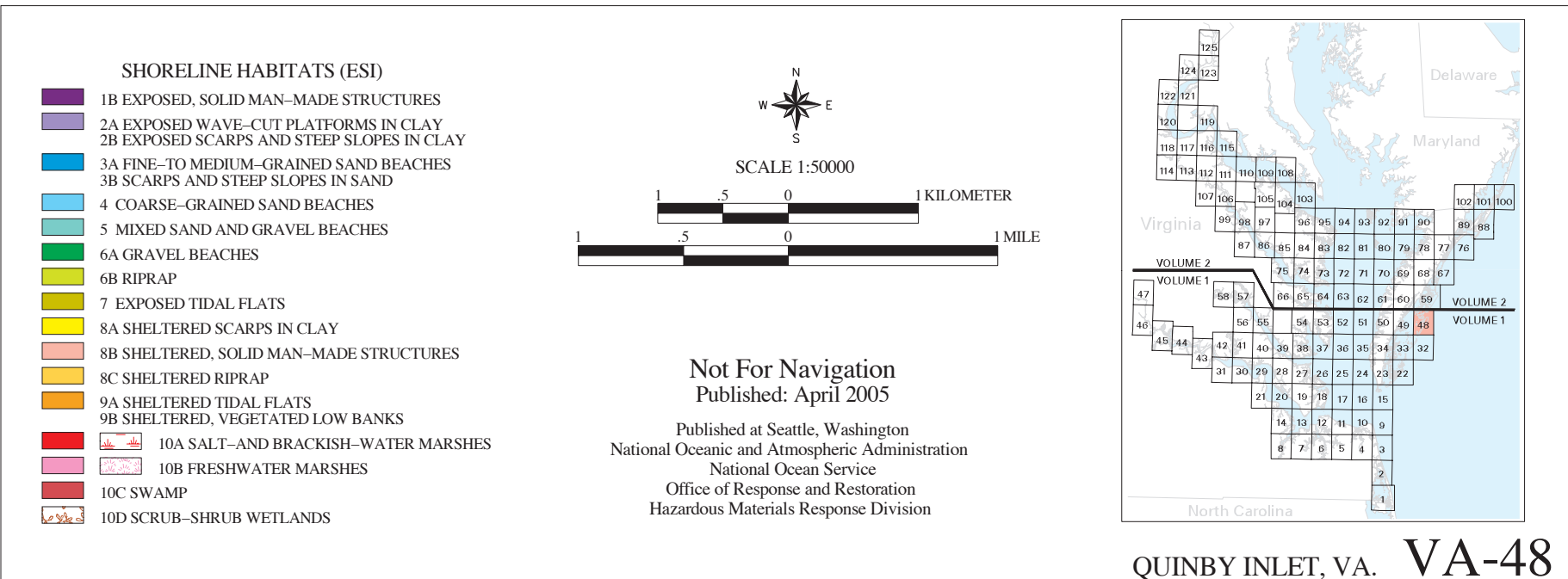
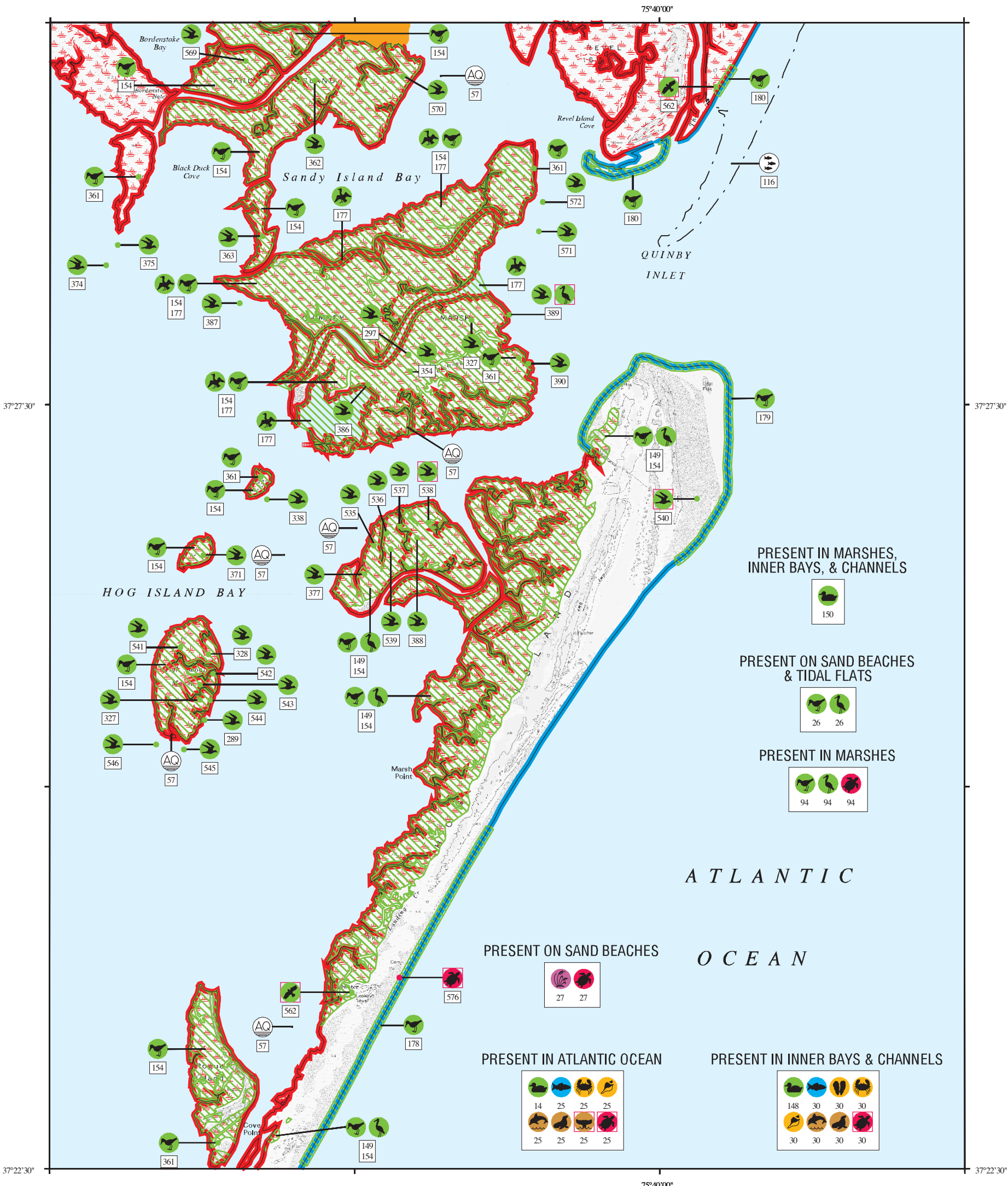


ENVIRONMENTAL SENSITIVITY INDEX MAP



Virginia: ESIMAP 48

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			-	-	-
	Dunlin		X	X	X	X	X				X	X	X	X	-	-	-
	Greater yellowlegs			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		-	-	-
	Pectoral sandpiper						X	X	X	X	X	X			-	-	-
	Red knot			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			-	-	-
	Semipalmated sandpiper			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			-	-	-
	Western sandpiper						X	X	X	X	X	X			-	-	-
	Whimbrel			X	X	X	X	X							-	-	-
	White-rumped sandpiper			X	X	X									-	-	-
	Willet		X	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	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	-	-
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		-	-	-
149	American bittern		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Black rail			X	X	X	X	X	X	X	X	X	X		APR-JUN	-	-
	Least bittern		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
150	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	MODERATE	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		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		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	-	-
177	Double-crested cormorant		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
178	American oystercatcher	10 ADULTS		X	X	X	X	X	X	X					MAR-JUL	-	-
179	American oystercatcher	13 ADULTS		X	X	X	X	X	X						MAR-JUL	-	-
180	American oystercatcher	2 ADULTS		X	X	X	X	X	X						MAR-JUL	-	-
289	Laughing gull	31 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
297	Forster's tern	40 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
327	Forster's tern	6 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
328	Forster's tern	8 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
338	Laughing gull	325 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
354	Forster's tern	30 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
361	American oystercatcher	HIGH	X	X	X					X	X	X	X		-	-	-
362	Laughing gull	10 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
363	Forster's tern	102 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	429 ADULTS		X	X	X	X	X	X	X	X	X			MAY-JUL	-	-
371	Forster's tern	15 ADULTS		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	16 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
374	Common tern	18 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
375	Black skimmer	2 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Common tern	3 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
377	Black skimmer	6 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
386	Laughing gull	68 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
387	Forster's tern	88 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Herring gull	10 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull	850 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
388	Laughing gull	240 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
389	Great black-backed gull	82 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Great blue heron	2 ADULTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Great egret	C 64 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Herring gull	554 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Snowy egret	16 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
390	Herring gull	60 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
535	Forster's tern	68 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	10 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
536	Laughing gull	36 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
537	Laughing gull	180 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
538	Black skimmer	3 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
	Common tern	102 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
	Gull-billed tern	T 8 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
539	Herring gull	21 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
540	Black skimmer	22 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Common tern	48 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
	Least tern	C 26 ADULTS		X	X	X	X	X	X						MAY-JUL	-	-
541	Laughing gull	234 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
542	Forster's tern	44 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	94 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
543	Forster's tern	11 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
544	Forster's tern	14 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	52 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
545	Laughing gull	21 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
546	Laughing gull	42 ADULTS		X	X	X	X	X	X	X	X				MAY-JUL	-	-
562	Peregrine falcon	T		X	X	X	X	X							MAR-AUG	-	-
569	Forster's tern	162 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
570	Forster's tern	10 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
	Laughing gull	2 ADULTS		X	X	X	X	X	X	X					MAY-JUL	-	-
571	Great black-backed gull	6 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Herring gull	202 ADULTS		X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
572	Common tern	26 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

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 48 (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
			-	-	-	-	-	-	-	-	-	-	-	-					
25	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	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				-	-	-	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	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	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	-	-	-	-	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	X			APR-AUG	-	MAY-AUG	APR-NOV	APR-NOV
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	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-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					-	-	-	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
	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	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				JUL-NOV	-	-	AUG-SEP	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	-	-	-	-	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					-	-	-	APR-OCT	JUL-SEP
	Spotted hake		X	X	X	X				X	X	X			-	-	-	OCT-APR	-
	Spotted seatrout					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				-	-	-	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
	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

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

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

MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
			-	-	-	-	-	-	-	-	-	-	-	-				
25	Bottlenose dolphin					X	X	X	X	X	X				-	-	-	-
	Common dolphin					X	X	X	X	X	X				-	-	-	-
	Harbor porpoise		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				-	-	-	-
	Harbor porpoise		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	Interesting	Juveniles	Adults
			-	-	-	-	-	-	-	-	-	-	-	-					
25	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
27	Diamondback terrapin		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				-	-	-	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

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 48 (cont.)

BIOLOGICAL RESOURCES: (cont.)

REPTILE: (cont.)

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

HUMAN USE RESOURCES:

AQUACULTURE:

HUN#	Name	Contact	Phone
57	AQUACULTURE: HARD CLAMS		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
116	PARRAMORE ISLAND NATURAL AREA PRESERVE	THE NATURE CONSERVANCY	757/442-3049

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