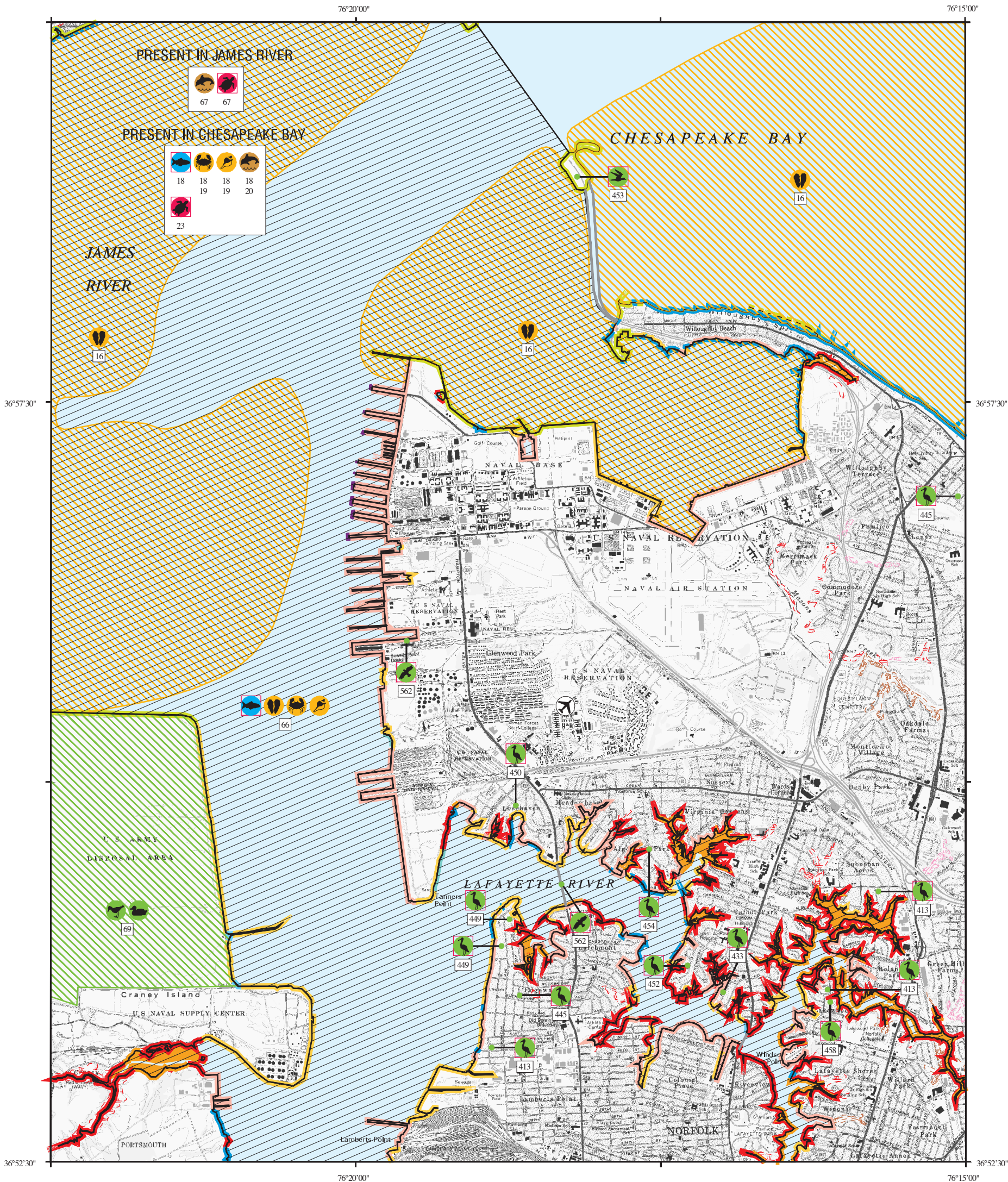
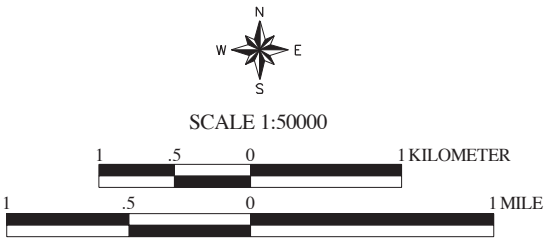


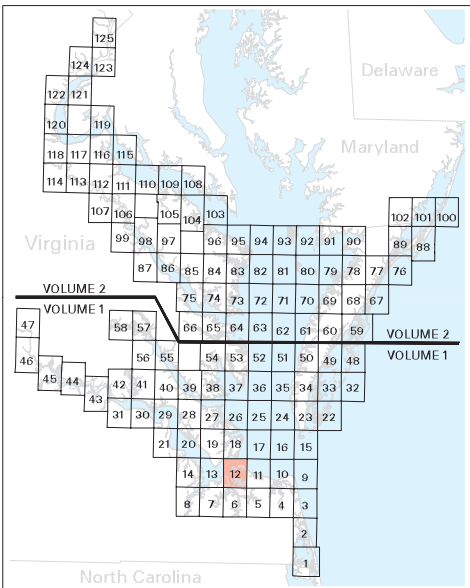
ENVIRONMENTAL SENSITIVITY INDEX MAP



- 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  
Published: April 2005  
Published at Seattle, Washington  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Response and Restoration  
Hazardous Materials Response Division





Virginia: ESIMAP 12

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S	F	Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
69	Dabbling ducks				X	X	X	X						X	X	X	-	-	-
	Green-winged teal				X	X	X	X						X	X	X	-	-	-
	Northern shoveler				X	X	X	X						X	X	X	-	-	-
	Shorebirds					X	X	X					X	X	X		-	-	-
413	Yellow-crowned night-heron	C		3 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
433	Yellow-crowned night-heron	C		4 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
445	Yellow-crowned night-heron	C		5 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
449	Great egret	C		2 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Yellow-crowned night-heron	C		6 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
450	Yellow-crowned night-heron	C		11 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
452	Yellow-crowned night-heron	C		6 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
453	Black skimmer			84 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Common tern			791 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Great black-backed gull			11 NESTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Gull-billed tern	T		18 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Herring gull			24 NESTS	X	X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
	Laughing gull			2711 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
454	Yellow-crowned night-heron	C		8 NESTS		X	X	X	X	X	X	X	X	X	X		MAY-JUL	-	-
458	Great egret	C		5 NESTS		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	
18	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				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	X	APR-SEP	-	-	JAN-DEC	JAN-DEC
	Black drum						X	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	X		-	-	-	MAY-NOV	APR-NOV	
	Butterfish						X	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	X	APR-SEP	APR-SEP	APR-OCT	JAN-DEC	JAN-DEC
	Harvestfish						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	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	X	APR-MAY	-	-	JAN-DEC	JAN-DEC
	Minnows				X	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	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	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	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	-	-	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
	66	Weakfish						X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	MAY-AUG	APR-NOV
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	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	-	-	-	JAN-DEC	JAN-DEC	
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	X	X	X	X	X	-	-	-	JAN-DEC	-
Alewife						X	X	X	X									-	-	-	-	FEB-JUN
American eel						X	X	X										-	-	-	FEB-MAY	-
American shad					X	X	X	X	X							X	X	-	-	-	NOV-MAR	JAN-JUN
Atlantic croaker					X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
Atlantic mackerel							X	X										-	-	-	-	MAR-APR
Atlantic menhaden					X	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	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	X	X	X	X	-	-	-	JAN-DEC	APR-NOV
Bay anchovy					X	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							-	-	-	APR-AUG	-
Blueback herring					X	X	X	X	X	X						X	X	-	-	-	NOV-MAR	JAN-JUN
Bluefish							X	X	X	X	X	X	X	X	X			-	-	-	MAY-NOV	APR-NOV
Butterfish							X	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	X	APR-SEP	APR-SEP	APR-OCT	JAN-DEC	JAN-DEC
Harvestfish							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	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	X	APR-MAY	-	-	JAN-DEC	JAN-DEC
Minnows					X	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	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	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

Virginia: ESIMAP 12 (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
66	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

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
18	Horseshoe crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Knobbed whelk		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
19	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	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
66	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-SEP	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
	Knobbed whelk		X	X	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
18	Harbor porpoise		X	X	X	X	X							X	-	-	-	-
20	Bottlenose dolphin					X	X	X	X	X	X	X			-	-	-	-
67	Bottlenose dolphin					X	X	X	X	X	X	X			-	-	-	-
	Harbor porpoise		X	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
23	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
67	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	-

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.