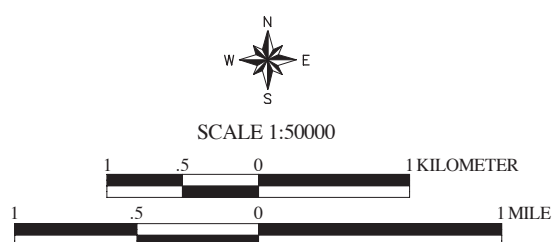
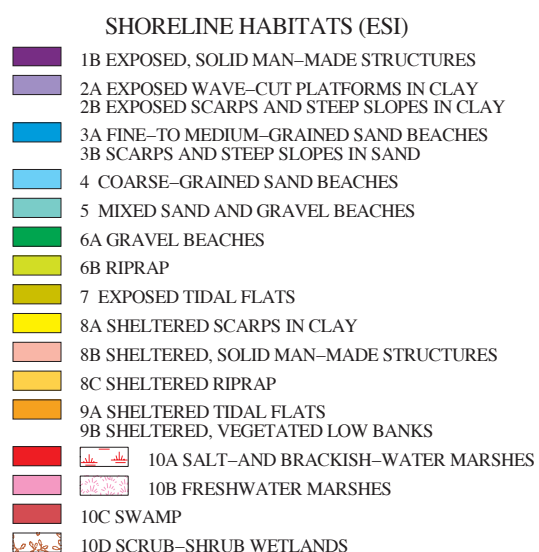
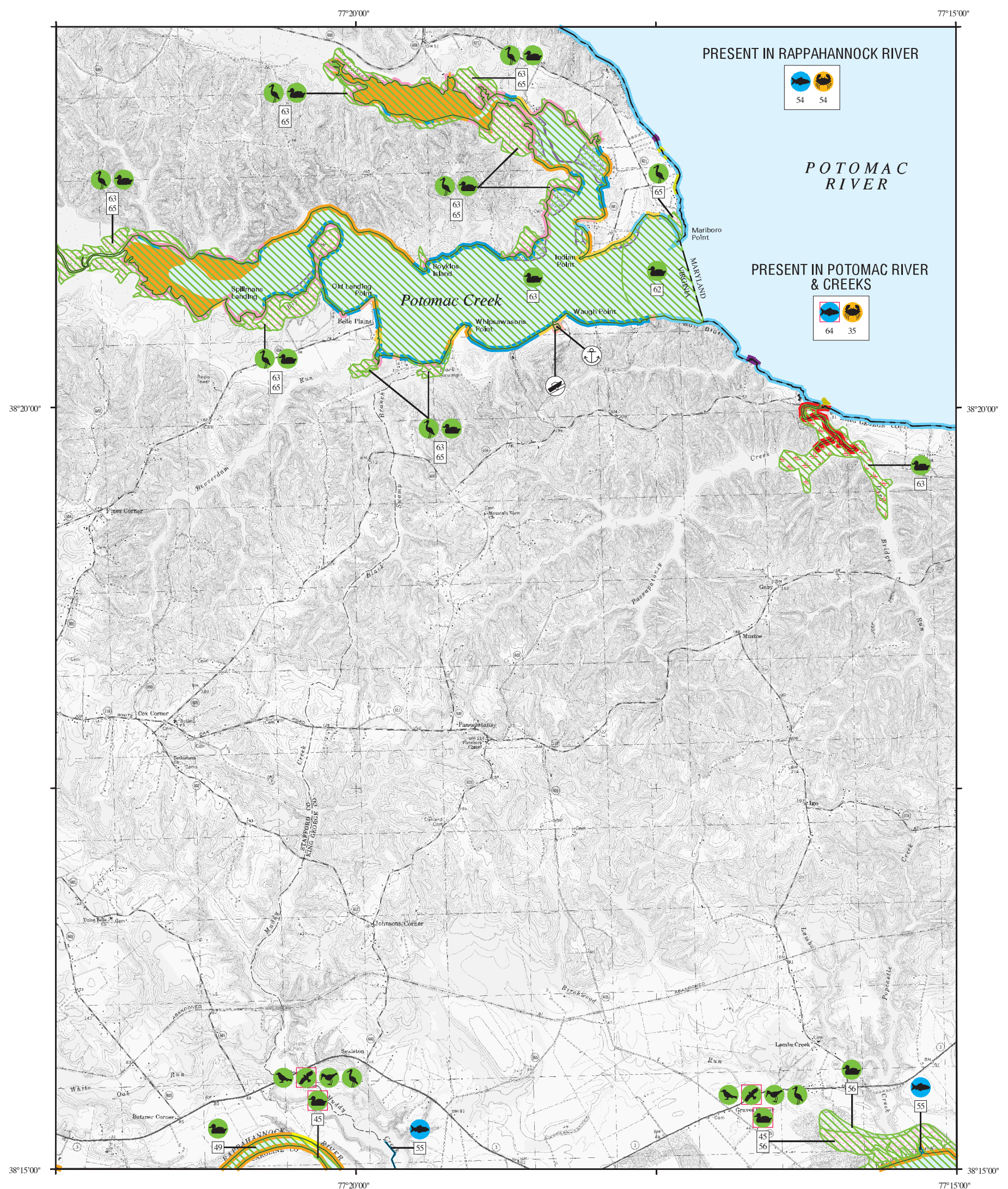
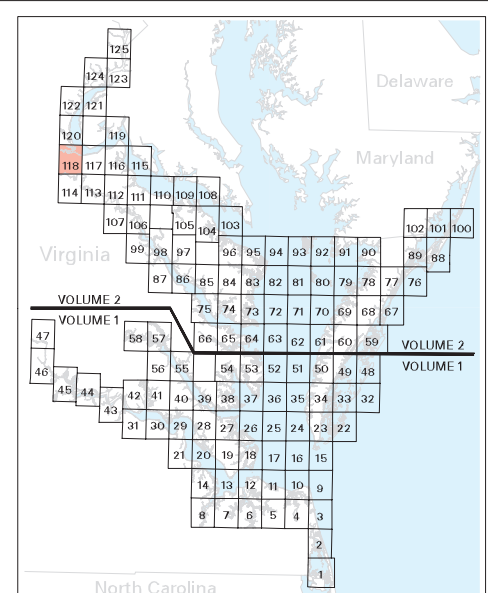


# ENVIRONMENTAL SENSITIVITY INDEX MAP



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National Ocean Service  
Office of Response and Restoration  
Hazardous Materials Response Division





Virginia: ESIMAP 118

BIOLOGICAL RESOURCES:

BIRD:

| RAR# | Species             | S F Conc. | J | F | M | A | M | J | J | A | S | O | N | D | Nesting | Migrating | Molting |
|------|---------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----------|---------|
|      |                     |           | - | - | - | - | - | - | - | - | - | - | - | - |         |           |         |
| 45   | Bald eagle          | T T       |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Common moorhen      | C         |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Great blue heron    |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Greater yellowlegs  |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Green heron         |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | King rail           |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Least bittern       |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Marsh wren          |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Osprey              |           |   | X | X | X | X | X | X |   |   |   |   |   | MAR-AUG | -         | -       |
|      | Sora                |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Swamp sparrow       |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Virginia rail       |           |   | X | X | X | X |   |   |   |   |   |   |   | -       | -         | -       |
|      | Wood duck           |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | -         | -       |
| 49   | Canada goose        | VERY HIGH | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Tundra swan         | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
| 56   | American black duck | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | American wigeon     |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Canada goose        | VERY HIGH | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Gadwall             |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Green-winged teal   | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Mallard             | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Northern pintail    |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Tundra swan         | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
| 62   | Bufflehead          |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Canvasback          | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Mergansers          | MODERATE  | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Ring-necked duck    | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Ruddy duck          | MODERATE  | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Scaup               | MODERATE  | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Tundra swan         | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
| 63   | American black duck | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | American coot       |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | American wigeon     |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Bufflehead          |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Canada goose        | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Mallard             | HIGH      | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Mergansers          | MODERATE  | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Northern pintail    |           | X | X | X | X |   |   |   |   | X | X | X |   | -       | -         | -       |
|      | Wood duck           |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN | -         | -       |
| 65   | Rails               |           | X | X | X | X | X | X | X | X | X | X | X | X | -       | -         | -       |
|      | Sora                |           | X | X | X | X | X | X | X | X | X | X | X | X | -       | -         | -       |

FISH:

| RAR# | Species             | S F Conc. | J | F | M | A | M | J | J | A | S | O | N | D | Spawning | Eggs    | Larvae  | Juveniles | Adults  |
|------|---------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|---------|---------|-----------|---------|
|      |                     |           | - | - | - | - | - | - | - | - | - | - | - | - |          |         |         |           |         |
| 54   | Alewife             |           | X | X | X | X | X | X | X | X | X | X | X |   | -        | FEB-JUN | FEB-JUN | FEB-OCT   | FEB-JUN |
|      | American shad       |           | X | X | 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 |   |   |   |   | -        | -       | -       | MAY-NOV   | -       |
|      | Banded killifish    |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Black crappie       |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUL  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Blueback herring    |           | X | X | 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   | JAN-DEC |
|      | Hickory shad        |           | X | X | X | X | X | X | X | X | X | X | X |   | FEB-JUN  | FEB-JUN | FEB-JUN | FEB-OCT   | 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 |
|      | Inland silverside   |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-MAY  | -       | -       | JAN-DEC   | 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   | JAN-DEC |
|      | Minnows             |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-AUG  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Pumpkinseed         |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUN  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Redbreast sunfish   |           | X | X | X | X | X | X | X | X | X | X | X | X | JUN-JUL  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Striped bass        |           |   |   |   | X | X | X | X | X | X |   |   |   | -        | -       | -       | MAY-OCT   | -       |
|      | 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   | JAN-DEC |
|      | White perch         |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN  | APR-JUN | APR-JUN | JAN-DEC   | JAN-DEC |
|      | Yellow perch        |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN  | -       | -       | JAN-DEC   | JAN-DEC |
| 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 |
| 64   | Alewife             |           | X | X | X | X | X | X | X | X | X |   |   |   | FEB-JUN  | 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 | X |   |   |   | -        | FEB-JUN | FEB-JUN | FEB-OCT   | FEB-JUN |
|      | Atlantic croaker    |           |   |   |   | X | X | X | X | X | X | X |   |   | -        | -       | -       | MAY-DEC   | -       |
|      | Atlantic menhaden   |           |   |   |   | X | X | X | X | X | X |   |   |   | -        | -       | MAY-NOV | MAY-NOV   | MAY-OCT |
|      | Atlantic sturgeon   | C         | X | X | X | X | X | X | X | X | X | X | X | X | -        | -       | -       | JAN-DEC   | APR-NOV |
|      | Banded killifish    |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Bay anchovy         |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Black crappie       |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUL  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Blueback herring    |           | X | X | X | X | X | X | X | X | X |   |   |   | FEB-JUN  | FEB-JUN | FEB-JUN | FEB-OCT   | FEB-JUN |
|      | Bluefish            |           |   |   |   | X | X | X | X | X | X |   |   |   | -        | -       | -       | MAY-NOV   | -       |
|      | Bluegill            |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP  | -       | -       | -         | JAN-DEC |
|      | Bluespotted sunfish |           | X | X | X | X | X | X | X | X | X | X | X | X | MAY-JUN  | -       | -       | -         | JAN-DEC |
|      | Brown bullhead      |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN  | -       | -       | -         | JAN-DEC |
|      | Chain pickerel      |           | X | X | X | X | X | X | X | X | X | X | X | X | FEB-APR  | -       | -       | -         | JAN-DEC |
|      | Channel catfish     |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-MAY  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Common carp         |           | X | X | X | X | X | X | X | X | X | X | X | X | MAY-AUG  | -       | -       | -         | JAN-DEC |
|      | Gizzard shad        |           | X | X | X | X | X | X | X | X | X | X | X | X | -        | -       | -       | JAN-DEC   | JAN-DEC |
|      | Gobies              |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-SEP  | APR-SEP | APR-OCT | JAN-DEC   | JAN-DEC |
|      | Hickory shad        |           | X | 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   | 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   | 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 |
|      | Pumpkinseed         |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUN  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Redbreast sunfish   |           | X | X | X | X | X | X | X | X | X | X | X | X | JUN-JUL  | -       | -       | JAN-DEC   | JAN-DEC |
|      | Shortnose sturgeon  |           | X | X | X | X | X | X | X | X | X | X | X | X | -        | -       | -       | JAN-DEC   | JAN-DEC |
|      | Silver perch        |           |   |   |   |   | X | X | X | X |   |   |   |   | -        | -       | -       | JUL-OCT   | -       |
|      | Silversides         |           | X | X | X | X | X | X | X | X | X | X | X | X | MAR-JUL  | MAR-JUL | APR-SEP | JAN-DEC   | JAN-DEC |
|      | Spot                |           | X | X | X | X | X | X | X | X | X | X | X | X | -        | -       | DEC-APR | APR-NOV   | -       |
|      | Spotted seatrout    |           |   |   | X | X | X | X | X | X | X |   |   |   | -        | -       | -       | APR-NOV   | -       |
|      | Striped bass        |           |   | X | X | X | X | X | X | X | X |   |   |   | FEB-JUN  | FEB-JUN | FEB-JUN | FEB-OCT   | FEB-JUN |
|      | 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 | -        | -       | -       | JAN-DEC   | -       |
|      | Tessellated darter  |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN  | -       | -       | -         | JAN-DEC |
|      | Threadfin shad      |           | X | X | X | X | X | X | X | X | X | X | X | X | -        | -       | -       | JAN-DEC   | -       |
|      | Weakfish            |           |   |   |   | X | X | X | X | X | X | X |   |   | -        | -       | -       | APR-NOV   | -       |
|      | 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 | APR-JUN  | APR-JUN | APR-JUN | JAN-DEC   | JAN-DEC |
|      | Yellow perch        |           | X | X | X | X | X | X | X | X | X | X | X | X | APR-JUN  | -       | -       | 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.

Virginia: ESIMAP 118 (cont.)  
BIOLOGICAL RESOURCES: (cont.)

INVERTEBRATE:

| RAR# | Species   | S F Conc. | J | F | M | A | M | J | J | A | S | O | N | D | Spawning | Eggs | Larvae  | Juveniles | Adults  |
|------|-----------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|------|---------|-----------|---------|
| 35   | Blue crab |           | X | X | X | X | X | X | X | X | X | X | X | X | -        | -    | MAY-NOV | JAN-DEC   | JAN-DEC |
| 54   | 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.