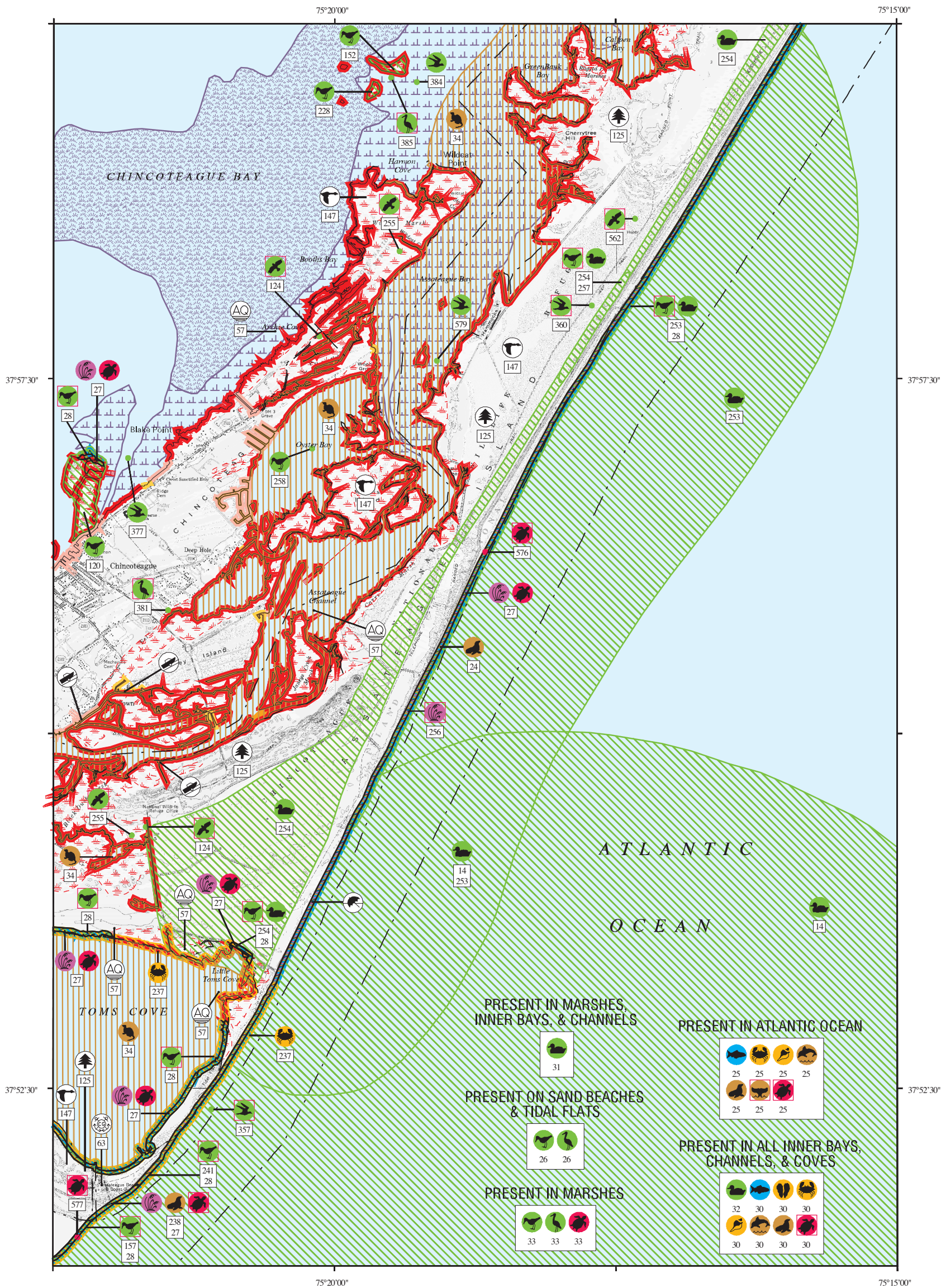
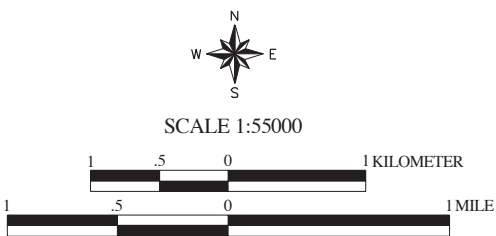


ENVIRONMENTAL SENSITIVITY INDEX MAP

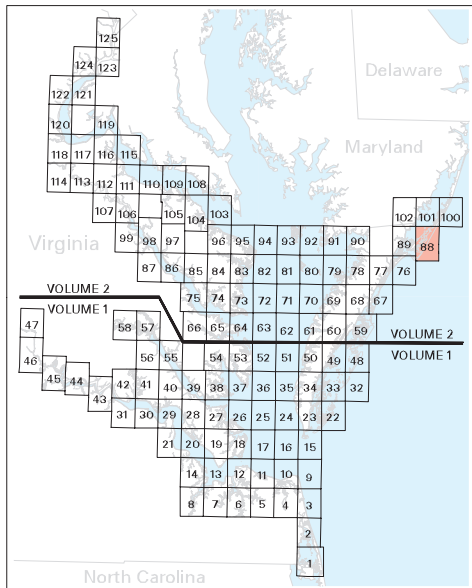


- SHORELINE HABITATS (ESI)**
- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
 - 2A EXPOSED WAVE-CUT PLATFORMS IN CLAY
 - 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
 - 3A FINE-TO MEDIUM-GRAINED SAND BEACHES
 - 3B SCARPS AND STEEP SLOPES IN SAND
 - 4 COARSE-GRAINED SAND BEACHES
 - 5 MIXED SAND AND GRAVEL BEACHES
 - 6A GRAVEL BEACHES
 - 6B RIPRAP
 - 7 EXPOSED TIDAL FLATS
 - 8A SHELTERED SCARPS IN CLAY
 - 8B SHELTERED, SOLID MAN-MADE STRUCTURES
 - 8C SHELTERED RIPRAP
 - 9A SHELTERED TIDAL FLATS
 - 9B SHELTERED, VEGETATED LOW BANKS
 - 10A SALT-AND BRACKISH-WATER MARSHES
 - 10B FRESHWATER MARSHES
 - 10C SWAMP
 - 10D SCRUB-SHRUB WETLANDS



Not For Navigation
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National Ocean Service
Office of Response and Restoration
Hazardous Materials Response Division



Virginia: ESIMAP 88

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
14	Black scoter	HIGH	X	X	X	X							X	X	-	-	-
	Surf scoter		X	X	X	X							X	X	-	-	-
	White-winged scoter		X	X	X	X							X	X	-	-	-
26	American woodcock		X	X								X	X	X	-	-	-
	Black-bellied plover			X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Dunlin		X	X	X	X	X			X	X	X	X	X	-	-	-
	Greater yellowlegs			X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Killdeer							X	X	X					-	-	-
	Least sandpiper				X	X	X	X	X	X	X	X	X	X	-	-	-
	Lesser yellowlegs			X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Pectoral sandpiper							X	X	X	X	X	X	X	-	-	-
	Red knot			X	X	X	X	X	X						-	-	-
	Ruddy turnstone			X	X	X	X	X							-	-	-
	Sanderling		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Semipalmated plover			X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Semipalmated sandpiper			X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Short-billed dowitcher		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Stilt sandpiper							X	X	X	X	X	X	X	-	-	-
	Western sandpiper							X	X	X	X	X	X	X	-	-	-
	Whimbrel			X	X	X	X	X	X						-	-	-
	White-rumped sandpiper			X	X	X									-	-	-
	Willet		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
28	Piping plover	T T HIGH		X	X	X	X	X	X	X					APR-SEP	-	-
31	American black duck	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-
	American wigeon	MODERATE	X	X	X	X					X	X	X		-	-	-
	Brant	HIGH	X	X	X	X					X	X	X		-	-	-
	Canada goose	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Gadwall	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Green-winged teal	MODERATE	X	X	X	X					X	X	X		-	-	-
	Mallard	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Northern pintail	MODERATE	X	X	X	X					X	X	X		-	-	-
	Northern shoveler		X	X	X	X					X	X	X		-	-	-
32	Snow goose	HIGH	X	X	X	X					X	X	X		-	-	-
	Bufflehead	HIGH	X	X	X	X					X	X	X		-	-	-
	Common goldeneye		X	X	X	X					X	X	X		-	-	-
	Mergansers	HIGH	X	X	X	X					X	X	X		-	-	-
	Ruddy duck		X	X	X	X					X	X	X		-	-	-
	Scaup		X	X	X	X					X	X	X		-	-	-
	Tundra swan	MODERATE	X	X	X	X					X	X	X		-	-	-
33	Clapper rail	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	King rail		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Sora			X	X	X					X	X	X		-	-	-
	Virginia rail		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Whimbrel	HIGH		X	X	X					X	X	X		-	-	-
	Willet	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
120	American oystercatcher			X	X	X	X	X	X	X					MAR-JUL	-	-
124	Bald eagle	T T	X	X	X	X	X			X	X	X	X		FEB-MAY	-	-
152	American oystercatcher	8 ADULTS		X	X	X	X	X	X						MAR-JUL	-	-
157	American oystercatcher	12 ADULTS		X	X	X	X	X	X						MAR-JUL	-	-
228	American oystercatcher	6 ADULTS		X	X	X	X	X	X						MAR-JUL	-	-
241	American oystercatcher	3 ADULTS		X	X	X	X	X	X	X					MAR-JUL	-	-
253	Sea ducks	VERY HIGH	X	X	X	X					X	X	X		-	-	-
254	American black duck	VERY HIGH	X	X	X	X					X	X	X		-	-	-
	Dabbling ducks	25,000-40,000	X	X	X	X					X	X	X		-	-	-
	Mallard	VERY HIGH	X	X	X	X					X	X	X		-	-	-
	Northern pintail	HIGH	X	X	X	X					X	X	X		-	-	-
	Snow goose	50000	X	X	X	X					X	X	X		-	-	-
	Tundra swan	HIGH	X	X	X	X					X	X	X		-	-	-
255	Bald eagle	T T	X	X	X	X				X	X	X	X		FEB-MAY	-	-
257	Piping plover	T T		X	X	X	X	X	X	X					APR-SEP	-	-
258	American oystercatcher	HIGH	X	X	X					X	X	X	X		-	-	-
357	Black skimmer	36 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Common tern	24 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Least tern	C 200 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
360	Least tern	C 20 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
377	Black skimmer	6 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
381	Yellow-crowned night-heron	C 6 ADULTS			X	X	X	X	X						MAY-JUL	-	-
384	Great black-backed gull	4 ADULTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Herring gull	50 ADULTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
385	Black-crowned night-heron	4 ADULTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Great egret	C 10 ADULTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Snowy egret	4 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
562	Peregrine falcon	T		X	X	X	X	X							MAR-AUG	-	-
579	Forster's tern	35 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-

FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
25	Atlantic croaker					X	X	X	X	X	X	X	X	X	-	-	-	AUG-DEC	MAY-NOV
	Atlantic mackerel			X	X										-	-	-	-	MAR-APR
	Atlantic menhaden		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	MAY-OCT
	Black drum			X	X	X	X	X	X						-	-	-	-	APR-OCT
	Black sea bass			X	X	X	X	X	X						JUN-OCT	-	-	APR-OCT	APR-OCT
	Bluefish			X	X	X	X	X	X	X					-	-	-	MAY-NOV	APR-NOV
	Butterfish			X	X	X	X	X	X	X	X				-	-	-	JUL-NOV	MAR-NOV
	Crevalle jack		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Northern kingfish			X	X	X	X	X	X						MAY-AUG	-	-	-	APR-OCT
	Northern searobin			X	X	X	X	X	X	X					-	-	-	-	MAR-OCT
	Pollock		X	X	X	X								X	-	-	-	-	DEC-APR
	Red drum				X	X	X	X	X	X	X				JUL-NOV	-	-	-	MAY-NOV
	Red hake		X	X	X	X				X	X	X			-	-	-	FEB-MAY	FEB-MAY
																			SEP-NOV
	Sandbar shark					X	X	X	X	X	X				-	-	-	MAY-OCT	MAY-OCT
	Scup (porgy)			X	X	X	X	X	X	X					-	-	-	JUN-OCT	MAR-OCT
	Silver hake		X	X	X	X				X	X	X			-	-	-	-	OCT-MAY
	Southern kingfish (whiting)			X	X	X	X	X	X	X					-	-	-	-	APR-OCT
	Spanish mackerel			X	X										-	-	-	-	APR-MAY
	Spiny dogfish		X	X	X	X						X	X		-	-	-	-	NOV-APR
	Spot		X	X	X	X	X	X	X	X	X	X	X	X	-	-	DEC-APR	MAR-NOV	MAR-NOV
	Spotted hake			X	X	X	X			X	X	X			-	-	-	MAR-JUN	MAR-JUN
																			SEP-NOV
	Spotted seatrout			X	X	X	X	X	X	X	X				MAY-JUL	-	-	APR-NOV	APR-NOV
	Summer flounder		X	X	X	X	X	X	X	X	X	X	X	X	-	-	OCT-MAY	-	APR-OCT
	Tautog		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	-	JAN-DEC
	Weakfish			X	X	X	X	X	X	X					-	-	MAY-AUG	APR-NOV	APR-NOV
30	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC	JAN-DEC
	Killifish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	-	-	JAN-DEC	JAN-DEC
	Minnows		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Mummichog		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC

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.

Virginia: ESIMAP 88 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH: (cont.)

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
30	Northern pipefish		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Northern searobin							X	X	X					-	-	-	JUN-AUG	JUN-AUG
	Pollock		X	X	X	X								X	-	-	-	-	DEC-APR
	Red drum						X	X	X	X	X	X	X		JUL-NOV	-	-	AUG-SEP	MAY-NOV
	Red hake		X	X	X	X				X	X	X			-	-	-	FEB-MAY	FEB-MAY
																		SEP-NOV	SEP-NOV
	Sandbar shark							X	X	X	X	X	X		-	-	-	MAY-OCT	MAY-OCT
	Scup (porgy)					X	X	X	X	X	X	X			-	-	-	JUN-OCT	MAR-OCT
	Silver hake		X	X	X	X							X	X	X	-	-	-	OCT-MAY
	Silver perch		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	APR-MAY	APR-JUN	JAN-DEC	JAN-DEC
	Silversides		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-JUL	APR-SEP	JAN-DEC	JAN-DEC
	Spanish mackerel						X	X							-	-	-	-	APR-MAY
	Spot					X	X	X	X	X	X	X			-	-	-	APR-OCT	JUL-SEP
	Spotted hake		X	X	X	X						X	X	X	-	-	-	OCT-APR	-
	Spotted seatrout					X	X	X	X	X	X	X	X		MAY-JUL	-	-	APR-NOV	APR-NOV
	Striped anchovy					X	X	X	X	X	X	X			APR-SEP	-	-	APR-NOV	APR-NOV
	Summer flounder					X	X	X	X	X	X	X			-	-	-	APR-NOV	APR-NOV
	Tautog		X	X	X	X						X	X	X	-	-	-	-	OCT-APR
	Weakfish					X	X	X	X	X	X	X			APR-AUG	-	-	MAR-OCT	APR-OCT
	White hake					X	X	X				X	X	X	-	-	-	-	MAR-MAY
																		SEP-NOV	SEP-NOV
	White perch		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	APR-JUN	APR-JUN	JAN-DEC	JAN-DEC
	Winter flounder		X	X	X	X	X	X					X		-	-	-	DEC-JUL	DEC-MAY
	Alewife			X	X	X	X								-	-	-	-	FEB-JUN
	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	American shad			X	X	X	X	X							-	-	-	-	FEB-JUN
	Atlantic croaker						X	X	X	X	X	X	X	X	-	-	-	MAY-DEC	-
	Atlantic herring			X	X	X	X	X							-	-	-	-	FEB-JUN
	Atlantic mackerel				X	X									-	-	-	-	MAR-APR
	Atlantic menhaden						X	X	X	X	X	X	X		-	-	-	MAY-NOV	MAY-OCT
	Bay anchovy		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-	JAN-DEC	JAN-DEC
	Black drum					X	X	X	X	X	X				-	-	-	-	APR-OCT
	Black sea bass					X	X	X	X	X	X				-	-	-	APR-SEP	APR-SEP
	Blueback herring			X	X	X	X	X	X	X	X				-	-	FEB-JUN	FEB-OCT	FEB-JUN
	Bluefish						X	X	X	X	X	X			-	-	-	MAY-OCT	MAY-OCT
	Crevalle jack		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Gobies		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-OCT	JAN-DEC	JAN-DEC
	Hickory shad			X	X	X	X	X							-	-	-	-	FEB-JUN

HABITAT:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
27	Maritime dune scrub		X	X	X	X	X	X	X	X	X	X	X	X
	Native coastal strand vegetation		X	X	X	X	X	X	X	X	X	X	X	X
	Sea-beach knotweed		X	X	X	X	X	X	X	X	X	X	X	X
	Southern beach spurge		X	X	X	X	X	X	X	X	X	X	X	X
256	Seabeach amaranth	T	X	X	X	X	X	X	X	X	X	X	X	X

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
25	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	JAN-DEC	JAN-DEC
	Channeled whelk		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
30	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-SEP	MAY-NOV	JAN-DEC	JAN-DEC
	Channeled whelk		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Northern quahog (hard clam)		X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT	MAY-OCT	JAN-DEC	JAN-DEC
237	Horseshoe crab					X	X	X	X						APR-JUL	-	-	-	MAY-JUL

MARINE MAMMAL:

RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting	
24	Harbor seal				X	X									X	X	X	-	-	-	-
25	Bottlenose dolphin							X	X	X	X	X	X	X			-	-	-	-	
	Common dolphin							X	X	X	X	X	X				-	-	-	-	
	Harbor porpoise				X	X	X	X	X							X	-	-	-	-	
	Harbor seal				X	X								X	X	X	-	-	-	-	
	Humpback whale	E	E		X	X	X	X	X	X	X	X	X	X	X	X	-	JAN-DEC	-	-	
30	Bottlenose dolphin							X	X	X	X	X	X	X			-	-	-	-	
	Harbor porpoise				X	X	X	X	X							X	-	-	-	-	
	Harbor seal				X	X								X	X	X	-	-	-	-	
238	Harbor seal				X	X								X	X	X	-	-	-	-	

REPTILE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Interesting	Juveniles	Adults
25	Green sea turtle	T T						X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Kemp's ridley sea turtle	E E						X	X	X	X	X	X	X	-	-	-	MAY-NOV	MAY-NOV
	Leatherback sea turtle	E E						X	X	X	X	X	X	X	-	-	-	-	MAY-NOV
	Loggerhead sea turtle	T T						X	X	X	X	X	X	X	-	-	-	MAY-NOV	MAY-NOV
27	Diamondback terrapin				X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-	MAR-NOV	MAR-NOV
30	Green sea turtle	T T						X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Kemp's ridley sea turtle	E E						X	X	X	X	X	X	X	-	-	-	MAY-NOV	MAY-NOV
	Leatherback sea turtle	E E						X	X	X	X	X	X	X	-	-	-	-	MAY-NOV
	Loggerhead sea turtle	T T						X	X	X	X	X	X	X	-	-	-	MAY-NOV	MAY-NOV
33	Diamondback terrapin	VERY HIGH			X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	MAR-NOV
238	Loggerhead sea turtle	T T						X	X	X	X	X	X	X	MAY-NOV	-	-	-	MAY-NOV
576	Loggerhead sea turtle	T T						X	X	X	X	X	X	X	MAY-NOV	-	-	-	MAY-NOV
577	Loggerhead sea turtle	T T						X	X	X	X	X	X	X	MAY-NOV	-	-	-	MAY-NOV

TERRESTRIAL MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
34	Northern river otter		X	X	X	X	X	X	X	X	X	X	X	X

HUMAN USE RESOURCES:

AQUACULTURE:

HUN#	Name	Contact	Phone
57	AQUACULTURE: HARD CLAMS		

COAST GUARD:

HUN#	Name	Contact	Phone
63	ASSATEAGUE BEACH USCG STATION		

Virginia: ESIMAP 88 (cont.)

HUMAN USE RESOURCES: (cont.)

NATIONAL PARK:

HUN#	Name	Contact	Phone
-----	-----	-----	-----
125	ASSATEAGUE ISLAND NATIONAL SEASHORE	NATIONAL PARK SERVICE	757/336-6577

WILDLIFE REFUGE:

HUN#	Name	Contact	Phone
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147	CHINCOTEAGUE ISLAND NWR	U.S. FISH AND WILDLIFE SERVICE	757/336-6122