

313 East "F" StreetWood and ConcreteTacoma, WA 98421Floating Docks(253) 383-2740BoathousesFax (253) 383-1102Design & Permitting

July 9, 2024

Re: West Bay Marina Replacement

Project Information

Purpose

The proposed activity is a marina replacement project in Olympia Washington.

The current use of the property is a commercial marina. The parcel consists of a large, paved parking lot, marina office building, and small restaurant (Tugboat Annie's), and commercial marina. There are scarce trees and ornate shrubs, as well as beach substrate located on the property.

To the north and east of the project parcel is Budd Inlet and an old logging company property; the south consists of commercially developed waterfront property, to the west is West Bay Drive.

Applicant Information

Name: Neil Falkenburg Title: Property Manager Organization: West Bay Marina Association Phone: (360) 943-2022 Email: <u>westbaymarina@hotmail.com</u> Mailing Address: 2100 West Bay Drive, Olympia, WA 98502

Agent Information

Name: Tabitha Simonetti Phone: (253)383-2740 Email: <u>tabitha@marinefloats.com</u> Mailing Address: 313 East F Street, Tacoma, WA 98421

Project Location

Address: 2100 West Bay Drive Northwest, Olympia, WA 98502 Section: 57, Township: 18 N, Range: 02 W Parcel Number: 09750018002 & 09750018003 Latitude: 47.06456 N Longitude: -122.91618 W Waterbody: Budd Inlet

Project Description

The project site is a commercial marina. The existing marina is out of date and is not composed of environmentally friendly materials. The proposed project will bring the materials up to date and install aspects including grating with a minimum of 69% open area on 100% of the piers and ramps and 50% of the floats. It will remove the creosote treated piling and replace it with galvanized steel. The project will remove the covered moorage. Light penetrability and fully encapsulated floatation will bring the dock up to today's standards. The boat houses are not involved with this project; some might be removed once the marina is upgraded, however they are privately owned by residents that rent moorage space at the marina and not related to this project.

The project will remove and replace the solid decked piers, ramps, floats, and creosote treated wood piling. The project consists of installation of new piers, ramps, piling, and float systems with up-to-date environmental standards in a new configuration. Total existing float square footage is 51,944 square feet, with 45,136 square feet of covered moorage, existing pier and ramps equate to 1,296 square feet and 405 creosote treated wood piling. The total proposed square footage is 49,891 square feet of grated floats, 1,552 square feet of grated piers and ramps, and 187 galvanized steel piling. All covered moorage will be removed, and the overall square footage will be reduced by 2,053 square feet. Dimensions can be seen in the tables below. The Square footage tables showing existing and proposed dimensions are attached at the end of this document.

Project Construction Details

The marina replacement project will be installed over the marine waters of Budd Inlet in Olympia, Washington. FEMA (Federal Emergency Management Agency has designated this area as a 100-year floodplain (Zone V EL 16, Effective 5/15/2018).

Construction sequence of the marina replacement will be:

- Demolition: Removal, demolition, and disposal of the existing facility at an approved upland facility includes the following:
- Using a tugboat, barge, crane, pile driver, and associated work boats/skiffs, disconnect the existing floating marina sections and place these on a barge using a barge-mounted crane. A containment bin will be utilized to stow the debris. Containment booms will be deployed, and the existing solid decked marina will be removed at low tide. Any construction debris will be collected and removed.
- Piling Removal: Removal of the existing creosote piling will be accomplished using a tugboat and barge equipped with a pile driver and extractor.
- Removal of the existing creosote wood pilings will be via a barge mounted derrick and vibratory hammer on the construction barge. The vibratory extraction method will be attempted first, then the direct pull method will be used if vibratory is unsuccessful by using a choke cable around the base of the pile. The extracted piling will not be shaken or scraped off and will be placed directly into a containment bin located on the construction barge. If the pile breaks piles located in intertidal and shallow subtidal areas that are less than -10 feet deep
- MLLW shall be cut at least 2 feet below the mudline; In subtidal areas that are greater than -10 feet deep MLLW, piles shall be cut at least 1 foot below the mudline. Piles shall be cut off at lowest practical tide condition and at slack water. This is intended to reduce turbidity due to reduced flow and short water column through which pile must be withdrawn. The contractor shall provide the location of all the broken and cut piles using a GPS. EPA Region 10 and DNR 2016 Best Management Practices will be followed.
- Installation of new galvanized steel piling: The new galvanized steel piling will be barged to the project site from the manufacturer's yard.

- Steel piles will be installed using a vibratory hammer, which takes about 15-20 min. per pile. No proof will be used for non-load bearing piles
- Installation of marina system: Once the piling is in place and secure, the floating marina system, and replacement pier with 100% fiberglass grating will be installed. The new float system will be prefabricated at Marine Floats Corporation facility in Tacoma and towed to Olympia for installation. The new float system is EnviroCrete®¹. Marine Floats Corporation will barge all construction debris to an approved upland disposal site. The aluminum ramps with 100% fiberglass grating will connect the floats to the pier.

Marine Floats installs their docks from the water, never from the land, by using the following method:

- The construction crew is small, 2-4 men. A small tugboat pulls the construction barge loaded with supplies to the site. The prefabricated floats are tied behind the barge and pulled to the site via water.
- Existing floats and piling are placed in a containment bin on the construction barge, which is transported back to the facility via water for off-loading and then demolition and disposal at an approved upland facility.
- The new steel piling is driven using a vibratory hammer and crane mounted on the floating construction barge.
- The pre-constructed floats are manually attached to the float piling using pile hoops.
- Depth is sufficient, no float stops will be installed.
- The floats are constructed on the Marine Floats property in Tacoma for each dock system.

No Net-Loss Analysis

According to the COSMP Section 1.3.C describes the purpose and intent of the Shoreline Master program to ensure, at a minimum, no net loss of shoreline ecological function and process are achieved.

In accordance with WAC 173-26-201(2)(e) the below describes the mitigation sequencing and how the project design complies to achieve no net loss of ecological function:

- \circ Avoiding the impact altogether by not taking a certain action or parts of actions:
 - No action would not achieve the goal of the project. The goal of the project is to replace an existing outdated marina that is not up to date with today's standards and regulations. Not performing the action would leave 45,136 square feet of covered moorage and 405 creosote treated wood piling with the South-Central Puget Sound, resulting in harmful chemicals being left to degrade in the shoreline environment.

• 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 project minimizes the design by reducing the overall square footage of overwater coverage by 2,053 square feet and reducing the total piling count by 218. Impacts are reduced through the installation of grated surfaces and removal of covered moorage.

¹ EnviroCrete[®] Specifications – Float surface decked with 50% pre-stressed concrete decking and 50% fiberglass grating. Concrete is pre-stressed with stainless steel cable. Grating is fiberglass with 1 ½" x 1 ½" squares and 69% open area. All timber is Chemonite pressure treated Douglas/fir glulam's is part of the framing. Metal fasteners are hot dipped galvanized steel or stainless steel. White vinyl rub strip on all edges with pneumatic vinyl corners. Power pedestals equipped with electrical and potable water, and fire system utilities will be installed.

• Rectify the impact by repairing, rehabilitating, or restoring the affected environment:

- The project will result in overall repair and rehabilitation of the affected environment. 51,944 square feet of solid decked floats, 45,136 square feet of covered moorage, 1,296 square feet of solid decked pier and ramp, and 405 creosote treated wood piling will be removed from the location as a result of the project.
- Removal of creosote treated wood piling will restore the natural shoreline in the area through removing unusable overwater structures and harmful chemicals from the aquatic environment. The derelict pilings are uncapped and provide a place for piscivorous birds to prey on fish. The pilings are also treated with creosote which is a highly toxic chemical to marine life that causes mutations and reproductive abnormalities in many species, such as salmon.
 - Toxic Chemicals: Creosote is a wood preservative made from coal tar, containing a mixture of chemicals, including polycyclic aromatic hydrocarbons (PAHs) and phenols. These chemicals are toxic to aquatic organisms and can leach into the surrounding water, soil, and sediment, posing risks to marine life and ecosystems.
 - Bioaccumulation: PAHs and other chemicals in creosote can accumulate in the tissues of marine organisms, leading to bioaccumulation and biomagnification through the food chain. This can result in harmful effects on fish, shellfish, and other wildlife, as well as potential risks to human health through consumption of contaminated seafood.
 - Habitat Degradation: Creosote-treated wood pilings can degrade over time, releasing toxic chemicals into the surrounding environment. This can degrade habitats for fish, shellfish, and other aquatic species, impacting their ability to survive, reproduce, and thrive in the Puget Sound ecosystem.
 - Contaminated Sediments: The leaching of chemicals from creosote-treated wood pilings can result in the accumulation of contaminated sediments in the Puget Sound. These sediments can serve as long-term sources of pollution, affecting water quality and ecosystem health.

• Reducing or eliminating the impact over time by preservation and maintenance operations:

• Maintenance of the dock will be upheld by the owners, as to not let the dock degrade as it exists throughout the useful life. The materials utilized to build the dock adhere to state regulations and are selected based on the latest advancements in scientific research to minimize environmental impacts.

• Compensate for the impact by replacing, enhancing, or providing substitute resources or environments:

- The project reduces the total overwater coverage and a large amount of creosote treated wood piling. No additional mitigation compensation is proposed at this time, as there is a robust reduction of impacts through the proposed replacement.
- Monitoring the impact and compensation projects and taking appropriate corrective measurements:

• Post construction notices will be sent to all requesting agencies showing the removal of the existing structures. No additional monitoring is needed for this project.

Best Management Practices

Several best management practices will be enacted throughout the design of the project and specific construction techniques will be implemented to avoid and minimize impacts; these are listed below.

- The dock design complies with regulatory agency requirements.
- All permits will be received from the required regulatory agencies before any work commences.
- Floatation will be permanently encapsulated.
- Piling will be driven with a vibratory hammer, utilizing a sediment curtain.
- The pile driver will operate for the minimum days necessary to complete the project.
- A boom will be deployed to contain construction debris.
- A containment bin will be installed on the construction barge, to hold the removed dock.
- Overwater work will be completed during the approved work windows (July 15- February 15).
- The proposed project will incorporate 50% fiberglass grating on the floats and 100% fiberglass grating on the pier and ramp.
- (405) 14" creosote treated wood piling will be removed.
- The overwater footprint will be reduced by 2,053 square feet.
- Any additional provisions and conditions issued by WDFW or the USACE in their respective permits will be followed.
- No net loss of ecological function will be accomplished by the project.
- Barges will not be used within 25 feet of known vegetated shallows; reducing impact to EFH.
- The barge will not ground out and will always remain a minimum of one foot above the substrate; minimizing sediment disturbance within the water column.
- Discharge of oil, fuel, or chemicals into state waters is prohibited by state law. Fuel hoses, oil drums, transfer valves and fittings, etc. will be checked for leaks or drips daily and will be properly stored, maintained, and secured to prevent spills.
 - In the event of a spill or any discharge the following corrective actions will be taken immediately:
 - The spill of oil or any hazardous material will be reported immediately to the National Response Center at +1(800)424-8802 and to the Washington Emergency Management Division at +1(800)258-5990.
 - If there are distressed or dying fish it will immediately be reported to the Northwest Regional Spill Response Office of the Department of Ecology at (425)649-7000
 - Immediate containment and cleanup of the spilled material will commence. This will include proper disposal of any material used to clean up the spill.
 - The source of the spill will be determined and taken care of to prevent any future spills.
- A Spill Prevention, Control, and Countermeasures plan will be put in place and utilized during the duration of the project. Creosote will not be scraped or shaken; it will be placed immediately in a containment basin on the barge after removal.
- Construction will comply with water quality restrictions imposed by the Washington State Department of Ecology (Ecology), reducing turbidity impacts in EFH.
- All General Construction Measures and Project Design Criteria applicable to the project listed in the Salish Sea Nearshore Programmatic Biological Opinion will be implemented (NOAA 2022).

Proposed						
	4	Dock		-	-	
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	475	234	3342	1	3342	
	60	4	240	5	1200	
Fingers	60	6	360	1	360	
	70	6	420	6	2520	
Тс	otal Square I	Footage			7422	
	E	3 Dock				
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	435	122	4392	1	4392	
Fingers	50	4	200	17	3400	
	50	6	300	2	600	
Тс	otal Square I	Footage			8392	
	(Dock		.	_	
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	472	122	4752	1	4752	
Fingers	40	4	160	21	3360	
	40	6	240	2	480	
	otal Square I	-ootage			8592	
D Dock						
	ء الاست.		O	0	T - 4 - 1	
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	Length 488	Width 88	Square Footage 3904	Quantity	Total 3904	
Headwalk & Buffer Dimensions	Length 488 40	Width 88 4	Square Footage 3904 160	Quantity 1 22	Total 3904 3520	
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5	Width 88 4 14	Square Footage 3904 160 217 240	Quantity 1 22 1	Total 3904 3520 217	
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40	Width 88 4 14 6	Square Footage 3904 160 217 240	Quantity 1 22 1 2	Total 3904 3520 217 480	
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Proposed					
Pier, Ramp, & Piling					
Square Footage	Square Footage				
Pier (Overwater)	480				
Ramp	864				
Ramp 208					
Total Square Footage 1552					
	171	12"			
Piling	12	10"			

Summary				
Total Float	49891			
Pier and Ramp	1552			
Piling	183			

Existing							
A Dock							
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	557	92	3108	1	3108		
	40	3	120	13	1560		
	30	3	90	1	90		
	30.5	3	91.5	5	457.5		
Fingers	24	3	72	1	72		
	35	9	315	1	315		
	21	16	336	1	336		
	46	19	889	1	889		
	Total Squa	are Footage			6827.5		
		B Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	722	40	4590	1	4590		
	44	3	132	1	132		
	36.66667	3	110	1	110		
	51.33333	3	154	2	308		
	47.66667	3	143	1	143		
Fingers	45.66667	3	137	2	274		
	50	3	150	1	150		
	39.66667	3	119	1	119		
	4	3	12	4	48		
	30.5	3	91.5	2	183		
	Total Squa	are Footage			6057		
	•	C Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	325	98	1390	1	1390		
	88	6	528	1	528		
Fingers	135.3333	6	812	1	812		
i ingers	30	3	90	7	630		
	32	27	608	1	608		
	Total Squa	are Footage			3968		
	•	D Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	357	48	2436	1	2436		
Fingers	44	3	132	2	264		
	30	3	90	9	810		
Total Square Footage							

Existing							
E Dock							
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	315	75	2024	1	2024		
	20	3	60	3	180		
Fingers	24	3	72	1	72		
i ingers	30	3	90	8	720		
	40	3	120	8	960		
Tot	al Square F	ootage			3956		
	F	Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	325	66	1872	1	1872		
Fingers	30	3	90	21	1890		
Tot	al Square F	ootage			3762		
	Length	Width	Height	Square Footage			
	100	65	20	6500			
Covered Moorage	100	65	20	6500			
*(16) Fingers under covered moorage	То	tal Squa	re Footage	13000			
	G	Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	324	66	1889	1	1889		
Fingers	30	3	90	20	1800		
			Total Squa	re Footage	3689		
	Length	Width	Height	Square Footage			
	100	65	20	6500			
Covered Moorage	100	65	20	6500			
*(16) Fingers under covered moorage	То	tal Squa	re Footage	13000			
	Н	Dock			-		
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	274	86	1570	1	1570		
	30.5	3	91.5	8	732		
Fingers	40	3	120	9	1080		
	36	8	288	1	288		
Tot	al Square F	ootage			3670		
	Length	Width	Height	Square Footage			
Covered Moorage	96	65	20	6240			
*(8) Fingers under covered moorage	То	Total Square Footage 6240					

		Existing			
		l Dock			
	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	295	112	2249	1	2249
Fingers	24	3	72	4	288
	30.5	3	91.5	16	1464
	Total Squa	re Footage			4001
		J Dock			
	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	300	110	2121	1	2121
	24	3	72	3	216
_	40	3	120	1	120
Fingers	24	3	72	2	144
	30.5	3	91.5	9	823.5
	40	3	120	8	960
	Iotal Squa	re Footage			4384.5
	Length	Width	Height	Square Footage	
	32	65	18	2080	
Covered Moorage	32	65	18	2080	
^(16) Fingers under covered	104	84	20 Faataga	8/36	
liioolage			roolage	12090	
	l ongth	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	252	30	1502	Quantity 1	1502
	232	3	72	3	216
Fingers	24	9	,2	0	210
Ĭ	20	3	60	4	240
~	20 Total Squa	3 r e Footage	60	4	240 1958
	20 Total Squa	3 re Footage	60 Headwalk Float	4	240 1958
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Headwalk & Buffer Dimensions	20 Total Squa Length 256	3 re Footage Width 167	60 Headwalk Float Square Footage 6161	4 Quantity 1	240 1958 Total 6161
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Headwalk & Buffer Dimensions	20 Total Squa Length 256 Total Squa Pier, I Squ	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1	240 1958 Total 6161 6161
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Headwalk & Buffer Dimensions Pier Pier Ramp	20 Total Squa Length 256 Total Squa Pier, I Squ	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1 88 952 256	240 1958 Total 6161 6161
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Headwalk & Buffer Dimensions Pier Pier Ramp Total Square Foo Piling	20 Total Squa Length 256 Total Squa Pier, I Squ	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1 88 952 256 1296 405	240 1958 Total 6161 6161
Headwalk & Buffer Dimensions Headwalk & Buffer Dimensions Pier Pier Pier Ramp Total Square Foo Piling Summary	20 Total Squa Length 256 Total Squa Pier, I Squ	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1 88 952 256 1296 405	240 1958 Total 6161 6161
Headwalk & Buffer Dimensions Headwalk & Buffer Dimensions Pier Pier Ramp Total Square Foo Piling Summary Total Solid Float	20 Total Squa Length 256 Total Squa Pier, I Squ tage	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1 88 952 256 1296 405	240 1958 Total 6161 6161
Headwalk & Buffer Dimensions Headwalk & Buffer Dimensions Pier Pier Ramp Total Square Foo Piling Summary Total Solid Float Total Covered Moorage	20 Total Squa Length 256 Total Squa Pier, I Squ tage 51944 45136	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161	4 Quantity 1 88 952 256 1296 405	240 1958 Total 6161 6161
Headwalk & Buffer Dimensions Headwalk & Buffer Dimensions Pier Pier Pier Ramp Total Square Foo Piling Summary Total Solid Float Total Covered Moorage Pier and Ramp	20 Total Squa Length 256 Total Squa Pier, I Squ tage 51944 45136 1296	3 re Footage Width 167 re Footage Ramp, & Pili are Footage	60 Headwalk Float Square Footage 6161 ng	4 Quantity 1 88 952 256 1296 405	240 1958 Total 6161 6161

September 30, 2022



313 East "F" Street Tacoma, WA 98421 (253) 383-2740 Fax (253) 383-1102 Wood and Concrete Floating Docks Boathouses Design & Permitting

West Bay Marina c/o Neil Falkenburg 2100 W Bay Dr NW Olympia, WA 98502

Dear Neil,

In order to submit your documents to various jurisdictions and act on your behalf in the process, the following statement needs to be completed with a notary.

OWNER/APPLICANT AGREEMENT

The undersigned owner(s) of record of the property identified by the **Thurston County Assessor's account number(s)** 09750018002 and located at 2100 W Bay Dr NW, Olympia, WA 98502.

The undersigned gives consent and approval to Marine Floats Corporation to act on their behalf as their agent to proceed with land use applications for permits on the property referenced herein.

Owner of Record Date Owner of Record **NOTARY:** STATE OF WASHINGTON) before me, the undersigned, a Notary Public in and for the State of On this 73 day of NOVEMD Washington, duly commissioned and sworn, personally appeared to me known to be the individual described in and who executed the foregoing instrument and acknowledged to me that he/she/they signed and sealed the said instrument as a free and voluntary act and deed for the uses and purposes therein mentioned. day of Given under my hand and official seal this _ Notary Public in and for the State of Washington Residing at THURSTON CD-My commission expires MARCH 202 1111111111





attle District

Tax Parcel #(s):

AGENCY	USE ONLY
Date received:	
Agency reference #:	

Application (JARPA) Form^{1,2} [help] USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

Joint Aquatic Resources Permit

Part 1–Project Identification

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

West Bay Marina Replacement

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Mi	iddle)			
Falkenburg, Neil -POC Marina Manager Jerome Beruffi- Marina Association Partner				
2b. Organization (If app	blicable)			
West Bay Marina Asso	ociation			
2c. Mailing Address (S	Street or PO Box)			
2100 West Bay Dr				
2d. City, State, Zip				
Olympia, WA 98502				
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail	
360.943.2022			westbaymarina@hotmail.com	

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

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)					
Simonetti, Tabitha					
3b. Organization (If ap	oplicable)				
Marine Floats					
3c. Mailing Address (Street or PO Box)				
313 East F St					
3d. City, State, Zip					
Tacoma, WA 98421	Tacoma, WA 98421				
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail		
253-383-2740	Direct office line: 253.386.9201		tabitha@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]

- \boxtimes 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 <u>JARPA Attachment A</u> 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 <u>JARPA Attachment E</u> to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)					
4b. Organization (If app	licable)				
4c. Mailing Address (St	reet 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 <u>JARPA</u> <u>Attachment B</u> for each additional project location.

5a. Indicate the type of o	5a. Indicate the type of ownership of the property. (Check all that apply.) [help]					
⊠ Private						
□ Federal						
Publicly owned (state, or a state)	county, city, s	special districts like s	schools, ports, etc.)			
🗆 Tribal						
☑ Department of Natural	Resource	es (DNR) – mana	ged aquatic lands (Complete <u></u>	JARPA Attachment E)		
5b. Street Address (Cann	ot be a PO E	Box. If there is no ad	dress, provide other location informat	ion in 5p.) [<mark>help]</mark>		
2100 W Bay Drive NW						
5c. City, State, Zip (If the	project is not	in a city or town, pro	ovide the name of the nearest city or	town.) [<u>help]</u>		
Olympia, WA 98502						
5d. County [help]						
Thurston						
5e. Provide the section, t	township, a	and range for the	e project location. [help]			
1/4 Section	5	Section	Township	Range		
	57		18N	02W		
5f. Provide the latitude a	nd longitud	de of the project	location. [help]			
• Example: 47.03922 N	l lat. / -122.8	9142 W long. (Use	decimal degrees - NAD 83)			
47.06456, -122.91618						
5g. List the tax parcel nu	mber(s) fo	r the project loca	ation. [<u>help]</u>			
The local county asse	essor's office	can provide this info	ormation.			
09750018002, 09750018	003					
5h. Contact information f	or all adjo	ning property ow	/ners. (If you need more space, use	JARPA Attachment C.) [help]		
Name		Γ	Mailing Address	Tax Parcel # (if known)		
Dunlap Towing Co		PO Box 593		09750016000		
		La Conner, WA	98257	097 000 10000		
West Bayview Landing		14400 Tukwila	International Blvd Ste 100	0101500000		
Development Associates	LLC	Tukwila, WA 98	3168	91015002000		

5i. List all wetlands on or adjacent to the project location. [help]

None, other than Water and Unconsolidated Bed

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [help]

Budd Inlet, Puget Sound

5k. Is any part of the project area within a 100-year floodplain? [help]

 \boxtimes Yes \Box No \Box Don't know

FEMA Zone V (EL 16) 53067C0158F eff. 5/15/2018

51. Briefly describe the vegetation and habitat conditions on the property. [help]

There is a large parking lot with scarce trees and ornate shrubs as well as beach substrate.

5m. Describe how the property is currently used. [help]

The property is used as a commercial marina with a large parking lot and marina office/supply building. There is also a small restaurant (Tugboat Annie's).

5n. Describe how the adjacent properties are currently used. [help]

The adjacent properties are relatively barren and used for land development purposes. They have access to the water with existing overwater structures.

50. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]

Parking lot, storage area, office/supply building, restaurant, marina with covered moorage.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]

Use the left 2 lanes to merge onto I-5 S toward Portland

Use the 2nd from the right lane to take exit 105 toward State Capitol/City Ctr

Take Union Ave SE, Columbia St SW, 5th Ave SW and W Bay Dr NW to your destination

Merge onto 14th Ave SE

At the traffic circle, take the 1st exit onto Jefferson St SE

Turn left onto Union Ave SE

Turn right onto Columbia St SW

Turn left onto 5th Ave SW

Pass by Bank of America (with Drive-thru ATM) (on the right)

At the traffic circle, take the 2nd exit onto Olympic Way

At the traffic circle, take the 1st exit onto W Bay Dr NW

Keep right to stay on W Bay Dr NW

Turn right

Turn right

Turn right

Destination will be on the right

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]						
The existing marina consists moorage, 1,296 square feet replaced with 49,891 square ramp, and (171) 12" and (12	The existing marina consists of 51,944 square feet of solid decked floats, 45,136 square feet of covered moorage, 1,296 square feet of solid decked pier and ramp, and 405 creosote treated wood piling. It will be replaced with 49,891 square feet of EnviroCrete® floats,1522 square feet of 100% fiberglass grated pier and ramp, and (171) 12" and (12) 10" galvanized steel piling. The existing boathouses are not part of this project.					
EnviroCrete® Specifications Concrete is pre-stressed with open area. All timber is Che fasteners are hot dipped galv vinyl corners. Power pedesta installed.	 Float surface decked with h stainless steel cable. Gratin monite pressure treated Douv vanized steel or stainless steals equipped with electrical a 	50% pre-stressed concrete s ng is fiberglass with 1 ½" x 3, iglas/fir glulam's is part of the el. White vinyl rub strip on al nd potable water, and fire sy	50% fiberglass grating. /4" squares and 69% e framing. Metal I edges with pneumatic stem utilities will be			
6b. Describe the purpose of	the project and why you war	nt or need to perform it. [help]			
The existing marina is outdat maintenance. Replacement grated surfaces, resulting in square feet of float coverage	ted and in need of repair. Re will incorporate environmenta removal of 45,136 square fe e.	placement is a common forn al improvements such as gal et of covered moorage and a	n of marina vanized steel piling and reduction of 2,270			
6c. Indicate the project cate	gory. (Check all that apply) [help]					
\boxtimes Commercial \square R	esidential 🛛 🗆 Instituti	onal 🛛 🗆 Transportatio	on 🗆 Recreational			
⊠ Maintenance □ E	nvironmental Enhancement					
6d. Indicate the major eleme	ents of your project. (Check all	that apply) [help]				
□ Aquaculture	□ Culvert	⊠ Float	□ Retaining Wall			
□ Bank Stabilization	🗆 Dam / Weir	□ Floating Home	(upland)			
□ Boat House	🗆 Dike / Levee / Jetty	□ Geotechnical Survey				
Boat Launch	□ Ditch	□ Land Clearing	Measurement Device			
□ Boat Lift	⊠ Dock / Pier	🛛 Marina / Moorage	□ Stairs			
□ Bridge	□ Bridge □ Dredging □ Mining □ Stormwater facility					
□ Bulkhead	□ Fence □ Outfall Structure □ Swimming Pool					
□ Buoy	□ Ferry Terminal	⊠ Piling/Dolphin	Utility Line			
□ Channel Modification	□ Fishway	□ Raft				
□ Other:						

- **6e.** Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [help]
 - Identify where each element will occur in relation to the nearest waterbody.
 - Indicate which activities are within the 100-year floodplain.

The marina replacement project will be installed over the marine waters of Budd Inlet in Olympia, Washington. FEMA (Federal Emergency Management Agency has designated this area as a 100-year floodplain <u>Zone V</u> (<u>EL 16) 53067C0158F eff. 5/15/2018</u>.

Construction sequence of the marina replacement will be:

Demolition: Removal, demolition, and disposal of the existing facility at an approved upland facility includes the following:

Using a tugboat, barge, crane, pile driver, and associated work boats/skiffs, disconnect the existing floating marina sections and place these on a barge using a barge-mounted crane. A containment bin will be utilized to stow the debris. Containment booms will be deployed. Any construction debris will be gathered placed in the containment bin and disposed of at an approved upland facility.

Piling Removal: Removal of the existing creosote piling will be accomplished using a tugboat and barge equipped with a pile driver and extractor.

Removal of the existing creosote wood pilings will be via a barge mounted derrick and vibratory hammer on the construction barge. The vibratory extraction method will be attempted first, then the direct pull method will be used if vibratory is unsuccessful by using a choke cable around the base of the pile. The extracted piling will not be shaken or scraped off and will be placed directly into a containment bin located on the construction barge. If the pile breaks piles located in intertidal and shallow subtidal areas that are less than -10 feet deep MLLW shall be cut at least 2 feet below the mudline; In subtidal areas that are greater than -10 feet deep MLLW, piles shall be cut at least 1 foot below the mudline. Piles shall be cut off at lowest practical tide condition and at slack water. This is intended to reduce turbidity due to reduced flow and short water column through which pile must be withdrawn. The contractor shall provide the location of all the broken and cut piles using a GPS. EPA Region 10 and DNR 2016 Best Management Practices will be followed.

Installation of new galvanized steel piling: The new galvanized steel piling will be barged to the project site from the manufacturer's yard.

Replacement piles will be installed using a vibratory hammer, which takes about 15-20 min. per pile. No proof will be used for non-load bearing piles (floats). Proofing may be necessary for load-bearing pilings. If proofing occurs a wooden block and bubble curtain will be utilized (Longmuir & Lively, 2001). (12) 10" galvanized steel pier pile will be driven; (171) 12" galvanized steel float pile will be driven.

Installation of marina system: Once the piling is in place and secure, the floating marina system, and replacement piers with 100% fiberglass grating will be installed. The new float system will be prefabricated at Marine Floats Corporation facility in Tacoma and towed to Budd Inlet for installation. The new float system is EnviroCrete®. The ramps with 100% fiberglass grating will connect the pier and ramp and will be placed utilizing a barge mounted crane.

EnviroCrete® Specifications – Float surface decked with 50% pre-stressed concrete decking and 50% fiberglass grating. Concrete is pre-stressed with stainless steel cable. Grating is fiberglass with 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " squares and 69% open area. All timber is Chemonite pressure treated Douglas/fir glulam's is part of the framing. Metal fasteners are hot dipped galvanized steel or stainless steel. White vinyl rub strip on all edges with pneumatic vinyl corners. Power pedestals equipped with electrical and potable water, and fire system utilities will be installed.

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 <u>JARPA Attachment D</u> to list the start and end dates of each phase or stage.

Start Date: 2025

End Date: <u>2030</u>

□ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]		
10-15 million		
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.				
 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				
Marina project completely overwater, no known wetlands on site.				
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 Name1Wetland type and rating category2Impact area (sq. ft. or Acres)Duration of impact3Proposed mitigation type4Wetland mitigation area (sq. type4				
N/A				

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
Ecologically friendly design, construction techniques, and best management practices will always be implemented during construction.
1. The design of the marina complies with regulatory agencies' criteria. Grated surfaces and ecologically friendly materials will be incorporated throughout.
2. Flotation will be permanently encapsulated.
3. All pilings are galvanized steel and will be the smallest diameter that is structurally feasible.
4. A floating surface boom will be installed, as needed, to capture any debris or oil sheen.

- 5. Old creosote pilings will not be shaken or scraped and will be taken from the site in a containment basin on a work barge to be properly disposed of at an upland disposal site.
- 6. Piling driven with an air driven vibratory pile hammer for sound attenuation.
- 7. Floating pile driver will not ground out.
- 8. Care will be taken to contain all construction debris.
- 9. All applicable BMPs and GCMs will be exercised throughout this project.
- 10. Work windows will be adhered to.
- 11. Piling is fitted with caps to prevent piscivorous birds perching.
- 12. Floats will not ground out- depth is adequate to prevent this.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

 \boxtimes Yes \Box No – Budd Inlet

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 ap	plicable, explain be	elow why a mitigat	tion plan should n	ot be required.	
🛛 Yes 🗆 No	🗆 Don't know	V			
Replacement will ind surfaces, resulting ir of float coverage. Ar	corporate environ ו removal of 45, וd removal of 40	nmental improv 136 square fee 15 creosote trea	vements such t of covered m ated wood pilir	as galvanized steel piling noorage and a reduction of ng.	and grated f 2,053 square feet
8d. Summarize what used to design t	at the mitigation p the plan.	plan is meant to	o accomplish.	Describe how a watershee	d approach was
No pet loss of ecolor	aical function		e your answer ne		
		atarbady in the	table balaw	fl 1 1	
oe. Summarize impa	act(s) to each wa	aterbody in the		[neip]	Anon (nor ft or
dredge, fill, pile drive, etc.)	name ¹	location ²	of impact ³	(cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
See attached Dimer	sion tables and	associated dra	wings. All imp	acts will be permanent.	
 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 i you will use, and	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]				
N/A – no fill					
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]					
N/A - no excavating					
 8h. Have you prepared a Water Quality Monitoring Plan (WQMP) for all in-water work (below ordinary high water), over water work or discharges to waters of the state? □ Yes ⊠ No If NO describe the monitoring that you will be conducting including parameters, equipment and locations, or evelopie why monitoring will not be preserved. 					
or explain why monitoring will not be necessary. [nelp]					
The project does not have excavating or dredging in the waterbody involved. Turbidity monitoring will be observed during pile driving; if plumes become too large pile driving will cease until turbidity has subsided.					

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	
WDFW				
City of Olympia				
USACE				
DNR	Kristen Miller			

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: <u>https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d</u>.
- \boxtimes Yes \Box No

None listed on site.

Budd Inlet parameters:

- Dissolved oxygen
- 2,3,7,8-TCDD (Dioxin)
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene & Benzo(k)fluoranthene
- Dibenzo(a,h)anthracene
- Ideno(1,2,3-c,d)pyrene
- Bacteria Enterococci & Fecal coliform
- Nickel & Copper
- Chrysene
- PCBs

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

• Go to <u>http://cfpub.epa.gov/surf/locate/index.cfm</u> to help identify the HUC.

1711001905 – McLane Creek-Frontal Puget Sound

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

• Go to <u>https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up</u> to find the WRIA #.

13 Deschutes

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

• Go to <u>https://ecology.wa.gov/Water-Shorelines/Water-quality/Freshwater/Surface-water-quality-standards/Criteria</u> for the standards.

 \boxtimes Yes \Box No \Box Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline				
environment designation? [help]				
 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>Urban Intensity</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.				
Name of manual:				
9i. Does the project site have known contaminated sediment? [help]				
If Yes, please describe below.				
None on site.				
Further south 3,600 ft away from the marina, there is sediment bioassay (listing ID 602690).				
9j. If you know what the property was used for in the past, describe below. [help]				
The site was first developed as a lumber mill in 1919. Since then, it was a stud mill, veneer plant, sawmill, hog fuel burner. Then the property was used as a boatyard and marina from 1966 to 2002. Site has been used exclusively for a marina since.				
9k. Is the project located in or adjacent to a designated state or federal contaminated site or clean-up site.				
(e.g. MTCA or CERCLA)?				
If Yes, provide any additional details below.				
West Bay marina was a previous cleanup site documented by the WA Department of Ecology. Facility Site ID: 92753273. Cleanup Site ID: 6873. No further clean up actions are required.				
91. Has a cultural resource (archaeological) survey been performed on the project area? [help]				
If Yes, attach it to your JARPA package.				
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				

9m. 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 (PS) Chinook salmon (Oncorhynchus tshawytscha), Hood Canal summer-run (HCSR) chum (O. keta), PS steelhead (O. mykiss), Puget Sound/Georgia Basin (PSGB) yelloweye rockfish (Sebastes ruberrimus), PSGB bocaccio (S.paucispinis), Southern Resident killer whales (SRKW) (Orcinus orca), Central America or Mexico humpback whales (Megaptera novaeangliae), the southern DPS of green sturgeon (Acipenser medirostris), the southern distinct population segment (DPS) of eulachon (Thaleichthys pacificus), marbled murrelet (Brachyramphus marmoratus) and bull trout (Salvelinus confluentus)

Critical habitat: Chinook Salmon, Bocaccio, and Southern Resident Killer Whale.

9n. 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]

Big brown bat (Eptesicus fuscus), Little brown bat (Myotis lucifugus), myotis spp (Myotis yumanesis/lucifigus), Yuma myotis (Myotis yumanensis)

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 .
\Box A copy of the SEPA determination or letter of exemption is included with this application.
☑ A SEPA determination is pending with The City of Olympia (lead agency). The expected decision date is2025
□ 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).
\Box 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 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 – <u>Attach Exemption Form</u>		
Washington Department of Natural Resources:		
☑ Aquatic Use Authorization		
Complete <u>JARPA Attachment E</u> 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		
□ Authorization to impact waters of the state, including wetlands (Check this box if the proposed impacts are to waters not subject to the federal Clean Water Act)		
FEDERAL AND TRIBAL GOVERNMENT		
United States Department of the Army (U.S. Army Corps of Engineers):		
\Box Section 404 (discharges into waters of the U.S.) \boxtimes 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:		
Bridge Permit: D13-SMB-D13-BRIDGES@uscg.mil		
□ Private Aids to Navigation (or other non-bridge permits): D13-SMB-D13-PATON@uscg.mil		
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.

11a. Applicant Signature (required)

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.

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.

× Jerome Beruffi	Porome 1	3 conception	11/23/2022
Applicant Printed Name	Applicant Signature	U	Date

11b. Authorized Agent Signature

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.

Tabitha Simonetti	Tabitha Simonetti	7/9/2024	
Authorized Agent Printed Name	Authorized Agent Signature	Date	

11c. Property Owner Signature (if not applicant)

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.

Jerome Baruffi

Property Owner Signature Date 1/23/2022

Property Owner Printed Name

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

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 <u>Supplemental Sheet for Nonproject Actions (Part D)</u>. 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 Find help answering background questions

1. Name of proposed project, if applicable:

West Bay Marina Replacement

2. Name of applicant:

2a. Name (Last, First, Middle)				
Falkenburg, Neil				
2b. Organization (If app	licable)			
West Bay Marina				
2c. Mailing Address (St	reet or PO Box)			
2100 West Bay Dr				
2d. City, State, Zip				
Olympia, WA 98502				
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail	
360.943.2022			westbaymarina@hotmail.com	

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

3a. Name (Last, First, Middle)				
Simonetti, Tabitha				
3b. Organization (If ap	oplicable)			
Marine Floats				
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	Direct office line: 253.386.9201		tabitha@marinefloats.com	

4. Date checklist prepared:

July 9, 2024

5. Agency requesting checklist:

City of Olympia

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

Upon Permit Approval

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.

Site plan, Dive Report/Survey, JARPA, Critical Areas Report

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.

USACE Permit approval, DNR Lease Approval, WDFW HPA (all for this marina replacement project)

10. List any government approvals or permits that will be needed for your proposal, if known.

City of Olympia - Shoreline Permit, SEPA Checklist Review, Building Permit

WDFW - Hydraulic Project Approval

DNR - Lease Approval/ Work Authorization

USACE - Permit Approval

Ecology - Approval

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The existing marina consists of 51,944 square feet of solid decked floats, 45,136 square feet of covered moorage, 1,296 square feet of solid decked pier and ramp, and 405 creosote treated wood piling. It will be replaced with 49,674 square feet of EnviroCrete[®] floats, 1,522 square feet of 100% fiberglass grated pier and ramp, and (171) 12" and (12) 10" galvanized steel piling. The existing boathouses are not part of this project.

EnviroCrete[®] Specifications – Float surface decked with 50% pre-stressed concrete 50% fiberglass grating. Concrete is pre-stressed with stainless steel cable. Grating is fiberglass with $1 \frac{1}{2}$ " x 3/4" squares and 69% open area. All timber is Chemonite pressure treated Douglas/fir glulam's is part of the framing. Metal fasteners are hot dipped galvanized steel or stainless steel. White vinyl rub strip on all edges with pneumatic vinyl corners. Power pedestals equipped with electrical and potable water, and fire system utilities will be installed.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]				
2100 W Bay Drive	e NW			
5c. City, State, Zip) (If the project is not ir	n a city or town, provide the name o	f the nearest city or town.) [<u>help</u>]	
Olympia, WA 985	02			
5d. County [help	ט			
Thurston				
5e. Provide the se	ection, township, a	nd range for the project locat	ion. [<u>help]</u>	
¼ Section	Section Township Range			
	57	18N	02W	
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)				
47.06456, -122.91618				
5g. List the tax parcel number(s) for the project location. [help]				
• The local county assessor's office can provide this information.				
09750018002, 09	750018003			



B. Environmental Elements

1. Earth Find help answering earth questions

a. General description of the site:

The site is a highly developed area within Budd Inlet that consists of commercial marina, parking lot, storage area and ornamental vegetation. There is a small restaurant onsite.

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

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

0-5% Slopes

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.

Site is asphalt and water. Soils consists of Xerorthents.

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

No- N/A to project- project will occur overwater.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

No filling, excavation, or grading.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

No- project is overwater.

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

Site is highly developed and will reduce the float footprint by 2,053 square feet.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any. None- no soil impact project will remain within existing footprint creating no soil disturbance and occur overwater.

2. Air Find help answering air questions

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.

Emissions will come from boats and operating equipment during construction. Boat emissions will remain the same as it is a replacement for the same use of the marina after project is complete.

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

None known- marine environment.

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

None- NA

- 3. Water Find help answering water questions
- a. Surface Water: Find help answering surface water questions
- 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- project occurs in/ overwater – Budd Inlet, Puget Sound

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes installation will occur overwater. See attached plans.

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 a 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 – FEMA Zone V (EL 16) 53067C0158F eff. 5/15/2018.

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 discharge into waters.

b. Ground Water: Find help answering ground water questions

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 a general description, purpose, and approximate quantities if known.

No- N/A to project

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (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.

No- N/A to project

- c. Water Runoff (including stormwater):
- a) 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 to project

b) Could waste materials enter ground or surface waters? If so, generally describe. No- N/A to project

c) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No- N/A to project

d) Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any.

No- N/A to project

4. Plants Find help answering plants questions

- a. Check the types of vegetation found on the site:
 - deciduous tree: alder, maple, aspen, other
 - evergreen tree: fir, cedar, pine, other
 - 🛛 shrubs
 - ⊠ grass
 - **<u>pasture</u>**
 - **□** crop or grain
 - □ orchards, vineyards, or other permanent crops.
 - <u>u</u>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?
- No vegetation removal or alteration.
 - 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 proposed at this time
 - e. List all noxious weeds and invasive species known to be on or near the site.
 - None known

5. Animals Find help answering animal questions

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Hawks, Eagles, Marine Birds, Marine Mammals, Puget Sound fish species

Examples include:

- Birds: hawk, heron, eagle, songbirds, other:
- Mammals: deer, bear, elk, beaver, other:
- Fish: bass, salmon, trout, herring, shellfish, other:
- b. List any threatened and endangered species known to be on or near the site.

Puget Sound (PS) Chinook salmon (Oncorhynchus tshawytscha), Hood Canal summer-run (HCSR) chum (O. keta), PS steelhead (O. mykiss), Puget Sound/Georgia Basin (PSGB) yelloweye rockfish (Sebastes ruberrimus), PSGB bocaccio (S.paucispinis), Southern Resident killer whales (SRKW) (Orcinus orca), Central America or Mexico humpback whales (Megaptera novaeangliae), the southern DPS of green sturgeon (Acipenser medirostris), the southern distinct population segment (DPS) of eulachon (Thaleichthys pacificus), marbled murrelet (Brachyramphus marmoratus) and bull trout (Salvelinus confluentus) Critical habitat: Chinook Salmon, Bocaccio, and Southern Resident Killer Whale.

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

No

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

Ecologically friendly design, construction techniques, and best management practices will be implemented at all times during construction.

1. The design of the marina complies with regulatory agencies criteria. Grated surfaces and ecologically friendly materials will be incorporated throughout.

- 2. Flotation will be permanently encapsulated.
- 3. All pilings are galvanized steel and will be the smallest diameter that is structurally feasible.
- 4. A floating surface boom will be installed, as needed, to capture any debris or oil sheen.

5. Old creosote pilings will not be shaken or scraped and will be taken from the site in a containment basin on a work barge to be properly disposed of at an upland disposal site.

- 6. Piling driven with an air driven vibratory pile hammer for sound attenuation.
- 7. If impact pile driving is implemented a bubble curtain will be utilized.
- 9. Care will be taken to contain all construction debris.
- 10. All applicable BMPs and GCMs will be exercised throughout this project.
- 11. Work windows will be observed.
- 12. Piling is fitted with caps to prevent birds perching.
- 13. Floats will not ground out- depth is adequate to prevent this.
- e. List any invasive animal species known to be on or near the site.

None known

- 6. Energy and Natural Resources Find help answering energy and natural resource questions
- 1. 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.

None

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

No

3. 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.

None- NA

7. Environmental Health Find help with answering environmental health questions

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe. Yes, gas- boat hazards

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

Budd Inlet contaminate parameters:

- Dissolved oxygen
- 2,3,7,8-TCDD (Dioxin)
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene & Benzo(k)fluoranthene
- Dibenzo(a,h)anthracene
- Ideno(1,2,3-c,d)pyrene
- Bacteria Enterococci & Fecal coliform
- Nickel & Copper
- Chrysene
- PCBs
- Sediment bioassay

Site was a previous clean up site documented by Dept of Ecology. Facility ID 92753273, Clean up Site ID 6873. No further clean up required.

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Gas

4. Describe special emergency services that might be required.

Stop the spill and warn others in the area immediately. Shut off any ignition sources, including cigarettes. Contain the spill. Report the spill immediately to BOTH: 1-800-258-5990 (Washington Emergency Management Division) 1-800-424-8802 (National Response Center)

5. Proposed measures to reduce or control environmental health hazards, if any. Spill prevention kit on site- crew is trained in spill response.
b. Noise

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

Normal boat traffic.

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)?

No change long term- boat traffic

Short term- pile driving for construction installation during daylight hours.

3. Proposed measures to reduce or control noise impacts, if any.

Construction during daylight and normal working hours.

8. Land and Shoreline Use Find help answering land and shoreline use questions

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.

Commercial marina on site with small restaurant. Adjacent properties utilize shoreline for use, development and/or construction purposes but are otherwise vacant. No change in use to adjacent properties as marina replacement will remain in the same footprint.

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 because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No

1. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

No

c. Describe any structures on the site.

Storage area, parking lot, commercial marina with some covered moorage, restaurant, office building

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

Marina will be replaced

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

Urban Waterfront

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

Aquatic Shoreline

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

Urban Intensity, Aquatic

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

Yes- Budd Inlet, Puget Sound

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

None

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

None

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

None-N/A

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

All permits and applications will be applied for through the city. No change in use.

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

None- N/A

- 9. Housing Find help answering housing questions
- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or lowincome housing.

None- N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None- N/A

c. Proposed measures to reduce or control housing impacts, if any. None- N/A

None- N/A

10. Aesthetics Find help answering aesthetics questions

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No change in height (reduction as covered moorage will be removed).

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

None project is an existing replacement

c. Proposed measures to reduce or control aesthetic impacts, if any.

Views will be improved - More modern dock design removal of covered moorage.

11. Light and Glare Find help answering light and glare questions

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.

None- N/A

12. Recreation Find help answering recreation questions

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

Fishing, boating, swimming, kayaking, marine activities, 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- improvement to existing use.

13. Historic and Cultural Preservation Find help answering historic and cultural preservation <u>questions</u>

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.

South of the marina there is a historic tugboat called the Sand Man located at Percival Landing, Olympia (Property ID 19672, Resource ID 13941). West inland about 1,000 feet away there is a house (Property ID 497960, Resource ID 445309).

Both properties have not received historically significant determination.

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- if requested during tribal consultation a cultural resource study will be performed

- 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 tribes through USACE and City applications. Use of WISAARD database.
- 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. 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 Find help with answering transportation questions

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.

West Bay Drive NW. Access will be gained via water no expected change in trips- same number of slips from existing to proposed.

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?

No. Nearest bus stop is Division St at Elliot Ave which is 1.1 miles away.

- c. 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
- d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
- Yes Project will occur overwater
- e. 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? No change from existing.
- f. 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 - NA

g. Proposed measures to reduce or control transportation impacts, if any.

None- no change from existing

15. Public Services Find help answering public service questions

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No

- b. Proposed measures to reduce or control direct impacts on public services, if any. None- No change
- **16. Utilities** Find help answering utilities questions
- 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.

No change

C. Signature Find help about who should sign

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.

x.

Type name of signee: Tabitha Simonetti

Position and agency/organization: Environmental Manager – Marine Floats Corporation

Date submitted: 7/9/2023



WEST BAY MARINA REPLACEMENT

Critical Areas Report

Date: June 7, 2024 Prepared for: West Bay Marina 2100 West Bay Drive Olympia, WA 98502

Tabitha Simonetti

313 East F Street Tacoma, WA 98421 (253)383-2740 tsimonetti@aquaticresourcesllc.com

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List of Abbreviations

BMP	Best Management Practice
CAMP	Capitol Asset Management Program
COSMP	City of Olympia Shoreline Master Program
DNR	Department of Natural Resources
DPS	Distinct Population Segment
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
ESU	evolutionary significant unit
FEMA	Federal Emergency Management Agency
FR	Federal Register
НА	Habitat Assessment
MLLW	mean low lower water
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
ODFW	Oregon Department of Fish and Wildlife
OWS	overwater structure
PHS	Priority Habitat and Species
PNW	Pacific Northwest
PSEMP	Puget Sound Ecosystem Monitoring Program
SRKW	Southern Resident Killer Whale
USACE	United States Army Corps of Engineers
USFWS	United State Fish and Wildlife Service
WA	Washington
WDFW	Washington State Department of Fish and Wildlife
WDOE	Washington State Department of Ecology
WRIA	Water Resource Inventory Area
WSCC	Washington State Conservation Commission
WSDOT	Washington State Department of Transportation
WSF	Washington State Ferry

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West Bay Marina Replacement

1 Project Information

1.1 Purpose

The proposed activity is a marina replacement project in Olympia Washington. Based on the location of the project (i.e., within 300 feet of critical fish and wildlife habitat), this Critical Areas Report (CAR) has been developed to meet the requirements of the City of Olympia Shoreline Master Program (COSMP) 3.23-18.20.420- Critical Areas (City of Olympia 2021).

The current use of the property is a commercial marina. The parcel consists of a large, paved parking lot, marina office building, and small restaurant (Tugboat Annie's), and commercial marina. There are scarce trees and ornate shrubs, as well as beach substrate located on the property.

To the north and east of the project parcel is Budd Inlet and an old logging company property; the south consists of commercially developed waterfront property, to the west is West Bay Drive. Layout of the existing site plan can be seen in Figure 1.

1.2 Applicant Information

Name: Neil Falkenburg Title: Property Manager Organization: West Bay Marina Association Phone: (360) 943-2022 Email: <u>westbaymarina@hotmail.com</u> Mailing Address: 2100 West Bay Drive, Olympia, WA 98502

1.3 Biologist Information

Name: Tabitha Simonetti Phone: (253)383-2740 Email: <u>tabitha@marinefloats.com</u> or <u>tsimonetti@aquaticresourcesllc.com</u> Mailing Address: 313 East F Street, Tacoma, WA 98421

Qualifications: Bachelor of Science in Earth and Environmental Science with a focus in Wildlife Ecology and Conservation Sciences (30 semester hours of wildlife coursework) from Washington State University. Five years' experience working with Marine Floats Corporation, Environmental Assessment Services, and Washington State Department of Fish and Wildlife CAMP. Tabitha is also a certified Marine Naturalist by the Friday Harbor, Washington Whale Museum. In addition, she has received training from the Department of Ecology in "How to Administer Development Permits in Washington's Shoreline", "Advanced Shoreline Permitting: No Net Loss and Mitigation", "Flood Recovery Resources", and "How to Conduct a Forage Fish Survey"; Tabitha also has training and experience in determining the Ordinary High-Water Mark. She has also received certification for marbled murrelet monitoring from USFWS.

1.4 Project Location

Address: 2100 West Bay Drive Northwest, Olympia, WA 98502 Section: 57, Township: 18 N, Range: 02 W Parcel Number: 09750018002 & 09750018003 Latitude: 47.06456 N Longitude: -122.91618 W Waterbody: Budd Inlet The Vicinity Map of the Project location can be seen in Figure 2.

2 Project Description

The project site is a commercial marina. The existing marina is out of date and is not composed of environmentally friendly materials. The proposed project will bring the materials up to date and install aspects including grating with a minimum of 69% open area on 100% of the piers and ramps and 50% of the floats. It will remove the creosote treated piling and replace it with galvanized steel. The project will remove the covered moorage. Light penetrability and fully encapsulated floatation will bring the dock up to today's standards. The boat houses are not involved with this project; some might be removed once the marina is upgraded, however they are privately owned by residents that rent moorage space at the marina and not related to this project.

The project will remove and replace the solid decked piers, ramps, floats, and creosote treated wood piling. The project consists of installation of new piers, ramps, piling, and float systems with up-to-date environmental standards in a new configuration. Total existing float square footage is 51,944 square feet, with 45,136 square feet of covered moorage, existing pier and ramps equate to 1,296 square feet and 405 creosote treated wood piling. Total proposed square footage is 49,891 square feet of grated floats, 1,552 square feet of grated piers and ramps, and 187 galvanized steel piling. All covered moorage will be removed, and the overall square footage will be reduced by 2,053 square feet. Dimensions can be seen in the tables below. Figure 3 Shows an overview of the proposed project. Figure 4 shows an overview of the existing removal.

Existing						
A Dock						
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	557	92	3108	1	3108	
	40	3	120	13	1560	
	30	3	90	1	90	
	30.5	3	91.5	5	457.5	
Fingers	24	3	72	1	72	
	35	9	315	1	315	
	21	16	336	1	336	
	46	19	889	1	889	
	Total Squa	are Footage			6827.5	
		B Dock	-	-		
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	722	40	4590	1	4590	
	44	3	132	1	132	
	36.66667	3	110	1	110	
	51.33333	3	154	2	308	
	47.66667	3	143	1	143	
Fingers	45.66667	3	137	2	274	
	50	3	150	1	150	
	39.66667	3	119	1	119	
	4	3	12	4	48	
	30.5	3	91.5	2	183	
	Total Squa	are Footage			6057	
		C Dock				
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	325	98	1390	1	1390	
	88	6	528	1	528	
Finders	135.3333	6	812	1	812	
Filigers	30	3	90	7	630	
	32	27	608	1	608	
	Total Squa	are Footage			3968	
		D Dock				
	Length Width Square Footage Quantity				Total	
Headwalk & Buffer Dimensions	357	48	2436	1	2436	
Findore	44	3	132	2	264	
Filgers	30	3	90	9	810	
Total Square Footage						

Table 1: Existing Marina Dimensions

Existing							
	E	Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	315	75	2024	1	2024		
	20	3	60	3	180		
Finders	24	3	72	1	72		
ringers	30	3	90	8	720		
	40	3	120	8	960		
Tot	al Square F	ootage			3956		
	F	Dock					
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	325	66	1872	1	1872		
Fingers	30	3	90	21	1890		
Tot	al Square F	ootage			3762		
	Length	Width	Height	Square Footage			
	100	65	20	6500			
Covered Moorage	100	65	20	6500			
*(16) Fingers under covered moorage	To	Total Square Footage 13000					
G Dock							
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	324	66	1889	1	1889		
Fingers	30	3	90	20	1800		
			Total Squa	re Footage	3689		
	Length	Width	Height	Square Footage			
	100	65	20	6500			
Covered Moorage	100	65	20	6500			
*(16) Fingers under covered moorage	To	tal Squar	re Footage	13000			
	H L	Dock		- ···			
	Length	Width	Square Footage	Quantity	Total		
Headwalk & Buffer Dimensions	274	86	1570	1	1570		
	30.5	3	91.5	8	732		
Fingers	40	3	120	9	1080		
	36	8	288	1	288		
T.A	1 2 F	Total Square Footage					
Tot	al Square F	ootage		Contraction of the second	3670		
Tot	al Square F Length	ootage Width	Height	Square Footage	3670		
Tot Covered Moorage	tal Square F Length 96	ootage Width 65	Height 20	Square Footage 6240	3670		

Existing						
		I Dock				
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	295	112	2249	1	2249	
Finders	24	3	72	4	288	
ringera	30.5	3	91.5	16	1464	
	Total Squa	re Footage			4001	
		J Dock			-	
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	300	110	2121	1	2121	
	24	3	72	3	216	
	40	3	120	1	120	
Fingers	24	3	72	2	144	
	30.5	3	91.5	9	823.5	
	40	3	120	8	960	
	Total Squa	re Footage			4384.5	
	Length	Width	Height	Square Footage		
	32	65	18	2080		
Covered Moorage	32	65	18	2080		
*(16) Fingers under covered	104	84	20	8736		
moorage	Te	otal Square	Footage	12896		
	_					
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	252	30	1502	1	1502	
Finders	24	3	72	3	216	
1112013	20	3	60	4	240	
	Total Squa	re Footage			1958	
			Headwalk Float	t	-	
	Length	Width	Square Footage	Quantity	Total	
Headwalk & Buffer Dimensions	256	167	6161	1	6161	
	Total Squa	uare Footage 616				
	Pier, I	Ramp, & Pili	ing			
	Squ	are Footage	9			
Pier			88			
Pier		952				
Ramp		256				
Total Square Footage			1296			
Piling	Piling			405		
Summary						
Total Solid Float	51944					
Total Covered Moorage	45136					
Disc and Dama	4000					
Pier and Kamp	1296					

Proposed					
	ŀ	A Dock			
	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	475	234	3342	1	3342
	60	4	240	5	1200
Fingers	60	6	360	1	360
	70	6	420	6	2520
Τα	tal Square I	Footage			7422
	E	B Dock			
	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	435	122	4392	1	4392
Fingers	50	4	200	17	3400
	50	6	300	2	600
To	tal Square	Footage			8392
	(Dock		-	
	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	4/2	122	4/52	1	4/52
Fingers	40	4	160	21	3360
	40	6	240	2	480
Total Square Footage					
		JIJOCK			
	Longth	Width	Saugra Egistada	Quantity	Total
Headwalk & Buffer Dimensions	Length	Width	Square Footage	Quantity	Total
Headwalk & Buffer Dimensions	Length 488 40	Width 88	Square Footage 3904	Quantity 1	Total 3904
Headwalk & Buffer Dimensions	Length 488 40	Width 88 4 14	Square Footage 3904 160 217	Quantity 1 22	Total 3904 3520 217
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40	Width 88 4 14	Square Footage 3904 160 217 240	Quantity 1 22 1 2	Total 3904 3520 217 480
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40	Width 88 4 14 6 Footage	Square Footage 3904 160 217 240	Quantity 1 22 1 2	Total 3904 3520 217 480 8121
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40 tal Square	Width 88 4 14 6 Footage	Square Footage 3904 160 217 240	Quantity 1 22 1 2	Total 3904 3520 217 480 8121
Headwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40 tal Square I E	Width 88 4 14 6 Footage Dock Width	Square Footage 3904 160 217 240 Square Footage	Quantity 1 22 1 2 Quantity	Total 3904 3520 217 480 8121 Total
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions	Length 488 40 15.5 40 tal Square E Length 488	Width 88 4 14 6 Footage Dock Width 88	Square Footage 3904 160 217 240 Square Footage 3904	Quantity 1 22 1 2 Quantity 2	Total 3904 3520 217 480 8121 Total 3904
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions	Length 488 40 15.5 40 ttal Square I E Length 488 40	Width 88 4 14 6 Footage Dock Width 88 4	Square Footage 3904 160 217 240 Square Footage 3904 160	Quantity 1 22 1 2 Quantity 1 22	Total 3904 3520 217 480 8121 Total 3904 3520
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40 tal Square E Length 488 40 40	Width 88 4 14 6 Footage Dock Width 88 4 6	Square Footage 3904 160 217 240 Square Footage 3904 160 240	Quantity 1 22 1 2 Quantity Quantity 1 22 2 2	Total 3904 3520 217 480 8121 Total 3904 3520 480
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers	Length 488 400 15.5 400 tal Square I Ength 488 400 400 tal Square I	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage	Square Footage 3904 160 217 240 Square Footage 3904 160 240	Quantity 1 22 1 2 Quantity 1 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers	Length 488 40 15.5 40 tal Square E Length 488 40 40 40 tal Square	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Footage Footage Footage	Square Footage 3904 160 217 240 Square Footage 3904 160 240	Quantity 1 22 1 2 Quantity 2 2 2 2 2	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers To	Length 488 40 15.5 40 tal Square I Length 488 40 40 tal Square I Length	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 88 4 6 Footage Dock Width	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 3904 160 240	Quantity 1 22 1 2 Quantity 2 Quantity 2 Quantity 2 Quantity	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904
He adwalk & Buffer Dimensions Fingers He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions To He adwalk & Buffer Dimensions	Length 488 400 15.5 400 tal Square Length 488 400 400 tal Square Length Length 491	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 201	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 3904 160 240 Square Footage 3904 160 240	Quantity 1 22 1 2 Quantity 2 Quantity 2 Quantity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 Total 480
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions	Length 488 400 15.5 400 tal Square I Ength 488 400 400 tal Square I Length Length 491 401 401 401 402 402 402 402 402 402 402 402	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 6 Footage Dock Width 4 6 Footage Dock 4 Width 4 6 Footage 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 3904 160 240 Square Footage 400 160	Quantity 1 22 1 2 Quantity Quantity 2 Quantity 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 Total 4600 1920
He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions	Length 488 400 15.5 400 ttal Square I E Length 488 400 400 ttal Square I E Length 491 400 600	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 201 4 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 3904 160 240 Square Footage 4600 160 240	Quantity 1 22 1 2 Quantity Quantity Quantity 1 22 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 7904 Total 4600 1920 240
He adwalk & Buffer Dimensions Fingers He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers Fingers	Length 488 400 15.5 400 tal Square 1 Ength 488 400 400 tal Square 1 Length Length 491 400 600 65	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 201 4 4 4 4 4	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 3904 160 240 Square Footage 4600 160 240	Quantity 1 22 1 2 Quantity 2 Quantity 1 22 2 Quantity 1 1 22 1 1 3	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 7904 7004 1920 240 780
He adwalk & Buffer Dimensions Fingers He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers Fingers	Length 488 400 15.5 400 tal Square I Ength 488 400 400 tal Square I Ength Length 491 400 600 65 700	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 201 4 4 4 6	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 4600 160 240 260 420	Quantity 1 22 1 2 Quantity 2 Quantity 1 2 2 Quantity 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 7904 7904 1920 240 780 1680
He adwalk & Buffer Dimensions Fingers He adwalk & Buffer Dimensions Fingers To He adwalk & Buffer Dimensions Fingers Fingers	Length 488 400 15.5 400 tal Square I Ength 488 400 400 tal Square I Ength Length 491 400 600 65 700 400	Width 88 4 14 6 Footage Dock Width 88 4 6 Footage Dock Width 201 4 4 6 Footage Dock Width 201 4 6 6 6	Square Footage 3904 160 217 240 Square Footage 3904 160 240 Square Footage 4600 160 240 240 240 240 240	Quantity 1 22 1 2 Quantity Quantity 1 22 2 Quantity 1 1 22 1 1 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total 3904 3520 217 480 8121 Total 3904 3520 480 7904 480 7904 4600 1920 240 780 1680 240

Table 2: Proposed Marina Dimensions

Proposed				
Pier, Ramp, & Piling				
Square Footage				
Pier (Overwater)	480			
Ramp	864			
Ramp 208				
Total Square Footage 1552				
	171	12"		
Piling	12	10"		

Summary		
Total Float	49891	
Pier and Ramp	1552	
Piling	183	

2.1 Project Construction Details

The marina replacement project will be installed over the marine waters of Budd Inlet in Olympia, Washington. FEMA (Federal Emergency Management Agency has designated this area as a 100-year floodplain (Zone V EL 16, Effective 5/15/2018).

Construction sequence of the marina replacement will be:

- Demolition: Removal, demolition, and disposal of the existing facility at an approved upland facility includes the following:
- Using a tugboat, barge, crane, pile driver, and associated work boats/skiffs, disconnect the existing floating marina sections and place these on a barge using a barge-mounted crane. A containment bin will be utilized to stow the debris. Containment booms will be deployed, and the existing solid decked marina will be removed at low tide. Any construction debris will be collected and removed.
- Piling Removal: Removal of the existing creosote piling will be accomplished using a tugboat and barge equipped with a pile driver and extractor.
- Removal of the existing creosote wood pilings will be via a barge mounted derrick and vibratory hammer on the construction barge. The vibratory extraction method will be attempted first, then the direct pull method will be used if vibratory is unsuccessful by using a choke cable around the base of the pile. The extracted piling will not be shaken or scraped off and will be placed directly into a containment bin located on the construction barge. If the pile breaks piles located in intertidal and shallow subtidal areas that are less than -10 feet deep
- MLLW shall be cut at least 2 feet below the mudline; In subtidal areas that are greater than -10 feet deep MLLW, piles shall be cut at least 1 foot below the mudline. Piles shall be cut off at lowest practical tide condition and at slack water. This is intended to reduce turbidity due to reduced flow and short water column through which pile must be withdrawn. The contractor shall provide the location of all the broken and cut piles using a GPS. EPA Region 10 and DNR 2016 Best Management Practices will be followed.
- Installation of new galvanized steel piling: The new galvanized steel piling will be barged to the project site from the manufacturer's yard.
- Steel piles will be installed using a vibratory hammer, which takes about 15-20 min. per pile. No proof will be used for non-load bearing piles
- Installation of marina system: Once the piling is in place and secure, the floating marina system, and replacement pier with 100% fiberglass grating will be installed. The new float system will be prefabricated at Marine Floats Corporation facility in Tacoma and towed to Olympia for installation. The new float system is EnviroCrete®¹. Marine Floats Corporation will barge all construction debris to an approved upland disposal site. The aluminum ramps with 100% fiberglass grating will connect the floats to the pier.

¹ EnviroCrete® Specifications – Float surface decked with 50% pre-stressed concrete decking and 50% fiberglass grating. Concrete is pre-stressed with stainless steel cable. Grating is fiberglass with 1 ¹/₂" x 1 ¹/₂" squares and 69% open area. All timber is Chemonite pressure treated Douglas/fir glulam's is part of the framing. Metal fasteners are hot dipped galvanized steel or stainless steel. White vinyl rub strip on all edges with pneumatic vinyl corners. Power pedestals equipped with electrical and potable water, and fire system utilities will be installed.

Marine Floats installs their docks from the water, never from the land, by using the following method:

- The construction crew is small, 2-4 men. A small tugboat pulls the construction barge loaded with supplies to the site. The prefabricated floats are tied behind the barge and pulled to the site via water.
- Existing floats and piling are placed in a containment bin on the construction barge, which is transported back to the facility via water for off-loading and then demolition and disposal at an approved upland facility.
- The new steel piling is driven using a vibratory hammer and crane mounted on the floating construction barge.
- The pre-constructed floats are manually attached to the float piling using pile hoops.
- Depth is sufficient, no float stops will be installed.
- The floats are constructed on the Marine Floats property in Tacoma for each dock system.

2.2 Action Area

The action area is defined as "all areas that may be affected directly or indirectly by the project and not merely the immediate area involved in the action" (USFWS, 2019). The direct location includes Budd Inlet in Olympia, Washington. However, the action area includes sites outside of this due to underwater noise associated with pile replacement.

The potential impact was determined based off the sound levels produced by construction equipment and can be seen in Figure 5. The underwater action area was determined to be approximately 1.3 miles.

At various ranges sound can affect wildlife with various behavioral as well as health consequences (WSDOT 2020). The action area was constructed based on water noise circumference. Water sound attenuation was calculated based on information found in the Biological Assessment Preparation Advanced Training Manal, Version 2020, created from the Washington State Department of Transportation (WSDOT). This analysis will be an overestimate at the highest level of sound prediction. Elements of topography, vegetation, and atmosphere are too variable to measure and are not included in the analysis. These elements often naturally reduce the sound produced by construction (WSDOT 2020).

2.2.1 Underwater Action Area

Impacts on fishes or other aquatic organisms have not been observed in association with vibratory hammers. This may be due to the slower rise time and the fact that the energy produced is spread out over the time it takes to drive the pile. As such, vibratory pile driving is generally considered less harmful to aquatic organisms and is the preferred method.

Vibratory pile driving methods will be utilized for the proposed action. The use of a vibratory hammer will minimize in-water impacts. Turbidity is another consideration among underwater action areas; the noise component is the higher extent and was chosen to evaluate the in-water action area. Various literature sources were evaluated to determine the noise extent of vibratory pile driving. Sources were derived from NMFS "Multispecies NMFS Calculator- Vibratory Proxy Sound Levels tab". Water noise impacts are measured utilizing Root Mean Square decibels (dB_{RMS}). According to Caltrans 2015 vibratory pile driving of a 12-inch diameter steel pipe pile generates 155 dB_{RMS} measured at 10 meters or 32.81 feet from the pile. This number was utilized to evaluate the in-water noise attenuation level for this project. It takes approximately 15-20 minutes to drive a 12-inch diameter steel pile.

Acoustic thresholds established by NOAA were used. To be conservative the lowest behavioral threshold for marine mammals of 120 dB_{RMS} was utilized as the ambient noise level. The "Multispecies NMFS

Calculator- Vibratory Proxy Sound Levels tab" seen in Figure 5was utilized to evaluate the distance in which construction noise will attenuate out to. Construction underwater noise levels will attenuate at 7,068.4 feet. The underwater action area seen in Figure 4, shows that the backing bulkheads will push the noise out of the mouth of the cove. This is an overestimate as there are breakwaters surrounding the marinas in the area that will cause some attenuation of the noise; these were not accounted for in the calculation.

Both vibratory noise and impact noise can create sufficient disturbance to affect the suitability of habitat from a behavioral and physiological sense for listed species. Vibratory noise is a slow rise. The work is not expected to cause any deaths, but juvenile fish in the area may experience additional stress and a loss of fitness due to the exposure.

Work is proposed to occur during the approved in water work windows (IWWW) as determined by Washington State Department of Fish and Wildlife (WDFW) of July 16 through February 15. This will allow for juvenile salmonid species to be at least two grams, reducing the likelihood of a lethal response to the vibratory pile driving. Behavioral responses that impair the juvenile species could lead to impacts regarding predator detection.

3 Species and Habitat Information

3.1 Habitat

The habitat is located within Water Resource Inventory Area (WRIA)13 Deschutes. Photographs of the project site can be seen in Figure 7-

Figure 9.

Washington State Department of Fish and Wildlife's (WDFW) Priority Habitat and Species (PHS) tool classifies the project area as "Aquatic Habitat" with the occurrence name "Estuarine and Marine Wetland". The WDFW PHS map and information can be seen in Figure 10 and Figure 11. The PHS Report shows the species occurrence of Big brown bat, Little Brown bat, myotis spp., and Yuma myotis. There is no documented forage fish spawning in the action area. Schneider Creek is approximately a quarter mile to the south of the project site; this stream contains fall chum, winter steelhead, fall chinook, and coho salmon. An unnamed stream with a listing identification number of 1228960470673 is approximately one mile to the east of the project site; this stream contains fall chum, and coho salmon. The Deschutes River and Indian Creek also occur approximately a mile and a half south of the project location. These streams contain winter steelhead, fall chinook, coastal cutthroat trout, fall chum, and coho salmon (WDFW 2024). The project is within the Deschutes natal estuary Figure 12 (WDFW 2024).

Washington State Department of Ecology (WDOE) Coastal Atlas maps classifies this shoreline as "Marine Shoreline" as seen in Figure 13. The COSMP classifies the site shoreline as being within 300 feet of critical fish and wildlife habitats and codify it as a critical area as adopted by the City Council as of May 18, 2021 (Ordinance 7280) (18.20.420). The COSMP classifies the site shoreline as "Urban Intensity" area as seen in Figure 14 (City of Olympia 2021).

WDOE Coastal Atlas maps classifies the project location as "1% annual chance velocity flood zone" seen in Figure 15 (WDOE 2024). FEMA classifies the area as Zone VE with an Elevation of 16 feet as seen in Figure 16 (Department of Homeland Security 2024).

The USFWS' National Wetlands Inventory maps the wetlands within the project area as Estuarine and Marine Deepwater habitat classification E1UBL as seen in Figure 17. According to WDOE Atlas, the project occurs on the boarder of the upper and lower Budd Inlet Estuary as seen in Figure 18.

The site is in an area with "Modified Slope Stability" as seen in Figure 19. The shoreline consists of "Artificial Coastal Landform" with "No appreciable drift" as seen in Figure 20. There is "No appreciable drift" along the site shoreline as seen in Figure 21 (WDOE 2024).

A dive report was performed by Marine Survey's and Assessment; the habitat map can be seen in Figure 22. The dive report is attached to this application and showed that no submerged aquatic vegetation was found.

3.1.1 Status of species with Critical Habitat in the project action area

Listed species have a potential to occur in the project area. The species that have the potential to occur in the project area as determined by National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) are seen in Table 3.

NMFS/ USFWS Critical Habitat Species	Critical Area within the Project Action Area and Potential of Species Occurrence
Marine Critical Habitat for Puget Sound Chinook Salmon (NMFS, 2005)	Yes
Freshwater Critical Habitat for Puget Sound Chinook Salmon (NMFS, 2005)	No
Critical Habitat for Puget Sound Steelhead (NMFS, 2016)	Yes
Marine Critical Habitat for Hood Canal Summer-run Chum Salmon (NMFS, 2005)	Yes
Freshwater Critical Habitat for Hood Canal Summer-run Chum Salmon (NMFS, 2005)	No
Bull Trout Final Critical Habitat (USFWS, 2010)	No
Bocaccio Rockfish (Puget Sound-Georgia Basin DPS) Critical Habitat (NMFS, 2014)	Yes
Yelloweye Rockfish (Puget Sound-Georgia Basin DPS) Critical Habitat (NMFS, 2014)	No
Green Sturgeon (Southern DPS) Critical Habitat (NMFS, 2009)	No
Marbled Murrelet (USFWS, 2016)	No
Southern Resident Killer Whale (SRKW) Critical Habitat (NMFS, 2021)	Yes
Humpback Whale Critical Habitat (NMFS, 2021)	No
Leatherback Sea Turtle Critical Habitat (NMFS, 2012)	No
Pacific Eulachon (Southern DPS) (NMFS, 2011)	No

Table 3: Designated Critical Habitat: NMFS and USFWS

3.1.1.1 Puget Sound Chinook

Puget Sound Chinook were listed under the Endangered Species Act of 1973 (ESA) as threatened on March 24, 1999 (64 FR 14308) and June 28, 2005 (70 FR 37159); updated April 14, 2014 (79 FR 20802).

Critical habitat was designated for 12 ESUs of West Coast Salmon, including the Puget Sound Chinook Salmon on September 2, 2005 (70 FR 52630).

Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*) are an evolutionary significant unit (ESU), that include naturally spawned Chinook salmon originating from rivers flowing into Puget Sound from the Elwha River, including rivers in Hood Canal, South Sound, North Sound, and the Strait of Georgia. The ESU also includes Chinook Salmon from multiple artificial propagation programs (NOAA Fisheries 2021).

Chinook salmon are the largest of the Pacific salmon. Chinook fry rear in freshwater from three months to one year, one year is typical of spring chinook and fish in northern areas. Most chinook in the Puget Sound area migrate to the marine environment during or shortly after their first year (Myers, et al. 1998).

Chinook migrate from freshwater habitats downstream to the estuary. After leaving the estuarine habitat they enter the Puget Sound and spread out among various nearshore ecosystems. Some rear for weeks and some pass through the estuarian habitat immediately. Habitat use depends on size of the fish, while smaller chum 50-60 mm or smaller stay along the shoreline and in shallow waters, while larger go to deeper water (Fresh 2006). Prey sources vary for salmon; they often feed on organic matter like eelgrass, they also feed on emergent insects and epibenthic crustaceans. The size of the fish, turbidity, temperature, time of year, convergence zones, and climate all effect the feeding and growth of chinook (Simenstad, et al. 1988).

The Deschutes River and Indian Creek occur within the action area of the project; south of the direct project location. Fall Chinook have a documented presence within this stream. Chinook begin entering the river in August and peak in late September and early October. Spawning typically begins in October and goes on until late December. They are considered main stem spawners preferring to spawn in or near the main river channel (ODFW 2024).

The portion of the project below the line of extreme high water is an area designated as critical habitat for the Puget Sound Chinook ESU (70 FR 52630). The project footprint is near Puget Sound Chinook marine critical habitat. The Deschutes River is to the south of the project area, where there is a fall chinook presence (WDFW 2024). It is likely that this species utilizes the shoreline and marine environment surrounding the project location.

3.1.1.2 Puget Sound Steelhead

Puget Sound Steelhead DPS were listed under the ESA as threatened on May 11, 2007 (72 FR 26722). Critical habitat was designated for the DPS of Puget Sound Steelhead in the Puget Sound on February 24, 2016; approximately 2,031 miles of freshwater and estuarine habitat in Puget Sound Washington was designated as critical habitat. (70 FR 52630).

Puget Sound Steelhead (*Oncorhynchus kisutch*) are a DPS throughout the Puget Sound. Freshwater steelhead are known as rainbow trout. Unlike Pacific salmon, steelhead can return to the ocean after spawning and return to freshwater to spawn again. Steelhead fry can spend one to two years in freshwater and three to four years in the open ocean before they return. Steelhead migrated quickly through the Puget Sound estuarine environment to go to the open ocean. They do not have long-term feeding or growth periods in the nearshore areas of Puget Sound (PSEMP, 2012).

South of the project is the Deschutes River, that is designated as critical habitat for the Puget Sound Steelhead DPS. Winter steelhead form a presence in the river and are likely migrate to marine waters

(WDFW 2024). The project site is in the vicinity of the marine waters that are utilized by the Winter steelhead to reach the creeks when they migrate.

3.1.1.3 Hood Canal summer-run Chum

Hood Canal summer-run chum ESU were listed under the ESA as threatened on March 25,1999 (64 FR 14508) and June 28, 2005 (70 FR 37160); updated April 14, 2014 (79 FR 20802). Critical habitat was designated for 12 ESUs of West Coast Salmon, including the Hood Canal summer-run chum on September 2, 2005 (70 FR 52630). Critical habitat includes all of Hood Canal and adjacent shoreline north/northwest, ending near Sequim.

Hood Canal summer chum (*Oncorhynchus keta pop.*) are an ESU that are part of the Puget Sound chum. Chum spawning grounds are near coastal rivers and lowland streams within the Puget Sound. Chum spends more time in the estuarine environment than other species of salmon (Healey 1982). Juvenile chum prey on benthic organisms found in and around eelgrass beds, with a diet changing to drift insects and plankton, as their size increases (Simenstad, Fresh and Salo 1982).

Hood Canal summer-run chum do not have critical habitat within action area. There are no streams that have documented a presence in the action area (WDFW 2024). It is unlikely the species would utilize the shoreline or marine environment near the project site or be adversely affected by the proposed action.

3.1.1.4 Puget Sound Bull Trout

Puget Sound Bull Trout were listed under the ESA as threatened on November 1,1999 (64 FR 58910). Critical habitat was designated on September 26, 2005 (70 FR 56212) and updated on October 18, 2010 (75 FR 63898).

Coastal- Puget Sound bull trout (*Salvelinus confluentus*) are a native salmonid to Washington State. Historically the Puget Sound bull trout were widely distributed throughout the PNW. Several DPSs have become extinct over time. In western Washington the species resident forms exist as anadromous, fluvial, and adfluvial.

Anadromous: Spawning and early rearing in cold-water streams. Major growth occurs in saltwater. Frequent migration into and out of mainstem rivers, estuaries, and saltwater. Adults are piscivorous and are 400–600+ mm (found in Snohomish River) **Fluvial**: Spawning and early rearing in cold-water streams. Major growth occurs during migrations up and down mainstem rivers. Adults piscivorous. 300-500+ mm (e.g., S.F. bull Skokomish River) **Adfluvial**: Spawning and early rearing in cold-water streams. Major growth occurs in lakes or reservoirs. Adults piscivorous. 400-600+ mm (e.g., Cedar River above Chester Morse Lake) (Shellberg 2002).

Puget Sound bull trout live in both marine and freshwater, they are members of the char subgroup of the salmon family. Habitat degradation, dams and diversions, and predation by non-native fish threatened the population causing the USFWS to list the species as threatened under the ESA (64 FR 58910).

The streams in the vicinity of the project are at low elevation, which does not reach water temperatures for spawning requirements. Use of the nearshore environment by bull trout has not been documented (WSCC 2000).

Critical habitat for Coastal-Puget Sound bull trout has been designated by the USFWS in the Puget Sound watershed. The action area has no streams that connect to the presence of the species. Bull trout no longer occupy the upper Deschutes River basin, Crescent Lake or Suttle Lake in the action area vicinity (ODFW 2004). It is unlikely the species would utilize the shoreline or marine environment near the project site or be adversely affected by the proposed action.

3.1.1.5 Rockfish

Two DPSs of Rockfish were listed under the ESA by NMFS. The Yelloweye was listed as threatened and the Georgia Basin DPS of bocaccio rockfish was listed as endangered on April 28, 2010 (75 FR 22276). Critical Habitat for both species was designated on November 13, 2014 (79 FR 68402).

The two species of rockfish listed under the ESA, yelloweye (*Sebastes ruberrimus*) and the Georgia Basin DPS Bocaccio (*Sebastes paucispinis*) critical habitat lies in all of the Puget Sound, the Strait of Juan de Fuca east of Victoria Sill, and south of the North Strait of Georgia (NMFS 2014). Larvae and juvenile rockfish occupy the pelagic environment and have been observed under fee-floating algae, seagrass, and detached kelp (Shaffer, et al. 1995, Love, Yoklavich and Thorstein 2002). Once reaching 3 to 9 cm juvenile rockfish move to the pelagic environment. The bocaccio associates with shallow nearshore areas for up to a year old, while yelloweye moves to deeper waters at an earlier age. Yelloweye have a small home range and remain near the bottom of the water column, while bocaccio have a larger home range and spend time suspended in the water column (Love, Yoklavich and Thorstein 2002).

There is not designated habitat for Rockfish in the project action area (NOAA 2024). Juvenile rockfish are found in high densities of floating and submerged kelp fish, which have not been observed at the project location (NMFS 2014). The Washington State Coastal Atlas Map does not document kelp or eelgrass in the action area (WDOE 2024).

Juvenile bocaccio rockfish within the project's action area may be temporarily affected by the elevated noise from pile driving, causing avoidance of the area. There are not anticipated adverse effects long term.

3.1.1.6 Green Sturgeon- Southern DPS

The Southern DPS of green sturgeon were listed under the ESA as threatened on April 7, 2006 (71 FR 17757). Critical habitat was designated for the Southern DPS of green sturgeon in North America on October 9, 200 (74 FR 52300).

The Southern DPS of green sturgeon (*Acipenser medirostris*) spawns in rivers and migrates to the marine environment to grow and feed. This population is known to migrate to the west coast in the summer and fall months. During migration the population can be found in the bays and estuaries of Washington. Populations were threatened due to overfishing, but mainly degradation of habitat. Dams and culverts prevent the population from migrating back to their spawning habitat in the rivers (NOAA Fisheries 2022).

Green sturgeon of the Southern DPS do not have critical habitat within the action area. It is unlikely the species would utilize the shoreline or marine environment near the project site or be adversely affected by the proposed action.

3.1.1.7 Marbled Murrelets

Marbled murrelets were listed under the ESA as threatened on October 1, 1992 (57 FR 45328). Critical habitat was designated for the species by the USFWS in 1996 (61 FR 26256), revised in 2011 (76 FR 61599), and reviewed again on August 4, 2016 (81 FR 51348) to determine if the ESA definition of critical habitat was still being met. Ultimately designated critical habitat for the species includes approximately 3,698,100 acres in Washington, Oregon, and California.

Marbled murrelets (*Brachyramphus marmoratus*) are small seabirds that dive, feed, and rest on the ocean, they fly inland to nest in old growth forests (USFWS 2016). Habitat for the species is in danger due to habitat degradation, forest fragmentation, climate change, and oil spill entanglement (Defenders of

Wildlife 2022). The species feeds on small fish, for example herring, capelin, and sand lance. These types of fish are found near the shoreline (NPS 2019).

Marbled Murrelet critical habitat is not within the project action area. This species is unlikely to occur in the area. If they are foraging in the action area construction work could deter them from staying in the area temporarily due to the elevated noise levels from pile driving. No long-term adverse effects are anticipated to occur due to the project. If required by USFWS during consultation a Marbled Murrelet Monitoring Plan will be put in place to minimize impacts.

3.1.1.8 Southern Resident Killer Whales

Southern Resident killer whales DPS (SRKW) were listed under the ESA as endangered on November 18, 2005 (70 FR 69903). Critical habitat was designated for the species by the NMFS in 2006 (71 FR 69054) and revised on August 2, 2021 (86 FR 41668). Critical habitat is that of marine waters along the U.S. West Coast between the 20-foot and 656.2-foot depth contour, it spans from the U.S. international border with south Canada to Point Sur, California.

The Southern Resident killer whale DPS (*Orcinus orca*) consists of the three pods J, K, and L. During the late spring, summer and early fall the species resides in the inland waterways of Washington State (Bigg 1982, Ford, Ellis and Balcomb 2000, Krahn 2002). The main reason this species became listed as endangered was due to a lack of prey availability. SRKW mainly feed on salmon and take advantage of the Puget Sound chum and Chinook runs (Baird 2001).

Sighting from 1999-2022 document seven sightings of Southern Resident Killer Whales within the projects quadrat as seen in Figure 23. As required by the Salish Sea Nearshore Programmatic Biological Opinion a marine mammal monitoring plan is proposed to be in place during pile driving to reduce the noise impact on the species.

3.1.1.9 Humpback whale

Fourteen humpback whale DPSs were listed under the ESA as endangered on September 8, 2016 (81 FR 62260). Critical habitat was designated for the species by NMFS in 2021 and amended to add critical habitat for an additional three DPSs on February 17, 2022 (87 FR 8981). Critical Habitat is not designated for this species in the action area.

Humpback whales (*Megaptera novaeangliae*) were listed as an endangered species due to whaling in the 19th and early 20th century (ESC 2020). Humpbacks have been seen in the Puget Sound, but no records were found of Humpbacks in Budd Inlet (Orca Network 2024). A marine mammal monitoring plan is proposed, and it is unlikely that the project will adversely affect the species.

3.1.1.10 Pacific Leatherback Turtle

The Pacific leatherback turtle (*Dermochelys coriacea*) was listed as endangered under the ESA on June 2, 1970 (35 FR 8491). This species has the potential to occur in the Puget Sound, however January 26, 2012 (77 FR 4170) NMFS designated critical habitat to the species along the outer coast of Washington State, not including the Puget Sound.

Leatherback turtles typically occur in oceans worldwide, but they do not breed in Washington State. Those that have been seen foraging near Washington are believed to nest in western New Guinea (WDFW 2022). This species is highly unlikely to be found near the action area, therefore the project is unlikely to adversely affect the species.

3.1.1.11 Pacific Eulachon- Southern DPS

Pacific eulachons Southern DPS was listed under the ESA as threatened on March 18, 2010 (75 FR 13012). Critical habitat was designated for the species by NMFS on October 20, 2011 (76 FR 65324). Critical Habitat is not designated for this species in the action area. The Critical habitat for the Southern DPS of the Pacific eulachons is 16 specific areas with a combination of freshwater creek and rivers and their associated estuaries (76 FR 65324).

Pacific eulachon (*Thaleichthys pacificus*) are anadromous fish, offspring hatch in fresh water and are carried to the estuary nearby by the flow of the river. Once carried to the estuary juveniles move from the nearshore areas to deeper waters and have a wide distribution (Hay 2000, NMFS 2011).

Pacific Eulachon of the Southern DPS do not have critical habitat within the action area. It is unlikely the species would utilize the shoreline or marine environment near the project site or be adversely affected by the proposed action.

3.1.1.12 Forage Fish

Forage fish are small, schooling fish serving as a source of food for other valuable marine mammals, birds, and fish species. Forage fish populations monitored in Washington State, as prey resources include Pacific herring (*Clupea harengus pallasi*), sand lance (*Ammodytes hexapterus*), and surf smelt (*Hypomesus pretiosus*). These species are a key component of the marine ecosystem in the state. Monitoring for these species is key to managing a healthy ecosystem (Bargmann 1998).

Sand lance and surf smelt are not considered concerned, threatened, or endangered by the State or Federal status. Pacific Herring is considered a Species of Concern and a State Candidate species.

According to WDFW and the Department of Natural Resources (DNR) Aquatics Division there is no forage fish spawning habitat in the project area, as seen in Figure 24 (DNR- Aquatics Division and WDFW 2024). In addition, the substrate surrounding the project site does not appear suitable for forage fish spawning.

4 Effect Analysis of Proposed Project

Reviewing this project, the direct and indirect effects to the species and their critical habitats are considered. Existing structures are considered an element of the environmental baseline at the time of the proposed action. Impacts that may occur are based on current baseline conditions as opposed to historical conditions.

4.1 Direct Effects

Direct effects are those effects that will immediately reduce or destroy the listed species and/or their critical habitat. The potential direct impacts would be caused by the construction phase of this project. These potentials include analysis of the effects to the floodplain, noise, and water quality impacts to the surrounding marine environment.

4.1.1 Impacts to FEMA Concerns

FEMA classifies the area as Zone VE with an Elevation of 16 feet as seen in Figure 16Figure 16 (Department of Homeland Security 2024). With the project location occurring in the flood hazard area, Table 4 addresses the possible impacts that could affect ESA Listed Species and critical habitat within the floodplain. This is being addressed in accordance with COSMP 18.20.300 Shoreline Jurisdiction.

Table 4: FEMA Floodplain Related Impacts

Question Regarding Potential Impact on ESA Listed Species and critical habitat	Answer
Does the project involve the removal of native vegetation?	No
Does the project include channel straightening?	No
Does the project result in habitat isolation?	No
Does the project include bank armouring?	No
Does the project reduce flood storage capacity?	No
Does the project adversely affect flood velocities?	No
Does the project adversely affect spawning substrate?	No
Does the project adversely affect floodplain refugia?	No
Does the project result in degradation of water quality?	Yes, for a brief time see Section 4.1.3 .
Will there be construction noise or turbidity effects?	Yes, see Section 4.1.2 and 4.1.3 .

4.1.2 Pile Driving Noise

Pile driving noise is a result of two objects hitting one another with released energy. The sound goes down through the piling and radiates into the bottom of the sediment causing waves in the substrate (Popper and Hastings 2009). Many marine mammals create an auditory scene to navigate the marine environment and pile driving noise can affect this scene (Bergman 1990). Evidence shows increased sound can cause stress levels to enhance due to the noise exposure (Hattingh and Perry 1992). James Anderson concluded that pile driving does affect juvenile fish, through studies within the Puget Sound (1990).

In order to minimize pile driving impacts to the marine environment several steps will be taken to limit the impacts. Pile removal and pile driving will take place between July 15 and February 15, when salmonids are least likely to be in the area. A vibratory pile driver will be utilized and a sediment curtain will be deployed whenever feasible.

As mentioned in Section 3.1.1.7 Marbled murrelets do not have critical habitat in the action area (81 FR 51348). Due to no critical habitat and the use of a vibratory pile driver a murrelet monitoring plan is not proposed for this project. With a lack of sightings, it is unlikely that the species will be in the area while pile driving occurs. However, if requested by USFWS a marbled murrelet monitoring plan will be put in place.

SRKWs have the potential to be impacted by pile driving noise as well. As required by NMFS a marine mammal monitoring plan has been put in place for this project.

4.1.3 Water Quality

As seen in Figure 25 the water quality is a Category 2 with three listings found including parameters of Benzo anthracene, Polychlorinated Biphenyls (PCBs), and Benzo fluoranthene. The sediment is listed with category 1 and 2 sediment in the project action area with 93 listings found (WDOE 2024). The project will follow all BMPs and put in place any additional BMPs as recommended by the Department of Ecology and Environmental Protection Agency.

A 25- foot radius around each pile is considered the action area for potential water quality impacts. Turbidity plumes caused by pile removal and pile driving are expected to settle back to background level after an hour, depending on the sediment type and the currents in the bay. (USACE 2008).

Increased turbidity from pile driving and removal could cause adverse effects on salmon in the vicinity. The increase could affect primary productivity, interfere with fish respiration, alter the suitability of spawning areas, and reduce habitat diversity (Mulvihill, et al. 1980). This project proposes turbidity effects that will be localized and brief.

Water quality impacts from increased turbidity due to construction activities are not expected to travel upstream to nearby creeks. It is likely that the water quality will be temporarily impacted causing marine species to move out of the area. The construction barge will operate in a way 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.

To minimize impacts while removing and installing piling, BMPs will be implemented. The EPA developed, "EPA Region 10 Best Management Practices for Piling Removal and Placement in Washington State" and these BMPs will be followed (EPA 2016). In addition to BMPs, all-work windows will be followed to reduce impact on aquatic species in the area.

4.2 Indirect Effects

Indirect effects are those effects that will occur over time, because of the project and impact the listed species and their critical habitat. The potential indirect impacts that are analyzed are the threat of alteration to salmonid migration pathways, and increased predation.

4.2.1 Salmonid Migratory Pathway Alteration

Juvenile salmonids utilize the nearshore habitats when navigating through their migratory corridor. Estuarine and marine nearshore habitats, like Budd Inlet are often along the migratory corridor. There is evidence to show that overwater structures can alter the movement and behavior of these juvenile migratory species. However, it is unclear what the significance of this alteration is. It is possible that delays in movement or alteration of movement patterns can occur when encountering an overwater structure, but the fitness and survival of the species is unknown (Nightingale and Simenstad 2001). A report by Sothard, et al. (2006) analyzed several studies of the effects of OWS in the form of ferry terminals and the effects they had on salmonids. Results observed several ferry terminals including the Fauntleroy and Edmonds ferry terminals. Findings showed that "juvenile salmon were observed most frequently adjacent to ferry terminals (within 10 m of the edge of the OWS) but were also observed far from (10 to 50 m away) and underneath the terminals" (Southard, et al. 2006). Shading caused by the structures can alter the movement and deter or delay the salmonids from their usual migratory patterns.

Findings have also shown that the response to OWSs is uncertain. Some fish will pass under the dock, some will go around, and others split up the school they are traveling with (Pentec Environmental 1997, Weitkamp 1982). There are varying opinions and evidence of the effect OWS have on salmonid migration patterns.

The proposed action is a replacement for an already existing OWS. Therefore, it is unlikely that the replacement of the structure will alter migration patterns of the species. In addition, the proposed project will eliminate covered moorage and solid decking increasing light penetration in action area. The proposed action will add grating to the structure, ultimately reducing the amount of shading that is currently present at the site.

4.2.2 Increased Predation

There is no evidence of docks accumulating predators of salmonid species in the Puget Sound (Nightingale and Simenstad 2001, Ratte and Salo 1985, Cardwell, et al. 1980). Marine mammals have been known to utilize various structures like breakwaters as haul out areas, but there is no literature to suggest that this increases predation on the juvenile fish species. Pilings are capped to prevent birds from aggregating around the docks. Ultimately this helps provide additional protection for the small migrating fish species.

A report prepared for the Washington State Department of Transportation (WSDOT) found evidence of the following:

We conclude that potential salmon predators were slightly more abundant at WSF terminals as compared with unmodified shorelines, although large aggregations were not observed on any occasion. The spatial distribution patterns of both bird and fish predators rarely overlapped with juvenile salmon oriented in surface waters close to shore (Williams, et al. 2003).

This study shows that the presence of OWS and increased predation does not directly relate to salmonid species moving to deeper waters to avoid predation. Pile caps will be added to the replacement pile to prevent piscivorous birds from perching on piling.

4.2.3 Light Penetration

Overwater structures can reduce light penetration by causing increased shading. Light limitations can stunt growth in algae like *Ulva* or *Entrermorpha* spp. It can also stunt growth in eelgrass and other epibenthic organisms resulting in reduced prey for salmon and bull trout (Berkowitz 2017, Simenstad, et al. 1988). As noted in Section 2, the proposed project will extract the existing solid structure and replace it with one incorporating 50% fiberglass grating on the floats and 100% fiberglass grating on the pier and ramp, that will allow greater light penetration. In addition to removal of covered moorage.

4.3 Interrelated and Interdependent Effects

No additional interrelated or interdepended actions will cause effects on species because of this project. Completion of the project will not further promote construction that would not occur without accomplishment of the project.

4.4 Take Analysis

Section three of the ESA 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. The project has been designed to fit within the guidance of the Salish Sea Nearshore Programmatic Biological Opinion published by USFWS and NMFS, in order to create a project that will not adversely affect species or their critical habitat.

4.5 Determination of Effect

After reviewing the appropriate data and surveys, the determination of effects for the various species is seen in Table 5 below.

Table 5: Effects Determination

NMFS/ USFWS Critical Habitat and Species	Determination of Effect
Marine Critical Habitat for Puget Sound Chinook	May affect, not likely to adversely affect
Salmon (NMFS, 2005)	
Freshwater Critical Habitat for Puget Sound Chinook	No effect
Salmon (NMFS, 2005)	
Critical Habitat for Puget Sound Steelhead (NMFS,	May affect, not likely to adversely affect
2016)	
Marine Critical Habitat for Hood Canal Summer-run	No effect
Chum Salmon (NMFS, 2005)	
Freshwater Critical Habitat for Hood Canal Summer-	No effect
run Chum Salmon (NMFS, 2005)	
Bull Trout Final Critical Habitat (USFWS, 2010)	May affect, not likely to adversely affect
Bocaccio Rockfish (Puget Sound-Georgia Basin DPS)	May affect, not likely to adversely affect
Critical Habitat (NMFS, 2014)	
Yelloweye Rockfish (Puget Sound-Georgia Basin	No effect
DPS) Critical Habitat (NMFS, 2014)	
Green Sturgeon (Southern DPS) Critical Habitat	No effect
(NMFS, 2009)	
Marbled Murrelet (USFWS, 2016)	No effect
Southern Resident Killer Whale (SRKW) Critical	No effect
Habitat (NMFS, 2021)	
Humpback Whale Critical Habitat (NMFS, 2021)	No effect
Leatherback Sea Turtle Critical Habitat (NMFS, 2012)	No effect
Pacific Eulachon (Southern DPS) (NMFS, 2011)	No effect

5 No Net-Loss Analysis

According to the COSMP Section 1.3.C describes the purpose and intent of the Shoreline Master program to ensure, at a minimum, no net loss of shoreline ecological function and process are achieved.

In accordance with WAC 173-26-201(2)(e) the below describes the mitigation sequencing and how the project design complies to achieve no net loss of ecological function:

• Avoiding the impact altogether by not taking a certain action or parts of actions:

- No action would not achieve the goal of the project. The goal of the project is to replace an existing outdated marina that is not up to date with today's standards and regulations. Not performing the action would leave 45,136 square feet of covered moorage and 405 creosote treated wood piling with the South-Central Puget Sound, resulting in harmful chemicals being left to degrade in the shoreline environment.
- 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 project minimizes the design by reducing the overall square footage of overwater coverage by 2,053 square feet and reducing the total piling count by 218. Impacts are reduced through the installation of grated surfaces and removal of covered moorage.

• Rectify the impact by repairing, rehabilitating, or restoring the affected environment:

- The project will result in overall repair and rehabilitation of the affected environment. 51,944 square feet of solid decked floats, 45,136 square feet of covered moorage, 1,296 square feet of solid decked pier and ramp, and 405 creosote treated wood piling will be removed from the location as a result of the project.
- Removal of creosote treated wood piling will restore the natural shoreline in the area through removing unusable overwater structures and harmful chemicals from the aquatic environment. The derelict pilings are uncapped and provide a place for piscivorous birds to prey on fish. The pilings are also treated with creosote which is a highly toxic chemical to marine life that causes mutations and reproductive abnormalities in many species, such as salmon.
 - Toxic Chemicals: Creosote is a wood preservative made from coal tar, containing a mixture of chemicals, including polycyclic aromatic hydrocarbons (PAHs) and phenols. These chemicals are toxic to aquatic organisms and can leach into the surrounding water, soil, and sediment, posing risks to marine life and ecosystems.
 - Bioaccumulation: PAHs and other chemicals in creosote can accumulate in the tissues of marine organisms, leading to bioaccumulation and biomagnification through the food chain. This can result in harmful effects on fish, shellfish, and other wildlife, as well as potential risks to human health through consumption of contaminated seafood.
 - Habitat Degradation: Creosote-treated wood pilings can degrade over time, releasing toxic chemicals into the surrounding environment. This can degrade habitats for fish, shellfish, and other aquatic species, impacting their ability to survive, reproduce, and thrive in the Puget Sound ecosystem.
 - Contaminated Sediments: The leaching of chemicals from creosotetreated wood pilings can result in the accumulation of contaminated sediments in the Puget Sound. These sediments can serve as long-term sources of pollution, affecting water quality and ecosystem health.

• Reducing or eliminating the impact over time by preservation and maintenance operations:

• Maintenance of the dock will be upheld by the owners, as to not let the dock degrade as it exists throughout the useful life. The materials utilized to build the dock adhere to state regulations and are selected based on the latest advancements in scientific research to minimize environmental impacts.

- Compensate for the impact by replacing, enhancing, or providing substitute resources or environments:
 - The project reduces the total overwater coverage and a large amount of creosote treated wood piling. No additional mitigation compensation is proposed at this time, as there is a robust reduction of impacts through the proposed replacement.
- Monitoring the impact and compensation projects and taking appropriate corrective measurements:
 - Post construction notices will be sent to all requesting agencies showing the removal of the existing structures. No additional monitoring is needed for this project.

6 Best Management Practices

Several best management practices will be enacted throughout the design of the project and specific construction techniques will be implemented to avoid and minimize impacts; these are listed below.

- The dock design complies with regulatory agency requirements.
- All permits will be received from the required regulatory agencies before any work commences.
- Floatation will be permanently encapsulated.
- Piling will be driven with a vibratory hammer, utilizing a sediment curtain.
- The pile driver will operate for the minimum days necessary to complete the project.
- A boom will be deployed to contain construction debris.
- A containment bin will be installed on the construction barge, to hold the removed dock.
- Overwater work will be completed during the approved work windows (July 15- February 15).
- The proposed project will incorporate 50% fiberglass grating on the floats and 100% fiberglass grating on the pier and ramp.
- (405) 14" creosote treated wood piling will be removed.
- The overwater footprint will be reduced by 2,053 square feet.
- Any additional provisions and conditions issued by WDFW or the USACE in their respective permits will be followed.
- No net loss of ecological function will be accomplished by the project.
- Barges will not be used within 25 feet of known vegetated shallows; reducing impact to EFH.
- The barge will not ground out and will always remain a minimum of one foot above the substrate; minimizing sediment disturbance within the water column.
- Discharge of oil, fuel, or chemicals into state waters is prohibited by state law. Fuel hoses, oil drums, transfer valves and fittings, etc. will be checked for leaks or drips daily and will be properly stored, maintained, and secured to prevent spills.
 - $\circ~$ In the event of a spill or any discharge the following corrective actions will be taken immediately:
 - The spill of oil or any hazardous material will be reported immediately to the National Response Center at +1(800)424-8802 and to the Washington Emergency Management Division at +1(800)258-5990.
 - If there are distressed or dying fish it will immediately be reported to the Northwest Regional Spill Response Office of the Department of Ecology at (425)649-7000
 - Immediate containment and cleanup of the spilled material will commence. This will include proper disposal of any material used to clean up the spill.

- The source of the spill will be determined and taken care of to prevent any future spills.
- A Spill Prevention, Control, and Countermeasures plan will be put in place and utilized during the duration of the project. Creosote will not be scraped or shaken; it will be placed immediately in a containment basin on the barge after removal.
- Construction will comply with water quality restrictions imposed by the Washington State Department of Ecology (Ecology), reducing turbidity impacts in EFH.
- All General Construction Measures and Project Design Criteria applicable to the project listed in the Salish Sea Nearshore Programmatic Biological Opinion will be implemented (NOAA 2022).

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8 Figures

Figure 1: Existing Site Plan



Figure 2: Vicinity Map

VICINITY MAP





City of Olympia: WA State Parks Gil5, Exil: TorrTom, Germin: SafeGraph, GacRethniopes, Inc, METINASA, USGS, Banesu of Land Nanapement, EPA, NPS, US Census Bureau, USGA, USFAS

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Figure 3: Proposed Project Plan



Figure 4: Existing Removal

EXISTING MARINA



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Figure 5: Underwater Action Area



Figure 6: NMFS Underwater Noise Calculator



Figure 7: Project Backshore



Figure 8: Existing Low Tide Photos.



Figure 9: Department of Ecology, Budd Inlet Shoreline Photo







Figure 10: WDFW Priority Habitat and Species Map

(WDFW 2024)

Figure 11: WDFW Priority Habitat and Species Information

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Sensitive Location
Big brown bat			Yes
Little Brown Bat			Yes
myotis spp			Yes
Yuma myotis			Yes

PHS Species/Habitats Details:

Big brown bat			
Scientific Name	Eptesicus fuscus		
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dftww.agov for obtaining information about masked sensitive species and habitats.		
PHS Listing Status	PHS Listed Occurrence		
Sensitive	Y		
Display Resolution	TOWNSHIP		
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00805		

Little Brown Bat			
Scientific Name	Myotis lucifugus		
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dftww.agov for obtaining information about masked sensitive species and habitats.		
PHS Listing Status	PHS Listed Occurrence		
Sensitive	Y		
Display Resolution	TOWNSHIP		
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00805		

myotis spp			
Scientific Name	Myotis yumanensis/lucifigus		
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfww.agov for obtaining information about masked sensitive species and habitats.		
PHS Listing Status	PHS Listed Occurrence		
Sensitive	Y		
Display Resolution	TOWNSHIP		

Yuma myotis			
Scientific Name	Myotis yumanensis		
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.		
PHS Listing Status	PHS Listed Occurrence		
Sensitive	Y		
Display Resolution	TOWNSHIP		
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00805		

(WDFW 2024)

Figure 12: Pocket Estuary Map – Natal Estuary





600ft

City of Olympia, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | National Oceanic and Atmospheric Administration (NOAA), NOAA Fisheries, NOAA Fisheries West Coast Region

Figure 13: WDOE Coastal Atlas Marine Shoreline Areas





Figure 14: City of Olympia Shoreline Environment Designations Map

(City of Olympia 2021)

Figure 15: WDOE Coastal Atlas Map- Flood Hazard





Figure 16:FEMA Flood Hazard Map



(Department of

Homeland Security 2024)

Figure 17: UFWS Wetland Mapper



(USFWS 2024)

Figure 18:WDOE Coastal Atlas Map-Estuary Map



Figure 19: WDOE Coastal Atlas Map-Slope Stability Map



Figure 20:WDOE Coastal Atlas Map-Coastal Landforms Map



Figure 21:WDOE Coastal Atlas Map-Drift Cells Map



Figure 22: MSA Dive Survey Map

Figure 4. Habitat survey results map; no SAV was observed



(Marine Surveys and Assessments 2024)



Figure 23: NOAA SRKW Sightings 1999-2022

Figure 24: WDFW-DNR Forage Fish Spawning Map

Home - Forage Fish Spawning Map - Washington State

Details	
1) About 📳 Content 📗 Legend	
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(DNR- Aquatics Division and WDFW 2024)



West Bay Water Quality Map

Esri, NASA, NGA, USGS, FEMA Esri Community Maps Contributors, City of Olympia, WA State Parks GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph. Miles 0.05 0.1 0.2

June 11, 2024

360-385-4073 info@msaenvironmental.com



2601 Washington Street Port Townsend WA 98368

West Bay Marina Habitat Survey Report (to accompany map dated 7/1/2024)

A habitat survey was performed on June 4th, 2024 from approximately 9:00am to 4:30pm and June 5th from approximately 9:00am to 12:00pm at the project site located at 2100 W Bay Dr. NW, Olympia, WA. Bryan DeCaterina, Madalyn Walker, Raquel Corniuk, and Amy Leitman of Marine Surveys & Assessments (MSA) surveyed the intertidal and subtidal zone using SCUBA along 29 survey transects to identify flora, fauna, substrate types and other qualitative baseline information for proposed dock reconfiguration. The weather was sunny with a light breeze; water visibility was approximately 20 ft.



Figure 1. Vicinity map of project location

Both survey transect baselines were positioned parallel to the shoreline, where the first set of transects (T-1 to T-13) extended 300 ft. The second survey baseline was established in the water 300 ft waterward of the baseline on shore (i.e. where the first set of transects ended) where T-14 to T-29 extended another 300 ft seaward. Twenty-nine (29) transects in total were surveyed and covered the area of the proposed work area, including a 25-ft buffer. Transects were 300 ft long and were separated by 80 ft due to the uniformity of the benthic environment and absence of submerged aquatic vegetation (SAV). They were arranged from south to north, or when looking at the water from shore, from right to left.

The substrate within the survey area consisted of mainly mud, silt, shells, and diatoms. Pink sea stars (*Pisaster brevispinus*), plumose anemones (*Metridium senile*), a horse clam (*Tresus* sp.), Dungeness crabs (*Metacarcinus magister*), and unidentified sculpins and perch were also observed within the survey area.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

No SAV (e.g. eelgrass, kelp, etc.) was observed within the survey area.

The full survey results can be seen in Table 1 at the end of this report and are summarized in the habitat map (Figure 4).

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





Figure 3. Looking south along the transect baseline

Figure 4. Numerous sea stars near the shore



Figure 4. Habitat survey results map; no SAV was observed





 Table 1. Habitat survey results

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
1	0	-0.5	Mud/Shells	
1	11	-1.6	Mud/Shells/Diatoms	Shore crab
1	30	-2.6	Mud/Shells/Diatoms	Pink sea star
1	41	-3.6	Mud/Diatoms	Pink sea star, Plumose anemone
1	58	-4.6	Mud/Diatoms	Pink sea star
1	89	-5.7	Mud	Pink sea star
1	125	-6.7	Mud	Pink sea star
1	219	-7.7	Mud	Pink sea star
1	280	-7.7	Mud	Pink sea star
1	300	-7.8	Mud	Pink sea star
2	0	-0.3	Mud/Shells	
2	40	-1.3	Mud/Shells/Diatoms	Pink sea star, Perch fish
2	57	-2.3	Mud/Diatoms	Pink sea star, Plumose anemone
2	73	-3.4	Mud/Diatoms	Pink sea star, Plumose anemone
2	100	-4.4	Mud/Diatoms	Pink sea star, Plumose anemone
2	140	-5.4	Mud/Diatoms	Pink sea star, Plumose anemone
2	190	-6.4	Mud/Diatoms	Pink sea star, Plumose anemone
2	240	-7.5	Mud/Diatoms	Pink sea star, Plumose anemone
2	300	-7.5	Mud/Diatoms	Pink sea star, Plumose anemone
3	0	-0.1	Mud/Shells/Diatoms	Pink sea star
3	33	-1.1	Mud/Diatoms	Pink sea star
3	52	-2.1	Mud/Diatoms	Pink sea star
3	69	-3.2	Mud/Diatoms	Pink sea star
3	98	-4.2	Mud/Diatoms	Pink sea star, Float tub or boat
3	155	-5.2	Mud/Diatoms	Pink sea star, Plumose anemone, Moon jellyfish
3	210	-6.2	Mud/Diatoms	Pink sea star, Egg-yolk jellyfish
3	300	-7.3	Mud/Diatoms	Pink sea star, Plumose anemone
4	0		Mud/Shells	
4	19	0.1	Mud/Shells/Diatoms	Pink sea star

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
4	62	-0.9	Mud/Diatoms	Pink sea star
4	105	-1.9	Mud/Diatoms	Pink sea star, Plumose anemone
4	130	-3.0	Mud/Diatoms	Pink sea star, Plumose anemone
4	151	-4.0	Mud/Diatoms	Pink sea star, Plumose anemone
4	200	-5.0	Mud/Diatoms	Pink sea star, Plumose anemone
4	300	-6.0	Mud/Diatoms	Pink sea star, Plumose anemone
5	0		Mud/Shells	
5	29	0.4	Mud/Diatoms	
5	42	-0.7	Mud/Diatoms	Plumose anemone, Pink sea star
5	65	-1.7	Mud/Diatoms	
5	110	-2.7	Mud/Diatoms	Plumose anemone, Pink sea star
5	140	-3.7	Mud/Diatoms	
5	180	-4.8	Mud/Diatoms	
5	230	-5.8	Mud/Diatoms	
5	300	-6.8	Mud/Diatoms	Plumose anemone, Pink sea star
6	0		Mud/Wood Debris	
6	2	2.1	Mud/Wood Debris	
6	38	1.1	Mud/Wood Debris	
6	62	0.0	Mud/Wood Debris	
6	106	-1.0	Mud/Wood Debris	
6	140	-2.0	Mud/Wood Debris	
6	157	-3.1	Mud/Wood Debris	
6	195	-4.1	Mud/Wood Debris	
6	274	-5.2	Mud/Wood Debris	
6	300	-6.2	Mud/Wood Debris	
7	0		Mud/Silt/Shells	Lots of sea stars (Pink sea star)
7	57	1.4	Mud/Silt/Shells	
7	70	0.5	Mud/Sand/Silt	
7	96	-0.5	Mud/Sand/Silt	
7	131	-1.5	Mud/Sand/Silt	
7	142	-2.4	Mud/Sand/Silt	
7	157	-3.4	Mud/Sand/Silt	
7	190	-4.3	Mud/Sand/Silt	

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
7	236	-5.3	Mud/Sand/Silt	
7	278	-6.3	Mud/Sand/Silt	
7	300	-6.2	Mud/Sand/Silt	
8	0		Mud/Silt	
8	140	1.3	Mud/Silt	
8	143	0.3	Mud/Silt	
8	146	-0.8	Mud/Silt	
8	150	-1.8	Mud/Silt	
8	154	-2.8	Mud/Silt	
8	173	-3.9	Mud/Silt	
8	179	-4.9	Mud/Silt	
8	238	-6.0	Mud/Silt	
8	300	-7.0	Mud/Silt	
9	0		Mud/Silt	
9	100	0.7	Mud/Silt	
9	115	-0.3	Mud/Silt	
9	125	-1.3	Mud/Silt	
9	150	-2.2	Mud/Silt	
9	175	-3.2	Mud/Silt	
9	183	-4.2	Mud/Silt	
9	220	-5.1	Mud/Silt	Dungeness crab
9	265	-6.1	Mud/Silt	
9	300	-7.0	Mud/Silt	
10	0		Mud/Silt	
10	92	0.5	Mud/Silt	
10	110	-0.5	Mud/Silt	
10	130	-1.5	Mud/Silt	
10	142	-2.6	Mud/Silt	
10	164	-3.6	Mud/Silt	
10	185	-4.7	Mud/Silt	
10	217.5	-5.7	Mud/Silt	
10	250	-6.7	Mud/Silt	
10	300	-5.8	Mud/Silt	
11	0		Mud/Silt	
11	119	-0.1	Mud/Silt	
11	131	-1.1	Mud/Silt	Dungeness crab
11	145	-2.0	Mud/Silt	
11	163	-3.0	Mud/Silt	
11	196	-4.0	Mud/Silt	
11	215	-4.9	Mud/Silt	
11	248	-5.9	Mud/Silt	

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
11	270	-6.8	Mud/Silt	
11	300	-6.8	Mud/Silt	
12	0		Mud/Silt/Wood Debris	
12	130	-0.2	Mud/Silt	
12	143	-1.3	Mud/Silt	
12	153	-2.3	Mud/Silt	
12	156.5	-3.3	Mud/Silt	
12	160	-4.4	Mud/Silt	
12	179	-5.4	Mud/Silt	
12	181	-6.5	Mud/Silt	
12	200	-7.5	Mud/Silt/Wood Debris	Wood waste
12	221	-8.5	Mud/Silt	
12	239	-7.6	Mud/Silt	Dungeness crab
12	300	-8.6	Mud/Silt	
13	0		Mud/Silt/Wood Debris	
13	90	-1.0	Mud/Silt/Wood Debris	
13	110	-2.0	Mud/Silt/Wood Debris	
13	150	-2.9	Mud/Silt/Wood Debris	
13	210	-3.9	Mud/Silt/Wood Debris	
13	221	-4.8	Mud/Silt/Wood Debris	
13	232	-5.8	Mud/Silt/Wood Debris	
13	251	-6.8	Mud/Silt/Wood Debris	
13	270	-7.7	Mud/Silt/Wood Debris	
13	289	-8.7	Mud/Silt/Wood Debris	
13	300	-8.7	Mud/Silt/Wood Debris	
14	0	-5.6	Mud/Silt/Diatoms	
14	116	-5.6	Mud/Silt/Diatoms	
14	133	-5.5	Mud/Silt/Diatoms/Shells	
14	149	-5.5	Mud/Silt/Diatoms/Shells	
Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
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14	178	-5.5	Mud/Silt/Diatoms	
14	212	-6.4	Mud/Silt/Diatoms	
14	263	-7.4	Mud/Silt/Diatoms	Sculpins
14	285	-8.4	Mud/Silt/Diatoms	Shrimp
14	300	-8.4	Mud/Silt/Diatoms	
15	0	-3.1	Mud/Silt/Diatoms/Shells	
15	42	-4.2	Mud/Silt/Diatoms/Shells	
15	50	-4.2	Mud/Silt/Diatoms	
15	108	-4.2	Mud/Silt/Diatoms	Large 5x5 grate, metal
15	142	-5.2	Mud/Silt/Diatoms	
15	208	-6.3	Mud/Silt/Diatoms	
15	252	-7.3	Mud/Silt/Diatoms	
15	292	-8.3	Mud/Silt/Diatoms	
15	300	-8.3	Mud/Silt/Diatoms	
16	0	-5.1	Mud/Silt/Diatoms/Shells	
16	31	-5.1	Mud/Silt/Diatoms/Shells	
16	45	-6.0	Mud/Silt/Diatoms/Shells	Debris
16	140	-6.0	Mud/Silt/Diatoms/Shells	Large debris with lots of life (Plumose anemone, Dungeness crab, Pink sea star)
16	151	-6.0	Mud/Silt/Diatoms/Shells	
16	193	-7.0	Mud/Silt/Diatoms/Shells	Lots of debris
16	228	-6.9	Mud/Silt/Diatoms/Shells	
16	233	-7.9	Mud/Silt/Diatoms/Shells	Wood plank or plywood
16	245	-7.9	Mud/Silt/Diatoms/Shells	
16	250	-8.9	Mud/Silt/Diatoms/Shells	
16	270	-9.8	Mud/Silt/Diatoms/Shells	
16	281	-10.8	Mud/Silt/Diatoms/Shells	
16	300	-11.8	Mud/Silt/Diatoms	
17	0	-6.6	Mud/Silt/Diatoms	

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
17	156	-7.7	Mud/Silt/Diatoms	
17	247	-8.7	Mud/Silt/Diatoms	
17	270	-9.7	Mud/Silt/Diatoms	
17	300	-10.7	Mud/Silt/Diatoms	
18	0	-8.6	Mud/Silt/Diatoms	
18	17	-8.6	Mud/Silt/Diatoms	
18	80	-9.6	Mud/Silt/Diatoms	
18	177	-10.5	Mud/Silt/Diatoms	
18	206	-11.5	Mud/Silt/Diatoms	
18	238	-12.5	Mud/Silt/Diatoms	
18	257	-13.5	Mud/Silt/Diatoms	
18	265	-13.4	Mud/Silt/Diatoms	Large Debris, Plumose anemone, Dungeness crab, Pink sea star
18	285	-13.4	Mud/Silt/Diatoms	
18	300	-14.4	Mud/Silt/Diatoms	Between T-18 & T-19 there was a horseclam
19	0	-9.0	Mud/Silt/Diatoms	
19	45	-9.0	Mud/Silt/Diatoms/Shells	
19	55	-9.0	Mud/Silt/Diatoms	Plumose anemone, Dungeness crab, Pink sea star
19	62	-10.0	Mud/Silt/Diatoms	Wagon
19	79	-10.1	Mud/Silt/Diatoms/Shells	
19	89	-10.1	Mud/Silt/Diatoms	
19	105	-11.1	Mud/Silt/Diatoms	Debris (rope)
19	133	-11.2	Mud/Silt/Diatoms	Large tubs with wheels (wagon?)
19	159	-11.2	Mud/Silt/Diatoms	Metal
19	204	-11.2	Mud/Silt/Diatoms/Shells	Dungeness crab
19	230	-12.2	Mud/Silt/Diatoms	
19	240	-13.3	Mud/Silt/Diatoms	
19	254	-14.3	Mud/Silt/Diatoms	
19	284	-15.3	Mud/Silt/Diatoms	
19	300	-15.3	Mud/Silt/Diatoms	
20	0	-8.9	Mud/Silt/Diatoms	
20	81	-9.9	Mud/Silt/Diatoms	Plastic crate
20	86	-9.9	Mud/Silt/Diatoms/Shells	

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
20	93	-9.9	Mud/Silt/Diatoms	Metal wire
20	94	-9.8	Mud/Silt/Diatoms	Lots of plastic tarp
20	137	-9.8	Mud/Silt/Diatoms	Sculpins
20	164	-9.8	Mud/Silt/Diatoms/Shells	
20	174	-10.7	Mud/Silt/Diatoms	Large Tub
20	185	-10.7	Mud/Silt/Diatoms	
20	194	-10.7	Mud/Silt/Diatoms/Shells	
20	195	-10.7	Mud/Silt/Diatoms	Ctenophora
20	206	-10.6	Mud/Silt/Diatoms	
20	214	-11.6	Mud/Silt/Diatoms	Debris (small tarp)
20	222	-11.6	Mud/Silt/Diatoms	Debris (small tarp)
20	255	-11.6	Mud/Silt/Diatoms	
20	259	-12.5	Mud/Silt/Diatoms	
20	271	-13.5	Mud/Silt/Diatoms	Large tub or barrel
20	280	-14.5	Mud/Silt/Diatoms/Shells	Plumose anemone, Dungeness crab, Pink sea star
20	289	-14.5	Mud/Silt/Diatoms	
20	300	-15.4	Mud/Silt/Diatoms	
21	0	-8.1	Mud/Silt/Shells	Plumose anemone, Dungeness crab, Pink sea star
21	14	-9.1	Mud/Silt/Shells/Diatoms	
21	58	-10.2	Mud/Silt/Shells/Diatoms	
21	147	-10.2	Mud/Silt/Shells/Diatoms	
21	155	-10.2	Mud/Silt/Diatoms	Debris (helmet)
21	230	-11.2	Mud/Silt/Diatoms	
21	240	-11.3	Mud/Silt/Diatoms	Debris (aluminum can)
21	283	-11.3	Mud/Silt/Shells/Diatoms	Plumose anemone, Metal pipe
21	286	-12.3	Mud/Silt/Shells/Diatoms	Debris (tarp)
21	290	-12.3	Mud/Silt/Shells/Diatoms	Trash/debris
21	294	-13.4	Mud/Silt/Shells/Diatoms	

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
21	300	-14.4	Mud/Silt/Shells/Diatoms	40 ft in between T-21 and T-22 there was a large tub
22	0	-16.0	Mud/Diatoms	
22	10	-16.1	Mud/Diatoms	
22	210	-17.1	Mud/Diatoms	
22	270	-18.2	Mud/Diatoms	
22	275	-19.2	Mud/Diatoms	
22	300	-20.2	Mud/Diatoms	
23	0	-15.6	Mud/Diatoms	
23	70	-16.5	Mud/Diatoms	
23	110	-17.5	Mud/Diatoms	
23	150	-18.5	Mud/Diatoms	
23	175	-18.4	Mud/Diatoms	Float tub
23	180	-19.4	Mud/Diatoms	
23	280	-20.3	Mud/Diatoms	
23	295	-21.3	Mud/Diatoms	
23	300	-21.3	Mud/Diatoms	
24	0	-15.6	Mud/Diatoms	
24	60	-15.7	Mud/Diatoms	Float tubs
24	200	-16.7	Mud/Diatoms	
24	210	-17.7	Mud/Diatoms	
24	230	-18.8	Mud/Diatoms	Between 34' and 50' there are four large 3'x8' tubs
24	270	-19.8	Mud/Diatoms	
24	300	-20.8	Mud/Diatoms	
25	0	-15.2	Mud/Diatoms	Plumose anemone, Dungeness crab
25	49	-15.2	Mud/Diatoms	Float tubs
25	59	-16.1	Mud/Diatoms	
25	80	-17.1	Mud/Diatoms	
25	200	-18.0	Mud/Diatoms	
25	230	-19.0	Mud/Diatoms	
25	250	-19.0	Mud/Diatoms	Float tubs
25	290	-19.9	Mud/Diatoms	
25	300	-19.9	Mud/Diatoms	
26	0	-13.2	Mud/Diatoms	
26	25	-13.3	Mud/Diatoms	
26	55	-14.3	Mud/Diatoms	Float tubs
26	140	-15.3	Mud/Diatoms	Float tubs

Transect	Distance (ft)	Elevation (Corrected to ft MLLW)	Substrate & Other Features Noted	Observations
26	170	-15.4	Mud/Diatoms	Float tubs
26	250	-16.4	Mud/Diatoms	
26	270	-17.5	Mud/Diatoms	
26	290	-18.5	Mud/Diatoms	
26	300	-19.5	Mud/Diatoms	Plumose anemone, Pink sea star
27	0	-12.8	Mud/Diatoms	Plumose anemone, Dungeness crab, Pink sea star
27	40	-13.8	Mud/Diatoms	
27	60	-14.7	Mud/Diatoms	
27	150	-15.7	Mud/Diatoms	
27	195	-15.7	Mud/Diatoms	Log
27	270	-16.6	Mud/Diatoms	Two large metal tubs
27	300	-17.6	Mud/Diatoms	Plumose anemone, Pink sea star
28	0	-10.8	Mud/Diatoms	
28	35	-10.8	Mud/Diatoms	
28	50	-11.8	Mud/Diatoms	
28	60	-12.9	Mud/Diatoms	
28	195	-13.9	Mud/Diatoms	
28	265	-15.0	Mud/Diatoms	
28	300	-16.0	Mud/Diatoms	
29	0	-9.7	Mud/Diatoms	
29	50	-10.7	Mud/Diatoms	
29	70	-11.7	Mud/Diatoms	
29	165	-12.6	Mud/Diatoms	
29	250	-13.6	Mud/Diatoms	
29	300	-14.5	Mud/Diatoms	