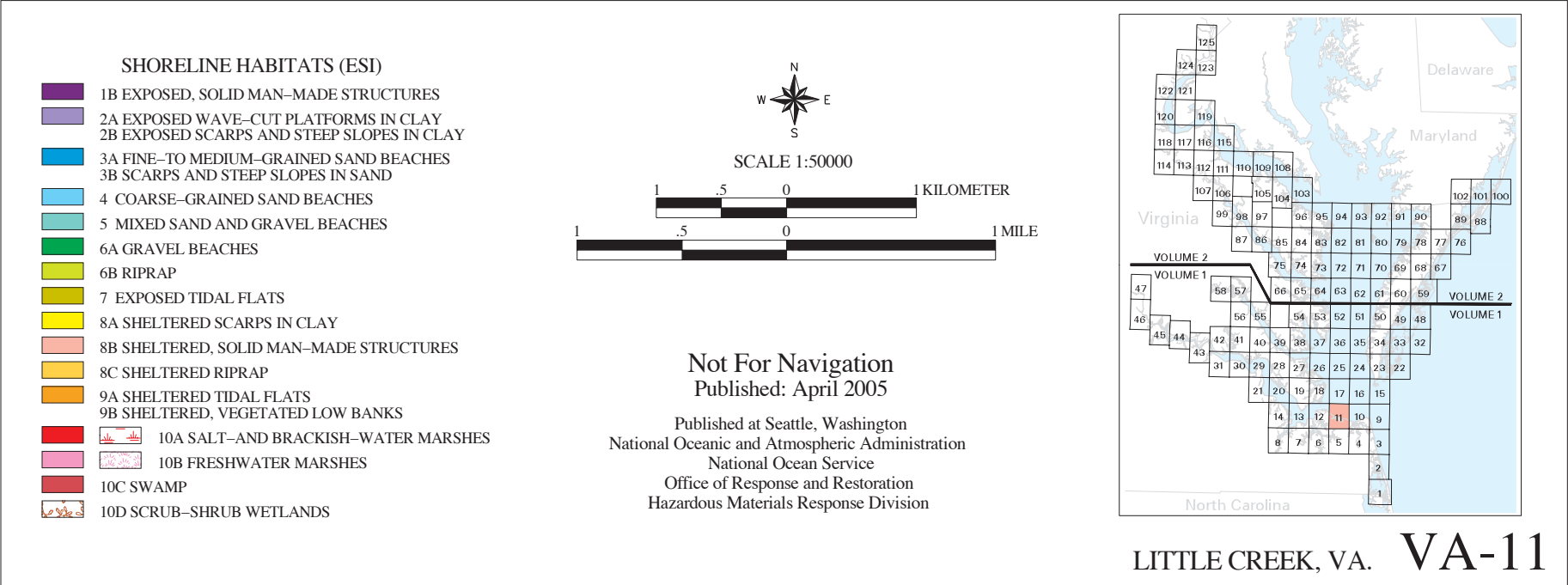
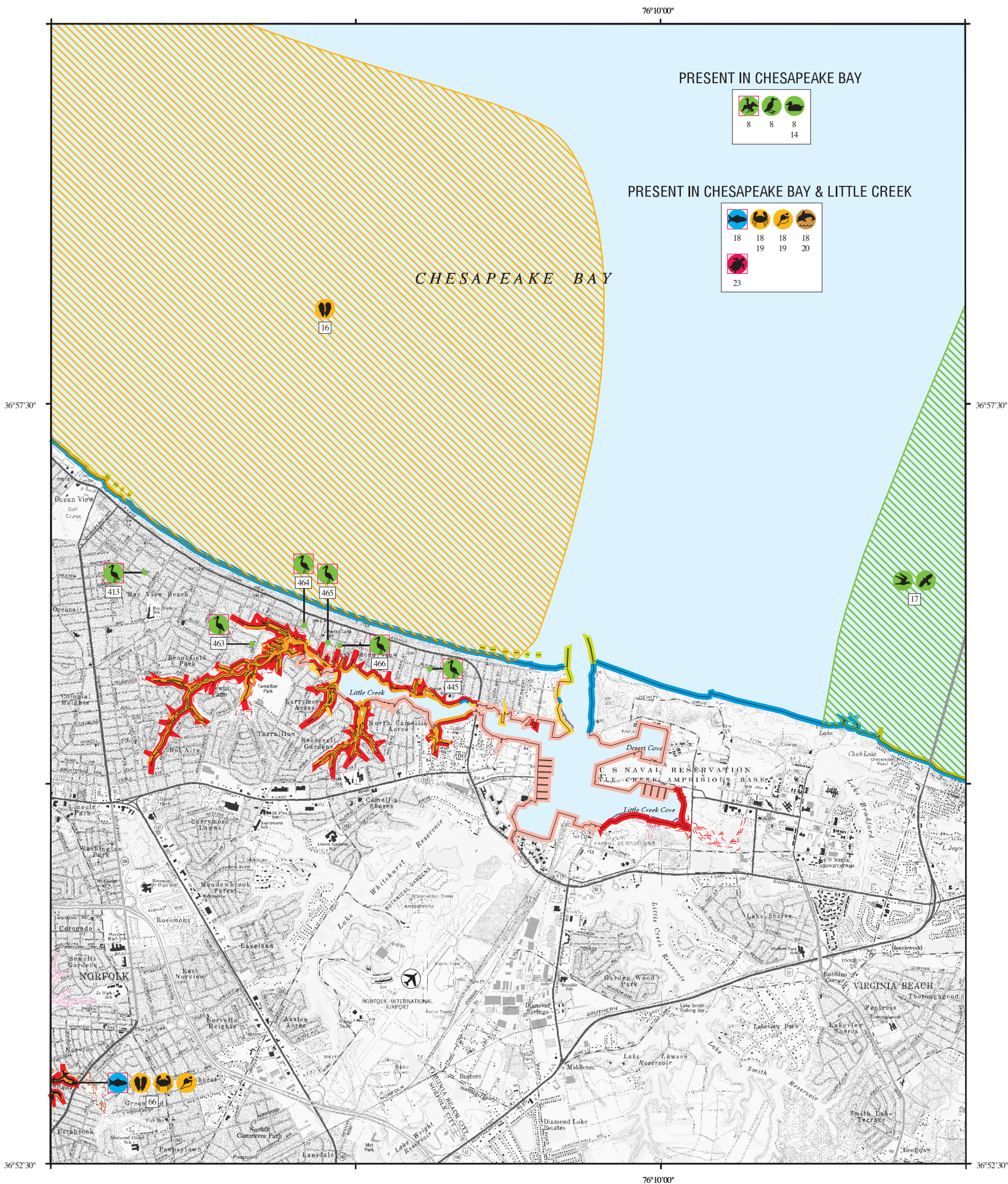


ENVIRONMENTAL SENSITIVITY INDEX MAP



Virginia: ESIMAP 11

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 | 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 | | - | - | - |
| 17 | Gulls | | X | X | X | X | | | | | | X | X | | - | - | - |
| | Raptors | | X | X | X | X | | | | | | X | X | | - | - | - |
| 413 | Yellow-crowned night-heron | C 3 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 445 | Yellow-crowned night-heron | C 5 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 463 | Great egret | C 1 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| | Yellow-crowned night-heron | C 3 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 464 | Great egret | C 4 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| | Yellow-crowned night-heron | C 10 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 465 | Yellow-crowned night-heron | C 12 NESTS | | X | X | X | X | X | X | X | X | X | X | X | MAY-JUL | - | - |
| 466 | Great egret | C 33 NESTS | | 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 | 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 | 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 | | | - | - | - | - | 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 | 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 | X | X | | - | - | - | MAY-NOV | APR-NOV |
| | Butterfish | | | X | X | X | X | X | X | X | X | X | | | - | - | - | JUL-NOV | MAR-NOV |
| | Clearnose skate | | | | X | 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 | 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 | 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 | X | | | - | - | - | - | OCT-APR |
| | 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 |
| 66 | Alewife | | X | X | X | X | X | | | | | | | | - | - | - | - | FEB-JUN |
| | American eel | | X | X | X | X | | | | | | | | | - | - | - | FEB-MAY | - |
| | American shad | | X | X | X | X | X | | | | | X | X | | - | - | - | NOV-MAR | JAN-JUN |
| | Atlantic croaker | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | JAN-DEC | - |
| | 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 | X | - | - | - | JAN-DEC | APR-NOV |
| | 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 | | | | | APR-JUN | APR-JUN | APR-JUN | APR-NOV | APR-NOV |
| | Black sea bass | | | X | X | X | X | X | | | | | | | - | - | - | APR-AUG | - |
| | Blueback herring | | X | X | X | X | X | | | | | X | X | | - | - | - | NOV-MAR | JAN-JUN |
| | Bluefish | | | X | 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 | | | | | | - | - | - | - | 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 | | | | | | - | - | - | - | 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 | X | - | - | - | - | OCT-MAY |
| | Silver perch | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | JAN-DEC | JAN-DEC |
| | Spot | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | DEC-APR | MAR-NOV | JAN-DEC |
| | 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 | - | - | - | JAN-DEC | JAN-DEC |
| | Tautog | | X | X | X | X | | | | X | X | X | | | - | - | - | - | OCT-APR |

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 11 (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 |
|------|----------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----------|------|--------|-----------|--------------------|
| 66 | Threadfin shad | | | X | X | X | X | | | X | X | X | | | - | - | - | - | FEB-MAY SEP-NOV |
| | Weakfish | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | JAN-DEC | - |

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 |
| 66 | Blue crab | | X | X | X | X | X | X | X | X | X | X | X | X | - | MAY-SEP | MAY-NOV | JAN-DEC | JAN-DEC |
| | Eastern oyster | | X | X | X | X | X | X | X | X | X | X | X | X | JUN-SEP | JUN-SEP | JUN-SEP | JAN-DEC | JAN-DEC |
| | Knobbed whelk | | X | X | X | X | X | X | X | X | X | X | X | X | - | - | - | 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 | 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 |
| | Loggerhead sea turtle | T T | | | | | | X | X | X | X | X | X | X | - | - | - | MAY-NOV | MAY-NOV |