

**Shoreline Critical Areas  
Best Available Science Consistency Review**

**Summary Report  
City of Bainbridge Island  
Critical Areas Ordinance and Shoreline Management Master Program**

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## Introduction

This report has been prepared to examine the protections provided by the City of Bainbridge Island Critical Areas Ordinance (CAO) and the Shoreline Management Master Program for marine critical areas. Bainbridge Island CAO, Ordinance 2005-03 was appealed by the Suquamish Tribe at the Central Puget Sound Growth Hearings Board. The question posed by the tribe was:

Does the adoption of Ordinance 2005-03, which adopted an updated and revised critical area ordinance, fail to comply with RCW 36.70A.130, RCW 36.70A.020(9), RCW 36.70A.020(10), RCW 36.70A.060, RCW 36.70A.170 and RCW 36.70A.172 when it fails to designate any more shorelines as critical areas and does not adopt development regulations based on best available science to protect the functions and values of marine shoreline habitats as required by the GMA?

The Bainbridge Island City Council believes that the combination of the protection provided by the CAO and SMMP are adequate to protect the critical areas found on the marine shorelines. To determine the level of protection provided by these regulations, this analysis reviews what protections are provided by these regulations and how these regulations are interrelated. This document will be reviewed by the consultant and used along with the complete regulations in the determination of whether these protections are consistent with what best available science.

## CAO - Shoreline Critical Areas Defined

Critical Areas Ordinance classifications applicable to the protection and management of critical areas and anadromous fisheries associated with the City's shorelines are as follows.

### Fish and Wildlife Habitat Conservation Areas

Fish and Wildlife Habitat Conservation Areas are classified into the following categories [CAO pg.30; 16.20.130(B)(1)]:

#### Marine Critical Areas:

- Commercial and recreational shellfish areas;
- Kelp and eelgrass beds;
- Marine and estuarine waters of the state; and
- Herring, sand lance, and smelt spawning areas. [CAO pg.30; 16.20.130(B)(1)(a)]

Class I Fish and Wildlife Habitat Conservation Areas – habitats recognized by federal or state agencies for federal and/or state listed endangered, threatened, and sensitive species documented in maps or databases available to the City of Bainbridge Island and which, if

altered, may reduce the likelihood that the species will maintain and reproduce over the long term. [CAO pg.30; 16.20.130(B)(1)(c)(i)]

Class II Fish and Wildlife Habitat Conservation Areas – habitats for state listed candidate, monitor, or priority species documented in maps or databases available to the City of Bainbridge Island and its citizens, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. [CAO pg.30; 16.20.130(B)(1)(c)(ii)]

The following classifications are not applicable to this analysis for areas that are beyond the marine shoreline:

- Streams would not be applicable for streams beyond the tidal area. [CAO pg.30; 16.20.130(B)(1)(b)]
- 
- Habitats and Species of Local Importance not applicable since there are no habitats and species of local importance currently designated. These provisions could be applicable if the habitats or species associated with the marine shoreline are identified and designated. These provisions are not evaluated since the review looks at protection currently provided by the CAO and SMMP. [CAO pg.30; 16.20.130(B)(1)(d)]

Critical Aquifer Recharge Areas – This is one of the categories listed in the Growth Management Act and the entire Island has been designated as an aquifer recharge area. The Growth Management Act includes in the definition of critical areas “areas with a critical recharging effect on aquifers used for potable water.” This critical area may have some indirect impact on the management of the marine shoreline but the connection is too indirect to be included in the evaluation. [CAO pg. 6; 16.20.030(A)(8)]

### **Frequently Flooded Areas**

Frequently flooded areas are defined as lands subject to a one percent or greater chance of flooding in any given year, as determined by the Federal Emergency Management Agency. These areas include, but are not limited to, floodplains adjacent to streams, lakes, coastal areas, and wetlands. (Also see Chapter 15.16 BIMC, Flood Damage Prevention.) [CAO, pg. 7; 16.20.030(A)(18)]

### **Geologically Hazardous Areas**

Geologically hazardous areas are defined as areas susceptible to significant erosion, sliding, or other geological events. They pose a threat to the health and safety of citizens when used as sites for incompatible commercial, residential or industrial development. Geologically hazardous areas include erosion hazard areas, landslide hazard areas, and seismic hazard areas. [CAO, 16.20.030(A) (20)]

## **Wetlands**

Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined in Department of Ecology publication #96-94, Washington State Wetlands Identification and Delineation Manual or the current Washington State Department of Ecology methodology. Wetlands generally include swamps, estuaries, marshes, bogs, and similar areas. [CAO, 16.20.030(A) (50)]

## **SMMP - Shoreline Critical Areas Defined**

The Shoreline Management Master Program was written prior to the inclusion of “critical areas” as a term in the Growth Management Act, but uses the earlier term of “environmentally sensitive areas” in much the same manner.

### **Environmentally Sensitive Areas**

Environmentally Sensitive Areas - Areas with especially fragile biophysical characteristics and/or with significant environmental resources as identified by the City or by a scientifically-documented inventory accomplished as part of the SEPA/NEPA process or other recognized assessment. Environmentally sensitive areas include, but are not limited to, aquifer recharge areas; wildlife habitat areas; fish breeding, rearing or feeding areas; frequently flooded areas; geologically hazardous areas (e.g., steep, unstable slopes); wetlands (i.e., marshes, bogs, and swamps); streams; tidal lagoons; mud flats; salt marshes; and marine vegetation areas. [SMMP pg.19; Section II]

Wildlife habitat areas – This term is not defined in the SMMP but the definitions do include a definition for Salmon and Steelhead Habitats. These are defined as “gravel bottom streams, creeks, and river used for spawning; streams, creeks, rivers, side channels, ponds, lakes, and wetlands used for rearing, feeding, cover and refuge from predators and high water: streams creeks, rivers, estuaries, and shallow areas of saltwater habitat used as mitigation corridors; and saltwater bodies used for rearing, feeding, and refuge from predators and currents.

Fish breeding, rearing, or feeding areas – This term is also not defined but is included in the definition for salmon and steelhead habitat.

Frequently flooded areas – undefined, but the SMMP does define the following related terms:

- Floodplain – Synonymous with one-hundred-year floodplain, this is that land area susceptible to being inundated by stream-derived waters with a one percent chance of being equaled or exceeded in any given year. The limits of this area are based on flood regulation ordinance maps or a reasonable method that meets the objectives of the Shoreline Management Act. [SMMP pg.20; Section II]

- Floodway - Those portions of the area of a river valley lying streamward from the outer limits of a watercourse, and upon which floodwaters are carried during periods of flooding that occur with reasonable regularity, though not necessarily annually. The floodway is identified, under normal conditions, by changes in surface soil conditions, or changes in types or quality of vegetative ground cover conditions. The floodway does not include lands that can reasonably be expected to be protected from floodwaters by flood control devices maintained by or under license from the Federal government, the State, or a political subdivision of the State. The limits of the floodway are based on flood regulation ordinance maps or by a reasonable method which meets the objectives of the Shoreline Management Act. [SMMP pg.20; Section II]

Geologically Hazardous areas – undefined, but the SMMP does define the following related terms:

- Feeder bluff, Erosional Bluff – Any bluff (or cliff) experiencing periodic erosion from waves, sliding, or slumping, whose eroded earth, sand, or gravel material is naturally transported (littoral drift) via a driftway to an accretion shoreform. These natural sources of beach material are limited and vital for the long-term stability of driftways and accretion shoreforms. [SMMP pg.19-20; Section II]

Wetlands – Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands that were created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands. [SMMP pg.29; Section II]

The SMMP further defines the following wetland related terms:

- Marsh – Soft, wet area periodically or continuously flooded to a shallow depth, usually characterized by a particular subclass (monocotyledons) of grasses, cattails, and other low plants. [SMMP pg.22; Section II]
- Marshes, Bogs, Swamps - Lands transitional between terrestrial and aquatic systems where saturation with water is the dominant factor determining plant and animal communities and soil development. Such lands must have one or more of the following attributes: a) at least periodically, the land predominately supports supports hydrophytes, and/or 2) the substrate is predominately undrained hydric soils. [SMMP, pg 22]
- Estuary – The zone in which fresh water and saltwater mingle and affect the total land and water habitat. [SMMP pg. 19]

- Estuarine Zone, Estuary – The zero-gradient sector of a stream where it flows into a standing body of water, together with associated wetlands. Tidal flows reverse flow in this zone twice daily, determining its upstream limit. It is characterized by low bank channels branching off the main streamway to form a broad, near-level delta. The bank, bed, and delta materials are typically silt and clay. Banks are stable with vegetation ranging from marsh to forest, and the water is usually brackish due to daily mixing and layering of fresh and salt water. Estuarine shores are rich in aquatic and other bird and animal life, and in their natural condition are the most productive of all shoreline habitats in terms of the marine food chain. [SMMP pg. 19]
- hydrophytes, and/or 2) the substrate is predominately undrained hydric soil. [SMMP pg.22; Section II]

Salt Marshes – undefined, but the SMMP does define the related terms above and following:

- Salt Tolerant Vegetation - Vegetation which is tolerant of interstitial soil salinities greater than or equal to 0.5 parts per thousand. [SMMP pg.25; Section II]

Tidal Lagoons – A body of saline water (salinity greater than 0.5 parts per thousand) with a constricted or subsurface outlet that is subject to the periodic, but not necessarily daily, exchange of water with Puget Sound or a tidal inlet. The exchange may occur seasonally, during storms, or during the highest spring tides. The connection between the sea and the lagoon does not necessarily have to be on the surface; the connection can be subsurface through permeable gravel or sand berms. [SMMP pg.27; Section II]

Mud Flats – undefined, but muds are defined and a reference is made to muds being critical habitats if the sediments in a tidal inlet contain at least 30% by weight of mud. Tidal flats are defined as “marshy or muddy areas of the seabed which is covered and uncovered by the rise and fall of tidal water.”

Marine Vegetation Areas – undefined but referenced in relationship to designation criteria for Aquatic conservancy environment. [SMMP pg 54]

**Table 1 - Comparative classification of critical areas.**

<b>Critical Areas Ordinance</b>	<b>Shoreline Management Master Program</b>
<i>Critical Areas</i>	<i>Environmentally Sensitive Areas</i>
Fish and Wildlife Habitat Conservation Areas	
<ul style="list-style-type: none"> <li>• Marine Critical Areas</li> </ul>	
<ul style="list-style-type: none"> <li>• Commercial and recreational shellfish areas</li> </ul>	
<ul style="list-style-type: none"> <li>• Kelp &amp; eelgrass beds</li> </ul>	Marine vegetation areas
<ul style="list-style-type: none"> <li>• Marine &amp; estuarine waters of the state</li> </ul>	Tidal lagoons; Estuarine zone, estuary
<ul style="list-style-type: none"> <li>• Herring, sand lance, and smelt spawning areas</li> </ul>	
<ul style="list-style-type: none"> <li>• Class I Fish and Wildlife Habitat Conservation Areas</li> </ul>	Wildlife habitat areas; Fish breeding, rearing, or feeding areas
<ul style="list-style-type: none"> <li>• Class II Fish and Wildlife Habitat Conservation Areas</li> </ul>	
Frequently Flooded Areas	Frequently flooded areas
Geologically Hazardous Areas	Geologically hazardous areas
Wetlands	Wetlands; Salt marshes
	Mud flats

## CAO - Applicable Provisions

### Fish and Wildlife Habitat Conservation Areas – Development Standards

Marine Critical Areas – Marine Critical Areas are defined in the CAO (pg. 30, 16.20.130(B)(1)(a)) as commercial and recreational shellfish areas; kelp and eelgrass beds; marine and estuarine waters of the state and herring, sand lance and smelt spawning areas. Development standards for defined marine critical areas are provided in the City’s Shoreline Management Master Program. Appendix A (page 65) of the CAO does list studies required to do work in these marine areas. These include dive surveys and biological assessment or evaluations if required by Washington Department of Fish and Wildlife, US Army Corps of Engineers, NOAA fisheries or US Fish and Wildlife Service. The CAO specifically states that development standards listed for Fish and Wildlife Conservation areas do not apply to marine critical areas. [CAO pg.32; 16.20.130(C)(1)]

Fish and Wildlife Habitat Conservation Areas (FWHCA) – As outlined in the CAO, development standards associated with Fish and Wildlife Conservation Areas are not intended to apply to any marine critical areas including marine and estuarine waters. Since the National Marine Fisheries Service has identified the nearshore environment of Puget Sound as critical habitat for Chinook salmon, the nearshore of Bainbridge Island would be considered Class I Fish and Wildlife Habitat. If marine critical areas had not been excluded, the 200 feet next to the shore would have been defined as adjacent to a Class I FWHCA. [CAO pg. 32; 16.20.130(C) (1)]

Development is allowed in Class I FWHCAs or the adjacent area after a Habitat Management Plan (HMP) that considers “measures to retain and protect the wildlife habitat and shall consider effects of land use intensity, buffers, setbacks, impervious surfaces, erosion control or the retention of native or equivalent vegetation.” The HMP may require larger buffer than normally required if it is necessary to protect habitat values. [CAO pg. 33; 16.20.130 (C)(3)]

### Frequently Flooded Areas

Standards for frequently flooded areas address the potential impact on flood storage capacity and requirements to note flood elevation on site plans. The standards are not intended to address environmental issues. [CAO, pg. 38; 16.20.040(B)].

### Geologically Hazardous Areas

Geologically hazardous areas include landslide hazard, erosion hazard and liquefaction areas that are located on the shoreline. The standards for geologically hazardous areas are primarily intended to provide for public safety and protection of property. The general standards for geologically hazardous areas are that the proposed activity does not create a net increase in geological instability, the proposed development does increase the safety risk above professional acceptable levels, and proposed buildings are constructed using appropriate technology to achieve the highest standard of safety feasible. [CAO,

pg 40, 16.20.050(E)(1)] A geological hazardous area may also be another type of critical area such as a stream buffer or a wetland or wetland buffer that could affect the proposed level of development.

There is a standard that requires a variance to clear or develop within fifty feet of all slopes classified as geologically hazardous areas. This reduces the likelihood of development of shoreline bluffs but development would still be allowed if there is no reasonable alternative to development on the slope. [CAO, pg. 40, 16.20.050(E)(2)(a)].

## **Wetlands**

Wetlands located on the shoreline are regulated by the CAO. The width of the buffer on these wetlands depends on the category of the wetland, the habitat value and the intensity of the land use. The categories and habitat scores of the wetlands are determined by applying the classification system found in *Washington State Wetland Rating System for Western Washington*, Washington Department of Ecology publication #04-06-025. Category I wetlands are those that represent a unique or rare wetland type that is relative undisturbed and a wetland that has an exceptional level of function. Category IV wetland has the lowest level of function and is often heavily disturbed.

Some buffers for category I wetlands are based on other characteristics such a bogs, forested, estuarine and wetlands in coastal lagoons. To be a category I wetland on the shoreline requires that the site be relatively undisturbed and with a significant undisturbed buffer of at least 100 feet. The estuary at the mouth of Murden Cove stream is rated as a category I wetland.

The buffers can range from 25 feet for a small wetland with low habitat value (category IV wetland that is less than 10,000 square feet) to 200 feet for a Category I, estuarine wetlands next to a high intensity land use. There are two additional wetland buffer categories that have wider buffer requirements. These are category I or II wetlands with high level of function for habitat (a 300 foot buffer) or a category I, Natural Heritage wetland (250 foot buffer). These wetland categories were left in the regulation to be consistent with the Department of Ecology recommendation but there are presently no wetlands on Bainbridge Island that have been identified as have a high level of function for habitat. The main reason that it is unlikely that there will be any wetlands that are considered high habitat value is that the rating systems requires a high level of conductivity between wetlands and the Island has been too fragmented by roads to maintain these connections.

The requirements for buffers on wetlands reflect the recommendations of the Department of Ecology in Wetlands in Washington State, Volume 2: Guidance for Protecting and Managing Wetlands. Ecology publication #05-06-008. The recommendations have been modified to designate a water quality buffer and a habitat buffer. The water quality buffer can only be developed or reduced by doing a reasonable use exception. The habitat buffer can be modified by development of a Habitat Management Plan if the applicant can demonstrate the function and values of the buffer and critical areas are

better than would be provided by leaving the standard buffers. Following is a simplified version of the buffer requires. [CAO, pg. 41, 16.20.160]

Category	Function for Habitat	Impacts of Land Use	Water Quality Buffer (Feet)	Habitat Buffer (Feet)	Total (Feet)
I – Special Characteristics	N/A	Low Medium High	50 75 100	50 -75 75-115	100 – 125 150 - 190
I & II	High	Low Medium High	50 75 100	100 150 200	150 225 300
I & II	Moderate	Low Medium High	50 75 100	25 35 50	75 110 150
I & II	Low	Low Medium High	50 75 100	0 0 0	50 75 150
II - Estuarine	N/A	Low Medium High	50 75 100	25 35 15	75 110 115
III	Moderate	Low Medium High	40 60 80	35 50 70	75 110 150
IV Greater than 10,000 ft <sup>2</sup>	N/A	Low Medium High	25 40 50	0 0 0	25 40 50
IV Less than 10,000 ft <sup>2</sup>	N/A	Low Medium High	25 25 25	0 0 0	25 25 25

## SMMP - Applicable Provisions

As documented above, the CAO and the Shoreline Management Master Program (SMMP) do not use consistent terminology or definitions for critical areas. In addition the SMMP is not a well organized document when it comes to critical area provisions and applicable provisions are scattered throughout the document. Therefore the summary presented below is our best attempt to consolidate relevant provisions as they relate to critical areas.

Scope of applicability - All developments, uses, and activities within shoreline jurisdiction must be consistent with the SMMP. [SMMP pg.30; Section III] Shoreline jurisdiction includes all uplands within 200 feet of the ordinary high water mark and all marine waters.

## **Fish and Wildlife Habitat Conservation Areas**

The SMMP contains several sections of provisions that generally apply to fish and wildlife habitat conservation areas and are summarized below. Specific provisions for various types of marine critical areas are provided in a separate section below.

The SMMP contains various Shoreline Environment Designations, which are similar to zoning, that allow for varying types of uses and developments with associated varying native vegetation zone (buffer) requirements and critical area protections. Tables 4-1 and 4-2 from Section IV of the SMMP generally summarize these provisions.

### General Provisions

- Shoreline uses and activities shall be located, designed, constructed, and managed to minimize:
  - adverse impacts to fish and wildlife resources including spawning, nesting, rearing and habitat areas, and migratory routes [SMMP pg. 42; Section III.H.Policy 4b];
  - interference with beneficial natural shoreline processes such as water circulation, sand and gravel movement, erosion, and accretion;
  - the need for shoreline stabilization measures and flood protection. [SMMP pg.34; Section III.C.Reg.6, 7, & 10]
- Marinas and launch ramps shall not be located at or along fish and shellfish spawning and rearing areas [SMMP pg. 74; Section V.D.Regulations-location 7d.
- Shoreline critical areas and their buffers (native vegetation zone) are to be left undisturbed and maintained as open space. [SMMP pg.35; Section III.D.Reg.1]
- When critical areas and/or critical area native vegetation zones are disturbed, revegetation with native or other approved vegetation shall be required. [SMMP pg.35; Section III.D.Reg.4]
- Impacts to shoreline critical areas must be mitigated, either on or off site. [SMMP pg.35; Section III.D.Reg.6]
- Mitigation for impacts must be equal or greater than affected area and approved by appropriate resource agencies. [SMMP pg.35; Section III.D.Reg.7]
- Legal instruments such as conservation easements shall protect any replacement areas/activities. [SMMP pg.35; Section III.D.Reg.8]

### Native Vegetation Zones (buffers)

Native vegetation zones range from 25 feet to 200 feet based on use and environment. [SMMP Section IV Tables 4-2] The native vegetation zones are to be generally managed in accordance with the following provisions of the Shoreline Master Program:

- Temporary fencing/marking shall protect the native vegetation zone during construction activities. [SMMP pg.32-33; Section III.B.Reg.3]
- Existing native vegetation within the native vegetation zone shall remain unless specifically allowed to be altered or removed. [SMMP pg.36; Section III.E.Reg.2]

- Removal of nonnative plants and plants on the State noxious weed list shall be allowed within the native vegetation zone with appropriate replanting with native plants or other approved species. [SMMP pg.37; Section III.E.Reg. 3 & 4]
- Nondestructive pruning and limbing of native vegetation for maintenance and view shall be allowed provided it does not threaten the health of the vegetation. Individual tree cutting to remove a hazard may be allowed by the Director, subject to a report by an arborist or other approved expert. [SMMP pg.37; Section III.E.Reg.5]
- No clearing, grading, or construction may be undertaken within the native vegetation zone unless specifically provided for in the Shoreline Master Program. [SMMP pg.37; Section III.E.Reg.6]
- A path to the shoreline not more than four (4) feet in width, constructed by hand and designed to minimize environmental impacts, shall be allowed. The path may be wider when required for handicapped access. [SMMP pg.37; Section III.E.Reg.7]
- Accessory utility lines determined by the Director to be necessary or required to reduce an impact (for example, a stormwater tightline to the water to protect a slope or a sewer line to a marina) may be allowed in the native vegetation zone. [SMMP pg.37; Section III.E.Reg.8]
- To allow flexibility when required because of site limitations, the depth of the native vegetation zone (measured from OHWM) may be altered by averaging the depth, provided that:
  - The total area of the native vegetation zone shall not be less than otherwise required.
  - All portions of the native vegetation zone shall be contiguous.
  - The depth of the zone shall not be reduced more than twenty-five percent (25%) and shall be a minimum of twenty-five (25) feet, (measured from OHWM) at any point.
  - At least seventy-five percent (75%) of the resulting zone shall be located within the area that would otherwise be required.
  - Any area altered shall be compensated for by a substitute area. Any area used as a substitute for an altered area must contain vegetation of comparable or better quality than the area being deleted. [SMMP pg.37; Section III.E.Reg.9]
- Residential development can alter the native vegetation zone by as much as twenty-five percent (25%) to allow flexibility in using the property for certain specific purposes. However, the native vegetation zone shall never be less than twenty-five (25) feet. The purposes for which the twenty-five percent (25%) flexibility may be used shall include, and be limited to, the following:
  - Replacing native vegetation with exotic vegetation;
  - Siting permitted accessory structures;
  - Siting the primary residence closer to the water. [SMMP pg. 88 Section V. K. Reg. 4]
- In the Semi-rural environment where an existing residential use has been legally constructed with a setback of twenty-five (25) feet or less, twenty-five (25) feet may be used as the setback when the Director makes a finding that:

- The proposed construction will not further obstruct the view from the most waterward indoor portion of a primary residence on an abutting property on either side; and
- The property is not upland of an Aquatic Conservancy environment. [SMMP pg. 89 Section V. K. Reg. 6]
- In the Semi-rural environment where there are adjacent primary residences within twenty-five (25) feet of the side property line on both sides of the property and both are less than fifty (50) feet from the OHWM, the average setback of the adjacent properties may be used as the required depth of the native vegetation zone, provided that:
  - The property is not upland of an Aquatic Conservancy environment; and
  - The setback from OHWM may not be less than twenty-five (25) feet. [SMMP pg. 89 Section V. K. Reg. 7]
- Native vegetation zones from those portions of Puget Sound which exhibit unique, rare and/or fragile resources (including, but not limited to, tidal lagoons, mud flats, and salt marshes) may be increased under the Bainbridge Island Municipal Code, Chapter 16.20. [SMMP pg.35; Section III.D.Reg.3]
- No accessory structures shall be located within the required native vegetation zone, except for the following:
  - Hand installed steps. [SMMP pg.90; Section V. K.Reg.15]
  - Path to the shoreline. [SMMP pg.37; Section III.E.Reg.7]
  - Stairway to the beach. Tram. [SMMP pg.90; Section V. K.Reg.16]
  - Pier or dock.
  - Boat house or boat storage deck. [SMMP pg.89; Section V. K.Reg.13]
  - Permeable decks less than thirty (30) inches in height above grade. SMMP pg.89; Section V. K.Reg.14]
  - Fences, provided that they conform to all other City and State requirements, including provisions of the Master Program. [SMMP pg.89; Section V. K.Reg.9]

## **Marine Critical Areas**

### Commercial and recreational shellfish areas

The SMMP does not contain many general provisions for the protection or management of shellfish areas, but the following specific provisions do apply:

- Mechanical or hydraulic clam harvesting will only be allowed if the operation will not harm existing shellfish resources. [SMMP pg.70-71; Section V.C.Reg-General.27]
- Marinas and boat launches shall not be sited in or along, and shall prevent any restrictions in the use of, commercial and recreational shellfish beds. [SMMP pg.73-74; Section V.C.Reg-Location.2 & 7]
- Marina and boat launch entrances shall not be located closer than one thousand (1,000) feet from valuable areas for commercial or recreational shellfish collection. [SMMP pg.74; Section V.C.Reg-Location.6]

- Dredging, dredged material disposal, and landfill shall be permitted only where it is demonstrated that the proposed actions will not result in significant and/or ongoing damage to water quality or shellfish. [SMMP pg.102; Section VI.D.Reg-General.3 and SMMP pg.105; Section VI.E.Reg-General.8]
- In areas identified by the City, WDFW, or WDNR as having a high environmental value for shellfish, piers and docks shall be prohibited, unless it can be demonstrated that the dock or pier will not be detrimental to the natural habitat or species of concern. [SMMP 107; Section VI.F.Reg-General.3]
- In saltwater areas characterized by significant shellfish populations, untreated wood, used pilings, precast concrete, or other nontoxic alternatives shall be used. [SMMP 107; Section VI.F.Reg-General D&C Standards.2]

#### Marine and estuarine waters of the state

The SMMP contains the following provisions that apply to this class of critical area.

- Tidal lagoons, salt marshes and mud flats in tidal inlets are designated as an Aquatic Conservancy Shoreline Environment, where uses, developments, and activities are extremely limited. [SMMP pg.54-55; Section IV.H. Designation Criteria.Regime 1 & 2]
- Shoreline uses and activities shall:
  - utilize effective measures to minimize any increase in surface water runoff and to control, treat, and release surface water runoff so that receiving water quality and quantity and shore properties and features are not adversely affected and shall adhere to the guidelines, policies, standards, and regulations of applicable water quality management programs and regulatory agencies. Such measures may include, but are not limited to, dikes, catch basins, or settling ponds, installation and required maintenance of oil/water separators, grassy swales, interceptor drains and landscaped buffers; [SMMP pg.33-34; Section III.C.Reg.1 & 4]
  - utilize effective erosion control methods during construction and operation; [SMMP pg.34; Section III.C.Reg.5]
- Herbicides and pesticides shall not be allowed to directly enter water bodies or wetlands unless approved for such use by the appropriate agencies. [SMMP pg.34; Section III.C.Reg.11]
- Solid waste, liquid waste, and untreated effluent (i.e., discharge from a source containing pollutants) or oil, chemicals, or other hazardous materials shall not be allowed to enter any water bodies or to be discharged onto land. [SMMP pg.34; Section III.C.Reg.2 & 3]
- All shoreline development shall minimize any increase in surface runoff through control, treatment, and release of surface water runoff so that the receiving water quality and shore properties and features are not adversely affected. Control measures include, but are not limited to, dikes, catch basins or settling ponds, oil interceptor drains, grassy swales, planted buffers, and fugitive dust controls. [SMMP pg.44; Section III.K.Reg.1]
- Where feasible, septic fields shall be located on the landward side of any new residence or business. [SMMP pg.44; Section III.K.Reg.2]

- New residences or businesses on the shoreline within two hundred (200) feet of an existing sewer line and/or within an established sewer service area shall be connected to the sewer system. [SMMP pg.44; Section III.K.Reg.3]
- All shoreline development shall comply with the applicable requirements of the Stormwater Management Manual for the Puget Sound Basin (Washington State Department of Ecology publication #91-75) as amended by the City's Engineering Design and Development Standards Manual. [SMMP pg.44-45; Section III.K.Reg.4]

#### Kelp and eelgrass beds

As general practice, the City utilized the submerged aquatic vegetation surveys required by WDFW and the US Army Corps of Engineers in our review of applications, but our own SMMP does not specifically require these surveys. The SMMP contains only two specific regulations regarding kelp and eelgrass, but these are in addition to the general provisions summarized above in the previous section.

- Kelp and eelgrass beds at least 4,000 square feet in area are designated as an Aquatic Conservancy Shoreline Environment, where uses, developments, and activities are extremely limited. [SMMP pg.55; Section IV.H.Designation Criteria.Regime 3]
- Mechanical and/or hydraulic clam harvesting or other activities that involve substantial substrate modification through dredging, trenching, or digging shall be prohibited in existing kelp beds or in beds of native eelgrass (*Zostera marina*) containing more than two (2) turions per one-quarter (1/4) square meter in winter or three (3) turions per one-quarter (1/4) square meter in summer. [SMMP pg.70; Section V.C.Reg-General.18]

#### Herring, sand lance, and smelt spawning areas

Not specifically addressed by the SMMP.

#### **Class I & II Fish and Wildlife Habitat Conservation Areas**

The SMMP does not address class I & II fish and wildlife habitat conservation areas specifically. Refer to the General Provisions summarized under Fish and Wildlife Habitat Conservation Areas in the previous section for any applicable provisions.

#### **Frequently Flooded Areas**

- Single-family dwellings shall not be permitted where flood control is required to create a buildable site. [SMMP pg.89; Section V. K.Reg.10]
- Shoreline stabilization and flood protection works are prohibited in wetlands and on point and channel bars. They are also prohibited in salmon and trout spawning areas, except for fish or wildlife habitat enhancement. [SMMP pg.96; Section VI. Prohibited. Reg.1]

## Geologically Hazardous Areas

The SMMP does not specifically address geologically hazardous areas. However, the SMMP does recognize the importance the natural process of erosion and beach feeding, and protects those processes through the following regulations:

- Single-family dwellings shall not be permitted where flood control, shoreline protection measures, or bulkheading is required to create a buildable site. All structures shall be located and designed to avoid the need for structural shore defense. [SMMP pg.89; Section V. K.Reg.10]
- All new development activities shall be located and designed to prevent or minimize the need for shoreline stabilization. [SMMP pg. 95; Section VI. A.Reg.3]
- All forms of protective structures shall be designed, constructed, and maintained in a manner that does not degrade water quality and/or fisheries habitat, and conforms to state agency policies and regulations, including Washington State Department of Fish and Wildlife criteria and permit requirements. [SMMP pg. 99; Section VI. C.Reg.2]
- Revetments and bulkheads may be allowed only when evidence is presented which conclusively demonstrates that the following conditions exist:
  - Serious wave erosion threatens an existing development or land.
  - Bulkheads or revetments may be approved for the operations and location of water-dependent and water-related activities consistent with the Master Program, provided that all alternatives have proven infeasible (i.e., use relocation, use redesign, nonstructural shore stabilization options). Such bulkheads or revetments must meet other policies and regulations of this chapter; and
  - That use of natural materials and processes and nonstructural solutions to bank stabilization are unworkable in protecting existing development. [SMMP pg. 99; Section VI. C.Reg.5]
- Shoreline stabilization shall not be designed in a manner that will cause scouring of the beach at the toe of protective devices nor erosion on the level of the seaward beach or impact adjacent properties. [SMMP pg. 96; Section VI. A.Reg.5]
- Revetments and bulkheads shall be prohibited for any purpose if they will cause significant erosion or beach starvation. [SMMP pg. 99; Section VI. C. Prohibited 2]
- Construction of a bulkhead, revetment, or other armoring structure for the purpose of retaining a landfill or creating dry land is prohibited, unless it is proposed in conjunction with a water-dependent or public use. [SMMP pg. 99; Section VI. C. Prohibited 3]
- Shoreline hardening (i.e., revetments, bulkheads, seawalls) shall not be located on shores where valuable geo-hydraulic or biological processes are sensitive to interference and critical to shoreline conservation such as feeder bluffs, marshes, wetlands, or accretion shoreforms such as spits, hooks, bars, or barrier beaches. [SMMP pg. 99; Section VI. C. Prohibited. 4]

- Except as otherwise allowed, existing native vegetation between the OHWM and the top of any bank ten (10) feet or higher that is waterward of the development shall be retained. [SMMP pg.32; Section III.B.Reg.2]

## **Wetlands**

Shoreline wetlands are considered to be part of the shoreline and are protected by both the Critical Areas Ordinance and the regulations in the SMMP.

- Regulation 2 above, notwithstanding, native vegetation zones from those portions of Puget Sound which exhibit unique, rare and/or fragile resources (including, but not limited to, tidal lagoons, mud flats, and salt marshes) may be increased under the Bainbridge Island Municipal Code, Chapter 16.20. [SMMP pg. 35; Section III.D.Reg.3]
- If development results in impacts to a sensitive area, in-kind and on-site replacement of resource functions shall be provided unless it is found that in-kind and on-site replacement is not feasible or practical due to the physical characteristics of the site, and/or that a greater benefit can be demonstrated by an alternative location. In such cases, substitute resources of equal or greater ecological value shall be provided. [SMMP pg. 35; Section III.D.Reg.6]
- Salt marshes and mud flats of ¼ acre or greater are designated as an Aquatic Conservancy Shoreline Environment, where uses, developments, and activities are extremely limited. [SMMP pg.54; Section IV.H.Designation Criteria.Regime 2]
- Marinas and launch ramps shall not be located at or along:
  - Wetlands, marshes, bogs, swamps and lagoons [SMMP pg. 74; Section V.D.Regulations-location 7b.
  - Mud flats and salt marshes [SMMP pg. 74; Section V.D.Regulations-location 7c.