

Appendix B

Establishing a Natural Area Network  
on the Annapolis Neck

A Report Prepared by the Environmental Subcommittee  
of the Annapolis Neck Small Area Planning Committee with the  
assistance of Earl Bradley

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# **Protecting and Enhancing the Environmental Resources of the Annapolis Neck Through Establishment of a Natural Area Network**

## **Introduction**

Identifying, protecting, restoring and linking together in a natural area network the significant natural resources remaining on the Annapolis Neck is a major goal of the Annapolis Neck Small Area Planning Committee. Among such significant natural resources are tidal and non-tidal wetlands; streams and their riparian buffers; plant and wildlife habitat, particularly that of rare, threatened and endangered species; and significant forested areas. Particular attention has been focused on forested areas because they are presently provided less protection than the other types of resources and the variety of benefits they provide is only now becoming recognized, as noted in Attachment A. While existing County regulations provide for mitigation of the impacts of development on these resources, the purpose of this report is to identify those areas containing significant natural resources which are key components for establishing a natural area network throughout the Annapolis Neck and to show how such areas can be linked together to form a network.

## **Approach**

Using the digital information provided by the State's Technology Toolbox (files on the location of significant natural resources and digital orthophoto quarterquads produced by the Maryland Department of Natural Resources and information on property ownership produced by the Maryland Office of Planning), the areas listed in Table B-1 were identified as deserving of particular attention. Because of the benefits noted in Attachment A, particular attention was focused on identifying forested areas 10 acres or greater not in public ownership.

There are a number of public parks located on the Annapolis Neck which are listed in Table B-3. There are a number of other areas in public ownership on the Annapolis Neck which are listed in Table B-2.

Areas under community ownership as recreation and open space areas can also serve as valuable components of a natural area network. Their locations are noted on the maps produced as part of this report along with the areas noted above.

The remainder of this report is devoted to depicting, on a subregion by subregion basis, the location of the above types of areas which, if retained in their present state and linked together with reforested areas, could provide a natural area network throughout the Annapolis Neck Region. Their locations on the maps have been indicated by their numbers and letters noted in Tables B-1, B-2, and B-3. Because the City of Annapolis is so heavily developed an attempt has not been made at this time to propose a natural area network within the City boundaries. It is important to note that, besides protecting the areas listed in Table B-1, attention needs to be focused on ensuring reforestation efforts are undertaken on the properties located

between them to establish a complete network. Existing and potential connections between the Areas To Be Protected, Parkland and Public Lands needed to complete the Natural Area Network are also shown on the maps. In many cases, such connections are provided some protection by their location in Community Open Space Areas or the 100-foot buffer of the Chesapeake Bay Critical Area.

## **Attachment A**

### **Environmental Values of Forested Areas**

The environmental significance of forested areas has been documented in the report **Conserving the Forests of the Chesapeake** produced by the U. S. Forest Service for the EPA Chesapeake Bay Program:

“Acre for acre, forests are the most beneficial land use in terms of water quality. Acting as a living filter, forests capture rainfall, regulate stormwater and streamflow, filter nutrients and sediment, and stabilize soils. When streams are buffered by surrounding forests, the amount of nitrogen in runoff washing into streams is reduced by 2.5 to 4 times while phosphorus drops by 1.5 to 3 times. The Maryland Tributary Strategy Overview states, “ Any loss of forest or wetland represents an increase in nutrients entering the Bay.”

“ Forests typically retain 70% to 80% of atmospherically deposited nitrogen. The Bay airshed is three times larger than the basin and the air is contributing an increasing proportion of nitrogen loads to the Bay. Loss of forests, therefore, results in more nitrogen entering the Bay. Forests in urban areas can exert significant control over the local and regional climates while improving air quality. Cities with adequate urban forest can save 4% on heating costs and an additional 10% on cooling. Trees absorb carbon dioxide; one acre of trees can remove 40 tons of carbon annually. This same acre produced enough oxygen to sustain over 1,000 people during the year.”

“Forest habitats are essential for much of the watershed’s animal, bird, and plant life. Riparian forests along streams, rivers, and shorelines provide critical habitat for over half the terrestrial wildlife species. They also influence the quality of adjacent water, buffering the flow of nutrients, supplying organic detritus, and providing shade. Forests serve human values - people enjoy wooded areas for their aesthetic qualities and recreational opportunities - but they also serve human needs for food, building materials, and sustaining the environmental integrity of a region.”

**Table B-1**  
**Areas Deserving Protection as Components of a Natural Area Network**

- A. Chase Pond
- B. Heron Lake
- C. Annapolis Roads Woods
- D. Bay Ridge Woods
- E. South River Manor
- F. Sandpiper Lane Woods
- G. Hunt Meadows Woods
- H. Masque Farm/ Crystal Spring Farm
- I. Skipper Property Woods
- J. Crisland Property Woods
- K. Church Creek Headwaters
- L. Johnston Property
- M. Camp Aberdeen
- N. Pyles Property
- O. Plattner Trust RCA area
- P. Brilliant Property Woods/ Carr Property
- Q. Severn Grove (Belle Grove) Woods
- R. Priest Point

Note: The above letters correspond to the location of the areas shown on the following maps.

**Table B-2**  
**Public Properties in the Annapolis Neck**

0. Inholding
1. Sewage Treatment Plant
2. Peninsula Park
3. Hillsmere Elementary School
4. U. S. Coast Guard Station
5. Annapolis Middle School
6. Annapolis High School
7. Heritage Office Complex
8. Anne Arundel County Board of Education
9. Farmer's Market
10. Park and Ride lower area
11. Park and Ride Lot
12. MVA
13. Maryland Dept. of Agriculture
14. Anne Arundel County Heath Dept, Public Works, etc.
15. Bestgate Park

Note: The above letters correspond to the location of the areas shown on the following maps. Numbers 16-19 have not been presently used but are reserved for future delineations.

**Table B-3**  
**Parklands on The Annapolis Neck**

- 20. Back Creek Nature Park
- 21. Quiet Waters Park
- 22. Augusta Park
- 23. Aldridge Park
- 24. Broad Creek Park
- 25. Annapolis Waterworks
- 26. Hock Property
- 27. Thomas Point Park

Note: The above numbers correspond to the location of the areas shown on the following maps.

**Table B-4**  
**Potential Areas for Reforestation**

In addition to the open areas shown on the maps between the areas indicated as components of the Natural Area Network, public properties in the Annapolis Neck and areas along the streams, creeks and rivers located in the Annapolis Neck were examined through use of GIS information to identify additional potential reforestation areas. Information from the stream file and the Maryland Property view files developed by the Maryland Office of Planning were overlaid over the Digital Orthophoto Quarter Quads developed by the Maryland Department of Natural Resources to identify unforested areas that may have potential for afforestation.

The principal unforested shoreline areas were found on small lots located in the communities of Arundel On the Bay, Highland Beach, and Hillsmere. Selected other areas were found in the following areas beginning in the Annapolis Roads area:

1. Back Creek Park owned by the City of Annapolis.
2. The Sewage Treatment plant property.
3. The shorelines of a small stream flowing from Heron Lake to the Chesapeake Bay.
4. Selected properties along the shorelines of Lake Ogleton.
5. The recently purchased Chesapeake Bay Foundation property in Bay Ridge.
6. The eastern shoreline of Fishing Creek west of Gordon Cove Road.
7. The U. S. Coast Guard Station located on Fishing Creek.
8. The peninsula located between Cherrystone Cove and Duvall Creek.
9. The shorelines of Smith Creek (which is located off of Duvall Creek) west of Arundel On The Bay Road.
10. The edges of Peninsula Park, particularly the shoreline of a tributary flowing across Bay Ridge Road into Lake Ogleton.
11. Selected properties along the western shore of Harness Creek across from Quiet Waters Park.
12. Shoreline south of mouth of Aberdeen Creek along western shore of Harness Creek peninsula.
13. Shorelines of tributary to Aberdeen Creek located in western part of Hunt Meadows Community.
14. Area at end of Romar Drive at headwaters of Aberdeen Creek.
15. Area at end of Rundelac Drive along northwestern shoreline of Aberdeen Creek.
16. Area along southwestern shoreline of Aberdeen Creek.
17. Shorelines of Aberdeen creek and Little Aberdeen Creek north of Melvin Point.
18. Shorelines of headwaters of Little Aberdeen Creek east of Ferry Point Road.
19. Shorelines of properties in Wild Rose Shores northwest of Ferry Point.
20. Area west of end of Crystal Spring Farm Road at headwaters of Crab Creek.
21. Shorelines of properties north of Eaton's Landing Road along northwest shore of Crab Creek.
22. Property at end of Crab Creek Lane along western shore of Crab Creek.

23. Properties along southwestern shore of Crab Creek near end of Bywater Road.
24. Shorelines of property located at Poplar Point west of mouth of Church Creek.
25. Southeastern edge of marina located east of South River Bridge.
26. Shoreline of property located just east of South Point in Cape St. John.
27. Shoreline of property located just east of Riva Bridge.
28. Property located at Addison Point west of Riva Bridge.
29. Property located along southwestern shoreline of Broad Creek east of end of Broadview Terrace Road.
30. Headwaters of tributary to Broad Creek located north of Park and Ride Lot.
31. Shoreline of Open Space property located north of end of Broadview Lane along southeastern shoreline of Broad Creek.
32. Shoreline of tributary to Broad Creek near end of Coover Road in Heritage Harbour area.
33. Property northeast of end of Poplar Drive along southwestern shoreline of Broad Creek.
34. Property near end of Post Oak Drive along southwestern shore of Broad Creek.
35. Properties located east of South Haven Road Loop along southwestern shore of Broad Creek.
36. Selected properties along the South River shoreline between Porter Point and the end of Bon Haven Road.
37. Properties along southern shoreline of Saltworks Creek east of Severn Grove Road in Severn Grove Community.
38. Properties at the end of Dellwood Road along southern shore of Saltworks Creek.
39. Property at the end of Ridgely Ave. at head of Howard Creek.
40. Property along tributary to Howard Creek southwest of end of Dubois Road.
41. Enhance buffer on shoreline of property at mouth of Luce Creek in Dreams Landing Community.
42. Shoreline of the Severn River either side of the end of Dreams Landing Way.
43. Property at mouth of Cove of Cork on northern side.
44. Properties along western shore of Weems Creek south of Priest Point.
45. Properties along western shore of Weems Creek north of the Weems Creek Bridge.
46. Properties along western shore of Weems Creek south of the Weems Creek Bridge.
47. Shorelines of tributary flowing north into Weems Creek north of Jennifer Road across from Harbor Gates Community.