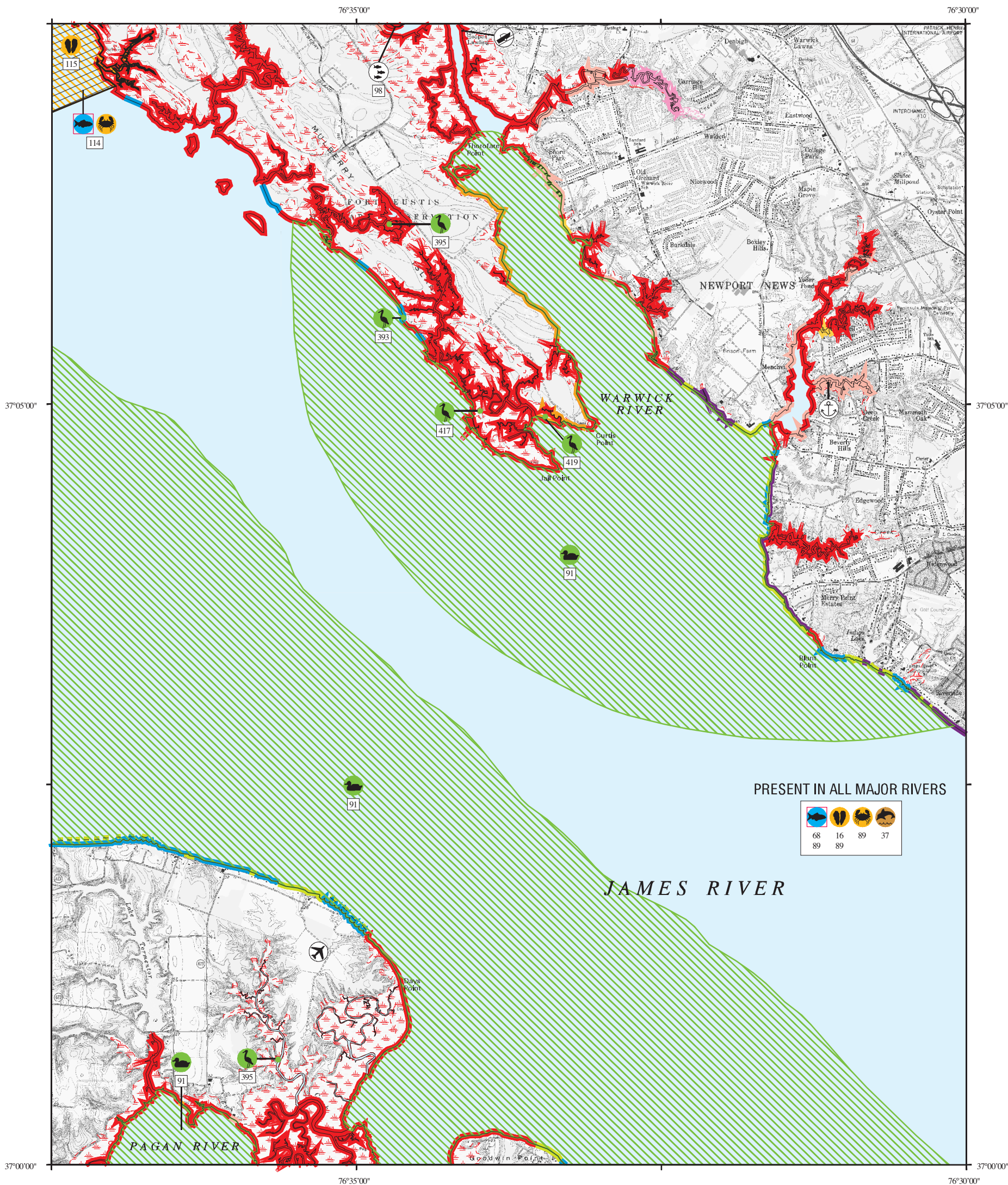


ENVIRONMENTAL SENSITIVITY INDEX MAP



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

Not For Navigation

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National Ocean Service

Office of Response and Restoration

Hazardous Materials Response Division

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Delaware

Maryland

Virginia

North Carolina

MULBERRY ISLAND, VA.

VA-20

Virginia: ESIMAP 20

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
			-	-	-	-	-	-	-	-	-	-	-	-			
91	Bufflehead	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	-	-	-
	Mergansers	MODERATE	X	X	X	X						X	X	X	-	-	-
	Redhead		X	X	X	X						X	X	X	-	-	-
	Ring-necked duck		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	-	-	-
393	Great blue heron	2 NESTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
395	Great blue heron	12 NESTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
417	Great blue heron	28 NESTS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
419	Great blue heron	23 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
			-	-	-	-	-	-	-	-	-	-	-	-					
68	Alewife			X	X	X	X	X							-	-	-	-	FEB-JUN
	American shad			X	X	X	X	X							-	-	-	-	FEB-JUN
	Blueback herring			X	X	X	X	X							-	-	-	-	FEB-JUN
	Hickory shad			X	X	X	X	X							-	-	-	-	FEB-JUN
	Striped bass		X	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				-	-	-	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	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
	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	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
114	Alewife		X	X	X	X	X	X	X	X	X				-	-	-	FEB-OCT	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	X	X	X				-	-	-	FEB-OCT	FEB-JUN
	Atlantic croaker		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	-
	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
	Blueback herring			X	X	X	X	X	X	X	X				-	-	-	FEB-OCT	FEB-JUN
	Channel catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	-	-	JAN-DEC	JAN-DEC
	Gizzard shad		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Hickory shad			X	X	X	X	X	X	X					-	-	-	MAR-SEP	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
	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
	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	X	X	X				-	-	-	MAY-OCT	FEB-JUN
	Weakfish		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	White catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	JAN-DEC	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
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
114	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	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

MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
			-	-	-	-	-	-	-	-	-	-	-	-				
37	Bottlenose dolphin					X	X	X	X	X	X	X			-	-	-	-
	Harbor porpoise		X	X	X	X	X						X		-	-	-	-

HUMAN USE RESOURCES:

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
98	BALTHROPE MARSH WILDLIFE MANAGEMENT AREA		