



THE SEADOC SOCIETY:
a marine ecosystem health program

**Listed Species of Concern within the Puget Sound Georgia Basin Marine Ecosystem
including changes from 2002 to 2004**

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Abstract

Species of concern are native species, sub-species or ecologically significant units that warrant special attention to ensure their conservation. Within the Puget Sound Georgia Basin marine ecosystem, the Province of British Columbia, the State of Washington, the Canadian Federal Government, and the United States Federal Government each assess which species require special initiatives to ensure protection and survival of the population. Since 2002 when we first compiled an ecosystem-based list of species of concern for the Puget Sound Georgia Basin marine ecosystem, two ecologically significant units of sockeye salmon (*Oncorhynchus nerka*; Cultus Lake and Sakinaw Lake) have been listed as endangered by the Canadian Federal Government and status changes were made on an additional 14 species by one or more



jurisdiction. As of September 1, 2004, 63 species of concern were listed by one or more jurisdiction in the Puget Sound Georgia Basin marine ecosystem (Table 1). These included three invertebrates (Table 2), 27 fishes (Table 3), one reptile (Table 4), 23 birds (Table 5), and 9 mammals (Table 6). Of the 26 species listed as threatened or endangered, over-harvest, habitat loss, and contaminants were the most frequent causes cited for species declines (Table 7). The identification of 63 species of concern in these marine waters is suggestive of ecosystem decay and reflects poorly on the single-species management approach, at least in the case of the species listed.

Note: the complete manuscript for this abstract and lists will be published in the proceedings of the 2005 Puget Sound Georgia Basin Research Conference.



Table 1: Marine ecosystem species identified as species of concern by jurisdiction

	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S.A.	TOTAL
INVERTEBRATES	0	3	2	2	3
FISHES	2	22	5	6	27
REPTILES	1	1	1	1	1
BIRDS	21	11	6	7	23
MAMMALS	8	9	9	4	9
TOTAL	32	46	23	20	63



Table 2: Invertebrate Species of Concern in the Georgia Basin / Puget Sound Marine Ecosystem

SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S.A.
Newcomb's littorine snail (<i>Algamorda subrotundata</i>)		Candidate		Species of Concern
Olympia oyster (<i>Ostrea lurida</i>)		Candidate	Special Concern	
Pinto (Northern) Abalone (<i>Haliotis kamtschatkana</i>)		Candidate	Threatened	Not listed to Species of Concern

*Items in bold represent legal status changes made between September 2002 and September 2004.



Table 3: Fish Species of Concern in the Georgia Basin / Puget Sound Marine Ecosystem

SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S.A.
Eulachon (<i>Thaleichthys pacificus</i>)	Blue List	Candidate		
Pacific cod, S. & C. Puget Sound (<i>Gadus macrocephalus</i>)		Candidate		
Pacific hake, C. Puget Sound (<i>Merluccius productus</i>)		Candidate		Candidate to Species of Concern
Pacific herring, Cherry Point (<i>Clupea pallasii</i>)		Candidate		Candidate
Pacific herring, Discovery Bay (<i>Clupea pallasii</i>)		Candidate		
Rockfish, Black (<i>Sebastes melanops</i>)		Candidate		
Rockfish, Bocaccio (<i>Sebastes paucispinis</i>)		Candidate	Not listed to Threatened	
Rockfish, Brown (<i>Sebastes auriculatus</i>)		Candidate		
Rockfish, Canary (<i>Sebastes pinniger</i>)		Candidate		
Rockfish, China (<i>Sebastes nebulosus</i>)		Candidate		
Rockfish, Copper (<i>Sebastes caurinus</i>)		Candidate		
Rockfish, Greenstriped (<i>Sebastes elongatus</i>)		Candidate		
Rockfish, Quillback (<i>Sebastes maliger</i>)		Candidate		
Rockfish, Redstripe (<i>Sebastes proriger</i>)		Candidate		
Rockfish, Tiger (<i>Sebastes nigrocinctus</i>)		Candidate		
Rockfish, Widow (<i>Sebastes entomelas</i>)		Candidate		
Rockfish, Yelloweye (<i>Sebastes ruberrimus</i>)		Candidate		
Rockfish, Yellowtail (<i>Sebastes flavidus</i>)		Candidate		
Salmon, Chinook (<i>Oncorhynchus tshawytscha</i>) (Puget Sound)		Candidate		Threatened
Salmon, Chum (<i>Oncorhynchus keta</i>) (summer-run Hood Canal)		Candidate		Threatened
Salmon, Coho (<i>Oncorhynchus kisutch</i>)			Endangered	



Interior Frasier River				
SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S.A.
Salmon, Coho (<i>Oncorhynchus kisutch</i>) Puget Sound and Strait of Georgia				Candidate to Species of Concern
Salmon, Sockeye (<i>Oncorhynchus nerka</i>) Sakinaw Lake			Not listed to Endangered	
Salmon, Sockeye (<i>Oncorhynchus nerka</i>) Cultus Lake			Not listed to Endangered	
Spinynose Sculpin (<i>Asemichthys taylori</i>)			Data Deficient	
Trout, Bull (<i>Salvelinus confluentus</i>)	Blue List	Candidate	Candidate	Threatened
Walleye Pollock, S. Puget Sound (<i>Theragra chalcogramma</i>)		Candidate		

*Items in bold represent legal status changes made between September 2002 and September 2004.

Table 4: Reptile Species of Concern in the Georgia Basin / Puget Sound Marine Ecosystem

Species	British Columbia	Washington State	Canada	U.S.A.
Sea Turtle, Leatherback (<i>Dermochelys coriacea</i>)	Red List	Endangered	Endangered	Endangered



Table 5: Avian Species of Concern in the Georgia Basin / Puget Sound Marine Ecosystem

SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S. A.
American Golden Plover (<i>Pluvialis dominica</i>)	Blue List			
Ancient Murrelet (<i>Synthliboramphus antiquus</i>)	Blue List		Special Concern	
Bald Eagle (<i>Haliaeetus leucocephalus</i>)		Threatened		Threatened
Canada Goose, Aleutian (<i>Branta canadensis leucopareia</i>)	Not listed to Blue List	Threatened		Threatened to Species of Concern
Caspian Tern (<i>Sterna caspia</i>)	Blue List			
Cassin's Auklet (<i>Ptychoramphus aleuticus</i>)	Blue List	Candidate		Species of Concern
Common Loon (<i>Gavia immer</i>)		Sensitive		
Common Murre (<i>Uria aalge</i>)	Red List	Candidate		
Cormorant, Brandt's (<i>Phalacrocorax penicillatus</i>)	Red List	Candidate		
Cormorant, Double-crested (<i>Phalacrocorax auritus</i>)	Red List			
Cormorant, Pelagic (<i>Phalacrocorax pelagicus pelagicus</i>)	Red List			
Forster's Tern (<i>Sterna forsteri</i>)	Red List		Data Deficient	
Great Blue Heron, Pacific (<i>Ardea herodias fannini</i>)	Blue List		Special Concern	
Long-billed Curlew (<i>Numenius americanus</i>)	Blue List			
Long-tailed duck / Oldsquaw (<i>Clangula hyemalis</i>)	Blue List		Special Concern	
Marbled Murrelet (<i>Brachyramphus marmoratus marmoratus</i>)	Red List	Threatened	Threatened	Threatened



Peregrine Falcon, American (<i>Falco peregrinus anatum</i>)	Red List	Sensitive	Threatened	Species of Concern
SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S. A.
Peregrine Falcon, Peale's (<i>Falco peregrinus pealei</i>)	Blue List	Sensitive	Special Concern	Species of Concern
Phalarope, Northern / Red-necked (<i>Phalaropus lobatus</i>)	Blue List			
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	Blue List			
Surf Scoter (<i>Melanitta perspicillata</i>)	Blue List			
Tufted Puffin (<i>Fratercula cirrhata</i>)	Blue List	Candidate		Species of Concern
Western Grebe (<i>Aechmophorus occidentalis</i>)	Red List	Candidate		

***Items in bold represent legal status changes made between September 2002 and September 2004.**



Table 6: Mammalian Species of Concern in the Georgia Basin / Puget Sound Marine Ecosystem

SPECIES	BRITISH COLUMBIA	WASHINGTON STATE	CANADA	U.S.A.
Gray Whale (<i>Eschrichtius robustus</i>)	Blue List	Sensitive	Not listed to Special Concern	
Harbor Porpoise (<i>Phocoena phocoena</i>)	Blue List	Candidate	Data deficient to Special Concern	
Humpback whale, N. Pacific (<i>Megaptera novaeangliae</i>)	Not listed to Blue List	Endangered	Threatened	Endangered
Killer Whales, Offshore (<i>Orcinus orca</i>)		Candidate to Endangered	Special Concern	
Killer Whales, S. Residents (<i>Orcinus orca</i>)	Red List	Candidate to Endangered	Endangered	Not listed to Candidate
Killer Whales, N. Residents (<i>Orcinus orca</i>)	Blue list to Red List	Candidate to Endangered	Threatened	
Killer Whales, Transients (<i>Orcinus orca</i>)	Red List	Candidate to Endangered	Threatened	
Sea Otter, northern (<i>Enhydra lutris</i>):	Red List	Endangered	Threatened	Not listed to Species of Concern
Steller Sea-lion (eastern population) (<i>Eumetopias jubatus</i>)	Red List	Threatened	Not listed to Special Concern	Threatened

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