

Table 1. Skagit Shoreline Needs Assessment Prioritization Framework and Process

Prioritization attribute	Description	Data Source	Maximum score	Scoring
STEP 1: Determine ecological value of the location by evaluating criteria associated with the type and quality of the habitat based on available data. <i>The sum of the scores in the Ecological Function category represents the “ecological value”. Higher scores would indicate higher ecological value.</i>				
ECOLOGICAL FUNCTION				
Forage fish spawning	Documented forage fish spawning at location or nearby herring spawning. Consider beach spawners separately from herring. Documented spawning is indicative of the presence of appropriate habitat, either currently or in the recent past.	WDFW	6	6 → documented presence within 200 ft 0 → no documented presence or habitat
Eelgrass presence	Documented presence of eelgrass (<i>Zostera marina</i> or <i>Zostera japonica</i> combined) in proximity. Eelgrass documented habitat would provide high quality nearshore resources for a variety of species.	DNR	6	6 → documented presence within 200 ft 0 → no documented presence or habitat
Kelp presence	Documented presence of kelp (e.g., <i>Nereocystis luetkeana</i> , <i>Laminaria</i> spp.). Kelp documented would provide high quality nearshore resources for a variety of species.	DNR (Floating Kelp Forest Indicator)	6	6 → documented presence within 200 ft 0 → no documented presence or habitat
Tidal marsh or wetland habitat	Current presence of tidal marsh or wetland habitat on the parcel or adjacent to shoreline segment. Tidal marshes and wetlands are important features of functioning nearshore and riparian habitats.	NWI PSNERP	3	3 → mapped wetland 0 → no
Proximity to natal estuary	Assesses whether the proposed location is within 5-mile buffer of salmonid natal streams. NMFS is currently using a 5-mile buffer when assessing impacts of proposed projects, so this analysis is consistent.	NMFS	2	2 → Within 5 miles of natal estuary 0 → >5 miles to stream
Distance to stream	Distance (as fish would swim) to nearest the stream (not necessarily natal stream). Streams are important habitat for nearshore species and represent key connections to terrestrial ecosystems. Only type F (fish bearing) streams included.	Synthetic streams and/or Statewide Washington Integrated Fish Distribution , depending on coverage	4	4 → stream on parcel 2 → <0.5 miles to stream 0 → >0.5 miles to stream
Land cover	Considers the proportion of the upland/riparian area that is natural versus developed. NOAA’s C-CAP dataset classifies land cover into one of 24 land cover types, including both developed and undeveloped types.	NOAA Coastal Change Analysis Program (C-CAP)	3	3 → majority of upland area is natural 0 → majority of upland area is developed
Shoretype and erosion potential	Potential for erosion of the shoreline based on fetch and shoretype. Dominant shoretypes include Pocket Beach (PB), Accretion Shoreform (AS), Feeder Bluff (FB), Feeder Bluff Exceptional (FBE), No Appreciable Drift (NAD), or Transport Zone (TZ). Locations score high if they are identified as a pocket beach and have a low potential for erosion or are identified as a feeder bluff with a high potential for erosion.	Beach Strategies	8	8 → PB with erosion potential of 3-4 OR FB/FBE with erosion potential of 7-8 6 → PB with erosion potential of 5-6 4 → FB/FBE with erosion potential of 5-6 2 → AS or TZ 0 → NAD
Sediment quality	Based on data from the Washington Department of Ecology that captures assessed sediments under the Clean Water Act: Water Quality Standards. Category 1 and areas that have not been assessed are considered to have high sediment quality. Category 5 represents the lowest quality.	Water Quality Atlas	6	6 → Category 1 or no data 4 → Category 2 or 3 2 → Category 4 0 → Category 5 (303(d) list)
Water quality	Based on data from the Washington Department of Ecology that captures assessed waters under the Clean Water Act: Water Quality Standards. Category 1 and areas that have not been assessed are considered to have high water quality. Category 5 represents the lowest quality.	Water Quality Atlas	6	6 → Category 1 or no data 4 → Category 2 or 3 2 → Category 4 0 → Category 5 (303(d) list)
TOTAL			50	Higher scores indicate higher ecological value.

STEP 2: Identify restoration options at locations that would support ecological function.

Attributes in the Restoration Potential category would help to identify armoring removal, riparian restoration, overwater structure removal, and general shoreline restoration projects.

RESTORATION POTENTIAL				
Historic wetlands	The Puget Sound Nearshore Ecosystem Restoration Project captured historic wetlands and past estuary extents. When considering restoration opportunities, this data highlights locations that could be restored to a past high-value condition.	PSNERP	4	4 → yes, within 200 ft 0 → no
Presence of overwater structures	Considers whether overwater structures are present on the parcel or along the shoreline. Removal of overwater structures is a restoration action with high uplift potential.	DNR	5	5 → yes, within 200 ft 0 → no
Armoring	Armoring identified along the shoreline. Removal of armoring and creating a soft shoreline could improve shoreline functions.	Beach Strategies	5	5 → yes, within 200 ft 0 → no
Structures adjacent to shoreline	Presence of structures on the nearshore parcel. Potential removal of structures adjacent to the shoreline could improve riparian habitat and connectivity.	Skagit County Assessor	4	4 → yes 0 → no
Stream barriers	Documented barriers to fish passage on the parcel/within the drift cell or upstream of an identified stream. Removal of a stream barrier could be a restoration opportunity. This is also an important consideration if actions are being considered downstream of a stream barrier.	WDFW	3	3 → stream barrier present 1 → barrier upstream 0 → no stream barrier
Sea level rise risk	Risk of the location being affected by sea level rise. May help to highlight locations where restoration actions could help mitigate effects of sea level rise.	Puget Sound Parcel-scale Sea Level Rise Vulnerability Assessment	4	4 → high 1 → med 0 → low
TOTAL			25	Higher scores indicate greater opportunity for restoration.