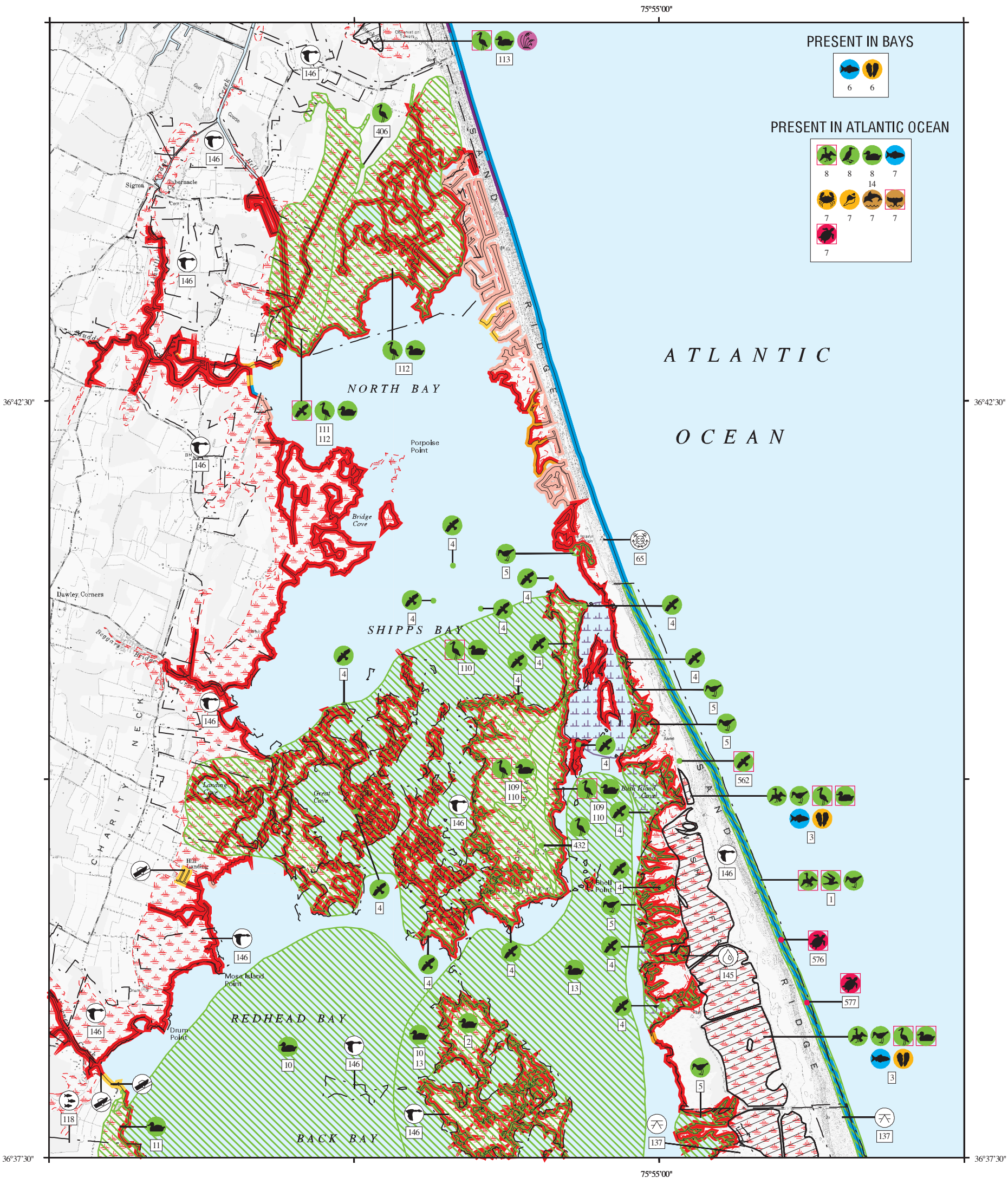


ENVIRONMENTAL SENSITIVITY INDEX MAP



**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

N

W E S

SCALE 1:50000

1 .5 0 1 KILOMETER

1 .5 0 1 MILE

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Delaware

Maryland

Virginia

North Carolina

VOLUME 2

VOLUME 1

VOLUME 2

VOLUME 1

Virginia: ESIMAP 2

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
1	Black-bellied plover	LOW			X	X	X	X	X	X	X	X	X		-	-	-
	Bonaparte's gull	LOW	X	X	X	X	X						X		-	-	-
	Brown pelican	C LOW			X	X	X	X	X	X	X	X	X		-	-	-
	Caspian tern	C LOW			X	X	X				X	X	X		-	-	-
	Common tern	LOW			X	X	X	X	X	X	X	X	X		-	-	-
	Forster's tern	MODERATE			X	X	X	X	X	X	X	X	X		-	-	-
	Great black-backed gull	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Herring gull	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Laughing gull	LOW			X	X	X	X	X	X	X	X	X		-	-	-
	Least sandpiper	LOW			X	X	X				X	X	X		-	-	-
	Least tern	C LOW			X	X	X	X	X						-	-	-
	Lesser black-backed gull	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Ring-billed gull	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Royal tern	MODERATE			X	X	X	X	X	X	X	X	X		-	-	-
	Ruddy turnstone	LOW			X	X	X				X	X	X		-	-	-
	Sanderling	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Sandwich tern	C LOW			X	X	X	X	X	X	X	X	X		-	-	-
	Semipalmated plover	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Semipalmated sandpiper	LOW			X	X					X				-	-	-
	Willet	LOW			X	X	X	X	X	X	X	X	X		-	-	-
2	American black duck	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	American wigeon	HIGH	X	X	X	X	X	X			X	X	X	X	MAY-JUN	-	-
	Canada goose	LOW	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Gadwall	HIGH	X	X	X	X	X				X	X	X	X	APR-MAY	-	-
	Green-winged teal	HIGH	X	X	X	X	X				X	X	X	X	-	-	-
	Tundra swan	MODERATE	X	X	X	X	X				X	X	X	X	-	-	-
3	American bittern	LOW	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	American black duck	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	American coot	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	American wigeon	LOW	X	X	X	X	X	X			X	X	X	X	MAY-JUN	-	-
	Blue-winged teal	MODERATE			X	X	X	X	X	X	X				MAY-JUN	-	-
	Bufflehead	LOW	X	X							X	X	X	X	-	-	-
	Canada goose	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Cattle egret	LOW					X	X	X						JUN-AUG	-	-
	Common merganser	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Common moorhen	C LOW	X	X	X	X	X	X			X	X	X	X	MAY-JUN	-	-
	Gadwall	MODERATE	X	X	X	X	X				X	X	X	X	APR-MAY	-	-
	Glossy ibis	C LOW			X	X	X	X	X	X	X	X	X	X	-	-	-
	Great blue heron	LOW	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Great egret	C MODERATE			X	X	X	X	X	X	X	X	X	X	-	-	-
	Greater yellowlegs	LOW			X	X					X				-	-	-
	Green-winged teal	HIGH	X	X	X	X	X				X	X	X	X	-	-	-
	Killdeer	LOW			X	X	X	X	X	X	X	X	X	X	-	-	-
	King rail	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-
	Least bittern	LOW			X	X	X	X	X	X					MAY-JUN	-	-
	Least sandpiper	LOW			X	X	X				X	X	X		-	-	-
	Lesser yellowlegs	MODERATE			X	X					X				-	-	-
	Mallard	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Northern pintail	MODERATE	X	X							X	X	X	X	-	-	-
	Northern shoveler	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Pied-billed grebe	LOW	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-
	Ruddy duck	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Scaup	LOW	X	X	X	X	X				X	X	X	X	-	-	-
	Semipalmated plover	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Semipalmated sandpiper	MODERATE			X	X					X				-	-	-
	Short-billed dowitcher	LOW			X	X	X								-	-	-
	Snow goose	MODERATE	X	X	X	X	X				X	X	X	X	-	-	-
	Snowy egret	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Sora	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Spotted sandpiper	LOW			X	X	X				X	X	X		-	-	-
	Tricolored heron	C LOW			X	X	X	X	X	X	X	X	X	X	-	-	-
	Tundra swan	MODERATE	X	X	X	X	X				X	X	X	X	-	-	-
	Virginia rail	LOW	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-
	Wood duck	MODERATE			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
4	Osprey				X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
5	Greater yellowlegs	LOW			X	X					X				-	-	-
	Lesser yellowlegs	MODERATE			X	X					X				-	-	-
	Semipalmated sandpiper	MODERATE			X	X					X				-	-	-
8	Brown pelican	C			X	X	X	X	X	X	X	X	X		-	-	-
	Common loon				X	X	X						X	X	-	-	-
	Northern gannet	HIGH			X	X	X						X	X	-	-	-
	Red-breasted merganser	VERY HIGH			X	X	X						X	X	-	-	-
	Red-necked grebe				X	X									-	-	-
	Red-throated loon				X	X	X						X	X	-	-	-
10	Lesser scaup	MODERATE			X	X	X	X			X	X	X	X	-	-	-
	Snow goose				X	X	X	X			X	X	X	X	-	-	-
11	American black duck	HIGH			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	American coot	LOW			X	X	X	X			X	X	X	X	-	-	-
	American wigeon	LOW			X	X	X	X	X		X	X	X	X	MAY-JUN	-	-
	Blue-winged teal	MODERATE			X	X	X	X	X	X					MAY-JUN	-	-
	Gadwall	MODERATE			X	X	X	X			X	X	X	X	APR-MAY	-	-
	Green-winged teal	HIGH			X	X	X	X			X	X	X	X	-	-	-
	Mallard	VERY HIGH			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Northern pintail	MODERATE			X	X					X	X	X	X	-	-	-
	Northern shoveler	LOW			X	X	X	X			X	X	X	X	-	-	-
	Wood duck	MODERATE			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
13	American wigeon	HIGH			X	X	X	X			X	X	X	X	-	-	-
	Gadwall	HIGH			X	X	X	X			X	X	X	X	-	-	-
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	-	-	-
109	American bittern	LOW			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Great blue heron	< 10 NESTS			X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	King rail	LOW			X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-
	Least bittern	LOW			X	X	X	X	X	X					MAY-JUN	-	-
	Virginia rail	LOW			X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-
110	American black duck	HIGH			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Canada goose				X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Great blue heron	LOW			X	X	X	X	X	X	X	X	X	X	-	-	-
	Great egret	C LOW			X	X	X	X	X	X	X	X	X	X	-	-	-
	Green-winged teal	HIGH			X	X	X	X			X	X	X	X	-	-	-
	Mallard				X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
111	Bald eagle	T T			X	X	X	X	X	X				X	MAR-MAY	-	-
	Least bittern	LOW-MODERATE			X	X	X	X	X	X					APR-MAY	-	-
	Mallard				X	X					X	X	X	X	-	-	-
112	American bittern	LOW			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	American black duck				X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Clapper rail	VERY LOW			X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	King rail	MODERATE			X	X	X	X			X	X	X	X	APR-MAY	-	-

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 2 (cont.)

BIOLOGICAL RESOURCES: (cont.)

BIRD: (cont.)

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting
112	Mallard		X X X X X X X X X X	-	-	-
	Virginia rail	LOW	X X X X X X X X X X	APR-MAY	-	-
113	American black duck	LOW	X X X X X X X X X X	-	-	-
	Gadwall	LOW	X X X X X X X X X X	-	-	-
	Great blue heron	LOW	X X X X X X X X X X X	-	-	-
	Great egret	C LOW	X X X X X X X X X X	-	-	-
	Mallard	LOW	X X X X X X X X X X	-	-	-
	Tundra swan	LOW	X X X X X X X X X X	-	-	-
406	Great blue heron	5 NESTS	X X X X X X X X X X X	MAY-JUL	-	-
432	Great blue heron	10 NESTS	X X X X X X X X X X X	MAY-JUL	-	-
562	Peregrine falcon	T	X X X X X X	MAR-AUG	-	-

FISH:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
3	Black crappie		X X X X X X X X X X	MAR-JUL	-	-	JAN-DEC	JAN-DEC
	Bluegill		X X X X X X X X X X	APR-SEP	-	-	-	JAN-DEC
	Bowfin		X X X X X X X X X X	APR-JUN	-	-	-	JAN-DEC
	Brown bullhead		X X X X X X X X X X	APR-JUN	-	-	-	JAN-DEC
	Chain pickerel		X X X X X X X X X X	FEB-APR	-	-	-	JAN-DEC
	Chubsucker		X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Common carp		X X X X X X X X X X	MAY-AUG	-	-	-	JAN-DEC
	Largemouth bass		X X X X X X X X X X	MAR-MAY	-	-	-	JAN-DEC
	Pumpkinseed		X X X X X X X X X X	MAR-JUN	-	-	JAN-DEC	JAN-DEC
	White perch		X X X X X X X X X X	-	-	-	JAN-DEC	-
	Yellow perch		X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
6	Alewife		X X X X X X X X X X	-	-	-	JAN-DEC	-
	American eel		X X X X X X X X X X	-	-	-	JAN-DEC	-
	Atlantic menhaden		X X X X X X X X X X	-	-	-	JAN-DEC	-
	Blueback herring		X X X X X X X X X X	-	-	-	JAN-DEC	-
	Bowfin		X X X X X X X X X X	APR-JUN	-	-	-	JAN-DEC
	Brown bullhead		X X X X X X X X X X	APR-JUN	-	-	-	JAN-DEC
	Common carp		X X X X X X X X X X	MAY-AUG	-	-	-	JAN-DEC
	Spot		X X X X X X X X X X	-	-	-	JAN-DEC	-
	Summer flounder		X X X X X X X X X X	-	-	-	JAN-DEC	-
	White perch		X X X X X X X X X X	APR-JUN	APR-JUN	APR-JUN	JAN-DEC	JAN-DEC
	Yellow perch		X X X X X X X X X X	APR-JUN	-	-	JAN-DEC	JAN-DEC
7	Atlantic croaker		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	-	-	-	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
	Crevaille jack		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	-	-	-	-	MAR-OCT
	Pollock		X X X X	X	-	-	-	DEC-APR
	Red drum		X 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 X	-	-	-	JUN-OCT	MAR-OCT
	Silver hake		X 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 X	-	-	-	-	NOV-APR
	Spot		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	-	-	OCT-MAY	-	APR-OCT
	Tautog		X X X X X X X X X X	APR-AUG	-	-	-	JAN-DEC
	Weakfish		X X X X X X X X	APR-AUG	-	MAY-AUG	APR-NOV	APR-NOV

HABITAT:

RAR#	Species	S F Conc.	J F M A M J J A S O N D
113	Rare plant		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
3	Brackishwater clam		X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Carolina marsh clam		X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
6	Brackishwater clam		X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
7	Blue crab		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	-	-	-	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
7	Bottlenose dolphin		X X X X X X	-	-	-	-
	Common dolphin		X X X X X X	-	-	-	-
	Harbor porpoise		X X X X X	X	-	-	-
	Humpback whale	E E	X X X X X X X X X X	-	JAN-DEC	-	-

REPTILE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Hatching	Internesting	Juveniles	Adults
7	Green sea turtle	T T	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
576	Loggerhead sea turtle	T T	X X X X X X	MAY-NOV	-	-	-	MAY-NOV
577	Loggerhead sea turtle	T T	X X X X X X	MAY-NOV	-	-	-	MAY-NOV

HUMAN USE RESOURCES:

COAST GUARD:

HUN#	Name	Contact	Phone
65	LITTLE ISLAND USCG STATION		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
118	PRINCESS ANNE WILDLIFE MANAGEMENT AREA	VDGIF	804/367-1000

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 2 (cont.)

HUMAN USE RESOURCES: (cont.)

PARK:

HUN#	Name	Contact	Phone
137	FALSE CAPE STATE PARK	VA DCR	757/426-7128

WATER INTAKE:

HUN#	Name	Contact	Phone
145	WATER INTAKE	JOHN GALLEGOS	757/721-2412

WILDLIFE REFUGE:

HUN#	Name	Contact	Phone
146	BACK BAY NATIONAL WILDLIFE REFUGE	U.S. FISH AND WILDLIFE SERVICE	757/721-2412