



KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

614 DIVISION STREET MS-36, PORT ORCHARD WASHINGTON 98366-4682
(360) 337-7181 FAX (360) 337-4925 www.kitsapgov.com/dcd/

Kamuron D. Gurol, Director

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Fish and Wildlife Habitat Conservation Areas – Best Available Science (BAS) Review

The attached materials will provide a basis for discussion of Best Available Science relative to Fish and Wildlife Conservation Areas at the next Technical Review Committee Meeting scheduled for February 4, 2004.

Introduction

The Growth Management Act identifies “fish and wildlife habitat conservation areas” as one of five types of critical areas that local jurisdictions must protect under their critical areas regulation. The fish and wildlife habitat section of Kitsap County’s Critical Area Ordinance (CAO) was reviewed and updated in 1999.

The following categories are used in Section 300 of the current CAO to classify fish and wildlife habitat conservation areas: (Please refer to the Kitsap County Critical Area Ordinance for additional information)

1. Streams: All streams which meet the criteria for Type 1, 2, 3, 4, and 5 waters as set forth in WAC 222-16-030 of the DNR Water Typing System (See Section 800)
2. Saltwater Shorelines, and Lakes 20 acres and greater in surface area. Shorelines include: Type 1 waters as set forth in WAC 222-16-030, (DNR Water Typing System); commercial and recreational shellfish areas; kelp and eelgrass beds; and herring and smelt spawning areas.
3. Lakes less than 20 acres in surface area. Includes lakes and ponds less than twenty (20) acres in surface area and their submerged aquatic beds, and lakes and ponds planted with game fish by a governmental or tribal authority.
4. Wildlife Conservation Areas:
 - a) Class I Wildlife Conservation Areas
 - i. Habitats recognized by Federal or State agencies for Federal and/or State listed endangered, threatened and sensitive species documented in maps or data bases available to Kitsap County and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.
 - ii. Areas targeted for preservation by the federal, state and/or local government, which provide fish and wildlife habitat benefits, such as important waterfowl areas identified by the U.S. Fish and Wildlife Service.
 - iii. Areas that contain habitats and species of local importance.
 - b) Class II Wildlife Conservation Areas

- i. Habitats for State listed candidate and monitored species documented in maps or data bases available to Kitsap County and its citizens, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.
- ii. Habitats which include attributes such as comparatively high wildlife density; high wildlife species richness; significant wildlife breeding habitat, seasonal ranges or movement corridors of limited availability and/or high vulnerability. These habitats may include caves, cliffs, islands, meadows, old-growth/mature forest, snag-rich areas, talus slopes, and urban natural open space.

Functions and Values of Fish and Wildlife Areas

Fish and wildlife conservation areas perform many important physical and biological functions including but not limited to: maintaining species diversity and genetic diversity; providing opportunities for food, cover, nesting, breeding and movement for fish and wildlife; helping to maintain air and water quality and controlling erosion.

The main habitat requirements for salmon include the freshwater streams and lakes, nearshore waters and estuaries, the adjacent border of vegetation (riparian zone), and the quality and quantity of water. The riparian zone provides: shade needed to keep the water cool; a buffer against soil erosion, which maintains water quality; living space for various animals that provide food and nutrients for streams; a source of large woody debris, which plays a key role in the formation of physical habitat complexity and storage of sediment and organic matter. The estuaries, shorelines and marine waters also provide an array of habitats critical to salmon survival. The region's estuaries and nearshore waters (including marine riparian zone) provide four main habitat functions. They are: a migratory zone for young salmon going to sea and adults heading upstream to spawn; a place to adapt to salt water and back to freshwater (physiological changes); they provide refuge from predation, storms, etc., and they provide a rich food web.

Kitsap County provides a uniquely diverse geography for salmon including many small productive lowland streams, estuaries and an extensive and diverse shoreline. Three species of Pacific Salmon and two species of trout are present in the area. Salmon species include summer and fall chum (*Oncorhynchus keta*), coho (*O. kisutch*) and fall chinook (*O. tshawytscha*). Winter steelhead (*O. mykiss*), and coastal cutthroat (*O. clarki clarki*) are the two trout species present. All of the salmonids discussed display some degree of anadromy, reproducing in freshwater and growing and maturing in saltwater. All the Pacific Salmon reproduce in freshwater and migrate to sea. Steelhead and coastal cutthroat display varying degrees of anadromous behavior.

Best Available Science Literature Review

The following information is attached in order to assist in discussing best available science for fish and wildlife conservation areas:

- Kitsap County Critical Areas Ordinance – August 1999

- Citations of Recommended Sources of Best Available Science – Washington State Office of Community Development.
- King County BAS review – Chapter 7 Aquatic Areas; Chapter 8 Wildlife Areas.
- Bellevue Critical Areas Update Best Available Science Paper
- May, C.W. 2003. Stream-Riparian Ecosystems in the Puget Sound Lowland Eco-Region. A Review of Best Available Science. 59 pp.
- Ames, J., Graves, G., Weller, C., editors. 2000. Summer Chum Salmon Conservation Initiative. Washington Department of Fish & Wildlife/Point No Point Treaty Tribes. 1,165 pp.