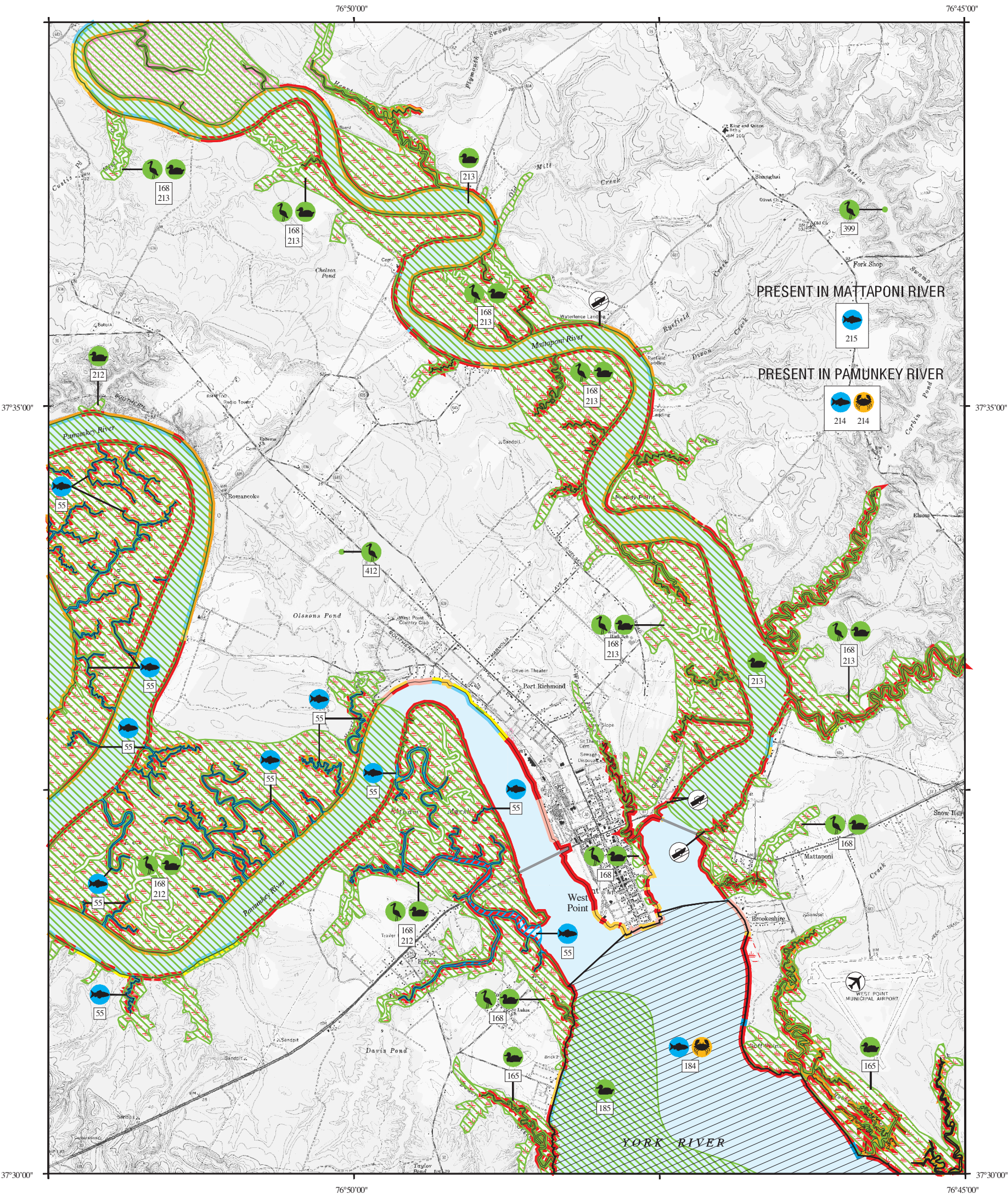


ENVIRONMENTAL SENSITIVITY INDEX MAP



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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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

VOLUME 1

VOLUME 2

VOLUME 1

VOLUME 2

WEST POINT, VA.

VA-57

Virginia: ESIMAP 57

BIOLOGICAL RESOURCES:

BIRD:

| RAR# | Species | S F Conc. | J | F | M | A | M | J | J | A | S | O | N | D | Nesting | Migrating | Molting |
|------|---------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----------|---------|
| 165 | American black duck | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | American wigeon | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canada goose | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Green-winged teal | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Mallard | | X | X | X | X | | | | | | X | X | X | - | - | - |
| 168 | King rail | VERY HIGH | X | X | X | X | X | X | X | X | X | X | X | X | APR-MAY | - | - |
| | Sora | VERY HIGH | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - |
| | Virginia rail | VERY HIGH | X | X | X | X | X | X | X | X | X | X | X | X | APR-MAY | - | - |
| | Wood duck | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - |
| 185 | Bufflehead | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canvasback | HIGH | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Mergansers | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Ring-necked duck | HIGH | 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 | - | - | - |
| | Tundra swan | | X | X | X | X | | | | | | X | X | X | - | - | - |
| 212 | American black duck | HIGH | X | X | X | X | | | | | | X | X | X | - | - | - |
| | American wigeon | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canada goose | HIGH | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canvasback | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Green-winged teal | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Mallard | HIGH | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Mergansers | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Northern pintail | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Ring-necked duck | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Tundra swan | | X | X | X | X | | | | | | X | X | X | - | - | - |
| 213 | American black duck | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | American wigeon | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canada goose | HIGH | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Canvasback | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Gadwall | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Green-winged teal | | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Mallard | MODERATE | X | X | X | X | | | | | | X | X | X | - | - | - |
| | Ring-necked duck | | X | X | X | X | | | | | | X | X | X | - | - | - |
| 399 | Great blue heron | 63 NESTS | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 412 | Great blue heron | 6 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 |
|------|---------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|---------|---------|-----------|---------|
| 55 | Alewife | | X | X | X | X | X | | | | | | | | FEB-JUN | FEB-JUN | - | - | FEB-JUN |
| | Blueback herring | | X | X | X | X | X | | | | | | | | FEB-JUN | FEB-JUN | - | - | FEB-JUN |
| 184 | Alewife | | X | X | X | X | X | | | | | | | | - | - | - | - | 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 | | | | | | | | - | - | - | - | 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 |
| | Bay anchovy | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | Blueback herring | | X | X | X | X | X | | | | | | | | - | - | - | - | FEB-JUN |
| | Channel catfish | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| | Hickory shad | | X | X | X | X | X | | | | | | | | - | - | - | - | FEB-JUN |
| | Hogchoker | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | JAN-DEC | - |
| | Longnose gar | | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN | - | - | - | JAN-DEC |
| | Mummichog | | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG | - | - | - | JAN-DEC |
| | Silver perch | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| | Spot | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | DEC-APR | MAR-NOV | JAN-DEC |
| | Striped bass | | X | X | X | X | X | | | | | X | X | X | - | - | - | - | OCT-JUN |
| | Striped killifish | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | 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 catfish | | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN | - | - | - | JAN-DEC |
| | White perch | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| 214 | Alewife | | X | X | X | X | X | X | X | X | | | | | - | FEB-JUN | FEB-JUN | 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-JUN | FEB-JUN | 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 |
| | Bay anchovy | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | Black crappie | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUL | - | - | - | JAN-DEC |
| | Blue catfish | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | - | JAN-DEC |
| | Blueback herring | | X | X | X | X | X | X | X | X | X | | | | - | FEB-JUN | FEB-JUN | FEB-OCT | FEB-JUN |
| | Bluegill | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | Channel catfish | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-MAY | - | - | - | JAN-DEC |
| | Hickory shad | | X | X | X | X | X | X | X | X | | | | | - | FEB-JUN | FEB-JUN | FEB-OCT | FEB-JUN |
| | Hogchoker | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| | Inland silverside | | X | X | X | X | X | X | X | X | X | X | X | X | APR-MAY | - | - | - | JAN-DEC |
| | Largemouth bass | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-MAY | - | - | - | JAN-DEC |
| | Longnose gar | | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN | - | - | - | JAN-DEC |
| | Minnows | | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG | - | - | - | JAN-DEC |
| | Mummichog | | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG | - | - | - | JAN-DEC |
| | Pumpkinseed | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUN | - | - | - | JAN-DEC |
| | Redbreast sunfish | | X | X | X | X | X | X | X | X | X | X | X | X | JUN-JUL | - | - | - | JAN-DEC |
| | Striped bass | | X | X | X | X | X | X | X | X | | | | | FEB-JUN | FEB-JUN | FEB-JUN | FEB-OCT | FEB-JUN |
| | Tessellated darter | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | - | JAN-DEC |
| | White catfish | | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN | - | - | - | JAN-DEC |
| | White perch | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| | Yellow perch | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | - | JAN-DEC |
| 215 | 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-JUN | FEB-JUN | 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 |
| | Bay anchovy | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | Black crappie | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUL | - | - | - | JAN-DEC |
| | Blue catfish | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | - | JAN-DEC |
| | Bluegill | | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP | - | - | - | JAN-DEC |
| | Channel catfish | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-MAY | - | - | - | JAN-DEC |
| | Hickory shad | | X | X | X | X | X | X | X | X | | | | | - | FEB-JUN | FEB-JUN | FEB-OCT | FEB-JUN |
| | Hogchoker | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | JAN-DEC |
| | Inland silverside | | X | X | X | X | X | X | X | X | X | X | X | X | APR-MAY | - | - | - | JAN-DEC |
| | Largemouth bass | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-MAY | - | - | - | JAN-DEC |
| | Longnose gar | | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN | - | - | - | JAN-DEC |
| | Minnows | | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG | - | - | - | JAN-DEC |
| | Mummichog | | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG | - | - | - | JAN-DEC |
| | Pumpkinseed | | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUN | - | - | - | JAN-DEC |
| | Redbreast sunfish | | X | X | X | X | X | X | X | X | X | X | X | X | JUN-JUL | - | - | - | JAN-DEC |
| | Striped bass | | X | X | X | X | X | X | X | X | | | | | FEB-JUN | FEB-JUN | FEB-JUN | FEB-OCT | FEB-JUN |
| | Tessellated darter | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | - | JAN-DEC |
| | Weakfish | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | - | 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 57 (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 |
|------|---------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|------|--------|-----------|---------|
| 215 | 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 |
| | Yellow perch | | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | - | - | JAN-DEC | JAN-DEC |
| | Alewife | | | X | X | X | X | X | X | X | X | X | | | - | - | - | FEB-OCT | - |

INVERTEBRATE:

| RAR# | Species | S F Conc. | J | F | M | A | M | J | J | A | S | O | N | D | Spawning | Eggs | Larvae | Juveniles | Adults |
|------|-----------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|------|---------|-----------|---------|
| 184 | Blue crab | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | MAY-NOV | JAN-DEC | JAN-DEC |
| 214 | Blue crab | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | MAY-NOV | 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.