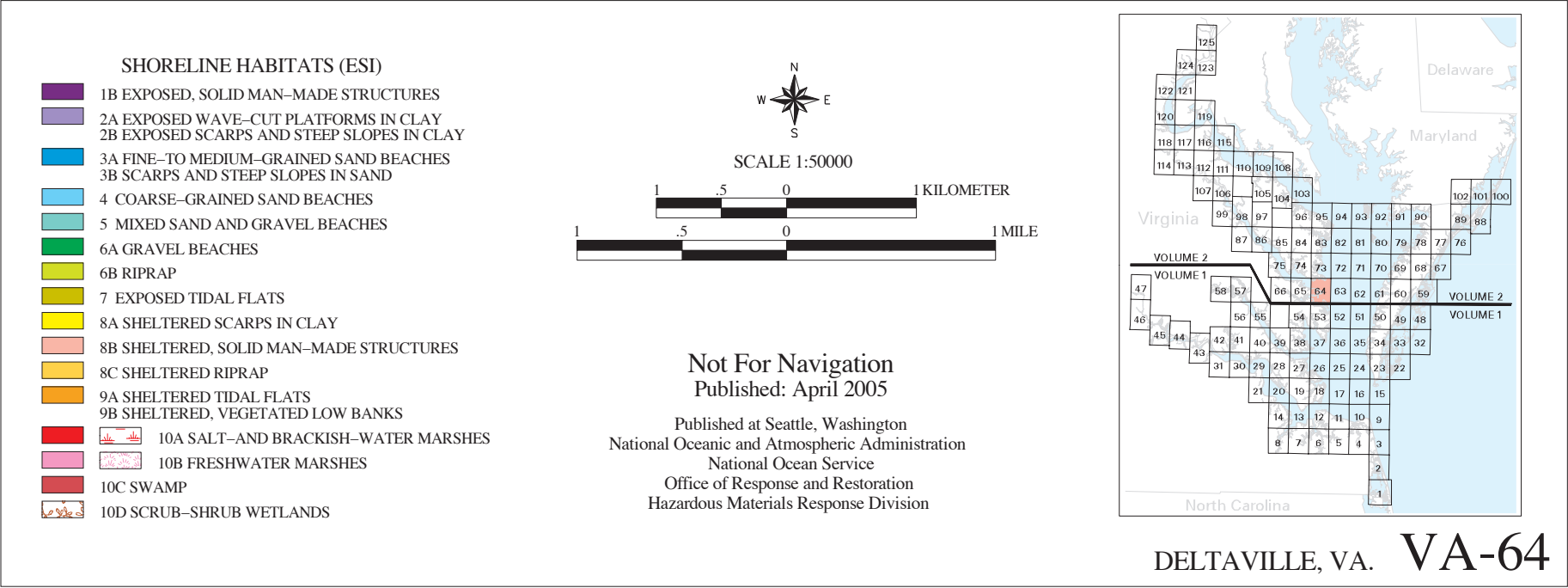
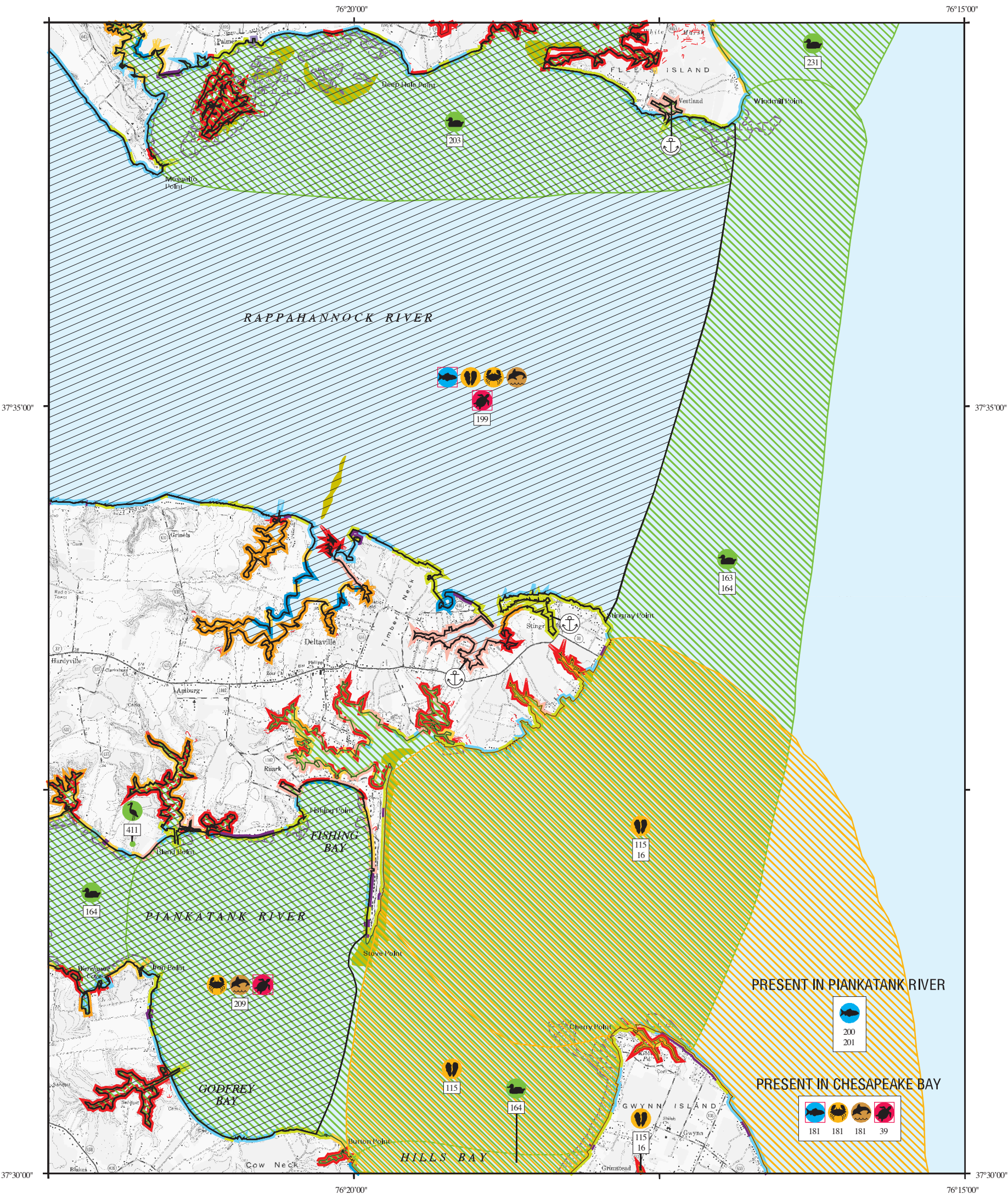


ENVIRONMENTAL SENSITIVITY INDEX MAP



Virginia: ESIMAP 64

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
163	American black duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	American wigeon	MODERATE	X	X	X	X						X	X	X	-	-	-
	Brant		X	X	X	X						X	X	X	-	-	-
	Canada goose	HIGH	X	X	X	X						X	X	X	-	-	-
	Gadwall	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mallard	MODERATE	X	X	X	X						X	X	X	-	-	-
164	Bufflehead	HIGH	X	X	X	X						X	X	X	-	-	-
	Canvasback	MODERATE	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		X	X	X	X						X	X	X	-	-	-
	Long-tailed duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mergansers		X	X	X	X						X	X	X	-	-	-
	Mute swan		X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Ruddy duck	HIGH	X	X	X	X						X	X	X	-	-	-
	Scaup	MODERATE	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	-	-	-
203	American black duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Bufflehead	MODERATE	X	X	X	X						X	X	X	-	-	-
	Canada goose	HIGH	X	X	X	X						X	X	X	-	-	-
	Canvasback	HIGH	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		X	X	X	X						X	X	X	-	-	-
	Green-winged teal		X	X	X	X						X	X	X	-	-	-
	Long-tailed duck		X	X	X	X						X	X	X	-	-	-
	Mallard	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mergansers	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mute swan		X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Ruddy duck	HIGH	X	X	X	X						X	X	X	-	-	-
	Scaup	MODERATE	X	X	X	X						X	X	X	-	-	-
	Tundra swan	MODERATE	X	X	X	X						X	X	X	-	-	-
231	Bufflehead	MODERATE	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		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	-	-	-
	Mute swan		X	X	X	X						X	X	X	-	-	-
	Ruddy duck		X	X	X	X						X	X	X	-	-	-
	Scaup		X	X	X	X						X	X	X	-	-	-
	Scoters		X	X	X	X						X	X	X	-	-	-
411	Great blue heron	3 NESTS	X	X	X	X	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
181	Alewife			X	X	X	X	X							-	-	-	-	FEB-JUN
	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	SEP-DEC
	American shad		X	X	X	X	X						X	X	-	-	-	NOV-MAR	JAN-JUN
	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	-	-	MAY-NOV	JAN-DEC	MAY-OCT
	Atlantic silverside		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-	JAN-DEC	JAN-DEC
	Atlantic spadefish									X	X	X	X		-	-	-	AUG-OCT	AUG-NOV
	Atlantic sturgeon	C	X	X	X	X	X	X	X	X	X	X	X		-	-	-	-	JAN-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	X	X		APR-JUN	APR-JUN	APR-JUN	APR-NOV	APR-NOV
	Black sea bass					X	X	X	X	X	X	X			JUN-OCT	-	-	APR-OCT	APR-OCT
	Blueback herring		X	X	X	X	X	X					X	X	-	-	-	NOV-MAR	JAN-JUN
	Bluefish					X	X	X	X	X	X	X	X		-	-	-	MAY-NOV	APR-NOV
	Butterfish				X	X	X	X	X	X	X	X			-	-	-	JUL-NOV	MAR-NOV
	Clearnose skate					X	X	X	X	X	X	X			-	-	-	-	MAY-NOV
	Gobies		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-OCT	JAN-DEC	JAN-DEC
	Harvestfish					X	X	X	X	X	X	X			-	-	-	JUL-OCT	APR-OCT
	Hickory shad		X	X	X	X	X						X	X	-	-	-	NOV-MAR	JAN-JUN
	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC	JAN-DEC
	Inland silverside		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	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 kingfish					X	X	X	X	X	X				-	-	-	-	APR-OCT
	Northern pipefish		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	JAN-DEC	JAN-DEC
	Northern puffer					X	X	X	X	X	X				MAY-AUG	-	-	MAR-OCT	MAR-OCT
	Northern searobin					X	X	X	X	X	X				MAY-JUL	-	-	-	MAR-OCT
	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		-	-	-	JUN-OCT	MAR-OCT
	Silver hake		X	X	X	X							X	X	-	-	-	-	OCT-MAY
	Silver perch		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	JAN-DEC	JAN-DEC
	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
	Striped bass		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Striped killifish		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-	JAN-DEC	JAN-DEC
	Summer flounder		X	X	X	X	X	X	X	X	X	X	X	X	-	-	OCT-MAY	JAN-DEC	APR-OCT
	Tautog		X	X	X	X						X	X	X	-	-	-	-	OCT-APR
	Threadfin shad			X	X	X	X					X	X	X	-	-	-	-	FEB-MAY
																			SEP-NOV
	Weakfish					X	X	X	X	X	X	X	X		APR-AUG	-	MAY-AUG	APR-NOV	APR-NOV
199	Threadfin shad		X	X	X	X						X	X	X	-	-	-	-	FEB-MAY
																			SEP-NOV
	Weakfish					X	X	X	X	X	X	X	X		APR-AUG	-	MAY-AUG	APR-NOV	APR-NOV
	Alewife			X	X	X	X	X							-	-	-	-	FEB-JUN
	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	SEP-DEC
	American shad		X	X	X	X	X						X	X	-	-	-	NOV-MAR	JAN-JUN
	Atlantic croaker					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	-	-	MAY-NOV	JAN-DEC	MAY-OCT
	Atlantic silverside		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-	JAN-DEC	JAN-DEC
	Atlantic spadefish									X	X	X	X		-	-	-	AUG-OCT	AUG-NOV
	Atlantic sturgeon		X	X	X	X	X	X	X	X	X				-	-	-	-	JAN-OCT
	Bay anchovy	C	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	X	X		APR-JUN	APR-JUN	APR-JUN	APR-NOV	APR-NOV
	Black sea bass					X	X	X	X	X	X				JUN-OCT	-	-	APR-OCT	APR-OCT
	Blueback herring		X	X	X	X	X						X	X	-	-	-	NOV-MAR	JAN-JUN
	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
	Clearnose skate					X	X	X	X	X	X				-	-	-	-	MAY-NOV
	Gobies		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-OCT	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 64 (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		
199	Harvestfish					X	X	X	X	X	X	X			-	-	-	JUL-OCT	APR-OCT		
	Hickory shad		X	X	X	X	X							X	X	-	-	-	NOV-MAR	JAN-JUN	
	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X		MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC	JAN-DEC	
	Inland silverside		X	X	X	X	X	X	X	X	X	X	X	X		APR-MAY	-	-	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 kingfish					X	X	X	X	X	X	X			-	-	-	-	APR-OCT		
	Northern pipefish		X	X	X	X	X	X	X	X	X	X	X	X		MAY-JUN	-	-	JAN-DEC	JAN-DEC	
	Northern puffer					X	X	X	X	X	X	X			MAY-AUG	-	-	MAR-OCT	MAR-OCT		
	Northern searobin					X	X	X	X	X	X	X			MAY-JUL	-	-	-	MAR-OCT		
	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		
		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	-	-	-	JAN-DEC	JAN-DEC	
		Spot		X	X	X	X	X	X	X	X	X	X	X	X	-	-	DEC-APR	MAR-NOV	JAN-DEC	
		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	
Striped bass			X	X	X	X	X	X	X	X	X	X	X	X		-	-	-	JAN-DEC	JAN-DEC	
Striped killifish			X	X	X	X	X	X	X	X	X	X	X	X		APR-SEP	-	-	JAN-DEC	JAN-DEC	
Summer flounder			X	X	X	X	X	X	X	X	X	X	X	X		-	-	OCT-MAY	JAN-DEC	APR-OCT	
Tautog			X	X	X	X							X	X	X	-	-	-	-	OCT-APR	
200		American shad					X	X	X	X						-	-	-	-	FEB-JUN	
		Hickory shad					X	X	X	X						-	-	-	-	FEB-JUN	
		Striped bass		X	X	X	X	X	X					X	X	X	-	-	-	-	OCT-JUN
201		American eel		X	X	X	X	X	X	X	X	X	X	X	X		-	-	-	JAN-DEC	-
	Atlantic menhaden						X	X	X	X	X	X	X		-	-	-	-	MAY-NOV	-	
	Bay anchovy		X	X	X	X	X	X	X	X	X	X	X	X		APR-SEP	-	-	JAN-DEC	JAN-DEC	
	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	
	Mummichog		X	X	X	X	X	X	X	X	X	X	X	X		APR-AUG	-	-	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	

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
16	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
115	Eastern oyster		X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-SEP	JUN-SEP	JAN-DEC	JAN-DEC
181	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	JAN-DEC	JAN-DEC
199	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	JAN-DEC	JAN-DEC
	Eastern oyster		X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-SEP	JUN-SEP	JAN-DEC	JAN-DEC
	Horseshoe crab		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
209	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	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
181	Bottlenose dolphin						X	X	X	X	X	X	X		-	-	-	-
	Harbor porpoise		X	X	X	X								X	-	-	-	-
199	Bottlenose dolphin						X	X	X	X	X	X	X		-	-	-	-
	Harbor porpoise		X	X	X	X								X	-	-	-	-
209	Bottlenose dolphin						X	X	X	X	X	X	X		-	-	-	-
	Harbor porpoise		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
39	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	-
	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	-
199	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	-
	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	-
209	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	-
	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	-