



AGENDA

City of Gig Harbor Hearing Examiner Virtual Hearing of Tuesday, September 6, 2022 at 1:30 PM

Due to public health concerns, 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

To speak during the hearing, press the Raise Hand button near the bottom of your Zoom window or press *9 on your phone. Comments are only allowed during designated portions of the hearing. Please refrain from "raising your hand" until the Hearing Examiner has announced that he has opened the public comment portion of the hearing. Your name or the last four 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. All speakers will have up to three minutes to speak.

If you wish to submit written public comment, please provide your comments to the Planning Division by **Monday, September 5, 2022 by 5:00 pm**. All written comments must be able to be read in 3 minutes or less to be included in the record and have the title: **FOR PUBLIC COMMENT** included. Send comments to: MThomas@gigharborwa.gov. Written comments will be read during the appropriate agenda item.

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

1. **CARL HALSAN, P.O. BOX 1447, GIG HARBOR, WA 98335:** Olympic Commercial Center Conditional Use Permit and Major Site Plan, (PL-SPR-20-0005, PL-CUP-20-0007, PL-DR-20-0075, PL-SEPA-20-0008). **This project has been rescheduled to appear before the Hearing Examiner on September 20th, 2022**
2. **DC APT LLC., c/o WADE PERROW, P.O. BOX 1805, GIG HARBOR, WA 98335:** Perrow Pier Ramp, Float and Piling, (PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007). The applicant proposes the installation of one new residential pier, ramp, float and piling. The proposal consists of (1) 4'x40' aluminum pier, (1) 4'x38' aluminum pier and (1) 3'x44 aluminum ramp. The new residential pier, ramp, float and piling will also include 100% fiberglass grated surfaces consisting of 1.5" squares and 69% open area. Also proposed (1) 8'x24' float with fully encapsulated polyethylene foam filled tubs for flotation. All surfaces are composed of 50% composite decking and 50% fiberglass grating with 1.5" squares and 69% open area. Additionally, (4) pilin mounted float stops, (4) 8" Galvanized steel pier pilings and (4) 10" galvanized steel float pilings are proposed. The total project length from the existing bulkhead is 136". The site is located at 9113 Harborview Dr., site is located on the east side of Harborview Drive, approximately 165 feet north of intersection with Goodman Ave. Sec 05, Tw 21, R 02, QTR 23. Parcel - 2260000541

III. Adjournment



**PLANNING DEPARTMENT
STAFF REPORT**

TO: Hearing Examiner
FROM: Planning Staff
DATE: September 6, 2022

RE: PL-SDP-22-0002, PL-SEPA-22-0007 & PL-DR-22-0022

Perrow Pier, Ramp and Piling
Public Hearing Date: September 6, 2022

I. GENERAL INFORMATION

- A. Applicant:** John Kavanaugh c/o Marine Floats
313 East F Street
Tacoma, WA 98421
- B. Owner:** DC Apt, LLC
PO BOX 1805
Gig Harbor, WA 98335

II. APPLICANT'S REQUEST

The applicant is proposing to build a new private residential dock including a pier, ramp, and float in Gig Harbor Bay. The structure will be 136 feet from the shore, and the total overwater area of the new dock will be 602 square feet. The dock will consist of:

- One (1) 4' x 78' aluminum pier with 100% grated fiberglass surface (1.5-inch square and 69% open area)
- One (1) 3' x 44' aluminum ramp with 100% grated fiberglass surface (1.5-inch squares and 69% open area), 38' will be overwater
- One (1) 8' x 24' float with 50% composite decking and 50% grated fiberglass surface with polyethylene foam-filled tubs for flotation
- Four (4) 10.75" galvanized steel piles to secure the float
- Four (4) 8.75" galvanized steel piles to support the pier
- Four (4) pile-mounted float stops to prevent the float from grounding at low tide

PL-SDP-22-0002, PL-FLOOD-22-0002, PL-SEPA-22-0007 & PL-DR-22-0022

The site will be accessed via barge which will transport the pre-fabricated pier, ramp, and float from the Marine Floats property in Tacoma. Piles will be installed via impact hammer using a bubble curtain and 6" wood block for sound attenuation. The pier and ramp will be lifted into place using a barge-mounted crane and secured using hand tools. The float will be connected to the piles using hand tools. Work will take approximately three days to complete but is dependent upon tides and weather. The site plan and project drawings are included as Exhibit B, additional project information was attained from the Joint Aquatic Resources Permit Application Form (Exhibit C).

Proposed mitigation for this project is the removal of a marine railway on the adjacent property to the north. The marine railway has historically impeded the movement of sediments and vegetation along the shoreline and the removal of the railway will provide benefits to shoreline ecological quality and health in the long term.

III. SITE DESCRIPTION

- A. Location:** 9113 North Harborview Drive
Pierce County Parcel No. 2260000541
- B. Site Area/Acreage:** 20,914 square feet/0.480 acre
- C. Existing Site Characteristics**
 - 1. Topography:** The site's uplands slope down gradually from Harborview Drive on the northwest to Gig Harbor Bay on the southeast.
 - 2. Vegetation:** The upland portion of the site is landscaped with ornamental landscaping.
 - 3. Wetlands and Critical Areas:** No wetlands or critical areas are located on the site. The site is regulated by the City's Flood Hazard Standard Construction Standard Ordinance of the Gig Harbor Municipal Code (GHMC Chapter 18.10). Further, the proposed improvements are located within 200-feet of the Special Flood Hazard Area boundary located on Gig Harbor Bay and within the regulated 200-foot riparian buffer regulated per GHMC Section 18.10.100. Per the requirements of the GHMC, the applicant prepared a Habitat Assessment and Mitigation Plan (HAMP) dated February 21, 2022 (revised June 16, 2022) to address potential impacts to

Endangered Species Act (ESA) listed species and associated habitat. Under its “effects determination”, the assessment concluded that the project would have either “no effect” or “may effect, but not likely to adversely affect” ESA-listed species or associated habitat. The HAMP is included as Exhibit D.

D. Zoning

1. **Subject parcel:** Waterfront Residential (WR)
2. **Adjacent zoning and current use:**
 - a. **Northwest:** R-1, single-family residential, across Harborview Drive
 - b. **Southeast:** Gig Harbor Bay
 - c. **Northeast:** WR, single-family residential
 - d. **Southwest:** WR, single-family residential

The Gig Harbor Shoreline Master Program (GHSMP) designates the subject site as a Low Intensity Environment Designation. GHSMP subsection 5.2.4 addresses the purpose and management policies for the Low Intensity Environment.

- E. Utilities / Road Access:** The site is accessed by a single driveway from Harborview Drive abutting on the north. The property is serviced by City of Gig Harbor water and sewer, Peninsula Light electricity, and Puget Sound Energy gas.

IV. APPLICABLE CODES AND POLICIES:

A. Comprehensive Plan: The subject property is designated a Waterfront area by the Gig Harbor Comprehensive Plan. The purpose of this land use category is to provide for a variety of waterfront uses allowed under the City of GHSMP and zoning code. Generally, lower intensity waterfront areas favor residential uses while the more intense waterfront areas would provide for higher density residential and commercial/retail uses.

B. Gig Harbor Municipal Code (GHMC)

1. The subject parcel is zoned Waterfront Residential. The following code chapters apply to this proposal:
 - a. 17.46 Waterfront Residential (WR)
 - b. 17.99 Design Review
 - c. 18.04 Environmental Review (SEPA)
 - d. 18.08 Critical Areas Ordinance

e. 18.10 Flood Hazard Construction Standards

C. Shoreline Master Program: Shoreline development in Gig Harbor is regulated by the City of GHSMF, which was adopted November 8, 2021 and became effective January 28, 2022. The following sections/subsections of the Master Program apply to this project:

1. Subsection 5.2.4 Low Intensity Environment Shoreline Designation
2. Subsection 6.2.2 No Net Loss and Mitigation
3. Subsection 6.2.5 Critical Areas
4. Subsection 6.4 Historic, Cultural, Scientific, and Educational Resources
5. Section 6.5 Public Access
6. Subsection 7.11 Boating and Marinas: Piers, Docks, and Moorage
7. Chapter 8 Administrative Procedures

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

1. A substantial development permit shall be granted only when the development proposed is consistent with:
 - a. The policies and procedures of the act;
 - b. The provisions of this regulation; and
 - c. The applicable master program adopted or approved for the area. Provided, that where no master program has been approved for an 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 government.
2. 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.

V. BACKGROUND INFORMATION

Historical information about the subject site is provided in the Cultural Resources Survey of the Perrow Property, Gig Harbor, WA (Exhibit E). The subject site has been modified to varying degrees by logging, agriculture, and urban development since the mid-1800s. The area was formerly densely forested.

The subject site is developed with a single-story 1,630-square-foot single-family home with a partial basement and 400-square-foot detached garage. Per assessor's information the home was constructed in 1962. City of Gig Harbor permit records show that the home was extensively remodeled between 2011 and 2012 with several plumbing and heating upgrades, the certificate of occupancy was issued April 2013.

VI. DESIGN REVIEW

The city's Design Review process is defined under GMHC Chapter 17.98. GHMC Subsection 17.98.050(B) states, "the application shall be reviewed by the director for compliance with the specific requirements of GHMC Chapter 17.99 and all other applicable codes." The subject request complies with all applicable requirements of the city's Design Manual.

No utilities, lighting, or outdoor furnishings are proposed at this time. The addition of these appurtenances at a later date would require further design review.

VII. ENVIRONMENTAL REVIEW

Pursuant to WAC 197-11 and Gig Harbor Municipal Code Chapter 18.04, on August 15, 2022 the City of Gig Harbor issued a Determination of Nonsignificance (DNS) for the proposed action (Exhibit F).

VIII. PUBLIC NOTICE & INPUT

The notice of application was posted at the subject site on March 15, 2022. The notice was also published in the Tacoma News Tribune, sent to state agencies, and notice was mailed to all property owners within 300 feet of the subject site on March 17, 2022.

The City received a comment from the Department of Ecology with comments requesting best practices and reporting for erosion control measures and the control of soil and groundwater contaminants present on site (Exhibit H).

The City received two comments from the Puyallup (Exhibit I) and Squaxin Island Tribes (Exhibit J) requesting a cultural resource study be completed as the subject site is in a very high probability area for archaeological findings as there are multiple known village sites nearby.

The applicant submitted a Cultural Resources Survey of the Perrow Property, Gig Harbor, WA (Exhibit E) dated May 15, 2022; the report did not

recommend any further investigation. The report was sent to the Puyallup and Squaxin Island Tribes on July 8, 2022. Neither tribe had any further comment or request for further investigation.

IX. STAFF ANALYSIS AND FINDINGS

A. Planning Staff

1. Comprehensive Plan: The site is designated as a Waterfront area by the City's Comprehensive Plan. The purpose of this land use category is to provide for a variety of mixed uses along the waterfront which are allowed under the City of Gig Harbor Shoreline Master Program and as more particularly defined under the zoning code. Generally, the lower intensity waterfront areas would favor residential and marinas while the more intense waterfront areas would provide for higher density residential and commercial/retail uses.

The proposed pier, ramp, and float is considered a water-dependent land use under the GHSMP, and the subject site is located in a less intense section of the Waterfront area designation as addressed by the purpose statement above.

The following is an analysis of Comprehensive Plan goals applicable to the proposal:

Goal 2.2 Define Identity and Create Community Based Urban Form: Define a pattern of urban development which is recognizable, provides an identity and reflects local values and opportunities.

Policy 2.2.3.H Waterfront

Provides for a variety of mixed uses along the waterfront which are allowed under the GHSMP and as more particularly defined under the zoning code. Generally, the lower intensity waterfront areas would favor residential and marinas while the more intense use waterfront areas would provide for higher density residential and commercial/retail uses.

Goal 3.4 Protect the native and built environment from degradation and pollution and require low impact development where feasible.

Policy 3.4.1

Encourage open waters and sustainable land development and building practices in the construction of new development.

Policy 3.4.4

Preserve and protect habitat which provides the shoreline's unique value, including the Crescent Creek and Donkey Creek estuaries, and critical saltwater habitats which include kelp beds, eelgrass beds, spawning and holding areas for forage fish such as surf smelt and sand lance, sand spits, mud flats, and areas with which priority species have a primary association.

Goal 10.1 Protect Natural Quality: It is the goal of the City of Gig Harbor to protect ecological processes and functions existing in the shoreline and nearshore area. It is also the goal of the City of Gig Harbor to protect and restore shoreline vegetation, recognizing the multiple benefits native vegetation provides, including reduction in the need for structural stabilization; ecological functions and habitat; coastal bluff stability, safety, and protection of human life and property; and visual and aesthetic qualities.

Staff analysis: Provided the request is properly conditioned to address potential environmental impacts during construction, the proposal which would allow for the development of a water-dependent use consistent with the requirements of the GHSMP, is generally consistent with the stated purpose and applicable goals of the Comprehensive Plan.

2. Gig Harbor Municipal Code

17.46 Waterfront Residential (WR): The WR district recognizes those areas of the shoreline that are characterized by single-family residences. It is intended that development occur that is respectful of the shoreline and surrounding properties while permitting a limited mix of residential structure types.

Staff analysis: The subject site is within Gig Harbor Bay primarily characterized by single-family residences. The proposed pier, ramp, and float will extend 136 feet from the mean higher high water mark. The pier and ramp are 4 feet wide, and the float is 8 feet wide. The pier, ramp, and float are sited in a manner consistent with the requirements of the GHSMP and based on the environmental analyses, including the HAMP (Exhibit D) and cultural resource study (Exhibit E), if properly conditioned this proposal is consistent with land use regulations.

17.99 Design Manual: Design review approval is required for all outdoor proposals which require a building permit or are part of a project or development requiring a site plan, subdivision, conditional use permit or utility extension agreement per 17.98.030.A.

Staff analysis: There are no elements of the proposal (such as lighting, furniture, paint, or decorative surfaces) requiring review against design manual standards.

18.08 Critical Areas Ordinance: The intent of the Gig Harbor Critical Areas Ordinance is to promote the maintenance, enhancement and preservation of critical areas and environmentally sensitive natural systems by avoiding or minimizing adverse impacts from construction and development. The proposal is subject to GHMC 18.08 as it includes critical fish and wildlife habitat areas and flood hazard areas.

Staff analysis: The project has developed a plan for best management practices to minimize impacts to shoreline ecosystems. The project is within a fish and wildlife critical habitat area and will achieve no net loss to shoreline ecological function by removing a marine railway on the adjacent property to the north. The marine railway has historically impeded the movement of sediments and vegetation along the shoreline and the removal of the railway will provide benefits to shoreline ecological quality and health in the long term.

18.10 Flood Hazard Construction Standards: The purpose of 18.10 is to promote public health, safety, and general welfare; as well as reduce the annual cost of flood insurance and minimize public and private losses due to flood conditions through applicable provisions.

Staff analysis: The subject site is within a Federal Emergency Management Administration (FEMA) Flood Zone Hazard area. The applicant submitted a Floodplain Development Permit Application and Elevation Certificate (Exhibit K) completed during remodel of the associated upland single-family home (BD-11-0127, PL-FLOOD-11-0004). The upland home is more than 1 foot above the Flood Insurance Rate Map (FIRM) Base Flood Elevation. The proposed pier is equipped with a float which will allow it to move with fluctuating tide levels.

3. Gig Harbor Shoreline Master Program

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

5.2.4 Low Intensity Environment: The purpose of the “Low Intensity Environment” is to accommodate residential development in areas that are already developed with or planned primarily for residential uses. The Low Intensity Environment may also include water-oriented commercial, recreation uses, and public access.

Policy 5.2.4.D.1

Priority should be given to residential and water-oriented commercial development where such development can be accommodated with no net loss of shoreline ecological functions.

Policy 5.2.4.D.2

Public or private recreational facilities should be encouraged if compatible with surrounding uses. Preferred recreational uses include water-dependent and water-enjoyment recreation facilities that provide opportunities for substantial numbers of people to access and enjoy the shoreline.

Policy 5.2.4.D.3

Development should be designed to preserve and enhance the visual quality of the shoreline, including views over and through the development from the upland side, and views of the development from the water.

Policy 5.2.4.D.5

New structures waterward of the ordinary high water mark should only be permitted for water-dependent uses or public access. The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use. To reduce the impacts of shoreline development and increase effective use of water resources, multiple uses of the same over-water facility should be encouraged.

Policy 5.2.4.D.6

Standards for density, setbacks, lot coverage, buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality should be applied to assure no net loss of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of

infrastructure and services available, and other comprehensive planning considerations.

Policy 5.2.4.D.7

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.

Policy 5.2.4.D.8

All developments and uses waterward of the ordinary high water mark should be located and designed to minimize interference with surface navigation, 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 proposal is designed to be a private residential access for recreational watercraft. The design is typical of a residential pier, ramp, and float and does not appear to disrupt the visual quality of the shoreline. The HAMP (Exhibit D) has provided a mitigation plan which will produce no net loss of shoreline ecological function.

6.2 Marine Shorelines, Vegetation Conservation and Critical Areas Protection

Policy 6.2.1.B No Net Loss

Assure no net loss of shoreline ecological functions and processes. This means all shoreline use and development should be carried out in a manner that avoids and minimizes adverse impacts so that the resulting ecological condition does not become worse than the current condition. Natural features of the shoreline and nearshore environment that provide ecological functions and that should be protected include marine riparian habitat, banks and bluffs, beaches and backshore, critical saltwater habitat, wetlands, and streams. Shoreline processes that should be protected include erosion and accretion; sediment delivery, transport, and storage; and large woody debris recruitment.

Policy 6.2.1.C Mitigation Measures

Require shoreline development to ensure no net loss of shoreline ecological functions by mitigating for unavoidable environmental impacts. Compensatory mitigation measures should be considered both in the immediate vicinity and within the broader watershed or

nearshore environment as identified in applicable comprehensive resource management or shoreline restoration plans.

6.2.2 Regulation – No Net Loss and Mitigation: 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.

6.2.5.24 Critical Fish and Wildlife Habitat Areas: Regulation of critical fish and wildlife habitat areas requires a habitat assessment and management plan (HAMP). For all regulated activity proposed on a site which contains or is within 300 feet of critical fish and wildlife habitat, a HAMP shall be prepared by a qualified wildlife biologist and include requirements within this subsection.

Staff analysis: The City of Gig Harbor utilizes a third-party reviewer to review critical area reports. Grette Associates reviewed the applicant's HAMP (Exhibit D), conducted a site visit, and provided a technical memorandum (Exhibit L) requesting revisions due to several deficiencies. Deficiencies included the HAMP's conclusion that the project's removal of a marine railway on the adjacent parcel to the northeast did not constitute sufficient mitigation based on the applicant's calculations using the US Army Corps of Engineers (USACE) Regional General Permit 6 Marine Overwater Mitigation Calculation Tool (RGP-6) (Exhibit M). Specifically, that the marine railway was not acting as a manmade groin and the use of the *marine railway* mitigation calculation in the RGP-6 was not appropriate.

The applicant submitted a revised HAMP on June 21, 2022 (Exhibit D) however, disagreed with Grette regarding the RGP-6 calculations for mitigation. Specifically, that the marine railway is acting as a manmade groin. Staff reviewed the resubmittal, consulted with Grette Associates, and on July 22, 2022 received further evidence (Exhibit N & O) from the applicant which demonstrated that the marine railway is functioning as a manmade groin and has impeded the movement of sediments and vegetation along the shoreline. Staff determined the applicant's resubmittal and proposed mitigation will achieve no net loss of shoreline ecological function.

7.11.8 Regulations – Piers, Docks, Floats, and Lifts – Accessory to Residential Use

1. In-water fixed platform structures supported by piles that do not abut the shoreline shall be prohibited.
2. Covered moorages are prohibited.
3. Joint moorage with four or fewer slips is allowed. A covenant executed between all property owners sharing the joint moorage docks shall be submitted to the City that covers the agreement for the joint use of common lot lines, shall run with the land, and be filed with the Pierce County Auditor as a covenant with the land.
4. Residential subdivisions may be allowed a community moorage dock that is shared by at least four shoreline property owners. A covenant executed between all property owners sharing the community moorage docks shall be submitted to the City that covers the agreement for the joint use of common lot lines, shall run with the land, and be filed with the Pierce County Auditor as a covenant with the land.
5. Storage of fuel, oils, and other toxic materials is prohibited on residential docks, piers and floats.
6. Docks, piers, floats and lifts accessory to residential development/use shall only be allowed when:
 - a. Ecological impacts are mitigated in accordance with the Program; and
 - b. The moorage platform is designed for access to private watercraft.
7. No more than one (1) dock/pier or one (1) float may be permitted on a single lot owned for residential use or private recreational use.
8. 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 and floats shall be the minimum necessary, and in no case shall be wider than six (6) feet unless authorized by state resource agencies;
 - b. Materials that will allow light to pass through the deck may be required where the width exceeds six (6) feet;

Staff analysis: The proposal is consistent with the applicable GHSMF goals and policies regulating water-dependent uses

accessory to residential use, outlined above. The pier and ramp portion of the dock are four feet wide, and the float will be eight feet wide and 24 feet long. The float is comprised of 50% composite decking which allows for light to pass through, as described in 7.11.8.8.b.

4. WAC 173-27-150 Review Criteria for Substantial Development Permits

Staff analysis: The proposal is consistent with the goals of RCW 90.58, the State Shoreline Management Act (SMA) which promote the public use of shorelines, while protecting against adverse effects to the public health, the land and its vegetation and wildlife and the waters of the state and their aquatic life.

The proposal is also consistent with the applicable requirements of the WAC 173-27 and with the GHSMP. If properly conditioned, the request can be found consistent with the RCW 90.58, WAC 173-27 and the applicable provisions of the GHSMP.

B. Operations and Engineering

Operations and Engineering staff reviewed the proposal and had no comments.

C. Fire Marshal/Building Official

The Fire Marshal/Building Official reviewed the proposal and had no comments.

X. CONCLUSIONS:

A. Shoreline Substantial Development Permit:

1. The proposed residential pier, ramp, and float, which is a water-dependent use promoted 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 GHSMP.

B. Design Review:

1. The proposal is consistent with the applicable requirements of GHMC Chapter 17.99.

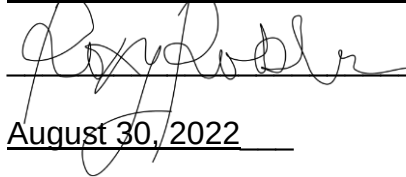
XI. RECOMMENDATIONS:

Should the requested Shoreline Substantial Development Permit, and Design Review be authorized by the Hearing Examiner, staff recommends the imposition of the following special conditions of approval:

Land Use Special Conditions:

1. The applicant shall obtain a Hydraulic Project Approval from the Washington Department of Fish and Wildlife for the project prior to any site work.
2. The Department of Ecology guidelines provided in a letter dated April 16, 2022 shall be implemented where appropriate and otherwise considered before, during and after construction of the project (Exhibit H).
3. Standard best management practices shall be utilized throughout the construction phase, including, but not limited to temporary erosion and sediment control and stormwater management.

Project Planner: Roxanne Robles, Senior Planner



Date: August 30, 2022

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

Exhibit A Staff report dated September 6, 2022

Exhibit B Site plan and drawings dated March 7, 2022

Exhibit C Join aquatic resources permit application form dated December 20, 2020

Exhibit D Habitat assessment and management plan dated February 21, 2022 (revised June 16, 2022)

Exhibit E Cultural resources survey dated May 15, 2022

Exhibit F SEPA Determination of Nonsignificance dated August 15, 2022

Exhibit G SEPA environmental checklist dated July 20, 2021

Exhibit H Comment from the WA Department of Ecology dated April 16, 2022

Exhibit I Comment from the Puyallup Tribe dated March 17, 2022

Exhibit J Comment from the Squaxin Island Tribe dated March 21, 2022

Exhibit K Floodplain permit application (September 8, 2011) and elevation certificate (September 9, 2011)

Exhibit L Grette Associates technical memo dated April 11, 2022

Exhibit M RGP-6 USACE Mitigation Calculator dated February 8, 2022

Exhibit N Photo of marine railway acting as a groin dated July 22, 2022

Exhibit O Memorandum from Marine Floats documenting marine railway conditions dated July 29, 2022

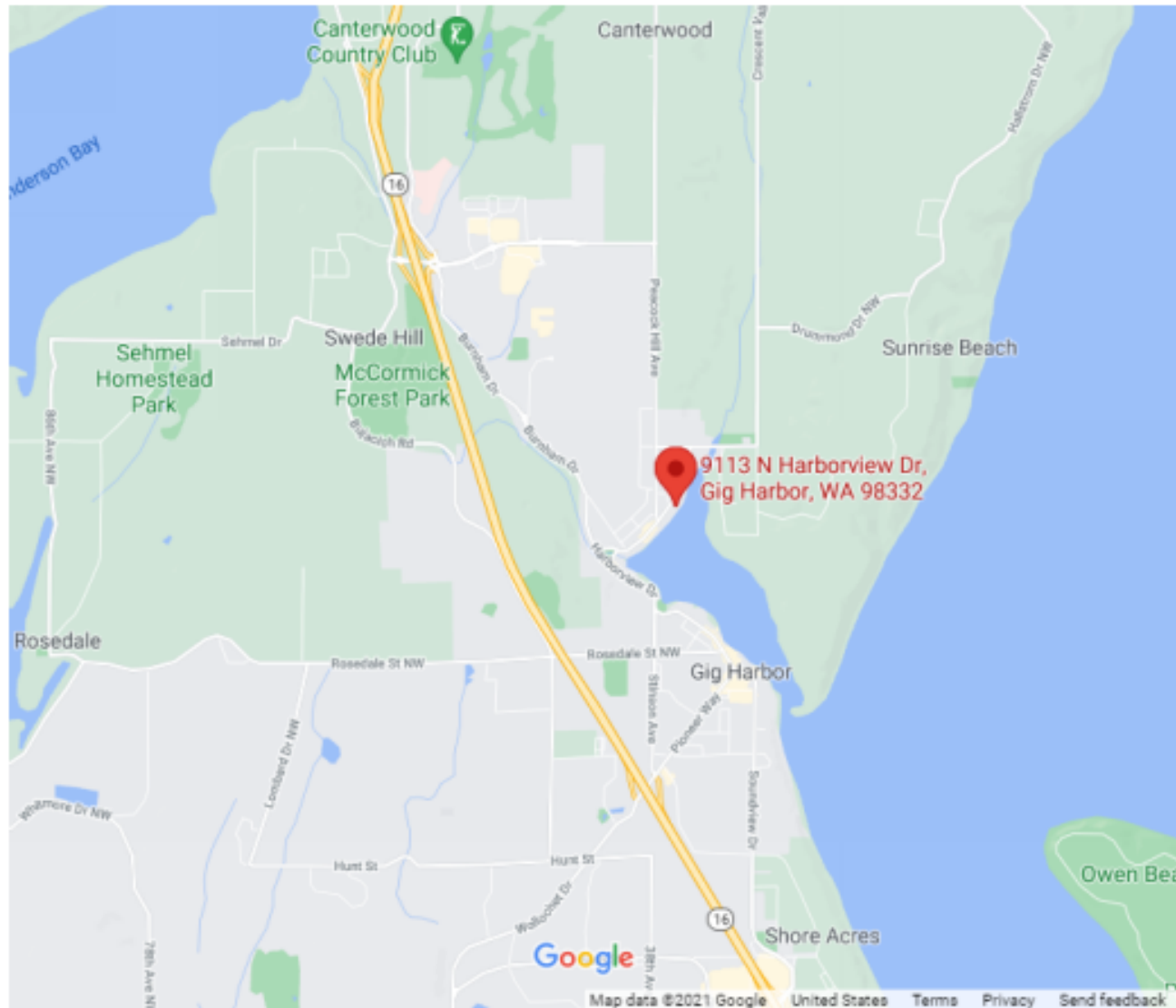
Exhibit P No net loss shoreline ecological functions evaluation form received March 9, 2022

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.

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 Peter Katich, Senior Planner, at 253-851-6170 should you desire to review the file.

Purpose: Private use recreational dock and Boat Moorage Datum: 0.0	MARINE FLOATS Tacoma WA (253) 383-2740	Proposed: Install (1) 4' X 40' & (1) 4' X 38' aluminum piers with (4) 8.75" galvanized steel pier piling and (1) 3' X 44' aluminum ramp with 100% fiberglass grating both composed of 1.5" squares and 69% open space. Install (1) 8' X 24' float with polyethylene foam filled tubs, 50% composite decking and 50% fiberglass grating. (4) pile mounted float stops will be installed with (4) 10.75" galvanized steel piling.		
Adjacent Property Owners: (1) Perrow, Wade and Elizabeth PO Box 245 Gig Harbor, WA 98335 2260000551		(2) Beverly Rudy & Peter Rodgers 9119 N Harborview Dr Gig Harbor, WA 98332 2260000521		Job Add: 9113 Harborview Dr. Gig Harbor, WA 98332 Mail Add: PO Box 1805 Gig Harbor, WA 98335 Appl by: DC APT-Wade Perrow In: Gig Harbor Bay State: WA Date: 3-7-22 At: Puget Sound County: Pierce Page 1 of 5
Scale: NTS	Sec 05	T 21	R 02	Lat/Long 47.34129/-122.58714 Corps Reference # NWS-2021-713

VICINITY MAP



RECEIVED

By C. ANDREWS at 7:40 am, Mar 09, 2022

Purpose: Private use recreational dock and Boat Moorage Datum: 0.0	MARINE FLOATS Tacoma WA (253) 383-2740	Proposed: Install (1) 4' X 40' & (1) 4' X 38' aluminum piers with (4) 8.75" galvanized steel pier piling and (1) 3' X 44' aluminum ramp with 100% fiberglass grating both composed of 1.5" squares and 69% open space. Install (1) 8' X 24' float with polyethylene foam filled tubs, 50% composite decking and 50% fiberglass grating. (4) pile mounted float stops will be installed with (4) 10.75" galvanized steel piling.
Adjacent Property Owners: (1) Perrow, Wade and Elizabeth PO Box 245 Gig Harbor, WA 98335 2260000551	(2) Beverly Rudy & Peter Rodgers 9119 N Harborview Dr Gig Harbor, WA 98332 2260000521	Job Add: 9113 Harborview Dr. Gig Harbor, WA 98332 Mail Add: PO Box 1805 Gig Harbor, WA 98335 Appl by: DC APT-Wade Perrow In: Gig Harbor Bay State: WA Date: 3-7-22 At: Puget Sound County: Pierce Page 2 of 5

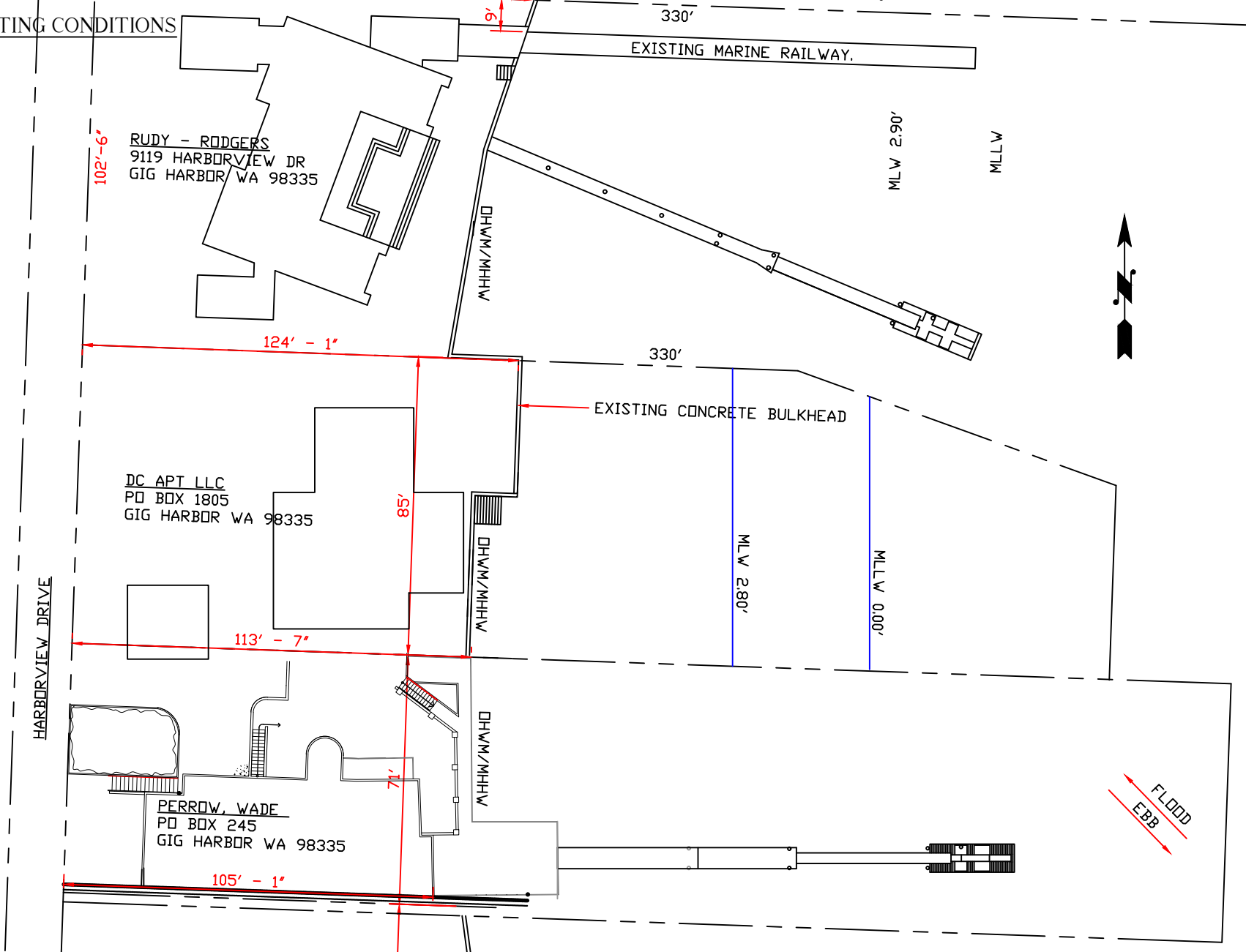
Scale: 1" = 40'

Sec 05 T 21 R 42

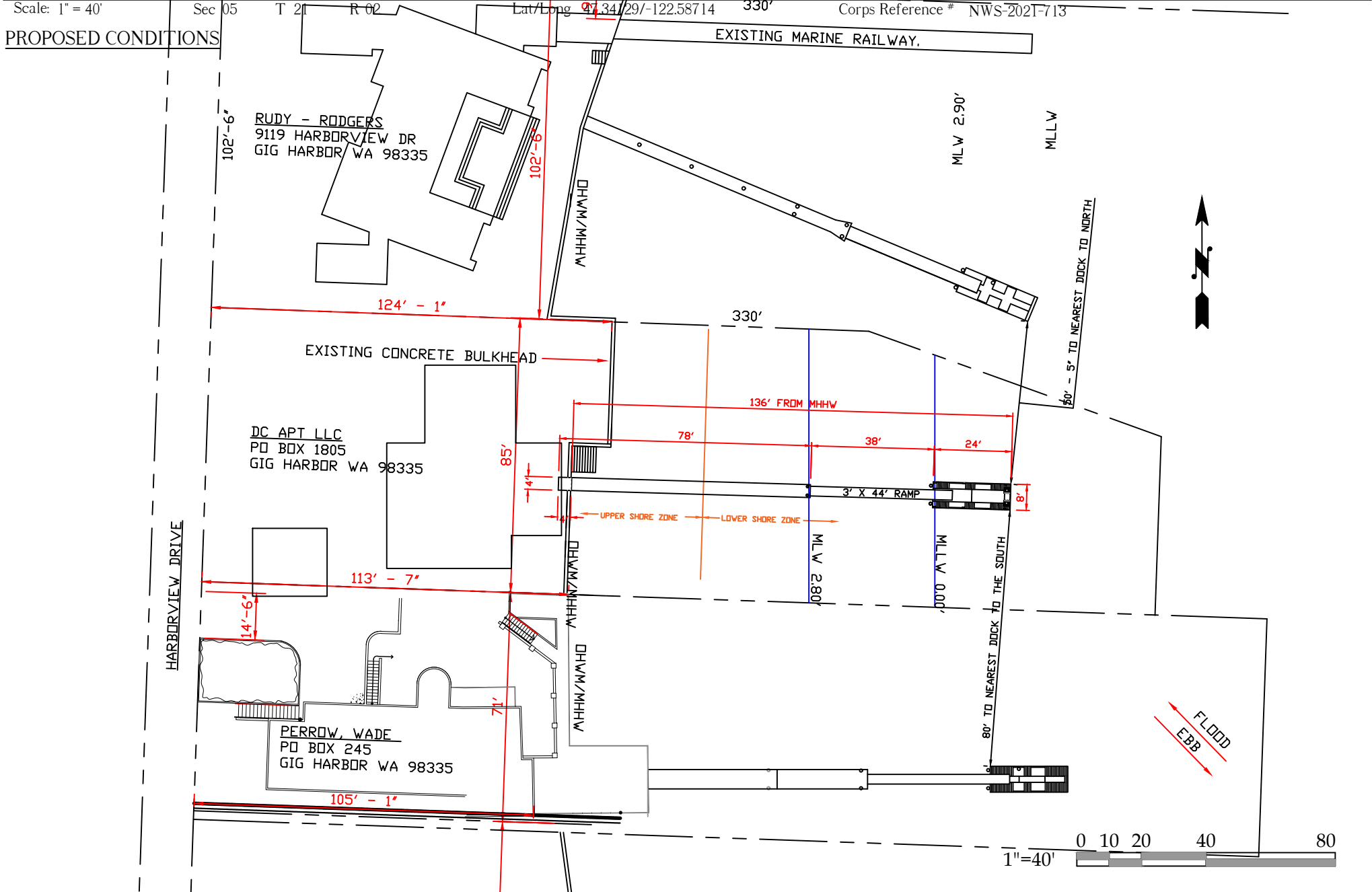
Lat/Long 47.34129/-122.58714

Corps Reference # NWS-2021-713

EXISTING CONDITIONS

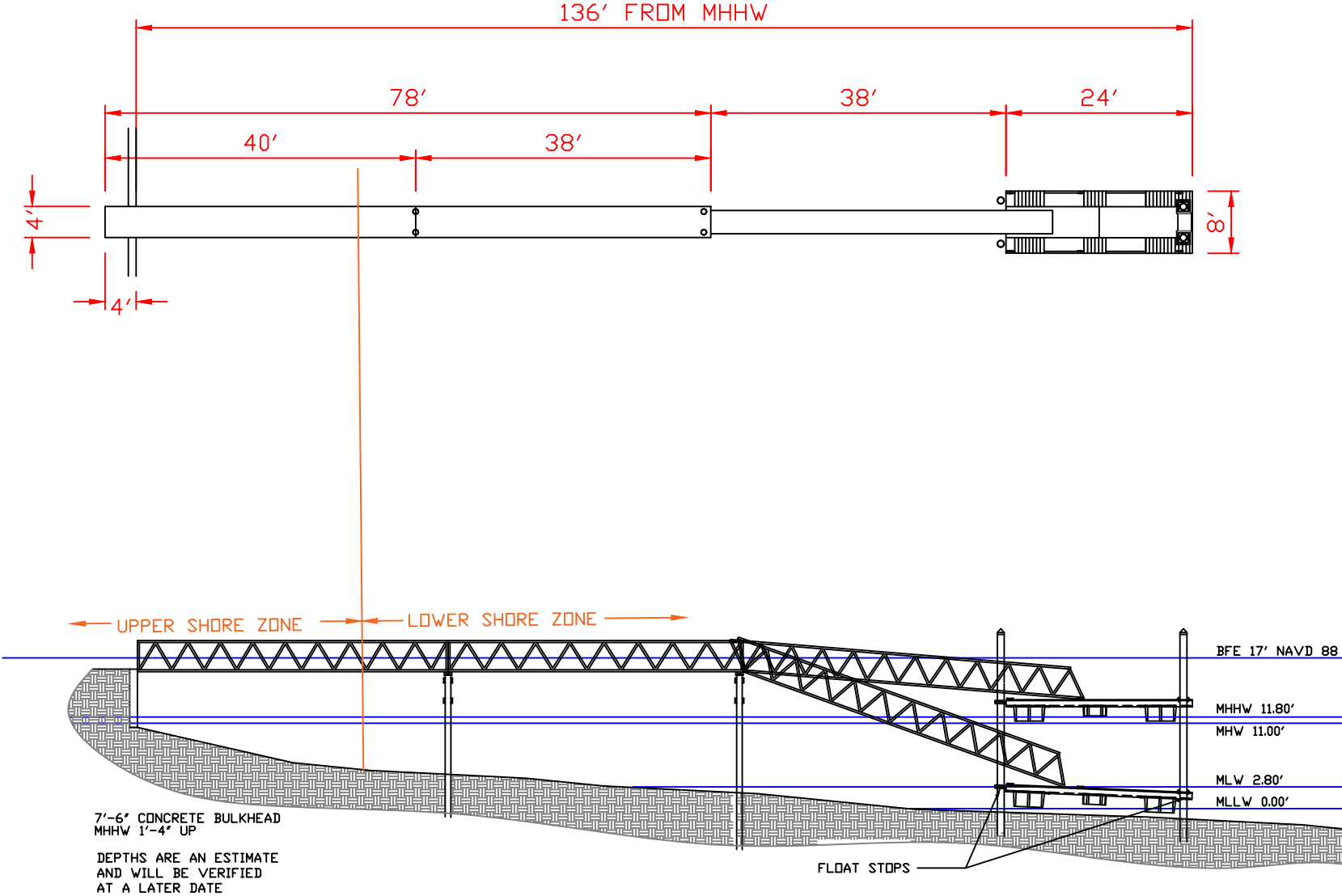


Purpose: Private use recreational dock and Boat Moorage Datum: 0.0	MARINE FLOATS Tacoma WA (253) 383-2740	Proposed: Install (1) 4' X 40' & (1) 4' X 38' aluminum piers with (4) 8.75" galvanized steel pier piling and (1) 3' X 44' aluminum ramp with 100% fiberglass grating both composed of 1.5" squares and 69% open space. Install (1) 8' X 24' float with polyethylene foam filled tubs, 50% composite decking and 50% fiberglass grating. (4) pile mounted float stops will be installed with (4) 10.75" galvanized steel piling.
Adjacent Property Owners: (1) Perrow, Wade and Elizabeth PO Box 245 Gig Harbor, WA 98335 2260000551	(2) Beverly Rudy & Peter Rodgers 9119 N Harborview Dr Gig Harbor, WA 98332 2260000521	Job Add: 9113 Harborview Dr. Gig Harbor, WA 98332 Mail Add: PO Box 1805 Gig Harbor, WA 98335 Appl by: DC APT-Wade Perrow In: Gig Harbor Bay State: WA At: Puget Sound County: Pierce Date: 3-7-22 Page 3 of 5



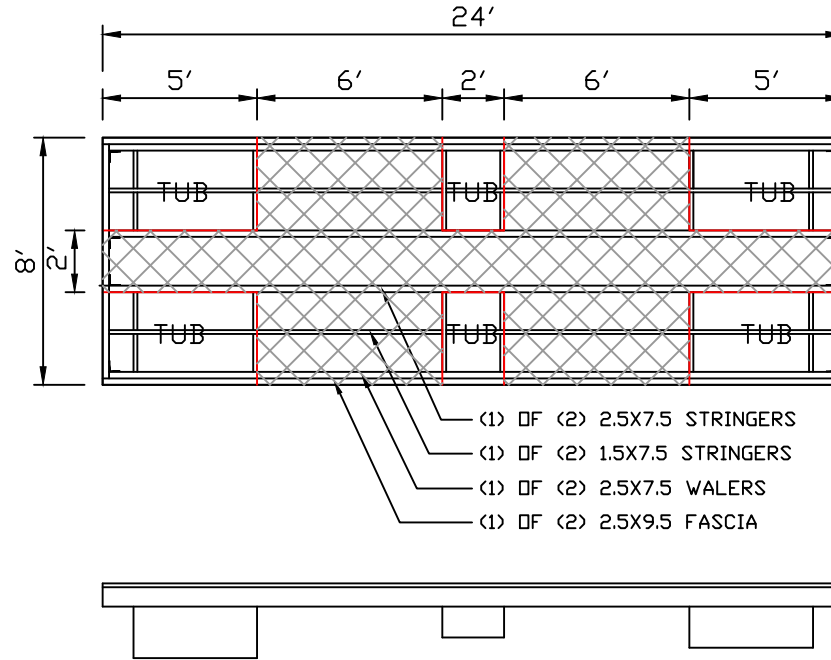
Purpose: Private use recreational dock and Boat Moorage Datum: 0.0	MARINE FLOATS Tacoma WA (253) 383-2740	Proposed: Install (1) 4' X 40' & (1) 4' X 38' aluminum piers with (4) 8.75" galvanized steel pier piling and (1) 3' X 44' aluminum ramp with 100% fiberglass grating both composed of 1.5" squares and 69% open space. Install (1) 8' X 24' float with polyethylene foam filled tubs, 50% composite decking and 50% fiberglass grating. (4) pile mounted float stops will be installed with (4) 10.75" galvanized steel piling.		
Adjacent Property Owners: (1) Perrow, Wade and Elizabeth PO Box 245 Gig Harbor, WA 98335 2260000551		(2) Beverly Rudy & Peter Rodgers 9119 N Harborview Dr Gig Harbor, WA 98332 2260000521		Job Add: 9113 Harborview Dr. Gig Harbor, WA 98332 Mail Add: PO Box 1805 Gig Harbor, WA 98335 Appl by: DC APT LLC-Wade Perrow In: Gig Harbor Bay State: WA Date: 3-7-22 At: Puget Sound County: Pierce Page 4 of 5
Scale: 1" = 20'	Sec 05 T 21 R 02	Lat/Long 47.34129/-122.58714	Corps Reference # NWS-2021-713	

PROPOSED SECTION



Purpose: Private use recreational dock and Boat Moorage Datum: 0.0	MARINE FLOATS Tacoma WA (253) 383-2740	Proposed: Install (1) 4' X 40' & (1) 4' X 38' aluminum piers with (4) 8.75" galvanized steel pier piling and (1) 3' X 44' aluminum ramp with 100% fiberglass grating both composed of 1.5" squares and 69% open space. Install (1) 8' X 24' float with polyethylene foam filled tubs, 50% composite decking and 50% fiberglass grating. (4) pile mounted float stops will be installed with (4) 10.75" galvanized steel piling.	
Adjacent Property Owners: (1) Perrow, Wade and Elizabeth PO Box 245 Gig Harbor, WA 98335 2260000551	(2) Beverly Rudy & Peter Rodgers 9119 N Harborview Dr Gig Harbor, WA 98332 2260000521	Job Add: 9113 Harborview Dr. Gig Harbor, WA 98332 Mail Add: PO Box 1805 Gig Harbor, WA 98335	Appl by: DC APT LLC- Wade Perrow In: Gig Harbor Bay State: WA Date: 3-7-22 At: Puget Sound County: Pierce Page 5 of 5
Scale: NTS	Sec 05	T 21	R 02
		Lat/Long 47.34129/-122.58714	Corps Reference # NWS-2021-713

GRATING CALCULATIONS



CALCULATION OF GROSS GRATED AREA

$5' \times 2' = 10 \text{ SQ. FT.} \times 2 \text{ SECTIONS} = 20 \text{ SQ. FT.}$
 $8' \times 6' = 48 \text{ SQ. FT.} \times 2 \text{ SECTIONS} = 96 \text{ SQ. FT.}$
 $2' \times 2' = 4 \text{ SQ. FT. (MIDDLE SECTION)}$
TOTAL GRATED AREA = 20 + 96 + 4 = 120 SQ. FT

CALCULATION OF GROSS FRAMING AREA

$2.5' \times 6' \text{ FASCIA} = 1.25 \text{ SQ. FT.} \times 4 = 5 \text{ SQ. FT.}$
 $1.5' \times 6' \text{ STRINGER} = .75 \text{ SQ. FT.} \times 4 = 3 \text{ SQ. FT.}$
 $2.5' \times 6' \text{ WALER} = 1.25 \text{ SQ. FT.} \times 4 = 5 \text{ SQ. FT.}$
 $2.5' \times 24' \text{ STRINGER} = 5 \text{ SQ. FT.} \times 2 = 10 \text{ SQ. FT.}$
TOTAL FRAMING = 5 + 3 + 5 + 10 = 23 SQ. FT.

CALCULATION OF FUNCTIONAL GRATED AREA

GROSS GRATED AREA	120 SQ. FT.
GROSS FRAMING AREA	- 23 SQ. FT.
TOTAL =	97 SQ. FT.

FUNCTIONAL GRATING	97 SQ. FT.
GROSS FLOAT AREA	÷ 192 SQ. FT.
TOTAL =	50.5%



9

WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2} [\[help\]](#)

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

Part 1—Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [\[help\]](#)

DC APT Pier, Ramp, Float, & Piling

Part 2—Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)			
Perrow, Wade			
2b. Organization (If applicable)			
DC APT LLC			
2c. Mailing Address (Street or PO Box)			
PO Box 1805			
2d. City, State, Zip			
Gig Harbor, WA, 98335			
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail
			wade@donkeycreekholdings.com

¹Additional 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.

²To 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.

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)			
Kavanaugh, John			
3b. Organization (If applicable)			
Marine Floats Corporation			
3c. Mailing Address (Street or PO Box)			
313 East F ST			
3d. City, State, Zip			
Tacoma, WA, 98421			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
253-383-2740			John@marinefloats.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]			
9113 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
23	05	21 N	02 E
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)			
47.34129 // -122.58714Ins			
5g. List the tax parcel number(s) for the project location. [help]			
The local county assessor's office can provide this information.			
2260000541			
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)	
Perrow, Elizabeth & Wade	PO Box 245	2260000551	
	Gig Harbor, WA 98335		
Rudy, Beverly & Rodgers, Peter	9119 N Harborview Dr	2260000521	
	Gig Harbor, WA 98332		

5i. List all wetlands on or adjacent to the project location. [help]
None known
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 2017 AE Coastal
5l. Briefly describe the vegetation and habitat conditions on the property. [help]
The property consists of a residential home, manicured lawn, and ornamental trees.
5m. Describe how the property is currently used. [help]
The property is used as a single-family residential home.
5n. Describe how the adjacent properties are currently used. [help]
Adjacent properties are used as single-family residential homes. (One by the same owner as the applicant)
5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]
The property consists of a single-family residential home with a detached garage.
5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]
From WA-16 W towards Gig Harbor/Bremerton Take the Wollochet Dr NW exit Follow Stinson Ave to N Harborview Dr Continue straight on Stinson Ave Turn left onto Harborview Dr Turn right onto N Harborview Dr The destination will be on the right

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]
Installation of a new family residential pier, ramp, float consisting of: (1) 4' X 40' aluminum pier, (1) 4' X 38', (1) 3' X 44' (3' X 38' overwater) aluminum ramp. Both pier and ramp to be 100% fiberglass grating with 1.5" squares and 69% open area. (1) 8' X 24' float with polyethylene foam filled tub flotation, with surfaces composed of 50% composite decking and 50% fiberglass grating. (4) 8" galvanized steel piling to secure the pier, (4) 10" galvanized steel piling to secure the float, and (4) float stops. Total project length is 136 feet from the existing concrete bulkhead.
6b. Describe the purpose of the project and why you want or need to perform it. [help]
The purpose of this project is to create recreational enjoyment for water dependent activities. This project creates access to the water and various recreational activities such as, boating, swimming, fishing, etc.

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 ☐ Bank Stabilization ☐ Boat House ☐ Boat Launch ☐ Boat Lift ☐ Bridge ☐ Bulkhead ☐ Buoy ☐ Channel Modification	☐ Culvert ☐ Dam / Weir ☐ Dike / Levee / Jetty ☐ Ditch ☒ Dock / Pier / Ramp ☐ Dredging ☐ Fence ☐ Ferry Terminal ☐ Fishway	☐ Float ☐ Floating Home ☐ Geotechnical Survey ☐ Land Clearing ☐ Marina / Moorage ☐ Mining ☐ Outfall Structure ☒ Piling/Dolphin ☐ Raft	☐ Retaining Wall (upland) ☐ Road ☐ Scientific Measurement Device ☐ Stairs ☐ Stormwater facility ☐ Swimming Pool ☐ Utility Line
☐ 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.			
On site construction includes: Pile drive (4) 8-inch diameter galvanized steel pier piling. Install the (1) 4'x40' aluminum pier, (1) 4'x38' aluminum pier with 100% grated fiberglass surface with 69% open area. Pile drive (4) 10-inch diameter galvanized steel float piling. Attach the 8' x 24' float with (4) float stops. Install the 3' x 44' (3'x38' overwater) prefabricated aluminum ramp with a crane to place it between the pier and the float, then manually connect the ramp to the float and the pier using hand tools to install connections. Piling will be installed using an impact hammer, a bubble curtain and 6" wooden block cushion for sound attenuation and debris collection when needed (Longmuir and Lively 2001). Construction barge will not be permitted to ground out at any time. Gangway ramps are manufactured off-site and made of 100% aluminum. Marine Floats pre-constructs the pier and float at our facility in Tacoma for each dock system.			
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: <u>July 15, 2021</u>		End Date: <u>February 15, 2026</u> ☐ See JARPA Attachment D	
6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]			
\$106,575.00			

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

N/A wetlands will not be affected by the project.

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

N/A

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. [\[help\]](#)

N/A

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. [\[help\]](#)

N/A

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 overall project complies with all regulatory agencies to minimize environmental impacts.
- The grating on the pier, ramp, and float allow deeper light penetration beneficial to fish and SAV.
- The flotation tubs are fully encapsulated and filled with polyethylene foam.
- The piling (s) are made of galvanized steel to not release anything into the environment.
- The barge will not ground out at any time.
- Regulatory in-water work windows will be observed.

Best management practices will be utilized throughout the project.

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 be determined based on regulating agency requirements.

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. [\[help\]](#)

N/A

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
Install New Aluminum Pier	Gig Harbor	USZ	Permanent	4' X 40'	160
Install New Aluminum Pier	Gig Harbor	LSZ	Permanent	4' X 38'	152
Install New Aluminum Ramp	Gig Harbor	LSZ	Permanent	3' X 44' (3' X 38' overwater)	114
Install New Float	Gig Harbor	LSZ	Permanent	8' X 24'	192
Install New Pier Piling	Gig Harbor	LSZ	Permanent	(4) 8" galvanized steel	1.4
Install New Float Stops & Piling	Gig Harbor	LSZ	Permanent	(4) 10" galvanized steel	2.2

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. [\[help\]](#)

None.

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. [\[help\]](#)

None.

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			
WDFW			
USACE			

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.										
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 #.										
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: <u>Residential--WR</u>										
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: <u>2019 Stormwater Management Manual for Western Washington</u>										
9i. Does the project site have known contaminated sediment? [help] If Yes, please describe below.										
☐ Yes ☒ No										
No, closest sites include: <table border="0"> <tr> <td>14579 74514</td> <td>Harborview Drive Property</td> <td>3720 Harborview Dr</td> <td>Gig Harbor</td> <td>98332</td> </tr> <tr> <td>3419 1301959</td> <td>EDDON BOAT PARK</td> <td>3805 Harborview Dr</td> <td>Gig Harbor</td> <td>98332</td> </tr> </table>	14579 74514	Harborview Drive Property	3720 Harborview Dr	Gig Harbor	98332	3419 1301959	EDDON BOAT PARK	3805 Harborview Dr	Gig Harbor	98332
14579 74514	Harborview Drive Property	3720 Harborview Dr	Gig Harbor	98332						
3419 1301959	EDDON BOAT PARK	3805 Harborview Dr	Gig Harbor	98332						
9j. If you know what the property was used for in the past, describe below. [help]										
Unknown										

9k. Has a cultural resource (archaeological) survey been performed on the project area? [\[help\]](#)

- If Yes, attach it to your JARPA package.

☐ Yes ☒ No Should archaeological materials (e.g. bones, shell, stone tools, beads, ceramics, old bottles, hearths, etc.) or human remains be observed during project activities, all work in the immediate vicinity should stop. The State Department of Archaeology and Historic Preservation (360-586-3065), the County/City planning office, the affected Tribe(s) and the county coroner (if applicable) should be contacted immediately in order to help assess the situation and determine how to preserve the resource(s). Compliance with all applicable laws pertaining to archaeological resources (RCW 27.53, 27.44 and WAC 25-48) is required. Failure to comply with this requirement could constitute a Class C Felony.

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. [\[help\]](#)

Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*), Puget Sound Steelhead Trout (*Oncorhynchus mykiss*), Puget Sound Coho Salmon (*Oncorhynchus kisutch*), Killer Whale (*Orcinus orca*), Bull trout (*Salvelinus confluentus*), Marbled murrelet (*Brachyramphus marmoratus*), and Leatherback sea turtle (*Dermochelys coriacea*).

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. [\[help\]](#)

Estuarine and Marine Wetland-Critical Habitat Assessment to be completed and attached.

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 2022.

☐ 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. ☒ W (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. ☒ W (initial)

☒ WANE PERROW MAN AGENT MEMBER
Applicant Printed Name Applicant Signature Date 12.20.20
DC APARTMENTS, LLC

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.

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.

☒ WANE PERROW MAN AGENT MEMBER
Property Owner Printed Name Property Owner Signature Date 12.20.20
DC APARTMENTS, LLC

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 11:17 am, Jun 21, 2022

DC APT Pier, Ramp, and Float Habitat Management Plan

February 21, 2022, revised June 16, 2022

**Site Address: 9113 Harborview Dr.
Gig Harbor, WA**

**For: DC APT, LLC c/o Wade Perrow
P.O. Box 1805
Gig Harbor, WA 98335**



**MARINE SURVEYS & ASSESSMENTS
380 Jefferson Street
Port Townsend WA 98368
360-385-4073
msa@marinesurveysandassessments.com**

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1 Project Overview

1.1 Purpose

The proposed activity is to build a private pier, ramp, and float in Gig Harbor Bay. Because Gig Harbor Bay is designated as critical fish and wildlife habitat and a Special Flood Hazard Area, and the project site falls within this designated habitat, this habitat management plan (HMP) has been prepared pursuant to Section 6.2.5.23(4) of the Gig Harbor Shoreline Master Program (GHSMP). Due to the proposed project site containing critical fish and wildlife habitat, this HMP will also serve as a Habitat Assessment to meet the requirements of Section 6.2.5.23(4) of the GHSMP.

This report includes impacts analysis, potential direct and indirect effects of the proposed project on critical fish and wildlife habitat, potential impacts to water quality of nearby streams, management and mitigation measures, and an evaluation of the effectiveness of the proposed mitigation measures. Net-Loss Analysis is provided (as required by GHSMP Section 6.2.2) and evaluates potential impacts, pre-and post-project site conditions, and effectiveness of mitigation measures to characterize the net gain or loss of ecological function. An assessment per the city's Flood Hazard Regulations (GHMC 18.10.100) is also included in this report (Attachment 1).

1.2 Applicant Information

Name: Wade Perrow of DC APT, LLC
Mailing Address: P.O. Box 1805, Gig Harbor, WA 98335
Email: wade@donkeycreekholdings.com

1.3 Biologist Information

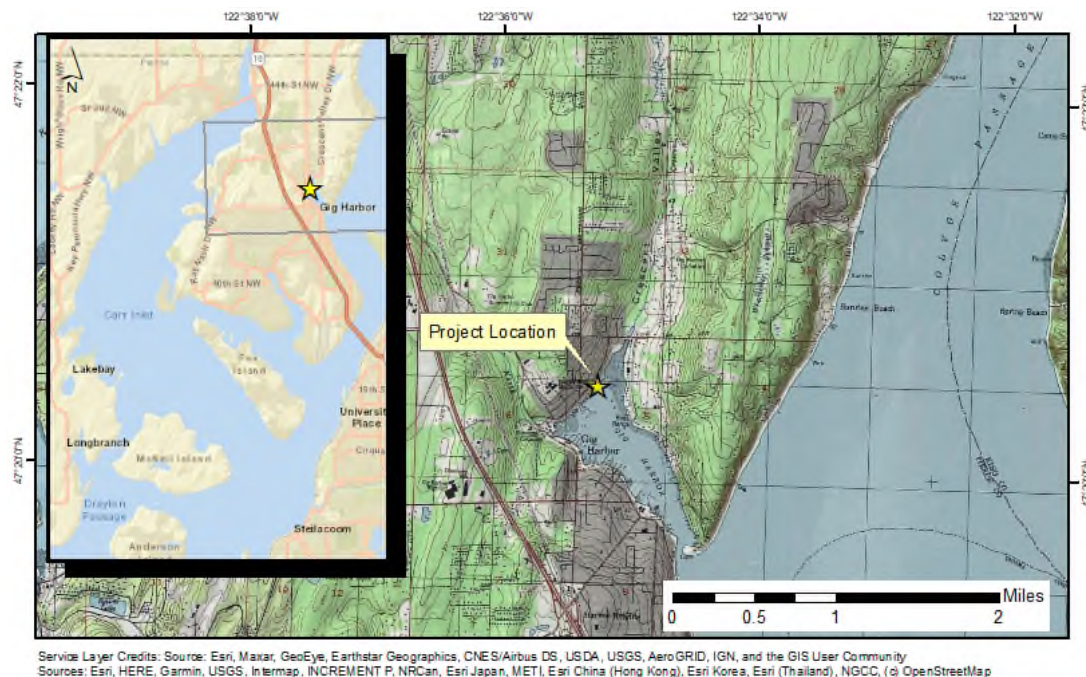
Name: Kimberly McClurg, Marine Surveys & Assessments
Phone: (360) 385-4073
Email: Kimberly@msaenvironmental.com
Contact Address: 380 Jefferson Street, Port Townsend, WA 98368

1.4 Project Location

Section 05, Township 21N, Range 02E
Site Address: 9113 Harborview Drive, Gig Harbor, WA
Parcel: 2260000541
Latitude: 47.34129, Longitude: -122.58714
Waterbody: Gig Harbor Bay

The project location is seen in Figure 1.

Figure 1. Vicinity map



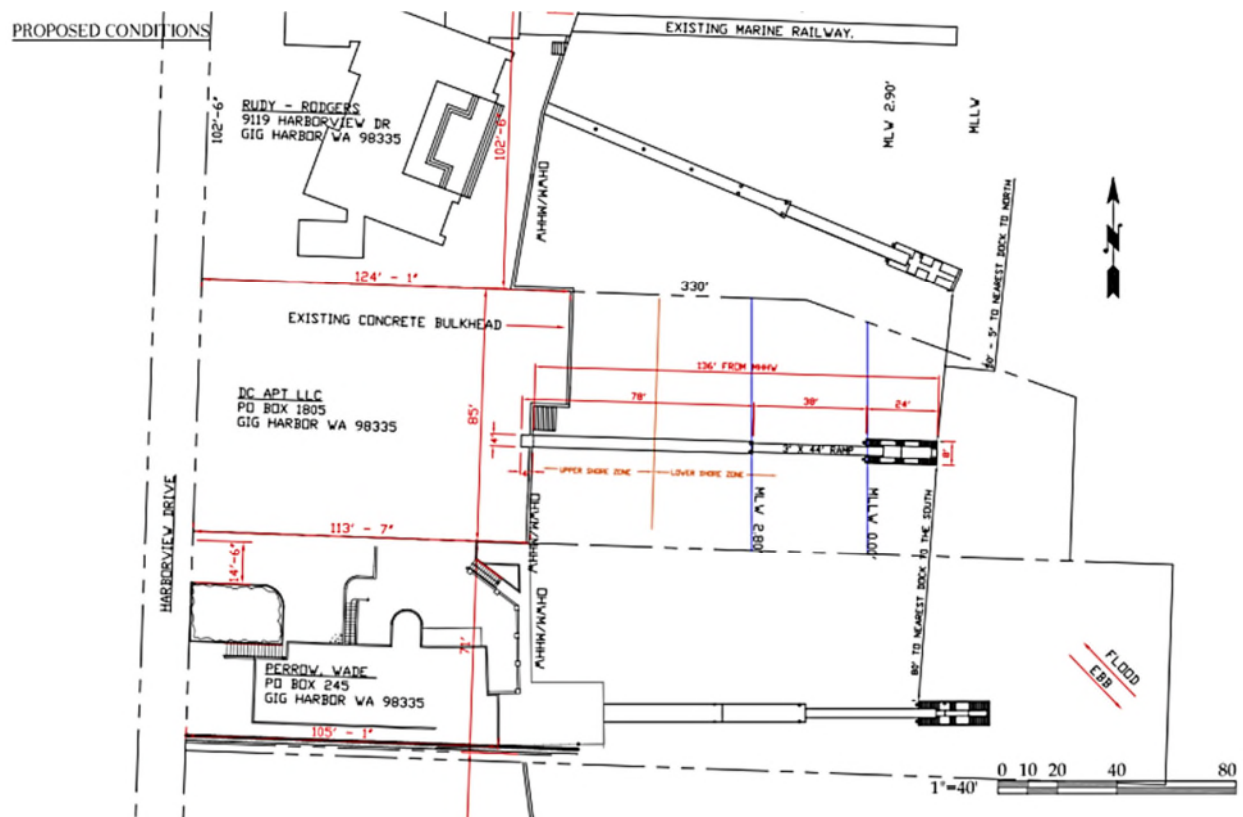
1.5 Project Description

A new residential dock is proposed which will measure 136 ft from the existing bulkhead (140 ft in total length). The proposed dock will consist of:

- 4'x78' aluminum pier with 100% grated fiberglass surface (1.5-inch squares and 69% open area)
- 3'x44' (38 ft overwater) aluminum ramp with 100% grated fiberglass surface (1.5-inch squares and 69% open area)
- 8'x24' float with 50% composite decking and 50% fiberglass grated surface
 - With polyethylene foam-filled tubs for flotation
- (4) 10.75" galvanized steel piles will secure the float
- (4) 8.75" galvanized steel piles will support the pier
- 4 pile-mounted float stops will be installed to prevent the float from grounding out at low tide

The total overwater area of this new dock will be 602 ft². The site will be accessed via barge which will transport the pre-fabricated pier, ramp, and float from the Marine Floats property in Tacoma. Piles will be installed via impact hammer using a bubble curtain and 6" wood block for sound attenuation. The pier and ramp will be lifted into place using a barge-mounted crane and secured using hand tools. The float will be connected to the piles using hand tools. Depending on tides and weather, the work will likely take up to three days to complete.

Figure 2. Proposed pier, ramp, and float site plan



Due to the lack of mitigation on site, off-site mitigation is proposed on the neighboring parcel (# 2260000521). A marine rail (totaling 341.9 ft²) with the rails embedded in the beach perpendicular to shore which could be acting as a groin (i.e. restricting longshore sediment transport) will be removed, as well as the (16) 6-inch concrete piles that support it. This proposed mitigation is described in more detail in Section 5.

1.6 Action Area

The “project area” is the area of the proposed dock. The project area also includes areas used for staging materials and equipment and accessing the site. The “action area” includes any areas with potential ecological effects from short-term construction activities or long-term habitat modifications.

For impact assessments during potential fish migration, the distance at which underwater pile driving noise attenuates to ambient sound levels is generally considered the project action area, even though the radius of potential injury is a much smaller area (CalTrans 2015). The NMFS prescribed acoustic thresholds are:

- 160 dB_{RMS} threshold for marine mammals behavioral impacts for impulsive noise (e.g. impact pile driving)
- 150 dB_{RMS} threshold for fish behavioral impacts

For this project, the threshold for fish behavioral impacts will be used since whale sightings are not common in the bay. The following equation was used to delineate the action area where sound exposure levels (SELs) from pile driving will attenuate to 150 dB_{RMS}:

$$R2 = R1 \times 10^{((dBR1-dBthreshold)/15)}$$

Where,

R1= distance of known/measured sound level

R2= estimated distance that a sound will attenuate to prescribed acoustic threshold

For sound levels measured 10 meters away during unattenuated impact pile driving of 12-inch steel pipe pile, 177 dB_{RMS} was measured (CalTrans 2015, Table I.2-2.).

The action area based on 12-inch piles for unattenuated impact pile driving is then calculated to be approximately 631 meters (0.39 mile) where sound is anticipated to attenuate to 150 dB_{RMS} (Figure 3). This includes the northern portion of the bay and is a conservative action area since the largest piles being driven for this project are 10.75 inches in diameter and a bubble curtain and wood block will be used for sound attenuation. This action area also includes potential turbidity effects from pile driving and removal (25 ft around each pile as defined by the U.S. Army Corps of Engineers (USACE)).

2 Species & Habitat

2.1 Site Specific Habitat Information

A SCUBA survey was performed on June 1, 2021 at the project site. Bryan DeCaterina and Darby Flanagan from Marine Surveys & Assessments surveyed the intertidal and subtidal zone using SCUBA along survey transects in the area of the proposed dock to identify flora, fauna, substrate types, and other qualitative information. Water visibility was 4 ft.

11 transects were surveyed perpendicular to the existing bulkhead and were 200 ft long. Transects were separated from each other by 10-15 ft and were situated to cover the area the proposed dock, plus a 25-ft buffer around the proposed float location.

The area of the survey ranged in elevation from +2.7' MLLW to -2' MLLW at the seaward extent. Substrate in the area was sand, cobble, and mud. Areas of macroalgae included: attached *Ulva* 5-70%; *Fucus* 1-10%; and *Porphyra* 1-5%. One observation of *Salicornia* was recorded in the upper intertidal zone. No kelp or eelgrass was documented at the site. The full habitat report and map can be seen in Appendix A.

Washington Department of Ecology Coastal Atlas map shows this site has stable slope stability (WECY 2006) and no wetlands in the vicinity (WECY 1999). The Water Quality Atlas identifies the water in the southwest portion of the action area as being a Category 1 for temperature, meaning it “meets the state water quality standards” but may not necessarily be free of pollutants (WECY 2022). The Puget Sound Natal and Pocket Estuaries map by NOAA Fisheries shows the project site to be within a pocket estuary that spans the entire northern shoreline of the bay including the area around Crescent Creek (NOAA 2022).

The site has a “low intensity” shoreline environment designation under the GHSMP which allows for permitted new structures waterward of the ordinary high water mark (OHWM) for water-dependent uses.

2.2 Critical Fish & Wildlife Habitat Areas

The following are designated critical fish and wildlife habitat areas (CFWHA) as defined under GHMC 18.08.186 that were identified within the action area and will be discussed in the following sections:

- 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;
- Habitats and species of local importance, including:
 - 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;
- Commercial and public recreational shellfish areas;
- Kelp and eelgrass beds;
- Herring and smelt spawning areas.

2.3 State & Local Habitat & Species

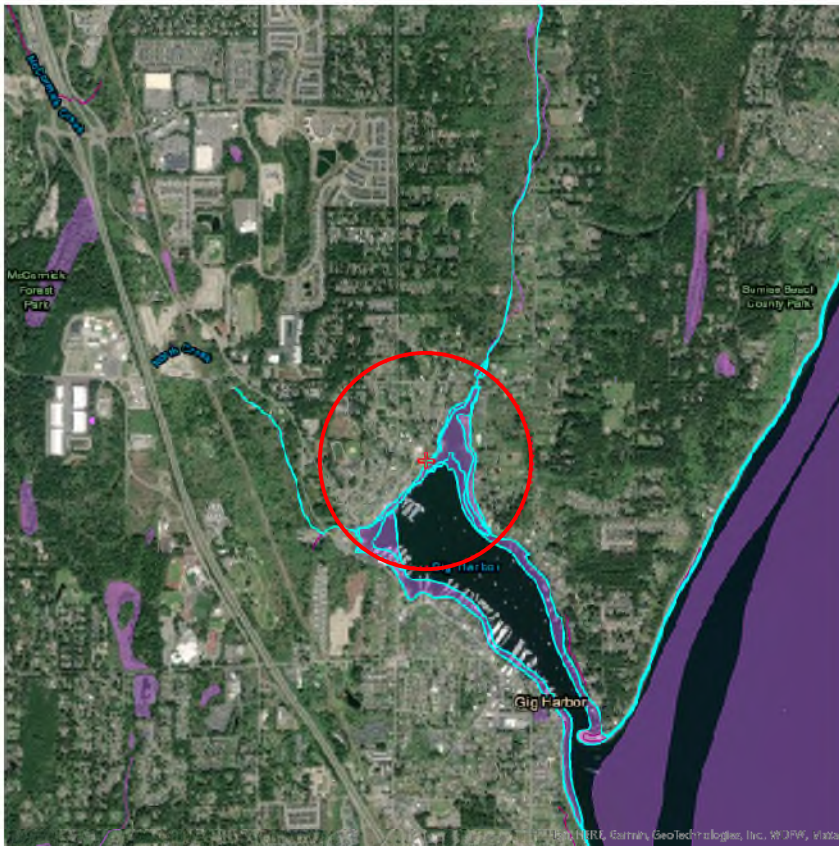
The Washington Department of Fish & Wildlife (WDFW) Priority Habitat and Species (PHS) mapper shows surf smelt spawning along the eastern shore of the bay, but not at the project site, and the use of North Creek and Crescent Creek by coho, winter steelhead, fall chum, fall chinook, and resident coastal cutthroat (WDFW 2022a) (Figure 3). The full list of species and habitat within the action area can be seen in Appendix B and is also summarized in Table 1 below.

According to queries of the Salmonid Stock Inventory (SaSI) (WDFW), there are no streams other than North Creek and Crescent Creek that connect to Gig Harbor Bay and are utilized by salmonids as listed in Table 1 (WDFW 2022b).

Figure 3. Priority Habitat & Species that occur within the 631-meter action area



Priority Habitats and Species on the Web



Buffer radius: 631 Meters

Table 1. WDFW PHS query results within action area

Occurrence Name	Area Use	Federal Status	State Status
Fall Chinook	occurrence/migration in Crescent Creek	N/A	N/A
Chum (stock name: Gig Harbor/Ollala Creek Fall Chum)	occurrence in North Creek; occurrence in Crescent Valley	N/A	N/A
Fall Chum	breeding area in North Creek; occurrence/migration in Crescent Creek	N/A	N/A
Steelhead (stock name: East Kitsap Winter Steelhead)	occurrence in Crescent Valley; occurrence in North Creek	Threatened	N/A
Winter Steelhead	occurrence/migration in Crescent Creek; occurrence/migration in North Creek	N/A	N/A

Coho (stock name: East Kitsap Coho)	occurrence in North Creek; occurrence in Crescent Valley	N/A	N/A
Coho	occurrence/migration & breeding area in North Creek; occurrence/migration in Crescent Creek	N/A	N/A
Cutthroat (stock name: West South Sound Coastal Cutthroat)	Occurrence in Crescent Valley	N/A	N/A
Resident Coastal Cutthroat	occurrence/migration in North Creek; occurrence/migration in Crescent Creek	N/A	N/A
Surf Smelt	breeding area	N/A	N/A
Esturine Zone – Gig Harbor/North Creek	aquatic habitat	N/A	N/A
Esturine Zone – Gig Harbor/Crescent Valley	aquatic habitat	N/A	N/A
Estuarine and Marine Wetland	aquatic habitat	N/A	N/A

2.3.1 Forage Fish

Migrating salmon utilize baitfish such as Pacific herring (*Clupea harengus pallasii*), sand lance (*Ammodytes hexapterus*), and surf smelt (*Hypomesus pretiosus*) as prey resources. These forage fish form a very important trophic link between plankton resources and a wide variety of predatory marine organisms as well as providing food for marbled murrelets and bald eagles. Sand lance and surf smelt do not have Federal or State concerned, threatened, or endangered status, while Pacific herring are a Federal Species of Concern and a State Candidate species.

Surf smelt spawning habitat has been documented within the action area along the eastern shore of Gig Harbor Bay, but it has not been documented at the project site (Figure 4). The substrate on the beach at the project site did not appear to be suitable for surf smelt spawning since it was mainly sand and mud (Appendix A). No sand lance or herring spawning habitat is documented within the action area (WDFW 2021a).

Gig Harbor Bay is within Tidal Reference Area 4 (Tacoma) where the work window for surf smelt is April 15 – September 30. In the Hydraulic Project Approval (HPA), WDFW may require a forage fish survey after September 30 to confirm absence of surf smelt spawning and those guidelines outlined in the issued HPA should be followed if a survey is required.

Figure 4. WDFW Documented forage fish spawning habitat



2.3.2 Estuarine Wetland

Within 300 ft of the project, there is “estuarine and marine wetland” (E2USN) along the shoreline and “estuarine and marine deepwater” wetland further waterward (E1UBL) (USFWS 2022). As mentioned above, the project site is also within an area designated as a pocket estuary (NOAA 2022). As discussed in Section 2.1 above, a small patch of *Salicornia* was noted at the project site. A larger, thicker bed of *Salicornia* is present on the property to the north where a marine rail will be removed as mitigation (see Section 5).

Impacts to these estuarine wetlands should be minimal and will mainly result from temporary, localized turbidity associated with the dock installation and removal of the marine rail which will disturb sediment on the beach. These temporary impacts to water quality are not expected to be adversely impactful long term and should subside after a tidal cycle. See Section 3 for more information on direct and indirect impacts to CFWHAs.

2.4 Kelp & Eelgrass

The Washington Department of Natural Resources (WDNR) has surveyed the shoreline within the action area (as well as the entire bay) as part of their Submerged Vegetation Monitoring Program, but no eelgrass has been documented. According to the Puget Sound Seagrass Monitoring Data Viewer, the closest eelgrass presence is north of the bay’s entrance near Sunrise

Beach Park (WDNR 2019). The Washington State ShoreZone Inventory documented fringe (patchy) kelp along the shoreline of the southwest portion of the action area, but no eelgrass (WDNR 2000). No kelp or eelgrass was documented at the project site by MSA.

2.5 Commercial & Recreational Shellfish Areas

Washington State Department of Health’s (WDOH 2022) Commercial Shellfish Map Viewer shows no commercial harvest sites within the action area or the bay. The entire bay is designated as a “prohibited growing area” (WDOH 2022). No public recreational shellfish beaches are shown within the bay (WDOH 2022).

2.6 Federal ESA-Listed Species & Critical Habitat

For each listed species with the *potential to be in the project action area*, the listing status, distribution of species, and relevant life history traits are presented in the sections below. Salmon species that utilize streams within the action area will also be included as they may migrate past the project site.

Table 2. National Marine Fisheries Service (NMFS) & U.S. Fish & Wildlife Service (USFWS) Designated Critical Habitat

NMFS/USFWS Critical Habitat	Project Footprint	Action Area
Bocaccio Rockfish (Puget Sound-Georgia Basin DPS) Critical Habitat (NMFS, 2014)	N	Y
Yelloweye Rockfish (Puget Sound-Georgia Basin DPS) Critical Habitat (NMFS, 2014)	N	N
Marine Critical Habitat for Puget Sound Chinook Salmon (NMFS, 2005)	Y	Y
Freshwater Critical Habitat for Puget Sound Chinook Salmon (NMFS, 2005)	N	N
Final Critical Habitat for Puget Sound Steelhead (NMFS, 2016)	N	Y
Marine Critical Habitat for Hood Canal Summer-run Chum Salmon (NMFS, 2005)	N	N
Freshwater Critical Habitat for Hood Canal Summer-run Chum Salmon (NMFS, 2005)	N	N
Bull Trout Final Critical Habitat (USFWS, 2010)	N	N
Green Sturgeon (Southern DPS) Critical Habitat (NMFS, 2009)	N	N
Marbled Murrelet (USFWS, 2016)	N	N
Leatherback Sea Turtle Critical Habitat (NMFS, 2012)	N	N
Southern Eulachon (Southern DPS) (NMFS, 2011)	N	N
Southern Resident Killer Whale Critical Habitat (NMFS, 2021)	N	Y
Final Humpback Whale Critical Habitat (NMFS, 2021)	N	N

2.6.1 Puget Sound Chinook

Puget Sound Chinook (*Oncorhynchus tshawytscha*), also called the king salmon, are distinguished from all other Pacific salmon by their large size. Most Chinook in the Puget Sound are “ocean-type” and migrate to the marine environment during their first year (Myers et al. 1998). They may enter estuaries immediately after emergence as fry from March to May at a length of 40 mm or they may enter the estuaries as fingerling smolts during May and June of their first year at a length of 60-80 mm (Healey 1982). Chinook fry in Washington estuaries feed on emergent insects and epibenthic crustaceans (gammarid amphipods, mysids, and cumaceans). As they grow and move into neritic habitats, they feed on decapod larvae, larval and juvenile fish, drift insects, and euphausiids (Simenstad et al. 1982). These ocean-type Chinook use estuaries as rearing areas and are the most dependent of all salmon species on estuaries for survival.

The Puget Sound Chinook is listed under the Endangered Species Act (ESA) as threatened according to the National Marine Fisheries Service (NMFS) (70 FR 37160; June 28, 2005). In addition, NMFS has designated critical habitat for 12 Evolutionarily Significant Units (ESUs) of West Coast salmon, including the Puget Sound Chinook Salmon ESU. The portion of the project footprint and action area below the line of extreme high water is in an area designated as critical habitat for the Puget Sound Chinook ESU (70 FR 52685; September 2, 2005).

According to the Washington State Conservation Commission (WSCC 2000): “East WRIA 15 lack the typical riverine Chinook habitat characterized by habitat found in larger Puget Sound mainstream rivers. However, low numbers of spawning adult Chinook are observed on a regular basis in numerous East WRIA 15 streams”. There was historically a wild Chinook run in Crescent Creek, which ended in the 1940s (WSCC 2000).

The project footprint and action area are within Puget Sound Chinook marine critical habitat. According to queries of the SaSI data (WDFW 2022b), there is fall Chinook riverine presence within the action area, in Crescent Creek to the northeast. Therefore, it is likely that this species utilizes the shoreline along the project site.

2.6.2 Hood Canal Summer-run Chum

In Puget Sound, chum spawning grounds are situated near coastal rivers and lowland streams. Puget Sound chum typically spawn from September to March (WSCC 2003). Chum (along with ocean-type Chinook) spend more time in the estuarine environment than other species of salmon (Healey 1982). Residence time in the Hood Canal ranges from 4 to 32 days with an average residence of 24 days (Simenstad et al. 1982). Juvenile chum consume benthic organisms found in and around eelgrass beds (harpacticoid copepods, gammarid amphipods, and isopods), but change their diet to drift insects and plankton such as calanoid copepods, larvaceans, and hyperiid amphipods as their size increases to 50 - 60 mm (Simenstad, Fresh, & Salo 1982).

Chum move offshore and switch diets when presented with a lack of food supply (Simenstad et al. 1982).

NMFS has listed the Hood Canal summer run chum ESU (*Oncorhynchus keta*) as threatened under the ESA (70 FR 37160; June 28, 2005). NMFS designated critical habitat for the Hood Canal summer-run chum ESU shortly after (70 FR 52739; September 2, 2005) and it includes the entire Hood Canal and contiguous shoreline north/northwest, ending past Dungeness Bay near Sequim.

Hood Canal Summer-run Chum critical habitat is not within the action area and there are no streams that connect to Gig Harbor Bay with documented summer chum presence (WDFW 2022b). It is unlikely this species would utilize the shoreline along the project site or be adversely affected by the proposed project.

2.6.3 Bull Trout

In the United States, Coastal-Puget Sound bull trout (*Salvelinus confluentus*) used to range from northern California (now extinct in California) to Alaska. In the salmon family, they are members of the char subgroup. Spawning occurs typically from August to November in streams and migration to the open sea (for anadromous populations) takes place in the spring. Very cold water is required for the survival of eggs and juveniles. Temperatures in excess of about 15 degrees C are thought to limit bull trout distribution (Rieman & McIntyre, 1993). They live both in fresh and marine waters. Some migrate to larger rivers (fluvial), lakes (adfluvial), or saltwater (anadromous) before returning to smaller streams to spawn. Others (resident bull trout) complete all of their life in the streams where they were reared. Habitat degradation, dams and diversions, and predation by non-native fish threaten the Coastal Puget Sound population (64 FR 58910; November 1, 1999).

All populations of bull trout, including the Coastal-Puget Sound populations, were listed as threatened by the United States Fish and Wildlife Service (USFWS) in 1999 (64 FR 58910; November 1, 1999). USFWS designated critical habitat for bull trout in 2010 (75 FR 63898; October 18, 2010).

According to the Washington State Conservation Commission (WSCC 2000): “No char [bull trout] presence is identified for East WRIA 15. Streams in this area are all low elevation streams, which are not likely to meet the low water temperature spawning requirements of char. No bull trout use of the East WRIA 15 marine nearshore is known.”

USFWS has designated critical habitat for bull trout in the Puget Sound watershed but no critical habitat for bull trout is within Gig Harbor Bay; the nearest designated critical habitat is along the eastern shoreline of the Tacoma Narrows bridge (75 FR 63898; October 18, 2010). There are no

streams that connect to Gig Harbor Bay with documented bull trout presence; the nearest stream with documented Dolly Varden/bull trout presence is located in the Puyallup River by Tacoma (WDFW 2022b). It is unlikely this species would migrate past the project site or be adversely affected by the proposed project.

2.6.4 Puget Sound Steelhead

Steelhead is the name given to the anadromous form of the species *Oncorhynchus mykiss*. The freshwater residents are called rainbow trout. Steelhead can return to the ocean after spawning and migrate to freshwater to spawn again, unlike Pacific salmon. Steelhead fry can spend one to two years in freshwater before heading to the open ocean, where they may stay for two to four years before returning to Washington streams. Steelhead migrate quickly through Puget Sound and into the open sea as individuals or in small groups (PSEMP 2012). Unlike Chinook, steelhead do not have a long-term feeding and growth period in Puget Sound nearshore areas (PSEMP 2012).

NMFS has listed the Puget Sound steelhead (*O. mykiss*) as a threatened species under the ESA (72 FR 26722; May 11, 2007). Critical habitat has been finalized for the Puget Sound steelhead distinct population segment (81 FR 9252; February 24, 2016).

Crescent Creek and North Creek at the north end of Gig Harbor Bay are both designated critical habitat for steelhead. According to queries of WDFW's SaSI data, there is documented presence of winter steelhead in both creeks (WDFW 2022b). Steelhead likely migrate through the marine waters adjacent to the project site in order to reach these creeks.

2.6.5 Rockfish

Bocaccio (*Sebastes paucispinis*) and yelloweye (*Sebastes ruberrimus*) rockfish remain in the upper part of the water column as larvae and pelagic juveniles. Around 3 to 6 months old, bocaccio rockfish settle into intertidal, nearshore habitat; they prefer to settle in rocky reefs, kelp beds, low rock, and cobble areas (Love et al. 2002). Juvenile yelloweye rockfish are usually found in the upper extent of the adult depth range instead of in intertidal habitat (Studebaker et al. 2009). As both species grow larger, they move into deeper waters. Adults are found around rocky reefs and coarse habitats. Marine habitats high in complexity are associated with higher numbers of rockfish species (Young et al. 2010). Adult yelloweye and bocaccio rockfish generally inhabit depths from approximately 90 ft to 1,400 ft (Love et al. 2002). Both species are opportunistic feeders, with their prey dependent on their life stage. Predators of adult rockfish include marine mammals, salmon, other rockfish, lingcod, and sharks.

NOAA has listed the distinct population segments (DPSs) of yelloweye (*Sebastes ruberrimus*) as threatened species under the ESA and listed the Georgia Basin DPS of bocaccio rockfish (*Sebastes paucispinis*) as endangered (75 FR 22276 April 28, 2010). The Georgia Basin refers to

all of Puget Sound, including the area around the San Juan Islands, and the Strait of Georgia, north to the mouth of the Campbell River in British Columbia. The western boundary of the Georgia Basin runs from east of Port Angeles to Victoria in the Strait of Juan de Fuca. Critical habitat for both species was designated in 2014 (79 FR 68042; November 13, 2014).

The majority of Gig Harbor Bay is designated as critical habitat for bocaccio rockfish and deeper areas outside of the bay (and, therefore, outside of the action area) are critical habitat for yelloweye rockfish (79 FR 68042; November 13, 2014). Critical habitat for bocaccio rockfish is designated outside of the project area but within the action area. Shallow, intertidal, nearshore waters in rocky, cobble, and sand substrates (with or without kelp) can provide suitable substrate for juvenile (3-6 months old) bocaccio rockfish (Love et al. 2002). However, the highest densities of juvenile rockfish are found in areas with floating or submerged kelp species, which were not observed during MSA's site visit. The Washington State ShoreZone Inventory documented fringe (patchy) kelp along the western shoreline of the bay, but no kelp at the project site (WDNR 2000).

Juvenile bocaccio rockfish within the action area may be temporarily affected by the elevated in-water noise from pile driving causing them to avoid the area but are not anticipated to be adversely affected long term.

2.6.6 Marbled Murrelet

Marbled murrelets (*Brachyramphus marmoratus*) are small marine birds in the Alcidae family. They spend most of their time at sea and only use old growth areas for nesting. In the critical nesting areas, fragmentation and loss of old growth forest has a significant impact on the survival and conservation of the species (WDW 1993). Adult birds are found within or adjacent to the marine environment where they dive for sand lance, sea perch, Pacific herring, surf smelt, other small schooling fish, and invertebrates.

Marbled murrelets have been listed as threatened by the USFWS since 1992 (57 FR 45328; October 1, 1992). Critical habitat was designated by USFWS in 1996, revised in 2011, and reviewed again in 2016 to determine if the ESA definition of critical habitat was being met (81 FR 51348, August 4, 2016).

There is no marbled murrelet critical habitat within the action area or within close range of it (81 FR 51348, August 4, 2016). Results from the Puget Sound Seabird Survey (managed by Seattle Audubon) group that monitors the Gig Harbor Spit site has shown scattered marbled murrelet sightings since surveys began in October 2008 (PSSS 2019). The last recorded sighting was on 04/07/2018, with a high count of 2, an average count of 2, and a frequency of 2.17% (PSSS 2019).

It is unlikely this species will be affected by the proposed work. If they happen to be foraging in the action area during construction, they may temporarily avoid the area due to elevated in-air and in-water noise from pile driving but no long-term adverse effects are anticipated.

2.6.7 Humpback whale

NMFS has listed the humpback whale (*Megaptera novaeangliae*) as an endangered species that may occur in Puget Sound (81 FR 62260; September 8, 2016). Critical habitat was designated by NMFS in 2021, but does not include Gig Harbor Bay (86 FR 21082; April 21, 2021).

Humpback whales are seen in Puget Sound, but were not documented within the action area or Gig Harbor bay in the last two years (Orca Network 2022). They are usually observed in the water by the Tacoma Narrows bridge or Point Defiance, outside of Gig Harbor Bay (Orca Network 2022). Due to the shallow nature of the bay and the boat traffic in and out of the entrance, it does not seem likely this species would be present in the action area during construction. Therefore, a marine mammal monitoring plan is not proposed.

2.6.8 Leatherback Sea Turtle

NMFS has listed the Pacific leatherback turtle (*Dermochelys coriacea*) as an endangered species that may occur in Puget Sound (35 FR 8491; June 2, 1970). There is no designated critical habitat for Pacific leatherback turtles in Puget Sound at this time; it is designated along the outer coast of Washington state (77 FR 4170; January 26, 2012).

Breeding habitat for leatherback sea turtles in Washington does not exist, even though they are occasionally seen along the coast (Bowlby et al. 1994). Leatherback sea turtles are rarely seen in Puget Sound and it is highly unlikely leatherback turtles would be found near the project site or in the action area.

2.6.9 Southern Resident Killer Whale

The Southern Resident population consists of three pods: J, K and L. According to Wiles (2004), “While in inland waters during warmer months, all of the pods concentrate their activity in Haro Strait, Boundary Passage, the Southern Gulf Islands, the eastern end of the Strait of Juan de Fuca and several localities in the southern Georgia Strait.” During early autumn, these pods, especially J pod, extend their movements into Puget Sound to take advantage of the chum and Chinook salmon runs. Resident killer whales spend more time in deeper water and only occasionally enter water less than 5 meters deep (Baird 2001).

On November 15, 2005, NMFS listed the Southern Resident killer whale (*Orcinus orca*) as endangered under the ESA (70 FR 69903; November 18, 2005). NOAA Fisheries has designated critical habitat for killer whales: “Critical habitat includes waters deeper than 20 ft relative to a

contiguous shoreline delimited by the line of extreme high water." (71 FR 69054; November 29, 2006).

Sightings from 2020 and 2021 in the Orca Network's archives showed sightings in the area outside of Gig Harbor Bay in the waters around Tacoma, but none in the bay itself. Due to the shallow nature of the bay and the presence of boat traffic in and out of the entrance, it does not seem likely this species would be present in the action area during construction. Therefore, a marine mammal monitoring plan is not proposed.

3 Effects of the Proposed Action

When reviewing all of the data, the direct and indirect effects of the project on the listed species and their critical habitat should be considered. Impacts to ESA-listed species and critical habitats that may occur within the FEMA floodplain are based on current baseline conditions versus historic pre-development conditions, where existing structures are considered an element of the environmental baseline at the time of a proposed action.

3.1 Direct Effects

When considering the direct effects of the proposed project, one must determine if the proposed project will immediately reduce or destroy the listed species and/or their habitat. The potential, direct impacts caused by the construction process include increased noise and impacts to water quality.

3.1.1 FEMA Floodplain-Related Impacts

The proposed dock occurs within a zone identified by the Federal Emergency Management Agency (FEMA) as a flood hazard area (Special Flood Hazard Area - Zone AE (elevation 14 feet)). Therefore, impacts to the following items that may also adversely affect ESA-listed species and critical habitat within the floodplain need to be addressed per GHMC 18.10.100.

- a. Does the project involve the removal of native vegetation?** No
- b. Does the project include channel straightening?** No.
- c. Does the project result in habitat isolation?** No.
- d. Does the project include bank armoring?** No.
- e. Does the project reduce flood storage capacity?** No.
- f. Does the project adversely affect flood velocities?** No.
- g. Does the project adversely affect spawning substrate?** No.
- h. Does the project adversely affect flood plain refugia?** No.
- i. Does the project result in degradation of water quality?** Yes, briefly. See Section 3.1.2 below.
- j. Will there be construction effects (noise or turbidity)?** Yes, see Sections 3.1.2 and 3.1.3 below.

3.1.2 Water Quality

Increased turbidity caused by impact pile driving could have adverse effects on salmon. The impact level depends on duration of exposure, concentration of turbidity, the life stage during the increased exposure and the options available for the fish to avoid the plumes. The effects can be discussed in terms of lethal, sublethal or behavioral (Nightingale and Simenstad 2001a).

Variations in suspended sediment concentration can also negatively impact species composition, biomass, algal growth and can affect secondary production as well (Newcombe and MacDonald 1991; Kahler et al. 2000). Filter feeders can have blockages in feeding structures which affects their feeding efficiency, in turn reducing growth rates, increasing stress or in some cases can result in death (Newcombe and MacDonald 1991). Suspended sediments can also impact salmonid fishes by increasing mortality rate, reducing growth rate and/or reducing resistance to disease, modifying natural movements, interfering with development, reducing prey abundance and fish catch methods (Newcombe and MacDonald 1991).

For this project, during pile installation, turbidity effects are expected to be localized and brief. The area where turbidity impacts may affect the listed fish has been defined by the Army Corps of Engineers (USACE) as a 25-ft radius around each pile. However, turbidity is much more localized with the installation of hollow piles (such as the proposed steel pipe piles) than it is with pile removal. To be more reserved in our analysis of turbidity from activity associated with pile work, we will discuss turbidity from pile removal as it tends to generate more turbidity than pile driving.

In terms of turbidity generated by vibratory pile removal, the following results were noted in “Jimmycomelately Piling Removal Monitoring Project” (Weston Solutions 2006):

“Based on TSS measurements from fixed OBS sensors, the primary source for sediment resuspension was prop wash from the tug boat as it maneuvered the barge to and from pile removal locations. This influence was increased by “live boating,” the use of the tug to continuously hold the barge on location, which was necessitated by the absence of operating spuds to hold the barge in position. TSS concentrations resulting from the tug’s prop wash often exceeded 50 to 100 mg/L. To provide some perspective, the Washington State Water Quality Limits for AA waters is 5 NTU (approximately 5 mg/L) above background. Generally, elevated TSS concentrations did not remain for more than five minutes; however, on one occasion, a turbidity plume was observed from the work station to the shore and near the mouth of Jimmycomelately Creek. It should be pointed out that the former log yard is located in very shallow waters and it is not uncommon to have elevated turbidity from wind waves in this area.

The extraction of the pile resulted in greater increases in TSS, with average concentrations of 40 mg/L near the pile and 26 mg/L at the sensor located 5 to 10 meters from the pile (approximately 30 and 16 mg/L above background, respectively). The turbidity plume during extraction, although larger than observed during activation of the vibratory hammer, did appear to be finite; however, it was difficult to determine how long the turbidity plume persisted, because the tug boat prop wash would overwhelm the signal from the pile removal soon after the pile was pulled.”

The barge will operate in a way so as to reduce turbidity as much as possible, such as anchoring in places where much of the work can be done with the crane to avoid excessive maneuvering of the barge. The work will be done at tides where the water is high enough to prevent the barge from grounding out. Any turbidity that does occur is not expected to be elevated or concentrated enough reach into nearby Crescent Creek (approximately 1,800 ft away) or North Creek (approximately 1,900 ft away). Turbidity would not travel upstream to affect water quality within the creeks.

3.1.3 Pile Driving Noise

Exposure to elevated in-water sound levels can lead to a variety of impacts to fish, including behavioral, stress and physiological responses, and injury to hearing organs (including temporary or permanent hearing loss), and structural and cellular damage (including barotrauma to organs and potentially lethal damage to gas-filled structures such as swim bladders) (Hastings and Popper 2005, Halvorsen et al. 2011). These effects are usually associated with impact pile driving and the associated high levels of sound pressure underwater.

Feist et al. (1992) reported that salmonids could be expected to hear pile driving noise approximately 2,000 ft from the source. Based on the studies at the Everett Homeport, these researchers concluded that pile driving did alter the distribution and behavior of juvenile pink and chum salmon. It is also possible that noise from pile driving will mask the approach of predators. As calculated in Section 1.6 above, 631 meters is where sound is anticipated to attenuate to 150 dB_{RMS} (the threshold for fish behavioral impacts). However, this is a conservative action area since it was calculated using the sound levels from unattenuated impact pile driving of 12-inch steel piles, whereas the largest piles being installed for this project are 10.75-inch and sound attenuation will be used in the form of a bubble curtain and wood block.

The project proposes the use of an impact hammer for 8.75-inch and 10.75-inch steel piles with a wood block and bubble curtain for sound attenuation. According to a study done on the effectiveness of bubble curtains in October 2005 at Washington State Ferry’s Eagle Harbor maintenance facility (Bainbridge Island, WA), the bubble curtain proved effective in mitigating both sound pressure and particle velocity levels generated by the impact pile driving of 30-inch diameter steel piles (JASCO 2005). Bubble curtains can reduce dB by 0-30 dB depending on

current in the project area and the type of system used (CalTrans 2015). The CalTrans document also goes on to state “the data generally indicate that an air bubble curtain used on a steel or concrete pile with a maximum cross-section dimension of 24 inches or less will provide approximately 5 dB of sound reduction.” Therefore, the action area will likely be smaller than 631 meters; approximately 293 meters taking into account a conservative estimate of 5 dB in sound reduction.

Marine mammals, such as killer whales and humpback whales, can also be impacted by pile driving noise. Migration, resting, and foraging behaviors may be altered in response to noise effects from pile driving. WSDOT uses the following criterion for evaluating impacts to fish and marine mammals:

- Fish Injury and Disturbance Thresholds: behavior effects threshold at 150 dB_{RMS} and a fish injury threshold dB_{SEL} of 183-187 (depending on fish size) and any peak dB above 206.
- Marine Mammal injury and disturbance depend on functional hearing groups and are summarized in Table 3 below.

Table 3. WSDOT table of marine mammal injury and disturbance thresholds

Functional Hearing Group	In Air Noise Thresholds	Underwater Noise Thresholds				
	Disturbance Threshold	Impulsive Sound Impact Pile Driving			Non- Impulsive Sound Vibratory Pile Driving	
		Auditory Injury Threshold (PTS)		Behavioral Disturbance Threshold	Auditory Injury Threshold (PTS)	Behavioral Disturbance Threshold
		Peak SPL	dB SEL _{cum}	dB RMS	dB SEL _{cum}	dB RMS
Low-frequency Cetaceans	NA	219	183 LF, 24h	160	199	120
Mid-frequency Cetaceans	NA	230	185 MF, 24h	160	198	120
High-frequency Cetaceans	NA	202	155 HF, 24h	160	173	120
Harbor Seals	90	218	185 PW, 24 h	160	201	120
Non-harbor seal pinnipeds	100	232	203 OW, 24h	160	219	120

New thresholds:

Hearing Frequency Groups:

Low-frequency Cetaceans = baleen whales (includes humpback ,Northern minke, Sei, gray, blue)

Mid-frequency Cetaceans = dolphins, toothed whales, beaked whales, bottle nose whales (includes sperm whale, killer whale, bottlenose dolphin, Pacific White-sided dolphin)

High-frequency Cetaceans = true porpoises, river dolphins, cephalorhynchid. (Dall's Porpoise)

Phocid Pinnipeds – true seals (harbor seal, Northern elephant sea, ribbon seal).

Otariid Pinnipeds – sea lions, fur seals (California and Stellars sea lion, northern fur seal)

Using the equation mentioned in section 1.6 above, impact pile driving sound is expected to attenuate to 160 dB_{RMS} approximately 136 meters away; which is within the estimated 631-meter

action area. Due to the low likelihood of killer whales and humpback whales being present in the action area (or even in Gig Harbor Bay) during construction, a marine mammal monitoring plan has not been prepared. Pile driving noise should stay contained within the bay and would not affect any killer whales or humpback whales that would be found in deeper water outside of the bay.

3.2 Indirect Effects

When considering the indirect effects of the proposed project on the listed species and their habitat, one must determine the effects that might occur later in time, after completion of the project. This proposed dock would help perpetuate long-term impacts in Gig Harbor Bay from overwater structures; however, removal of an adjacent marine rail and its concrete piles is proposed as mitigation to offset these long-term impacts.

3.2.1 Salmonid Migratory Pathway Alteration

It is generally accepted that overwater structures in the nearshore environment can alter migration behavior of juvenile salmon; though these effects may vary depending on the design and orientation of the structure, degree of shading, and the presence of artificial light (Simenstad et al. 1999). Simenstad et al. (1999) summarized the following observations from previous studies on fish migration behavior with regard to overwater structures:

- delays in their migration due to disorientation caused by lighting changes
- loss of schooling refugia due to fish school dispersal under light limitation
- a change in migratory route into deeper water, without refugia, to avoid the light change.

However, the significance of these effects is not clear. Nightingale and Simenstad (2001b) state, “Presently, although we know that under some conditions small juvenile salmon will delay or otherwise alter their shoreline movements when encountering an overwater structure, the conditions under which this behavioral modification is significant to the fishes’ fitness and survival is relatively unknown.”

A study by Williams et al. (2003) at the Mukilteo ferry terminal, found that, “Salmon fry were observed in all nearshore habitats during each transect sampling period (day and night). The fry were observed under a wide range of PAR values (0.0 $\mu\text{mol m}^{-2} \text{s}^{-1}$ to 2370 $\mu\text{mol m}^{-2} \text{s}^{-1}$).” Fry were observed both outside the terminal and underneath the terminal at all times, and shadows produced by the 10-m-wide terminal structure did not appear to act as barriers to fry movement at this location.” Chum and pink salmon fry were the most abundant species at this study site.

Responses to overwater structure also seem to vary by species. After reviewing literature on juvenile salmon use of nearshore habitats, notable conclusions Weitkamp (2003) made were: all species of juvenile salmon avoided areas with substantial changes in light intensity, Chinook

juveniles preferred widely spaced piles over densely spaced piles that create dark conditions, chum fry do not seem to alter their course to avoid piers, and coho responses to light varied by study.

Grating will be incorporated into the proposed pier, ramp, and float to reduce shading effects that may cause pathway alteration to migrating salmonids. Piles have also been spaced as far apart as possible to reduce the number needed. Float stops will be mounted on all four float piles to prevent the float from grounding out at low tides.

The (16) 6-inch concrete piles and marine rail that will be removed as mitigation on the neighboring parcel will remove a possible obstacle to migrating salmon in the nearshore environment.

3.2.2 Increased Predation

Historically, there is little evidence of docks aggregating salmonid predators in the Puget Sound (Ratte and Salo 1985; Cardwell et al. 1980; Nightingale and Simenstad 2001b). Dock associated structures, such as breakwaters, may serve as marine mammal haulout areas, but there is limited evidence that suggests these mammals are particularly targeting small out-migrating juveniles. It might be assumed that birds would be interested in small migrating juveniles, but there is no evidence that docks provide an aggregation site for predatory birds (Taylor and Willey 1997).

An additional concern about the impacts of overwater structures on migrating salmon is that they will be forced to move out into deeper water, where they will be consumed by predatory fish species. However, in the Williams study cited above, the authors noted:

“We found no evidence that avian, marine mammal, or fish predators consumed more juvenile salmon near WSF terminals than along shorelines without overwater structures. Few species appeared to be targeting abundant fry in nearshore habitats, and we observed only two occasions in which predators (one tern sp., one staghorn sculpin) had consumed juvenile salmon.”

The authors also state:

“Our analysis of fish diets at the Mukilteo ferry terminal provides one piece of conclusive evidence that juvenile salmon were not a major dietary component of predatory fish species during our study.”

This study would seem to contradict the assertion that overwater structures cause increased salmonid predation by other fish species.

3.2.3 Shading Impacts

Shading caused by overwater structures can reduce or eliminate eelgrass, macroalgae, and other epibenthic organisms resulting in reduced prey and refugia resources for salmonids (Simenstad et al. 1999; Nightingale and Simenstad 2001b). The proposed pier and ramp will be 100% grated and the proposed float will have 50% functional grating to minimize shading impacts. The minimum number of piles needed to secure the pier and float will be used. Float stops will be mounted on all four float piles to prevent the float from grounding out at low tides. All of these design parameters will minimize shading impacts.

3.2.4 Boating Impacts

Boating activity can cause damage to the aquatic habitat due to prop scour and increased turbidity. In several studies, aquatic vegetation and benthic organisms were found to be absent or greatly reduced in areas where boat traffic was high and the propellers were within one foot of the bottom (Chmura and Ross 1978). Lagler (1950) found that propellers within approximately 14 inches of the bottom removed all plants and silt within a swath approximately 5 ft wide. Conversely, boat use over deeper water can actually stimulate aquatic plant growth by increasing the dissolved carbon dioxide and increasing water circulation (Warrington 1999).

It is assumed (and recommended) that boating activity adjacent to the proposed dock will be at slow speeds. Depths at the end of the proposed dock are shallower than 0 ft MLLW so boat use should be limited to times when there is at least 2 ft of water between the prop and the bottom.

3.2.5 Impacts to Littoral Drift and Wave Energy

As noted by Ratte and E. O. Solo (1985) and Penttila and Doty (1990), piles can impact the water flow around the piles, thereby altering the bathymetry in the adjacent area. Nightingale and Simenstad (2001b) also noted that piles can affect water direction and intensity, which could result in altered substrate distribution and associated detritus. Nightingale and Simenstad (2001b) observed that "...widely spaced piles allow currents to flow freely and sediment is essentially unaffected."

This project site is along a stretch of shoreline that is classified as an area of "no appreciable drift" (WECY 2003). However, the piles for the proposed dock are spaced apart as far as possible to minimize impacts to littoral drift and wave energy. The (16) 6-inch concrete piles associated with the marine rail on the neighboring parcel are spaced close enough together that they might be altering any littoral drift occurring along the shoreline, as well as altering current flow.

3.3 Cumulative Effects

Cumulative effects from future state, local, or private entities that are reasonably certain to occur in the action area are anticipated for this project. The action area includes shoreline properties within 631 m to the east and west of the project site. Most of the shoreline within the action area

(and the bay) is armored (WDFW 2019) and there are multiple marinas and smaller, residential docks.

The proposed project would facilitate continued habitat alteration along the shoreline and may promote future activities, including fishing, swimming, and any other water dependent recreational activity.

The full scope of cumulative impacts cannot be quantified in this assessment, but with appropriate regulations in place, it is unlikely that ESA-listed species, critical habitat, or human recreation will be greatly affected by the proposed dock.

3.4 Interrelated/Interdependent Effects

Completion of this project is not anticipated to promote future construction or other activities that would not otherwise occur without its completion. Gig Harbor Bay includes many permitted overwater structures, such as residential docks and commercial marinas. Therefore, no additional interrelated or interdependent actions that could affect species are anticipated to occur because of this project.

4 Conservation Measures to Avoid & Minimize Impacts

Conservation measures presented here include avoidance and minimization measures that are intended to address both City of Gig Harbor SMP criteria and FEMA requirements. The FEMA requirements pertain to marine critical habitat and ESA-listed species within the adjoining floodplain.

All shoreline development must be located, designed, constructed, and maintained in a manner that protects ecological functions and ecosystem-wide processes. This section describes the steps taken during project planning and implementation to find the least environmentally damaging practicable alternative to achieve the project goal.

The following mitigation sequencing steps, as described in WAC 173-26-201(2)(e), were considered during project development and site selection:

- **No action:** To avoid the adverse impact altogether by not taking a certain action or parts of an action.
 - The project purpose and need are described in more detail in the Project Description section. “No Action” would not achieve the project goal.
- **Minimizing impacts** by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts.

- The proposal includes the minimum footprint necessary and a design that complies with regulatory agencies' criteria.
- Measures to reduce shading impacts will be implemented, such as grating incorporated throughout the dock. The grating will have 69% open area.
- Pile-mounted float stops will prevent the float from grounding out at low tide.
- A bubble curtain and wood block will be used for sound attenuation during pile driving activities.
- Flotation will be permanently encapsulated and located only under solid decking on the float.
- Floats and gangway will be prefabricated in Tacoma so that the dock can be assembled on site.
- **Rectifying** the impact by repairing, rehabilitating, or restoring the affected environment.
 - On the neighboring parcel, a marine rail (totaling 341.9 ft²) with the rails embedded in the beach that could be acting as a groin will be removed, as well as the (16) 6-inch concrete piles that support it.
- **Reducing or eliminating** the impact over time by preservation and maintenance operations.
 - Opportunities to reduce or eliminate the permanent direct and indirect negative impacts from the project over time are described above in “minimizing impacts” and below under BMPs.
- **Compensating** for the adverse impact by replacing, enhancing, or providing substitute resources or environments.
 - Compensatory mitigation will be completed in the form of off-site mitigation. On the neighboring parcel, a marine rail (totaling 341.9 ft²) with the rails embedded in the beach that could be acting as a groin will be removed, as well as the (16) 6-inch concrete piles that support it. More detail is provided in Section 5.
- **Monitoring** the impact and the compensation project and taking appropriate corrective measures.
 - No monitoring is proposed.

In order to minimize potential impacts to listed species and habitat associated with this project, the following conservation measures are recommended by MSA for implementation at the site:

1. “Best Management Practices” (BMPs) will be exercised throughout this project:
 - a. Care will be taken to contain all construction debris.
 - b. Training for all employees on emergency spill response and containment.
 - c. Daily housekeeping to ensure debris does not enter the water/area adjacent to the work site.
 - d. Removed piles and marine rail should be disposed of at an approved upland location.
 - e. EPA Region 10 BMPs for pile removal will be followed.

- f. A floating surface boom should be deployed to capture any debris or oil sheen.
 - g. No grounding of the barge should occur.
 - h. Equipment shall be operated in a way that minimizes turbidity.
- 2. USACE in-water work window should be observed (July 16 to February 15).
- 3. Additional provisions and conditions as enumerated in the HPA issued by the WDFW should be followed.
- 4. Additional provisions and conditions as enumerated in the RGP-6 permit issued by the USACE should be followed.
- 5. No creosote, pentachlorophenol, CCA (chromated copper arsenate), or comparably toxic compounds not approved for marine use shall be used for any portion of the overwater/inwater structure. ACZA (ammoniacal copper zinc arsenate)-treated wood must meet post-treatment procedures identified by the Western Wood Preservers Institute.

5 Proposed Mitigation

Due to the lack of mitigation on site, off-site mitigation is proposed on the neighboring parcel (# 2260000521). A 130-ft-long marine rail (totaling 341.9 ft²) and the (16) 6-inch concrete piles that support it will be removed from the nearshore marine environment where there is “estuarine and marine wetland” present, in an area of shoreline adjacent to Crescent Creek where salmon are known to be present (WDFW 2022a) (Figure 5-7). This mitigation site (and the project site) is also located in a pocket estuary that encompasses the shoreline between Crescent Creek and North Creek (NOAA 2020). The marine rail currently sits in a bed of *Salicornia* on the upper beach (Figure 7).

The piles will be removed via direct pull and the holes remaining after removal would be left to fill in naturally. The marine rail and piles will be placed into a containment bin on the barge to be disposed of at an approved upland location.

The (16) 6-inch concrete piles and marine rail that will be removed as mitigation on the neighboring parcel will remove a possible obstacle to migrating salmon in the nearshore environment. These piles are also spaced close enough together that they might be altering any littoral drift occurring along the shoreline, as well as altering current flow. The rails, treated wood walkway boards, and concrete rail ties embedded on the beach may be acting as a groin and preventing or altering littoral drift along this section of shoreline (Figure 7). Removal of this rail will also remove impervious surfaces over and from within a bed of *Salicornia* on the upper beach and from within shoreline designated as “estuarine and marine wetland”; this rail is also adjacent to “estuarine and marine deepwater” wetland.

Table 4. Marine rail components to be removed

Quantity	Rail Component	Area (ft ²)
16	6-inch concrete support piles	3.2
2	0.65'x130' light gauge rail	169
1	25' long 2"x12' treated wood walkway	25
22	8"x4' concrete rail ties	58.7
1	80' long 2"x12' treated wood walkway	80
8	Galvanized rail spreaders	4
8	Re-bar spreaders	2
Total		341.9 ft²

Figure 5. Department of Ecology shoreline aerial photo dated 7/24/2016 (close-up); arrow indicates marine rail to be removed



Figure 6. Photo of the upper portion of the marine rail to be removed



Figure 7. Photos of marine rail and concrete piles to be removed



6 Take Analysis

The ESA (Section 3) defines “take” as to “harass, harm, pursue, hunt, shoot, wound, trap, capture, collect or attempt to engage in any such conduct.” The USFWS further defines “harm” as “significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.” It is likely that no “take” will result from this project.

7 Conclusion

7.1 No Net Loss

While the proposed project may result in some short-term negative impacts, the overall outcome is not expected to cause long-term impacts to ecological function of the nearshore marine environment. Short-term impacts will be temporary and minor; Section 4 of this report outlines avoidance and minimization measures to prevent these impacts, primarily related to noise and water quality. However, the net long-term impacts are expected to be neutral given the mitigation proposed in Section 5.

This project will go through the federal review process with the USACE and NMFS where they will confirm that the proposed mitigation will go towards satisfying the RGP-6 mitigation point requirements which consider the presence of surf smelt spawning within the action area, submerged aquatic vegetation found at the site, and factors such as being in a pocket estuary. As noted above, all measures have been taken to avoid and minimize potential impacts resulting from the proposed project.

In consideration of the unlikely impact to ESA-listed species, as well as the proposed mitigation described above, we determine that no-net-loss of ecological function will result from this project’s unavoidable impacts due to its water-dependent use. Additionally, we believe that this project reflects the goal of the Shoreline Master Program by balancing access to the environment with the protection of that environment.

7.2 Determination of Effect

ESA-listed species and critical habitat in the action area and FEMA Flood Hazard Area are evaluated below based on the following assessments:

- No effect (absolutely no effect whatsoever, either positive or negative);
- May affect, not likely to adversely affect (insignificant effects that never reach the level where take occurs, or effects are discountable and extremely unlikely to occur; or there would be an entirely beneficial effect); or,
- May affect, likely to adversely affect (measurable or significant effects are likely, and the project will require formal consultation).

This determination of effect for protected species is contingent upon implementation of the conservation and minimization measures in Section 4. In general, direct adverse effects to ESA-listed species (avoidance, behavior modification during construction) will be short-term, but would not result in take, and would not contribute to an increased risk of extinction.

After reviewing the appropriate data, the determination of effect to each ESA-listed species with the potential to be found within the action area is:

- ***Puget Sound Chinook*** – “May effect, not likely to adversely affect”
- ***Bocaccio Rockfish*** – “May effect, not likely to adversely affect”
- ***Yelloweye Rockfish*** – “No effect”
- ***Bull Trout*** – “No effect”
- ***Hood Canal Summer-run Chum*** – “No effect”
- ***Puget Sound Steelhead*** – “May effect, not likely to adversely affect”
- ***Marbled Murrelet*** – “May effect, not likely to adversely affect”
- ***Green Sturgeon*** – “No effect”
- ***Southern Eulachon*** – “No effect”
- ***Humpback whale*** – “No effect”
- ***Leatherback sea turtle*** – “No effect”
- ***Southern Resident Killer Whale*** – “No effect”

The determination of effect to designated critical habitat within the action area is:

- ***Puget Sound Chinook*** – “May effect, not likely to adversely affect”
- ***Bocaccio Rockfish*** – “May effect, not likely to adversely affect”
- ***Puget Sound Steelhead*** – “May effect, not likely to adversely affect”
- ***Southern Resident Killer Whale*** – “May effect, not likely to adversely affect”

References

- Adams, P.B., C.B. Grimes, J.E. Hightower, S.T. Lindley, and M.L. Moser. 2002. Status Review for the North American green sturgeon. Final Report to Southwest Region, NOAA Fisheries. Long Beach, CA. 50 p.
- Baird, R.W. 2001. Status of killer whales, *Orcinus orca*, in Canada. Canadian Field-Naturalist 115:676-701.
- Caltrans. 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Report number CTHWNP-RT-15-306.01.01. November 2015.
- Cardwell R.D., S.J. Olsen, M.I. Carr, and E.W. Sanborn. 1980. Biotic, water quality and hydrologic characteristics of Skyline Marina in 1978. Tech. Rep. 54, WDFW, Olympia, WA.
- Chmura, G.L. and N.W. Ross. 1978. The Environmental Impacts of Marinas and Their Boats: A literature review with management considerations. Marine Advisory Service, University of Rhode Island, Narragansett, RI.
- Federal Register / Vol. 35, No. 106 / Tuesday, June 2, 1970 / Rules and Regulations.
- Federal Register / Vol. 57, No. 191 / Thursday, October 1, 1992 / Rules and Regulations.
- Federal Register / Vol. 64, No. 210 / Monday, November 1, 1999 / Rules and Regulations.
- Federal Register / Vol. 70, No. 123 / Tuesday, June 28, 2005 / Rules and Regulations.
- Federal Register / Vol. 70, No. 170 / Friday, September 2, 2005 / Rules and Regulations.
- Federal Register / Vol. 70, No. 222 / Friday, November 18, 2005 / Rules and Regulations.
- Federal Register / Vol. 71, No. 67 / Friday, April 7, 2006 / Rules and Regulations.
- Federal Register / Vol. 71, No. 229 / Wednesday, November 29, 2006 / Rules and Regulations.
- Federal Register / Vol. 72, No. 91 / Friday, May 11, 2007 / Rules and Regulations.
- Federal Register / Vol. 74, No. 195 / Friday, October 9, 2009 / Rules and Regulations.
- Federal Register / Vol. 75, No. 52 / Thursday, March 18, 2010 / Rules and Regulations.
- Federal Register / Vol. 75, No. 81 / Wednesday, April 28, 2010 / Rules and Regulations.
- Federal Register / Vol. 75, No. 200 / Monday, October 18, 2010 / Rules and Regulations.
- Federal Register / Vol. 76, No. 203 / Thursday, October 20, 2011 / Rules and Regulations.
- Federal Register / Vol. 77, No. 17 / Thursday, January 26, 2012 / Rules and Regulations.
- Federal Register / Vol. 79, No. 219 / Friday, November 13, 2014 / Rules and Regulations.
- Federal Register / Vol. 81, No. 36 / Wednesday, February 24, 2016 / Rules and Regulations.
- Federal Register / Vol. 81, No. 150 / Thursday, August 4, 2016 / Rules and Regulations.
- Federal Register / Vol. 81, No. 174 / Thursday, September 8, 2016 / Rules and Regulations.
- Federal Register / Vol. 84, No. 196 / Wednesday, October 9, 2019 / Rules and Regulations.
- Feist, B.E., J.J. Anderson and R. Miyamota. 1992. Potential impacts of pile driving on juvenile pink (*Oncorhynchus gorbuscha*) and chum (*O. keta*) salmon behavior and distribution. FRI-UW-9603. Fisheries Resources Institute, University of Washington. Seattle, WA.

- Halvorsen, M.B., Casper, B.M., Woodley, C.M., Carlson, T.J., and Popper, A.N. 2011. Predicting and mitigating hydroacoustic impacts on fish from pile installations. NCHRP Research Results Digest 363, Project 25-28, National Cooperative Highway Research Program, Transportation Research Board, National Academy of Sciences, Washington, D.C.
- Hastings, M.C. and A.N. Popper. 2005. Effects of Sound on Fish. California Department of Transportation. Contract No. 43A0139, Task Order 1. Sacramento CA.
- Healey, M.C. 1982. Juvenile Pacific salmon in estuaries - the life support system, p. 315-341. In: V.S. Kennedy (ed.). Estuarine comparisons. Academic Press, New York, NY.
- JASCO 2005. Alex MacGillivray, Roberto Racca. Sound pressure and particle velocity measurements from Marine Pile Driving with Bubble Curtain Mitigation. JASCO Research Ltd., Victoria BC, Canada.
- Johnson, L.L., M.R. Arkoosh, C.F. Bravo, T.K. Collier, M.M. Krahn, J.P. Meador, M.S. Myers, W.L. Reichert, and J.E. Stein. 2007. The Effects of Polycyclic Aromatic Hydrocarbons in Fish from Puget Sound, Washington. *The Toxicology of Fishes*: Chapter 22.
- Kahler, T., M. Grassley, & D. Beauchamp. 2000. A summary of the effects of bulkheads, piers, and other artificial structures and shorezone development on ESA-listed salmonids in lakes. Final Report prepared for the City of Bellevue.
- Lagler, K.F., A.S. Hazzard, W.E. Hazen, and W.A. Tompkins. 1950. Outboard motors in relation to fish behavior, fish production and angling success. *Transactions of the 15th Annual North American Wildlife Conference*. pp. 280-303.
- Love, M.S., M.M. Yoklavich, and L.K. Thorsteinson. 2002. *The rockfishes of the northeast Pacific*. University of California Press, Berkeley.
- Myers, J.M., R.G. Kope, G.J. Bryant, D. Teel, L.J. Lierheimer, T.C. Wainwright, W.S. Grant, F.W. Waknitz, K. Neeley, S.T. Lindley, and R.S. Waples. 1998. Status review of Chinook salmon from Washington, Idaho, Oregon, and California. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, NOAA Technical Memo, NMFS-NWFSC-35, 443p.
- Newcombe, C.P. and MacDonald, D.D., 1991. Effects of suspended sediments on aquatic ecosystems. *North American journal of fisheries management*, 11(1), pp.72-82.
- Nightingale, B. and C.A. Simenstad. 2001a. Dredging activities: marine issues. White Paper. Submitted to the Washington Department of Fish and Wildlife, Washington Department of Ecology, and Washington Department of Transportation.
- Nightingale, B. and C.A. Simenstad. 2001b. Overwater structures: marine issues. White Paper, Res. Proj. T1803, Task 35, Washington State Department of Transportation, Washington State Transportation Center (TRAC). Seattle, WA. 133p.

- NOAA. 2022. Puget Sound Natal & Pocket Estuaries map. Credits: National Oceanic and Atmospheric Administration, NOAA Fisheries, NOAA Fisheries West Coast Region. Accessed February 2022. Available at:
<https://noaa.maps.arcgis.com/home/webmap/viewer.html?webmap=7cb6ea0376cc4b24b65341a4e2b8ac0b>
- Orca Network. 2022. Sightings Archives. Accessed February 2022. Available at:
<http://www.orcanetwork.org/sightings/archives.html>
- Penttila, Dan and D. Doty. 1990. Results of 1989 eelgrass shading studies in Puget Sound, Progress Report Draft. WDFW Marine Fish Habitat Investigations Division.
- Puget Sound Ecosystem Monitoring Program (PSEMP) Salmonid Workgroup. 2012. Methods and quality of VSP monitoring of ESA listed Puget Sound salmon and steelhead. Bruce A. Crawford editor. 148 p.
https://www.psp.wa.gov/downloads/psemp/salmonid_VSP_monitoring_assessment.pdf
- Puget Sound Seabird Survey (PSSS). 2019. Seattle Audubon Society. Survey Summary Reports. Accessed August 2019. Available at:
<http://www.seattleaudubon.org/sas/About/Science/CitizenScience/PugetSoundSeabirdSurvey.asp>
- Ratte, L.D. and E.O. Salo. 1985. Under-pier ecology of juvenile Pacific salmon (*Oncorhynchus spp.*) in Commencement Bay, Washington. Port of Tacoma. Report number FRI-UW-8508. December 1985.
- Rieman, B.E. and J.D. McIntyre. 1993. Demographic and habitat requirements for conservation of Bull Trout. USDA, Forest Service, Intermountain Research Station, Technical Report INT-302, Ogden, Utah, September 1993. 38 pp.
- Simenstad, C.A., K.L. Fresh, and E.O. Salo. 1982. The role of Puget Sound and Washington coastal estuaries in the life history of Pacific salmon: an unappreciated function. Pages 343-364. In: V.S. Kennedy, editor. *Estuarine comparisons*. Academic Press. New York, NY.
- Simenstad, C. A., B.J. Nightingale, R.M. Thom, and D.K. Shreffler. 1999. Impacts of ferry terminals on juvenile salmon migrating along Puget Sound shorelines. Phase I: Synthesis of state of knowledge. Washington State Department of Transportation. Seattle, WA. Research Project T9903. June 1999.
- Studebaker, R.S., K.M. Cox, and T.J. Mulligan. 2009. Recent and historical spatial distributions of juvenile rockfish, *Sebastes* spp., in rocky intertidal tidepools with emphasis on *Sebastes melanops*, Trans., Am. Fish. Soc., 138:645-651.

- Taylor, W.S. and W.S. Willey. 1997. Port of Seattle fish mitigation study: Pier 64/65 short-stay moorage facility: qualitative fish and avian predator observations. Prepared for Beak Consultants.
- U.S. Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory mapper. Accessed May 16, 2022. Available at: <https://www.fws.gov/wetlands/data/mapper.html>
- Warrington, P.D. 1999. Impacts of outboard motors on the aquatic environment. www.nalms.org/bclss/impactsrecreationboat.htm
- Washington Department of Ecology (WECY). 2022. Water Quality Atlas Map. Accessed February 2022. Available at: <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&RT=1&Layers=30&Filters=n%2cy%2cn%2cn&F2.1=0&F2.2=0&BBBox=-14338616%2c5395963%2c-12562831%2c6503994>
- Washington Department of Ecology (WECY). 1999. Coastal Atlas Map. Wetlands data. Accessed February 2022. Available at: <https://apps.ecology.wa.gov/coastalatlas/tools/Map.aspx>
- Washington Department of Ecology (WECY). 2003. Coastal Atlas Map. Drift Cell data. Accessed February 2022. Available at: <https://apps.ecology.wa.gov/coastalatlas/tools/Map.aspx>
- Washington Department of Ecology (WECY). 2006. Coastal Atlas Map. Slope Stability data. Accessed February 2022. Available at: <https://apps.ecology.wa.gov/coastalatlas/tools/Map.aspx>
- Washington Department of Ecology (WECY). 2022. Water Quality Atlas Map. Accessed January 2022. Available at: <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&RT=1&Layers=30&Filters=n%2cy%2cn%2cn&F2.1=0&F2.2=0&BBBox=-14338616%2c5395963%2c-12562831%2c6503994>
- Washington Department of Fish and Wildlife (WDFW). 2022a. Priority Habitats and Species (PHS) report. Accessed February 2022. Available at: <http://wdfw.wa.gov/mapping/phs/>
- Washington Department of Fish and Wildlife (WDFW). 2022b. Salmonid Stock Inventory (SaSI). Accessed January 2022. Available at: <http://apps.wdfw.wa.gov/salmonscape/map.html#>
- Washington Department of Fish & Wildlife (WDFW). 2019. Beach Strategies Shoreline Armor dataset. Estuary and Salmon Restoration Program (ESRP).
- Washington Department of Natural Resources (WDNR). 2001. Washington State ShoreZone Inventory 1994-2000. Nearshore Habitat Program. Olympia, WA.

- Washington Department of Wildlife (WDW). 1993. Status of the marbled murrelet (*Brachyramphus marmoratus*) in Washington. July 1993. Unpubl. Rep. Washington Department of Wildlife, Olympia, WA.
- Washington State Conservation Commission (WSCC). 2000. Salmon and Steelhead Habitat Limiting Factors. Water Resources Inventory Area 15, East Kitsap Watershed. November 2000.
- Washington State Department of Health (WDOH). Office of Environmental Health and Safety. Commercial Shellfish Map Viewer. Accessed January 2022.
Available at: <https://fortress.wa.gov/doh/oswpviewer/index.html>
- Washington State Department of Transportation (WSDOT). Fish and Marine Mammal Thresholds. Available at: https://wsdot.wa.gov/sites/default/files/2021-10/ENV-FW-FishMM_Thresholds.pdf
- Weitkamp, D.E. 2003. Young Pacific salmon in estuarine habitats. Parametrix, Inc., Kirkland, WA. 53 pp.
- Weston Solutions. 2006. Jimmycomelately piling removal monitoring project. Final Report for the Jamestown S’Klallam Tribe, Sequim, WA. 116 pp.
- Wiles, G.J. 2004. Washington State status report for the killer whale. Washington Department Fish and Wildlife, Olympia. 106 pp.
- Williams, G.D., R.M. Thom, D.K. Shreffler, J.A. Southard, L.K. O’Rourke, S.L. Sargeant, V.I. Cullinan, R. Moursund, and M. Stamey. 2003. Assessing overwater structure-related predation risk on juvenile salmon: field observations and recommended protocols. September 2003. Pacific Northwest National Laboratory. Sequim, WA.
- Young et al. 2010. Multivariate bathymetry-derived generalized linear model accurately predicts rockfish distribution on Cordell Bank, California, USA. Marine Ecology Progress Series. Vol. 415: 247-261.

Attachment 1. No Net Loss Shoreline Ecological Functions Evaluation Form (prepared by Marine Floats)



No Net Loss Shoreline Ecological Functions Evaluation Form

1. Please provide a complete project description:

This project will install a new residential pier, ramp, float and piling. The project consists of: (1) 4'X40' Aluminum Pier, (1) 4'X38' Aluminum Pier, (1) 3'X44' Aluminum Ramp, all with 100% fiberglass grated surfaces consisting of 1.5" squares and 69% open area. (1) 8'X24' float with fully encapsulated polyethylene foam filled tubs for floatation and surfaces composed of 50% composite decking and 50% Fiberglass grating with 1.5" squares and 69% open area. (4) piling mounted float stops, (4) 8" Galvanized steel pier piling and (4) 10" galvanized steel float piling. total project length from the existing bulkhead is 136'.

Instructions: Please provide the requested information for each of the project-related questions set forth below. If the project doesn't include one or more of the development activities, indicate "not applicable" next to the topic. **Please note that the completed form must be submitted with the required shoreline permit application or shoreline permit exemption request in order for the application to be deemed complete.**

Shoreline Setback/Impervious Coverage

1. Existing Shoreline Setback (from the Ordinary High-Water Mark): N/A
2. Proposed Shoreline Setback: N/A
3. Parcel Width (linear feet shoreline frontage): 85 Feet
4. Proposed Shoreline Setback Area (sq. ft.): N/A
5. Number of existing accessory structures in setback area: N/A
6. Number of accessory structures to be removed: None
7. Net increase/decrease in impervious coverage: None

Native Vegetation (Areas in Sq. Ft.) within Shoreline Setback/Vegetation Conservation Area Buffer

1. Proposed Native Shrubs & Ground Cover: None
2. Proposed Lawn: None
3. Amount of Existing Lawn Removed: None
4. Amount of Existing Ornamental Shrubs Removed: None

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5. Amount of Existing Invasive Species Removed: None
6. Amount of Aquatic Vegetation Removed: None
7. Amount of Aquatic Vegetation Added: None

Shoreline Stabilization (Linear Feet)

1. Hard Shoreline Stabilization Added (wood/concrete vertical bulkhead, rock bulkhead, or riprap): None
2. Hard Shoreline Stabilization Removed: None
3. Hard Shoreline Stabilization Repaired: None
4. Hard Shoreline Stabilization Altered (setback landward): N/A
5. Geotech Report Provided (yes/no): No
6. Needs Assessment Required (yes/no): No
7. Soft Shoreline Stabilization Added: None
8. Soft Shoreline Stabilization Removed: None
9. Soft Shoreline Stabilization that replaced hard stabilization structure: None
10. Soft Shoreline Stabilization Altered: none

Overwater Coverage

1. Change in height of overwater structure (pier/dock): 4 Feet
2. Amount of grating (sq. ft.): ___ Pier and Ramp are 100% grated surfaces, float is 50% grated surfaces
3. Amount of solid boards (decking) removed: None
4. Total length: 136 feet from bulkhead
5. Total Width: 8' at widest part (float)
6. Skirting removed (linear ft.): None
7. In-water structures removed: None
8. Is a boat lift included in the proposal? No
9. Is the proposed overwater structure a "joint pier" used by more than one property owner: ___ No

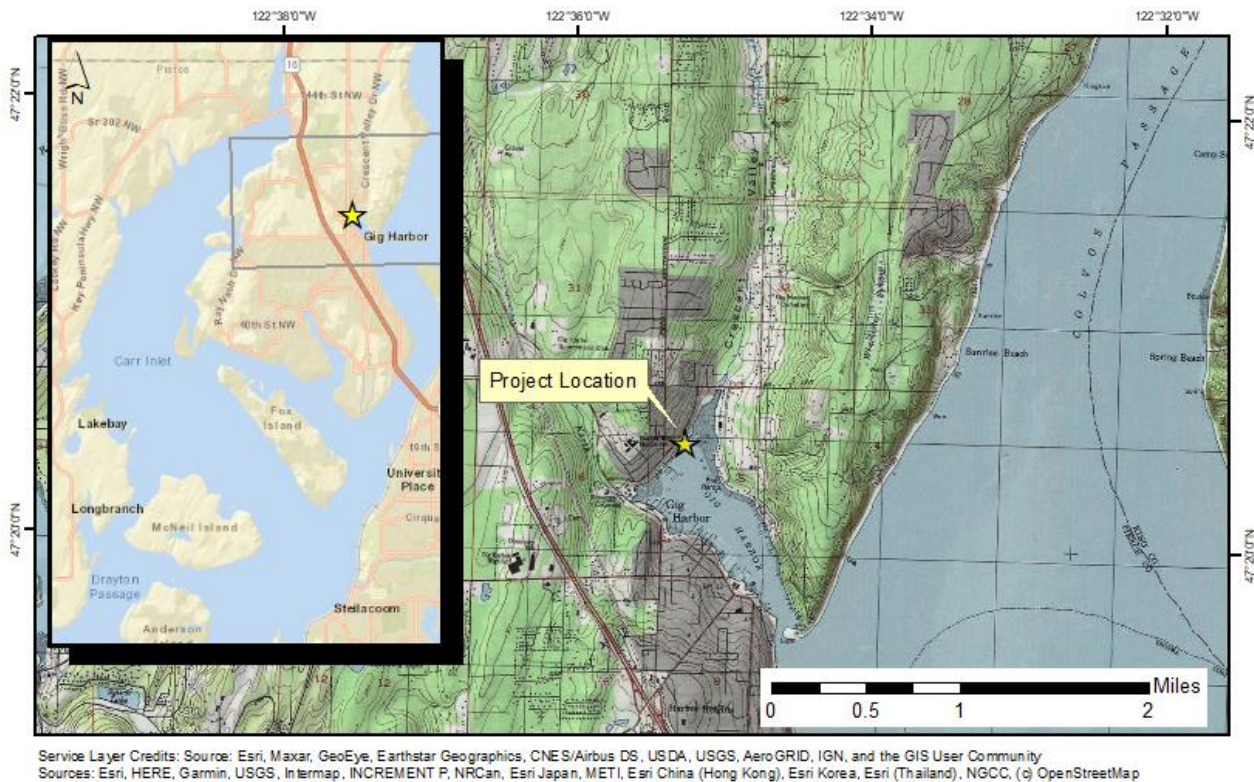
Appendix A. Perrow-DC APT Habitat Report



Perrow Habitat Survey Report (to accompany map dated 2/14/2022)

A habitat survey was performed on June 1, 2021 from approximately 2:30 pm to 3:30 pm at the project site located at 9113 Harborview Dr., Gig Harbor, WA 98335. Bryan DeCaterina and Darby Flanagan from Marine Surveys & Assessments surveyed the intertidal and subtidal zone using SCUBA along eleven survey transects in the area of a proposed pier-ramp-float to identify flora, fauna, substrate types and other qualitative information. Weather was clear and sunny; water visibility was 4 ft.

Figure 1. Vicinity Map of Project Location



The survey transect baseline was along the MHHW/HTL aligned with the bulkhead that runs the shoreline at the site. Eleven transects were surveyed from the baseline and transects were oriented perpendicular to the baseline. Transects were each 200 ft long and arranged from northeast to southwest, or when looking at the water from shore, from left to right (T1 to T11). T2 through T10 were separated from each other by 10 ft., with the outer transects (T1 & T11) offset by 15 feet. The survey covered the area of a proposed pier-ramp-float, plus a 25-ft buffer around the proposed float location.

The area of the survey ranged in elevation from +2.7' MLLW along shore to -2' MLLW at the seaward extent. The substrate at the site is sand, cobble, shell hash, and mud.

Areas of macroalgae included: attached *Ulva* 5-70%; *Fucus* 1-10%; and *Porphyra* 1-5%. One observation of *Salicornia* was recorded in the upper intertidal zone. No kelp or eelgrass was documented at the site.

The survey area included a 25-ft buffer around the proposed float. The percent cover of vegetation within this area is typically calculated to determine mitigation scenarios and can be found below in Table 1. *Ulva* is not included in these calculations because the area is not documented as a herring spawning zone.

Please note the depths in this report are for reference only can have an error of +/- 1 ft. and should not be used for engineering purposes.

Table 1. Vegetation within 25-ft Float Buffer

Vegetation in Float Buffer	
Total Sq Ft Kelp in Buffer	0
Buffer Sq Ft	3754.1
Percent Buffer Macroalgae	<10%
Percent Buffer Kelp	0.00%

Figure 2. Looking north along the survey baseline / bulkhead from existing dock to the South



Figure 3. Looking South along baseline / bulkhead from the North



Figure 4. Looking East site (from shore) along the existing dock just South of the site.



Figure 5. OHWM measured on the bulkhead



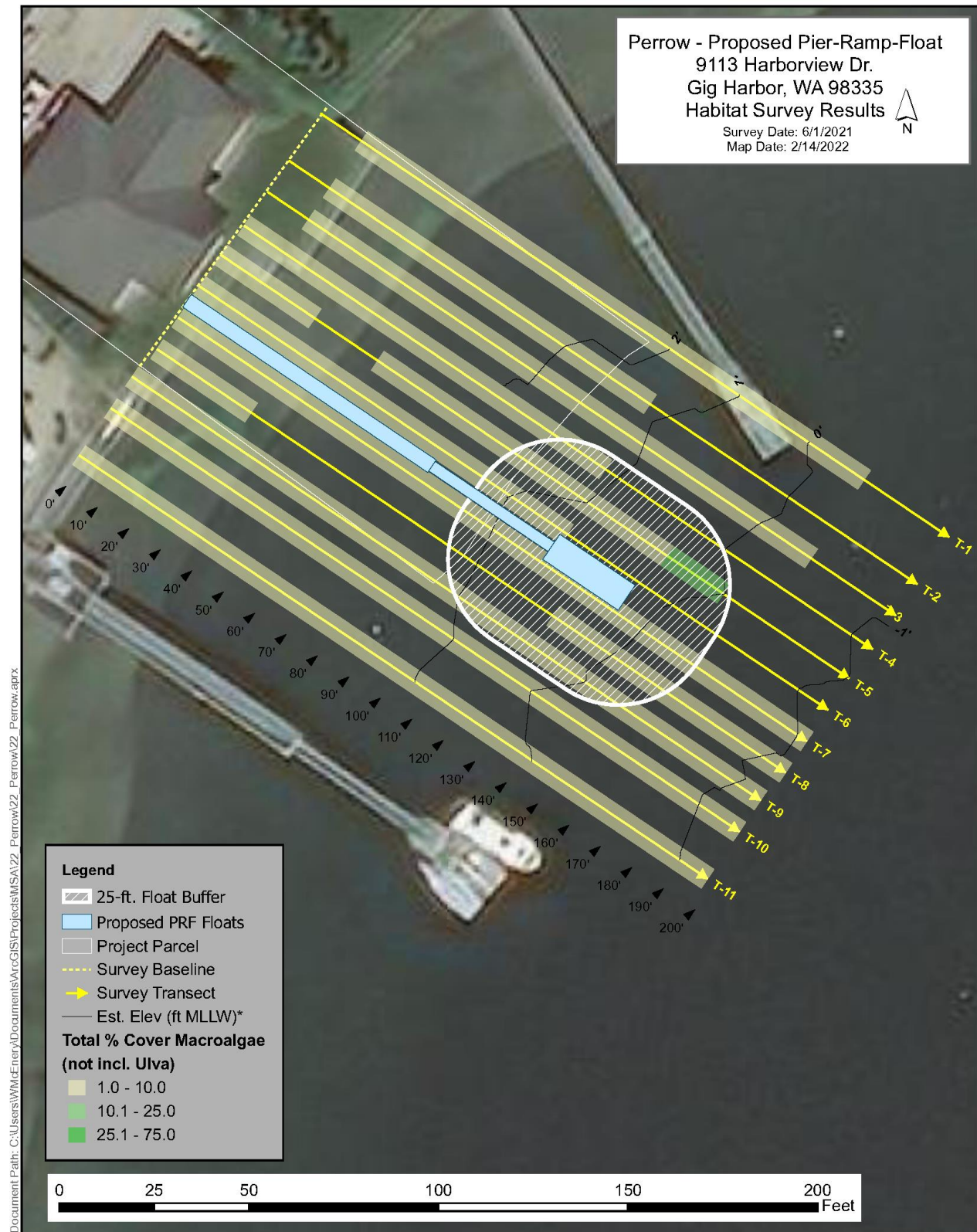
Figure 6. Typical substrate with sparse vegetation.



Figure 7. Typical Transect



Figure 8. Habitat Survey Results Map



Service Layer Credits: World Imagery: Maxar, Microsoft

*The depths shown are for reference only and can have an error of +/- one foot and should not be used for engineering purposes.

Table 2. Habitat Survey Results Table

Transect T-1

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
13		sand/mud /hash/cobble with larger rocks	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
23		sand/mud /hash/cobble with larger rocks	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
33		sand/mud /hash/cobble with larger rocks	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
43		sand/mud /hash/cobble with larger rocks	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
48		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
53		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
63		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
73		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
83		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
93		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
97	2.73	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
103		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
113		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
117	1.71	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
123	1.71	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
133	1.70	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
138	0.69	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.
143	0.68	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 5%.
153	0.68	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 5%.
163	-0.33	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 5%.

173	-0.34	sand/mud	<i>Ulva</i> 30%.
183	-0.34	sand/mud	<i>Ulva</i> 30%.
193	-0.35	sand/mud	<i>Ulva</i> 30%.
200	-0.36	sand/mud	<i>Ulva</i> 30%.

Transect T-2

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
13		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
20		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
30		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
40		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
44		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
85	2.54	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
90	1.55	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
100	1.56	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
110	1.56	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
115	1.57	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
120	0.58	sand/mud	<i>Ulva</i> 20%.
130	0.58	sand/mud	<i>Ulva</i> 20%.
140	0.59	sand/mud	<i>Ulva</i> 20%.

150	0.60	sand/mud	<i>Ulva</i> 20%.
157	0.60	sand/mud	<i>Ulva</i> 30%.
160	-0.39	sand/mud	<i>Ulva</i> 30%.
170	-0.38	sand/mud	<i>Ulva</i> 30%.
180	-0.38	sand/mud	<i>Ulva</i> 30%.
190	-0.37	sand/mud	<i>Ulva</i> 30%.
200	-1.36	sand/mud	<i>Ulva</i> 30%.

Transect T-3

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
13		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
23		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
33		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
43		sand/mud /hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
45		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
53		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
63		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
73		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
83	2.42	sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
93		sand/mud and cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
97		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
103		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
113	1.39	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
117	1.39	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.

123	1.38	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
133	1.37	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 5%.
138	0.37	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.
143	0.36	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 5%.
153	0.35	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 5%.
163	-0.65	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 5%.
173	-0.66	sand/mud	<i>Ulva</i> 30%.
183	-0.67	sand/mud	<i>Ulva</i> 30%.
193	-0.67	sand/mud	<i>Ulva</i> 30%.
200	-0.68	sand/mud	<i>Ulva</i> 30%.

Transect T-4

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
13		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
20		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
30		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
40		shale/hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
44		shale/hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
79	2.22	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
80	1.22	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
90	1.23	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
100	1.24	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
110	1.24	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.

115	1.25	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
120	0.26	sand/mud	<i>Ulva</i> 20%.
130	0.26	sand/mud	<i>Ulva</i> 20%.
140	0.27	sand/mud	<i>Ulva</i> 20%.
150	0.28	sand/mud	<i>Ulva</i> 20%.
160	-0.71	sand/mud	<i>Ulva</i> 30%.
170	-0.71	sand/mud	<i>Ulva</i> 30%.
180	-0.70	sand/mud	<i>Ulva</i> 30%.
190	-0.69	sand/mud	<i>Ulva</i> 30%.
200	-1.69	sand/mud	<i>Ulva</i> 30%.

Transect T-5

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand and pebble/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 10%.
10		sand and pebble/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 10%.
13		sand and pebble/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
20		sand and pebble/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
30		sand and pebble/cobble	<i>Ulva</i> 5%.
40		sand and pebble/cobble	<i>Ulva</i> 5%.
50		sand and pebble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
70		sand and pebble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
86	2.10	sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
90		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
100		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
118	1.08	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.

120	1.07	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.
130	1.06	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.
140	1.05	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 5%.
142	0.05	sand/mud	<i>Ulva</i> 30%; <i>Fucus</i> 10%; <i>Porphyra</i> 1%.
150	0.04	sand/mud	<i>Ulva</i> 30%; <i>Fucus</i> 10%; <i>Porphyra</i> 1%.
160	0.03	sand/mud	<i>Ulva</i> 40%.
190	-0.97	sand/mud	<i>Ulva</i> 40%.
200	-0.98	sand/mud	<i>Ulva</i> 40%.

Transect T-6

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand and pebble/cobble; <i>Salicornia</i> .	<i>Ulva</i> 5%; <i>Fucus</i> 10%.
13		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
20		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%.
30		shale/hash/cobble	<i>Ulva</i> 5%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
40		shale/hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
44		shale/hash/cobble	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 5%; <i>Porphyra</i> 1%.
84	1.93	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
90	0.93	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
100	0.94	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.

110	0.95	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
117	0.95	sand/mud	<i>Ulva</i> 15%; <i>Porphyra</i> 5%.
120	-0.04	sand/mud	<i>Ulva</i> 20%.
130	-0.03	sand/mud	<i>Ulva</i> 20%.
140	-0.03	sand/mud	<i>Ulva</i> 20%.
150	-0.02	sand/mud	<i>Ulva</i> 20%.
160	-1.01	sand/mud	<i>Ulva</i> 30%.
170	-1.01	sand/mud	<i>Ulva</i> 30%.
180	-1.00	sand/mud	<i>Ulva</i> 30%.
190	-0.99	sand/mud	<i>Ulva</i> 30%.
200	-1.99	sand/mud	<i>Ulva</i> 30%.

Transect T-7

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand/mud and cobble	<i>Ulva</i> 20%; <i>Fucus</i> 5%.
10		sand/mud and cobble	<i>Fucus</i> 5%.
20		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
30		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.

80		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
83	1.79	sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
90		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
100		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
110		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
120		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
126	0.76	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
130	0.75	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
140	0.74	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
150	-0.26	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
160	-0.27	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
170	-0.28	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
180	-0.28	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
190	-0.29	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
200	-1.30	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 1%.

Transect T-8

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand/mud and cobble/shell/hash	<i>Ulva</i> 15%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
10		sand/mud and cobble/shell/hash	<i>Ulva</i> 15%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
20		sand/mud and cobble/shell/hash	<i>Ulva</i> 15%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
30		sand/mud and cobble/shell/hash	<i>Ulva</i> 15%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
40		sand/mud and cobble/shell/hash	<i>Ulva</i> 10%.

50		sand/mud	<i>Ulva</i> 10%.
60		sand/mud	<i>Ulva</i> 10%.
70		sand/mud	<i>Ulva</i> 5%.
80		sand/mud	<i>Ulva</i> 5%.
85	1.60	sand/mud	<i>Ulva</i> 5%.
90		sand/mud	<i>Ulva</i> 20%.
100		sand/mud	<i>Ulva</i> 20%.
110		sand/mud	<i>Ulva</i> 20%.
120		sand/mud	<i>Ulva</i> 20%.
126	0.64	sand/mud	<i>Ulva</i> 20%.
130	-0.36	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
140	-0.35	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
150	-0.34	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
153	-0.34	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
160	-1.33	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
170	-1.32	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
180	-1.32	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
190	-1.31	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.
200	-1.30	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 5%.

Transect T-9

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand/mud and cobble	<i>Ulva</i> 70%; <i>Fucus</i> 5%.
10		sand/mud and cobble	<i>Ulva</i> 70%; <i>Fucus</i> 5%.
20		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.

30		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
90	1.47	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
100		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
110		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
120	0.45	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
130	0.45	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
140	0.44	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
150	-0.57	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
160	-0.57	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
170	-0.58	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
180	-0.59	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
190	-0.60	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
200	-1.60	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.

Transect T-10

Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand/mud and cobble	<i>Ulva</i> 60%; <i>Fucus</i> 10%.
10		sand/mud and cobble	<i>Ulva</i> 60%; <i>Fucus</i> 10%.

20		sand/mud and cobble	<i>Ulva</i> 60%; <i>Fucus</i> 10%.
30		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 5%; <i>Porphyra</i> 1%.
40		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
90		sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
99	1.32	sand/mud	<i>Ulva</i> 10%; <i>Porphyra</i> 1%.
100		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
110		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
120		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
130	0.34	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
140	-0.65	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
150	-0.64	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
160	-1.64	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
170	-1.63	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
180	-1.62	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 1%.
190	-1.62	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 1%.
200	-1.61	sand/mud	<i>Ulva</i> 40%; <i>Porphyra</i> 1%.

Transect T-11

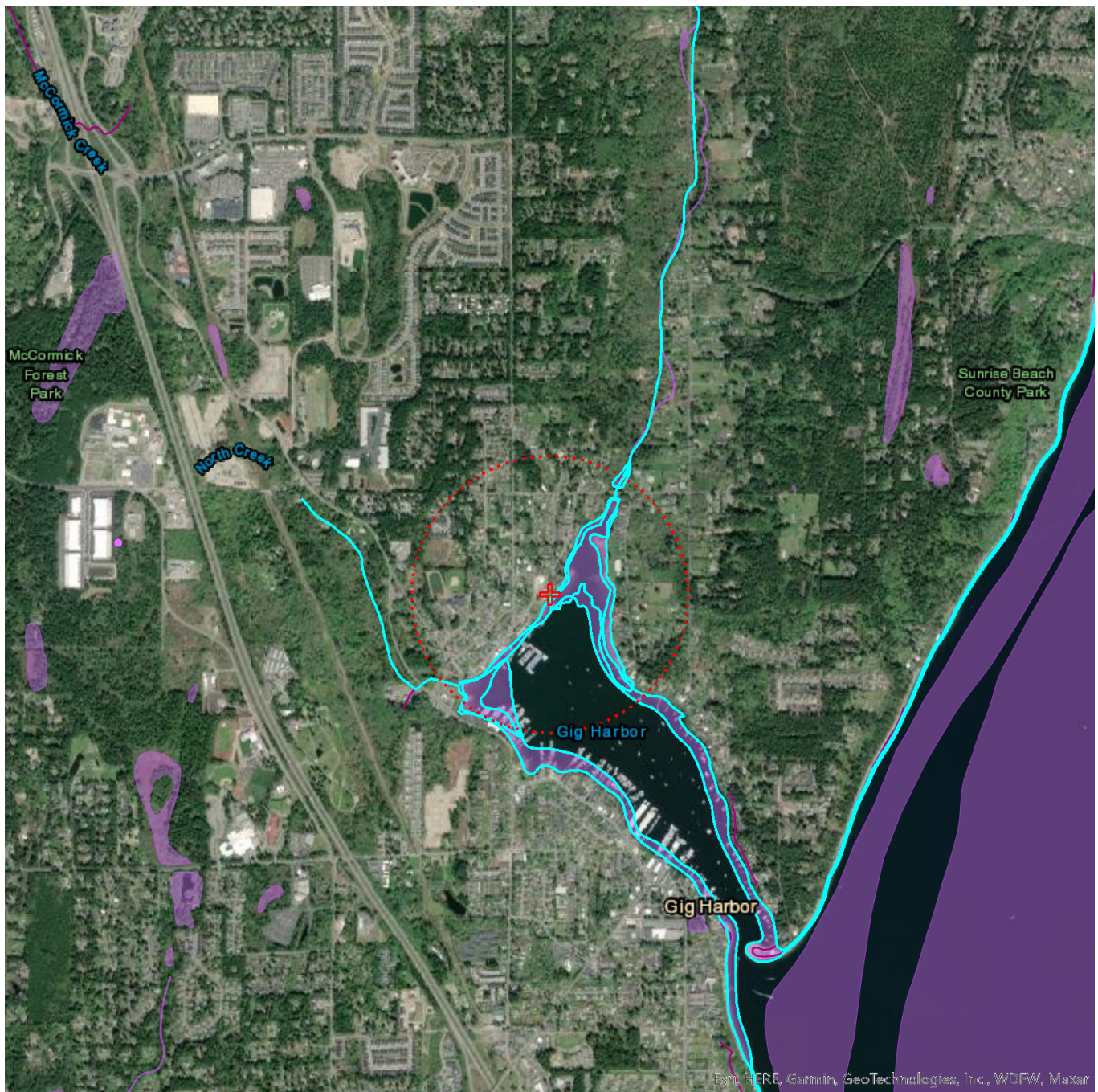
Distance (Ft) along transect from baseline	Elevation (Corrected to Ft MLLW)	Substrate and Other Features Noted	Macroalgae % Cover
0		sand/mud and cobble	<i>Ulva</i> 60%; <i>Fucus</i> 10%.
10		sand/mud and cobble	<i>Ulva</i> 60%; <i>Fucus</i> 10%.

20		sand/mud and cobble	<i>Ulva</i> 15%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
30		sand/mud and cobble	<i>Ulva</i> 15%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud and cobble	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
50		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
60		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
70		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
80		sand/mud	<i>Ulva</i> 10%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
90		sand/mud	<i>Ulva</i> 20%; <i>Fucus</i> 1%; <i>Porphyra</i> 1%.
100	1.17	sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
110		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
120		sand/mud	<i>Ulva</i> 20%; <i>Porphyra</i> 1%.
125	0.15	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
130	0.15	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
140	0.14	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
150	-0.87	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
160	-0.87	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
170	-0.88	sand/mud	<i>Ulva</i> 25%; <i>Porphyra</i> 1%.
180	-0.89	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
190	-0.89	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.
200	-1.90	sand/mud	<i>Ulva</i> 30%; <i>Porphyra</i> 1%.

Appendix B. WDFW Priority Habitat & Species Report



Priority Habitats and Species on the Web



Buffer radius: 631 Meters

Report Date: 02/23/2022

PHS Species/Habitats Overview:

Occurrence Name	Federal Status	State Status	Sensitive Location
Chum	Not Warranted	N/A	No
Fall Chinook	N/A	N/A	No
Surf Smelt	N/A	N/A	No
Winter Steelhead	N/A	N/A	No
Coho	N/A	N/A	No
Fall Chum	N/A	N/A	No
Coho	Candidate	N/A	No
Steelhead	Threatened	N/A	No
Resident Coastal Cutthroat	N/A	N/A	No
Cutthroat	Not Warranted	N/A	No
Esturine Zone	N/A	N/A	No
Estuarine and Marine Wetland	N/A	N/A	No

PHS Species/Habitats Details:

Chum	
Scientific Name	<i>Oncorhynchus keta</i>
Priority Area	Occurrence
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Stock Name: Gig Harbor/Ollala Creek Fall Chum, Run: Fall, Status: Healthy
Source Record	2239
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Not Warranted
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Fall Chinook	
Scientific Name	<i>Oncorhynchus tshawytscha</i>
Priority Area	Occurrence/Migration
Site Name	Crescent Creek
Accuracy	NA
Notes	LLID: 1225810473466, Fish Name: Chinook Salmon, Run Time: Fall, Life History: Anadromous
Source Record	47974
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Surf Smelt	
Scientific Name	<i>Hypomesus pretiosus</i>
Priority Area	Breeding Area
Site Name	Station Number: 1
Accuracy	NA
Source Record	14171
Source Dataset	Forage_Fish_Survey
Source Date	Forage_Fish_Survey
Source Name	Not Given
Source Entity	WDFW
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Species or Habitat
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Geometry Type	Lines

Winter Steelhead	
Scientific Name	<i>Oncorhynchus mykiss</i>
Priority Area	Occurrence/Migration
Site Name	Crescent Creek
Accuracy	NA
Notes	LLID: 1225810473466, Fish Name: Steelhead Trout, Run Time: Winter, Life History: Anadromous
Source Record	47980
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Coho	
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Breeding Area
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Fish Name: Coho Salmon, Run Time: Unknown or not Applicable, Life History: Anadromous
Source Record	48209
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Winter Steelhead	
Scientific Name	<i>Oncorhynchus mykiss</i>
Priority Area	Occurrence/Migration
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Fish Name: Steelhead Trout, Run Time: Winter, Life History: Anadromous
Source Record	48210
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Coho	
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Occurrence/Migration
Site Name	Crescent Creek
Accuracy	NA
Notes	LLID: 1225810473466, Fish Name: Coho Salmon, Run Time: Unknown or not Applicable, Life History: Anadromous
Source Record	47978
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Fall Chum	
Scientific Name	<i>Oncorhynchus keta</i>
Priority Area	Breeding Area
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Fish Name: Chum Salmon, Run Time: Fall, Life History: Anadromous
Source Record	48207
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Chum	
Scientific Name	<i>Oncorhynchus keta</i>
Priority Area	Occurrence
Site Name	Crescent Valley
Accuracy	NA
Notes	LLID: 1225810473466, Stock Name: Gig Harbor/Ollala Creek Fall Chum, Run: Fall, Status: Healthy
Source Record	2239
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Not Warranted
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Coho	
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Occurrence
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Stock Name: East Kitsap Coho, Run: Unspecified, Status: Healthy
Source Record	3203
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Candidate
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Fall Chum	
Scientific Name	<i>Oncorhynchus keta</i>
Priority Area	Occurrence/Migration
Site Name	Crescent Creek
Accuracy	NA
Notes	LLID: 1225810473466, Fish Name: Chum Salmon, Run Time: Fall, Life History: Anadromous
Source Record	47975
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Coho	
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Occurrence/Migration
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Fish Name: Coho Salmon, Run Time: Unknown or not Applicable, Life History: Anadromous
Source Record	48208
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Steelhead	
Scientific Name	<i>Oncorhynchus mykiss</i>
Priority Area	Occurrence
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Stock Name: East Kitsap Winter Steelhead, Run: Winter, Status: Unknown
Source Record	6220
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Threatened
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Coho	
Scientific Name	<i>Oncorhynchus kisutch</i>
Priority Area	Occurrence
Site Name	Crescent Valley
Accuracy	NA
Notes	LLID: 1225810473466, Stock Name: East Kitsap Coho, Run: Unspecified, Status: Healthy
Source Record	3203
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Candidate
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Surf Smelt	
Scientific Name	<i>Hypomesus pretiosus</i>
Priority Area	Breeding Area
Site Name	Station Number: 1
Accuracy	NA
Source Record	13913
Source Dataset	Forage_Fish_Survey
Source Date	Forage_Fish_Survey
Source Name	Not Given
Source Entity	WDFW
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Species or Habitat
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
Geometry Type	Lines

Resident Coastal Cutthroat	
Scientific Name	<i>Oncorhynchus clarki</i>
Priority Area	Occurrence/Migration
Site Name	North Creek
Accuracy	NA
Notes	LLID: 1225911473375, Fish Name: Cutthroat Trout, Run Time: Unknown or not Applicable, Life History: Unknown
Source Record	48205
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Resident Coastal Cutthroat	
Scientific Name	<i>Oncorhynchus clarki</i>
Priority Area	Occurrence/Migration
Site Name	Crescent Creek
Accuracy	NA
Notes	LLID: 1225810473466, Fish Name: Cutthroat Trout, Run Time: Unknown or not Applicable, Life History: Unknown
Source Record	47973
Source Dataset	SWIFD
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Cutthroat	
Scientific Name	<i>Oncorhynchus clarki</i>
Priority Area	Occurrence
Site Name	Crescent Valley
Accuracy	NA
Notes	LLID: 1225810473466, Stock Name: West South Sound Coastal Cutthroat, Run: Unspecified, Status: Unknown
Source Record	7020
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Not Warranted
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Steelhead	
Scientific Name	<i>Oncorhynchus mykiss</i>
Priority Area	Occurrence
Site Name	Crescent Valley
Accuracy	NA
Notes	LLID: 1225810473466, Stock Name: East Kitsap Winter Steelhead, Run: Winter, Status: Unknown
Source Record	6220
Source Dataset	SASI
Source Name	Not Given
Source Entity	WDFW Fish Program
Federal Status	Threatened
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
More Info	http://wdfw.wa.gov/wlm/diversty/soc/soc.htm
Geometry Type	Lines

Esturine Zone	
Priority Area	Aquatic Habitat
Site Name	GIG HARBOR/CRESENT VALLEY
Accuracy	1/4 mile (Quarter Section)
Notes	ESTUARY.
Source Record	912974
Source Dataset	PHSREGION
Source Name	MOLENAAR, DAVE
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/conservation/habitat/planning/ahg/index.html
Geometry Type	Polygons

Esturine Zone	
Priority Area	Aquatic Habitat
Site Name	GIG HARBOR/NORTH CREEK
Accuracy	1/4 mile (Quarter Section)
Notes	ESTUARY.
Source Record	912975
Source Dataset	PHSREGION
Source Name	MOLENAAR, DAVE
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/conservation/habitat/planning/ahg/index.html
Geometry Type	Polygons

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	NWIIWetlands
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

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	NWIIWetlands
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 necessary 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.

CULTURAL RESOURCES REPORT COVER SHEET

Author: Brett R. Lenz

TITLE OF REPORT: A CULTURAL RESOURCE SURVEY OF THE PERROW PROPERTY, GIG HARBOR, PIERCE COUNTY, WASHINGTON

Date of Report: May 15, 2022

County(ies): Pierce Section: 5 Township: 21N Range: 2W

Quad: Gig Harbor 7.5 Acres: <1

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐ Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

DAHP Archaeological Site #:

A CULTURAL RESOURCES SURVEY OF THE PERROW PROPERTY, GIG HARBOR, WASHINGTON

Brett R. Lenz

Prepared for
Marine Floats
313 East F. St.
Tacoma, WA 98421

Prepared by
Columbia Geotechnical Associates, Inc.
3405 West 46th Avenue
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MAY 15, 2022

ABSTRACT

Prior to the placement of a dock located at 9113 Harborview Drive, Gig Harbor, the property owners contracted with Columbia Geotechnical Associates (CGA) to produce a cultural resource assessment on a parcel of land in Pierce County, Washington. The Squaxin Island Tribe and Puyallup Tribe requested that cultural resource investigations must be completed prior to the granting of any permits related to ground disturbance due to the potential for cultural resources to exist in the project area. Cultural resources associated with prehistoric site 45PI102 are located within .3mi. to the southwest of the property, but archaeology associated with that site was not identified as a result of this investigation. The chance of impacting cultural resources as a result of any ground disturbing activity is exceedingly low. CGA recommends no further consideration of cultural resources at the dock project location.

INTRODUCTION

Project Description

This report presents the results of a cultural resource assessment for a dock located at 9113 Harborview Drive, Gig Harbor, Washington as shown on the project location map (Figure 1). Due to the sensitivity of the project area, the Squaxin Island and Puyallup Tribes stipulated that a cultural resource investigation must be completed prior to the granting of any permits related to construction due to the sensitivity of the project area.

The project sits on a low marine bench on Gig Harbor and covers less than one acre. Cultural resources research included a review of the historic and archaeological site files at the Department of Archaeology and Historic Preservation (DAHP) in Olympia, WA, a review of local GLO maps and files, a literature review, a physical field survey, and the production of this report. Columbia Geotechnical Associates, Inc. background research identified archaeological sites in the vicinity of the project. The following report describes the process and outcome of our investigation.

The project will create a new single-family residential dock consisting of access steps framed with pressure treated Douglas Fir and decked with fiberglass grating, a prefabricated Aluminum pier; a prefabricated aluminum ramp with fiberglass grating and a float. Floatation is encapsulated foam filled tubs located under the composite decking portion of the float. The pier is supported by galvanized steel pier piling and the float is secured with (4) galvanized steel float piling equipped with float stops and (4) stub pilings to prevent the float from grounding and bowing.

APE Location and Legal Description

The project Area of Potential Effect, a subset of the <1 acre property shown on Figure 1, is located on Wollochet Bay in the Puget Lowland. The project site is located on less than one half acre, within the northeast quarter of the northwest quarter of Section 5, Township 21 North, Range 2 East, Willamette Meridian, Pierce County, Washington, (Parcel 2260000541).

ENVIRONMENTAL AND CULTURAL SETTING

Overview

Knowledge of the geologic processes associated with the landforms in this area can assist in locating archaeological resources. The mapped parent material immediately underlying the project consists of reworked glacial sediment. Glacial sediments predate the observed record of humans in the Pacific Northwest, and effectively constitute “archaeological bedrock;” a marker sediment beneath which no potential archaeological deposits may exist. Short alluvial drainages that are cut into the glacial materials, such as the North Creek and Crescent Valley drainages north of the project that flow into the bay, were likely travel corridors across and between upland landforms.

Climate and Biota

The project is located within the Western Hemlock vegetation zone (J.F. Franklin and C.T. Dyrness 1988). The inland landscape has not changed significantly over the last 7,000 years. The recent to modern climate in the project vicinity is temperate, with moderate, relatively dry summers and mild, cool winters.



Figure 1. Gig Harbor 7.5 quad map highlighting Project location (Area of Potential Effect).

The natural vegetation of the area has been modified to varying degrees by logging, agriculture, and urban development since the mid-1800s. Historically, the area was covered with dense forests consisting of Douglas fir, western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), big-leaf maple (*Acer amplum*), red alder (*Alnus rubra*), willow (*Salix L.*), and vine maple (*Acer circinatum Pursh*). Ferns, mosses, salal (*Gaultheria shallon*), Oregon grape (*Mahonia aquifolium*), ocean spray (*Holodiscus discolor*), snowberry (*Symphoricarpos*), wild rose (*Rosa L.*), red huckleberry (*Vaccinium parvifolium*), blackberry (*Rubus Eubatus*), and salmonberry (*Rubus spectabilis*) were abundant (J.F. Franklin and C.T. Dyrness 1988).

Where available, these plants continue to support a diverse range of fauna. While few species thrive in the area today, the historic period landscape would have supported a greater number of plants and animals. Black-tailed deer (*O. hemionus columbianus*), bear (*Ursus americanus*), bobcat (*felis rufus*), cougar (*Puma concolor*), wolf (*Canis lupus*), elk (*Cervus elaphus*), raccoon (*Procyon lotor*), skunk (*Mephitis*), beaver (*Castor Canadensis*), pheasants (*Phasianus colchicus torquatus*), waterfowl, heron (*Cochlearius cochlearius*), salmon and trout (*Oncorhynchus*) are some of the resources common to the area.



Figure 2 Overview of project towards west

Pre-History of Project Area

The first human occupation of Washington State may date back about 14,000 years to the Manis Mastodon site at Sequim, where a possible bone point and the spirally fractured bones of a mastodon suggest human hunting and butchering (Gustafson et al. 1979). The next phase of human occupation in Washington was between 13,000 and 13,500 years ago and referred to as the Clovis culture. There have been a few isolated locales in southern and central Puget Sound, but no campsite of this culture has yet been found in Washington. Following the Clovis period, there are the Early (approximately 12,000 to 7,000 years ago), then the Middle (7,000 to 3,500 years ago) and Late (3,500 to 150 years ago) periods. Sites deposited during the Early period, typically occur on high marine and river terraces, sometimes at a significant distance from modern water courses, and consist of concentrations of cobble cores, flakes, large ovate knives, and broad-stemmed and leaf-shaped projectile points (Wessen 1990). Eustatic Sea Level rise continued through the Early period into the Middle period, eventually stabilizing between 7-5 thousand years ago. This period marks a significant shift in the overall environmental scheme which allowed for the establishment of a concentrated littoral adaptation. Archaeological evidence defining this period is seen in significant, widely spread changes in subsistence economy and residential patterns. Few, yet persistent lanceolate points, not uncommon in Olcott assemblages are present during this time and ground stone, bone and antler tools, and smaller, triangular projectile points are common.

During the Late Period (3,500 to 150 years ago) human lifeways changed radically, as people focused increasingly on aquatic resources; the number and diversity of sites markedly increased. People maintained permanent villages on the coast and along the lower reaches of inland rivers (Chatters 1989). They used these as home bases and storage warehouses for fish, shellfish, game, and plant foods systematically gathered during the warmer seasons. Shell-middens built up in coastal settings. Cemeteries are found adjacent to larger villages, midden sites, and fishing camps and petroglyph sites occasionally occur in higher upland environments. Small camps, left by hunters, fishers, plant gatherers, and traders are found from the lowlands well into the mountains, but usually remain close to larger, permanent sources of water. Typically, these sites are located along trade routes that linked communities living east and west of the Cascades (Burtchard 2003). Open, temporary camps, occurring as lithic scatters, are common in these settings. Blazed cedars, stripped of bark in order to make basketry or with planks removed from the base of their trunks, are still found in the lowlands (Gunther 1973).

Ethnographic Context

The native occupants of the project area were the Lushootseed-speaking Salish peoples who shared ties with other Puget Sound cultures (Suttles and Lane 1990). The terminus of Eld Inlet, also known as Mud Bay has been the traditional home of the Squaxin Island Tribe, the descendents of the original Lushootseed speaking, Coast Salish inhabitants of South Puget Sound, since time immemorial. The Tribe is composed of the Squawksin of Case Inlet, the S'Hotl-Ma-Mish of Carr Inlet, the Sa-Heh-Wa-Mish of Hammersley Inlet, the Sawamish/T'Peeksin of Totten Inlet, the Squi-Aitl of Eld Inlet and the Black Lake area, the Steh-Chass of Budd Inlet, and the Noo-Seh-Chatl of Henderson Inlet. With the signing of the Medicine Creek Treaty the aforementioned peoples became known collectively as the Squaxin Island Tribe (Croes et al. 2011).

Coastal people relied on a diet of fish, roots, berries, and wild game. There is evidence to suggest a marginal difference in diet between coast-dwelling groups of Puget Sound and the more inland peoples who lived along rivers with the latter group focusing more on upland game animals instead of marine resources. (Smith 1940, Bryan 1963). Waterman et al. (2001) identify several ethnographic place names in the project area. Suttles and Lane (1990) indicate that the Wollochet Bay area is probably most closely associated with sxwaldjabc, or "saltwater" people, the Shotlemamish (Smith 1940). The head of Gig Harbor was the location of the main Shotlemamish village. Another village located at the head of Wollochet Bay was reportedly established to accommodate population overflow from the village at Gig Harbor (Smith 1940).

Historic Context

Robert Gray was the first Euromerican to explore the Washington coastline in 1788–89. Shortly afterwards, Captain George Vancouver entered the Puget Sound and claimed it for the British government in 1792.

On that same voyage, Peter Puget, Second Lieutenant of the expedition made the first historic record of the area. The Puget exploration party noted an Indian village with winter houses at the entrance of the Bay near Gig Harbor, and the party stopped and traded with the Indian people there. In 1833, Fort Nisqually was established by the Hudson Bay Company near the mouth of the Nisqually River. This was the first European settlement in the South Puget Sound region. Settlement of the area by pioneers from the east started in the late 1840's. It was during the Wilkes expedition in 1841 that nearby Gig Harbor was named as a result of the expedition while seeking the shelter of the Harbor during a storm.

In 1854 Governor Isaac Stevens, in order to acquire land for the US, coordinated four treaties with Indian people. One of these, the Medicine Creek Treaty included signatories from nine Tribes, including the Puyallup, Squaxin, and Nisqually (Ruby and Brown 1986). Although the Tribes were told the Treaty would work well by compensating them for their lands, in fact, it removed prime farmland from their control, leaving them with far less valuable lands. Similarly, although the treaty included fishing rights, none of the Nisqually reservation land held rivers or prairies that would support the Nisqually traditional way of life. Chief Leschi, leader of the Nisqually tribe protested the treaty. The Nisqually people marched on Olympia, but they were ordered by Isaac Stevens to leave. The Nisqually refused and Stevens ordered martial law, creating a warrant to arrest Chief Leschi. He was caught and tried twice (after the first jury couldn't reach a verdict), and eventually found guilty and hanged. In the years that followed, logging activity was common in the area and vacation homes sprang up along the waterfront throughout the area, capping much of the prehistoric landscape.

METHODOLOGY

Review of Pertinent Literature and Map Resources

Prior to field investigations we conducted a records review and literature search for the property based partly on records kept at the Department of Archaeology and Historic Preservation (DAHP) in Olympia, Washington. Included in this search was a review of archaeological site forms, cultural resource reports, modern and historic maps, historic inventory forms, and National Register of Historic Places nomination forms as they apply to the project area.

Field Methods

CGA archaeologists initiated the physical field assessment of the property with a close ground inspection to identify any readily observable surface cultural materials or features that might help focus the placement of subsurface probes (SPs). The immediate geology present, on site biota, observable ground disturbance, and overall site conditions are noted for the formulation of a site specific sampling strategy. In the open beach environment, we initially focused on the area shoreward of the bulkhead. Pedestrian transects were spaced no greater than 5m apart.

Following the surface survey, subsurface probes (SP) were placed across the property based on the proposed project and potential location of site 45PI3, to locate any buried cultural materials, resources, or features (Figure 3). The SP regiment consisted of systematically placed probes. Subsurface probes were excavated as cylindrical pits approximately 30-50cm in diameter and up to a depth of 80cm, depending on buried geologic deposits and conditions observed within the subsurface. Soil excavated from each probe was screened using ¼" hardware cloth and hand examined for cultural materials and to identify individual soil constituents. Notes and photographs were taken and recorded in a working project log along with SP location, depth, and general descriptive notes.

RESULTS

Recorded Archaeological Resources and Project Expectations

Based on patterns of prehistoric, ethnographic and historic settlement and land use in this area, identifying archaeological resources associated with early through late prehistoric cultural occupation periods and historic sites associated with the lumber industry was considered a moderate probability. A

review of records kept by the DAHP show that archaeological site, 45PI3 is the nearest archaeological site to the project area, located 0.1mi east of the project. 45PI3 is recorded as a multicomponent shell midden site with historic artifacts in the beach zone. Other sites located within one mile of the project area include 45PI1, 2, 4 and 5, consisting of precontact shell midden sites, isolated lithics and burials. None of these sites will be impacted by the project.

There are two well-known villages in the general area of the project. The first is a village located at the head of Wollochet Bay, .3 mi. north-northeast from the project which was established to accommodate population increase from the primary village at Gig Harbor. This second village at Gig Harbor bay, 3.4 miles northeast of the project, was called Twawelkax, described as a main village “founded many generations before by Puyallup from Commencement Bay” (Smith 1940).

Table 1. Cultural Resources and Cultural Research Within 1 mile of the Project Area

Archaeological Sites	45PI102	45PI782	45PI1412	45PI4	45PI5
Site Type	Village	Shell Midden	Historic Burial	Isolated lithic	Cairn burials
Cultural Surveys	Daugherty, 2008	Baldwin, 2019	Chambers, 2005	Berger, 2015	Bard, 2010
Cemeteries	PI1412	Haven of Rest	PI861		
Historic Properties	Artondale elementary school	Gabled farm cottage	Arts and Crafts Bungalow		
GLO Features	Wollochet Bay is named on the map				
TCPs	Village at Gig Harbor, “twawelkax”	Village at head of Wollochet Bay			

Field Survey

The fieldwork for the current assessment was conducted on May 10, 2022. CGA archaeologist Brett Lenz completed the field assessment with a compliment of shovel probes on the beach-facing portion of the lot where the dock will be placed. As a result of the project location within the tidal fluctuation zone, on-site vegetation was non-existent and ground surface visibility was excellent with a nearly continuous cutbank along the shore providing 100% exposure of buried sediments across the project area.

Three subsurface probes were hand excavated in the area of the proposed dock (Figure 3). The probes were excavated to depths extending to .75cm below the surface depending on soil constituents. All probes SPs 1-3 were excavated into native sediment. No sign of cultural material was observed in any of the exposures or probes.



Figure 3. Project Map showing dock and SP locations on project design drawing.

CONCLUSIONS AND RECOMMENDATIONS

Investigation of the proposed dock resulted in the observation of no cultural materials identified. It does not appear that recorded archaeological site 45PI102 extends into the proposed project area, and no other cultural resources were found as a result of the survey. CGA recommends no further consideration of cultural resources as a result of our survey. In the event that ground disturbing or other construction activities result in the inadvertent discovery of buried archaeology, the development work should cease, and immediate contact should be made with the appropriate Tribal contacts, as well as the Department of Archaeology and Historic Preservation in Olympia.

REFERENCES

- Baldwin, Garth
2019 Cultural Resources Assessment for the Artondale Elementary School Replacement Project, Gig Harbor, Pierce County, Washington
- Berger, Margaret
2007 Cultural Resources Assessment for the Harbor Family Park Project, TP# 0121243120, Gig Harbor
2015 Archaeological Investigation of the Bailey-Anderson Joint Use Dock Project
- Bryan, Alan L.
1963 An archaeological survey of northern Puget Sound. Occasional Papers of the Idaho State University Museum No. 11. Idaho State University Museum, Pocatello Idaho.
- Burtchard, Greg C.
2003 Environment, Prehistory & Archaeology of Mount Rainier National Park, Washington.
- Chatters, J. C.
1989 Resource Intensification and Sedentism on the Southern Plateau. Archaeology in Washington.
- Croes, Dale, Kathleen Hawes, Bryce Allyn, Laurel Zickler-Martin, Tyler Graham, Jason Channel
2011 Allison Springs Restoration Project-Cultural Resource Survey. On file with DAHP
- Daugherty, Richard
2008 Archaeological and Historical Survey of Phillips Property, Wollochet Bay
- Elmendorf, W. W.
1992 The Structure of Twana Culture. Washington State University Press, Pullman, Washington.
- Franklin, J.F., and C.T. Dyrness
1988 Natural vegetation of Oregon and Washington. Corvallis, Oregon: Oregon State University Press.
- Gunther, Erna
1973 Ethnobotany of Western Washington.
- Gustafson, C. E., Dilbow, and R. Daugherty
1979 The Manis mastadon site: Early man on the Olympic Peninsula. Canadian Journal of Archaeology 3:157-164.
- Kennedy, Dorothy, and Randall T. Bouchard
1998 In Plateau, Handbook of North American Indians. W. Settles, ed. Washington, D.C., Smithsonian Institution Press. Vol. 12.

Lane, Barbara

- 1972 Anthropological Report on the Identity, Treaty Status and Fisheries of the Squaxin Tribe of Indians. In Political and Economic Aspects of Indian-White Culture Contact in Western Washington in the Mid-19th Century. Report prepared at request of United States Justice Department, May 1973.

Ruby, Robert H., and John A. Brown

- 1986 A Guide to the Indian Tribes of the Pacific Northwest. University of Oklahoma Press, Norman and London

Smith, M.

- 1940 The Puyallup-Nisqually. Columbia University Contributions to Anthropology, Volume 32. Columbia University Press, New York.

Suttles, Wayne and Barbara Lane

- 1990 Southern Coast Salish. In Wayne Suttles (ed.), Northwest Coast, 485-502. Washington: Smithsonian Institution.

Waterman, T. T., Vi Hilbert, Jay Miller, and Zalmai Zahir

- 2001 Puget Sound Geography. Lushootseed Press, Federal Way, WA

Wessen, Gary C.

- 1990 "Prehistory of the Ocean Coast of Washington" in Handbook of North American Indians, Volume 7: Northwest Coast, ed. W. Suttles. Washington D.C.: Smithsonian Institution Press.

APPENDIX A: SUBSURFACE DATA

Shovel Probe 1		
CM Depth Below Surface	Sediments	Comments
0-10	Fine gray sandy silt	No CM
10-30	Fine gray sandy silt with pebbles	No CM
30-75	Sandy gray silt with few rounded pebbles	No CM
Shovel Probe 2		
CM Depth Below Surface	Sediments	Comments
0-10	Fine gray sandy silt	No CM
10-30	Fine gray sandy silt with pebbles	No CM
30-75	Sandy gray silt with few rounded pebbles	No CM
Shovel Probe 3		
CM Depth Below Surface	Sediments	Comments
0-10	Fine gray sandy silt	No CM
10-30	Fine gray sandy silt with pebbles	No CM
30-75	Sandy gray silt with few rounded pebbles	No CM



COMMUNITY DEVELOPMENT
PLANNING DIVISION

**Determination of Nonsignificance (DNS)
W.A.C. 197-11-970**

Environmental Review Application No.: PL-SEPA-22-0007

Parcel Number: 2260000541

Action: Install a new residential pier, ramp, float and piling.

Proposal: The project will install a new residential pier, ramp, float and piling consisting of one 4'x40' aluminum pier, one 4'x39' aluminum pier, one 3'x44' aluminum ramp with fiberglass grating, one 8'x24' float with fully encapsulated polyethylene foam for floatation, 4 piling-mounted float stops, 4 8" galvanized steel pier pilings, and 4 10" galvanized steel float pilings.

The project is within a fish and wildlife critical habitat area and will be self-mitigating by removing a marine railway on parcel 226000521 (adjacent to the northeast). The marine railway has historically impeded the movement of sediments and vegetation along the shoreline and the removal of the railway will provide benefits to shoreline ecological quality and health in the long term.

Location: 9113 Harborview Drive, Gig Harbor, WA 98332

Proponent: John Kavanaugh (agent), Marine Floats

Lead Agency: City of Gig Harbor

The lead agency for this proposal has determined 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.

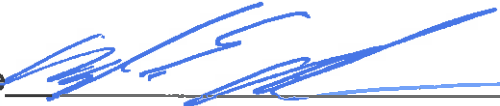
- [x] This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for at least 14 days from the date below, or by the date comments are due, whichever is longer. Comments must be submitted by **August 29, 2022.**

Any interested person may appeal the adequacy of this SEPA Threshold Determination to the City of Gig Harbor Hearing Examiner pursuant to the procedures set forth under Chapter 18.04 of the Gig Harbor Municipal Code if a written request for appeal is received within 21 days after the date of issuance, or 5:00 PM on **September 5, 2022**, whichever is later. The written appeal must be submitted with a filing fee of three hundred twelve dollars (\$312.00).

Contact: Roxanne Robles, Senior Planner; robles@gigharborwa.gov and (253) 853-7616

SEPA Responsible Official: Carl deSimas
Position Title: Principal Planner, (253) 853-7628

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

Signature  Date: August 10, 2022

cc: Agent
Owner

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:

DC APT LLC Pier, Ramp, Float, & Piling

2. Name of applicant:

Wade Perrow-DC Apartments LLC

3. Address and phone number of applicant and contact person:

PO Box 1805 Gig Harbor, WA 98335—wade@donkeycreekholdings.com

Contact (Authorized Agent): Marine Floats—John Kavanaugh—(253)383-2740---
John@marinefloats.com

4. Date checklist prepared:

July 20, 2021

5. Agency requesting checklist:

City of Gig Harbor

6. Proposed timing or schedule (including phasing, if applicable):

July 2021-February 2026

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.

A SAV Dive survey and report. JARPA and SEPA will be completed.

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.

The following permit applications will be submitted:

City of Gig Harbor Land-use applications, SEPA determination, WDFW HPA, USACE Corps.

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.)

Installation of a new family residential pier, ramp, float consisting of: (1) 4' X 40' & (1) 4' X 38' aluminum pier, (1) 3' X 44' (3' X 38' overwater) aluminum ramp both with 100% compatible fiberglass grating with 1.5" squares and 69% open area. (1) 8' X 24' float with polyethylene foam filled tub flotations, with surfaces composed of 50% composite decking and 50% fiberglass decking. (4) 8" galvanized steel piling to secure the pier, (4) 10" galvanized steel piling to secure the float, and (4) float stops. Total project length is 138 feet from the existing concrete bulkhead.

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).

9113 Harborview Drive, Gig Harbor, WA 98332
S: 05 T: 21N R: 02 E

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.

See attached

B. Environmental Elements [\[HELP\]](#)

1. Earth [\[help\]](#)

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other Shoreline

b. What is the steepest slope on the site (approximate percent slope)?

15-30% as determined by USDA Soil Survey

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- No soil will be removed.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None known

- 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.

N/A

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No all work will be done from the water

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

626 Square feet of water will be covered with impervious surfaces

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

N/A

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.

Temporary exhaust emissions from boat engines will be emitted.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

All equipment will be kept in good repair and up to standards.

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, Gig Harbor will be directly effected.

- 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- all work occurs overwater. Plans are attached.

On site construction includes:

- o Pile drive (4) 8-inch diameter galvanized steel pier piling. Install the (2) 6'x40' aluminum piers with 100% grated fiberglass surface with 69% open area.
- o Pile drive (4) 10-inch diameter galvanized steel float piling. Attach the 8' x 24' float with (4) float stops.
- o Install the 3' x 44' (3'x38' overwater) prefabricated aluminum ramp with a crane to place it between the pier and the float, then manually connect the ramp to the float and the pier using hand tools to install connections.
- o Piling will be installed using a impact hammer, a bubble curtain and 6" wooden block cushion for sound attenuation and debris collection when needed (Longmuir and Lively 2001). Construction barge will not be permitted to ground out at any time.
- o Gangway ramps are manufactured off-site and made of 100% aluminum.
- o Marine Floats pre-constructs the pier and float at our facility in Tacoma for each dock system

- 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.

None

- 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- 2017- AE Coastal

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.

N/A

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

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:

N/A

4. **Plants** [\[help\]](#)

a. Check the types of vegetation found on the site:

- ☒X deciduous tree: alder, maple, aspen, other
- ☒X evergreen tree: fir, cedar, pine, other
- ☒X shrubs
- ☒X 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
- ☐ other types of vegetation

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 unless required by regulating agencies.

e. List all noxious weeds and invasive species known to be on or near the site.

None known

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: Seabirds
mammals: deer, bear, elk, beaver, other: raccoons, opossums
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*), Puget Sound Steelhead Trout (*Oncorhynchus mykiss*), Puget Sound Coho Salmon (*Oncorhynchus kisutch*), Southern Resident Killer Whale (*Orcinus orca*), Marbled Murrelet (*Brachyramphus marmoratus*), Leatherback Sea Turtle (*Dermochelys coriacea*), Western Snowy Plover (*Charadrius nivosus nivosus*), and Puget Sound Bocaccio (*Sebastes paucispinis*).

c. Is the site part of a migration route? If so, explain.

No

d. Proposed measures to preserve or enhance wildlife, if any:

- The overall project complies with all regulatory agencies to minimize environmental impacts.
- The grating on the pier, ramp, and float allow for deeper light penetration beneficial to fish and SAV.
- The flotation tubs are fully encapsulated and filled with polyethylene foam.
- The piling (s) are made of galvanized steel to not release anything into the environment.
- The barge will not ground out at any time.
- Regulatory in-water work windows will be observed.
- Best management practices will be utilized throughout the project.

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.

N/A

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

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:

N/A

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.

No

- 1) Describe any known or possible contamination at the site from present or past uses.

No, closest sites include:

14579 74514	Harborview Drive Property	3720 Harborview Dr	Gig Harbor 98332
3419 1301959	EDDON BOAT PARK	3805 Harborview Dr	Gig Harbor 98332

- 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.

N/A

- 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.

Gasoline for boats

- 4) Describe special emergency services that might be required.

N/A

- 5) Proposed measures to reduce or control environmental health hazards, if any:

- If a spill occurs all required agencies will be notified, and spill will be contained and cleaned up in the most efficient manner.
- Best management practices will be utilized throughout the project.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

- 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.

Temporary sound from pile driving during regular business-construction hours.

3) 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 current use of the site and adjacent properties is single family residence and recreation by the family. No other property will be affected by the project.

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- N/A

c. Describe any structures on the site.

There is a single family residence home and detached garage on the property.

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

WR- Residential shoreline

f. What is the current comprehensive plan designation of the site?

Residential-Gig Harbor Community

g. If applicable, what is the current shoreline master program designation of the site?

Residential- Marine Shoreline—(WR)

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

None known

i. Approximately how many people would reside or work in the completed project?

A single family will utilize the the completed project. A small crew from 2-6 people will work on the project.

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Obtain all necessary permits.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

N/A

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:

N/A

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?

Railings are 3.5 feet tall and would be the tallest part of the project.

- b. What views in the immediate vicinity would be altered or obstructed?

None. The shoreline would be altered by the view of a dock, but docks and boats are normal in this shoreline community.

- C. 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?

None

- 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?

None

- d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

12. Recreation [\[help\]](#)

- a. What designated and informal recreational opportunities are in the immediate vicinity?

There are marinas and parks in the area, informal activities include walking, bird watching, fishing, etc.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None-N/A

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.

None known

- 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 known

- 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 regulating agencies while permitting project.

- 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- Should archaeological materials (e.g. bones, shell, stone tools, beads, ceramics, old bottles, hearths, etc.) or human remains be observed during project activities, all work in the immediate vicinity should stop. The State Department of Archaeology and Historic Preservation (360-586-3065), the County/City planning office, the affected Tribe(s) and the county coroner (if applicable) should be contacted immediately in order to help assess the situation and determine how to preserve the resource(s). Compliance with all applicable laws pertaining to archaeological resources (RCW 27.53, 27.44 and WAC 25-48) is required. Failure to comply with this requirement could constitute a Class C Felony

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.

North Harborview Drive serves the site, no roads will be effected. - This project will be accessed from a construction barge directly in the water.

- 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?

Peacock Hill Ave & Sellers St- Bus Stop

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None

- 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.

Yes the project will be transported and installed via a construction barge over water.

- 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:

N/A

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.

N/A

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.

None

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 John Kavanaugh

Position and Agency/Organization Environmental Permitting -Marine Floats Corporation

Date Submitted: 7/20/2021



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 16, 2022

Cindy Andrews, SEPA Contact
City of Gig Harbor
Community Development Department
Planning Division
3510 Grandview Street
Gig Harbor, WA 98335

Dear Cindy Andrews:

Thank you for the opportunity to comment on the prethreshold consultation for the Perrow Pier, Ramp, Float, and Piling Project (PL-SEPA-22-0007) located at 9113 Harborview Drive as proposed by Wade Perrow, DC APT, LLC. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

**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](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

(RLS:202201189)

cc: Evan Wood, WQ

From: [Jennifer M. Keating](#)
To: [Cindy Andrews](#)
Cc: [Brandon Reynon](#)
Subject: RE: PERROW PIER, RAMP, FLOAT AND PILING - PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007
Date: Thursday, March 17, 2022 10:11:55 AM
Attachments: [image001.png](#)

Hi Cindy,

The proposed dock project located at 9113 Harborview Dr is in a very high probability area for impacting cultural resources, near multiple known village sites and numerous archaeological findings. For these reasons, the Puyallup Tribe is requesting a cultural resource study prior to any ground disturbance. Please let us know if you have any questions.

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: Thursday, March 17, 2022 8:45 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; 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 <SEPARreview@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@piercettransit.org) <tvaslet@piercettransit.org>; Zachary Meyer <ZMEY461@ECY.WA.GOV>

Subject: PERROW PIER, RAMP, FLOAT AND PILING - PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007

The City of Gig Harbor has issued an NOA including the SEPA checklist for the PERROW PIER, RAMP, FLOAT AND PILING - PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007 project, I have included above the Notice of Application and associated SEPA checklist and below included 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 **April 16, 2022** and please let me know if you have any questions.

Best Regards
Cindy Andrews
Planning Technician
City of Gig Harbor
CAndrews@gigharborwa.gov
253-853-7625

From: [Shaun Dinubilo](#)
To: [Cindy Andrews](#)
Subject: RE: PERROW PIER, RAMP, FLOAT AND PILING - PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007
Date: Monday, March 21, 2022 2:02:48 PM

Hello Cindy,

Thank you for contacting the Squaxin Island Tribe Cultural Resources Department regarding the above listed project for our review and comment. The project area has a high potential for the location of cultural resources but due to the nature of the project we have no specific cultural resource concerns for this project. If DAHP recommends a survey, or 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 preferred method of communication.

From: Cindy Andrews <candrews@gigharborwa.gov>
Sent: Thursday, March 17, 2022 8:45 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; 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: PERROW PIER, RAMP, FLOAT AND PILING - PL-SDP-22-0002/PL-DR-22-0022/PL-FLOOD-22-0002/PL-SEPA-22-0007

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Best Regards
Cindy Andrews
Planning Technician
City of Gig Harbor
CAndrews@gigharborwa.gov
253-853-7625

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

RECEIVED
By C. ANDREWS at 7:37 am, Mar 09, 2022

OMB No. 1660-0008
Expires March 31, 2012

SECTION A - PROPERTY INFORMATION

Building Owner's Name Sham Construction	For Insurance Company Use:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 9113 Harborview Drive	Policy Number
City Gig Harbor State WA ZIP Code 98335	Company NAIC Number

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Tax Parcel No. 2260000540

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Single Family Residential
A5. Latitude/Longitude: Lat. 47d20' 28.3933"N Long. 122d35' 13.5936"W Horizontal Datum: ☐ NAD 1927 ☐ NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance. [Local Horizontal Datum]
A7. Building Diagram Number 3
A8. For a building with a crawlspace or enclosure(s):
a) Square footage of crawlspace or enclosure(s) _____ sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A8.b _____ sq in
d) Engineered flood openings? ☐ Yes ☐ No
A9. For a building with an attached garage:
a) Square footage of attached garage _____ sq ft
b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____
c) Total net area of flood openings in A9.b _____ sq in
d) Engineered flood openings? ☐ Yes ☐ No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Gig Harbor		B2. County Name Pierce		B3. State WA	
B4. Map/Panel Number 530142 00001	B5. Suffix B	B6. FIRM Index Date 9/2/81	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s) A1	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 9

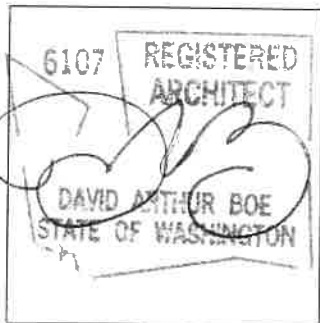
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.
☐ FIS Profile ☒ FIRM ☐ Community Determined ☐ Other (Describe) _____
B11. Indicate elevation datum used for BFE in Item B9: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____
Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date _____ ☐ CBRS ☐ OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.
C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.
Benchmark Utilized P15-4M2 Vertical Datum NGVD 29
Conversion/Comments _____
Check the measurement used.
a) Top of bottom floor (including basement, crawlspace, or enclosure floor) 10.18 ☒ feet ☐ meters (Puerto Rico only)
b) Top of the next higher floor 18.93 ☒ feet ☐ meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only) _____ ☐ feet ☐ meters (Puerto Rico only)
d) Attached garage (top of slab) _____ ☐ feet ☐ meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment and location in Comments) _____ ☐ feet ☐ meters (Puerto Rico only)
f) Lowest adjacent (finished) grade next to building (LAG) 9.5 ☒ feet ☐ meters (Puerto Rico only)
g) Highest adjacent (finished) grade next to building (HAG) 18.5 ☒ feet ☐ meters (Puerto Rico only)
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support 10.0 ☒ feet ☐ meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. ☒
Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No
Surveyor's Name David Arthur Boe License Number 6107
Title Principal, Architect Company Name BOE architects, pllc
Address 705 Pacific Avenue City Tacoma State WA ZIP Code 98402
Signature Date 09/09/2011 Telephone 253-383-7762



IMPORTANT: In these spaces, copy the corresponding information from Section A.	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 9113 Harborview Drive	Policy Number
City Gig Harbor State WA ZIP Code 98335	Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments

Signature

Date

☒ Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).

a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.

Property Owner's or Owner's Authorized Representative's Name
David Arthur Boe, BOE Architects, PLLC

Address 705 Pacific Avenue

City Tacoma

State WA

ZIP Code 98402

Signature

Date 09/09/2011

Telephone 253-383-7762

Comments
AGENT FOR PROPERTY OWNER

☐ Check here if attachments

SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.

- G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.
- G3. ☐ The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued
-------------------	------------------------	---

- G7. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement
- G8. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters (PR) Datum _____
- G9. BFE or (in Zone AO) depth of flooding at the building site: _____ ☐ feet ☐ meters (PR) Datum _____
- G10. Community's design flood elevation _____ ☐ feet ☐ meters (PR) Datum _____

Local Official's Name

Title

Community Name

Telephone

Signature

Date

Comments

☐ Check here if attachments



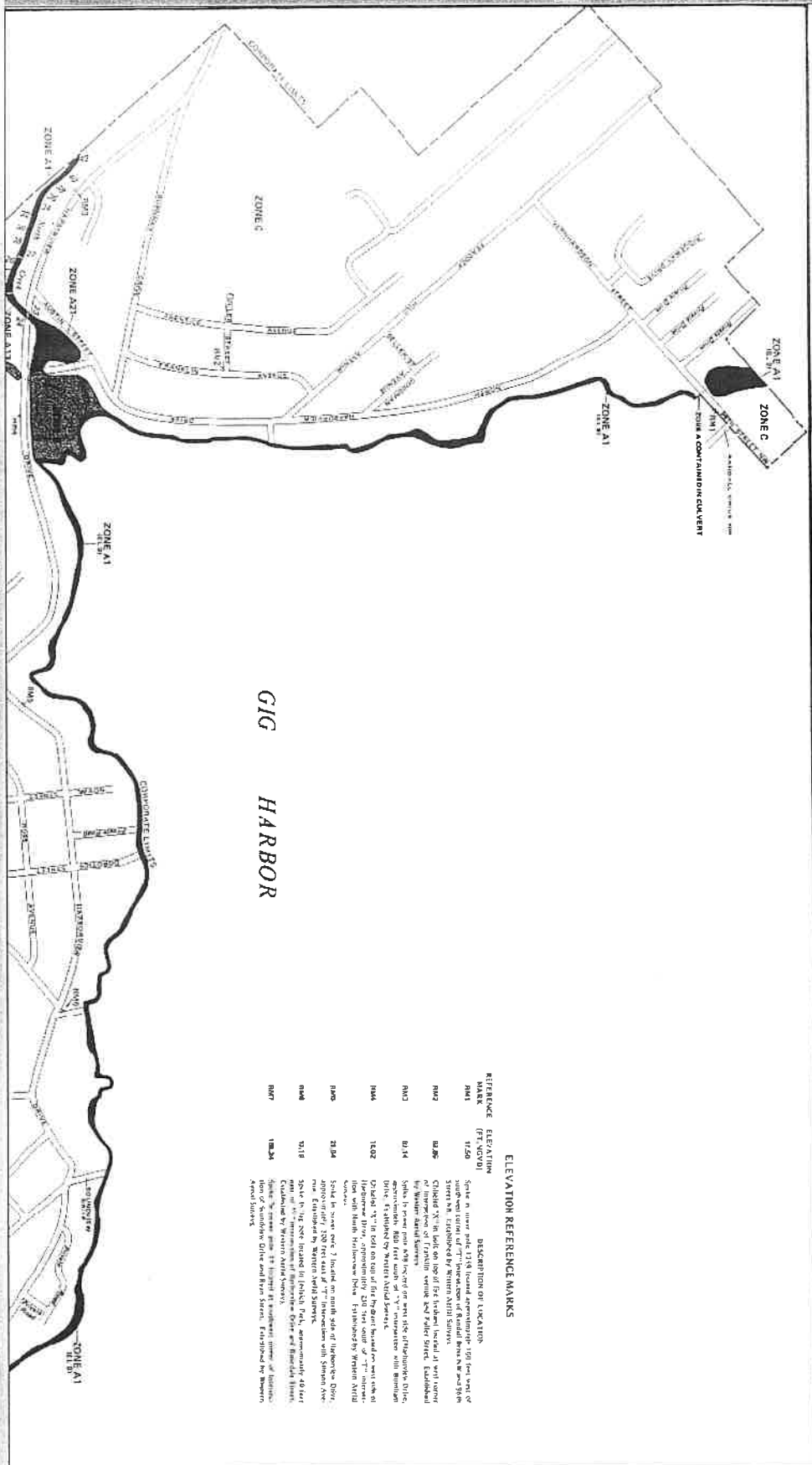
Community Development Department
Floodplain Development Permit/Application

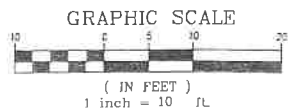
Application Date: <u>8/7/11</u> Parcel Number: <u>2260000540</u> Permit No. _____	
<u>BOE architects, llc</u> Owner or Agent <u>105 Pacific Ave</u> Address <u>Tacoma, Wa 98402</u> City/State/Zip Code <u>253 383 7762</u> <u>adesantis@boearc.com</u> Phone E-mail	<u>Burnham Construction</u> Contractor <u>P.O. Box 245</u> Address <u>Gig Harbor, Wa 98335</u> City/State/Zip Code <u>253 851 9309</u> Phone E-mail
1. Sec. <u>05</u> T. <u>21</u> R. <u>02</u> Dia. No. _____	
2. Lot No. _____ Subdivision Name _____ Plat / Short Plat _____	
3. <u>9113 Harborview Dr. Gig Harbor, Wa 98335</u> Street Address	
4. Type of Development: Filling ☐ Grading ☐ Excavation ☐ Minor Improvement ☐ Routine Maintenance ☐ Substantial Improvement ☒ New Construction ☐ Other ☐	
5. <u>Addition and Remodel including new windows, doors, siding, roofing, interior partitions</u> Description of Work	
6. <u>EXISTING: 1,562 House 402 GARAGE / NEW: 613 SF</u> Structure Size <u>61.3</u> ft. By <u>34.3</u> ft. Site Area <u>20,914</u> sq. ft.	
7. Principal Use: <u>RESIDENTIAL, SINGLE FAMILY</u> Accessory Use(s) <u>N/A</u>	
8. Value of Improvement: \$ <u>138,220</u> Pre-Improvement Assessed Value: \$ <u>357,013.06</u>	
9. Property Located In Designated Flood Way? Yes ☒ No ☐ Structure Located in Special Flood Hazard Area? Yes ☐ No ☒	
10. FIRM Base Flood Elevation: <u>9'</u> Source: <u>APEX ENGINEERING SURVEY</u>	
11. Elevation of first floor level (includes basement or crawlspace floor): <u>10.18'</u>	
12. Other Permits Required? Corps of Engineers Yes ☐ No ☒ Provided ☐ WA Dept. of Nat. Resources Yes ☐ No ☒ Provided ☐ Env. Prot. Agency NPDES Yes ☐ No ☒ Provided ☐ Shoreline Master Program Yes ☐ No ☒ Provided ☐	
13. SEPA Required ☐ Exempt ☒	
The undersigned hereby makes application for a permit pursuant to GHMC 15.04.060, Flood Hazard Construction Standards. The work to be performed, including flood protection works, is as described above and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Gig Harbor Municipal Code and all other applicable federal, state and local requirements.	
<u>[Signature]</u> Applicant Signature	<u>Albert A. deSantis</u> Applicant Name (Print Legibly) <u>9/8/11</u> Date
For Official Use Only	
Permit Number _____ : Approved ☐ Denied ☐	
This permit is issued with the condition that the lowest floor level (including basements and crawlspace floors) of any new or substantially improved structure will be elevated or floodproofed in accordance with the requirements of the National Flood Insurance Program to a minimum of 1 foot above the base flood elevation. The applicant is required to provide an approved elevation certificate prior to approval of a building permit and an approved certification by a registered engineer or land surveyor certifying that the lowest floor (including basements and crawlspaces) complies with the requirements of the NFIP and Gig Harbor Municipal Code.	
_____ Floodplain Administrator	_____ Date

LEGAL DESCRIPTION

9113 Harborview Drive, Gig Harbor, WA 98335, Parcel No. 2260000541

Section 05 Township 21 Range 02 Quarter 23 ARTENA ADD DBLA 2010-05-20-5005 DESC AS BEG AT NE COR OF L 8 B 13 TH S 54 DEG 12 MIN 28 SEC E ALG NLY LI OF L 8 & 23 SD BLK 240 FT TO MOST ELY COR SD L 23 TH S 35 DEG 47 MIN 32 SEC W 85.01 FT TO MOST SLY COR OF N 10 FT OF L 20 SD B 13 TH N 54 DEG 12 MIN 28 SEC W 246 FT TO W LI OF ELY 6 FT OF VAC HARBORVIEW DR TH N 35 DEG 47 MIN 32 SEC E ALG SD W LI 85.01 FT TH S 54 DEG 12 MIN 28 SEC E 6 FT TO POB TOG/W 2ND CLASS TDLDS EXT TO LI OF MEAN LOW TIDES COMB OF 054-0 & 059-0 SEG 2010-0535 JU 5/27/10JU

[illegible]



NELSON PROPERTY
A.L.T.A./A.C.S.M. LAND TITLE SURVEY
A PORTION OF THE S.W. 1/4 OF THE N.W. 1/4 OF SECTION 5, TOWNSHIP 21 NORTH, RANGE 2 EAST, W.M.,
CITY OF GIG HARBOR, PIERCE COUNTY, WASHINGTON



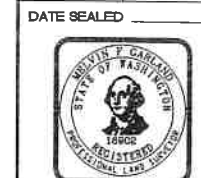
VICINITY MAP
N.T.S.

REV NO	REVISION DESCRIPTION	DATE	BY
1	ADJUST VERTICAL DATUM TO NGVD 29	11-12-09	SLS
2	MODIFY THE ROW FOR HARBORVIEW DRIVE TO REFLECT A 30 FOOT WIDTH	9-30-09	T.M.



NELSON PROPERTY
ALTA/A.C.S.M. LAND TITLE SURVEY

CLIENT
ALAN NELSON AND SHARON EVERSON
1509 - 58TH AVE CT. NW.
GIG HARBOR, WA 98335



PROJECT MANAGER
MEL GARLAND

DESIGN
DRAWN DMH
CHECKED MFG
SEC 5 T 2N R 2E
FILE NO 29718ALTA/ACSM
DATE 08-07-05
SCALE 1" = 10'

2 of 10
FILE NO 29718

FOUND 2 1/2" SURFACE BRASS MONUMENT 06-03-05

FOUND 2 1/2" SURFACE BRASS MONUMENT 06-03-05

"HIGH POINT" AS DETERMINED BY CLIFF JOHNSON, CITY OF GIG HARBOR, OCTOBER 9, 2009. SCRIBED "X" IN EXISTING CONCRETE RETAINING WALL. ELEVATION = 23.10'

PARCEL 2600000551
AMY YU

PARCEL 2600000521
WADE AND ELIZABETH PERROW

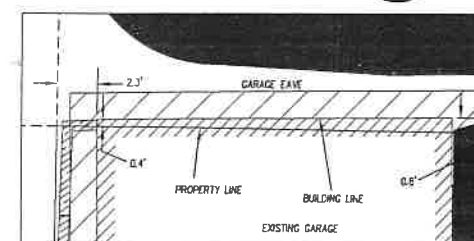
BASE FLOOD ELEVATION +9.0 NGVD 1929
DATA

NORTH HARBORVIEW DRIVE
(FRONT STREET)

LEGEND

- FOUND MONUMENT
- YARD DRAIN
- LUMINAIRE
- COMMUNICATIONS RISER
- CABLE RISER
- JUNCTION BOX
- CATCH BASIN
- SEWER MANHOLE
- WATER METER
- STORM CULVERT
- FENCE AS NOTED
- FENCE AS NOTED
- CONCRETE RETAINING WALL
- 5 FOOT CONTOUR
- 1 FOOT CONTOUR
- CONCRETE SURFACE
- ASPHALT SURFACE
- SPOT ELEVATION (TYP)

DETAIL "A"
SCALE: 1" = 5'



SITE ADDRESS

9311 NORTH HARBORVIEW DRIVE

TAX PARCEL NUMBER

2260000540

BASIS OF BEARING

HELD NORTH 35°47'32" EAST BETWEEN TWO FOUND MONUMENTS ALONG THE CENTERLINE OF NORTH HARBORVIEW DRIVE PER RECORD OF SURVEY 9309301033

VERTICAL DATUM

NGVD 29
PIERCE COUNTY BENCHMARK NO. P15-4M2
TOP SOUTHWEST CORNER OF WEST "L" SHAPED PLANTER ON SOUTH SIDE OF HARBORVIEW AT VIEW POINT BETWEEN BURNHAM AND AUSTIN, BM IS 6' WEST OF EAST FACE AND 3' SOUTH OF NORTH FACE PLANTER BOX.
ELEVATION = 29.649'

METHODS AND EQUIPMENT

SURVEY PERFORMED WITH A 1" TOTAL STATION, USING TRAVERSE AND RADIAL SURVEY METHODS. SURVEY MEETS OR EXCEEDS ACCURACY REQUIREMENTS CONTAINED IN W.A.C. 332.130.090.

LEGAL DESCRIPTION

LOTS 8, 9, 10 AND NORTHERLY 10 FEET OF LOT 11, AND LOTS 21, 22, 23 AND THE NORTHERLY 10 FEET OF LOT 20, ALL IN BLOCK 13, PLAT OF THE TOWN OF ARTENA, PIERCE CO., WASH., ACCORDING TO PLAT RECORDED IN BOOK 5 OF PLATS AT PAGE 68, IN PIERCE COUNTY, WASHINGTON.

TOGETHER WITH TIDELAND OF THE SECOND CLASS EXTENDING TO THE LINE OF MEAN LOW TIDES, AS CONVEYED BY THE STATE OF WASHINGTON.

TOGETHER WITH THE EASTERLY 6 FEET OF FRONT STREET ABUTTING UPON SAID LOTS 8, 9, 10 AND THE NORTH 10 FEET OF LOT 11, VACATED BY ORDER OF PIERCE COUNTY COMMISSIONERS ON DECEMBER 12, 1912.

TITLE COMMITMENT NOTES

FIDELITY NATIONAL TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE UNDER ORDER NUMBER 7050059, DATED MAY 19, 2005 WAS RELIED ON TO PRODUCE THIS SURVEY.

EASEMENT NOTE

NO EASEMENTS OF RECORD WERE DISCLOSED ON THE REFERENCED TITLE REPORT.

ENCROACHMENT NOTE

THE EXISTING GARAGE AT THE WEST SIDE OF THE SITE ENCROACHES INTO THE RIGHT OF WAY FOR N. HARBORVIEW DRIVE SEE DETAIL "A" FOR DETAILS.

SURVEYOR'S CERTIFICATE

TO ALAN NELSON AND SHARON EVERSON, FIDELITY NATIONAL TITLE COMPANY: THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA, ACSM AND NSPS IN 1999, AND INCLUDES ITEMS 2.5.7(a), 7(b.1), 7(c), 8.10.11(a), 13.16 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA, NSPS, AND ACSM AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT THE POSITIONAL UNCERTAINTIES RESULTING FROM THE SURVEY MEASUREMENTS MADE ON THE SURVEY DO NOT EXCEED THE ALLOWABLE POSITIONAL TOLERANCE.

MELVIN F. GARLAND
P.L.S. 18902

DATE



TECHNICAL MEMORANDUM

Prepared by: Grette Associates^{LLC}
2102 North 30th Street, Ste A
Tacoma, WA 98403

April 11, 2022

Prepared for: City of Gig Harbor
Attention: Roxanne Robles
3510 Grandview Street
Gig Harbor, WA 98335

File No.: 250.001.2081

Re: Perrow Pier, Ramp, Float Project: Third-Party Review

1 INTRODUCTION

The City of Gig Harbor (City) has contracted with Grette Associates to assist in the review of a Habitat Management Plan (the “HMP”; dated February 21, 2022) prepared by Marine Surveys and Assessments and a Compensatory Mitigation Plan (the “Plan”; dated February 4, 2022) prepared by Marine Floats. These documents were prepared in support of the single-family pier, ramp, float project located at 9113 Harborview Drive (Pierce County parcel 2260000541) in Gig Harbor, WA.

As proposed, all activities would occur within 200 feet of the Ordinary High-Water Mark (OHWM) of Gig Harbor Bay; therefore, land use, with respect to critical areas, is regulated under the City’s Shoreline Master Program (GHSMP).

According to the HMP, the Project will construct a new residential dock structure that will extend approximately 136 feet waterward from the existing bulkhead. The proposed dock structure will consist of a 4-foot by 78-foot aluminum pier with grated fiberglass decking; 3-foot by 44-foot aluminum ramp with grated fiberglass decking; and an 8-foot by 24-foot float equipped with composite plank decking and grated fiberglass decking. The proposed dock structure will be supported by four 8-inch galvanized steel pile and four 10-inch galvanized steel pile. The total overwater coverage of the proposed dock structure will be approximately 602 square feet.

2 REVIEW METHODS

2.1 Site Visit

Grette Associates completed a site visit on April 1, 2022 to assess the upland and intertidal areas within the general project area for consistency with the information contained in the submitted documents. All offsite areas within 300 feet of the proposed project were visually assessed.

2.2 Document Review

A Grette Associates biologist conducted a thorough review of the documents submitted to the City of Gig Harbor. The review focused on verifying the accuracy of the descriptions within the documents and compliance with the current version of the GHSMP.

3 REVIEW RESULTS

Based on Grette Associates' observations and review of the HMP, the HMP does not meet the requirements defined in Chapter 6 of the GSMP. However, as summarized below, there are several deficiencies that need to be addressed prior to the City's acceptance of the submitted materials.

3.1 Site Visit Review

Per GHSMP 6.2.5.23, all wetlands and critical fish and wildlife habitat areas shall be identified and addressed in support of a proposed project. In addition to Gig Harbor Bay, Grette Associates identified an offsite area along the shoreline within the intertidal zone that is dominated by pickleweed (*Salicornia virginica*). Pickleweed is a common salt marsh species typically associated with estuarine wetlands. Given the dominant vegetation and regular tidal inundation, the vegetated area dominated by pickleweed contains all three wetland criteria defined in the U.S. Army Corps of Engineers (USACE) *Federal Wetland Delineation Manual* (1987), and the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (2010).

In summary, Grette Associates identified two critical area features (i.e., Gig Harbor Bay and an estuarine wetland) on or within 300 feet of the proposed project. While the HMP accurately identifies Gig Harbor Bay, the HMP does not address the offsite estuarine wetland that is located within 300 feet of the proposed project.

3.2 Critical Areas Review

3.2.1 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. The shoreline within the project area is designated as Urban Conservancy within the Urban Growth Area (UGA). Based on existing non-conforming structure setbacks, the subject property is subject to a 25-foot vegetation conservation strip measured landward from the OHWM (GHSMP 6.2.3.2). The proposed dock structure will be situated near the face of the existing bulkhead and extend waterward. Therefore, in Grette Associates professional opinion, the establishment of the vegetation conservation strip is not an appropriate requirement for this proposed project because work will largely occur waterward of the OHWM and that no site redevelopment or like activities are included in this proposed project.

3.2.2 Wetlands

Per GHSMP 6.2.5.8, all wetlands on or within 300 feet of a proposed project shall be identified and addressed. As summarized above, there is an estuarine wetland situated offsite north of the subject property. This feature also extends across the neighboring property (Pierce County parcel 2260000521) where the proposed offsite mitigation will occur. Based on the information provided, the proposed offsite mitigation consists of removing an old marine railway structure to compensate for the new overwater coverage. This railway extends across the estuarine wetland. Per GHSMP 6.2.5.6, estuarine wetlands that are less than one acre in size are classified as Category II wetlands (Hruby 2014).

In summary, the HMP does not address the wetland that is situated within 300 feet of the proposed project and the HMP and Plan do not address the proposed offsite mitigation with respect to

wetland impacts for conformance with GHSMP 6.2.5.8 and the no net loss requirements defined in GHSMP 6.2.2.

3.2.3 Critical Fish and Wildlife Habitat Areas

Per GHSMP 6.2.5.23, a proposed project shall prepare a habitat assessment to identify any critical fish and wildlife habitat areas (CFWHAs) that are on or within 300 feet of the project area. If the habitat assessment identifies any CFWHAs on or within 300 feet of a project site a habitat management plan (HMP) shall be prepared.

Per GHSMP 6.2.5.23, Category II wetlands are classified as CFWHAs. The HMP does not address the offsite Category II estuarine wetland for conformance with the habitat assessment and HMP requirements defined in GHSMP 6.2.5.23.

The HMP provides the sufficient analysis and discussion with respect to Gig Harbor Bay to satisfy the habitat assessment reporting requirements defined in GHSMP 6.2.5.23. More specifically, the HMP identifies and discusses all CFWHA species that may utilize the portion of the bay within 300 feet of the proposed project as well as identifies and discusses all, with the exception of the offsite estuarine wetland, associated habitats within 300 feet of the proposed project.

Per GHSMP 6.2.5.23, an HMP shall provide an analysis and discussion on the proposed project's effects on critical fish and wildlife habitat; provide an assessment and discussion of the appropriate project BMPs to address species and/or habitat; propose mitigation measures to avoid and minimize project impacts; provide an assessment or evaluation of the effectiveness of the mitigation measures proposed; and an assessment of project impacts or effects on water quality in Crescent Creek.

The HMP prepared in support of the proposed project largely meets the HMP requirements defined in GHSMP 6.2.5.23; however, as summarized below, the HMP has not sufficiently demonstrated that the proposed offsite mitigation will adequately compensate for the permanent CFWHA impacts for conformance with GHSMP 6.2.5.23.

As summarized in the HMP and Plan, the proposed dock structure will result in approximately 602 square feet of new overwater coverage. The proposed offsite mitigation will include the removal of an old marine railway which accounts for approximately 310 square feet of overwater coverage. Therefore, upon completion, the proposed project would result in an increase of 292 square feet of new overwater coverage. In response to the net gain of overwater coverage that would occur as a result of the proposed project, the HMP refers to the federal Regional General Permit (RGP)-6 mitigation point calculations provided in the Plan which concludes that the proposed offsite mitigation would sufficiently compensate for the construction of the proposed dock structure.

Based on the information provided, the HMP has not provided sufficient rationale to adequately demonstrate that the proposed offsite mitigation will sufficiently compensate for the construction of the proposed dock structure based on function. According to the provided calculations, the proposed project impacts require 20.88 mitigation points and the proposed offsite mitigation will result in 25.95 mitigation points; however, it appears that the mitigation credit calculations incorrectly used calculations associated with *removal of an existing manmade groin* rather than the *removal of a marine railway* calculations¹ defined in RGP-6.

¹ Please note that the manmade groin calculations provided in RGP-6 define mitigation point multipliers whereas the removal of a marine railway calculation multipliers are determined by the USACE on a case-by-case basis.

Per the HMP, the offsite mitigation consists of removing an old marine railway. Grette Associates confirmed the old railway and did not observe any indication that the railway is preventing shoreline erosion or accumulating material that would otherwise migrate along the shoreline. Furthermore, as noted in the HMP, the shoreline in the general project area is considered a low intensity shoreline environment which likely does not provide conditions for the marine railway to function as a groin due to the lack of shoreline energy within the bay.

No supporting information or data was included in the HMP to show that the old marine railway is functioning as a groin to adequately demonstrate that it is more appropriate to utilize the manmade groin calculations rather than the removal of a marine railway calculations defined in RGP-6. Given that it appears the mitigation credit points have been miscalculated and that the proposed mitigation summary does not include any additional supporting analysis to demonstrate that the removal of a 310 square-foot marine railway would adequately compensate for the 602 square-feet of dock structure, Grette Associates cannot concur that the proposed offsite mitigation will adequately compensate for the permanent CFWHA impacts for conformance with GHSMP 6.2.5.23.

3.2.4 Critical Fish and Wildlife Habitat Area Buffer

Per GHMC 18.08.186.D, critical fish and wildlife habitat area buffers in no case shall exceed 150 feet nor be less than 25 feet in width, when it is determined that a critical fish and wildlife habitat area buffer is required to mitigate potential impacts.

Given that the proposed dock structure will be situated near the face of the existing bulkhead and extend waterward, it is Grette Associates professional opinion that CFWHA buffers are not applicable for this project. Therefore, this section does not apply.

3.3 No Net Loss Analysis

Per GHSMP 6.2.2, a no net loss analysis shall be completed to demonstrate that no net loss of shoreline ecological functions and processes will occur as a result of a project.

Section 7 of the HMP provides a no net loss summary which concludes that the construction of the proposed dock structure in conjunction with the proposed offsite mitigation to remove the marine railway will not result in a net loss of shoreline function. As summarized above, in response to the net gain of overwater coverage that would occur as a result of the proposed project, the HMP refers to the RGP-6 mitigation point calculations provided in the Plan which appears to incorrectly use calculations associated with removal of an existing manmade groin rather than the calculations for the removal of a marine railway defined in RGP-6.

The HMP does not provide any additional supporting analysis besides referencing the RGP-6 calculations to adequately demonstrate that the construction of a 602 square-foot dock structure and the removal of a 310 square-foot marine railway would not result in a net loss of shoreline ecological function.

Based on this information, Grette Associates cannot concur that the proposed offsite mitigation will adequately compensate for the permanent CFWHA impacts and result in no net loss of shoreline functions for conformance with GHSMP 6.2.2.

3.4 Flood Hazard Assessment and ESA Compliance

Per 6.2.5.28 of the GHSMP, no new development may be allowed on any parcel partially or fully located within the area of special flood hazard or riparian buffer zone unless an appropriate habitat

assessment report has determined that the proposed development meets the standards of *NE* (No Effect) or *NLAA* (Not Likely to Adversely Affect) for federally-listed species. Due to the deficiencies associated with the compensatory mitigation and no net loss requirements summarized above, Grette Associates cannot concur with the effects determinations stated in the HMP of *NE* and *NLLA* for all listed species.

4 SUMMARY AND RECOMMENDATIONS

Upon thorough review, the HMP is not compliant with Chapter 6 of the GHSMP. Prior to acceptance, Grette Associates recommends that the HMP be revised to address the deficiencies identified in this review. Please see below.

- Per GHSMP 6.2.5.8 and 6.2.5.23, all wetlands and critical fish and wildlife habitat areas shall be identified and addressed in support of a proposed project. The HMP does not address the offsite estuarine wetland that is located within 300 feet of the proposed project or address the proposed offsite mitigation with respect to wetland impacts and CFWHA impacts for conformance with GHSMP 6.2.5.8, 6.2.5.23, and 6.2.2 (i.e., no net loss requirements). The document needs to be revised accordingly.
- Per GHSMP 6.2.5.23, compensatory mitigation shall be provided to offset impacts to CFWHA and meet the requirements of no net loss (GHSMP 6.2.2). According to the information provided, the proposed project would result in an increase of 292 square feet of new overwater coverage. The HMP has not provided sufficient rationale to adequately demonstrate that the proposed offsite mitigation will sufficiently compensate for the construction of the proposed dock structure based on function. More specifically, the HMP solely references compliance with RGP-6 to demonstrate adequate compensatory mitigation will occur; however, it appears that the mitigation credit calculations incorrectly used calculations associated with *removal of an existing manmade groin* rather than the *removal of a marine railway* calculations defined in RGP-6. The HMP does not include any additional supporting analysis to demonstrate that the removal of a 310 square-foot marine railway would adequately compensate for the 602 square-foot dock structure. Therefore, the HMP needs to be revised accordingly.
- Per GHSMP 6.2.2, a no net loss analysis shall be completed to demonstrate that no net loss of shoreline ecological functions and processes will occur as a result of a project. The HMP does not provide any additional supporting analysis besides referencing the RGP-6 calculations to demonstrate that the construction of a 602 square-foot dock structure and the removal of a 310 square-foot marine railway would not result in a net loss of shoreline function. Therefore, the HMP needs to be revised accordingly;
- Per 6.2.5.28 of the GHSMP, no new development may be allowed on any parcel partially or fully located within the area of special flood hazard or riparian buffer zone unless an appropriate habitat assessment report has determined that the proposed development meets the standards of *NE* (No Effect) or *NLAA* (Not Likely to Adversely Affect) for federally-listed species. Due to the deficiencies associated with the compensatory mitigation and no net loss requirements summarized above, Grette Associates cannot concur with the effects determinations stated in the HMP of *NE* and *NLLA* for all listed species.

The review of the submitted documents was conducted using the best available scientific information and methodologies and the best professional judgment of Grette Associates staff wetland biologists. Final acceptance and approval of the report is at the discretion of City staff.

If you have any questions on the document review, please contact me at (253) 573-9300, or by email at chadw@gretteassociates.com.

Regards,

A handwritten signature in black ink, appearing to read 'Chad Wallin', written in a cursive style.

Chad Wallin
Biologist
GRETTE ASSOCIATES^{LLC}

Reference # **NWS-2021-713**
 Project Name **Perrow**
 Prepared on: **2/8/2022 TS**

Marine Overwater Structure Mitigation Calculation Tool (RGP-6, Appendix B)

This tool can be used to estimate mitigation required under the Regional General Permit (RGP) 6 (See RGP-6 Appendix B). In addition this tool can be used to estimate mitigate requirements for similar projects in inland-marine waters. Before proposing compensatory mitigation, the applicant **MUST** first demonstrate that impacts to waters of the U.S., including special aquatic sites have been avoided then minimized (in that order) to the maximum extent possible. To calculate compensatory mitigation requirements, briefly describe the project and then enter the applicable information into the Required Mitigation tab. This will report the number of Mitigation Points (MPs) required for the project. Next, on the Proposed Mitigation tab, briefly describe the mitigation proposal and enter the applicable information. Some mitigative measures yield MPs on a case-by-case basis. Discuss these options with your Regulatory Project Manager. Return to the cover sheet to review the totals and any remaining mitigation requirement.

	Mitigation Points	DSAYS
Total Required Mitigation (Appendix B, Table 2)	20.88	0.2088
Total Proposed Mitigation (Appendix B, Table 3)	25.95	0.2595
Remaining Mitigation Points Required	0.00	0.0000

SHORE ZONES	Description
Riparian Zone	HTL to 50 feet landward of HTL
Upper Shore Zone (USZ)	HTL to +5 feet MLLW
Lower Shore Zone (LSZ)	+5 feet MLLW to -10 feet MLLW and limits of SAV
Deeper Shore Zone (DSZ)	Deeper than -10 feet MLLW or outer limits of SAV

Appendix B: Table 1

VEGETATION SCENARIO	Native Eelgrass and/or Kelp occurs within 25 feet of project area	Other SAV occurs within 25 feet of project area (no native eelgrass or kelp present)
Scenario 0	<u>N/A</u>	$\leq 10\%$
Scenario 1	1-25% Combined SAV	11-25%
Scenario 2	26-69% Combined SAV	26-75%
Scenario 3	$\geq 70\%$ Combined SAV	$> 75\%$

*SAV defined as rooted vascular plants and attached macroalgae. Drift algae and *Ulva spp.* Are not included when determining cover percentage except where *Ulva spp.* occurs in documented herring spawning areas.

EXAMPLE: Site has 25% Native eelgrass and 45% other SAV (total 70 % cover) within 25 feet of project area. Select Scenario 3 from Column 1 because native eelgrass is present.

Total Required Mitigation

Brief description of proposed project

Install a new PRF in Gig Harbor Bay: USZ- 4' X 28.5' fully grated pier, LSZ- 4' X 45.5' pier, 3' X 38' ramp both fully grated and 8' X 24' float with 50% grating 50% composite decking. (8) galvanized steel piling.

	Impact	Units	Qty	Mitigation Points
RIPARIAN ZONE IMPACTS				
Shoreline Impacts	Vegetation removal adjacent to soft shorelines (including soft bioengineered shorelines): Enter SF of woody vegetation with a DBH > 4 in riparian work strip to be permanently cleared for access to overwater structure.	SF of woody vegetation permanently cleared	0	0.00

UPPER SHORE ZONE (USZ) IMPACTS

Pier

Standard Structure (Pile Spacing & Habitat)	If the pier is fully grated and width is < 4 feet for single use or < 6 feet for joint-use, no mitigation points.	SF of structure	114	0
	Piles are spaced closer than 40 feet apart	Yes or No	No	N/A
	Project is located in documented sand lance or surf smelt spawning habitat	Yes or No	No	N/A
Oversized Structure	If the USZ pier is fully grated and width is > 4 feet for single use or > 6 feet for joint-use, enter SF of structure. (may be required for ADA Access).	SF of structure	0	0.00
		Number of all pier pilings in USZ.	0	
Solid-decked Structure	If the pier in the USZ has solid-decking, include the SF of solid-decked portion of the structure here (Does not qualify for RGP-6). If the structure also exceeds width requirements, enter any grated SQFT of pier above.	SF of solid-deck structure	0	0.00
		Number of all pier pilings in USZ.	0	

	Impact	Units	Qty	Mitigation Points
--	--------	-------	-----	-------------------

USZ Forage Fish Factor (for oversized or solid-decked structures)

Habitat	Forage Fish Factor: Project is located in documented or potential sand lance or surf smelt spawning habitat.	Yes or No	No	0.00
	Forage Fish Maps			

LOWER SHORE ZONE (LSZ) IMPACTS

SAV	Must enter vegetation scenario for LSZ (See table 1)	Enter Vegetation Scenario 0-3	0	N/A
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Piers & Piles

Standard Structure	If the pier is fully grated and width is ≤ 4 feet for single use or ≤ 6 feet for joint-use, enter the SF of structure. No MPs accrued if vegetation scenario 0-2.	SF of structure	182	0.00
Oversized Structure	If the pier in the LSZ is fully grated and width is > 4 feet for single use or > 6 feet for joint-use, enter SF of structure.	SF of structure	0	0.00
		Number of all pier pilings in LSZ.	0	
Solid-decked Structure	If the pier in the LSZ is proposed to include solid-decking, include the SF of solid-decked portion of the structure here (Does not qualify for RGP-6). If the structure also exceeds width requirements, enter grated SQFT of pier above.	SF of solid-deck structure	0	0.00
		Number of all pier pilings for piers with solid decking, only in LSZ.	0	

Floats

Structure	Enter the SF of float(s), including access float, located in LSZ where the float is 50% grated with 60% or more open space and there are 8 or less piles.	SF of structure	192	13.92
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Floating Watercraft Lifts

Structure	Enter the SF of floating watercraft lifts located in the LSZ.	SF of pontoon		0.00
-----------	---	---------------	--	------

	Impact	Units	Qty	Mitigation Points
LSZ Forage Fish Factor				
Habitat	If the project is located in documented or potential herring spawning habitat, enter Yes, otherwise No.	Yes or No	No	0.00
	Forage Fish Maps			

DEEPER SHORE ZONE (DSZ) IMPACTS

Structure	Enter the square feet of floats located in the DSZ.	SF of structure	0	0.00
REQUIRED MITIGATION SUB-TOTAL				13.92

OTHER DEBITTING FACTORS

Habitat	If the project is located within a pocket estuary, bluff-backed beach, or pocket beach, enter Yes, otherwise No.	Yes or No	Yes	6.96
	Coastal Atlas Map			
	If the project is located within a Major Estuary Zone (see Corps webpage for zone mapping), enter Yes, otherwise No.	Yes or No	No	0.00
	Major Estuary Zone Maps			
	TOTAL REQUIRED MITIGATION			20.88

MITIGATION CREDITS

Brief description of proposed mitigation

Offsite mitigation - Neighboring Property 9119 Haborview Dr, Gig Harbor - Remove marine rail that is acting as a groin and 16 concrete piling

Mitigation Option		Units	Qty	Mitigation Points (Credit)																																		
Riparian Planting																																						
Shoreline Plantings	Plant native woody vegetation (within 10 feet of bulkhead)	Planted area in SF	0	0.00																																		
	Plant native woody vegetation (within 10 feet of natural shoreline)	Planted area in SF	0	0.00																																		
Spawning Gravel																																						
Beach Nourishment	Placement of beach nourishment (forage fish habitat improvement). Credit given if required or recommend by WDFW. Typically linear placement waterward of bulkhead	LF of Shoreline for placement	0	N/A																																		
	Erosion Potential	Calculated Score	0	N/A																																		
	Shoretype Score	Enter score from below																																				
	Fetch Score	Enter score from below																																				
	<table><tr><th colspan="4">CUMULATIVE RISK MODEL</th></tr><tr><th colspan="4">EROSION POTENTIAL</th></tr><tr><th>Shoretype</th><th>Score</th><th>Fetch</th><th>Score</th></tr><tr><td>No Appreciable Drift (NAD)-Bedrock/Low Energy</td><td>0</td><td rowspan="2">0-1 mile</td><td rowspan="2">1</td></tr><tr><td>Modified, Accretion Shoreform, NAD-Delta</td><td>1</td></tr><tr><td>NAD- Artificial , Transport Zone, Pocket Beach</td><td>2</td><td>1-5 miles</td><td>2</td></tr><tr><td>Feeder Bluff</td><td>3</td><td>5-15 miles</td><td>3</td></tr><tr><td>Feeder Bluff Exceptional</td><td>4</td><td>15+ miles</td><td>4</td></tr><tr><td colspan="3">Erosion Potential Score = Shoretype Score + Fetch Score</td><td></td></tr></table>				CUMULATIVE RISK MODEL				EROSION POTENTIAL				Shoretype	Score	Fetch	Score	No Appreciable Drift (NAD)-Bedrock/Low Energy	0	0-1 mile	1	Modified, Accretion Shoreform, NAD-Delta	1	NAD- Artificial , Transport Zone, Pocket Beach	2	1-5 miles	2	Feeder Bluff	3	5-15 miles	3	Feeder Bluff Exceptional	4	15+ miles	4	Erosion Potential Score = Shoretype Score + Fetch Score			
	CUMULATIVE RISK MODEL																																					
	EROSION POTENTIAL																																					
	Shoretype	Score	Fetch	Score																																		
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NAD- Artificial , Transport Zone, Pocket Beach	2	1-5 miles	2																																			
Feeder Bluff	3	5-15 miles	3																																			
Feeder Bluff Exceptional	4	15+ miles	4																																			
Erosion Potential Score = Shoretype Score + Fetch Score																																						
Optional																																						
	Placement of beach nourishment in an irregular polygon (not common). Case-by-case evaluation. Provide SF of placement area and erosion potential (above)	Placement area in SF	0	N/A																																		
Large Woody Material (LWM)																																						
LWM	Install large woody material anchored in USZ (measure area of potential effect)	Placement area in SF	0	0.00																																		
Remove Piles																																						
Pile Removal	Remove non-treated wood, concrete, plastic, steel piles, or creosote stub / broken pile	Number of piles	16	8.00																																		
	Remove creosote-treated piles	Number of piles	0	0.00																																		
Install Float Stops																																						
Float Stops	Install float stops on existing float that currently grounds out (does not count if float is being removed)	SF of existing structure	0	0.00																																		

Mitigation Option		Units	Qty	Mitigation Points (Credit)	
Remove Existing Old Structures (Constructed more than 25 years ago)					
UPPER SHORE ZONE (USZ) MITIGATION					
Remove Existing "Old" Structures	Grated Pier	Remove existing pier in USZ: Enter SF for fully grated structure if width is > 4 feet for single use or > 6 feet for joint-use.	SF of structure	0	0.00
	Solid-decked Pier	Remove existing pier in USZ. Enter SF of solid surface, only (assumes vegetation scenario 0). Additional credit may be granted if removal is proposed in high quality SAV scenario. Piling removal counted separately.	SF of solid-decking on elevated pier in USZ.	0	0.00
	Float or Lift	Remove old float or floating watercraft lift in USZ (assumes vegetation scenario 0). Additional credit may be granted if removal is proposed in high quality SAV scenario. Piling removal counted separately.	SF of solid-decking on float or area of pontoons on lifts in USZ	0	0.00
	Habitat	Forage Fish Factor: Project is located in documented or potential sand lance or surf smelt spawning habitat.	Yes or No	No	0.00
LOWER SHORE ZONE (LSZ) MITIGATION					
Remove Existing "Old" Structures	SAV	Must enter vegetation scenario for LSZ (See table 1)	Enter Vegetation Scenario in LSZ		N/A
	Piers				
	Grated Pier	Removal of fully grated pier sections in the LSZ with width > 4 feet for single use or > 6 feet for joint-use; enter SF of grated portions of pier.	SF of structure	0	0.00
	Solid-decked Pier	Removal of pier in LSZ with solid-decking, include the SF of solid-decked portion of the structure here. If the structure also exceeds width requirements, enter grated SF of pier above.	SF of solid-deck structure	0	0.00
	Floats				
	Grated Float	Remove grated float (assumes 50% grated surface) including pilings.	SF of existing grated float in LSZ	0	0.00
	Solid-decked Float/Lift	Remove solid-decked float or watercraft lift in LSZ. Piling removal counted separately.	SF of existing solid-decked float or watercraft lift in LSZ	0	0.00
	Habitat	Forage Fish Factor: Project is located in documented or potential herring spawning habitat.	Yes or No	0	0.00
	DEEP SHORE ZONE (DSZ) MITIGATION				
	Structure	Remove structure in DSZ	SF of existing structure in DSZ	0	0.00

Mitigation Option			Units	Qty	Mitigation Points (Credit)	
Remove Existing Functional Structures						
(Constructed within the last 25 years)						
UPPER SHORE ZONE (USZ) MITIGATION						
Remove Existing Functional Structures	Grated Pier	Remove existing pier in USZ: Enter SF for fully grated structure if width is > 4 feet for single use or > 6 feet for joint-use.	SF of structure	0	0.00	
	Solid-decked Pier	Remove existing pier in USZ (vegetation scenario 0): Enter SF of solid-decked portion of the structure here. If the structure also exceeds width requirements, enter any grated SF of pier above.	SF of solid-deck structure	0	0.00	
Remove Existing Functional Structures	Float or Lift	Remove existing float or boat lift in USZ (assumes vegetation scenario 0). Additional credit may be granted if removal is proposed in high quality SAV scenario. Piling removal counted separately.	SF of solid-decking on float in USZ	0	0.00	
	Habitat	Forage Fish Factor: Project is located in documented or potential sand lance or surf smelt spawning habitat.	Yes or No	0	0.00	
LOWER SHORE ZONE (LSZ) MITIGATION						
Remove Existing Functional Structures	SAV	Must enter vegetation scenario for LSZ (See table 1)	Enter Vegetation Scenario in LSZ	0	N/A	
	Piers					
	Grated Pier	Removal of fully grated pier sections in the LSZ with width > 4 feet for single use or > 6 feet for joint-use; enter SF of grated portions of pier.	SF of structure	0	0.00	
	Solid-decked Pier	Removal of in the LSZ with solid-decking, include the SF of solid-decked portion of the structure here. If the structure also exceeds width requirements, enter grated SF of pier above.	SF of solid-deck structure	0	0.00	
	Floats					
	Grated Float	Remove grated float (assumes 50% grated surface) including pilings.	SF of existing grated float in LSZ	0	0.00	
	Solid-decked Float/Lift	Remove solid-decked float or watercraft lift in LSZ	SF of existing solid-decked float or watercraft lift in LSZ	0	0.00	
	Habitat	Forage Fish Factor: Project is located in documented or potential herring spawning habitat.	Yes or No	No	0.00	
	DEEP SHORE ZONE (DSZ) MITIGATION					
	Structure	Remove structure in DSZ	SF of existing structure in DSZ	0	0.00	

		Mitigation Option	Units	Qty	Mitigation Points (Credit)
Remove Existing Bank Stabilization / Groin / Debris					
Shoreline Restoration	Remove Stabilization / Groin	Remove existing bank stabilization and plant	LF removed and planted	0	0.00
		Remove entire existing manmade groin	SF of groin removed	310	9.30
		Replacement of hardened bank stabilization with pocket beach	Case-by-Case		
	Remove Ramp/Debris/Rail	Complete or partial removal of boat ramp	SF of boat ramp	0	0.00
		Removal of concrete/metal debris	SF of concrete debris removed	0	0.00
		Removal of creosote debris (uncommon)	CY of creosote material removed	0	0.00
		Complete or partial removal of marine railway	Case-by-Case		
	Habitat	Forage Fish Factor: Bank stabilization, boat ramp, or debris removal occurs in documented or potential forage fish spawning (surf smelt/sand lance in USZ, herring in LSZ)	Yes or No	No	0.00
		Other	Case-by-Case		
	Mitigation Debit Sub-Total				17.30
OTHER CREDITING FACTORS					
Habitat	If the project is located within a pocket estuary, bluff-backed beach, or pocket beach, enter Yes, otherwise No. Coastal Atlas Map		Yes or No	Yes	8.65
	If the project is located within a Major Estuary Zone (see Corps webpage for zone mapping), enter Yes, otherwise No. Major Estuary Zone Maps		Yes or No	No	0.00
Credit Purchase					
Credit Purchase	Mitigation Bank or In-Lieu-Fee Credit		Case-by-Case		
TOTAL PROPOSED MITIGATION					25.95

Memo

Marine Floats Corporation

To: Roxanne Robles
From: John Kavanaugh
CC: City of Gig Harbor
Date: 7/29/2022
Re: **Wade Perrow Dock Project (SDP-22-0002)**

Comments: Per our discussion of the acceptability of the proposed mitigation on the SDP-22-0002 project to install a new pier, ramp, and float in Gig Harbor Bay:
The proposed new overwater structure will have a significantly smaller direct impact to the beach substrate than the marine rail removal that is being proposed as mitigation. The new Pier, ramp and float will directly contact the beach substrate with 8 total piling covering 3.6 Square feet. The proposed removal of marine rail will remove 16 concrete piling equal to 3.1 square feet and 310 square feet of marine rail. The removal of the marine rail on the neighboring parcel is currently acting as a man-made groin, preventing the natural movement of beach substrate caused by natural tidal action. According to the U.S. National Park Service: "Groins are shore perpendicular structures, used to maintain updrift beaches or to restrict longshore sediment transport. By design, these structures are meant to capture sand transported by the longshore current; this depletes the sand supply to the beach area immediately down-drift of the structure." Marine Floats has prepared and submitted a Compensatory Mitigation Plan detailing the existing conditions, reasoning for the mitigation site selection, and impacts/benefits to the aquatic resources for evaluation of this proposed action. The Compensatory Mitigation plan demonstrates these actions will meet or exceed the standard of no net loss of ecological function. Marine Surveys and Assessments has completed and submitted a Habitat Management Plan, this report provides further details on the proposed project, its impacts, and its proposed compensatory mitigation. The Habitat Management plan concludes that no-net-loss of ecological function has been met. Additional photographs have been added to the project's files for visual evidence.



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By C. ANDREWS at 7:41 am, Mar 09, 2022

No Net Loss Shoreline Ecological Functions Evaluation Form

1. Please provide a complete project description:

This project will install a new residential pier, ramp, float and piling. The project consists of: (1) 4'X40' Aluminum Pier, (1) 4'X38' Aluminum Pier, (1) 3'X44' Aluminum Ramp, all with 100% fiberglass grated surfaces consisting of 1.5" squares and 69% open area. (1) 8'X24' float with fully encapsulated polyethylene foam filled tubs for floatation and surfaces composed of 50% composite decking and 50% Fiberglass grating with 1.5" squares and 69% open area. (4) piling mounted float stops, (4) 8" Galvanized steel pier piling and (4) 10" galvanized steel float piling. total project length from the existing bulkhead is 136'.

Instructions: Please provide the requested information for each of the project-related questions set forth below. If the project doesn't include one or more of the development activities, indicate "not applicable" next to the topic. **Please note that the completed form must be submitted with the required shoreline permit application or shoreline permit exemption request in order for the application to be deemed complete.**

Shoreline Setback/Impervious Coverage

1. Existing Shoreline Setback (from the Ordinary High-Water Mark): N/A
2. Proposed Shoreline Setback: N/A
3. Parcel Width (linear feet shoreline frontage): 85 Feet
4. Proposed Shoreline Setback Area (sq. ft.): N/A
5. Number of existing accessory structures in setback area: N/A
6. Number of accessory structures to be removed: None
7. Net increase/decrease in impervious coverage: None

Native Vegetation (Areas in Sq. Ft.) within Shoreline Setback/Vegetation Conservation Area Buffer

1. Proposed Native Shrubs & Ground Cover: None
2. Proposed Lawn: N/A

3. Amount of Existing Lawn Removed: None
4. Amount of Existing Ornamental Shrubs Removed: None
5. Amount of Existing Invasive Species Removed: None
6. Amount of Aquatic Vegetation Removed: None
7. Amount of Aquatic Vegetation Added: None

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www.CityofGigHarbor.net
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Shoreline Stabilization (Linear Feet)

1. Hard Shoreline Stabilization Added (wood/concrete vertical bulkhead, rock bulkhead, or riprap): None
2. Hard Shoreline Stabilization Removed: None
3. Hard Shoreline Stabilization Repaired: None
4. Hard Shoreline Stabilization Altered (setback landward): N/A
5. Geotech Report Provided (yes/no): No
6. Needs Assessment Required (yes/no): No
7. Soft Shoreline Stabilization Added: None
8. Soft Shoreline Stabilization Removed: None
9. Soft Shoreline Stabilization that replaced hard stabilization structure: None
10. Soft Shoreline Stabilization Altered: none

Overwater Coverage

1. Change in height of overwater structure (pier/dock): 4 Feet
2. Amount of grating (sq. ft.): Pier and Ramp are 100% grated surfaces, float is 50% grated surfaces
3. Amount of solid boards (decking) removed: None
4. Total length: 136 feet from bulkhead
5. Total Width: 8' at widest part (float)
6. Skirting removed (linear ft.): None
7. In-water structures removed: None
8. Is a boat lift included in the proposal? No
9. Is the proposed overwater structure a "joint pier" used by more than one property owner: No

