

SHORELINE AREA (Reach Code): Marine 9 Boulevard Park

REACH NUMBER: 35

Land Use	Current Land Use	Public park and multifamily uses (Ref# 8, 54, 71)
	Zoning	21.2 acres water, 12.5 acres public, 4.1 acres residential, 1.3 acres commercial (Ref# 54)
Potential Species Present	Wildlife species	3.7 acres of mustelid and 13.6 acres of pinneped habitat; vulnerable water bird habitat (offshore winter diving bird concentrations). Pigeon guillemot nesting within reach – nests may have been destroyed with Taylor Street dock work. (Ref# 3, 70, 71,105)
	Fish species	Surf smelt and sand lance spawning at south end of reach. Presumed presence of Coho and Bull trout. (Ref# 3, 70, 71,105)
	PHS species/habitat	Vulnerable water bird habitat (offshore winter diving bird concentrations). Pigeon Gillemot nesting in this reach (docks, bluffs?). Surf smelt and sand lance spawning at south end of reach (vulnerable aggregations). (Ref# 3, 70, 71,105)
	TSE species	Chinook in bay (FT & SC). Coho (FCo) and Bull trout (FT) presumed. (Ref# 92, 93)
	Invasive wildlife/fish species	No data
Physical Environment	Acres of land in reach	39.1 acres total with 16.7 acres of land and 22.4 acres of water (Ref# 13)
	Aquatic vegetation	5.6 acres green algae, 1.9 acres eelgrass (Ref# 97, 98)
	Slope	Slope in this reach range from areas of 0-5% slopes and 20-50% slopes or greater. (Ref# 47, 103)
	Buildings	10 buildings covering 1.05 total acres (Ref# 16)
	Culverts/stormwater utilities	One stormwater outfall near Taylor dock. No retention basins identified. (Ref# 40, 41, 42)
	Geology	Continental sedimentary deposits and alluvium. Land slide hazard area indicated on slopes 15-35% or greater. Seismic hazard area (man-made fill) is also indicated (Ref# 21, 51, 63)
	Tributary Creeks	None indicated (Ref# 8, 42, 71)
	Impervious surface	42% impervious, 38% semi pervious, 20% pervious (Ref# 12)
	Invasive plant species	No data
	Roads/transportation	0.3 miles (0.7 acres) roads, 0.5 miles rail (Ref# 34, 44, 46)
	Soils	22.7 acres of soils with high infiltration rates and low runoff potential (Hydrologic soil Group A). Erosion potential: 22.7 acres slight risk, 16.5 acres high risk. (Ref# 51, 63)
	Topography	Range 0 to 76'; mean 11' (Ref# 47)
	FEMA	21.5 acres in 100 year floodplain, no floodway in reach (Ref# 19)
Terrestrial Vegetation	Mix of landscaped lawns and shrub communities. (Ref# 8, 71)	
Marine Aquatic Function	Aquatic substrate type	4.5 acres mixed coarse, 3.4 acres mixed fines, 2.1 acres artificial, 1.0 acres gravels (Ref# 3, 99)
	Creosote structures	Creosote structures present along board walk (Ref# 71, 73, 74, 99)
	In-water structures	Taylor street dock, Boulevard Park boardwalk and dock (Ref# 71, 73, 74, 99)
	Bulkheads	Rip-rap bulkhead along most of reach (Ref# 71, 73, 74, 99)
	DOE 303(d)	Inner Bay, no data. Outer Bay – cat 5 dissolved O2, Cat 2 pH, Cat 1 for Fecal, pH, and temp. (Ref# 81)
	Toxic sites/land fills	Off Boulevard Park. Sediment: (confirmed) EPA priority pollutants, petroleum products, and PAH's, including areas that exceeds SQS levels. Suspected: Organic conventional contaminants (organic matter that elevates BOD, COD, or TOC). Groundwater (confirmed) EPA priority pollutants, petroleum products, and PAH. Exxon Mobil Oil Corp site (908 10 th St). Sediments: (confirmed) EPA priority pollutants, PAH's (suspected) petroleum products, non-halogenated solvents. Groundwater (suspected) petroleum, non-halogenated solvents, and

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		EPA priority pollutants. Taylor Avenue Dock. Sediments (confirmed) PAH's. (Ref# 79, 80)
	Bathymetry	-24.0' to 0' range; -3.1 mean (Ref# 25,31)
	Wave energy	14.3 acres partially enclosed (Ref# 3, 99)
	Point source pollution	No data
	Waterways/dredge beds	None identified (Ref# 3, 99)
	Drift cells	South (Ref# 3, 99)
Marine Ecosystem	Beach characterization	No data
	High-Low tide lines	4.5 acres- beach
	Erosion/accretion zones	No data
Historic & Cultural	Historic aerials	See Waterfront futures website http://www.waterfrontfutures.org/learnmore/lm_photo_gallery.htm (Ref# 99)
	Archeological sites	No data
	Historic sites	None indicated (Ref# 77)
	Parks & public access	2.4 acres in open space (12.4 acres in parks zoning) (Ref# 33, 34, 36, 48)
Function Analysis	Reach Function	(Ref# for following 1, 2, 5, 69, 70, 71)
	<ul style="list-style-type: none"> Hydrologic Shoreline Vegetation Habitat 	Slightly impaired – rip rap Impaired to slightly impaired. Areas within main body of park dominated by lawn. Native shrubs and trees are interspersed along board walk
	Limiting Factors	<ul style="list-style-type: none"> Terrestrial – impaired to slightly impaired, poor cover and connectivity Intertidal – impaired in areas with rip rap and armoring/functioning in areas without armoring Shallow and deep water habitats – moderate to high function. High forage fish spawning in pocket beaches. Rip rap along Boulevard park and railroad tracks, shoreline armaments Off shore toxic site may present contamination risk Limited shoreline vegetation Existing active park uses may compete with habitat enhancement needs.
	Functions	All functions sustainable particularly with enhancements None identified
	Priority Actions	<ul style="list-style-type: none"> Remove rip rap and large rock along Boulevard Park shoreline and replace with finer substrate; or the addition of finer substrate between interstices to increase subtidal eelgrass beds (BBDP action # 21). (Ref# 73) Conservation of eelgrass bed. (Ref# 1, 73)
	Current Enhancement Projects	<ul style="list-style-type: none"> Taylor Street dock reconstruction has been performed that included removal of creosote piles. Shoreline plantings by City of Bellingham along portions of boardwalk.
	Preservation/Enhancement Opportunities	<ul style="list-style-type: none"> Enhance wetland located north of the Taylor Street dock. (Ref# 1, 73) Continue shoreline plantings.