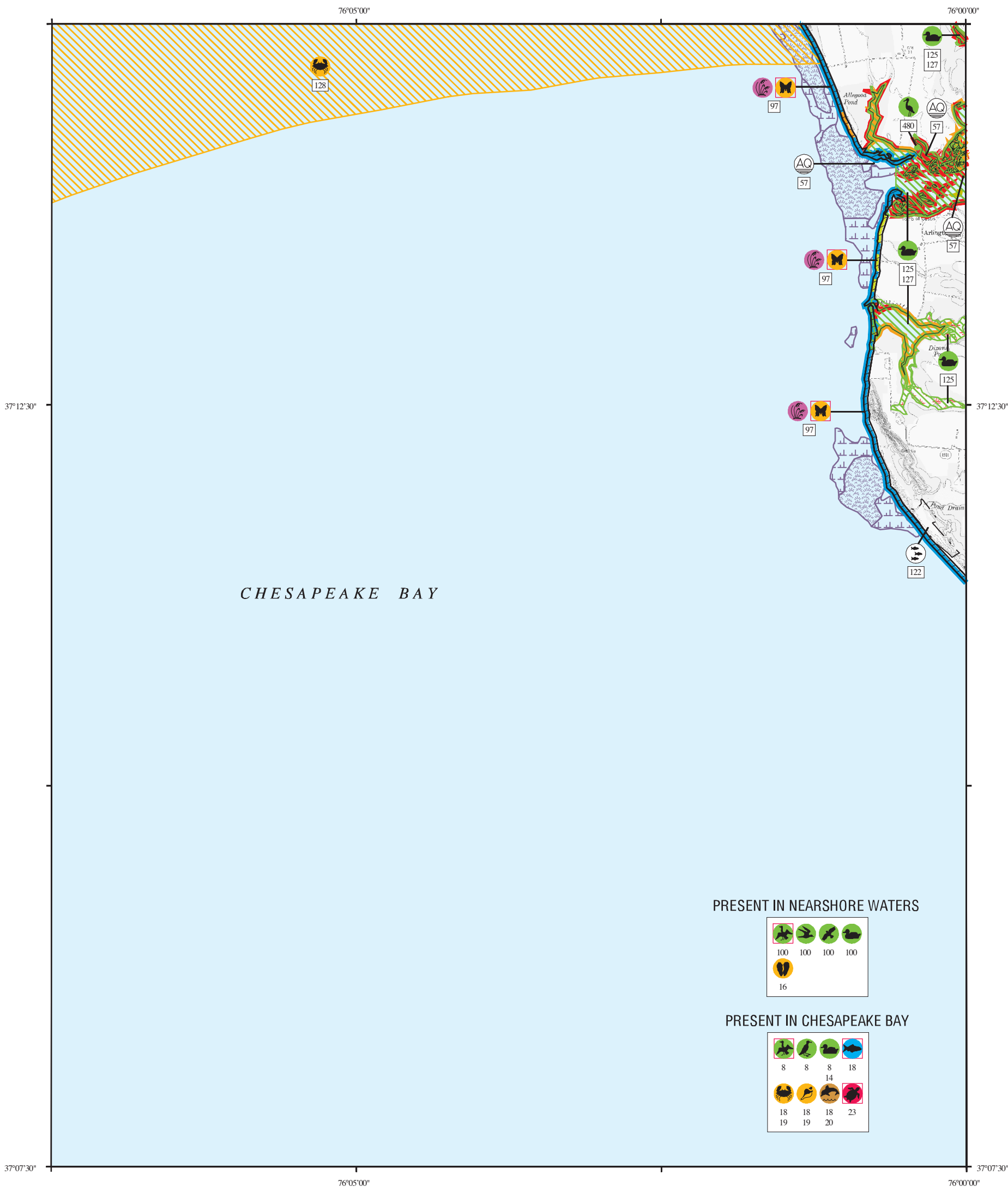
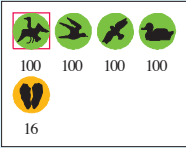


# ENVIRONMENTAL SENSITIVITY INDEX MAP



## PRESENT IN NEARSHORE WATERS



## PRESENT IN CHESAPEAKE BAY

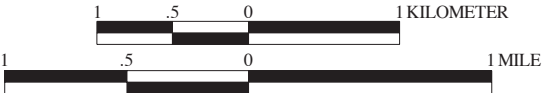


## SHORELINE HABITATS (ESI)

- 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

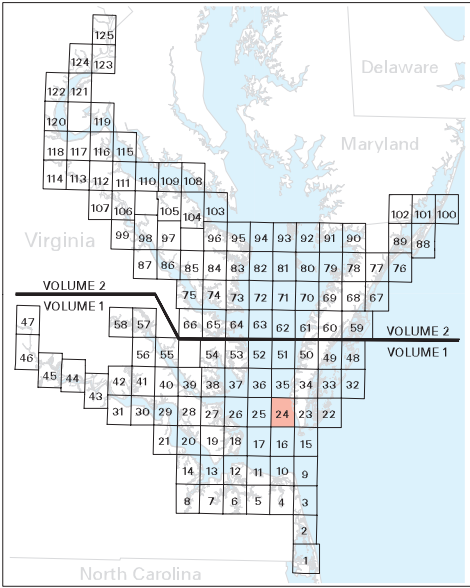


SCALE 1:50000



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Virginia: ESIMAP 24

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
8	Brown pelican	C				X	X	X	X	X	X	X	X	X	-	-	-
	Common loon		X	X	X									X	X	-	-
	Northern gannet	HIGH	X	X	X									X	X	-	-
	Red-breasted merganser	VERY HIGH	X	X	X									X	X	-	-
	Red-necked grebe				X	X									-	-	-
	Red-throated loon		X	X	X									X	X	-	-
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	-	-
100	Brown pelican	C				X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons		X	X	X	X								X	X	-	-
	Mergansers		X	X	X	X								X	X	-	-
	Osprey				X	X	X	X	X	X	X	X	X	X	-	-	-
	Scoters	HIGH	X	X	X	X								X	X	-	-
	Terns				X	X	X	X	X	X	X	X	X	X	-	-	-
125	American black duck	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-
	American wigeon		X	X	X	X								X	X	-	-
	Canada goose	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Gadwall		X	X	X	X								X	X	-	-
	Green-winged teal		X	X	X	X								X	X	-	-
	Mallard	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Snow goose		X	X	X	X								X	X	-	-
127	Bufflehead	HIGH	X	X	X	X								X	X	-	-
	Long-tailed duck		X	X	X	X								X	X	-	-
	Mergansers		X	X	X	X								X	X	-	-
	Ring-necked duck		X	X	X	X								X	X	-	-
	Scaup		X	X	X	X								X	X	-	-
	Scoters	HIGH	X	X	X	X								X	X	-	-
	Tundra swan		X	X	X	X								X	X	-	-
480	Great blue heron	44 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
18	Threadfin shad		X	X	X	X					X	X	X		-	-	-	-	FEB-MAY SEP-NOV
	Weakfish					X	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	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				-	-	-	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	-	-	-	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	-	-	-	OCT-APR

HABITAT:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
97	Maritime dune scrub		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
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
97	Northeastern beach tiger beetle	T T	X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-SEP	-	JAN-DEC	JUN-OCT
128	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-SEP	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
18	Harbor porpoise		X	X	X	X	X							X	-	-	-	-
20	Bottlenose dolphin					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	Interesting	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

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 24 (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	Internesting	Juveniles	Adults
23	Loggerhead sea turtle	T T						X	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
122	WM. B. TROWER BAYSHORE NAT. AREA PR.	VA DCR DNH	757/787-5576