



Virginia: ESIMAP 45

BIOLOGICAL RESOURCES:

BIRD	:
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2	BIRD								
1	RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting		
1.	42	Bald eagle	T T HIGH	X X X X X X X X X X X X X X X X X X X	-	-	-		
Mile					-	-	-		
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Programmer					-	-	-		
Marie Mari		-			-	-	-		
Barrier September Septem		-			_	_	_		
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Part Lane Miscolate					_	_	_		
State Stat		<u> </u>			-	-	-		
Table March Marc					_	_	_		
Part 1.5			HIGH		-	_	-		
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Note			MODERATE		-	_	_		
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Secret blue leaven						-	-		
Ann.	392					_	_		
Great egreet C 5 Statisty X X X X X X X X X						_	_		
Great of two heroon 200 MBRES	431	Great blue heron				-	-		
Deces or open	131	<u> </u>				_	_		
Double converse to Company 20	454					_	_		
Part						-	-		
PASH Species S F Conc						_	_		
Manual M		-	1	AAAAA	11111 1100				
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Alevide									
### Atlantic methades									FEB-JUN
Atlantic mechaden	I / I	Alewije		X X X X X X X X X	-	FEB-JUN F	LP-JON	I DD OCI	
Actamic sturgeon C	171	American eel		$\times \times $		-	-	JAN-DEC	
Blue catfish	171	American eel American shad		$\begin{smallmatrix} X&X&X&X&X&X&X&X&X&X&X&X&X&X&X&X&X&X&X&$	FEB-JUN	- FEB-JUN E	- FEB-JUN	JAN-DEC FEB-OCT	FEB-JUN
Blueback herring	1/1	American eel American shad Atlantic menhaden	С	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	FEB-JUN -	- FEB-JUN E	- FEB-JUN -	JAN-DEC FEB-OCT MAY-NOV	FEB-JUN -
Red	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP	FEB-JUN F - - -	- FEB-JUN - - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC	FEB-JUN - APR-NOV JAN-DEC
Gizzard shad	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN	FEB-JUN F - - - -	- FEB-JUN - - - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC	FEB-JUN - APR-NOV JAN-DEC JAN-DEC
Mickery shad	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN -	FEB-JUN F	- FEB-JUN - - - - - FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC FEB-OCT	FEB-JUN - APR-NOV JAN-DEC JAN-DEC FEB-JUN
Hogchoker	1,1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY	FEB-JUN FFEB-JUN F	- FEB-JUN - - - - - FEB-JUN -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC FEB-OCT - JAN-DEC	FEB-JUN - APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC
Minnows	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY -	FEB-JUN FFEB-JUN FFED-JUN FFEB-JUN FFEB-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED	- FEB-JUN - - - - - FEB-JUN - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC FEB-OCT - JAN-DEC JAN-DEC JAN-DEC JAN-DEC	FEB-JUN - APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC JAN-DEC
Minnows	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad	С	X X X X X X X X X X X X X X X X X X X	FEB-JUN	FEB-JUN FEB-JU	- FEB-JUN - - - FEB-JUN - - - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC - JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JEB-OCT	FEB-JUN - APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC JAN-DEC FEB-JUN
Mumnichog	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-SEP MAR-MAY FEB-JUN APR-MAY	FEB-JUN FFEB-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED	- FEB-JUN - - - FEB-JUN - - - FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC FEB-JUN JAN-DEC
Redbreast sunfish	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY APR-MAY	FEB-JUN FFEB-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED-JUN FFED	- FEB-JUN - - FEB-JUN - - - - FEB-JUN - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC	FEB-JUN - APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC JAN-DEC JAN-DEC FEB-JUN - JAN-DEC JAN-DEC JAN-DEC
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Tesselated darter	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN	FEB-JUN F FEB-JUN F FEB-JUN F	FEB-JUN FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC
White catfish	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish	c	X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL	- FEB-JUN F F F F F F F F F F F F F F F F F F F	- FEB-JUN - - FEB-JUN - - - - - - - - - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC
White perch	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-SEP MAR-MAY - FEB-JUN - APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN	FEB-JUN F FEB-JUN F FEB-JUN F	- FEB-JUN - - FEB-JUN - - - - - - - - - - - - - - - - - - -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC FEB-JUN
White perch	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN - APR-MAY MAY-JUN APR-AUG APR-AUG APR-AUG APR-JUN JUN-JUL FEB-JUN APR-JUN	FEB-JUN F FEB-JUN F FEB-JUN F		JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN FEB-MAY
Blueback herring	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN - APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN APR-JUN APR-JUN	FEB-JUN F FEB-JUN F FEB-JUN F		JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-MAY SEP-NOV
Alewife	1/1	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN - APR-MAY MAY-JUN APR-AUG APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN APR-JUN APR-JUN APR-JUN APR-JUN APR-JUN APR-JUN APR-JUN	FEB-JUN F FEB-JUN F FEB-JUN F		JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC
American sed		American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife	c	X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN FEB-JUN APR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN	FEB-JUN FEB-JU	FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN APR-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-MAY SEP-NOV JAN-DEC JAN-DEC FEB-JUN
Atlantic menhaden Atlantic sturgeon C XXXXXXXX - Atlantic sturgeon C Apr-Nov Apr-Nov Apr-Sep - Apr-Nov Apr-Sep - Apr-Nov Ap	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring	c	X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN - APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN - MAY-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN	FEB-JUN FEB-JU	FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN APR-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN FEB-JUN FEB-JUN FEB-JUN
Atlantic sturgeon C	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife	C	X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN APR-JUN FEB-JUN	FEB-JUN FEB-JU	- FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT - JAN-DEC JAN-DEC FEB-OCT - FEB-OCT - FEB-OCT	FEB-JUN APR-NOV JAN-DEC JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN
Banded killifish	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad	c	X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN	FEB-JUN FEB-JU		JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT - JAN-DEC JAN-DEC JAN-DEC JAN-DEC JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN
Blueback herring	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American shad Atlantic menhaden		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN MAY-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN	FEB-JUN FEB-JU	FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT - JAN-DEC JAN-DEC FEB-OCT JAN-DEC FEB-OCT JAN-DEC FEB-OCT JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN
Bluegill	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN
Channel catfish	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-AUG APR-AUG APR-AUG APR-JUN APR-JUN APR-JUN FEB-JUN APR-SEP APR-JUN	FEB-JUN FEB-JU	FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN -	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN
Hickory shad	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic sturgeon Banded killifish Blue catfish Blueback herring		X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN APR-AUG APR-AUG MAY-JUN APR-JUN - MAY-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN - FEB-JUN APR-SEP APR-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN
Hogchoker	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-AUG APR-AUG APR-AUG APR-JUN JUN-JUL FEB-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-SEP	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC FEB-OCT JAN-DEC JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC
Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse Tessellated darter Threadfin shad White catfish White perch Mine Sagar X X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-MAY MAY-JUN APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN APR-SEP APR-JUN APR-SEP MAR-MAY	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC
Minnows X X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-JUN FEB-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC
Mummichog X X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside		X X X X X X X X X X X X X X X X X X X	FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY FEB-JUN APR-AUG APR-AUG MAR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN APR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP APR-SEP APR-SEP MAR-MAY FEB-JUN APR-SEP APR-MAY APR-MAY	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC
Pumpkinseed X X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar		X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN - MAY-JUN FEB-JUN FEB-JUN FEB-JUN - FEB-JUN - FEB-JUN - FEB-JUN - FEB-JUN APR-SEP APR-SEP APR-SEP MAR-MAY - FEB-JUN - APR-SEP MAR-MAY - FEB-JUN - APR-SEP MAR-MAY - APR-MAY MAY-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC FEB-JUN JAN-DEC
Shorthead redhorse	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows		X X X X X X X X X X X X X X X X X X X	FEB-JUN - FEB-JUN APR-SEP APR-JUN - APR-SEP MAR-MAY - FEB-JUN APR-AUG APR-AUG APR-AUG APR-JUN - MAY-JUN APR-JUN FEB-JUN - APR-SEP APR-SEP MAR-MAY - APR-MAY - APR-MAY MAY-JUN APR-AUG	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	FEB-JUN APR-NOV JAN-DEC FEB-JUN JAN-DEC
Tessellated darter	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-SEP APR-SEP APR-SEP APR-JUN APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG APR-AUG APR-AUG MAR-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	APR-NOV JAN-DEC
Threadfin shad	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG MAR-JUN APR-JUN APR-AUG APR-AUG MAR-JUN APR-JUL	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	APR-NOV JAN-DEC
White catfish X X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-MAY MAY-JUN APR-AUG APR-AUG MAR-JUN JUN-JUL FEB-JUN APR-JUN FEB-JUN APR-JUN FEB-JUN APR-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP MAR-MAY MAY-JUN APR-SEP MAR-MAY MAY-JUN APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG APR-AUG APR-AUG APR-JUL APR-JUL APR-JUL	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT JAN-DEC	APR-NOV JAN-DEC
White perch X X X X X X X X X X X X APR-JUN APR-JUN JAN-DEC JAN-DEC 591 Alewife X X X X X X X X X X FEB-JUN FEB-JUN	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse Tessellated darter		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-MAY MAY-JUN APR-AUG MAR-JUN APR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP APR-JUN APR-SEP MAR-MAY MAY-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG APR-AUG APR-JUN	FEB-JUN FEB-JU	FEB-JUN	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	APR-NOV JAN-DEC FEB-JUN FEB-JU
591 Alewife X X X X X FEB-JUN FEB-JUN FEB-JUN	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse Tessellated darter Threadfin shad		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG MAR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN APR-JUN APR-JUL APR-JUL APR-JUN	FEB-JUN FEB-JU	FEB-JUN FEB	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	APR-NOV JAN-DEC
American eel X X X X X X X X X X X X X X X X X X	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse Tessellated darter Threadfin shad White catfish		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-MAY APR-AUG APR-AUG APR-AUG APR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN FEB-JUN APR-SEP APR-JUN	FEB-JUN FEB-JU	FEB-JUN FEB	JAN-DEC FEB-OCT MAY-NOV JAN-DEC	APR-NOV JAN-DEC
	172	American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Redbreast sunfish Striped bass Tessellated darter Threadfin shad White catfish White perch Alewife Blueback herring Alewife American eel American shad Atlantic menhaden Atlantic sturgeon Banded killifish Blue catfish Blueback herring Bluegill Channel catfish Gizzard shad Hickory shad Hogchoker Inland silverside Longnose gar Minnows Mummichog Pumpkinseed Quillback Shorthead redhorse Tessellated darter Threadfin shad White catfish White perch Alewife Alewife And White catfish White perch Alewife White catfish White catfish White catfish		X X X X X X X X X X X X X X X X X X X	FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-AUG APR-AUG APR-AUG MAR-JUN APR-JUN APR-JUN FEB-JUN FEB-JUN FEB-JUN APR-SEP APR-JUN APR-SEP MAR-MAY APR-SEP MAR-MAY APR-SEP MAR-MAY APR-JUN APR-JU	FEB-JUN FEB-JU	FEB-JUN FEB	JAN-DEC FEB-OCT JAN-DEC	FEB-JUN APR-NOV 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 45 (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
591	American shad		X X X X X X X X X	FEB-JUN	FEB-JUN	FEB-JUN	FEB-OCT	FEB-JUN
	Atlantic menhaden		X X X X X X X	-	_	-	MAY-NOV	-
	Atlantic sturgeon	C		FEB-JUN	-	-	JAN-DEC	APR-NOV
	Banded killifish		$\times \times $	APR-SEP	_	-	JAN-DEC	JAN-DEC
	Blue catfish		$ \begin{smallmatrix} X & X & X & X & X & X & X & X & X & X$	APR-JUN	_	-	JAN-DEC	JAN-DEC
	Blueback herring		X X X X X	FEB-JUN	FEB-JUN	-	-	FEB-JUN
	Bluegill			APR-SEP	-	-	-	JAN-DEC
	Channel catfish		$\times \times $	MAR-MAY	-	-	JAN-DEC	JAN-DEC
	Gizzard shad		$\times \times $	-	-	-	JAN-DEC	JAN-DEC
	Hickory shad		X X X X X X X X X	FEB-JUN	FEB-JUN	FEB-JUN	FEB-OCT	FEB-JUN
	Hogchoker		$ \begin{smallmatrix} X & X & X & X & X & X & X & X & X & X$	-	-	-	JAN-DEC	-
	Inland silverside		$ \begin{smallmatrix} X & X & X & X & X & X & X & X & X & X$	APR-MAY	-	-	JAN-DEC	JAN-DEC
	Longnose gar			MAY-JUN	-	-	JAN-DEC	JAN-DEC
	Minnows		$ \begin{smallmatrix} X & X & X & X & X & X & X & X & X & X$	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Mummichog			APR-AUG	-	-	JAN-DEC	JAN-DEC
	Pumpkinseed			MAR-JUN	-	-	JAN-DEC	JAN-DEC
	Redbreast sunfish			JUN-JUL	-	-	JAN-DEC	JAN-DEC
	Striped bass		X X X X X X X X X	FEB-JUN	FEB-JUN	FEB-JUN	FEB-OCT	FEB-JUN
	Tessellated darter			APR-JUN	-	-	-	JAN-DEC
	Threadfin shad			-	-	-	JAN-DEC	FEB-MAY
								SEP-NOV
	White catfish		$\times \times $	MAY-JUN	_	-	JAN-DEC	JAN-DEC
	White perch		$\times \times $	APR-JUN	APR-JUN	APR-JUN	JAN-DEC	JAN-DEC

HUMAN USE RESOURCES:

NATIONAL PARK:

HUN#	Name	Contact	Phone					
130 132	PETERSBURG NATIONAL BATTLEFIELD PARK RICHMOND NATIONAL BATTLEFIELD PARK	NATIONAL PARK SERVICE NATIONAL PARK SERVICE	804/732-3531 804/226-1981					
WILDI	WILDLIFE REFUGE:							
HUN#	Name	Contact	Phone					
159	PRESQUILE NATIONAL WILDLIFE REFUGE	U.S. FISH AND WILDLIFE SERVICE	804/333-1470					