

SALISH SEA NEARSHORE PROGRAMMATIC (SSNP) CONSULTATIONS
LIST OF REQUIREMENTS
Version: August 02, 2022

Project Design Criteria (PDC) #4 Shoreline Modifications

Programmatic Endangered Species Act (ESA) Consultations [National Marine Fisheries Service (NMFS) reference number WCRO-2019-04086, U.S. Fish and Wildlife Service (USFWS) reference number FWS/R1/2002-0048454] have been completed for the activities listed below. If you can design your project to meet all of the requirements of the Programmatic Biological Opinions (i.e. General Construction Measures, and Essential Fish Habitat Conservation Recommendations, and PDC's) including the specific project design criteria listed below, then the review of your ESA consultation and permit application will be streamlined. The submittal of this list is not required. However, to further expedite your review you may include a description of how you meet these requirements in your SSNP application materials.

Activities Covered	
<ul style="list-style-type: none"> Repair, replacement, and/or installation of new rock, concrete, untreated wood, and steel sheet pile bulkheads 	
<ul style="list-style-type: none"> Installation of soft and hybrid shoreline activities 	
Notification Requirements	
<p>NMFS notification and verification is required for this activity category. USFWS notification is required for this activity category. The application materials and notification should include the information below, if applicable.</p>	
<ul style="list-style-type: none"> Conservation offsets are required for this PDC, except for the installation of soft and hybrid shoreline treatment. Submit a proposal for conservation offsets and any applicable report(s) (i.e. conservation calculator, habitat improvement plan, pre-sale agreement etc.). See Program Administration Section 8 of the Biological Opinions for supporting information. 	
<ul style="list-style-type: none"> If a bulkhead removal is proposed, a riparian and vegetation planting plan is required. 	
<ul style="list-style-type: none"> Project description should include where applicable the vertical distance of bulkhead toe from MHHW (ft). 	
<ul style="list-style-type: none"> If a minor alteration from the PDC is requested, provide documentation in the notification. See Program Administration Section 6 of the Biological Opinions for supporting information. 	

Project Design Criteria	
	<p>Work will occur during low tide in the approved WDFW in-water work window and in phases to coordinate with tidal exposure. In the case of concrete, General Construction Measure (GCM) #3 applies, requiring 7 days curing time before tidal inundation. Should new concrete technology develop which has a quicker curing rate, information must be provided as part of the project submittal per GCM #3.</p>

	Prior to high tide, block nets will be set to prevent fish from accessing the area behind the new sheet pile installation.
	A barge or land-based equipment will be used to deliver materials and barge grounding must be avoided at any time.
	Bulkhead removals must include submittal and implementation of a riparian vegetation planting plan (RVPP) where riparian vegetation or areas where riparian vegetation naturally would occur have been disturbed. The RVPP must be submitted to NMFS and the Corps as part of the SSNP ESA application materials.
	Fill all beach depressions created during construction prior to the next inundating tide
	New armoring must follow Integrated Streambank Protection Guidelines (Cramer et al. 2002). See the Biological Opinions for supporting information.
	Soft Shoreline Treatments Design Criteria
	No or minimal use of artificial structural elements.
	Beach nourishment (sand and small gravel) Incorporated.
	Riparian plantings incorporated or allow for recruitment of native vegetation, including overhanging vegetation.
	Large wood recruitment incorporated or allow for, including allowances for small toe erosion protection where necessary, but where the wood does not act as a berm or a crib.
	Large wood may be chained as part of the design.
	Boulders may be incorporated into the design but must not be used as a primary slope stabilizing element.
	Degradable fabric and support filters may be used but must be designed and constructed to prevent surface exposure of the material through time.
	Hybrid Shoreline Treatments Design Criteria
	Contains artificial structure that allows for some biological processes to occur (such as forage fish spawning) but inhibits some ecological processes to fully occur (such as suppressing some sediment transport, supply or accretion), but not fully ceasing the process as with hardened approaches.
	Exposed rock, if used, must be discontinuously placed on the beach (i.e., not act as a berm or scour sediments)
	For any individual project, a hybrid approach may not contain more than 30 percent of exposed rock as measured against the length of the project beach.
	Buried rock may be used below grade where necessary to stabilize the toe of the slope and must be covered with sand/small gravel mixes in such a way to minimize net erosion through time.
	Hybrid shoreline techniques are an evolving science and individual review and verification of this category by NMFS will evaluate which proposed hybrid techniques will appropriately avoid and minimize impacts and thus be acceptable under this category.
	Incorporate beach nourishment (sand and small gravel) as needed to minimize lowering of beach grade and net erosion.