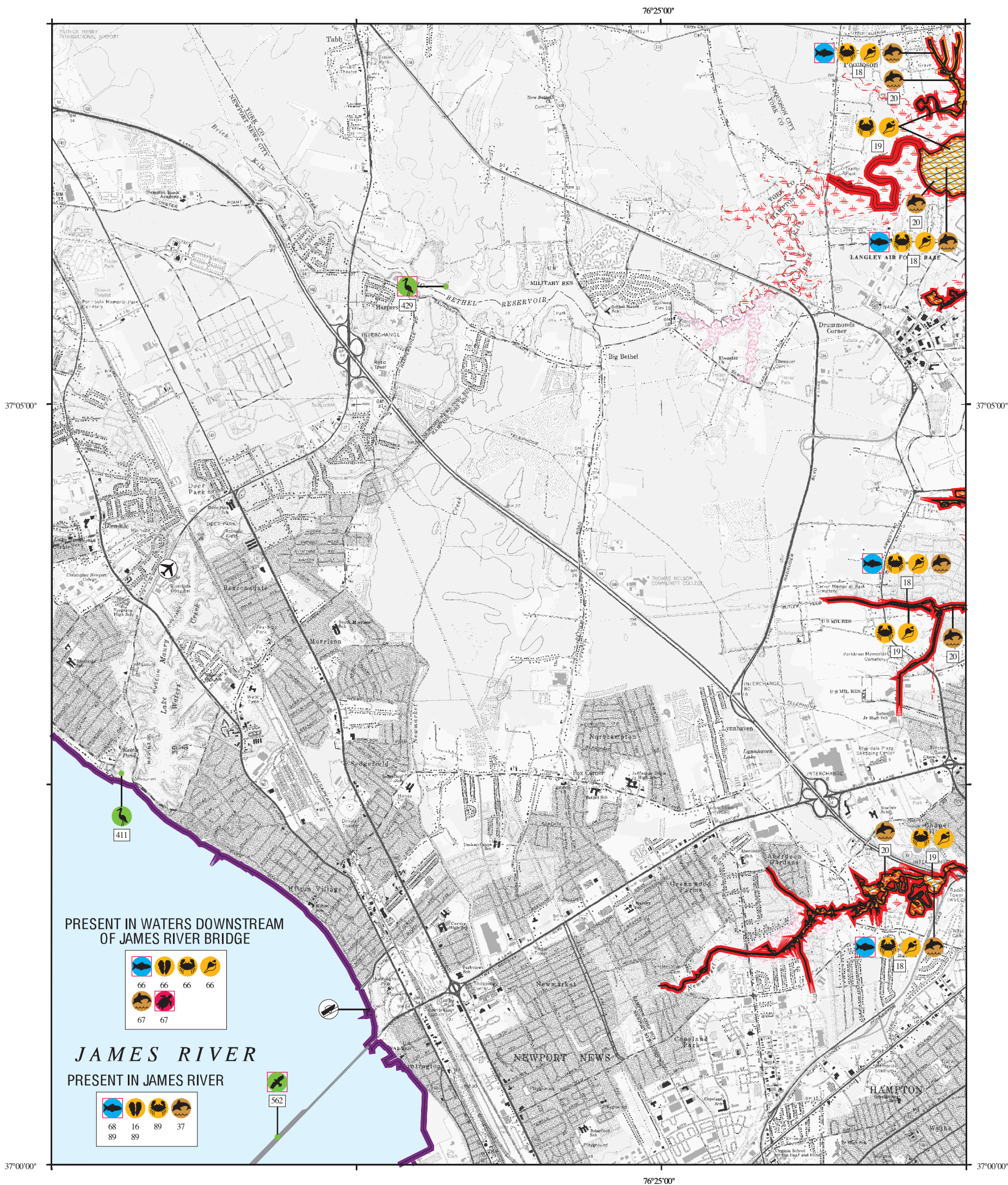


ENVIRONMENTAL SENSITIVITY INDEX MAP



**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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Virginia: ESIMAP 19

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
411	Great blue heron	3 NESTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
429	Great blue heron	100 NESTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Great egret	C 150 NESTS				X	X	X	X	X	X	X	X		MAY-JUL	-	-
562	Peregrine falcon	T			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					-	-	-	AUG-OCT	AUG-NOV
	Atlantic sturgeon	C	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				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			-	-	-	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
	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	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	-	-	-	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	-	-	-	JAN-DEC	-
68	Alewife		X	X	X	X	X								-	-	-	-	FEB-JUN
	American shad		X	X	X	X	X								-	-	-	-	FEB-JUN
	Blueback herring		X	X	X	X									-	-	-	-	FEB-JUN
	Hickory shad		X	X	X	X									-	-	-	-	FEB-JUN
	Striped bass		X	X	X	X	X			X	X	X			-	-	-	-	OCT-JUN
89	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	American shad		X	X	X	X	X	X	X	X	X				-	-	-	FEB-OCT	-
	Atlantic croaker		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Atlantic menhaden					X	X	X	X	X	X				-	-	-	MAY-NOV	-
	Atlantic silverside		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-	JAN-DEC	JAN-DEC
	Atlantic sturgeon	C	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	APR-SEP	-	-	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 19 (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
89	Black sea bass					X	X	X	X	X					-	-	-	APR-AUG	-
	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC	JAN-DEC
	Mummichog		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	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	APR-NOV	-
	Striped bass					X	X	X	X	X					-	-	-	MAY-OCT	-
	Summer flounder		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Weakfish		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	White perch		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	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
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
89	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

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	X		-	-	-	-
37	Bottlenose dolphin					X	X	X	X	X	X	X	X		-	-	-	-
	Harbor porpoise		X	X	X	X	X							X	-	-	-	-
67	Bottlenose dolphin					X	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
67	Green sea turtle	T T					X	X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Kemp's ridley sea turtle	E E					X	X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Leatherback sea turtle	E E					X	X	X	X	X	X	X	X	-	-	-	-	MAY-NOV
	Loggerhead sea turtle	T T					X	X	X	X	X	X	X	X	-	-	-	MAY-NOV	-

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