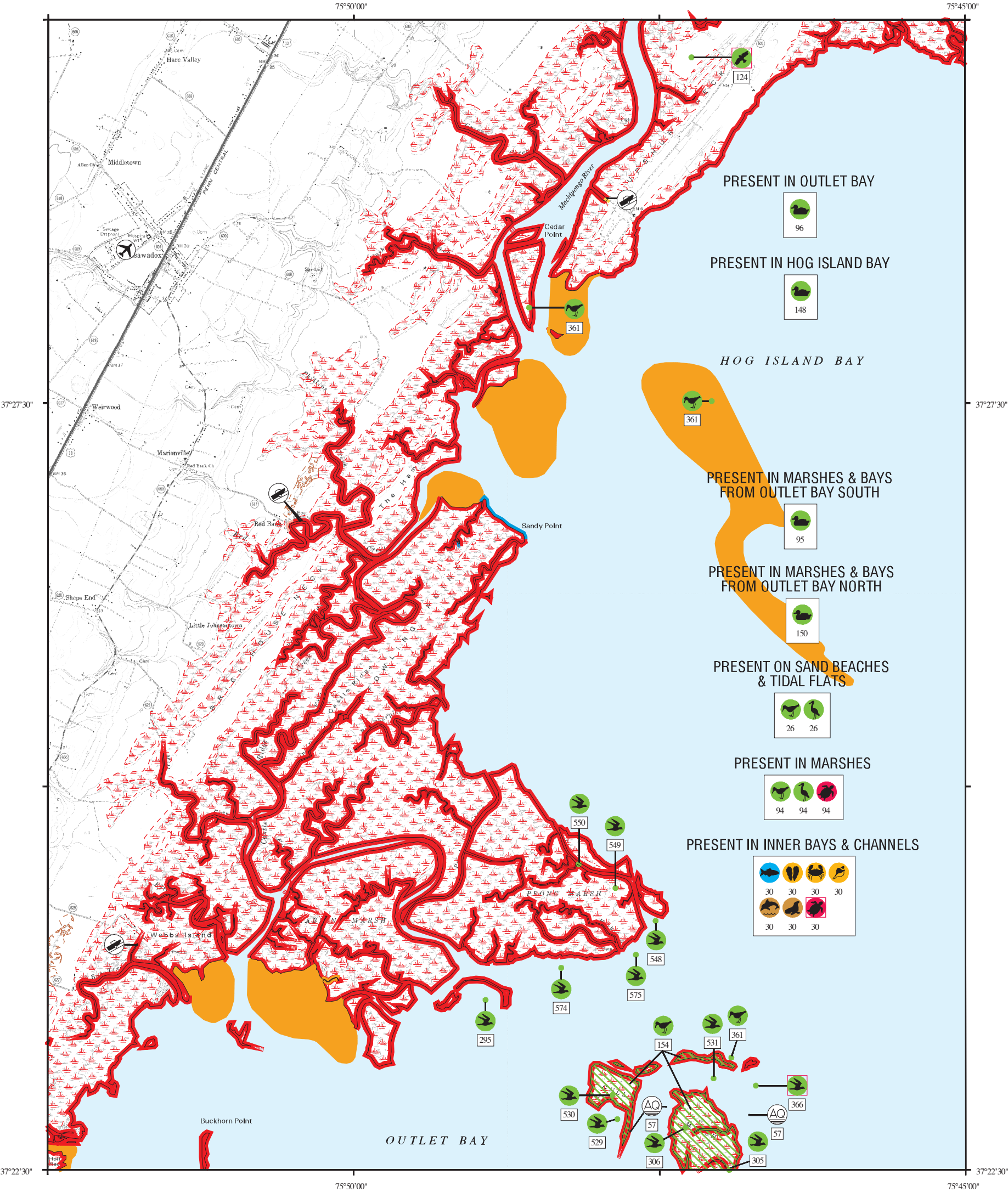


ENVIRONMENTAL SENSITIVITY INDEX MAP



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

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SCALE 1:50000

1 KILOMETER

1 MILE

NASSAWADOX, VA. **VA-49**

Virginia: ESIMAP 49

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
26	American woodcock		X	X							X	X	X	X	-	-	-
	Black-bellied plover				X	X	X	X	X	X	X	X	X	X	-	-	-
	Dunlin		X	X	X	X	X			X	X	X	X		-	-	-
	Greater yellowlegs			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			-	-	-
	Pectoral sandpiper						X	X	X	X	X	X			-	-	-
	Red knot			X	X	X	X	X	X						-	-	-
	Ruddy turnstone			X	X	X	X	X	X						-	-	-
	Sanderling		X	X	X	X	X	X	X	X	X	X	X		-	-	-
	Semipalmated plover			X	X	X	X	X	X	X	X	X			-	-	-
	Semipalmated sandpiper			X	X	X	X	X	X	X	X				-	-	-
	Short-billed dowitcher		X	X	X	X	X	X	X	X	X	X	X		-	-	-
	Stilt sandpiper						X	X	X	X	X	X			-	-	-
	Western sandpiper						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		-	-	-
94	Clapper rail	HIGH	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		-	-	-
	Sora			X	X	X				X	X	X			-	-	-
	Virginia rail		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		APR-SEP	-	-
95	American black duck	HIGH	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		APR-JUN	-	-
	Gadwall	MODERATE	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		MAY-JUL	-	-
	Northern pintail	MODERATE	X	X	X	X				X	X	X			-	-	-
	Northern shoveler	LOW	X	X	X	X				X	X	X			-	-	-
	Snow goose	HIGH	X	X	X	X				X	X	X			-	-	-
96	Bufflehead	HIGH	X	X	X	X				X	X	X			-	-	-
	Long-tailed duck	MODERATE	X	X	X	X				X	X	X			-	-	-
	Mergansers	HIGH	X	X	X	X				X	X	X			-	-	-
	Scoters	HIGH	X	X	X	X				X	X	X			-	-	-
	Tundra swan	MODERATE	X	X	X	X				X	X	X			-	-	-
124	Bald eagle	T T	X	X	X	X				X	X	X	X		FEB-MAY	-	-
148	Bufflehead	MODERATE	X	X	X	X				X	X	X			-	-	-
	Long-tailed duck		X	X	X	X				X	X	X			-	-	-
	Mergansers		X	X	X	X				X	X	X			-	-	-
	Scoters		X	X	X	X				X	X	X			-	-	-
150	American black duck	HIGH	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	MODERATE	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		APR-JUN	-	-
	Green-winged teal		X	X	X	X				X	X	X			-	-	-
	Mallard	MODERATE	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Northern pintail		X	X	X	X				X	X	X			-	-	-
	Northern shoveler		X	X	X	X				X	X	X			-	-	-
154	American oystercatcher	HIGH		X	X	X	X	X	X	X					MAR-JUL	-	-
295	Laughing gull	205 ADULTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
305	Forster's tern	85 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
	Herring gull	1 ADULT	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	160 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
306	Laughing gull	175 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
361	American oystercatcher	HIGH	X	X	X					X	X	X	X		-	-	-
366	Black skimmer	56 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
	Caspian tern	2 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
	Common tern	6 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
	Herring gull	3 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	6 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
	Royal tern	69 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
529	Laughing gull	150 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
530	Great black-backed gull	2 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Herring gull	2 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	673 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
531	Herring gull	5 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	60 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
548	Great black-backed gull	2 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Herring gull	6 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	190 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
549	Laughing gull	127 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
550	Forster's tern	11 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	31 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
574	Laughing gull	807 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
575	Laughing gull	93 ADULTS		X	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
30	Alewife			X	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								-	-	-	-	FEB-JUN
	Atlantic croaker					X	X	X	X	X	X	X	X		-	-	-	MAY-DEC	-
	Atlantic herring			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-SEP
	Black sea bass				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								-	-	-	-	FEB-JUN
	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
	Northern pipefish		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

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 49 (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	Red hake		X	X	X	X				X	X	X			-	-	-	FEB-MAY	FEB-MAY SEP-NOV
	Sandbar shark						X	X	X	X	X	X	X		-	-	-	MAY-OCT	MAY-OCT
	Scup (porgy)			X	X	X	X	X	X	X	X	X			-	-	-	JUN-OCT	MAR-OCT
	Silver hake		X	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	X			MAY-JUL	-	-	APR-NOV	APR-NOV
	Striped anchovy			X	X	X	X	X	X	X	X	X			APR-SEP	-	-	APR-NOV	APR-NOV
	Summer flounder			X	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	X	X			APR-AUG	-	-	MAR-OCT	APR-OCT
	White hake			X	X	X				X	X	X			-	-	-	-	MAR-MAY 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

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
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

MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
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		-	-	-	-

REPTILE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Internesting	Juveniles	Adults
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			-	-	-	MAY-NOV	MAY-NOV
	Leatherback sea turtle	E E					X	X	X	X	X	X			-	-	-	-	MAY-NOV
	Loggerhead sea turtle	T T					X	X	X	X	X	X			-	-	-	MAY-NOV	MAY-NOV
94	Diamondback terrapin		X	X	X	X	X	X	X	X	X				-	-	-	MAR-NOV	MAR-NOV

HUMAN USE RESOURCES:

AQUACULTURE:

HUN#	Name	Contact	Phone
57	AQUACULTURE: HARD CLAMS		