APPENDIX B

USGS 7.5 Minute Quadrangles for Chesapeake Bay and the Delmarva Peninsula Coastal Bays

Showing Distribution, Abundance, and Groundtruthing of SAV in 1998

Boundaries of individual SAV beds are delineated by solid lines and SAV beds are shaded. Each bed is identified with a unique one or two letter label (A-Z, AA-ZA, AB-ZB, etc.) and single number density designation (1-4). These density numbers represent the classification discussed in the text and Figure 9, i.e., 1 = <10%; 2 = 10-40%; 3 = 40-70%; 4 = 70-100%. Ground survey observations are represented by symbols and species codes, which are explained in the legend. Chesapeake Bay Program and Delmarva Peninsula coastal bay segments are identified on the maps with gray labels and delineated by dashed lines.
**Key for 1998 SAV Maps**

**SPECIES**

<table>
<thead>
<tr>
<th>Code</th>
<th>Species Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zm</td>
<td><em>Zostera marina</em> (eelgrass)</td>
</tr>
<tr>
<td>Rm</td>
<td><em>Ruppia maritima</em> (widgeon grass)</td>
</tr>
<tr>
<td>C</td>
<td><em>Chara</em> sp. (muskgrass)</td>
</tr>
<tr>
<td>Cd</td>
<td><em>Ceratophyllum demersum</em> (coontail)</td>
</tr>
<tr>
<td>Cl</td>
<td><em>Callitriche</em> sp. (water-starwort)</td>
</tr>
<tr>
<td>Ec</td>
<td><em>Elodea canadensis</em> (common elodea)</td>
</tr>
<tr>
<td>Ed</td>
<td><em>Egeria densa</em> (water-weed)</td>
</tr>
<tr>
<td>Hd</td>
<td><em>Heteranthera dubia</em> (water stargrass)</td>
</tr>
<tr>
<td>Hv</td>
<td><em>Hydrilla verticillata</em> (hydrilla)</td>
</tr>
<tr>
<td>Ms</td>
<td><em>Myriophyllum spicatum</em> (Eurasian watermilfoil)</td>
</tr>
<tr>
<td>N</td>
<td><em>Najas</em> sp. (naiad)</td>
</tr>
<tr>
<td>Nfl</td>
<td><em>Najas flexilis</em> (northern naiad)</td>
</tr>
<tr>
<td>Ngr</td>
<td><em>Najas gracilima</em> (slender naiad)</td>
</tr>
<tr>
<td>Ngu</td>
<td><em>Najas guadalupensis</em> (southern naiad)</td>
</tr>
<tr>
<td>Nm</td>
<td><em>Najas minor</em></td>
</tr>
<tr>
<td>Nt</td>
<td><em>Nitella</em> sp. (muskgrass)</td>
</tr>
<tr>
<td>Pcr</td>
<td><em>Potamogeton crispus</em> (curly pondweed)</td>
</tr>
<tr>
<td>Pe</td>
<td><em>Potamogeton epihydrus</em> (leafy pondweed)</td>
</tr>
<tr>
<td>Pn</td>
<td><em>Potamogeton nodosus</em> (American pondweed)</td>
</tr>
<tr>
<td>Ppc</td>
<td><em>Potamogeton pectinatus</em> (sago pondweed)</td>
</tr>
<tr>
<td>Ppf</td>
<td><em>Potamogeton perfoliatus</em> (redhead-grass)</td>
</tr>
<tr>
<td>Ppu</td>
<td><em>Potamogeton pusillus</em> (slender pondweed)</td>
</tr>
<tr>
<td>S</td>
<td><em>Sparganium</em> sp. (bureed)</td>
</tr>
<tr>
<td>Tn</td>
<td><em>Trapa natans</em> (water chestnut)</td>
</tr>
<tr>
<td>Va</td>
<td><em>Vallisneria americana</em> (wild celery)</td>
</tr>
<tr>
<td>Zp</td>
<td><em>Zannichellia palustris</em> (horned pondweed)</td>
</tr>
<tr>
<td>U</td>
<td>Unidentified species composition</td>
</tr>
</tbody>
</table>

**SURVEY STATIONS**

- Cit. Field Observation
- Army Corps of Engineers
- Aberdeen Proving Ground (USAEC/ARL)
- University of Maryland
- U.S. Environmental Protection Agency
- Harford Community College
- Md. Dept. of Natural Resources
- Naval Air Station – Patuxent River
- National Oceanographic Atmospheric Adminstration
- National Park Service
- Patuxent River Park
- Patuxent Wildlife Research Center
- Salisbury State University
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- VIMS Field Survey
- Virginia Marine Resources Commission

**SAV Bed Labels**

A, B, C, ..., AA, BA, CA, ...

1. 0 – 10% density
2. 10 – 40% density
3. 40 – 70% density
4. 70 – 100% density
Location of USGS 7.5 minute quadrangles in Chesapeake Bay, its tributaries, and in the Delmarva Peninsula coastal bays with corresponding code numbers. (See Table 2 for quad names.)
Submerged Aquatic Vegetation 1998

(151) Little Creek, Va.

Hectares of SAV: 4.16
Date Flown: 05/15

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Cape Henry, Va. (152)

Hectares of SAV: 16.86
Date Flown: 05/15

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey

1000 0 1000 2000 meters
Submerged Aquatic Vegetation 1998

(159) Bristol, Md.

Hectares of SAV: 27.14
Date Flown: 07/21

Sources:
- School of Marine Science
- Virginia Institute of Marine Science
- College of William and Mary
- U.S. Geological Survey
Hectares of SAV: 1.01
Date Flown: 09/05

Sources: School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(162) Charlotte Hall, Md.

Hectares of SAV: 12.46
Date Flown: 08/05

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Selbyville, Md. (165)

Hectares of SAV: 0.00
Date Flown: Not Flown

Sources:
- School of Marine Science
- Virginia Institute of Marine Science
- College of William and Mary
- U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(166) Assawoman Bay, Md.–Del.

Hectares of SAV: 234.73
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

Berlin, Md. (167)

Hectares of SAV: 85.16
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(168) Ocean City, Md.

Hectares of SAV: 96.31
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Public Landing, Md. (169)

Hectares of SAV: 0.00
Date Flown: 06/18

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
(170) Tingles Island, Md.

Hectares of SAV: 1,769.87
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey

1000 0 1000 2000 meters
Submerged Aquatic Vegetation 1998
Girdle Tree, Md.–Va. (171)

Hectares of SAV: 18.22
Date Flown: 07/21

Sources: School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(172) Boxiron, Md.—Va.

Hectares of SAV: 1,084.80
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Hectares of SAV: 607.55
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey

Whittington Point, Md.–Va. (173)
Submerged Aquatic Vegetation 1998

(174) Chincoteague West, Va.

Hectares of SAV: 435.65
Date Flown: 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Chincoteague East, Va. (175)

Hectares of SAV: 1,822.56
Date Flown: 06/18, 07/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(176) Anacostia, D.C.–Md.

Hectares of SAV: 0.14
Date Flown: 08/20

Sources: School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Bethel Beach, Va. (178)

Hectares of SAV: 0.31
Date Flown: 06/18

Sources: School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(179) Goose Island, Va.

Hectares of SAV: 127.87
Date Flown: 05/16

Sources:
- School of Marine Science
- Virginia Institute of Marine Science
- College of William and Mary
- U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Fishermans Island, Va. (186)

Hectares of SAV: 24.54
Date Flown: 06/18

Sources: School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(200) Rollins Fork, Va.

Hectares of SAV: 5.20
Date Flown: 09/05

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
Loretto, Va. (201)

Hectares of SAV: 2.09
Date Flown: 07/22

Sources:
- School of Marine Science
- Virginia Institute of Marine Science
- College of William and Mary
- U.S. Geological Survey
Submerged Aquatic Vegetation 1998

(210) Walkers, Va.

Hectares of SAV: 12.62
Date Flown: 09/09

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
King William, Va. (225)

Hectares of SAV: 30.30
Date Flown: 07/22

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998
(226) King & Queen Courthouse, Va.

Hectares of SAV: 9.98
Date Flown: 07/22, 08/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998

Tunstall, Va. (228)

Hectares of SAV: 69.72
Date Flown: 07/22, 08/21

Sources:
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
U.S. Geological Survey
Submerged Aquatic Vegetation 1998


Hectares of SAV: 0.27
Date Flown: 07/22, 08/21

Sources:
- School of Marine Science
- Virginia Institute of Marine Science
- College of William and Mary
- U.S. Geological Survey