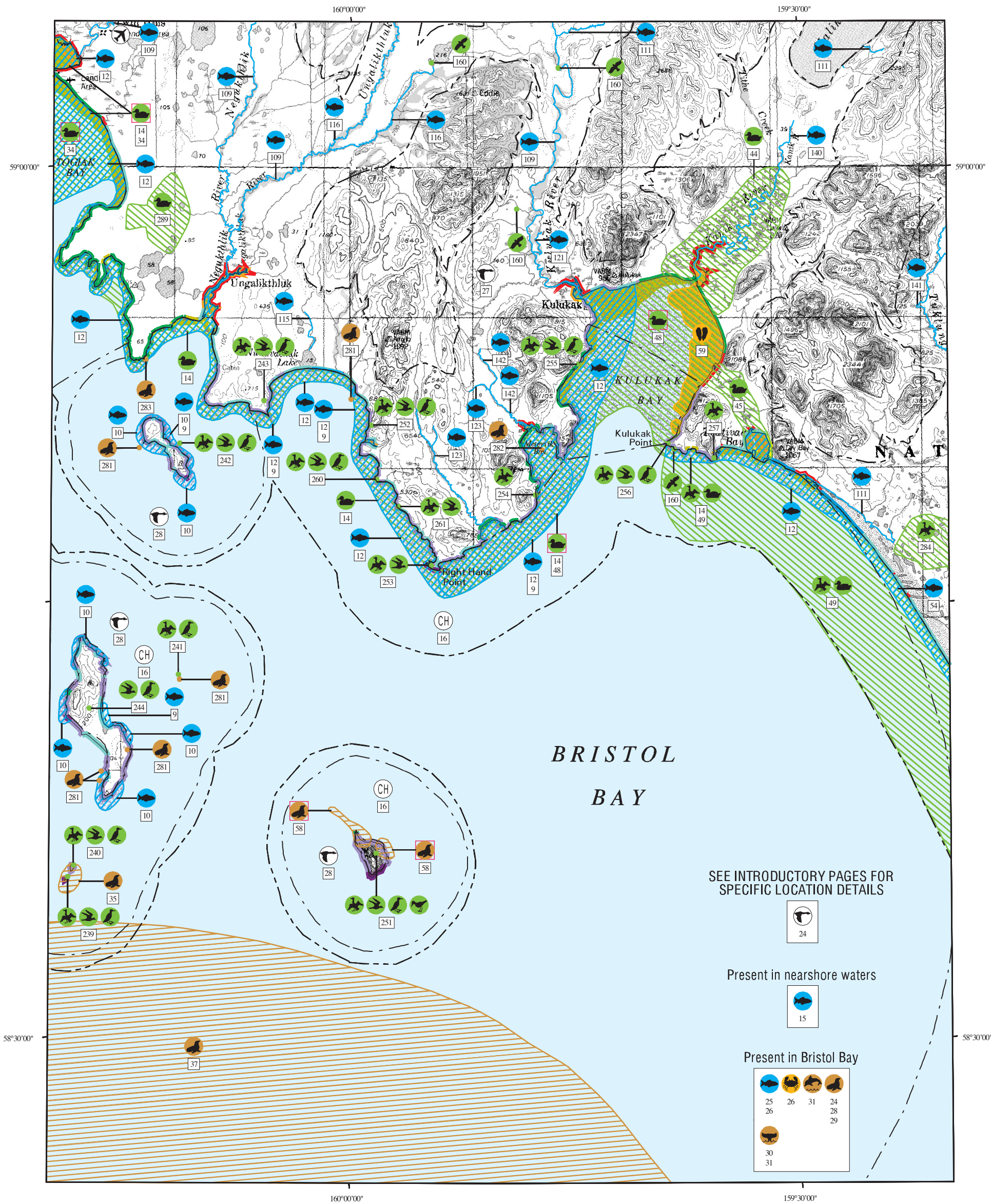


ENVIRONMENTAL SENSITIVITY INDEX MAP

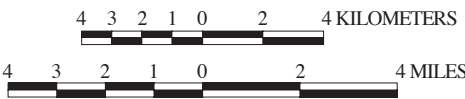


SHORELINE HABITATS (ESI)

- 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

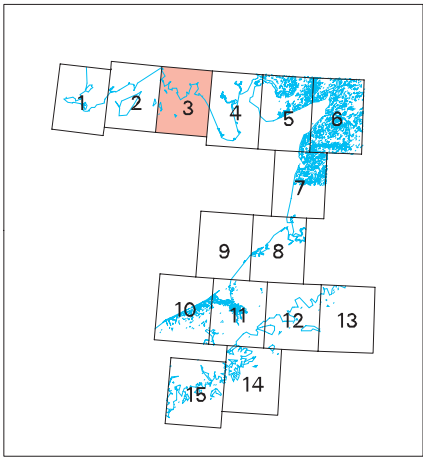


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Hazardous Materials Response Division



Bristol Bay: ESIMAP 3

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating		Molting
14	Harlequin duck							X	X			X	X	X			-	APR-MAY	AUG-OCT	-
34	Black scoter			100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Common eider			100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Long-tailed duck			1,000S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Scaup			100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Steller's eider	C	T	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
44	Waterfowl			HIGH				X	X		X	X	X	X			-	APR-MAY	SEP-OCT	JUL-AUG
45	Waterfowl			HIGH				X	X			X	X				-	APR-MAY	SEP-OCT	-
48	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			100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	Steller's eider	C	T	100S				X	X			X	X	X			-	APR-MAY	AUG-OCT	-
	White-winged scoter			100S				X	X			X	X	X			-	APR-MAY	AUG-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	-
160	Bald eagle							X	X	X	X	X					APR-AUG	-		-
239	Black-legged kittiwake			1,058				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Common murre			18,646				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			589				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			4				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			125				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			4				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
240	Black-legged kittiwake			5,814				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Common murre			98,231				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			1,038				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			10				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Parakeet auklet			15				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			320				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			60				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			1,500				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
241	Black-legged kittiwake			817				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Common murre			23,211				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			8				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Parakeet auklet			5				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			155				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			10				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			10				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
242	Black-legged kittiwake			2				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Double-crested cormorant			12				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			87				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			55				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			320				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			330				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			8				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
243	Black-legged kittiwake			4				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			76				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			31				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
244	Glaucous-winged gull			12				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			122				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Parakeet auklet			14				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			131				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			37				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
251	Black oystercatcher			2				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Black-legged kittiwake			58,880				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Common murre			145,724				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Crested auklet			100				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Fork-tailed storm-petrel			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			1,750				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Least auklet			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Parakeet auklet			1,500				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			901				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			400				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Rhinoceros auklet			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Thick-billed murre			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Tufted puffin			400				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
252	Glaucous-winged gull			3				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Horned puffin			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			7				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
253	Glaucous-winged gull			214				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			13				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
254	Pelagic cormorant			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
255	Glaucous-winged gull			13				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			22				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
256	Glaucous-winged gull			1,000S				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			356				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pigeon guillemot			UNKNOWN				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
257	Cormorant			100				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
260	Common murre			5				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Glaucous-winged gull			74				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			626				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
261	Glaucous-winged gull			40				X	X	X	X	X	X				JUN-JUL	APR-MAY	AUG-OCT	-
	Pelagic cormorant			27				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						MAY-JUN	MAY-MAY	JUL-SEP	-
289	Black scoter			3-7 BIRDS/SQ.KM				X	X	X	X	X	X				JUN-JUL	MAY-MAY	AUG-OCT	-
	Scaup			3-8 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
10	Pacific herring							X	X	X	X						APR-JUN	MAY-JUL	-	-	APR-JUL
12	Pacific herring			HIGH				X	X	X							APR-JUN	MAY-JUL	-	-	APR-JUL
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				-	-	-	MAY-JUN	JUL-OCT
	Dolly varden								X	X	X	X					-	-	-	MAY-JUN	MAY-SEP
	Pink salmon (humpy)								X	X	X						-	-	-	MAY-JUN	JUN-JUL

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 3 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH:																					
RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
25	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
111	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
115	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
	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
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
121	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
	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
123	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
140	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
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
142	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

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	
59	Alaska razor clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC	
	Butter clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC	
	Nuttall cockle				X	X	X	X	X	X	X	X	X	X	X	X	APR-NOV	-	-	-	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					-	-	-	-
35	Walrus			INFREQUENT						X	X	X	X	X	X		-	-	-	-
37	Walrus			HIGH						X	X	X	X	X			-	-	-	-
58	Steller (Northern) sea lion	C	E	500						X	X	X	X	X			-	-	-	MAY-JUL
	Walrus			2,000-15,000						X	X	X	X	X	X		-	-	-	-
281	Seals			10S	X	X	X	X	X	X	X	X	X	X	X		-	-	-	MAY-JUL
282	Seals			100S	X	X	X	X	X	X	X	X	X	X	X		-	-	-	MAY-JUL
283	Seals			<10	X	X	X	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

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
28	WALRUS ISLANDS STATE GAME SANCTUARY	ALASKA DEPT. OF FISH & GAME		907/842-2334

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.