

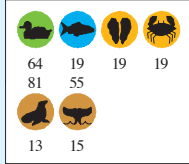
# ENVIRONMENTAL SENSITIVITY INDEX MAP



### PRESENT IN NORTON SOUND

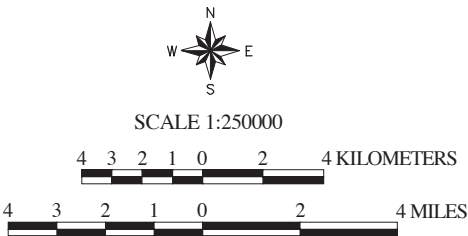


### PRESENT IN NEARSHORE AREAS



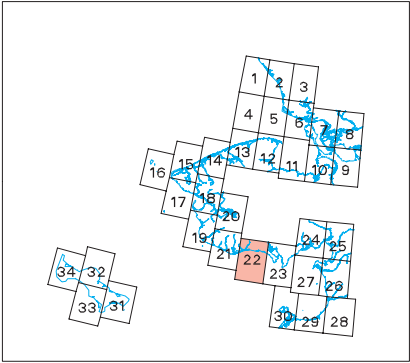
### SHORELINE HABITATS (ESI)

- 1A EXPOSED ROCKY SHORES
- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK, MUD, OR CLAY
- 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 3B SCARPS AND STEEP SLOPES IN SAND
- 3C TUNDRA CLIFFS
- 4 COARSE-GRAINED SAND BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES AND SHELTERED SCARPS IN MUD AND CLAY
- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 8E PEAT SHORELINES
- 9A SHELTERED TIDAL FLATS
- 9B SHELTERED, VEGETATED LOW BANKS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10D SCRUB-SHRUB WETLANDS
- 10E INUNDATED, LOW-LYING TUNDRA



Not For Navigation  
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Office of Response and Restoration  
Hazardous Materials Response Division



NW ARCTIC, AK - ESIMAP 22

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Pre-nest	Nesting	Post-nest
64	Canada goose			1000s								X	X				-	-	AUG-SEP
78	American wigeon			100s								X	X				-	-	AUG-SEP
	Brant								X	X	X						MAY-JUL	-	-
	Canada goose			1000s								X	X				-	-	AUG-SEP
	Common eider							X	X	X	X	X					MAY-JUN	JUN-JUL	JUL-SEP
	Dunlin			1000s				X	X	X							MAY-JUN	MAY-JUL	-
	Dunlin			10000s						X	X	X					-	-	JUL-SEP
	Greater scaup			10s					X	X	X	X					-	-	JUN-SEP
	Red-necked phalarope			1000s				X	X	X							MAY-JUN	MAY-JUL	-
	Red-necked phalarope			10000s						X	X	X					-	-	JUL-SEP
	Semipalmated sandpiper			1000s				X	X	X							MAY-JUN	MAY-JUL	-
	Semipalmated sandpiper			10000s						X	X	X					-	-	JUL-SEP
	Western sandpiper			1000s				X	X	X							MAY-JUN	MAY-JUL	-
	Western sandpiper			10000s						X	X	X					-	-	JUL-SEP
81	Common eider			HIGH									X	X			-	-	SEP-OCT
82	King eider			HIGH						X	X	X					-	-	-
83	Long-tailed duck			100s									X				-	-	-
85	American wigeon			100s								X	X				-	-	AUG-SEP
	Brant			1000s					X	X	X						MAY-JUL	-	-
	Canada goose			1000s								X	X				-	-	AUG-SEP
	Dunlin			1000s				X	X	X							MAY-JUN	JUN-JUL	-
	Dunlin			10000s						X	X	X					-	-	JUL-SEP
	Greater scaup			1000s						X	X						-	-	-
	Sandhill crane			1000s				X	X	X							-	MAY-JUL	-
	Semipalmated sandpiper			1000s				X	X	X							MAY-JUN	JUN-JUL	-
	Semipalmated sandpiper			10000s						X	X	X					-	-	JUL-SEP
	Tundra swan			1000s								X	X	X			-	-	-
	Western sandpiper			1000s					X	X	X						MAY-JUN	JUN-JUL	-
	Western sandpiper			10000s						X	X	X					-	-	JUL-SEP
86	Black scoter			100s									X	X			-	-	-
258	Aleutian tern			480			X	X	X	X	X	X	X				APR-MAY	JUN-JUL	AUG-OCT
	Arctic tern			19			X	X	X	X	X	X	X				APR-MAY	JUN-JUL	AUG-OCT
259	Glaucous gull			40			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Horned puffin			50			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pelagic cormorant			294			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pigeon guillemot			20			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Tufted puffin			30			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
260	Glaucous gull			4			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Horned puffin			31			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pelagic cormorant			16			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
261	Glaucous gull			2			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Horned puffin			5			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pelagic cormorant			2			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
262	Black-legged kittiwake			7000			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Common murre			56000			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Glaucous gull			18			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Horned puffin			800			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Parakeet auklet			65			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pelagic cormorant			114			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Thick-billed murre			560			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Tufted puffin			5			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
263	Black-legged kittiwake			550			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Common murre			3200			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Glaucous gull			30			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Horned puffin			125			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Pelagic cormorant			4			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
	Tufted puffin			1			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
268	Glaucous gull			60			X	X	X	X	X	X					APR-MAY	JUN-JUL	AUG-OCT
312	American peregrine falcon	S	C				X	X	X	X	X						-	APR-SEP	-
314	Arctic peregrine falcon	S	C				X	X	X	X	X						-	APR-SEP	-

FISH:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
19	Chinook salmon									X	X	X					-	-	-	MAY-JUL	JUN-JUL
	Chum salmon (dog)									X	X	X	X				-	-	-	MAY-JUL	JUN-AUG
	Coho salmon (silver)									X	X	X	X				-	-	-	MAY-JUL	AUG-AUG
	Dolly varden									X	X	X	X	X			-	-	-	MAY-JUL	AUG-OCT
	Pink salmon (humpy)									X	X	X					-	-	MAY-JUL	MAY-JUL	JUN-JUL
	Rainbow smelt				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Saffron cod				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Starry flounder									X	X	X					-	-	-	JUN-AUG	JUN-AUG
20	Pacific herring						X	X	X	X	X	X					MAY-JUN	MAY-JUL	MAY-JUL	JUN-JUL	APR-SEP
44	Rainbow smelt											X	X	X			-	-	-	-	SEP-NOV
	Saffron cod											X	X	X			-	-	-	-	SEP-NOV
55	Capelin									X	X	X					JUN-JUN	JUN-JUL	JUN-AUG	-	JUN-AUG
73	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
79	Chum salmon (dog)				X	X	X	X	X		X	X	X	X	X	X	JUL-SEP	JUL-DEC	DEC-MAY	MAY-MAY	JUL-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
137	Pacific halibut									X	X	X	X				-	-	-	-	JUL-OCT
163	Chum salmon (dog)				X	X	X	X	X		X	X	X	X	X	X	JUL-SEP	JUL-DEC	DEC-MAY	MAY-MAY	JUL-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
167	Chinook salmon				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUL	JAN-DEC	JUL-AUG
	Chum salmon (dog)				X	X	X	X		X	X	X	X	X	X	X	JUL-SEP	JUL-DEC	DEC-MAY	MAY-MAY	JUL-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
	Whitefish				X	X	X	X	X	X	X	X	X	X	X	X	SEP-OCT	SEP-DEC	DEC-JUN	JAN-DEC	JAN-DEC
168	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
169	Chum salmon (dog)				X	X	X	X	X		X	X	X	X	X	X	JUL-SEP	JUL-DEC	DEC-MAY	MAY-MAY	JUL-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
	Whitefish				X	X	X	X	X	X	X	X	X	X	X	X	SEP-OCT	SEP-DEC	DEC-JUN	JAN-DEC	JAN-DEC

NW ARCTIC, AK - ESIMAP 22 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH: (cont.)

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
170	Chum salmon (dog)				X	X	X	X	X		X	X	X	X	X	X	JUL-SEP	JUL-DEC	DEC-MAY	MAY-MAY	JUL-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
174	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC
	Pink salmon (humpy)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-AUG	JUL-DEC	DEC-JUN	MAY-JUN	JUL-AUG
184	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	AUG-SEP	AUG-DEC	DEC-JUN	JAN-DEC	AUG-SEP
	Dolly varden				X	X	X	X	X	X	X	X	X	X	X	X	AUG-OCT	AUG-DEC	DEC-JUN	JAN-DEC	JAN-DEC

INVERTEBRATE:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawn/Mate	Eggs	Larvae	Juveniles	Adults
19	Alaska razor clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Butter clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Crenulate astarte				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Helmet crab				X	X	X	X		X	X				X	X	-	-	-	-	-
	Pinkneck clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Siberia softshell clam				X	X	X	X	X	X	X	X	X		X	X	-	-	-	-	-
	Softshell clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
43	Red king crab			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	FEB-APR	JAN-DEC	FEB-JUN	JAN-DEC	JAN-DEC

MARINE MAMMAL:

RAR#	Species	S/F	T/E	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
13	Ringed seal				X	X	X	X	X	X				X	X	X	-	-	MAR-MAY	MAR-JUN
15	Beluga whale									X	X	X	X	X			-	JUN-AUG	-	-
80	Bearded seal				X	X	X	X	X	X					X	X	-	-	-	-
	Gray whale							X	X	X	X	X	X	X	X		-	-	-	-
	Spotted seal							X	X	X	X	X	X	X			-	-	-	-
	Walrus			HIGH				X	X								-	-	-	-
84	Spotted seal			HIGH						X	X	X	X	X	X		-	-	-	-

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Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.