

Marine Watershed Summary Sheet

Landscape Setting	Landscape Setting	The Marine SMA is 928.8 acres in size. The SMA is situated within northeast and southern portions of Bellingham Bay. The watershed includes intensive industrial, commercial and residential uses. The highest intensity uses are located in the vicinity of Squalicum, Whatcom and Padden Creek estuary areas. (Ref# 8, 54, 71)
	Geology	The northern portion of the watershed is glacial marine drift and continental outwash; whereas the southern portion is dominated by continental sediment deposits and bedrock. Moderate to steep marine bluffs are present northwest of Squalicum Creek and south of the City sewer treatment plant. (Ref# 21, 51, 63)
	Soils	Soils range widely in their infiltration rates and risk of erosion, although most soils have slow infiltration rates and a moderately high risk of erosion. (Ref # 51, 63)
Land Use	Zoning	Residential zoning dominates the northwest and southern portions of the SMA and a portion between downtown Bellingham and Fairhaven. Industrial and commercial zoning dominates between Squalicum Creek and Cornwall Ave. Industrial zoning also dominates in the vicinity of Padden Creek Lagoon. Areas draining into the Marine SMA are heavily developed with residential, commercial and industrial uses in most areas. Less intense development is present at the extreme northwest and southern portions of the SMA. (Ref # 54, 104)
	Transportation and Utilities	The SMA and outlying associated areas include a large number of arterials and secondary roads. The Burlington Northern/Santa Fe Railroad dominates most portions of the shoreline, but lays away from the immediate shoreline through the Squalicum Marina, GP property areas and Clark's Point. Squalicum Harbor provides moorage to commercial and recreational watercraft. Three formal Waterways are located in Bellingham Bay: Squalicum Waterway; I/J Waterway; and Whatcom Waterway (Ref# 35, 44, 46, 3, 99).
	Public Access	Formal public access is provided in a number of locations including: Squalicum Beach; Squalicum Marina (Pete Zuanich Park), Boulevard Park, Taylor Street Dock and boardwalk, Padden Creek Lagoon, Marine Park and Sewer Treatment Park and a small beach in Chuckanut Bay. Unofficial access and use are common in many areas within the SMA. Greenway trails also parallel and connect to other trail systems within the City to the Marine system. (Ref# 33, 36, 48)
	Shoreline Modifications	Shoreline modifications are extensive within the industrial and commercially zoned areas of the SMA. The railroad bed has separated the marine system from native soil and rock material in most areas. The only significant areas that lack some shoreline alteration in the SMA are Reaches 1, 2, 18, and 19. In water structures are common in many areas and include docks and old rail trestles. Creosote structures are also frequent along the entire SMA (Ref# 71, 73, 74, 99)
Critical Areas	Wetlands	The frequency of wetlands within the SMA is generally low, primarily located at Little Squalicum Beach, Padden Lagoon, and a small wetland north of Taylor Street dock. Wetlands within the outlying areas draining into the SMA are generally low due to past development and fill. Most remaining wetlands are associated with incoming streams (Ref# 52, 11, 78, 102)
	Streams	Little Squalicum, Squalicum, Whatcom, Padden and Chuckanut Creeks all drain into the SMA. (Ref# 38, 78, 102)
	Frequently Flooded Areas	A number of areas within the SMA are located in the floodplain, but only areas near drainages are located in any floodway. (Ref# 19)

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Steep Slopes	<p>Many of the marine bluffs are mapped by Whatcom County Critical Areas maps as “landslide hazard” areas. Artificial fill is present in the Squalicum Harbor, the mouth of Whatcom Creek, the toe of Cornwall Avenue and in the industrial area of Fairhaven. These areas are indicated to be “Seismic Hazards” on the WC Critical Areas Maps. (Ref# 103)</p>
Wildlife	<p>The SMA provides a wide range of wildlife habitat functions. Reaches at in the northwest and southern ends of the SMA provide functions at the highest level, but other reaches still provide significant fish and wildlife function including:</p> <ul style="list-style-type: none"> • Priority habitats include forage fish spawning habitat, off-shore seasonal diving bird concentrations, soft sediment bird populations, dabbling duck concentration areas; • Pinneped (seal and seal lion haul outs); • Roosting and nesting areas for cormorants, glaucous-winged gull and Caspian tern; • Bald eagle nesting territory at south end of SMA; • Offshore high densities of demersal fish, pandalid shrimp, crab along portions of SMA; • Chuckanut Bay contains only hardshell clam bed in SMA; and • Chinook, Chum, coho, sea-run cutthroat, bull trout, steelhead all documented in SMA. <p>(Ref# for above 3, 70, 71, 105)</p>
Overall Function	<p>The Marine SMA is provides functions at a range of levels. Reaches at the northwest and southern ends of the SMA provide functions at high levels; where Reaches in areas of high intensity use tend of serve functions at low to moderate levels. (Ref# 1, 71, 73)</p>
Hydrologic	<p>The hydrologic functions have been impaired by shoreline modifications and the railroad bed separating the native shoreline from the waterline.</p>
Shoreline Vegetation	<ul style="list-style-type: none"> • Shoreline vegetation is slightly impaired to unimpaired at the northwestern and southern ends of the SMA. • Shoreline vegetation is impaired to slightly impaired between Squalicum Creek and Post Point. <p>(Ref# for above 1, 71, 73)</p>
Ecological Functions Habitat <ul style="list-style-type: none"> • Terrestrial • Aquatic 	<ul style="list-style-type: none"> • Terrestrial habitat is slightly impaired to unimpaired at the northwestern and southern ends of the SMA. • Terrestrial habitat is impaired to slightly impaired between Squalicum Creek and Post Point. • Aquatic habitat is slightly impaired to unimpaired at the northwestern and southern ends of the SMA. • Aquatic habitat is impaired to slightly impaired between Squalicum Creek and Post Point. <p>(Ref# for above 1, 71, 73)</p>
Limiting Functions	<ul style="list-style-type: none"> • Railbed • Existing land use in industrial areas • Shoreline modifications in industrial areas

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	<ul style="list-style-type: none"> • Lack of aquatic connectivity from riparian habitats to marine systems • Lack of terrestrial connectivity in areas of high intensity use.
Priority Actions	<ul style="list-style-type: none"> • Preserve existing high function habitat (i.e. eelgrass , terrestrial and shoreline habitat and reaches 15-17) • Establish habitat islands for out migrating salmonids. • Create additional backshore habitats at Boulevard Park and Squalicum Beach
Current Enhancement Projects	<ul style="list-style-type: none"> • Restoration of habitat at Marine Park • GP log pond restoration • Removal of in-water structures in Squalicum Waterway proposed • Padden Lagoon Shoreline plantings <p>(Ref# 1, 71, 73)</p>
Preservation/Enhancement Opportunities	<ul style="list-style-type: none"> • Preserve eelgrass beds • General invasive species control in existing shoreline vegetation. • Increase tidal influence to lagoons at south end of SMA. • Enhance canopy in selected areas with existing shoreline vegetation. • Enhance eelgrass bed near Cornwall Landfill by removing debris. <p>See reach analysis sheets for more and references.</p>