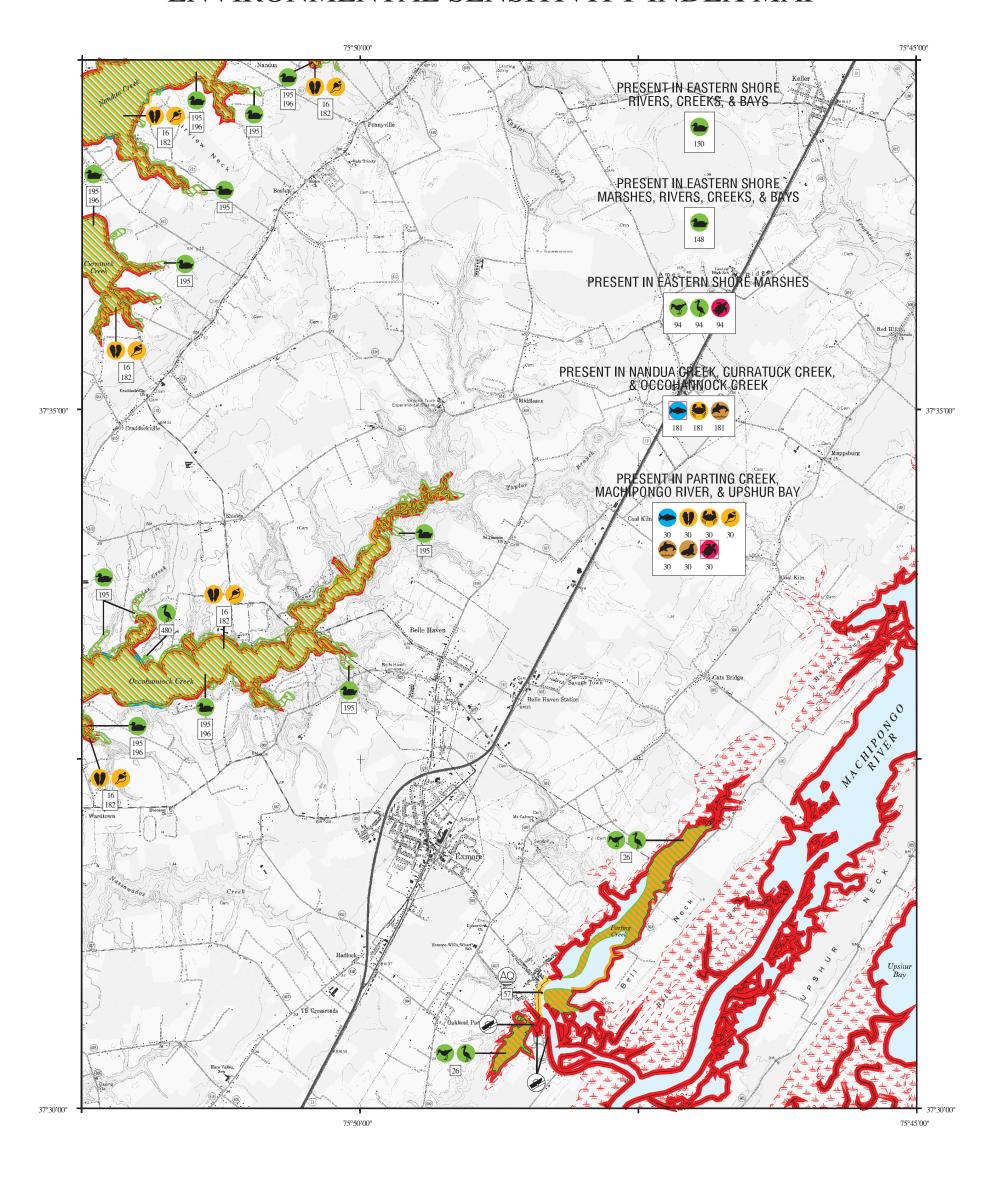
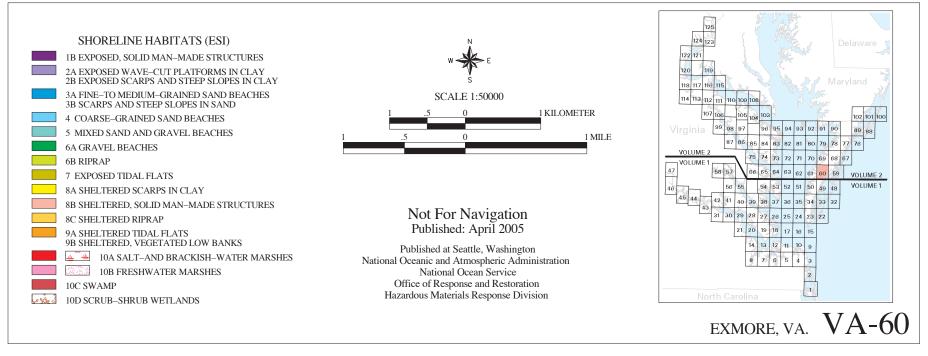
ENVIRONMENTAL SENSITIVITY INDEX MAP





Virginia: ESIMAP 60

BIOLOGICAL RESOURCES:

BIRD	:
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BIRD	:							
RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting		
26	American woodcock		X X X X X X				-	
20	Black-bellied plover		X X X X X X X X X X X X X X X X X X X	_	_	_		
	Dunlin		X X X X X X X X X X X X X X X X X X X	_	_	_		
	Greater yellowlegs		$\times \times $	-	-	-		
	Killdeer		XXX	-	-	-		
	Least sandpiper Lesser yellowlegs		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Pectoral sandpiper		X X X X X X	_	_	_		
	Red knot		X X X X X X	-	-	-		
	Ruddy turnstone		XXXXX	-	-	-		
	Sanderling Semipalmated plover		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Semipalmated sandpiper		XXXXXXXXX	-	_	_		
	Short-billed dowitcher		$\times \times $	-	-	-		
	Stilt sandpiper		XXXXX	-	-	-		
	Western sandpiper Whimbrel		$\begin{smallmatrix} & & \times & \times & \times & \times & \times \\ & & \times & \times & \times &$	_	_	_		
	White-rumped sandpiper		XXX	_	_	-		
	Willet		$\times \times $	-	-	-		
94	Clapper rail	HIGH	X X X X X X X X X X X X X		-	-		
	King rail Sora		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Virginia rail		X X X X X X X X X X X X X	APR-JUN	_	_		
	Whimbrel	HIGH	X X X	-	-	-		
4.40	Willet	HIGH	X X X X X X X X X X X X X	APR-SEP	-	-		
148	Bufflehead Long-tailed duck	MODERATE	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Mergansers		X X X X X X X X X	_	_	_		
	Scoters		XXXX	-	-	-		
150	American black duck	HIGH	$X\ X\ X$		-	-		
	American wigeon	MODERATE	X X X X X X X X X X X X X X X X X X X	-	-	-		
	Brant Canada goose	HIGH MODERATE	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	APR-JIIN	_	_		
	Gadwall	MODERATE	X X X X X X X X X X X X X X X X X X X		_	_		
	Green-winged teal		$X X X X \qquad X X X$	_	-	-		
	Mallard	MODERATE	X X X X X X X X X X X X X		-	-		
	Northern pintail Northern shoveler		X X X X X X X X X	_	-	-		
195	American black duck	VERY HIGH	$f X \ X \ X \ X \ X \ X \ X \ X \ X \ X $		_	_		
	American wigeon	HIGH	XXXX	-	_	_		
	Brant		$X \ X \ X \ X \qquad \qquad X \ X \ X$	-	-	-		
	Canada goose	HIGH	X X X X X X X X X X X X X		-	-		
	Gadwall Green-winged teal	LOW	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	APR-JUN -	_	_		
	Mallard	HIGH	X X X X X X X X X X X X X		_	_		
	Northern pintail		$X X X X \qquad X X X$	_	-	-		
400	Snow goose		X X X X X X X X	-	-	-		
196	Bufflehead Canvasback	HIGH HIGH	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Common goldeneye	nign	X X X X X X X X X	_	_	_		
	Long-tailed duck		X X X X X X X X	-	-	-		
	Redhead	HIGH	$X \ X \ X \ X \qquad \qquad X \ X \ X$	-	-	-		
	Ring-necked duck	LOW	X X X X X X X X X	-	-	-		
	Ruddy duck Scaup	HIGH	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	_	_	_		
	Scoters	MODERATE	X X X X X X X X X	_	_	_		
	Tundra swan	HIGH	$X X X X \qquad X X X$	_	-	-		
480	Great blue heron	44 NESTS	$\times \times $	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
30	Tautog		$X \ X \ X \ X$	-	-	-	-	OCT-APR
	Weakfish White hake		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	APR-AUG -	_	_	MAR-OCT	APR-OCT MAR-MAY
	Wille liake		A A A A A	_	_	_	_	SEP-NOV
	White perch		imes ime	APR-JUN	APR-JUN .	APR-JUN	JAN-DEC	JAN-DEC
	Winter flounder		$\times \times $	-	-	-	DEC-JUL	DEC-MAY
	Alewife		XXXXX	_	-	-	-	FEB-JUN
	American eel American shad							
	III.OIIOGII OIIGG		X X X X X X X X X X X X X X X X X X X	-	-	-	JAN-DEC -	FEB-JUN
	Atlantic croaker		X X X X X X X X X X X X X X X X X X X	- - -	- - -	- -	JAN-DEC - MAY-DEC	- FEB-JUN -
	Atlantic herring		X X X X X X X X X X X X X X X X X X X	- - -	- - -	- - -	- MAY-DEC -	FEB-JUN - FEB-JUN
	Atlantic herring Atlantic mackerel		X X X X X X X X X X X X X X X X X X X	- - - -	-	-	- MAY-DEC - -	FEB-JUN - FEB-JUN MAR-APR
	Atlantic herring Atlantic mackerel Atlantic menhaden		X X X X X X X X X X X X X X X X X X X	- - -	- - -	- - -	MAY-DEC MAY-NOV	FEB-JUN - FEB-JUN MAR-APR MAY-OCT
	Atlantic herring Atlantic mackerel		X X X X X X X X X X X X X X X X X X X	- - -	- - -	- - - -	- MAY-DEC - -	FEB-JUN - FEB-JUN MAR-APR
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass		X X X X X X X X X X X X X X X X X X X	- - -	- - - - - -	- - - - - - -	- MAY-DEC - - MAY-NOV JAN-DEC - APR-SEP	FEB-JUN - FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring		X X X X X X X X X X X X X X X X X X X	- - -	- - - - - -	- - - - - - - - FEB-JUN	- MAY-DEC - - MAY-NOV JAN-DEC - APR-SEP FEB-OCT	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish		X X X X X X X X X X X X X X X X X X X	- - -	- - - - - -	- - - - - - -	- MAY-DEC	FEB-JUN - FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring		X X X X X X X X X X X X X X X X X X X	- - - APR-SEP - - - -	- - - - - - - -	- - - - - - - FEB-JUN	- MAY-DEC - - MAY-NOV JAN-DEC - APR-SEP FEB-OCT	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN MAY-OCT
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad		X X X X X X X X X X X X X X X X X X X	- - - APR-SEP - - - - - APR-SEP	- - - - - - - - - - APR-SEP	- - - - - - FEB-JUN - - - APR-OCT	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN MAY-OCT JAN-DEC FEB-JUN
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker		X X X X X X X X X X X X X X X X X X X	- - - APR-SEP - - - - - APR-SEP - MAY-SEP	- - - - - - - - - - APR-SEP	- - - - - - FEB-JUN - - APR-OCT	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC JAN-DEC JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN MAY-OCT JAN-DEC FEB-JUN JAN-DEC
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish		X X X X X X X X X X X X X X X X X X X	- - - APR-SEP - - - - - APR-SEP - MAY-SEP MAR-SEP	- - - - - - - - - - APR-SEP	- - - - - - FEB-JUN - - - APR-OCT	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows		X X X X X X X X X X X X X X X X X X X	APR-SEP APR-SEP - MAY-SEP MAR-SEP APR-AUG	- - - - - - - - - - APR-SEP	- - - - - - FEB-JUN - - APR-OCT	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC
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	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin		X X X X X X X X X X X X X X X X X X X	APR-SEP - APR-SEP - APR-SEP - MAY-SEP MAR-SEP APR-AUG APR-AUG	- - - - - - - - - - APR-SEP	- - - - - FEB-JUN - - APR-OCT - MAY-SEP	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT JAN-DEC FEB-JUN JAN-DEC JUN-AUG
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock		X X X X X X X X X X X X X X X X X X X	APR-SEP APR-SEP APR-SEP - MAY-SEP MAR-SEP APR-AUG APR-AUG	- - - - - - - - APR-SEP - MAY-SEP	- - - - - - FEB-JUN - - APR-OCT - MAY-SEP - - -	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT - JAN-DEC FEB-JUN JAN-DEC
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	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock Red drum		X X X X X X X X X X X X X X X X X X X	APR-SEP APR-SEP APR-SEP - MAY-SEP MAR-SEP APR-AUG APR-AUG JUL-NOV	- - - - - - - - APR-SEP - MAY-SEP	- - - - - - FEB-JUN - - APR-OCT - MAY-SEP - - - -	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT - JAN-DEC
	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock Red drum Red hake Sandbar shark		X X X X X X X X X X X X X X X X X X X	APR-SEP		- - - - - - FEB-JUN - - APR-OCT - MAY-SEP - - - -	MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC JAN-	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN MAY-OCT JAN-DEC JAN
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181	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock Red drum Red hake Sandbar shark Scup (porgy) Silver hake Silver perch Silversides Spanish mackerel Spot Spotted hake Spotted seatrout Striped anchovy Summer flounder Alewife American eel			APR-SEP APR-SEP APR-SEP MAY-SEP MAY-SEP APR-AUG APR-AUG JUL-NOV APR-MAY MAR-JUL APR-MAY MAR-JUL MAY-JUL APR-SEP APR-SEP APR-SEP			- MAY-DEC - MAY-NOV JAN-DEC - APR-SEP FEB-OCT MAY-OCT JAN-DEC	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT JAN-DEC APR-MAY SEP-NOV MAY-OCT MAR-OCT OCT-MAY JAN-DEC APR-MAY JUL-SEP APR-NOV APR-NOV APR-NOV FEB-JUN SEP-DEC
181	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock Red drum Red hake Sandbar shark Scup (porgy) Silver hake Silver perch Silversides Spanish mackerel Spot Spotted hake Spotted seatrout Striped anchovy Summer flounder Alewife			APR-SEP - APR-SEP - APR-SEP - MAY-SEP MAR-SEP APR-AUG JUL-NOV APR-MAY MAR-JUL - MAY-JUL APR-SEP			MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC APR-OCT OCT-APR APR-NOV APR-NOV APR-NOV	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-OCT APR-SEP FEB-JUN MAY-OCT JAN-DEC APR-MAY SEP-NOV MAY-OCT MAR-OCT OCT-MAY JAN-DEC JAN-DEC APR-MOV APR-NOV APR-NOV APR-NOV FEB-JUN
181	Atlantic herring Atlantic mackerel Atlantic menhaden Bay anchovy Black drum Black sea bass Blueback herring Bluefish Crevalle jack Gobies Hickory shad Hogchoker Killifish Minnows Mummichog Northern pipefish Northern searobin Pollock Red drum Red hake Sandbar shark Scup (porgy) Silver hake Silver perch Silversides Spanish mackerel Spot Spotted hake Spotted seatrout Striped anchovy Summer flounder Alewife American shad		X X X X X X X X X X X X X X X X X X X	APR-SEP - APR-SEP - APR-SEP - MAY-SEP MAR-SEP APR-AUG JUL-NOV APR-MAY MAR-JUL - MAY-JUL APR-SEP			MAY-DEC MAY-NOV JAN-DEC APR-SEP FEB-OCT MAY-OCT JAN-DEC NOV-MAR	FEB-JUN FEB-JUN MAR-APR MAY-OCT JAN-DEC APR-SEP FEB-JUN MAY-OCT JAN-DEC APR-MAY JAN-DEC APR-MAY JAN-DEC APR-MAY JUL-SEP APR-NOV APR-NOV APR-NOV APR-NOV FEB-JUN SEP-DEC JAN-JUN

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 60 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH:	(cont.)
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RAR#	Species	S F Conc.	J F	MA	м ј	J A	s o	N D	Spawning	Eggs	Larvae	Juve	niles	Adults
	Atlantic menhaden		XX	- -	- -	- -	X	_ _	-	-	MAY-NOV	JAN-	DEC	MAY-OCT
	Atlantic silverside		ХХ	XXX	XX	ХХ	ХХ	ХХ	MAR-JUL	-	-	JAN-	DEC	JAN-DEC
	Atlantic spadefish						ХХ	Χ	-	-	-	AUG-		AUG-NOV
	Atlantic sturgeon	C			XX					-	-			JAN-OCT
	Bay anchovy		XX						APR-SEP			JAN-		JAN-DEC
	Black drum						XX		APR-JUN	APR-JUN -	APR-JUN	APR-		APR-NOV
	Black sea bass		17 1				ХХ		JUN-OCT -	_	-	APR-		APR-OCT
	Blueback herring Bluefish		XX		XX		ХХ	ХХ	_	-	_	NOV- MAY-		JAN-JUN APR-NOV
	Butterfish						XX		_	_	_	JUL-		MAR-NOV
	Clearnose skate			21 21			XX		_	_	_		110 1	MAY-NOV
	Gobies		ХХ	XXX					APR-SEP	APR-SEP	APR-OCT	JAN-		JAN-DEC
	Harvestfish				ХХ				_	_	_	JUL-		APR-OCT
	Hickory shad		ХХ	XXX	ХХ			ХХ	-	-	-	NOV-	MAR	JAN-JUN
	Hogchoker		ХХ	XXX	XX	ХХ	ХХ	ХХ	MAY-SEP	MAY-SEP	MAY-SEP	JAN-	DEC	JAN-DEC
	Inland silverside		XX	XXX	XX	ХХ	ХХ	ХХ	APR-MAY	-	-	JAN-	DEC	JAN-DEC
	Minnows								APR-AUG	-	-	JAN-	DEC	JAN-DEC
	Mummichog		XX						APR-AUG	_	-	JAN-		JAN-DEC
	Northern kingfish						ХХ		-	-	-			APR-OCT
	Northern pipefish		XX						MAY-JUN	-	-	JAN-		JAN-DEC
	Northern puffer						XX		MAY-AUG	-	-	MAR-		MAR-OCT
	Northern searobin			ΧX			ХХ		MAY-JUL	_	-		OHD	MAR-OCT
	Red drum		7.7	, ,, ,,		ХХ	XX		JUL-NOV	_	_	AUG-		MAY-NOV
	Red hake		X	XXX			ХХ	X	-	-	-	FEB-		FEB-MAY SEP-NOV
	Sandbar shark						ХХ		-	-	-	MAY-		MAY-OCT
	Scup (porgy)				XX	ХХ			-	-	-	JUN-		MAR-OCT
	Silver hake			XXX				ХХ	-	-	-			OCT-MAY
	Silver perch								APR-MAY	_	-	JAN-		JAN-DEC
	Spot		XX				ХХ		-	-	DEC-APR	MAR-		MAR-NOV
	Spotted hake			ХХ	XX		ХХ	Χ	-	_	-	MAR-	JUN	MAR-JUN
														SEP-NOV
	Spotted seatrout		17 1				ХХ		MAY-JUL	-	_	APR-		APR-NOV
	Striped bass						XX		7 DD CED	-	_	JAN- JAN-		JAN-DEC
	Striped killifish Summer flounder						XX		APR-SEP -	_	- OCT-MAY	JAN-		JAN-DEC APR-OCT
	Tautog			XXX		ΛΛ		XX	_	_	OCI-MAI	JAN-		OCT-APR
	Threadfin shad			XXX			ХХ		_	_	_	_		FEB-MAY
	Inicadiin Shad		21	1 21 21	. 21		21 21	21						SEP-NOV
	Weakfish			Х	XX	ХХ	ХХ	Х	APR-AUG	-	MAY-AUG	APR-	NOV	APR-NOV
NVE	RTEBRATE:													
AR#	Species	S F Conc.	J F	MA	м ј	J A	s o	N D	Spawning	Eggs	Larvae		niles	Adults
16	Northern quahog (hard clam)		ХХ	XXX	хх	ХХ	ХХ	ХХ	MAY-OCT	MAY-OCT	MAY-OCT	JAN-	DEC	JAN-DEC
	Blue crab						ХХ		_	MAY-SEP	MAY-NOV	JAN-		JAN-DEC
	Channeled whelk						ХХ		-	-	_	JAN-	DEC	JAN-DEC
	Northern quahog (hard clam)								MAY-OCT	MAY-OCT	MAY-OCT	JAN-		JAN-DEC
81	Blue crab		ХХ	XXX	ХХ	ХХ	ХХ	ХХ	_	_	MAY-NOV	JAN-	DEC	JAN-DEC
82	Knobbed whelk		ХХ	XXX	XX	ХХ	ХХ	ХХ	-	-	-	JAN-	DEC	JAN-DEC
ARI	NE MAMMAL:													
R#	Species	S F Conc.	J E	MA	м ј	JA	s o	N D	Mating	Calving	Pupping	Molt	ing	
30	Bottlenose dolphin			- -	- -	X X								
	Harbor porpoise		ХХ	XXX				Х	_	_	_	_		
	Harbor seal		ХХ				Х	ХХ	-	-	_	_		
81	Bottlenose dolphin			X	ХХ	ХХ	ХХ		-	-	-	-		
	Harbor porpoise		XX	XXX	X			Χ	-	-	-	-		
	ILE:													
AR#	Species	S F Conc.	J F	MA	M J	J A	s o	N D	Nesting	Hatching	Internest	ing	Juvenil	es Adul
	Green sea turtle	T T			ХХ	ХХ	ХХ	Х	-	-	_		MAY-NOV	-
30	Oreca bea carere						ХХ		_	_	_		MAY-NOV	MAY-1
30	Kemp's ridley sea turtle	E E			21 21									
30		E E E E					ХХ		-	-	-		-	MAY-1
30	Kemp's ridley sea turtle				ХХ	ХХ		Х	-	- -	- -		- MAY-NOV	

HUMAN USE RESOURCES:

AQUACULTURE:

HUN#	Name	Contact	Phone

57 AQUACULTURE: HARD CLAMS