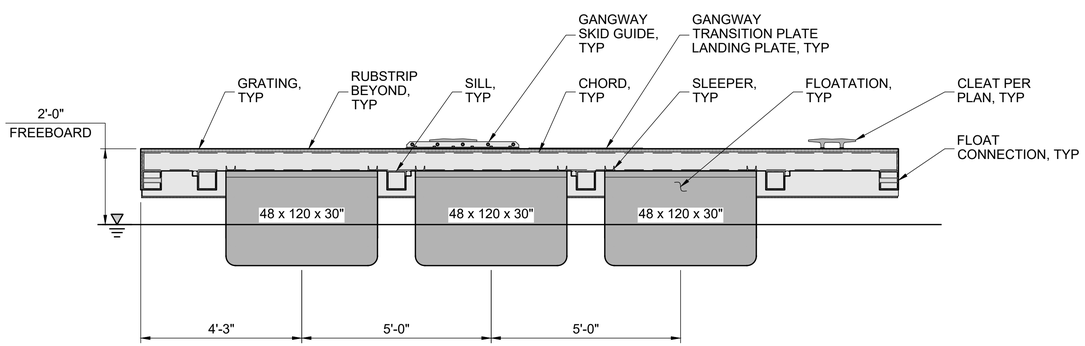
A S2.01 LANDING FLOAT PLAN

2 1 0 2 4
SCALE IN FEET



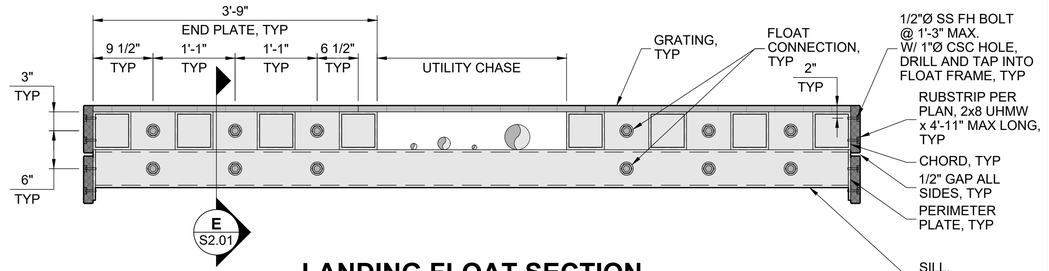
C S2.01 LANDING FLOAT SECTION

1 ½ 0 1 2
SCALE IN FEET



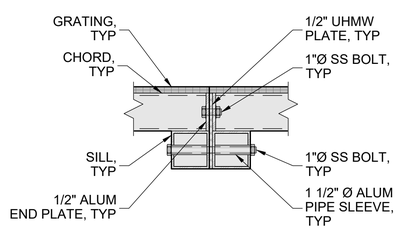
B S2.01 LANDING FLOAT SECTION

2 1 0 2 4
SCALE IN FEET



D S2.01 LANDING FLOAT SECTION AT FLOAT CONNECTION

1 ½ 0 1 2
SCALE IN FEET



E S2.01 FLOAT CONNECTION SECTION

1 ½ 0 1 2
SCALE IN FEET

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

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(UTILITY LOCATIONS ARE APPROX.)

#	DATE	BY	REVISION
0	2/13/26	SMR	ISSUED FOR BID 2026
1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING CONDITIONS AND NOTIFY ENGINEER IF CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN. CONTACT FACET PRIOR TO CONSTRUCTION.

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STEVEN MICHAEL ROBERTS — STATE OF WASHINGTON — 47721 — REGISTERED PROFESSIONAL ENGINEER
2026.04.10 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

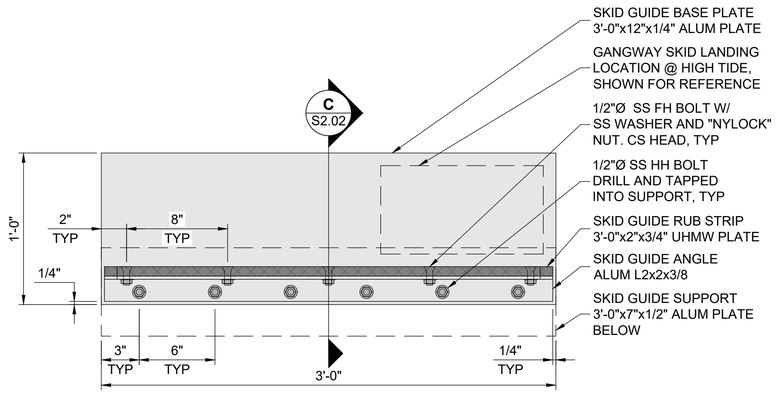
ISSUED FOR BID

FLOATING DOCK LANDING FLOAT

DATE: APR. 2026
PLAN NUMBER: S2.01
SHEET: 19 OF 39

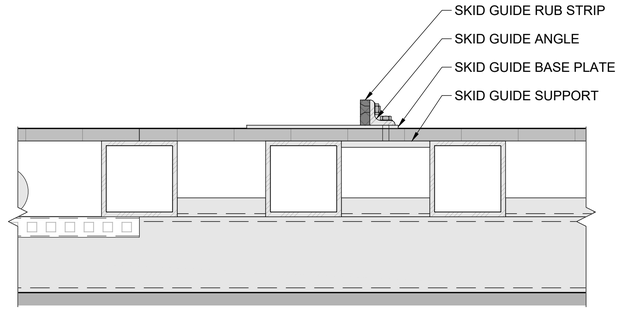
4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21212.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

STRUCTURAL NOTES
ALL WELDS ARE COMPLETE JOINT PENETRATING WELDS UNLESS SPECIFIED OTHERWISE.



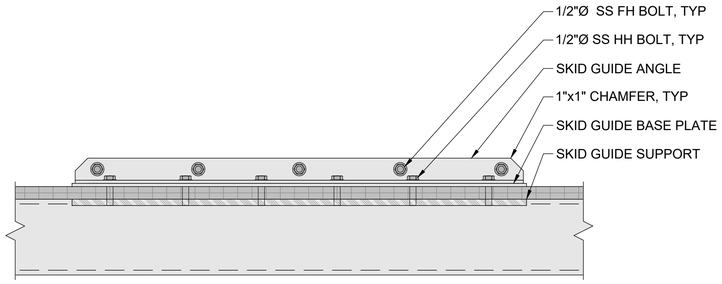
A S2.02 GANGWAY SKID GUIDE PLAN

½ ¼ 0 ½ 1
SCALE IN FEET



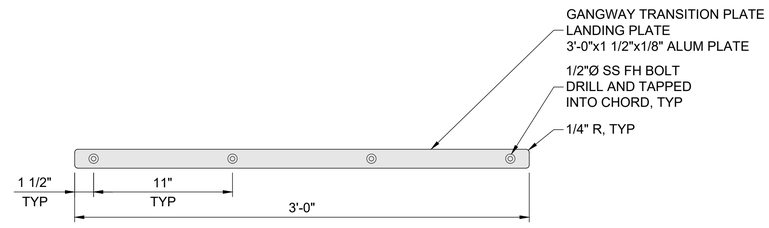
C S2.02 GANGWAY SKID GUIDE SECTION

½ ¼ 0 ½ 1
SCALE IN FEET



B S2.02 GANGWAY SKID GUIDE ELEVATION

½ ¼ 0 ½ 1
SCALE IN FEET



D S2.02 GANGWAY TRANSITION PLATE LANDING PLATE

½ ¼ 0 ½ 1
SCALE IN FEET

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STATE OF WASHINGTON
47721
REGISTERED
PROFESSIONAL ENGINEER
2026.04.14 14:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

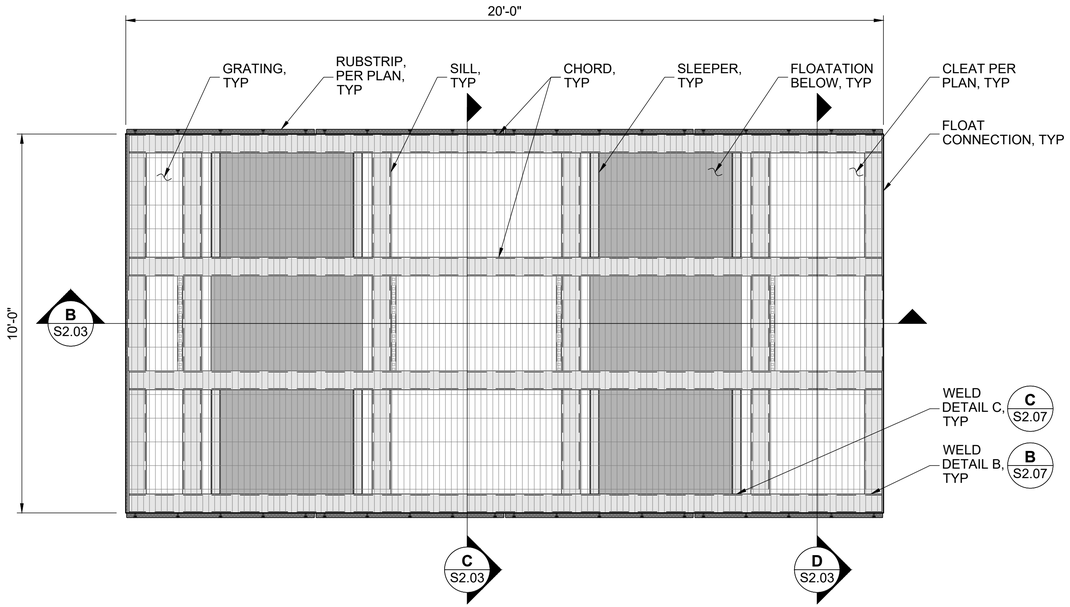
ISSUED FOR BID

FLOATING DOCK
LANDING
FLOAT
DETAILS

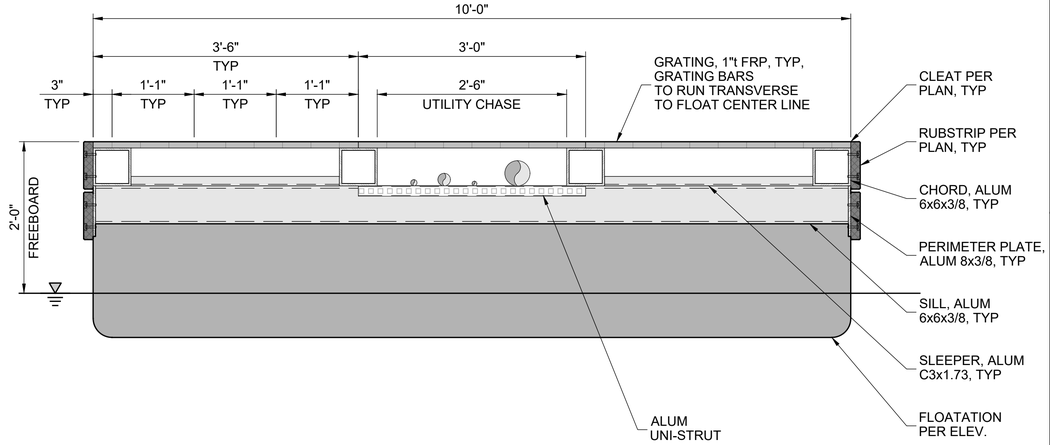
DATE: APR. 2026
PLAN NUMBER: S2.02
SHEET: 20 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21210164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

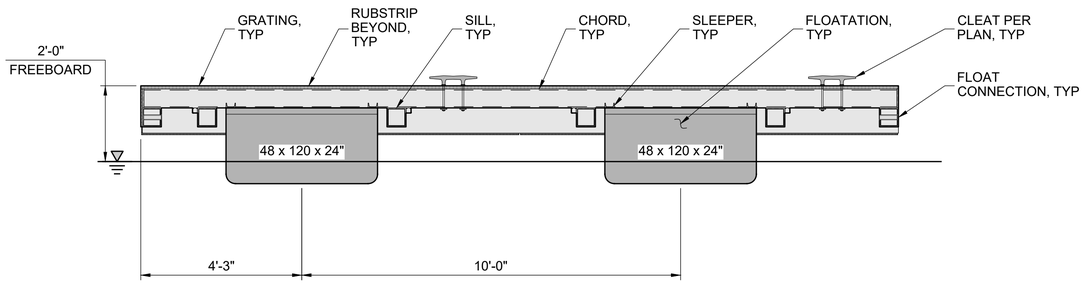
STRUCTURAL NOTES
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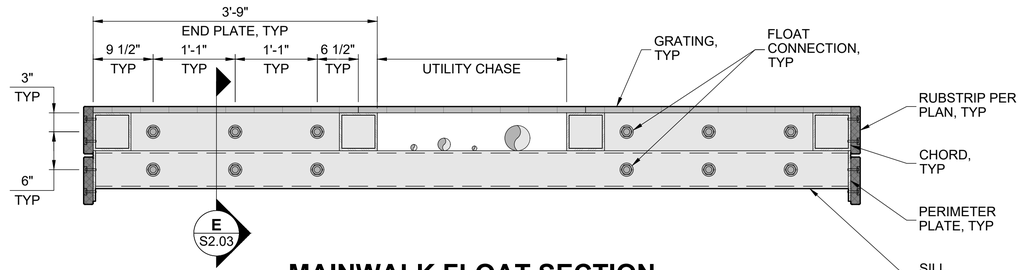
A MAINWALK FLOAT PLAN
A S2.03
SCALE IN FEET: 2 1 0 2 4



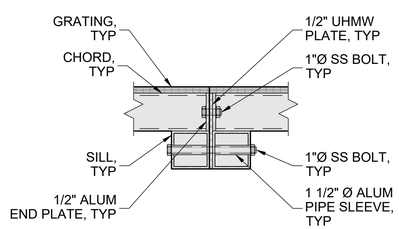
C MAINWALK FLOAT SECTION
C S2.03
SCALE IN FEET: 1 ½ 0 1 2



B MAINWALK FLOAT SECTION
B S2.03
SCALE IN FEET: 2 1 0 2 4



MAINWALK FLOAT SECTION AT FLOAT CONNECTION
D S2.03
SCALE IN FEET: 1 ½ 0 1 2



E FLOAT CONNECTION SECTION
E S2.03
SCALE IN FEET: 1 ½ 0 1 2

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2026.04.10 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

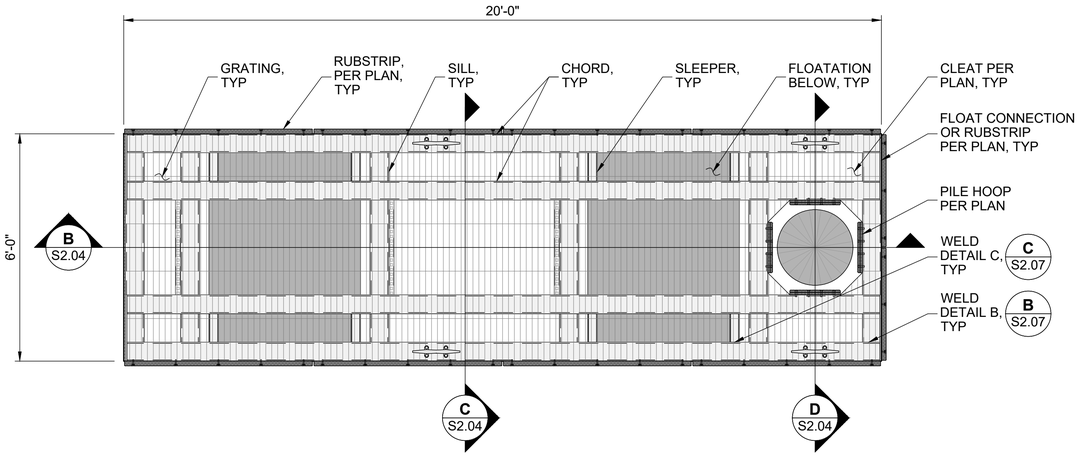
ISSUED FOR BID

FLOATING DOCK
MAINWALK
FLOAT

DATE: APR. 2026
PLAN NUMBER: S2.03
SHEET: 21 OF 39

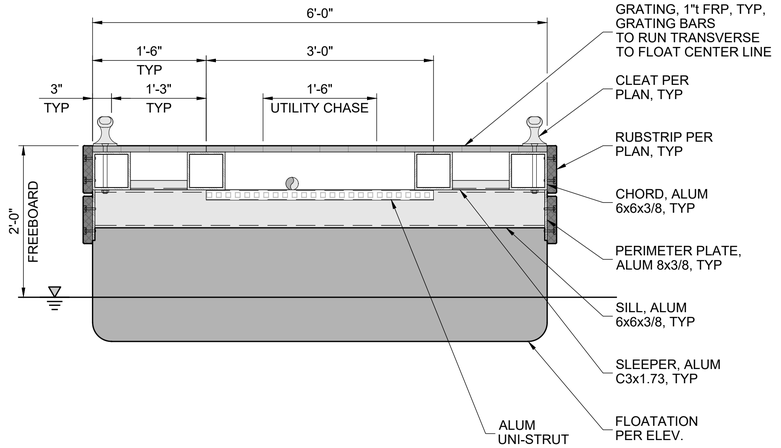
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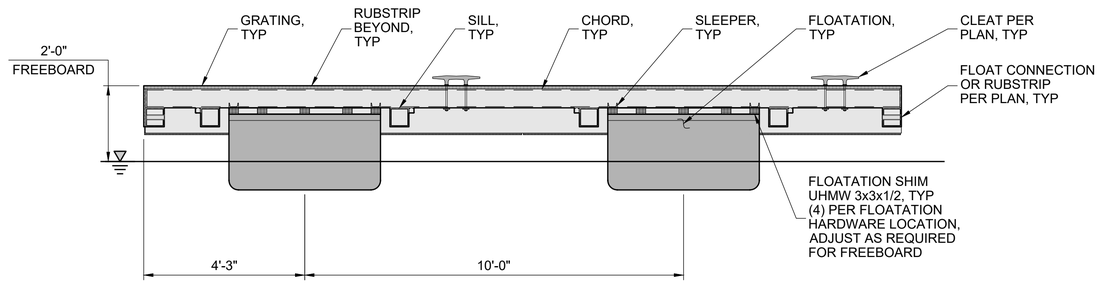
A S2.04 FINGER FLOAT PLAN

2 1 0 2 4
SCALE IN FEET



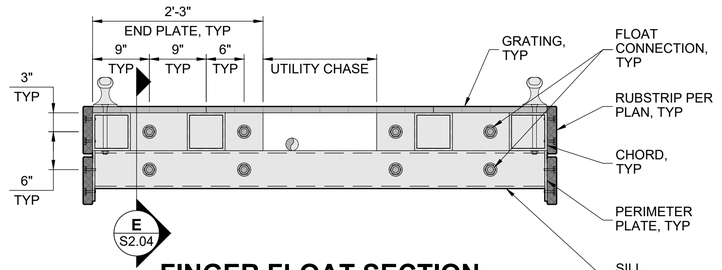
C S2.04 FINGER FLOAT SECTION

1 ½ 0 1 2
SCALE IN FEET



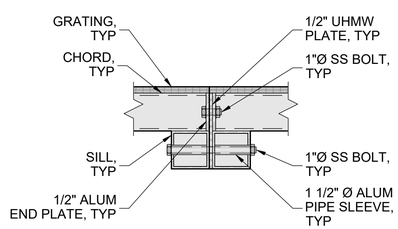
B S2.04 FINGER FLOAT SECTION

2 1 0 2 4
SCALE IN FEET



D S2.04 FINGER FLOAT SECTION AT FLOAT CONNECTION

1 ½ 0 1 2
SCALE IN FEET



E S2.04 FLOAT CONNECTION SECTION

1 ½ 0 1 2
SCALE IN FEET

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City of Gig Harbor
05.12.2026
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Steven M. Roberts 2026.04.10 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

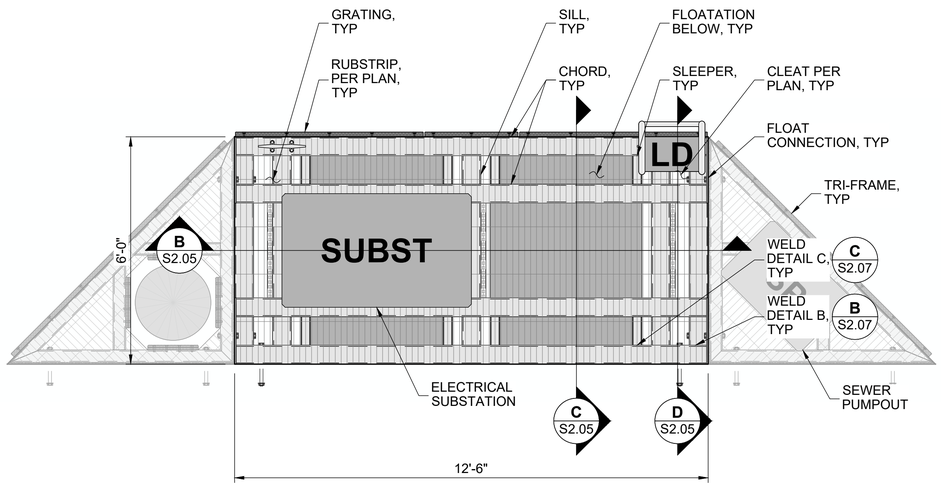
ISSUED FOR BID

FLOATING DOCK
FINGER
FLOAT

DATE: APR. 2026
PLAN NUMBER: S2.04
SHEET: 22 OF 39

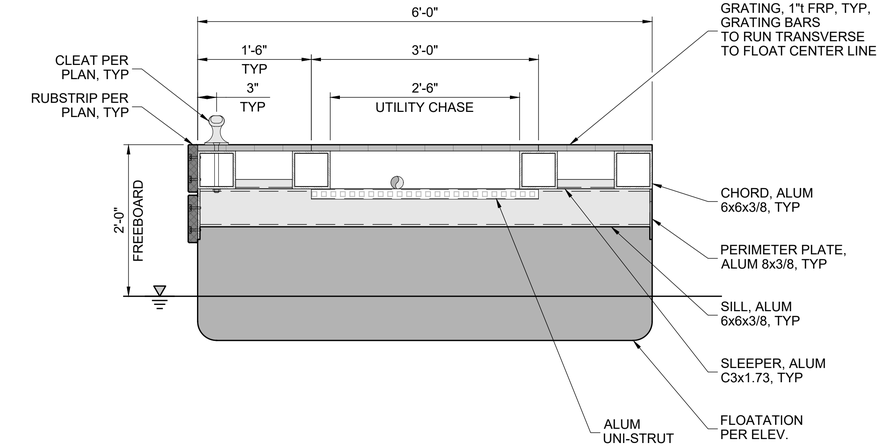
4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21210.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\GOGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

STRUCTURAL NOTES
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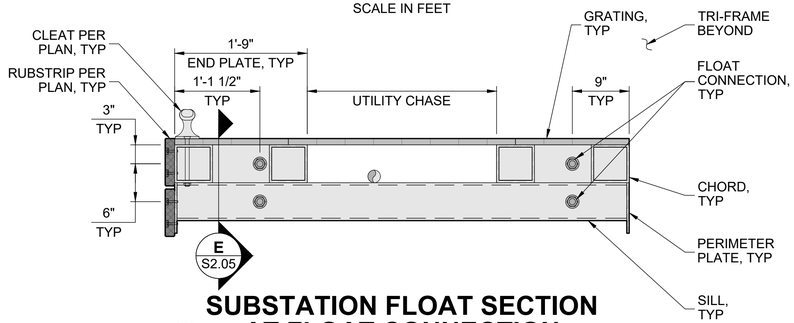
A S2.05 SUBSTATION FLOAT PLAN

2 1 0 2 4
SCALE IN FEET



C S2.05 SUBSTATION FLOAT SECTION

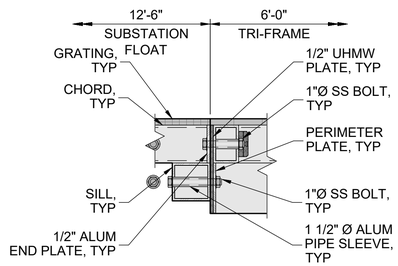
1 ½ 0 1 2
SCALE IN FEET



SUBSTATION FLOAT SECTION AT FLOAT CONNECTION

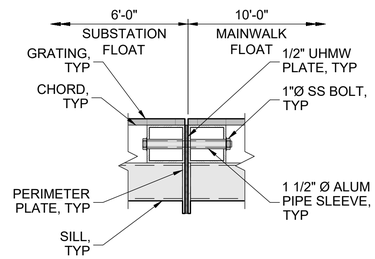
D S2.05

1 ½ 0 1 2
SCALE IN FEET



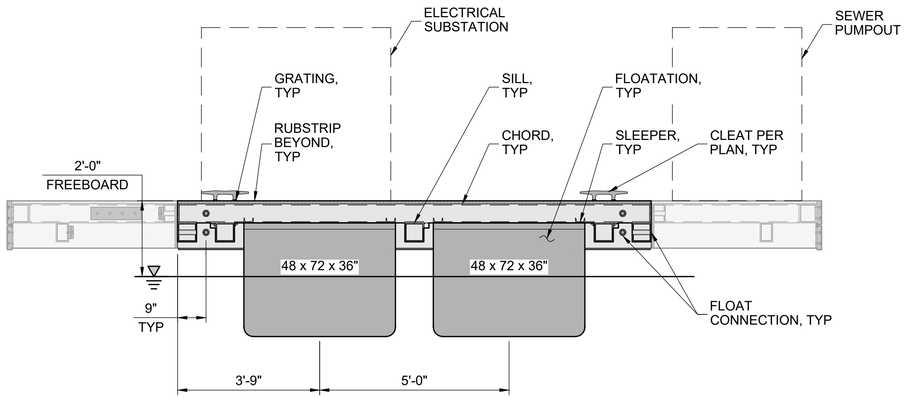
E S2.05 SUBSTATION FLOAT TO TRI-FRAME CONNECTION SECTION

1 ½ 0 1 2
SCALE IN FEET



F S2.05 SUBSTATION FLOAT TO LANDING CONNECTION SECTION

1 ½ 0 1 2
SCALE IN FEET



B S2.05 SUBSTATION FLOAT SECTION

2 1 0 2 4
SCALE IN FEET

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05.12.2026
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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
2026.04.10 14:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

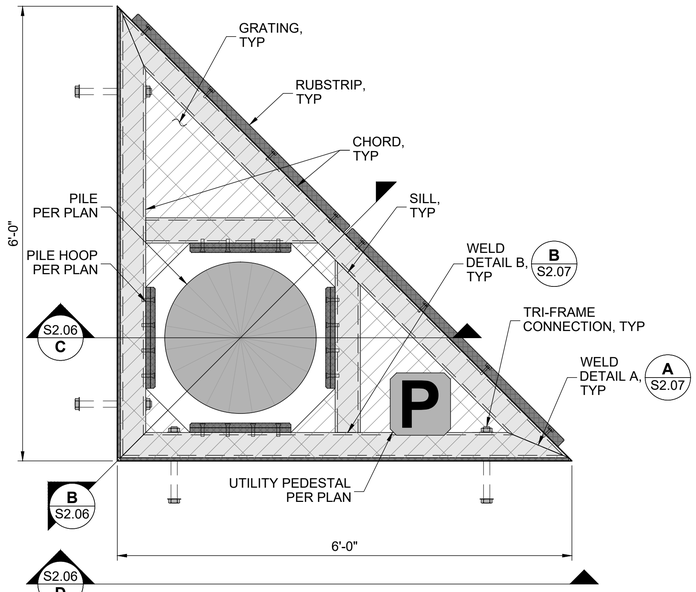
ISSUED FOR BID

FLOATING DOCK
SUBSTATION
FLOAT

DATE: APR. 2026
PLAN NUMBER: S2.05
SHEET: 23 OF 39

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STRUCTURAL NOTES
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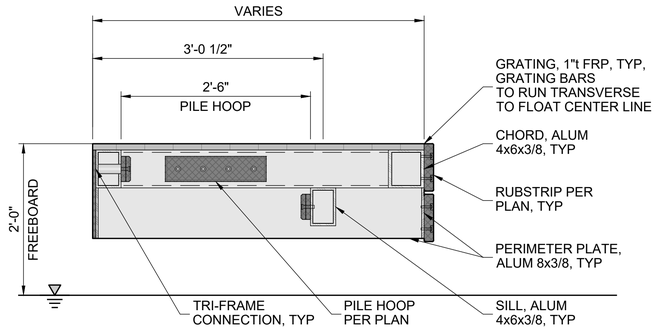


TRI-FRAME PLAN

A S2.06

1 ½ 0 1 2

SCALE IN FEET

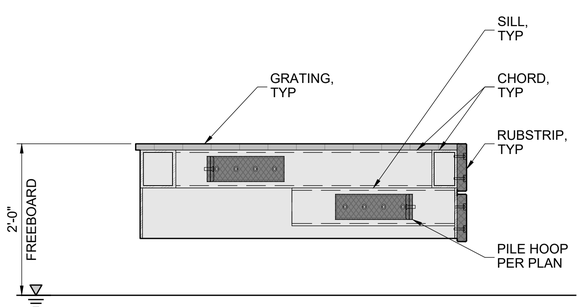


TRI-FRAME ELEVATION

C S2.06

1 ½ 0 1 2

SCALE IN FEET

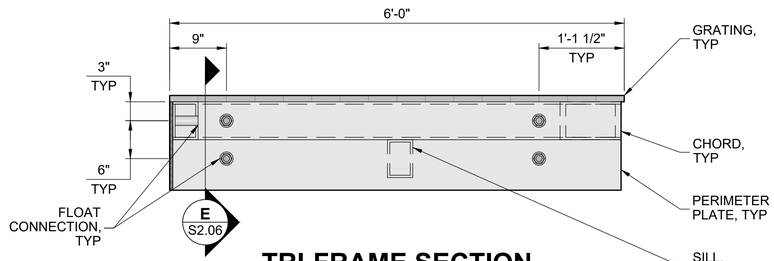


TRI-FRAME SECTION

B S2.06

1 ½ 0 1 2

SCALE IN FEET

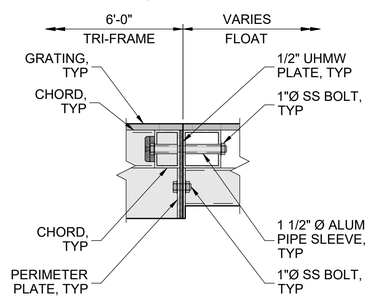


TRI-FRAME SECTION AT FLOAT CONNECTION

D S2.06

1 ½ 0 1 2

SCALE IN FEET



TRI-FRAME CONNECTION SECTION

E S2.06

1 ½ 0 1 2

SCALE IN FEET

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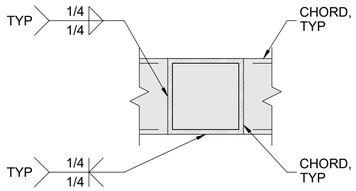
ISSUED FOR BID

FLOATING DOCK
TRI-FRAME

DATE: APR. 2026
PLAN NUMBER: S2.06
SHEET: 24 OF 39

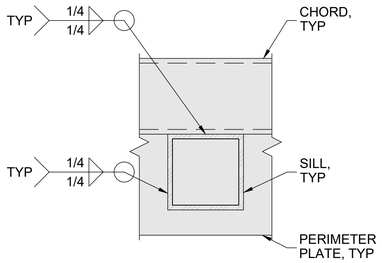
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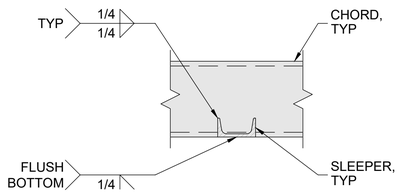
A S2.07 WELD CONNECTION A

SCALE IN FEET



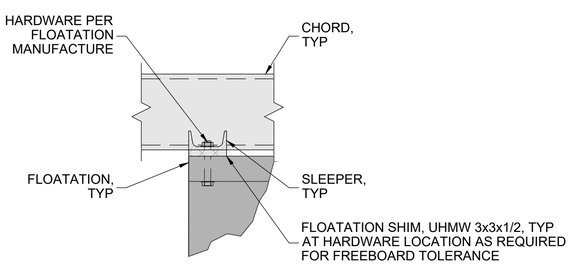
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SCALE IN FEET



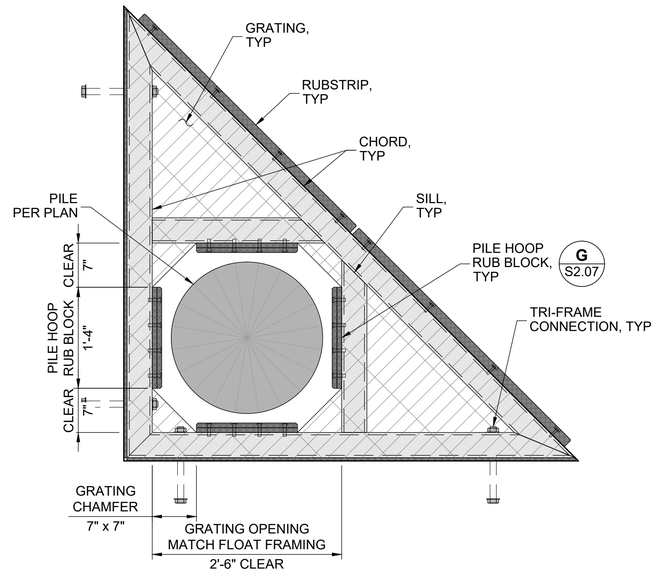
C S2.07 WELD CONNECTION C

SCALE IN FEET



D S2.07 FLOAT TUB CONNECTION

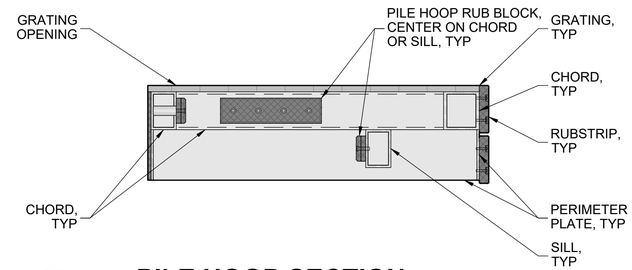
SCALE IN FEET



E S2.07 PILE HOOP PLAN

TRI-FRAME SHOWN, FINGER FLOAT SIMILAR.

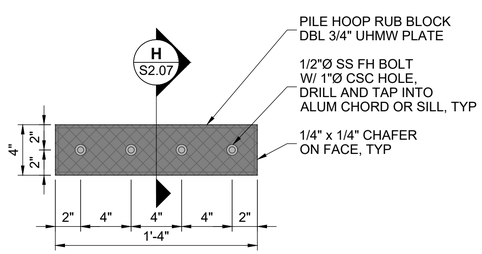
SCALE IN FEET



F S2.07 PILE HOOP SECTION

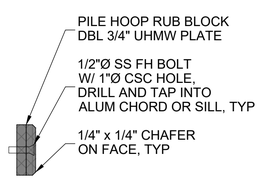
TRI-FRAME SHOWN, FINGER FLOAT SIMILAR.

SCALE IN FEET



G S2.07 PILE HOOP RUB BOCK

SCALE IN FEET



H S2.07 PILE HOOP RUB BOCK SECTION

SCALE IN FEET

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05.12.2026
PL-SDP-22-0005 et al

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(UTILITY LOCATIONS ARE APPROX.)

#	DATE	BY	REVISION
0	2/13/26	SMR	ISSUED FOR BID 2026
1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
47721
REGISTERED PROFESSIONAL ENGINEER
2026.04.10 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

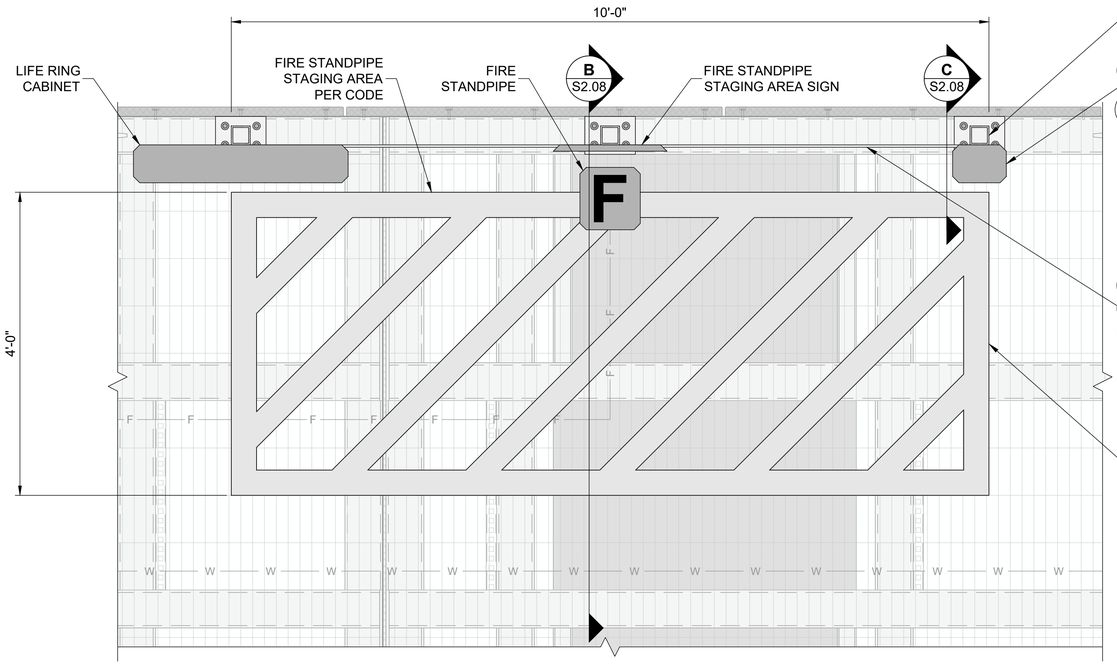
FLOATING DOCK WELD AND PILE HOOP DETAILS

DATE: APR. 2026
PLAN NUMBER: S2.07
SHEET: 25 OF 39

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FIRE DEPARTMENT CONNECTION (FDC) NOTES:

1. SHALL COMPLY WITH NFPA-13 STANDARD FOR PIPE SIZE AND MATERIAL.
2. ALL JOINTS SHALL BE RESTRAINED.
3. INSTALL DRAIN HOLE AND BALL DRIP TO ALLOW FOR PIPE DRAIN WHEN NOT IN USE.
4. A HYDROSTATIC PRESSURE TEST AT 225 FOR 2 HOURS AS PER NFPA STANDARDS IS REQUIRED TO BE WITNESSED BY FIRE MARSHALL.
5. A FINAL VELOCITY FLUSH OF PIPE AT A FLOW RATE OF 10 FEET PER SECOND. IT SHALL BE WITNESSES BY FIRE MARSHALL OR DESIGNER UNTIL PIPE IS CLEAR OF CONSTRUCTION DEBRIS.
6. ALL FIRE DEPARTMENT SHALL BE 30-36 INCHES ABOVE FLOAT DECK.
7. ALL FIRE DEPARTMENT CONNECTIONS SHALL HAVE "REDHEAD" OR EQUIVALENT STORZ COUPLING WITH CAP AND CHAIN. A 30° OR 45° ELBOW SHALL BE PROVIDED BETWEEN RISER PIPE AND STORZ COUPLING.
8. ALL FIRE DEPARTMENT CONNECTIONS RISERS SHALL BE PAINTED A STANDARD MEDIUM "RED" FROM FINISHED GRADE UP TO, BUT NOT INCLUDING, THE STORZ COUPLING ADAPTER.
9. ALL FIRE DEPARTMENT CONNECTIONS WILL BE ON PRIVATE PROPERTY. THE FDC'S WILL NOT BE LOCATED IN THE RIGHT-OF-WAY.
10. EXTENSION OF THE CLASS 1 MANUAL DRY STANDPIPE SYSTEM WILL REQUIRE SEPARATE PERMITTING BY THE FIRE MARSHAL PRIOR TO INSTALLATION. FINAL INSTALL WILL BE REQUIRED TO COMPLY WITH THE APPROVED STANDPIPE SYSTEM PERMITS.



A FIRE STANDPIPE PLAN

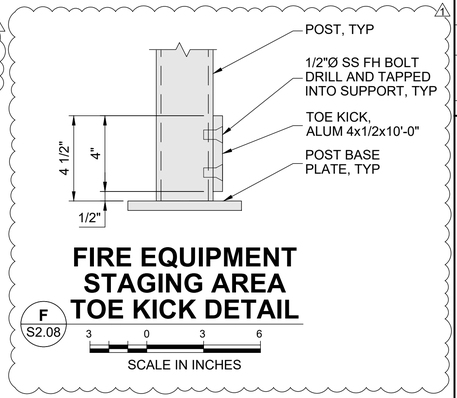
A S2.08

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SCALE IN FEET







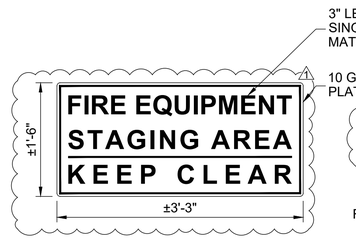
FIRE EQUIPMENT STAGING AREA TOE KICK DETAIL

F S2.08

3 0 3 6

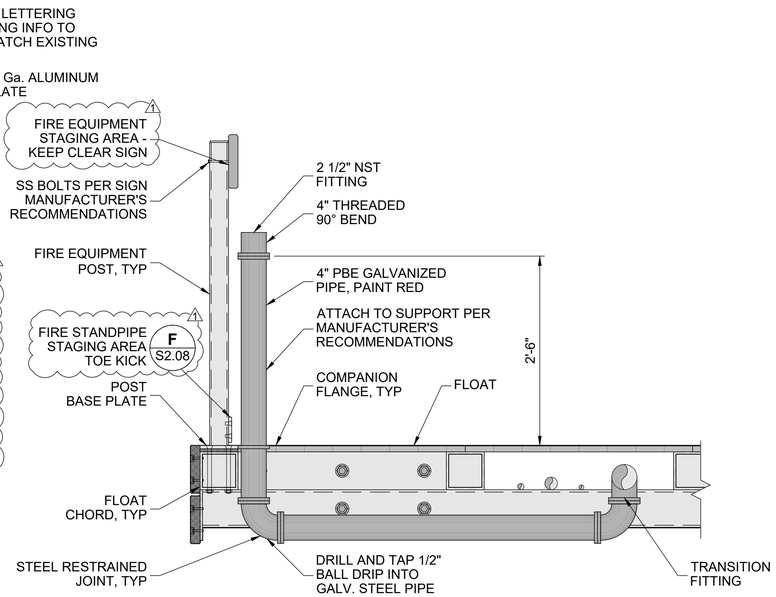
SCALE IN INCHES

STRUCTURAL NOTES
ALL WELDS ARE COMPLETE JOINT PENETRATING WELDS UNLESS SPECIFIED OTHERWISE.



SIGN NOTES:

1. PROVIDE SIGN AT EACH FIRE DEPARTMENT CONNECTION.
2. COLOR TO BE RED LETTERING ON A WHITE BACKGROUND.
3. SIGNAGE TO MATCH THAT OF EXISTING PARK SIGNS.
4. CITY OF GIG HARBOR SHALL APPROVE SIGNAGE PRIOR TO ORDERING.
5. FIRE MARSHAL'S OFFICE SHALL APPROVE SIGNAGE PRIOR TO ORDERING.
6. SIGNAGE SHALL READ: "FIRE EQUIPMENT STAGING AREA - KEEP CLEAR" PER GHMC IFC 3604.6.

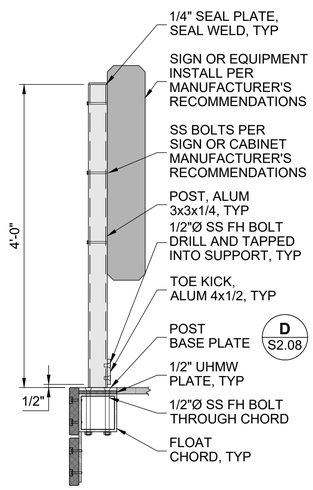


B FIRE STANDPIPE

B S2.08

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SCALE IN FEET

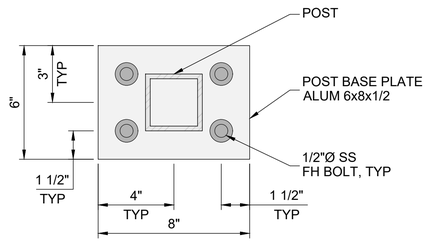


C FIRE EQUIPMENT POST

C S2.08

1 ½ 0 1 2

SCALE IN FEET

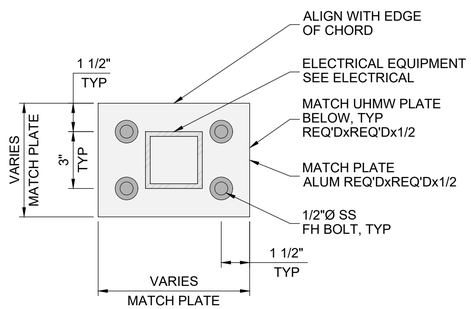


D FIRE EQUIPMENT POST BASE

D S2.08

3 0 3 6

SCALE IN INCHES



E ELECTRICAL EQUIPMENT BASE

E S2.08

3 0 3 6

SCALE IN INCHES

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05.12.2026
PL-SDP-22-0005 et al

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STEVEN MICHAEL ROBERTS — STATE OF WASHINGTON — 47121 — REGISTERED PROFESSIONAL ENGINEER

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

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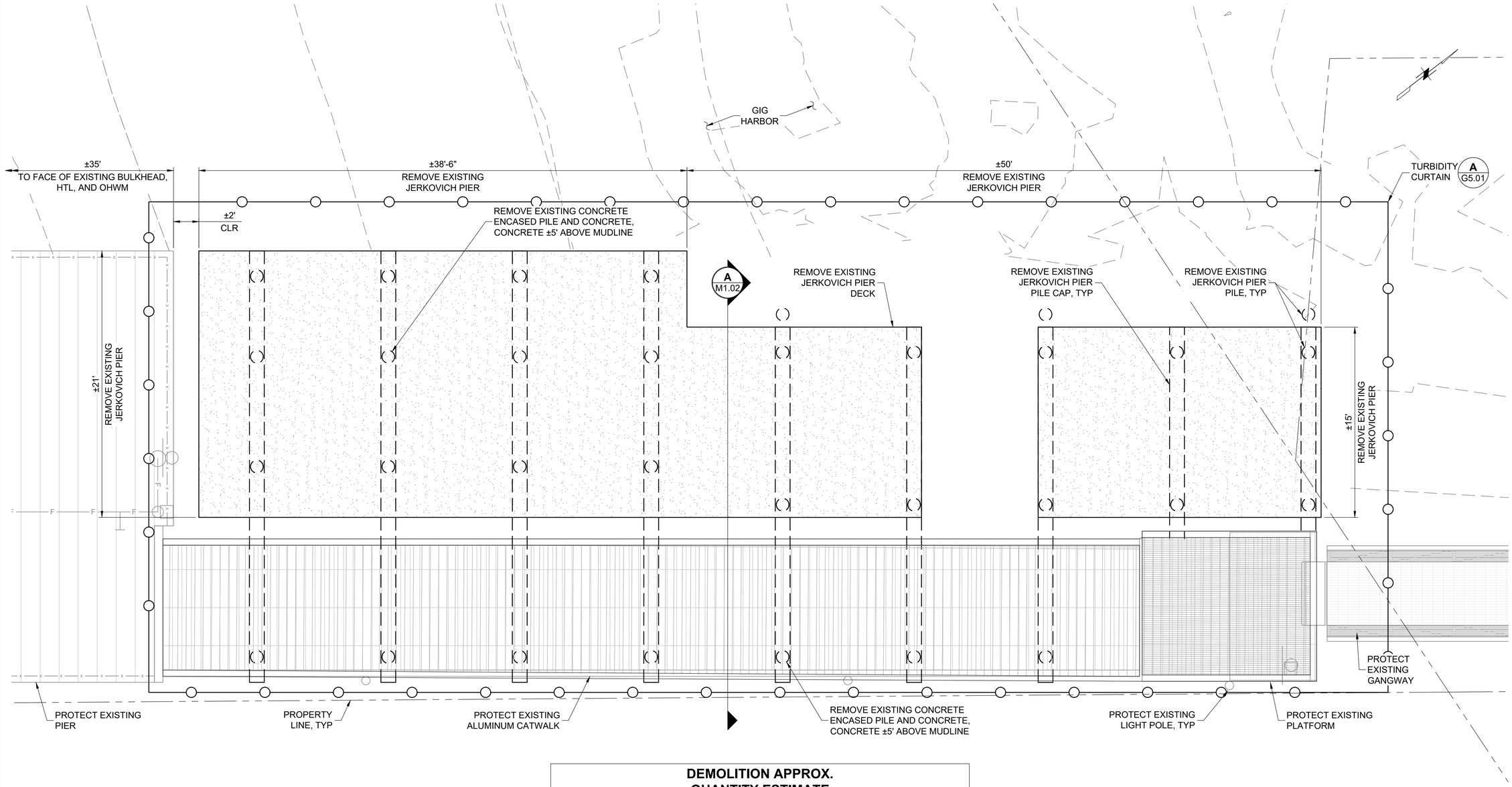
FLOATING DOCK UTILITY DETAILS

DATE: APR. 2026

PLAN NUMBER: S2.08

SHEET: 26 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACET\SHARED\PROJECTS\ACTIVE\2021\12\21120164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG



DEMOLITION APPROX. QUANTITY ESTIMATE		
3x10 TIMBER DECKING W/ 1 1/2 ASPHALT CEMENT CONCRETE LAYER	1,600	SF
2x8 TIMBER END BOARD	220	LF
3x10 TIMBER STRINGERS	1,600	LF
14"x14" TIMBER PILE CAP	280	LF
12"Ø TIMBER PILE APPROXIMATE 35-40' LENGTH	32	EA

JERKOVICH PIER MITIGATION SITE OVERWATER STRUCTURE AND PILE REMOVAL PLAN

4 2 0 4 8

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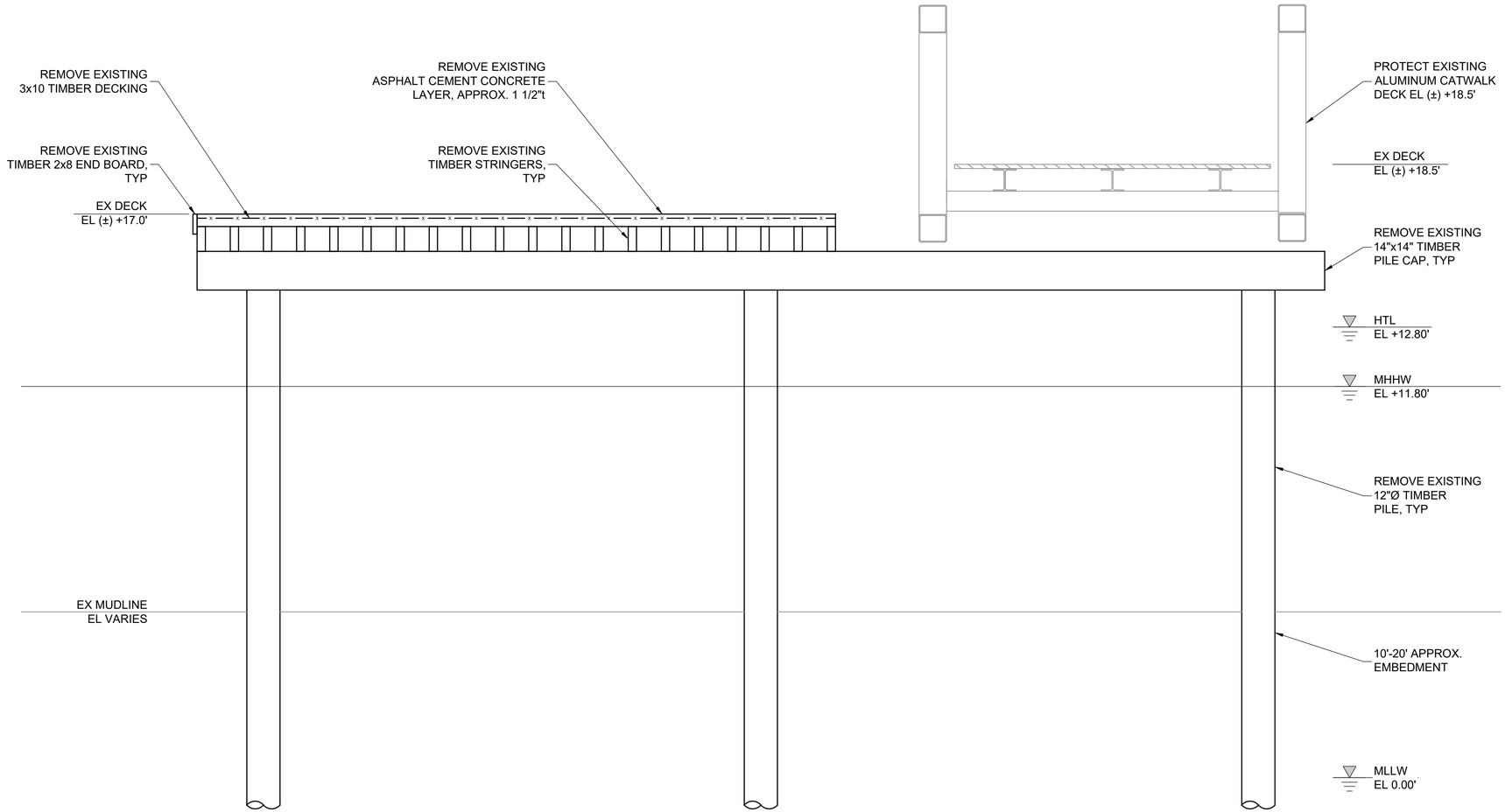
JERKOVICH PIER MITIGATION STRUCTURE AND PILE REMOVAL PLAN

DATE: APR. 2026

PLAN NUMBER: R1.01

SHEET: 27 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\2112.0164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG



EXISTING AND DEMOLITION SECTION

A / R1.02

2 1 0 2 4

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JERKOVICH PIER MITIGATION STRUCTURE AND PILE REMOVAL SECTION

DATE: APR. 2026

PLAN NUMBER: R1.02

SHEET: 28 OF 39

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PROJECT INFORMATION

PROJECT ADDRESS

ANCICH WATERFRONT PARK - ANCICH PIER
3589 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

ANCICH WATERFRONT PARK - JERKOVICH PIER MITIGATION SITE
3525 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 5970000244 - WM-ZONING (HR)
SECTION 05 TOWNSHIP 21N RANGE 02E

MARITIME PIER - MARITIME PIER MITIGATION SITE
3003 HARBORVIEW DR, GIG HARBOR, WA 98332
PARCEL: 0221081187 - WM-ZONING (HR)
SECTION 08 TOWNSHIP 21N RANGE 02E

PROJECT NOTES

NO PROPOSED UPLAND SITE GRADING OR EARTHWORK.

SEE SITE SPECIFIC GEOTECH REPORT BY PND ENGINEERS SEPTEMBER 2016.

PROJECT IS IN SHORELINE JURISDICTION.

CONTRACTOR TO PROTECT EXPOSED SOILS DURING CONSTRUCTION.

ALL EQUIPMENT ACCESS WILL BE VIA BARGE.

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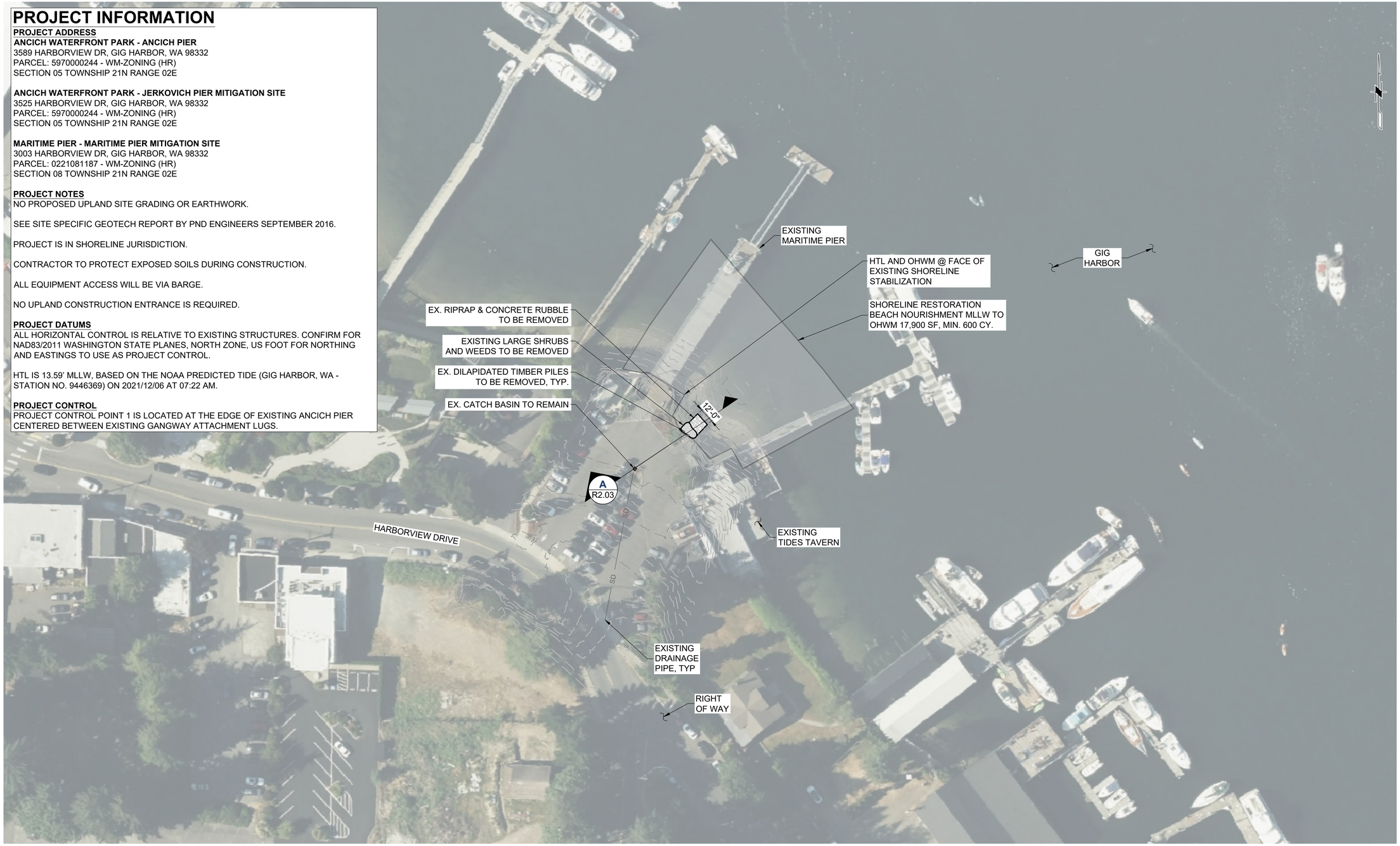
PROJECT DATUMS

ALL HORIZONTAL CONTROL IS RELATIVE TO EXISTING STRUCTURES. CONFIRM FOR NAD83/2011 WASHINGTON STATE PLANES, NORTH ZONE, US FOOT FOR NORTHING AND EASTINGS TO USE AS PROJECT CONTROL.

HTL IS 13.59' MLLW, BASED ON THE NOAA PREDICTED TIDE (GIG HARBOR, WA - STATION NO. 9446369) ON 2021/12/06 AT 07:22 AM.

PROJECT CONTROL

PROJECT CONTROL POINT 1 IS LOCATED AT THE EDGE OF EXISTING ANCICH PIER CENTERED BETWEEN EXISTING GANGWAY ATTACHMENT LUGS.



EXISTING MARITIME PIER MITIGATION SITE
STORMWATER OUTFALL AND BEACH RESTORATION PLAN

40 20 0 40 80
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City of Gig Harbor
05.12.2026
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MARITIME PIER MITIGATION OUTFALL AND RESTORATION PLAN

DATE: APR. 2026
PLAN NUMBER: R2.01
SHEET: 29 OF 39

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PARCEL: 5970000244 - WM-ZONING (HR)
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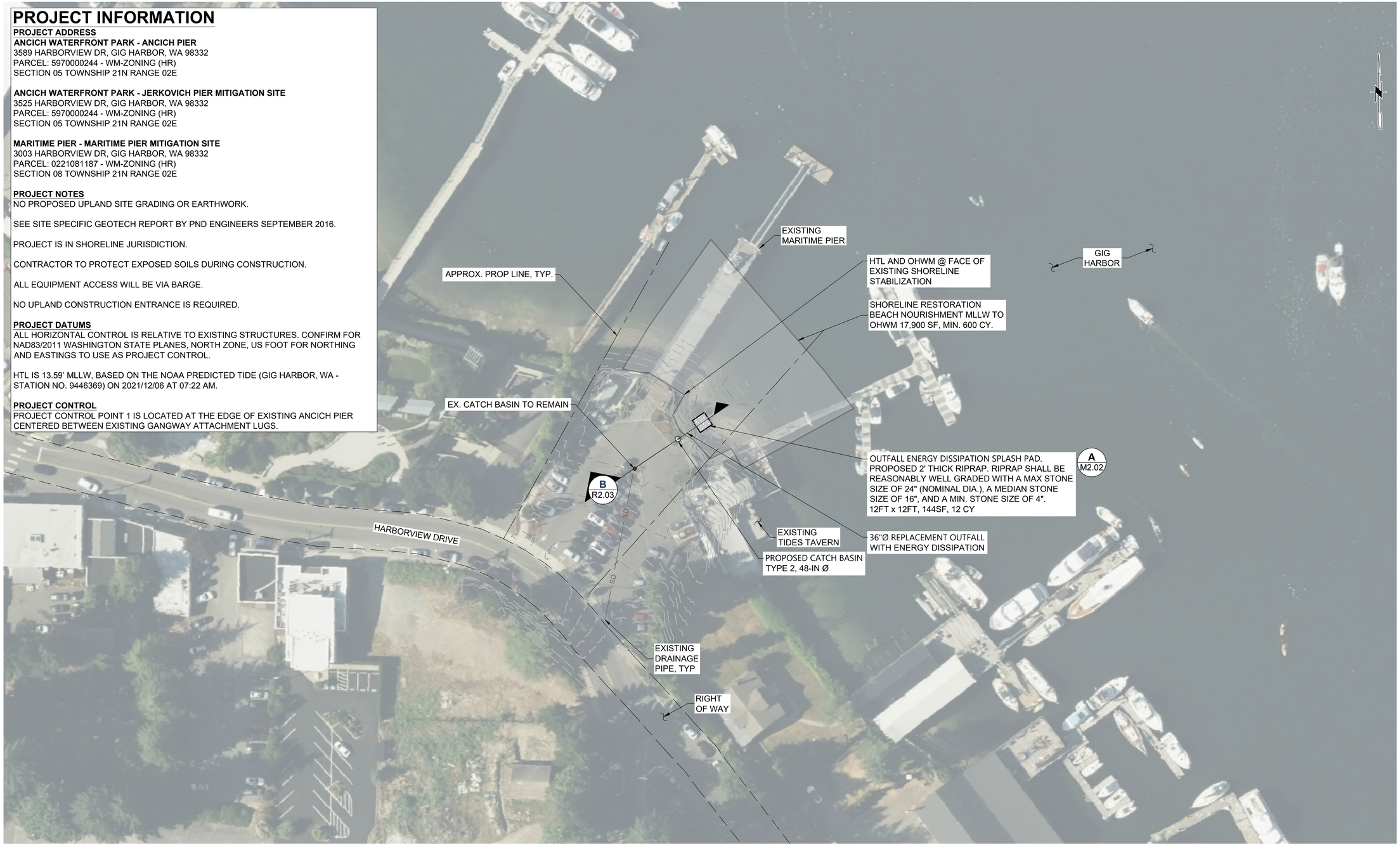
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STORMWATER OUTFALL AND BEACH RESTORATION PLAN

40 20 0 40 80
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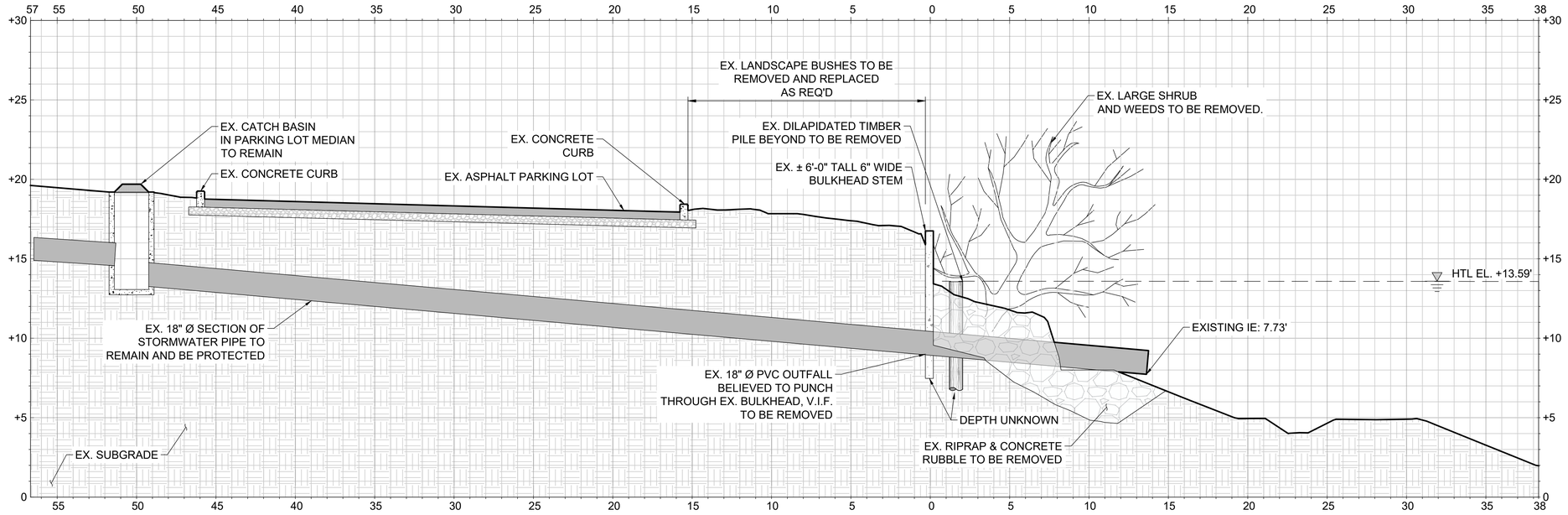
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MARITIME PIER MITIGATION OUTFALL AND RESTORATION PLAN

DATE: APR. 2026
PLAN NUMBER: R2.02
SHEET: 30 OF 39

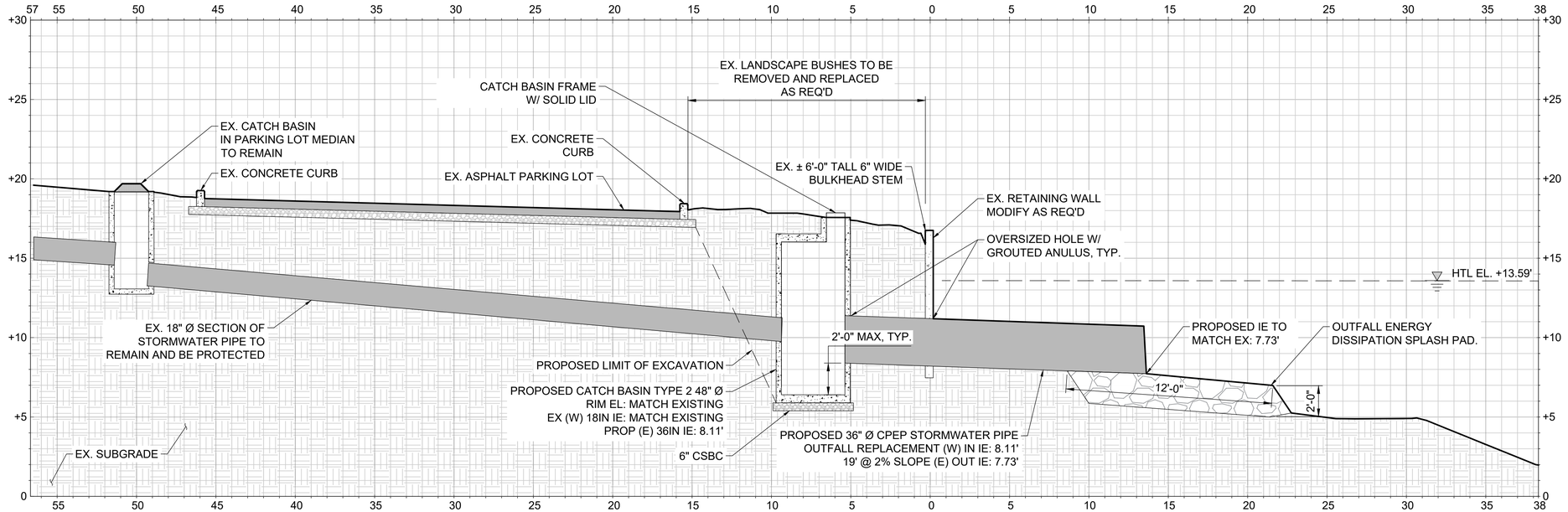
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EXISTING STORMWATER OUTFLOW SECTION A

4 2 0 4 8

SCALE IN FEET



PROPOSED STORMWATER OUTFLOW SECTION B

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SCALE IN FEET

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City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

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#	DATE	BY	REVISION
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1	4/10/26	SMR	ISSUED FOR BID 2026 REV 1

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. FACET CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, AND ALL OTHER EXISTING CONDITIONS. ALL UTILITIES AND CONDITIONS ARE NOT AS SHOWN AND/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT FACET PRIOR TO CONSTRUCTION.

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STEVEN MICHAEL ROBERTS
STATE OF WASHINGTON
47721
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PROFESSIONAL ENGINEER
2026.04.14 11:38:47 -7'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

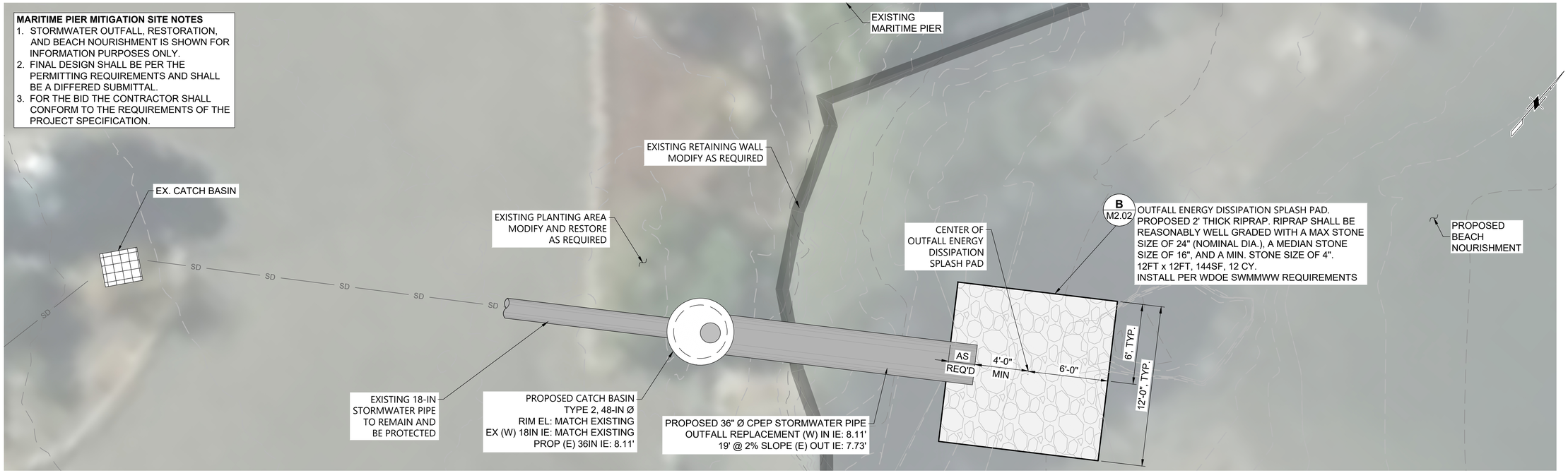
EXISTING AND PROPOSED MARITIME OUTFLOW SECTIONS

DATE: APR. 2026
PLAN NUMBER: R2.03
SHEET: 31 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12121210164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\COGH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

MARITIME PIER MITIGATION SITE NOTES

1. STORMWATER OUTFALL, RESTORATION, AND BEACH NOURISHMENT IS SHOWN FOR INFORMATION PURPOSES ONLY.
2. FINAL DESIGN SHALL BE PER THE PERMITTING REQUIREMENTS AND SHALL BE A DIFFERED SUBMITTAL.
3. FOR THE BID THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE PROJECT SPECIFICATION.



MARITIME PIER MITIGATION SITE STORMWATER OUTFALL PLAN

A M2.02

4 2 0 4 8

SCALE IN FEET

Approved
City of Gig Harbor
05.12.2026
PL-SDP-22-0005 et al

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STEVEN MICHAEL ROBERTS — STATE OF WASHINGTON — 47721 — REGISTERED PROFESSIONAL ENGINEER

2026.04.10 11:38:47 -07'00'

CITY OF GIG HARBOR
ANCICH WATERFRONT PARK
COMMERCIAL FISHING HOMEPORT
PROPOSED PIER IMPROVEMENTS

ISSUED FOR BID

MARITIME PIER MITIGATION OUTFALL AND RESTORATION DETAILS

DATE: APR. 2026

PLAN NUMBER: R2.04

SHEET: 30 OF 39

4/10/26 - DREWMCDONALD - \\EGNYTEDRIVE\FACETISHARED\PROJECTS\ACTIVE\2021\12\21210164.00 GIG HARBOR COMMERCIAL HOMEPORT\DWG\DRAWING\CO\GH - COMMERCIAL HOMEPORT - DRAWINGS IFB 2026 REV 1.DWG

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 25

TECHNICAL MEMORANDUM

TO: Michelle Thomas, Planning Technician – City of Gig Harbor

FROM: Chad Wallin, Project Biologist – Grette Associates, a division of Farallon Consulting, L.L.C.

DATE: April 27, 2026

RE: CITY OF GIG HARBOR – COMMERCIAL HOMEPORT
THIRD-PARTY CRITICAL AREAS REVIEW
FARALLON PN: 3353-006.001 TASK 2

INTRODUCTION

The City of Gig Harbor (City) contracted with Grette Associates (Grette), a division of Farallon Consulting, L.L.C., to assist in the review of the Critical Areas Report, Revision 2 (the "Report"; dated January, 2026) that was prepared by Facet in support of the Commercial Fishing Homeport Project located at the City's Ancich Waterfront Park (Pierce County parcel 5970000244). The Report was prepared to address the regulations defined in the City's Shoreline Master Program (GHSMP; dated January 28, 2022). This Report also contains appendices that include a proposed Mitigation Plan (Revision 6), a Macrovegetation Survey, Biological Assessment (BA), and National Marine Fisheries Service's (NMFS) Biological Opinion (BO). These appendices appear to have been prepared to support federal project authorization.

According to the Report, the project will include the installation of a primary dock with 7 finger floats, 16 24-inch steel pile, an 80-foot aluminum gangway, and 4 12-inch steel pile (Table 1). Total overwater coverage is approximately 6,411 square feet. The floats and gangway will include 100 percent grated decking (45 percent functional) and all pile work is anticipated to occur using a vibratory hammer with impact proofing.

Per the Report, the National Oceanic and Atmospheric Administration's (NOAA) Puget Sound Nearshore Conservation Calculator was used to determine the amount of conservation credit needed to offset project impacts to species listed under the Endangered Species Act. Proposed onsite mitigation to address project impacts include the removal of a dilapidated

pier (Jerkovich Pier) that is approximately 1,558 square feet in size along with the removal of the associated 32 12-inch creosote timber pile. Additional mitigation will be provided through offsite shoreline restoration at an existing stormwater outfall within Gig Harbor Bay that includes placement of approximately 600 cubic yards of beach nourishment material. Remaining project impacts are proposed to be offset through the purchase of conservation credits from the Puget Sound Partnership (PSP).

Table 1. Project Details

Project Element	Size	Quantity
Primary Dock	10 ft. by 280 ft.	1
Finger Floats	6 ft. by 60 ft.	6
Finger Float	6 ft. by 80 ft.	1
Steel Pile	24 in.	16
Steel Pile	12 in.	4
Aluminum Gangway	6 ft. by 80 ft.	1

REVIEW METHODS

SITE REVIEW

Grette completed a site visit on March 18, 2026, to assess the project site for consistency with the information contained in the Report. All publicly accessible, upland areas within 300 feet of the proposed project were evaluated.

DOCUMENT REVIEW

A Grette biologist conducted a thorough review of the Report submitted to the City. The review focused on verifying the accuracy of the descriptions within the documents and compliance with the current version of the GHSMP.

REVIEW RESULTS

SITE REIVEW

Per GHSMP 6.2.5.11, all wetlands within 300 feet of a project shall be identified. The Report includes a literature review that indicated the outer margins of Gig Harbor Bay contain estuarine wetland conditions. The Report does not provide results of a site assessment that included a determination of whether or not wetland conditions occur on or within 300 feet of the project. Based on Grette's site review, there are no wetlands on or within 300 feet of the

project. The nearest wetland observed is approximately 400 feet west of the project along the shoreline of Eddon Boat Park.

Per GHSMP 6.2.5.21, streams within 200 feet of a project shall be identified. No streams are located within 200 feet of the project.

Per GHSMP 6.2.5.24, Gig Harbor Bay is classified as a critical fish and wildlife habitat area (CFWHA). The Report outlines that the areas within the project are classified as a CFWHA as they have a primary association with federal and state endangered, threatened, and sensitive species. Given the information provided, the Report correctly describes Gig Harbor Bay as a CFWHA.

CRITICAL AREAS REVIEW

Marine Shorelines

Per GHSMP 6.2.3.2, a vegetation conservation strip shall be maintained along the marine shoreline for all non-water dependent uses to protect and maintain the integrity, functions, and processes of the shoreline. As the proposed project is a water dependent use; GHSMP 6.2.3.2 is not applicable for this project.

Wetlands

No wetlands are within 300 feet of this project.

Streams

No streams are located within 200 feet of the project.

Critical Fish and Wildlife Habitat Areas

Section 4.2 of the Report contains a code compliance narrative to address the habitat assessment and management plan (HAMP) reporting requirements defined in GHSMP 6.2.5.24; however, the Report appears to incorporate a previous version of GHSMP 6.2.5.24 (dated December 27, 2013). While the current version of GHSMP 6.2.5.24 is very similar to what is outlined in the Report, the current version of GHSMP 6.2.5.24 condensed the requirements of a HAMP into one subsection and also includes a requirement to demonstrate compliance with the Endangered Species Act (ESA) pursuant to Gig Harbor Municipal Code (GHMC) 18.10.100 and 18.10.110. While the code compliance narrative provided does not include a response to this code requirement, the BA provided in Appendix V of the Report does

include ESA determinations that support this requirement under GHSMP 6.2.5.24. See details below.

Per GHSMP 6.2.5.24, a HAMP shall include an analysis and discissions of those species or habitats within the identified CFWHA(s) along with an appropriate analysis of potential project impacts. The Report includes an appropriate analysis and discussion of species and habitats within Gig Harbor Bay. The BA also provides sufficient details on the extent of impacts that would occur as a result of the project. A HAMP shall also include mitigation measures which should minimize and avoid impacts (GHSMP 2.6.5.24). The Report and appendices do provide sufficient information to show that the project has been designed to avoid and minimize impacts to the extent feasible. Refer to the no net loss review summarized below for details. The Report and supporting materials also detail how appropriate BMPs will be implemented to minimize and avoid impacts associated with construction of the project.

Compensatory mitigation shall be provided to offset project impacts to CFWHAs (GHSMP 6.2.5.24). The project will result in approximately 6,411 square feet of new overwater coverage and 20 new steel pile. Proposed onsite mitigation to address project impacts includes the removal of Jerkovich Pier (approximately 1,558 square feet of overwater coverage) along with the removal of the associated 32 12-inch creosote timber pile. Additional mitigation will be completed through offsite shoreline restoration that includes the placement of approximately 600 cubic yards of beach nourishment material at an existing stormwater outfall. Remaining impacts will be offset through the purchase of conservation credits through the PSP.

As noted above, the Report states that NOAA's Puget Sound Nearshore Conservation Calculator was used to determine the amount of conservation credits needed to offset project impacts. The Report does not include any summary that quantifies project impacts (debits) and mitigation (credits) to show that project impacts will be adequately mitigated for compliance with GHSMP 6.2.5.24. The mitigation plan provided in Appendix III outlines mitigation actions associated with the pier removal and beach nourishment, but except for noting that conservation credits will be purchased, there is no additional detail to demonstrate sufficient credits will be purchased to offset impacts regulated under the GHSMP.

According to the reasonable and prudent measures defined in NMFS' BO provided in the Report, NMFS determined that the mitigation plan is sufficient to address project impacts and the terms and conditions associated with reasonable and prudent measures define mitigation actions to include the purchase of 340 conservation credits, removal of Jerkovich Pier, and

placement of beach nourishment. Based on this information, the proposed mitigation is sufficient to compensate for project impacts for compliance with GHSMP 6.2.5.24.

Per GHSMP 6.2.5.24, effects determinations of listed ESA species shall be provided for those applicable projects subject to the flood hazard construction standards defined in Chapter 18.10 of the GHMS. The BA provided by Facet reaches determinations of *not likely to adversely affect* (NLAA) for coastal Puget Sound bull trout, dolly varden, Bocaccio rockfish, yelloweye rockfish, humpback whale, marbled murrelet, and southern resident killer whale and *likely to adversely affect* (LAA) determinations for Puget Sound Chinook salmon and steelhead trout. According to Appendix VI of the Report, NMFS' Biological Opinion determined that without reasonable and prudent measures, the extent of anticipated take would result in a LAA determination, but is not likely to jeopardize the continued existence of Puget Sound Chinook and steelhead, Bocaccio rockfish, and southern resident killer whale. After considering proposed offsets, NMFS concluded that: "the amount or extent of anticipated take, coupled with other effects of the proposed action as modified by the reasonable and prudent alternative, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat". Per GHSMP 6.2.5.24, the City may not issue a development permit if it is determined that a project is LAA ESA-listed species unless an applicant submits a letter from NMFS demonstrating concurrence through consultation under Section 7 or 4(d) of ESA. With the issuance of NMFS's BO and the incorporation of all reasonable and prudent measures to limit take for the species covered by the BO, this regulation has been met. Grette concurs with Facet's NLAA calls for bull trout, dolly varden, yelloweye rockfish, marbled murrelet, and humpback whale.

Compensatory mitigation for impacts shall occur onsite when feasible and any offsite mitigation shall be within the shoreline jurisdiction associated with the same body of water (e.g., Gig Harbor Bay) or in the same sub-basin as the project (GHSMP 6.2.5.24). The Report states that all mitigation will occur within the City limits of Gig Harbor and refers to the mitigation plan for more detail. It is Grette's understanding that this statement refers to the onsite mitigation actions that will occur within Gig Harbor Bay and does not suggest that offsite mitigation actions through the PSP will occur within the City limits of Gig Harbor as well.

The mitigation plan does not provide any supporting detail to demonstrate compliance with the offsite mitigation requirements defined in GHSMP 6.2.5.24. According to the mitigation plan, a pre-sale agreement between the City and the PSP is in place and general conservation credits will be purchased to offset project impacts. The Report goes on to state priority will be given to areas that fall within the same sub-basin where impacts occur. However, it is not clear

that purchasing credits from PSP complies with the offsite mitigation requirements defined in GHSMP 6.2.5.24. This deficiency was discussed with City planning staff during Grette's review, and a follow up meeting occurred on April 10, 2026, with the project team, City planning staff, and Grette to discuss the offsite mitigation requirements defined in GHSMP 6.2.5.24. In summary, it was determined that additional information should be provided to show that the purchase of credits through the PSP will support mitigation actions within the same sub-basin as Gig Harbor Bay.

Following the April 10 meeting, Facet prepared an offsite mitigation compliance letter[1] to demonstrate that the offsite mitigation meets the criteria defined in GHSMP 6.2.5.24. Upon review, this letter describes that onsite mitigation is limited and will occur to the extent possible but that offsite mitigation is necessary to fully compensate for project impacts. Per GHSMP 6.2.5.24(8), offsite compensatory mitigation shall occur within the same sub-basin where impacts occur. The GHSMP defines sub-basin as the *geographic area, that drains to a stream or waterbody and that is contained within a basin of the stream or waterbody*. The GHSMP does not define the extent of the marine area of the sub-basin associated with Gig Harbor Bay.

According to Facet's letter, PSP's nearshore conservation service area map was used in support of defining the extent of the sub-basin associated with Gig Harbor Bay. Coordination with NOAA and NMFS occurred in defining the extent of the marine area of the sub-basin associated with Gig Harbor Bay through the use of PSP's nearshore conservation service area map. Gig Harbor Bay is situated within the South Central Puget Sound Sub-Basin.[2] The information provided in Facet's letter suggests that the general conservation credits to be purchased will support PSP projects within the South Central Puget Sound Sub-Basin; however, a copy of the pre-sale agreement between the City and the PSP has not been provided to confirm conservation credits will be purchased to support PSP projects within the South Central Puget Sound Sub-Basin.

No Net Loss Analysis

Per GHSMP 6.2.2, all regulated uses and development shall provide an analysis to demonstrate a proposed project will not result in a net loss of shoreline ecological functions.

[1] Facet. 2026. City of Gig harbor Commercial Fishing Homeport: SMP 6.2.5.24.8 Compliance Narrative. Prepared for the City of Gig Harbor Planning Department. April 10, 2026.
[2] According to NMFS' BO, Gig Harbor Bay is within south/central Puget Sound basin biogeographic region.

This analysis shall include a sufficient mitigation sequencing analysis to demonstrate that all avoidance and minimization measures have been considered.

The Report's no net loss compliance narrative states that Options B, C, and E will be the courses of action for the project to address mitigation sequencing. It is assumed that these options refer to minimization (Option B), restoration (Option C), and compensation (Option E). Mitigation sequencing is defined, per GHSMP 6.2.2, as a set of actions applied in a sequence of steps listed in order of priority[3]. Simply stating that selective mitigation steps are being implemented is insufficient to address mitigation sequencing. According to the no net loss compliance narrative, overwater structures will utilize grated decking to reduce shading impacts, but no additional minimization measures are mentioned in this narrative. The mitigation sequencing summary provided in the mitigation plan does describe how impacts are unavoidable as the project is a water dependent use and outlines a series of actions that will be implemented to minimize impacts; however, those actions are limited to construction BMPs and do not include actions that were considered during project design to minimize impacts for compliance with GHSMP 6.2.2. Although the no net loss narrative lacks details with respect to the mitigation sequencing process, the Report and appendices do provide sufficient information to show that the project has been designed to avoid and minimize impacts to the extent feasible.

As outlined above, the mitigation actions that will occur in support of the project will sufficiently address impacts to ensure no loss of shoreline ecological functions will occur for conformance with GHSMP 6.2.5.24.

CONCLUSION

Upon review, the Report and subsequent letter prepared by Facet contain sufficient information to demonstrate compliance with the requirements defined in Chapter 6 of the GHSMP. GHSMP 6.2.5.24 outlines offsite mitigation site selection in an order of preference which includes offsite mitigation in the same sub-basin. A pre-sale agreement between the City and the PSP is in place suggesting that general conservation credits will be purchased to support PSP projects within the South-Central Puget Sound Sub-Basin. Grette recommends that a copy of this pre-sale agreement between the City and the PSP be provided and that it

[3] The order of priority is defined under GHSMP 6.2.2 as avoidance, minimization, rectification, reduction, and compensation.

includes a description that credits are allocated to support projects within the South-Central Puget Sound Sub-Basin. Once received, Grette recommends acceptance of the Report.

If you have any questions regarding this review, please contact me at (253) 442-6948, or by email at chadw@gretteassociates.com.

Regards,

Grette Associates, a division of Farallon Consulting, L.L.C.



Chad Wallin, PWS
Project Biologist

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Determination of Nonsignificance (DNS)

W.A.C. 197-11-970

Environmental Review Application:
Shoreline Development Review Permit (SDP)-22-0005, PL-Design Review-22-0040, PL-Site Plan Review (SPR)-22-0007, PL-SEPA-22-0014

Location: 3589 Harborview Drive Gig Harbor, WA 98332 (Parcel #: 5970000244) within Section 05, Township 21 North, Range 02 East. The site is located along Gig Harbor Bay and includes overwater and nearshore components.

Proponent: The City of Gig Harbor proposes constructing a new commercial fishing homeport at Ancich Waterfront Park, located at 3589 Harborview Drive (Parcel No. 5970000244) within Gig Harbor Bay. The site is zoned Waterfront/Millville (WM) and lies within the shoreline jurisdiction of Gig Harbor Bay, where it is designated Historic Working Waterfront under the City's Shoreline Master Program.

The proposal includes the installation of a new overwater moorage facility intended to serve the local commercial fishing fleet. The facility includes:

- A 280-foot-long main walk floating dock
- Seven finger floats, including:
  - Six 60-foot finger floats
  - One 80-foot finger float
- An 80-foot aluminum gangway connecting the new floats to the existing Ancich Pier
- Sixteen 24-inch diameter steel guide piles to anchor the floats
- Four 12.75-inch diameter steel fender piles along the gangway

The new facility will provide 17 commercial berths. The floats will be fully grated to maximize light penetration and minimize shading impacts to the marine environment. The project will result in 6,250 square feet of new overwater coverage, including the gangway and floating dock system. This total accounts for overlapping structural areas, such as where the gangway connects to the floats, which are counted only once in the overall overwater coverage calculations.

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The project is located within the mapped AE flood zone, which has a 1 percent annual chance of flooding. However, because the proposed floating dock is an overwater structure, it will not affect flood storage capacity or alter flood conveyance.

Environmental Review: The City of Gig Harbor has reviewed the completed SEPA Environmental Checklist, dated May 5, 2022 and revised February 2, 2026, together with supporting documentation, including:

- Critical Areas Report
- Biological Assessment
- Macrovegetation Survey
- Mitigation Plan
- Joint Aquatic Resources Permit Application (JARPA)

The checklist and supporting materials identify potential environmental impacts primarily associated with in-water work, nearshore habitat, and listed species. These impacts are addressed through federal and state permitting processes, including U.S. Army Corps of Engineers Section 10 authorization, Hydraulic Project Approval (HPA), NOAA consultation, and approved mitigation plans.

Analysis

Earth

The project does not involve significant land disturbing activities. According to the environmental checklist, no grading, excavation, or fill is proposed other than minor work associated with mitigation activities. The upland portion of the site is already developed as Ancich Waterfront Park and includes existing infrastructure such as the Ancich Netshed and associated waterfront improvements. Erosion impacts are not anticipated, and in-water construction activities will utilize turbidity curtains to control sediment during installation of dock structures.

Air Quality

There will be limited to temporary emissions from construction equipment and a barge mounted crane during installation of the dock structures. These impacts will be short term and typical of marine construction projects. Long term operation of the dock will not generate air emissions beyond those associated with existing marine activity within Gig Harbor.

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Water Resources
The proposal involves construction of overwater structures within Gig Harbor Bay. No dredging or filling of aquatic areas is proposed other than mitigation actions associated with removal of the remaining portion of Jerkovich Pier and placement of approximately 600 cubic yards of beach nourishment along the shoreline. The floating dock structures will consist of grated decking designed to allow light penetration to the aquatic environment below.

Stormwater runoff will not increase because of the project because the proposed structures are permeable, and precipitation will pass through the grated decking directly into the harbor. The project site is located within the mapped FEMA AE flood zone; however, the floating dock structures will not alter flood storage or conveyance.

Potential impacts to water quality during construction will be minimized through standard best management practices including turbidity curtains and adherence to agency approved in-water work windows.

Plants and Habitat
The upland portion of the site contains maintained landscaping and shoreline buffer vegetation adjacent to a bulkhead. The environmental checklist indicates that no upland vegetation removal is proposed.

Marine vegetation surveys identified benthic macroalgae, including sugar kelp, in the vicinity of the project site. No eelgrass beds were identified in previous surveys. The project incorporates mitigation measures including removal of the remaining Jerkovich Pier, which will reduce overwater shading and provide ecological benefit.

Fish and Wildlife
The project occurs within marine habitat that may support listed species including Puget Sound Chinook salmon, steelhead, rockfish species, and southern resident killer whale critical habitat. Potential impacts to these species are primarily associated with construction noise and temporary turbidity during pile installation.

These impacts will be addressed through regulatory review and permitting processes including consultation with the National Marine Fisheries Service, issuance of a Hydraulic Project Approval by the Washington Department of Fish and Wildlife, and authorization from the U.S. Army Corps of Engineers. Required mitigation measures

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include construction timing windows, turbidity controls, and other habitat protection measures.

Land and Shoreline Use
The site is designated Historic Working Waterfront under the City's Shoreline Master Program and is currently used for waterfront recreation and historic fishing related activities. The proposal to construct a commercial fishing dock is consistent with this shoreline designation and supports the continued use of Gig Harbor as a working waterfront.

Noise
Temporary construction noise will occur during installation of piles and dock components; however, these effects will be short term and limited to daytime construction hours. Although long-term noise conditions are not expected to differ substantially from existing marine activity in the harbor, impact pile driving can generate elevated underwater sound levels that may affect fish and marine mammals. To minimize these potential impacts, the project will implement required noise attenuation measures, such as bubble curtains or other approved sound-dampening technologies, consistent with federal and state permit conditions during pile installation.

Aesthetics
The project will introduce new floating dock structures extending from Ancich Pier; however, the structures are designed to be low-profile and consistent with other marina infrastructure present within Gig Harbor. While views from Ancich Pier will include the new dock, the overall visual character of the harbor as a working waterfront will remain unaltered.

Recreation
The project will not displace existing recreational uses at Ancich Waterfront Park. Park visitors will continue to have access to the shoreline and will be able to observe the working marina and commercial fishing vessels from the park and adjacent public areas. The presence of active fishing boats and related activity may provide an opportunity for visitors to observe Gig Harbor's working waterfront and better understand the local commercial fishing industry.

Public Services and Utilities
The project will not increase demand for public services such as police, fire protection, or schools. Existing utilities, including water, sewer, and electrical service, will be

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extended to the dock as needed from existing infrastructure. No significant upgrades to public utility systems are required.

Aquatic Habitat Protection
To minimize impacts to nearshore habitat, the dock structures are designed with permeable grated decking, which allows light penetration to the aquatic environment below and reduces shading impacts to marine vegetation and habitat functions. The dock configuration and footprint have been designed to minimize overwater coverage while still meeting operational needs for commercial fishing vessels.

Construction Best Management Practices
Construction activities will incorporate best management practices (BMPs) to protect water quality and aquatic habitat. A turbidity curtain will be installed during in-water construction to contain suspended sediments and reduce turbidity within the surrounding waters. Construction equipment will be operated from barges where feasible to minimize disturbance to shoreline areas.

Timing Windows
All in-water construction will occur within agency approved in-water work windows established by the Washington Department of Fish and Wildlife and other regulatory agencies. These timing restrictions are intended to protect migrating salmonids and other sensitive marine species during critical life stages.

Pier Removal and Habitat Benefit
As mitigation for the new dock installation, the project includes removal of the remaining portion of the Jerkovich Pier, which will eliminate existing overwater shading and restore ecological function in that portion of the nearshore environment. Removal of older overwater structures can improve habitat conditions for forage fish and juvenile salmon by increasing light penetration and reducing structural barriers.

Mitigation
The mitigation plan submitted with the application includes removal of the existing Jerkovich Pier and associated creosote-treated piles, restoration of the stormwater outfall at Maritime Pier, and placement of approximately 600 cubic yards of beach nourishment along the shoreline. The applicant also plans to purchase credits from a conservation bank from the Puget Sound Partnership to address nearshore impacts to achieve no net loss. These credits will be used in the same watershed as the proposed project. These actions are intended to improve shoreline habitat conditions, reduce

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sediment erosion and turbidity, and provide ecological benefits within the Gig Harbor watershed.

Implementation of the proposed mitigation measures will occur through federal, state, and local regulatory permitting processes. Compliance with these permit requirements will ensure that potential environmental impacts are avoided, minimized, and mitigated in accordance with applicable regulatory standards from each level of government. Because some mitigation measures are required through other regulatory approvals and will be implemented as part of project construction and operation, the City finds that additional mitigation conditions under SEPA are not necessary.

ESA Species Protection
The project area provides habitat for federally listed species including Puget Sound Chinook salmon, steelhead, and other listed marine species. Consultation with the National Marine Fisheries Service (NMFS) will occur as part of the federal permitting process to ensure compliance with the Endangered Species Act (ESA). Crescent Creek and the adjacent marine waters of Gig Harbor provide habitat for anadromous fish species, and the NOAA Fisheries critical habitat designation includes species such as Chinook salmon and Southern Resident killer whales.

As part of the federal review process, the project will be evaluated to ensure that potential impacts to listed species and their habitat are avoided or minimized. Applicable conservation measures and permit conditions may include construction best management practices, in-water work timing restrictions where applicable, and implementation of habitat mitigation measures identified in the project's supporting environmental documentation. These requirements are intended to protect aquatic habitat functions and maintain or improve ecological conditions within the Gig Harbor watershed.

National Oceanic and Atmospheric Administration (NOAA)
NOAA will ensure compliance with the Endangered Species Act. NOAA may require additional mitigation measures, monitoring, or construction conditions to protect listed species.

Regulatory Oversight
Mitigation and environmental protection measures will be implemented and enforced through the following regulatory permits and approvals:

- U.S. Army Corps of Engineers Section 10 Authorization

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- Washington Department of Fish and Wildlife Hydraulic Project Approval (HPA)
- NOAA Endangered Species Act consultation
- Shoreline Substantial Development Permit (City of Gig Harbor)
- Approved Mitigation Plan and associated monitoring requirements

Compliance with these permits ensures that impacts to aquatic habitat, water quality, and listed species are avoided, minimized, and mitigated in accordance with applicable environmental regulations.

These design features and regulatory requirements collectively ensure that the proposal will not result in probable significant adverse environmental impacts to the aquatic environment or surrounding shoreline resources.

Lead Agency: City of Gig Harbor, Community Development Department,
3510 Grandview Street, Gig Harbor WA 98335

The lead agency for this proposal has determined based on the analysis and findings that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

SEPA review for this proposal was integrated with the Notice of Application dated June 7, 2022, in accordance with WAC 197-11-355. The required SEPA public comment opportunity was provided during the Notice of Application comment period. As a result, no additional SEPA comment period is required with issuance of this DNS.

Any interested person may appeal the adequacy of this SEPA Threshold Determination to the City of Gig Harbor Hearing Examiner in accordance with Chapter 18.04 of the Gig Harbor Municipal Code. A written appeal must be received by the City within fourteen (14) days of the date of issuance, no later than 4:30 p.m. on Monday, May 11, 2026.

Appeals must be submitted in writing and accompanied by the required appeal filing fee of $1,301.

Contact: Katharine Shaffer, Principal Planner,
kshaffer@gigharborwa.gov, (253)853-7615

GIG HARBOR
THE MARITIME CITY

City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335

gigharborwa.gov
253.851.8136

SEPA Responsible Official: Eric Baker,
Position/Title: Community Development Director
Ebaker@gigharborwa.gov, (253)530-7073

Signature: Eric B. Baker **Date:** 4/27/26

Cc: Agent
Owner

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF MAILING

I, **Michelle Thomas** (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On **April 28th, 2026**, I mailed/emailed a true and correct copy of the **NOTICE OF DNS** for the following:

Project Name: **Gig Harbor Commercial Fishing Homeport**

Project Location: **3589 Harborview Drive | Parcels 5970000244**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-SEPA-22-0014**

to the individuals/agencies identified on the attached transmittal form by United States Postal Service, inter-office routing, or electronic mail, as specified on the attached.

SIGNED at Gig Harbor, Washington, this **28th Day of April, 2026**

Michelle Thomas
DECLARANT (signature)

City of Gig Harbor
Transmittal Form

Routing for: NOA **SEPA** NOPH NOPM NOD **Notice Date:** 05.18.2026

Project: GH Commercial Homeport **Planner:** Katharine

Routed to: City Depts.

- ☐ Public Works–Operations
- ☐ Public Works–Engineering
- ☐ Building and Fire Safety
- ☐ Other_____

SEPA Agencies: (NOA, SEPA) Electronic Mail

- ☐ Washington Department of Ecology, SEPA Register online
- ☐ Washington Department of Commerce, attn: Review Team
- ☐ Pierce Transit Land Use Review
- ☐ Washington State Department of Fish & Wildlife, attn: SEPA Desk
- ☐ Washington State Department of Natural Resources, attn: SEPA Center
- ☐ Washington State DAHP
- ☐ Puyallup Tribe of Indians Historic Preservation
- ☐ Puyallup Tribe Cultural Resources
- ☐ PenMet Parks
- ☐ Pierce County Fire District Number 5
- ☐ Suquamish Tribe
- ☐ Peninsula School District
- ☐ Pierce County Planning and Land Services
- ☐ Washington State Department of Transportation, attn: OR-SEPA-REVIEW
- ☐ Squaxin Island Tribe
- ☐ Muckleshoot Tribe
- ☐ Washington Department of Corrections
- ☐ Puget Sound Partnership
- ☐ Nisqually Tribe

Other Parties: 1st Class Mail

- ☒ Applicant/Owner/Agent (NOA, NOPH, NOPM, SEPA, NOD)
- ☐ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
- ☐ Mayor & Council (NOD Hearing Examiner Decisions)
- ☒ Property Owners within 300 feet of site: attached list (NOA, SEPA, NOPH, NOPM, NOD for Type II permits only)
- ☒ Parties of Record: attached list (NOPH, NOPM, NOD)
- ☐ Pierce County (NOA for Plats adjacent to City Limits)
- ☐ Pierce County Assessor-Treasurer (NOD)
- ☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
- ☐ Tacoma Daily Index
- ☐ Other _____

City of Gig Harbor
Planning Division
3510 Grandview Street
Gig Harbor, WA 98335

gigharborwa.gov
(253)851-6170

NOTICE OF DETERMINATION OF NONSIGNIFICANCE

The City of Gig Harbor issued a Determination of Nonsignificance (DNS) under the State Environmental Policy Act Rules (Chapter 197-11-WAC) for the following project:

Application PL-SDP-22-0005/PL-SPR-22-0007/PL-SEPA-22-0014 – Gig Harbor Commercial Fishing Homeport

Location: 3589 Harborview Drive, site is located on the north side of Harborview Drive, approximately 275 feet east of the intersection with Novak Street.
Parcel – 5970000244

The proposal is to construct a commercial fishing homeport dock system at Ancich Waterfront Park, including a 280-foot main walk float, six 60-foot finger floats, one 80-foot finger float, an 80-foot gangway, and installation of steel guide and fender piles. The project also includes utility extensions with a sewer pump-out station, removal of the existing Jerkovich Pier and creosote piles, and shoreline mitigation improvements such as beach nourishment and stormwater outfall restoration. The proposal would result in a net overwater coverage increase of approximately 6,411 square feet.

After review of a completed environmental checklist and other information on file with the agency, the City of Gig Harbor has determined the above proposal, with mitigation, will not have a probable significant adverse impact on the environment.

Copies of the DNS are available at no charge from the City of Gig Harbor Community Development Department, 3510 Grandview Street, Gig Harbor, WA 98335, or the Permit Portal on the city's website.

A public hearing on the proposed project is tentatively scheduled before the City of Gig Harbor Hearing Examiner on June 2, 2026 at 1:30 p.m. virtually and in the Gig Harbor Civic Center Council Chambers located at 3510 Grandview Street. The public is invited to comment on this DNS at the public hearing, or by submitting written comments to the above address or emailing PlanningComments@gigharborwa.gov no later than the end of business on May 11, 2026. The deadline for appealing the final SEPA Threshold Determination is end of business on May 11, 2026.

Publish – Legal Notice – Tacoma Daily Index – April 29, 2026

5970000230 5970000291
ALLEN CAROLYN S
3526 HARBORVIEW DR
GIG HARBOR WA 98332

0221053071
BUJACICH DOCK LLC
3607 ROSS AVE
GIG HARBOR WA 98332-1856

5973000010
DOWD MICHAEL T &
CHRISTINE A
3519 HARBORVIEW DR APT 1
GIG HARBOR WA 98332

5973000030
GLEIN GARY A & LINDA D
3519 HARBORVIEW DR APT 3
GIG HARBOR WA 98332-2183

0221053003
HAN SOOK LEE REVOCABLE
LIVING TRUST
14425 SW ALLEN BLVD
BEAVERTON OR 97005

5970000310
MOORE JANE M & DENNIS D
3525 ROSS AVE
GIG HARBOR WA 98332-1845

5973000040
PETERSON PAMELA H
3519 HARBORVIEW DR UNIT 4
GIG HARBOR WA 98332

0221053058
VANBERG RICHARD L
& JEAN C
3616 HARBORVIEW DR
GIG HARBOR WA 98332-2129

5970000271 5970000301
ALLEN KRISTINE J
3603 ROSS AVE
GIG HARBOR WA 98332-1856

0221053093
BUJACICH GEORGE P TTEE
3619 ROSS AVE
GIG HARBOR WA 98332-1856

0221053051
FAIRWAY HOLDINGS LLC
PO BOX 99695
LAKEWOOD WA 98496-0695

5970000161
HARBOR CONDOMINIUM
5114 POINT FOSDICK DR STE
F181
GIG HARBOR WA 98335-1733

0221053030
MALICH DOCK LLC
8326 96TH ST NW
GIG HARBOR WA 98332

5970000372
MUELLER RAND A
3514 HARBORVIEW DR
GIG HARBOR WA 98332-2128

5970000263
PUPO ELAINE S TTEE
OF MABLE TRUST
3518 HARBORVIEW DR
GIG HARBOR WA 98332

5970000180
YETTER AARON C &
KRISTINE A
9127 NE 36TH ST
YARROW POINT WA 98004

5973000020
BORIS DARCY B TTEE OF
DARCY B BORIS TRUST
3519 HARBORVIEW DR UNIT 2
GIG HARBOR WA 98332

0221053092 0221053095
BUJACICH JACK D JR &
BUJACICH PATRICIA R
3607 ROSS AVE
GIG HARBOR WA 98332-1856

0221053083
FRANICH JAMES M
3702 HARBORVIEW DR
GIG HARBOR WA 98332-2130

0221053113 0221053114
HARBOR INVESTMENTS NW II
LLC
1329 N NORTHLAKE WAY
SEATTLE WA 98103

5973000050
MILLVILLE MARINA LLC
3519 HARBORVIEW DR
GIG HARBOR WA 98332-2183

5970000215
MULLAN LLC
PO BOX 7605
TACOMA WA 98417

0221053042
QUIGG PATRICK D &
KATHLEEN A
1831 BEL AIRE AVE
ABERDEEN WA 98520-1305

Gig Harbor Commercial Fishing Homeport



4/28/2026, 10:20:45 AM

Site

1:2,722

0 85 170 340 ft

0 25 50 100 m

Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Imagery © 2023 Hexagon and data partners., Microsoft, Vantor

City of Gig Harbor Staff

The map features are approximate. All data is provided "as-is" and "with all faults." The City assumes no liability for variations ascertained by actual survey.

From:	Michelle Thomas
Bcc:	"Alec, Wrolson, Puyallup Tribe"; "Andrew Strobel, Puyallup Tribe"; "aosullivan@suquamish.nsn.us"; "Brad Beach, THPO Nisqually Tribe"; "Brandon Reynon, Puyallup Tribe"; "Carol "; "Char Naylor, Puyallup Tribe"; "Dan Roscoe, WSP"; "David Winfrey, Puyallup Tribe"; "Deana McCortney - DNR"; "Department of Natural Resources SEPA Center (sepacenter@dnr.wa.gov)"; "Dept. of Ecology"; "dwilliams@suquamish.nsn.us"; "esorensen@penmetparks.org"; "Gig Harbor Fire"; "Grace Roberts, WSP"; "Lisa Anderson, Puyallup Tribe"; "Lois Boome, Puyallup Tribe"; "Michael Prentice"; "Muckleshoot Tribe - Laura Murphy (laura.murphy@muckleshoot.nsn.us)"; "Nancy Games, Puyallup Tribe"; "Nicole Jones-Vogel, AICP PenMet Parks"; "Nisqually Tribe"; "OR-SEPA-REVIEW@wsdot.wa.gov"; "Peninsula School District"; "Pierce County SEPA"; "Pierce Transit"; "Puyallup Tribe SEPA"; "reviewteam@commerce.wa.gov"; "Robert Barandon, Puyallup Tribe"; "Russ Ladley, Puyallup Tribe"; "sepa"; "Sharon Silver (sharons@penlight.org)"; "Shaun Dinubilo"; "Suquamish Tribe - Dennis Lewarch (dlewarch@suquamish.nsn.us)"; "Trevor Clifford, WSP"; "Washington Dept. Fish & Wildlife"
Subject:	Notice of Determination of Nonsignificance Gig Harbor Commercial Fishing Homeport
Date:	Tuesday, April 28, 2026 10:48:00 AM
Attachments:	2026.4.27 DNS PL-SDP-22-0005 .pdf

The City of Gig Harbor issued a Determination of Nonsignificance (DNS) under the State Environmental Policy Act Rules (Chapter 197-11-WAC) for the following project:

Application PL-SDP-22-0005/PL-SPR-22-0007/PL-SEPA-22-0014 – Gig Harbor Commercial Fishing Homeport

Location: 3589 Harborview Drive, site is located on the north side of Harborview
Drive, approximately 275 feet east of the intersection with Novak Street.
Parcel – 5970000244

The proposal is to construct a commercial fishing homeport dock system at Ancich Waterfront Park, including a 280-foot main walk float, six 60-foot finger floats, one 80-foot finger float, an 80-foot gangway, and installation of steel guide and fender piles. The project also includes utility extensions with a sewer pump-out station, removal of the existing Jerkovich Pier and creosote piles, and shoreline mitigation improvements such as beach nourishment and stormwater outfall restoration. The proposal would result in a net overwater coverage increase of approximately 6,411 square feet.

After review of a completed environmental checklist and other information on file with the agency, the City of Gig Harbor has determined the above proposal, with mitigation, will not have a probable significant adverse impact on the environment.

Copies of the DNS are available at no charge from the City of Gig Harbor Community Development Department, 3510 Grandview Street, Gig Harbor, WA 98335, or the Permit Portal on the city's website.

A public hearing on the proposed project is tentatively scheduled before the City of Gig Harbor Hearing Examiner on June 2, 2026 at 1:30 p.m. virtually and in the Gig Harbor Civic Center Council Chambers located at 3510 Grandview Street. The public is invited to comment on this DNS at the public hearing, or by submitting written comments to the above address or emailing PlanningComments@gigharborwa.gov no later than the end of business on May 11, 2026. The deadline for appealing the final SEPA Threshold Determination is end of business on May 11, 2026.

Michelle Thomas | Planning Technician
3510 Grandview St • Gig Harbor, WA 98335
253-851-6170 | 253-853-8255 (direct) | www.gigharborwa.gov

Stay Connected! Sign up for the city's weekly Gig-A-Byte email newsletter

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF PUBLISHING

I, **Michelle Thomas** (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On **April 27th, 2026,** I sent a true and correct copy of the **NOTICE OF DNS** for publication in the **April 29th, 2026,** edition of the Tacoma Daily Index for the following:

Project Name: **Gig Harbor Commercial Fishing Homeport**

Project Location: **3589 Harborview Drive | Parcels 5970000244**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-SEPA-22-0014**

SIGNED at Gig Harbor, Washington, this 27th, Day of April 2026

Michelle Thomas
DECLARANT (signature)

City of Gig Harbor
Transmittal Form

Routing for: NOA **SEPA** NOPH NOPM NOD **Notice Date:** 05.18.2026

Project: GH Commercial Homeport **Planner:** Katharine

Routed to: City Depts.

- ☐ Public Works–Operations
- ☐ Public Works–Engineering
- ☐ Building and Fire Safety
- ☐ Other_____

SEPA Agencies: (NOA, SEPA) Electronic Mail

- ☐ Washington Department of Ecology, SEPA Register online
- ☐ Washington Department of Commerce, attn: Review Team
- ☐ Pierce Transit Land Use Review
- ☐ Washington State Department of Fish & Wildlife, attn: SEPA Desk
- ☐ Washington State Department of Natural Resources, attn: SEPA Center
- ☐ Washington State DAHP
- ☐ Puyallup Tribe of Indians Historic Preservation
- ☐ Puyallup Tribe Cultural Resources
- ☐ PenMet Parks
- ☐ Pierce County Fire District Number 5
- ☐ Suquamish Tribe
- ☐ Peninsula School District
- ☐ Pierce County Planning and Land Services
- ☐ Washington State Department of Transportation, attn: OR-SEPA-REVIEW
- ☐ Squaxin Island Tribe
- ☐ Muckleshoot Tribe
- ☐ Washington Department of Corrections
- ☐ Puget Sound Partnership
- ☐ Nisqually Tribe

Other Parties: 1st Class Mail

- ☒ Applicant/Owner/Agent (NOA, NOPH, NOPM, SEPA, NOD)
- ☐ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
- ☐ Mayor & Council (NOD Hearing Examiner Decisions)
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- ☐ Pierce County (NOA for Plats adjacent to City Limits)
- ☐ Pierce County Assessor-Treasurer (NOD)
- ☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
- ☐ Tacoma Daily Index
- ☐ Other _____

Tacoma Daily Index

Affidavit of Publication

State of Washington }
County of Pierce } ss

Amanda Kahlke being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Tacoma Daily Index a newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a newspaper in Pierce County, Washington and is and always has been printed in whole or part in the Tacoma Daily Index and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Pierce County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of IDX1030170 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 04/29/2026 and ending on 04/29/2026 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $126.36.

Subscribed and sworn before me on this 29 day of April, 2026.

Notary Public in and for the State of Washington.

City of Gig Harbor | 09256156
MICHELLE THOMAS

JENNIFER TRIBBETT
APPOINTMENT EXPIRES June 25, 2028
NOTARY PUBLIC
COMM # 160037
STATE OF WASHINGTON

CITY OF GIG HARBOR
NOTICE OF DETERMINATION OF NONSIGNIFICANCE

The City of Gig Harbor issued a Determination of Nonsignificance (DNS) under the State Environmental Policy Act Rules (Chapter 197-11-WAC) for the following project:

Application PL-SDP-22-0005/PL-SPR-22-0007/PL-SEPA-22-0014 - Gig Harbor Commercial Fishing Homeport

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A public hearing on the proposed project is tentatively scheduled before the City of Gig Harbor Hearing Examiner on June 2, 2026 at 1:30 p.m. virtually and in the Gig Harbor

Classified Proof

Civic Center Council Chambers located at 3510 Grandview Street. The public is invited to comment on this DNS at the public hearing, or by submitting written comments to the above address or emailing **PlanningComments@gigharborwa.gov** no later than the end of business on May 11, 2026. The deadline for appealing the final SEPA Threshold Determination is end of business on May 11, 2026.
IDX-1030170
April 29, 2026

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 28

From: Mary Manning
To: Planning Comments
Subject: GH Homeport
Date: Wednesday, May 6, 2026 8:05:15 AM

You don't often get email from marypmanning65@gmail.com. Learn why this is important

To City,
I support The Homeport project which is more ecologically sensitive than most all private lease-line to lease-line moorage projects. It also preserves "place" and heritage in our community.
Thank you,
Mary Manning

From: guy hoppen
To: Planning Comments
Subject: Homeport Determination
Date: Tuesday, May 5, 2026 1:55:25 PM

You don't often get email from guyhoppen@comcast.net. Learn why this is important

I am writing in support of the Homeport project and the City's Determination of Non-significance.
This 'place' making project preserves heritage, delivers local economic benefit, provides public access to the Gig Harbor fishing fleet and will be the most ecologically sensitive long term moorage facility on the Gig Harbor City waterfront due to the small project footprint that covers a fraction of the potential area available for coverage.
Guy Hoppen
8402 Goodman Dr NW
Gig Harbor WA 98332

From: John McMillan
To: Planning Comments
Subject: Commercial Fishermen"s Homeport
Date: Tuesday, May 5, 2026 5:35:43 PM

You don't often get email from johnmcmillan0325@gmail.com. Learn why this is important

Gig Harbor Planning:

I support Gig Harbor's Commercial Fishermen's Homeport for the following reasons:

1. This Homeport, as designed, is one of the most environmentally sound projects ever seen in Gig Harbor bay considering that the bulk of marinas currently in the harbor are nothing more than wall-to-wall plastic parking lots, many of which are covered.
2. It leaves thousands of SF of open water that sustains the sensitive biodiversity in the bay.
3. It provides moorage for local fishermen who spend their dollars locally.
4. It will be the only long-term moorage facility that is open to the public.

Thank you for your work on this project.

- John
JohnMcMillan0325.com

From: Jeni Woock
To: Planning Comments
Subject: Homeport
Date: Tuesday, May 5, 2026 5:41:26 PM

[You don't often get email from jeniawoock@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

Dear Planning Department,
Please enter my comments regarding the Homeport into the record.
I support the Homeport and the city's determination of non significance.
Gig Harbor is a special city and we have a wonderful fishing history to tell. This project will bring in tourists who spend more time visiting our community, staying in hotels and enjoying our restaurants and other income producing events.
For the 8 years I served our citizens on council, the Homeport was slowly moving forward. We are so close, let's get this done!
Thank you for your consideration,
Jeni Woock

We do not inherit the earth from our ancestors but borrow it from our children and protect it for future generations.

From: Thomas Campanelli
To: Planning Comments
Subject: Homeport at Anchich
Date: Wednesday, May 6, 2026 1:53:38 AM

You don't often get email from roundengines@gmail.com. Learn why this is important

'I support the City's determination findings and the Homeport project.'

The Homeport preserves 'place' and heritage.

Sincerely,
Captain Thomas Campanelli
Fishing Vessel Fremont #75784

Sent from my iPhone

From:	Katharine Shaffer
To:	Michelle Thomas
Subject:	Fw: PL-SDP-22-0005, PL-SPR-22-0007 & PL-22-0014-Gig Harbor Commercial Fishing Homeport-Peter Katich Comments on Proposal
Date:	Thursday, May 7, 2026 8:29:00 AM

Please add this comment to the record for PL-SDP-22-0005.

Katharine Shaffer | Principal Planner
City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335
Phone: (253) 853-7615 X2230
www.gigharborwa.gov

Stay Connected! Sign up for the city's weekly Gig-A-Byte email newsletter.

From: pkatich@comcast.net <pkatich@comcast.net>
Sent: Wednesday, May 6, 2026 5:50 PM
To: Katharine Shaffer <KShaffer@gigharborwa.gov>
Subject: PL-SDP-22-0005, PL-SPR-22-0007 & PL-22-0014-Gig Harbor Commercial Fishing Homeport-Peter Katich Comments on Proposal

You don't often get email from pkatich@comcast.net. Learn why this is important

Hi Katharine: Thanks again for meeting with me today. Attached, are my comments on the project which I would request that you add to the public record for the Hearings Examiner decision on this matter. I tried to send you the letter earlier today, but I don't think it went through and that you received it. However, if you did, please use this version as I forgot to "date" the letter on page #1. I guess I'm out of practice. Please let me know if you have any questions and also, please confirm receipt of this letter. Thank you! Peter

May 6, 2026

Peter Katich
3509 Ross Avenue
Gig Harbor, WA 98332

Hearings Examiner Mark Scheibmeir
c/o City of Gig Harbor Community Development
3510 Grandview Street
Gig Harbor, WA 98332

RE: PL-SDP-22-0055, PL-SPR-22-0007 & PL-SEPA-22-0014-Gig Harbor Commercial Fish ing Homeport

Dear Hearings Examiner Scheibmeir:

I am writing to express my support for the Gig Harbor Commercial Fishing Homeport project proposed for 3589 Harborview Drive. As a fourth-generation member of a Croatian/American fishing family and along with my wife, an owner of a home in the nearby Historic Millville Neighborhood, I strongly support this project that will finally provide a modern, code compliant moorage facility to serve the needs of the city's commercial fishing fleet, while being designed in a manner that avoids adverse environmental impacts to the aquatic environment of Gig Harbor Bay.

I'm also a retired land use planner with 43 years of experience with the cities of Tacoma and Gig Harbor administering the State Shoreline Management Act (SMA), zoning, and SEPA environmental regulations, and was the project manager for the last major update of the Gig Harbor Shoreline Master Program (GHSMP) in December 2013. I am qualified to conclude that the proposal is consistent with the review criteria required to be met for the authorization of a Shoreline Substantial Development Permit set forth in GHSMP subsection 8.2.1.E and with the review criteria for approval of Substantial Development Permits set forth in WAC 173-27-150.

In this regard, the project is consistent with the policies and procedures of the SMA and would result in a water-dependent moorage facility that would serve the community's entire commercial fishing fleet and provide a secure homeport for an historically significant industry that provides economic and cultural benefits locally and beyond. It would be located on a previously developed urban shoreline and would not adversely affect the natural character of the shoreline. It will result in long-term versus short-term benefits to the community, and with mitigation provided to address project impacts through the Determination of Non-Significance (DNS) (see PL-SEPA-22-0014) issued for the project, the resources and the ecology of the shoreline will be protected.

Planning staff have found the project to be consistent with the applicable regulations of the city's zoning code, and with the applicable regulations and policies of the GHSMP. I concur and note that the subject site is located within the GHSMP's Historic Working Waterfront Environment Designation. The stated purpose of the designation is "to recognize and preserve two of Gig Harbor's most notable historic industries: commercial fishing and boatbuilding." The water-dependent project will help preserve the historic commercial fishing industry in Gig Harbor by providing safe, secure, and dependable long-term moorage for Gig Harbor's commercial fishing fleet at a time when many of the private moorage facilities have either been converted to other uses or fallen into disrepair. The moorage facility, together with the adjacent, restored Ancich Net Shed, will provide the necessary support and infrastructure required to keep Gig Harbor's fishing fleet thriving for years to come.

If properly conditioned to require the mitigation set forth in the DNS issued for the project, the subject request is consistent with the State Shoreline Management Act and the applicable provisions of the GHSMP.

Last, the project is consistent with the criteria set forth in Gig Harbor Municipal Code Subsection 17.96.035. In this regard, the site plan is

compatible with surrounding uses, which are principally private marinas, and as previously addressed, with all relevant statutory codes, regulations, and ordinances.

In conclusion, my family and I strongly support the Gig Harbor Commercial Fishing Fleet Homeport project and request that you approve the requested Substantial Development Permit and Site Plan Approval required for the project. Thank you!

Sincerely,

Peter Katich

Peter Katich

From: George Pollitt
To: Planning Comments
Subject: GIG HARBOR COMMERCIAL FISHING HOMEPORT
Date: Thursday, May 7, 2026 2:26:19 PM

[You don't often get email from pollittgm@hotmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

My wife and I continue to support the City's determination findings and the Homeport project.

This project has been in the works for over 10 years and is important to the City's Heritage. Not only will it be another tourist attraction, but will pay for itself through rental fees.

Please support the Homeport!

George & Marcia Pollitt, 2808 Harborview Drive, Gig Harbor

From: Rick Tarbet
To: Planning Comments
Subject: Homeport project
Date: Thursday, May 7, 2026 7:19:11 AM

> You don't often get email from rtarbet52@hotmail.com. Learn why this is important

I support the city's determinations finding and the Homeport Project,

Rick Tarbet

From: Melinda Stuart
To: Planning Comments
Subject: Fishing fleet home port
Date: Saturday, May 9, 2026 9:43:30 AM

[You don't often get email from melindastuart459@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

We are excited to see that the fishing home port project is continuing to get closer to becoming a reality for Gig Harbor. We have enjoyed living in Gig Harbor for 40 years and have gotten to know several of the fishing families. It is important to preserve the heritage of these fleets and allow them to have a safe, visible and environmentally responsible place to keep their boats.

Thank you for keeping this on track and seeing this important project through to completion. It has been a long process, but it is important to the city, it's heritage and the community that calls this place home.

Melinda Stuart

From: Robyn Denson
To: Planning Comments
Subject: Commercial Homeport Pier
Date: Monday, May 11, 2026 12:01:00 PM
Attachments: image001.png

> You don't often get email from robyn.denson@piercecountywa.gov. Learn why this is important

Hi Planning Commission,

I'm thrilled the City is continuing progress on the Commercial Fishing Homeport Pier. I've been a strong proponent of this project from the start. Having a strong fishing fleet in Gig Harbor is critical for the identity and character of our community. Our fleet sets us apart from other Puget Sound communities and is a key reason we have visitors to our downtown area. Seeing fishing boats in our waters is critical for economic vitality of our downtown area and the ability for the public/tourists to see the boats up close on the Homeport Pier, and observe our fishermen and women at work, is going to be a huge draw. This will be of great for our shops, restaurants and lodging facilities.

I strongly support the City's determination findings and the Homeport project.

Thank you for your leadership on this important project!

Thank you,
Robyn

For the latest news, please follow my official County Facebook page and sign up for my newsletter. Old newsletters can be found here.

Have you seen the NEW Pierce County *We Believe in Clean* video?



ROBYN DENSON
Council Member - District 7

robyn.denson@piercecountywa.gov
(253) 798-7776 (office)
(253) 318-1625 (mobile)
1501 Market Street, STE 530
Tacoma, WA 98402

robyn.denson@piercecountywa.gov | Visit my Council Website

***Notice**: All e-mail communications with the Pierce County Council may be subject to disclosure under the Public Records Act (Chapter 42.56 RCW) and should be **presumed to be public**.*

From:	ECY RE SWRO SEPA COORDINATOR
To:	Planning Comments
Cc:	Peck, Garret (ECY); Rockett, Derek (ECY); Ison, Diana (ECY)
Subject:	ECY SEPA 202601747 - Gig Harbor Commercial Fishing Homeport - Comments
Date:	Monday, May 11, 2026 9:01:47 AM
Attachments:	image001.png 202601747 ECY Comments.pdf
Importance:	High

Planning Division:

Thank you for the opportunity to comment on the Gig Harbor Commercial Fishing Homeport Project (Lead Agency File No(s). PL-SEPA-22-0014). Ecology's comments are attached.

[Statewide SEPA Register No. 202601747]

Have a great day,

Joe Thomas
ERTS & SEPA Coordinator
Southwest Region
Cell: 360-480-3300

DEPARTMENT OF ECOLOGY
State of Washington

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775, Olympia, WA 98504-7775 • 360-407-6300

May 11, 2026

Planning Division
City of Gig Harbor
Community Development Department
Planning Division
3510 Grandview Street
Gig Harbor, WA 98335

Dear Planning Division:

Thank you for the opportunity to comment on the determination of non-significance for the Gig Harbor Commercial Fishing Homeport Project (PL-SEPA-22-0014) located at 3589 Harborview Drive as proposed by FACETNW. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

HAZARDOUS WASTE & TOXICS REDUCTION: Garret Peck (564) 669-0836

The applicant proposes to remove a structure(s) that may contain treated wood. Please refer to Ecology's publication "Focus on Treated Wood Exclusion," available at, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Common-dangerous-waste/Treated-wood-waste for suggested best management practices and disposal requirements for treated wood. For additional information or clarification, please contact Southwest Regional Hazardous Waste and Toxics Reduction program, at (360) 407-6900.

SOLID WASTE MANAGEMENT: Derek Rockett (360) 995-3176

All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from your local jurisdictional health department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the local jurisdictional health department or Department of Ecology for proper management of these materials.

TOXICS CLEANUP: Diana Ison (360) 999-9593

This property is within a quarter mile of one known or suspected contaminated site. The site is Brunette & K B Partnership, Facility Site Identification (FSID) 7239. To search and access information concerning this site see http://www.ecy.wa.gov/fs/ and https://fortress.wa.gov/ecy/gsp/SiteSearchPage.aspx. If contamination is suspected, discovered, or occurs during the proposed dock demolition or construction, testing of the potentially contaminated media must be conducted. If

contamination of soil or groundwater is readily apparent, or is revealed by sampling, the Department of Ecology must be notified. Contact the Environmental Report Tracking System Coordinator at the Southwest Regional Office at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Diana Ison with the Toxics Cleanup Program at the Southwest Regional Office at (360) 999-9593.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(JKT:202601747)

cc: Garret Peck, HWTR
Derek Rockett, SWM
Diana Ison, TCP

From: Linda Foster
To: Planning Comments
Subject: Homeport
Date: Monday, May 11, 2026 6:45:22 PM

[You don't often get email from fosworks@comcast.net. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

I am in support of the Homeport and look forward to its completion.
Thank you
Linda Foster
6828 93rd St Ct NW
Gig Harbor, 98332
253-549-6734
Sent from my iPhone

From: Nancy Jerkovich
To: Planning Comments
Subject: Homeport
Date: Monday, May 11, 2026 6:49:32 PM

[You don't often get email from jerkopet@comcast.net. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

I am in support of the building of the Homeport. It will be a great addition for the harbor and the fishing industry.
Thank you
Nancy L Jerkovich
Sent from my iPhone

From: cindylumsden@comcast.net
To: Planning Comments
Subject: Gig Harbor's Homeport project.
Date: Monday, May 11, 2026 10:28:35 AM

[You don't often get email from cindylumsden@comcast.net. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

I fully support the Homeport project.
It's a much needed facility to support our Gig Harbor fishing fleet that continues the legacy of 5 generations of commercial fishing in our town.
The fleet continues to provide many jobs and spends their money with multiple businesses in our town.
Thank you for continuing to support this project!
Cindy Lumsden

Sent from my iPhone

From: COLLEEN PARIS
To: Planning Comments
Subject: Homeport construction.
Date: Monday, May 11, 2026 9:04:18 AM

You don't often get email from harborparis@centurytel.net. Learn why this is important

it is my hope that the city continues to move forward with the long delayed Homeport construction in order to offer Gig Harbors historic and continuing Fishing Fleet.

Thank you
Steve Paris

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF MAILING

I, **Michelle Thomas** (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On **May 15th, 2026**, I mailed/emailed a true and correct copy of the **NOTICE OF PUBLIC HEARING** for the following:

Project Name: **Gig Harbor Commercial Fishing Homeport**

Project Location: **3589 Harborview Drive | Parcels 5970000244**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-SEPA-22-0014**

to the individuals/agencies identified on the attached transmittal form by United States Postal Service, inter-office routing, or electronic mail, as specified on the attached.

SIGNED at Gig Harbor, Washington, this **15th Day of May, 2026**

Michelle Thomas
DECLARANT (signature)

City of Gig Harbor
Transmittal Form

Routing for: NOA SEPA **NOPH** NOPM NOD **Notice Date:** 05.18.2026

Project: GH Commercial Homeport **Planner:** Katharine

Routed to: City Depts.

- ☐ Public Works–Operations
- ☐ Public Works–Engineering
- ☐ Building and Fire Safety
- ☐ Other_____

SEPA Agencies: (NOA, SEPA) Electronic Mail

- ☐ Washington Department of Ecology, SEPA Register online
- ☐ Washington Department of Commerce, attn: Review Team
- ☐ Pierce Transit Land Use Review
- ☐ Washington State Department of Fish & Wildlife, attn: SEPA Desk
- ☐ Washington State Department of Natural Resources, attn: SEPA Center
- ☐ Washington State DAHP
- ☐ Puyallup Tribe of Indians Historic Preservation
- ☐ Puyallup Tribe Cultural Resources
- ☐ PenMet Parks
- ☐ Pierce County Fire District Number 5
- ☐ Suquamish Tribe
- ☐ Peninsula School District
- ☐ Pierce County Planning and Land Services
- ☐ Washington State Department of Transportation, attn: OR-SEPA-REVIEW
- ☐ Squaxin Island Tribe
- ☐ Muckleshoot Tribe
- ☐ Washington Department of Corrections
- ☐ Puget Sound Partnership
- ☐ Nisqually Tribe

Other Parties: 1st Class Mail

- ■ Applicant/Owner/Agent (NOA, NOPH, NOPM, SEPA, NOD)
- ☐ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
- ☐ Mayor & Council (NOD Hearing Examiner Decisions)
- ■ Property Owners within 300 feet of site: attached list (NOA, SEPA, NOPH, NOPM, NOD for Type II permits only)
- ■ Parties of Record: attached list (NOPH, NOPM, NOD)
- ☐ Pierce County (NOA for Plats adjacent to City Limits)
- ☐ Pierce County Assessor-Treasurer (NOD)
- ☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
- ☐ Tacoma Daily Index
- ☐ Other _____

City of Gig Harbor
3510 Grandview Street
Gig Harbor, WA 98335

gigharborwa.gov
(253)851-6170

Community Development Department
Planning Division

CITY OF GIG HARBOR
NOTICE OF PUBLIC HEARING

Gig Harbor Commercial Fishing Homeport

Project Info

Permit Number(s):	PL-SDP-22-0005, PL-SPR-22-0007 & PL-SEPA-22-0014
Date of Notice:	May 18, 2026
Applicant:	City of Gig Harbor, 3510 Grandview Street, Gig Harbor, WA 98335
Agent:	FACET, 9706 4th Ave NE, Suite 300, Seattle, WA 98115
Project Location:	3589 Harborview Drive, site is located on the north side of Harborview Drive, approximately 275 feet east of the intersection with Novak Street. Parcel – 5970000244
Project Description:	The proposal is to construct a commercial fishing homeport dock system at Ancich Waterfront Park, including a 280-foot main walk float, 15 60-foot finger floats, two 80-foot finger float, an 80-foot gangway, and installation of steel guide and fender piles. The project also includes utility extensions with a sewer pump-out station, removal of the existing Jerkovich Pier and creosote piles, and shoreline mitigation improvements such as beach nourishment and stormwater outfall restoration. The proposal would result in a net overwater coverage increase of approximately 4,852 square feet.
SEPA Threshold Determination:	Determination of Nonsignificance (DNS), issued April 27, 2026.
PUBLIC HEARING DATE:	Hearing Examiner, **June 2nd, 2026 at 1:30 pm**, Virtual Hearing or at the Civic Center in the Council Chambers

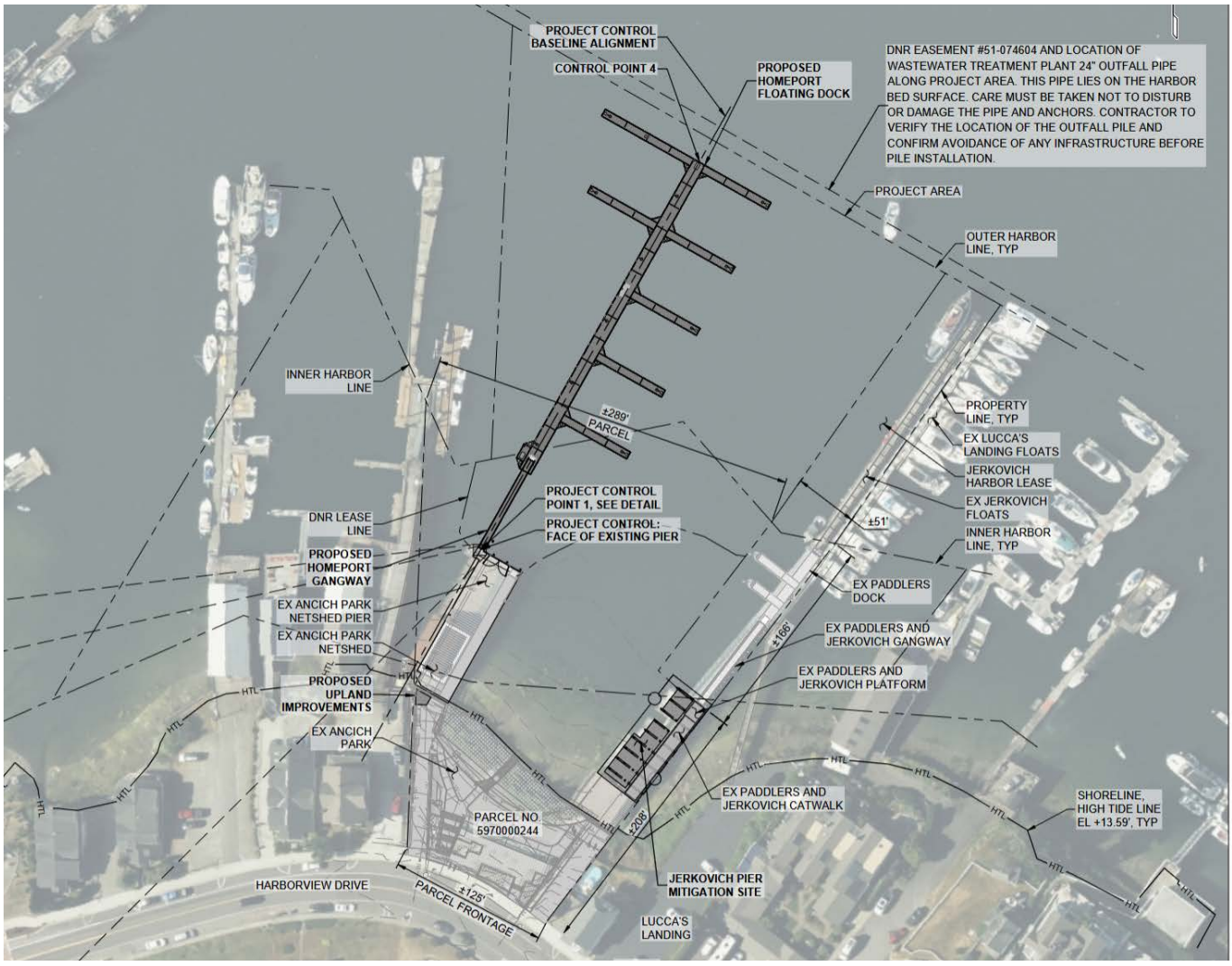
Interested persons are invited to attend the public hearing and provide testimony on this proposal. The hearing will be conducted in the manner prescribed by Gig Harbor Municipal Code Chapter 19.05.

Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or on the City's Permit Portal. A copy of the staff report on this proposal will be available at least seven days prior to the hearing. A copy of the application, all documents and evidence relied upon by the applicant, and applicable criteria are available for

inspection at no cost; copies will be provided at the requestor's cost.

Interested persons may comment on the above stated application or may request a copy of the decision on this application. **Requests for notification, written comments, including any written comments addressing the findings required for a decision, must be submitted to the Planning Division no later than close of business on June 1st, 2026.**

Questions regarding the above stated application should be made to Katharine Shaffer, Principal Planner, City of Gig Harbor Community Development Department, 3510 Grandview Street, Gig Harbor, WA 98335, KShaffer@gigharborwa.gov or by calling (253)851-6170. Additional permit information can also be found at www.gigharborwa.gov by clicking "Permit Portal" and entering the permit number.



5970000230 5970000291
ALLEN CAROLYN S
3526 HARBORVIEW DR
GIG HARBOR WA 98332

0221053071
BUJACICH DOCK LLC
3607 ROSS AVE
GIG HARBOR WA 98332-1856

5973000010
DOWD MICHAEL T &
CHRISTINE A
3519 HARBORVIEW DR APT 1
GIG HARBOR WA 98332

5973000030
GLEIN GARY A & LINDA D
3519 HARBORVIEW DR APT 3
GIG HARBOR WA 98332-2183

0221053003
HAN SOOK LEE REVOCABLE
LIVING TRUST
14425 SW ALLEN BLVD
BEAVERTON OR 97005

5970000310
MOORE JANE M & DENNIS D
3525 ROSS AVE
GIG HARBOR WA 98332-1845

5973000040
PETERSON PAMELA H
3519 HARBORVIEW DR UNIT 4
GIG HARBOR WA 98332

0221053058
VANBERG RICHARD L
& JEAN C
3616 HARBORVIEW DR
GIG HARBOR WA 98332-2129

5970000271 5970000301
ALLEN KRISTINE J
3603 ROSS AVE
GIG HARBOR WA 98332-1856

0221053093
BUJACICH GEORGE P TTEE
3619 ROSS AVE
GIG HARBOR WA 98332-1856

0221053051
FAIRWAY HOLDINGS LLC
PO BOX 99695
LAKEWOOD WA 98496-0695

5970000161
HARBOR CONDOMINIUM
5114 POINT FOSDICK DR STE
F181
GIG HARBOR WA 98335-1733

0221053030
MALICH DOCK LLC
8326 96TH ST NW
GIG HARBOR WA 98332

5970000372
MUELLER RAND A
3514 HARBORVIEW DR
GIG HARBOR WA 98332-2128

5970000263
PUPO ELAINE S TTEE
OF MABLE TRUST
3518 HARBORVIEW DR
GIG HARBOR WA 98332

5970000180
YETTER AARON C &
KRISTINE A
9127 NE 36TH ST
YARROW POINT WA 98004

5973000020
BORIS DARCY B TTEE OF
DARCY B BORIS TRUST
3519 HARBORVIEW DR UNIT 2
GIG HARBOR WA 98332

0221053092 0221053095
BUJACICH JACK D JR &
BUJACICH PATRICIA R
3607 ROSS AVE
GIG HARBOR WA 98332-1856

0221053083
FRANICH JAMES M
3702 HARBORVIEW DR
GIG HARBOR WA 98332-2130

0221053113 0221053114
HARBOR INVESTMENTS NW II
LLC
1329 N NORTHLAKE WAY
SEATTLE WA 98103

5973000050
MILLVILLE MARINA LLC
3519 HARBORVIEW DR
GIG HARBOR WA 98332-2183

5970000215
MULLAN LLC
PO BOX 7605
TACOMA WA 98417

0221053042
QUIGG PATRICK D &
KATHLEEN A
1831 BEL AIRE AVE
ABERDEEN WA 98520-1305

Gig Harbor Commercial Fishing Homeport



4/28/2026, 10:20:45 AM

Site

1:2,722

0 85 170 340 ft

0 25 50 100 m

Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Imagery © 2023 Hexagon and data partners., Microsoft, Vantor

City of Gig Harbor Staff

The map features are approximate. All data is provided "as-is" and "with all faults." The City assumes no liability for variations ascertained by actual survey.

Planning Division Interested Party Roster

Project Name: Commercial Homeport

Name	Address	City, State	Zip	Email	Phone	Comment Type/Date
Shaun Dinubilo, Squaxin Island Tribe				sdinubilo@squaxin.us		2022.06.13 NOA
Jennifer Keating, Puyallup Tribe				Jennifer.M.Keating@puyalluptribe-nsn.gov		2022.06.16 NOA
Brad Beach, Nisqually Island Tribe				beach.brad@nisqually-nsn.gov		2022.06.17 NOA
DOE						2022.07.07 NOA
Guy Hoppen	8402 Goodman Dr	Gig Harbor, WA	98332	guyhoppen@comcast.net		2026.05.05 DNS
John McMillan				johnmcmillan0325@gmail.com		2026.05.05 DNS
Jeni Woock				jeniawoock@gmail.com		2026.05.05 DNS
Captain Thomas Campanelli				roundengines@gmail.com		2026.05.06 DNS
Mary Manning				marymanning65@gmail.com		2026.05.06 DNS
Rick Tarbet				rtarbet52@hotmail.com		2026.05.07 DNS
Pete Katich				pkatich@comcast.net		2026.05.06 DNS
George & Marcia Pollitt	2808 Harborview Drive	Gig Harbor, WA	98332	pollittm@hotmail.com		2026.05.07 DNS
Melinda Stuart				melindastuart@gmail.com		2026.05.09 DNS
DOE Joe Thomas				swrosepacoordinator@ecy.wa.gov		2026.05.11 DNS
Steve Paris				harborparis@centurytel.net		2026.05.11 DNS
Nancy Jerkovich				jerkopet@comcast.net		2026.05.11 DNS
Linda Foster	6828 93rd St Ct NW	Gig Harbor, WA	98332	fosworks@comcast.net		2026.05.11 DNS
Robin Denson				robyn.denson@piercecountywa.gov		2026.05.11 DNS
Cindy Lumsden				cindylumsden@comcast.net		2026.05.11 DNS

Please refer to Gig Harbor Municipal Code (GHMC), Title 19, for any questions relative to the administration of the development code. This list should not be considered an exhaustive list of all those parties who may be interested in this project. This

From:	Michelle Thomas
To:	Katharine Shaffer
Bcc:	"sdinubilo@squaxin.us"; "Jennifer.M.Keating@puyalluptribe-nsn.gov"; "beach.brad@nisqually-nsn.gov"; "guyhoppen@comcast.net"; "johnmcmillan0325@gmail.com"; "jeniawoock@gmail.com"; "roundengines@gmail.com"; "marymanning65@gmail.com"; "rtarbet52@hotmail.com"; "pkatich@comcast.net"; "pollittm@hotmail.com"; "melindastuart@gmail.com"; "swrosepacoordinator@ecy.wa.gov"; "harborparis@centurytel.net"; "jerkopet@comcast.net"; "fosworks@comcast.net"; "robyn.denson@piercecountywa.gov"; "cindylumsden@comcast.net"
Subject:	Notice of Public Hearing Gig Harbor Commercial Fishing Homeport
Date:	Wednesday, May 13, 2026 9:06:00 AM
Attachments:	2026.05.18 NOPH.pdf

Dear Interested Parties,
Please be advised that a Public Hearing has been scheduled for the following project:
Project: Gig Harbor Commercial Fishing Homeport
Project Location: 3589 Harborview Drive
Hearing Date: June 2, 2026
Hearing Time: 1:30 PM
Hearing Location: Gig Harbor Civic Center or via Zoom
The purpose of this hearing is to consider a Shoreline Development permit to construct a commercial fishing homeport dock system at Ancich Waterfront Park.
Attached please find the formal Notice of Public Hearing and related project information for your review.
If you have any questions or would like additional information prior to the hearing, please contact Katharine Shaffer at 253-851-6170 or KShaffer@gigharborwa.gov.
Sincerely,

Michelle Thomas | Planning Technician
3510 Grandview St • Gig Harbor, WA 98335
253-851-6170 | 253-853-8255 (direct) | www.gigharborwa.gov

Stay Connected! Sign up for the city's weekly Gig-A-Byte email newsletter

CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF POSTING

I, Stephanie Seibel, P.E. (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On May 12, 2026 I caused to be posted the notice board provided by the City of Gig Harbor for the Notice of Public Hearing on the following:

Project Name: **Gig Harbor Commercial Fishing Homeport**

Project Location: **3589 Harborview Drive | Parcels 5970000244**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-SEPA-22-0014**

at the locations indicated below meeting the requirements of GHMC 19.03.001(A).

- ☒ Ancich Park, 3589 Harborview Drive, Gig Harbor WA
- ☒ _____

SIGNED at Gig Harbor, Washington, this 12 day of May, 2026.

_____
DECLARANT (signature)



CERTIFICATION OF PUBLIC NOTICE

==========

DECLARATION OF PUBLISHING

I, **Michelle Thomas** (printed name), declare under penalty of perjury under the laws of the State of Washington and the United States of America that the foregoing is true and correct to the best of my knowledge:

On **May 6th, 2026,** I sent a true and correct copy of the **NOTICE OF PUBLIC HEARING** for publication in the **May 18th, 2026,** edition of the Tacoma Daily Index for the following:

Project Name: **Gig Harbor Commercial Fishing Homeport**

Project Location: **3589 Harborview Drive | Parcels 5970000244**

Permit Number(s): **PL-SDP-22-0005, PL-SPR-22-0007, PL-SEPA-22-0014**

SIGNED at Gig Harbor, Washington, this 6th, Day of May 2026

Michelle Thomas
DECLARANT (signature)

City of Gig Harbor
Transmittal Form

Routing for: NOA SEPA **NOPH** NOPM NOD **Notice Date:** 05.18.2026

Project: GH Commercial Homeport **Planner:** Katharine

Routed to: City Depts.

- ☐ Public Works–Operations
- ☐ Public Works–Engineering
- ☐ Building and Fire Safety
- ☐ Other_____

SEPA Agencies: (NOA, SEPA) Electronic Mail

- ☐ Washington Department of Ecology, SEPA Register online
- ☐ Washington Department of Commerce, attn: Review Team
- ☐ Pierce Transit Land Use Review
- ☐ Washington State Department of Fish & Wildlife, attn: SEPA Desk
- ☐ Washington State Department of Natural Resources, attn: SEPA Center
- ☐ Washington State DAHP
- ☐ Puyallup Tribe of Indians Historic Preservation
- ☐ Puyallup Tribe Cultural Resources
- ☐ PenMet Parks
- ☐ Pierce County Fire District Number 5
- ☐ Suquamish Tribe
- ☐ Peninsula School District
- ☐ Pierce County Planning and Land Services
- ☐ Washington State Department of Transportation, attn: OR-SEPA-REVIEW
- ☐ Squaxin Island Tribe
- ☐ Muckleshoot Tribe
- ☐ Washington Department of Corrections
- ☐ Puget Sound Partnership
- ☐ Nisqually Tribe

Other Parties: 1st Class Mail

- ☒ Applicant/Owner/Agent (NOA, NOPH, NOPM, SEPA, NOD)
- ☐ DRB (NOA for Non-residential, Multi-family, Subdivisions, Public Projects)
- ☐ Mayor & Council (NOD Hearing Examiner Decisions)
- ☒ Property Owners within 300 feet of site: attached list (NOA, SEPA, NOPH, NOPM, NOD for Type II permits only)
- ☒ Parties of Record: attached list (NOPH, NOPM, NOD)
- ☐ Pierce County (NOA for Plats adjacent to City Limits)
- ☐ Pierce County Assessor-Treasurer (NOD)
- ☐ WA Transportation Secretary (NOA for Plats adj. to State ROW, or within 2 miles of Airport—approximately any plats south of Pioneer/Wollochet interchange)
- ☐ Tacoma Daily Index
- ☐ Other _____

Tacoma Daily Index

Affidavit of Publication

State of Washington }
County of Pierce } ss

Amanda Kahlke being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Tacoma Daily Index a newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a newspaper in Pierce County, Washington and is and always has been printed in whole or part in the Tacoma Daily Index and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Pierce County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of IDX1030682 NOPH as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 05/18/2026 and ending on 05/18/2026 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is $166.92.

Subscribed and sworn before me on this 18 day of May, 2026.

Notary Public in and for the State of Washington.

City of Gig Harbor | 09256156
MICHELLE THOMAS

JENNIFER TRIBBETT
NOTARY PUBLIC
STATE OF WASHINGTON
COMM # 160037
APPOINTMENT EXPIRES June 25, 2029

Classified Proof

CITY OF GIG HARBOR
NOTICE OF PUBLIC HEARING
Gig Harbor Commercial Fishing Homeport

Permit Number(s):
PL-SDP-22-0005, PL-SPR-22-0007 & PL-SEPA-22-0014

Date of Notice: May 18, 2026

Applicant:
City of Gig Harbor, 3510 Grandview Street, Gig Harbor, WA 98335

Agent:
FACET, 9706 4th Ave NE, Suite 300, Seattle, WA 98115

Project Location:
3589 Harborview Drive, site is located on the north side of Harborview Drive, approximately 275 feet east of the intersection with Novak Street. Parcel - 5970000244

Project Description: The proposal is to construct a commercial fishing homeport dock system at Ancich Waterfront Park, including a 280-foot main walk float, 15 60-foot finger floats, two 80-foot finger float, an 80-foot gangway, and installation of steel guide and fender piles. The project also includes utility extensions with a sewer pump-out station, removal of the existing Jerkovich Pier and creosote piles, and shoreline mitigation improvements such as beach nourishment and stormwater outfall restoration. The proposal would result in a net overwater coverage increase of approximately 4,852 square feet.

SEPA Threshold Determination:
Determination of Nonsignificance (DNS), issued April 27, 2026.

PUBLIC HEARING DATE:
Hearing Examiner, **June 2nd, 2026 at 1:30 pm**, Virtual Hearing or at the Civic Center in the Council Chambers

Interested persons are invited to attend the public hearing and provide testimony on this proposal. The hearing will be conducted in the manner prescribed by Gig Harbor Municipal Code Chapter 19.05.

Documents pertinent to this application are available for review and inspection at the City of Gig Harbor Planning Division, 3510 Grandview

Street, Gig Harbor, WA 98335, during normal business hours, Monday through Friday or on the City's Permit Portal. A copy of the staff report on this proposal will be available at least seven days prior to the hearing. A copy of the application, all documents and evidence relied upon by the applicant, and applicable criteria are available for inspection at no cost; copies will be provided at the requestor's cost.

Interested persons may comment on the above stated application or may request a copy of the decision on this application. **Requests for notification, written comments, including any written comments addressing the findings required for a decision, must be submitted to the Planning Division no later than close of business on June 1st, 2026.**

Questions regarding the above stated application should be made to Katharine Shaffer, Principal Planner, City of Gig Harbor Community Development Department, 3510 Grandview Street, Gig Harbor, WA 98335, **KShaffer@gigharborwa.gov** or by calling (253)851-6170. Additional permit information can also be found at **www.gigharborwa.gov** by clicking "Permit Portal" and entering the permit number.

IDX1030682
May 18, 2026

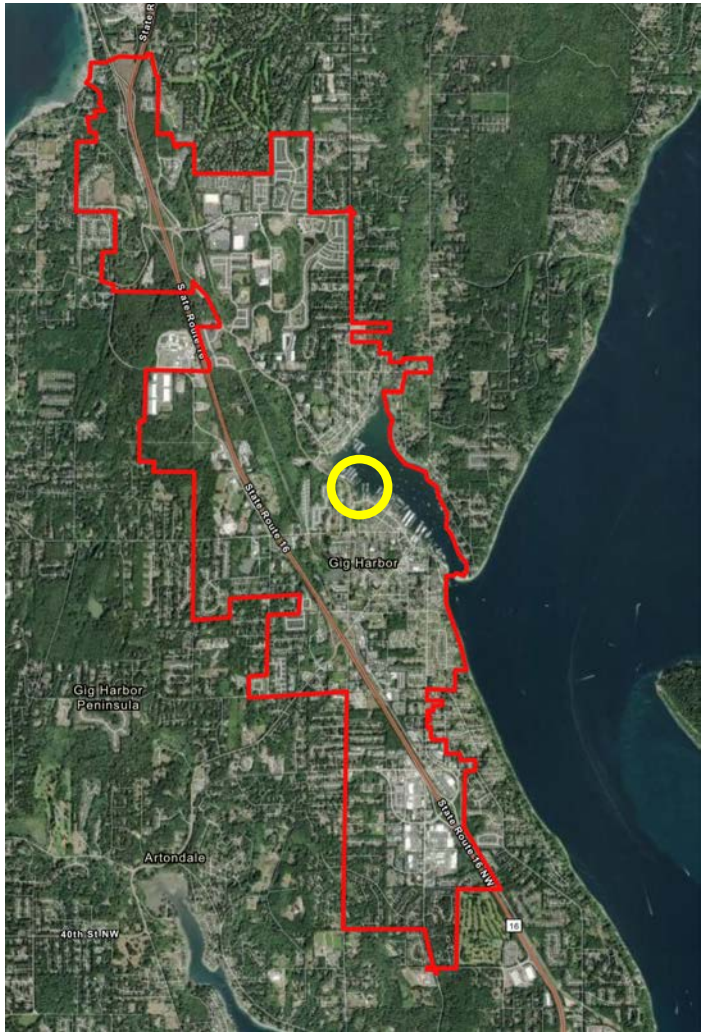
Commercial Fishing Homeport
PL-SDP-22-0005:
Shoreline Substantial Development Permit
Site Plan Review

Public Hearing
June 2, 2026

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Location: City Wide

Gig Harbor Commercial Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 30



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Location: Ancich Waterfront Park - Existing
3589 Harborview Drive
Parcel #5970000244

Gig Harbor Commercial
Fishing Homeport
PL-SDP-22-0005 et al
Hearing Examiner 06.02.2026
Exhibit 30





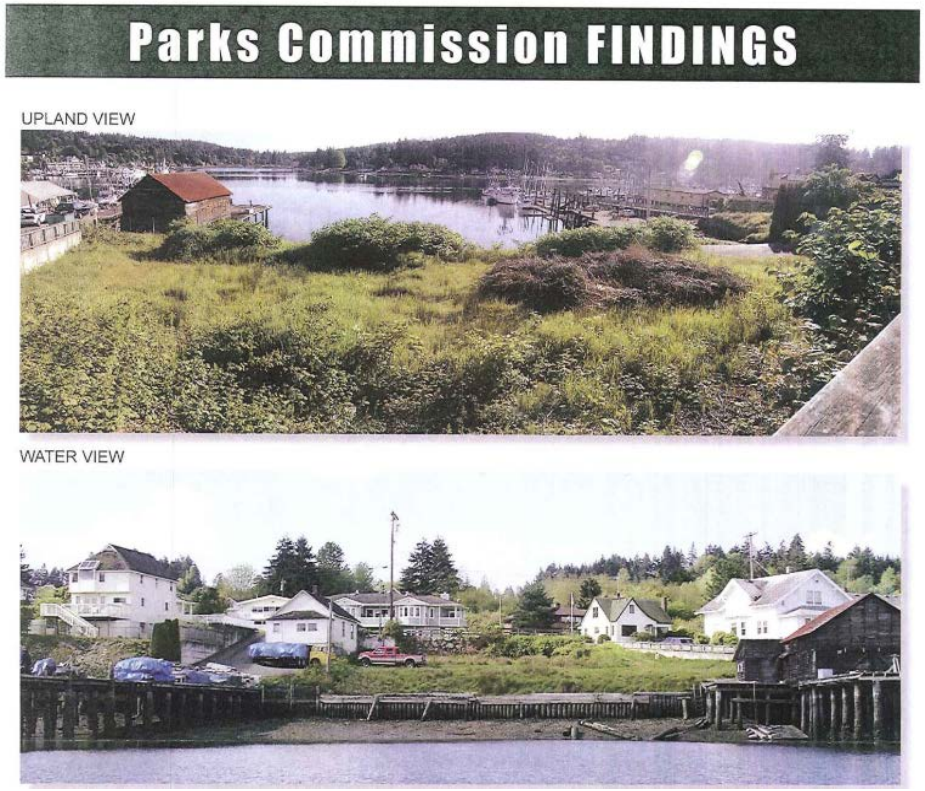


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Resolution 949 and Public Process

In December 2013, Resolution 949 (Exhibit 2) adopts the Parks Commission's recommendation for Ancich Waterfront Park, developed through an extensive public visioning process.

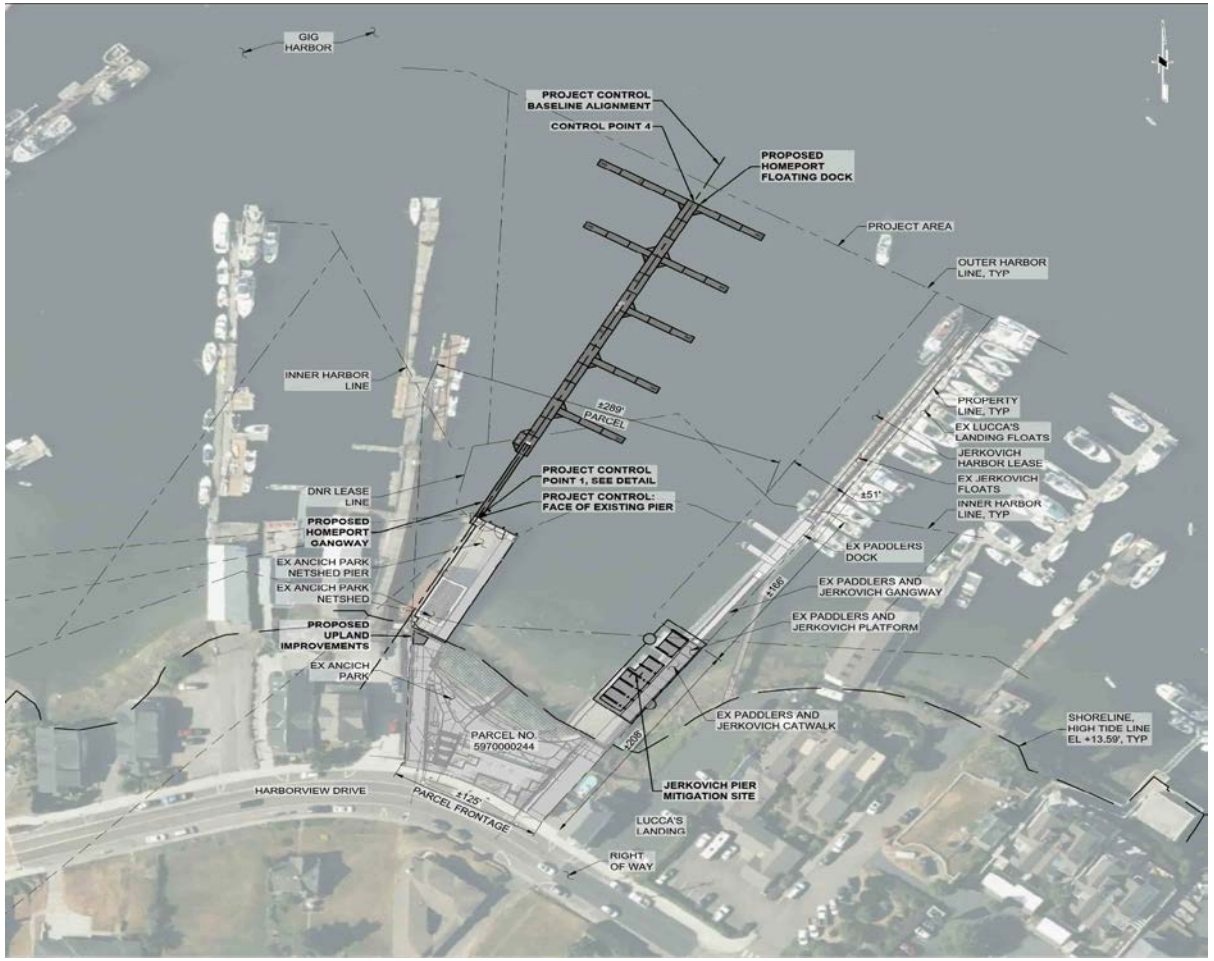
The Commission concluded that the site should remain a working-waterfront facility focused on supporting the commercial fishing fleet and preserving the historic Ancich netshed.



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Site Plan

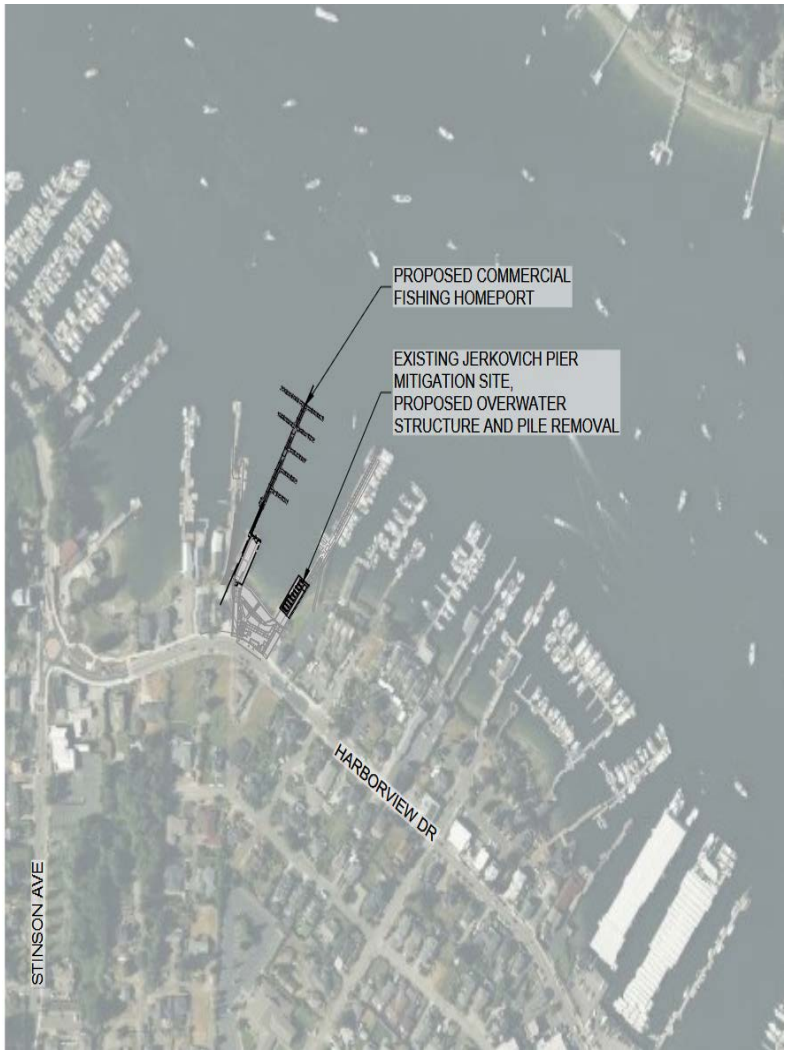
Gig Harbor Commercial Fishing Homeport
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Shoreline Designation: Historic Working Waterfront
Zoning: Waterfront Millville (WM)/Historic District

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Mitigation Plan



Removal of the Jerkovich Pier

- Removes 1,558 square feet of solid asphalt decking
- Removes 32 creosote-treated timber piles
- Estimated 16 tons of creosote removed
- One-time actions – does not require maintenance

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Mitigation Plan

Outfall Restoration and Beach Nourishment at Maritime Pier

- About 0.5 miles from Project site
- Outfall has created a plunge pool with sediment erosion into Gig Harbor
- Restored to Stormwater Management Manual Standards with 600 CY of beach nourishment
- Monitoring for 3 years



Figure 5. Shoreline Erosion at the Stormwater Outfall at Maritime Pier (Ecology, 2016)



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Mitigation Plan

Puget Sound Nearshore Habitat Conservation Calculator			
	Version 1.5b - annotated		2/24/2023
This tool determines long-term habitat impacts and benefits for projects in the Salish Sea nearshore. Details about the use of this Conservation Calculator can be found in the User Guide, FAQs, and training materials, which are all available on the Puget Sound Nearshore Habitat Conservation Calculator Webpage			
		Conservation Credits/Debits	DSAYs (Discounted Service Acre Years)
Overwater Structures	Debit	-464	-4.64
	Credit (includes creosote removal)	60	0.60
	Balance	-404	-4.04
Shoreline Armoring	Debit	0	0.00
	Credit from Armor Removal	0	0.00
	Credit from Creosote Removal	0	0.00
	Balance	0	0.00
[illegible]	Balance	0	0.00
Boatramps, Jetties, Rubble	Debit	0	0.00
	Credit	0	0.00
	Balance	0	0.00
Beach Nourishment	Conservation Offsets	65	0.65
Riparian Enhancement/Degradation	Balance	0	0.00
SAV Planting	Conservation Credit	0	0.00
Habitat Loss / Remaining Conservation Offsets Needed		-340	-3.40

Final August 13, 2025 PM NMFS
Total -340

Puget Sound Partnership Credit Agreement

- Credits calculated accounting for other mitigation
- Pre-sale agreement for 340 credits totaling $479,740
- Puget Sound Partnership conservation bank to use in same body of water/sub-basin
- Conditioned for final sale

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Federal Permitting

USACE

Permit Number: NWS-2022-472

Reviewer: (Lia Protopapadakis) (USACE), Phyllis Meyers (NMFS)

The permits required to be issued by the USACE are Section 10 and Section 404 permits. The initial USACE submittal was (6/9/2022). A mitigation plan was submitted on 10/1/2022, with revisions submitted on 2/28/2023 and 12/20/2024. The NMFS consultation number for the project is WCRO-2023-00546. Once NMFS approves the mitigation for this project, the USACE can issue the Section 10 and Section 404 permits.

On January 8th 2026, the NMFS issued the Biological Opinion for the project. The opinion made no jeopardy determination, and that adverse species/habitat impacts are offset by the proposed project mitigation.

WDFW

Hydraulic Project Approval (HPA) submitted after SEPA Determination was issued.

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Gig Harbor Commercial Fishing Homeport
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Hearing Examiner 06.02.2026
Exhibit 30

Consistent with Shoreline Master Program

5.2.6. Historic Working Waterfront: Reinforces Gig Harbor's Historic Working Waterfront by supporting the commercial fishing fleet, providing dedicated moorage

6.2 Marine Shorelines, Vegetation Conservation and Critical Areas Protection: Critical Areas, habitat, and water quality protections are addressed through design features, timing restrictions, BMPs, and mitigation

6.2.2 No Net Loss and Mitigation: Mitigation follows required sequencing and achieves no net loss

6.2.5.24 Critical Fish and Wildlife Habitat Areas: Site is entirely within a marine Fish and Wildlife Habitat Conservation Area supporting ESA-listed species; surveys found kelp present and confirmed no eelgrass or other special habitats on-site

7.11.8 Piers, Docks, Floats and Lifts: Meets SMP requirements for non-residential overwater structures by providing a water-dependent commercial fishing facility designed to minimize ecological impacts

7.11.11 Regulations – Commercial Fishing Moorage: Proposal restricted to active commercial fishing vessels only, with pleasure craft prohibited

8.2.1 Shoreline Substantial Development Permit - **including WAC 173-27-150:** Consistent with the Shoreline Management Act and the City's Shoreline Master Program, supporting water-dependent use and meeting all applicable shoreline regulations, including no-net-loss standards.

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Conclusion/Questions

State Environmental Policy Act (SEPA) Determination of Non-Significance was issued on April 27, 2026. No appeals filed. Decision considered final.

Staff finds that the proposal, as conditioned, meets all applicable shoreline, zoning, and site plan criteria and recommends **approval** of the consolidated application.

Questions?

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