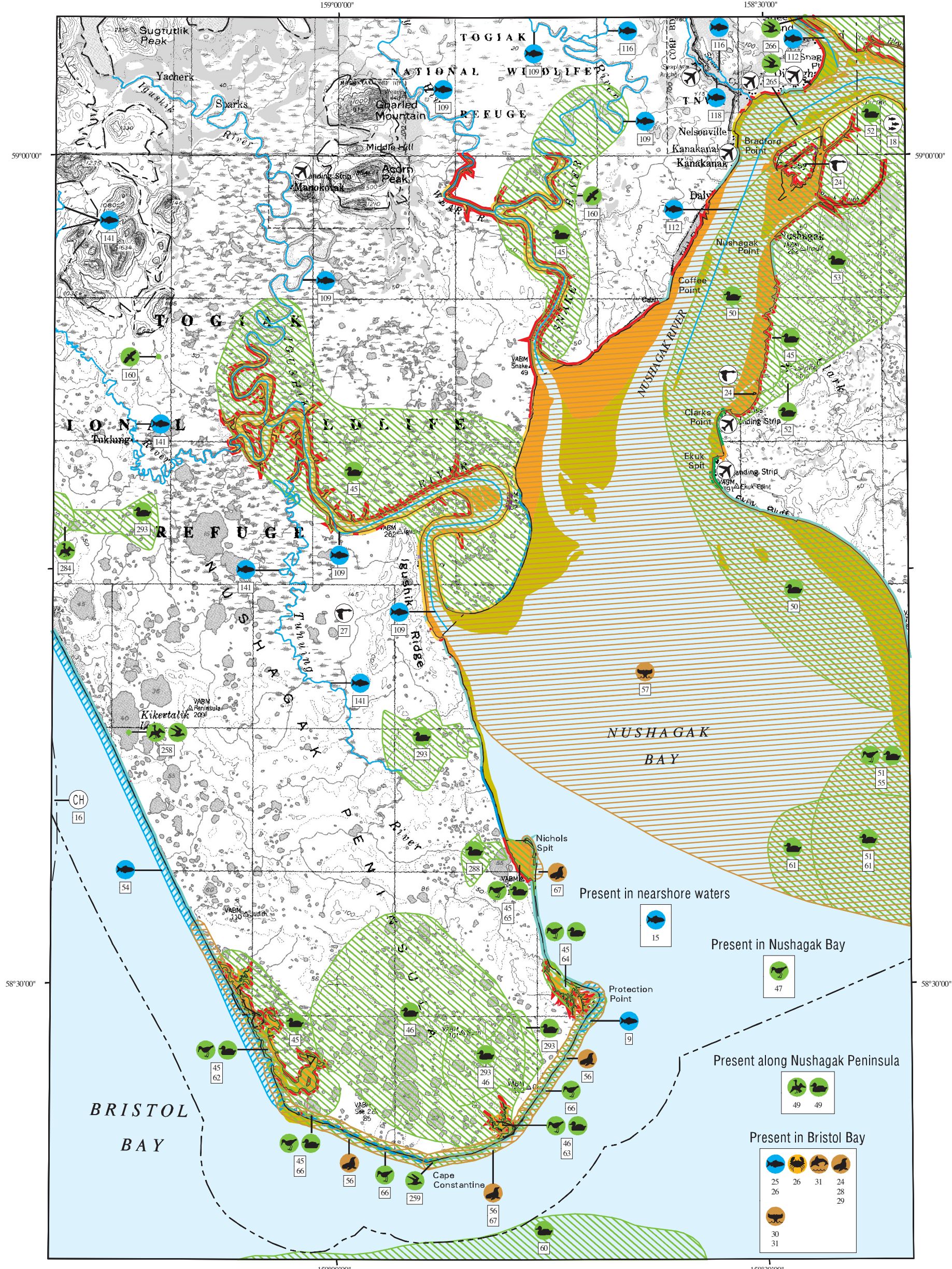
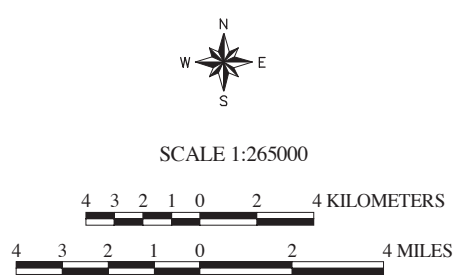


ENVIRONMENTAL SENSITIVITY INDEX MAP

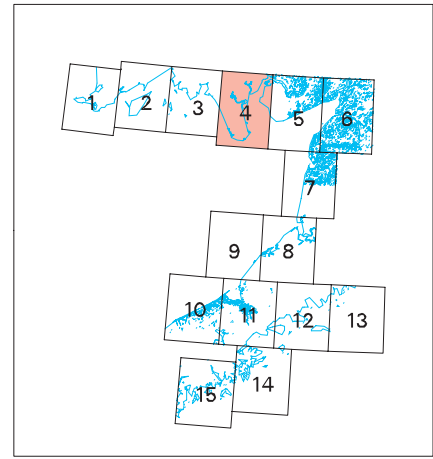


SHORELINE HABITATS (ESI)

- 1A EXPOSED ROCKY SHORES
- 2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK, MUD, OR CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 4 COARSE-GRAINED SAND BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES AND SHELTERED SCARPS IN MUD AND CLAY
- 8E PEAT SHORELINES
- 9A SHELTERED TIDAL FLATS
- 10A SALT-AND BRACKISH-WATER MARSHES



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Office of Response and Restoration
Hazardous Materials Response Division



Bristol Bay: ESIMAP 4

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating		Molting
45	Waterfowl	HIGH				X	X				X	X			-	APR-MAY	SEP-OCT	-
46	Waterfowl	HIGH							X	X					-	-		JUL-AUG
47	Black-bellied plover					X	X	X	X	X	X				MAY-JUL	MAY-OCT		-
	Dunlin	>1,000	X	X	X	X	X	X	X	X					MAY-JUL	APR-OCT		-
	Greater yellowlegs					X	X	X	X	X	X				MAY-JUL	MAY-OCT		-
	Least sandpiper					X	X	X							MAY-JUL	MAY-JUL		-
	Long-billed dowitcher						X	X	X	X	X				-	JUN-OCT		-
	Pacific golden-plover					X	X	X	X	X	X				-	APR-OCT		-
	Rock sandpiper					X	X	X	X	X	X				-	APR-OCT		-
	Sanderling						X	X	X	X	X				-	JUN-OCT		-
	Shorebirds	>20,000	X	X	X	X	X	X	X	X					MAY-JUL	APR-OCT		-
	Short-billed dowitcher					X	X	X							MAY-JUL	MAY-JUL		-
	Spotted sandpiper						X	X	X	X	X				-	JUN-OCT		-
	Western sandpiper					X	X	X	X	X	X				-	APR-OCT		-
	Whimbrel						X	X	X	X	X				-	MAY-OCT		-
49	Black scoter	1,000S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Long-tailed duck	100S								X	X	X			-	AUG-OCT		-
	Northern pintail	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Red-throated loon	100S								X	X	X			-	AUG-OCT		-
	White-winged scoter	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
50	Black scoter	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Northern pintail	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Scaup	1,000S				X	X								-	APR-MAY		-
51	Black scoter	1,000S				X	X			X	X	X	X		-	APR-MAY	AUG-OCT	JUL-OCT
	Long-tailed duck	1,000S				X	X			X	X	X	X		-	APR-MAY	AUG-OCT	JUL-OCT
	Northern pintail	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Scaup	1,000S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	White-winged scoter	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
52	Waterfowl	HIGH				X	X								-	APR-MAY		-
53	Waterfowl	HIGH										X	X		-	SEP-OCT		-
55	Bar-tailed godwit								X	X	X	X	X		-	JUN-OCT		-
	Black-bellied plover	100S					X	X	X	X	X	X			MAY-JUL	MAY-OCT		-
	Common snipe		X	X	X								X	X	-	-		-
	Dunlin	10,000S				X	X	X	X	X	X	X			MAY-JUL	APR-OCT		-
	Greater yellowlegs	100S					X	X	X	X	X	X			MAY-JUL	MAY-OCT		-
	Least sandpiper						X	X	X						MAY-JUL	MAY-JUL		-
	Pacific golden-plover	100S					X	X	X	X	X	X			-	MAY-OCT		-
	Red-necked phalarope						X	X	X						MAY-JUL	MAY-JUL		-
	Rock sandpiper					X	X	X							-	APR-JUN		-
	Sharp-tailed sandpiper							X	X	X	X	X	X		-	JUN-OCT		-
	Shorebirds	>40,000				X	X	X	X	X	X	X			MAY-JUL	APR-OCT		-
	Western sandpiper					X	X	X	X						-	APR-JUL		-
	Whimbrel						X	X	X						-	MAY-JUL		-
60	King eider	100,000S				X	X			X	X	X	X		-	APR-MAY	AUG-OCT	JUL-OCT
61	King eider	10,000S				X	X			X	X	X	X		-	APR-MAY	AUG-OCT	JUL-OCT
62	Bar-tailed godwit	10S								X	X				-	AUG-SEP		-
	Black turnstone	10S								X	X				-	AUG-SEP		-
	Black-bellied plover	10S								X	X				-	AUG-SEP		-
	Dunlin	100S								X	X				-	AUG-SEP		-
	Greater yellowlegs	100S								X	X				-	AUG-SEP		-
	Least sandpiper	10S								X	X				-	AUG-SEP		-
	Pacific golden-plover	10S								X	X				-	AUG-SEP		-
	Red-necked phalarope	10S								X	X				-	AUG-SEP		-
	Rock sandpiper	100S								X	X				-	AUG-SEP		-
	Ruddy turnstone	10S								X	X				-	AUG-SEP		-
	Semipalmated plover	10S								X	X				-	AUG-SEP		-
	Sharp-tailed sandpiper	10S								X	X				-	AUG-SEP		-
	Short-billed dowitcher	10S								X	X				-	AUG-SEP		-
	Western sandpiper	100S								X	X				-	AUG-SEP		-
	Whimbrel	10S								X	X				-	AUG-SEP		-
63	Black turnstone	10S								X	X				-	AUG-SEP		-
	Dunlin	10S								X	X				-	AUG-SEP		-
	Greater yellowlegs	10S								X	X				-	AUG-SEP		-
	Least sandpiper	10S								X	X				-	AUG-SEP		-
	Long-billed dowitcher	10S								X	X				-	AUG-SEP		-
	Rock sandpiper	10S								X	X				-	AUG-SEP		-
	Semipalmated plover	10S								X	X				-	AUG-SEP		-
	Short-billed dowitcher	10S								X	X				-	AUG-SEP		-
	Western sandpiper	100S								X	X				-	AUG-SEP		-
64	Bar-tailed godwit	10S								X	X				-	AUG-SEP		-
	Black turnstone	10S								X	X				-	AUG-SEP		-
	Black-bellied plover	10S								X	X				-	AUG-SEP		-
	Dunlin	100S								X	X				-	AUG-SEP		-
	Greater yellowlegs	10S								X	X				-	AUG-SEP		-
	Least sandpiper	10S								X	X				-	AUG-SEP		-
	Pacific golden-plover	10S								X	X				-	AUG-SEP		-
	Rock sandpiper	10S								X	X				-	AUG-SEP		-
	Ruddy turnstone	10S								X	X				-	AUG-SEP		-
	Semipalmated plover	10S								X	X				-	AUG-SEP		-
	Western sandpiper	100S								X	X				-	AUG-SEP		-
	Whimbrel	10S								X	X				-	AUG-SEP		-
65	Black-bellied plover	10S								X	X				-	AUG-SEP		-
	Dunlin	100S								X	X				-	AUG-SEP		-
	Red-necked phalarope	10S								X	X				-	AUG-SEP		-
	Western sandpiper	10S								X	X				-	AUG-SEP		-
66	Black turnstone	10S								X	X				-	AUG-SEP		-
	Black-bellied plover	10S								X	X				-	AUG-SEP		-
	Bristle-thighed curlew	100S								X	X				-	AUG-SEP		-
	Dunlin	100S								X	X				-	AUG-SEP		-
	Greater yellowlegs	10S								X	X				-	AUG-SEP		-
	Least sandpiper	10S								X	X				-	AUG-SEP		-
	Long-billed dowitcher	10S								X	X				-	AUG-SEP		-
	Pacific golden-plover	10S								X	X				-	AUG-SEP		-
	Red knot	10S								X	X				-	AUG-SEP		-
	Rock sandpiper	10S								X	X				-	AUG-SEP		-
	Ruddy turnstone	10S								X	X				-	AUG-SEP		-
	Sanderling	100S								X	X				-	AUG-SEP		-
	Semipalmated plover	10S								X	X				-	AUG-SEP		-
	Short-billed dowitcher	10S								X	X				-	AUG-SEP		-
	Western sandpiper	10S								X	X				-	AUG-SEP		-
	Whimbrel	10S								X	X				-	AUG-SEP		-
160	Bald eagle					X	X	X	X	X					APR-AUG	-		-
258	Double-crested cormorant	648				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull	2,000				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-

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.

Bristol Bay: ESIMAP 4 (cont.)

BIOLOGICAL RESOURCES: (cont.)

BIRD:																				
RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating		Molting
259	Aleutian tern			3					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
265	Aleutian tern			200					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			176					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Gulls			2					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Herring gull			2					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Mew gull			33					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
266	Glaucous-winged gull			15					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Gulls			40					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
	Mew gull			1					X	X	X	X	X	X			JUN-JUL	APR-MAY	AUG-OCT	-
284	Pacific loon			1-1.5 BIRDS/SQ.KM					X	X	X	X	X				MAY-JUN	MAY-MAY	JUL-SEP	-
288	Scaup			3-8 BIRDS/SQ.KM					X	X	X	X	X	X			JUN-JUL	MAY-MAY	AUG-OCT	-
293	Black scoter			3-7 BIRDS/SQ.KM					X	X	X	X	X	X			JUN-JUL	MAY-MAY	AUG-OCT	-

FISH:																					
RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
9	Capelin									X	X	X	X				MAY-AUG	JUN-JUL	JUN-AUG	-	MAY-AUG
15	Rainbow smelt			HIGH					X	X							-	-	-	APR-MAY	-
25	Chinook salmon									X	X	X	X				-	-	-	MAY-JUN	MAY-AUG
	Chum salmon (dog)									X	X	X	X				-	-	-	MAY-JUN	JUN-AUG
	Coho salmon (silver)									X	X	X	X	X	X		-	-	-	MAY-JUN	JUL-OCT
	Dolly varden									X	X	X	X	X			-	-	-	MAY-JUN	MAY-SEP
	Pink salmon (humpy)									X	X	X					-	-	-	MAY-JUN	JUN-JUL
	Sockeye salmon (red)			HIGH						X	X	X	X				-	-	-	MAY-JUN	MAY-AUG
26	Alaska plaice				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAY-JUN	MAY-JUN	JAN-DEC	JAN-DEC
	Pacific cod				X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAY	-	-	JAN-DEC	JAN-DEC
	Pacific halibut									X	X	X	X				-	-	-	-	JUL-OCT
	Rainbow smelt				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Rock sole				X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAR	-	-	JAN-DEC	DEC-SEP
	Sculpin				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Starry flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Walleye pollock				X	X	X	X	X	X	X	X	X	X	X	X	FEB-MAY	-	-	JAN-DEC	JAN-DEC
	Yellowfin sole				X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	JUN-AUG	JUN-NOV	JAN-DEC	MAY-AUG
54	Pacific herring									X	X	X					-	-	-	-	MAY-JUL
109	Chinook salmon				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	SEP-MAR	MAR-MAY	JAN-DEC	MAY-SEP
	Chum salmon (dog)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	AUG-MAR	MAR-MAY	JAN-DEC	JUN-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	SEP-NOV	OCT-MAR	MAR-MAY	JAN-DEC	JUL-NOV
	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	AUG-SEP	SEP-MAR	MAR-MAY	MAY-JUN	JUN-SEP
	Sockeye salmon (red)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	SEP-MAR	MAR-MAY	JAN-DEC	JUN-SEP
112	Chinook salmon				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	SEP-MAR	MAR-MAY	JAN-DEC	MAY-SEP
	Chum salmon (dog)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	AUG-MAR	MAR-MAY	JAN-DEC	JUN-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	SEP-NOV	OCT-MAR	MAR-MAY	JAN-DEC	JUL-NOV
	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	AUG-SEP	SEP-MAR	MAR-MAY	MAY-JUN	JUN-SEP
	Sockeye salmon (red)				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	SEP-MAR	MAR-MAY	JAN-DEC	JUN-SEP
	Whitefish				X	X	X	X	X	X	X	X	X	X	X	X	SEP-OCT	SEP-DEC	DEC-JUN	JAN-DEC	JAN-DEC
116	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	SEP-NOV	OCT-MAR	MAR-MAY	JAN-DEC	JUL-NOV
118	Chinook salmon				X	X	X	X	X	X	X	X	X	X	X	X	JUL-SEP	SEP-MAR	MAR-MAY	JAN-DEC	MAY-SEP
	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	SEP-NOV	OCT-MAR	MAR-MAY	JAN-DEC	JUL-NOV
141	Coho salmon (silver)				X	X	X	X	X	X	X	X	X	X	X	X	SEP-NOV	OCT-MAR	MAR-MAY	JAN-DEC	JUL-NOV
	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	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
26	Red king crab				X	X	X	X	X	X	X	X	X	X	X	X	JAN-JUL	-	-	JAN-DEC	JAN-DEC
	Tanner crab				X	X	X	X	X	X	X	X	X	X	X	X	JAN-JUN	-	-	JAN-DEC	JAN-DEC

MARINE MAMMAL:																				
RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Molting	Pupping
24	Walrus			HIGH	X	X	X									X	DEC-MAR	-	-	-
28	Ringed seal				X	X	X	X								X	-	-	-	MAR-APR
29	Bearded seal				X	X	X	X								X	-	-	-	MAR-APR
30	Gray whale							X	X	X							-	-	-	-
31	Harbor porpoise									X	X	X					-	-	-	-
	Killer whale						X	X	X	X	X	X	X	X			-	SEP-OCT	-	-
	Minke whale									X	X	X					-	-	-	-
56	Walrus			10S						X	X	X	X	X	X		-	-	-	-
57	Beluga whale			1,000S				X	X	X	X	X	X				-	JUN-AUG	-	-
67	Seals			HIGH			X	X	X	X	X	X	X	X			-	-	-	MAY-JUL

HUMAN USE RESOURCES:

CRITICAL HABITAT:				
HUN#	Name	Owner	Contact	Phone
16	STELLER SEA LION CRITICAL HABITAT	NMFS	NMFS	907/586-7858

MANAGEMENT AREA:				
HUN#	Name	Owner	Contact	Phone
18	NUSHAGAK & MULCHATNA REC. RIVERS MP			

WILDLIFE REFUGE:				
HUN#	Name	Owner	Contact	Phone
24	ALASKA MARITIME NWR	US FISH & WILDLIFE SERVICE	REFUGE MANAGER	907/246-3339
27	TOGIAK NATIONAL WILDLIFE REFUGE	US FISH & WILDLIFE SERVICE	REFUGE MANAGER	907/842-1063

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