

CHAPTER 8

NATURAL AND HISTORIC RESOURCES

The Broadneck Small Planning Area is situated in two Anne Arundel County watersheds, the Magothy River and the Severn River watersheds. Land draining to the Magothy River is located to the north of Church Road, College Parkway, and US 50. Major tributaries to the Magothy River include Mill Creek, Forked Creek, Deep Creek and the Little Magothy River. In addition to these tributaries, Spriggs Pond and Cool Spring Cove are located along the Magothy River shoreline.

The named tributaries to the Severn River that are within the Broadneck Small Planning Area include Carr Creek, Mill Creek, Burley Creek, Whitehall Creek and Meredith Creek. In addition, Ringold Cove, Asquith Creek, Ray Pond, Chase Creek, Cool Spring Cove, Crouchs Pond, Moss Pond, Westinghouse Bay and Mezick Pond are found along the Severn River shoreline.

In 1971, the Maryland General Assembly recognized the scenic and historic value of the Severn River and incorporated this waterbody into the Maryland Scenic and Wild Rivers program. The purpose of this designation is to preserve and protect the water quality and to promote the wise use of its resources.

Environmental Features

Specific environmental features of the Broadneck Small Planning Area include steep slopes, streams and their floodplains, wetlands, protected habitats of threatened or endangered species, and those lands permanently protected through County or State ownership or easement.

Steep slopes are defined in the County Code specific to Subdivision, Grading and Sediment Control and Zoning. A steep slope is defined generally as a slope that is 25% or greater unless it is in the Chesapeake Bay Critical Area or in an area zoned RLD, then it is 15% or greater. Slopes greater than 25% must have a 25' buffer between the top of the slope and any land disturbing activity, and can only be disturbed if the disturbance will improve an existing erosion problem. Within the Broadneck Small Planning Area steep slopes are found predominately along the Severn River and are characterized by steep bluffs overlooking the water. Lands draining to the Magothy River do not exhibit the steep slope characteristics evident within the Severn River watershed. The eastern portion of the Broadneck peninsula has relatively little topography.

Major streams draining to the Magothy and Severn Rivers tend to be short, first and second order streams that drain directly to the mainstem of these rivers or directly into the

Chesapeake Bay. The 100-year floodplains along these tributaries have been delineated on the Environmental Features map. Anne Arundel County first began protecting its streams and floodplains in the early 1950's when it prohibited the platting of lots in the 50-year floodplain. However, much of the legislation which currently protects floodplains was not adopted until the late 1960's and early 1970's. Therefore, early development review did not account for impacts from increased stormwater runoff from individual sites or the cumulative impacts of stormwater runoff in a drainage basin.

Through implementation of the Floodplain management ordinance (Article 21 of the County Code), specific requirements for development in or adjacent to the 100-year floodplain are set forth. Currently, the County prohibits development of property located within floodplains or streams. Prior to initiating any encroachment activities in a floodplain, justification for the action must be documented and a waiver applied for which can only be approved if there is no other practical solution, in accordance with Article 21 of the County Code. In addition, the Subdivision Regulations (Article 26 of the County Code) requires the dedication of floodplains, in their natural state, to the County.

Wetlands located in the Broadneck Small Planning area include tidal and non-tidal wetlands, the majority of which are located within or adjacent to the 100-year floodplains of the tributary streams. The National Wetland Inventory has also identified estuarine wetlands along Greenbury Point and Sandy Point. These wetlands provide environmental benefits including filtering sediment and nutrients from upland runoff, controlling flooding and shoreline erosion, providing nurseries for shellfish and finfish, providing valuable habitat for many aquatic and terrestrial flora and fauna, absorbing nutrients from the water column, and providing groundwater recharge.

Within the Broadneck Small Planning Area, there are several protected avian nesting sites. The Maryland Natural Heritage Program has identified bald eagle nesting sites adjacent to Moss Pond and Westinghouse Bay. There are also a number of other waterfowl nesting sites in this general location as well as adjacent to Sandy Point. There are no documented habitats of threatened or endangered species, or other designated natural heritage areas in the Broadneck Planning Area.

Permanently protected lands include those set apart through agricultural and woodland easements, as well as those dedicated as public open space. Within the Broadneck Small Planning Area there are two areas with agricultural easements south of US 50, and several park properties that constitute the permanently protected lands. In addition to the agricultural easements, there are several areas that are held as agricultural and woodland districts. Agricultural and woodland districts provide for no development for a minimum of five years and a maximum of ten years. The agricultural districts are located south of US 50 and the woodland districts are located west of MD 2 and north of US 50.

The protected public open space properties include Sandy Point State Park, Twin Oaks Park, Magovista Park, Belvedere Park, Arnold Park, Broadneck Park, Cape St. Clair Park and the B&A trail. Most of the protected parklands are designed for passive and active recreation, but also provide habitat for wildlife.

The Magothy and Severn Rivers, and their tidal tributaries are in the County's Critical Area and are subject to the provisions of the Critical Area Program. The Critical Area is defined as all wetlands, land, and water areas within 1000 feet beyond the landward boundaries of the high tide or the edge of tidal wetlands as designated on the State Tidal Wetland maps. There are three categories within the Critical Area, which were designated on the existing development in the area as of December 1, 1985. The categories are Intense Development Area (IDA), Limited Development Area (LDA), and Resource Conservation Area (RCA). Within the Broadneck Small Planning Area, all three categories are represented. The RCA category is predominant south of US 50, adjacent to the eastern tributaries of the Little Magothy River, within the lands comprising Sandy Point and Podickory Point, in selected portions of the headwaters of Deep Creek, Forked Creek, and Mill Creek, as well as along portions of the Severn River. Development requirements for each of the three categories are as described below:

IDA: These areas can be developed with housing, commercial or industrial uses, according to the underlying zoning. However, pollutant loadings must be reduced by 10% and designated habitat protection areas must be preserved. Additionally, a minimum of a 100-foot undisturbed buffer between the water and the developed land is required.

LDA: These areas can be developed with housing (a maximum of 3.99 units per acre). Commercial and small industrial uses are permitted according to the underlying zoning. A minimum 100-foot buffer is required.

RCA: Development in the RCA is limited to one house per twenty acres. Other permitted uses include agricultural and forest uses and resource utilization according to the underlying zoning. A minimum 100-foot buffer is required.

Development in the LDA and RCA categories require that impervious surfaces be limited to 15% to 25% of the site. Clearing of forested lands is limited and there are requirements for reforestation if for any clearing.

Current Activities

During the mid 1980's to mid 1990's several studies were undertaken in the watersheds comprising the Broadneck Small Planning Area. In 1987, the draft Magothy River Comprehensive Watershed Management Master Plan was completed. Although this plan was never finalized, several of the recommendations were implemented. Additionally, since the

1980's, various studies of the Severn River Watershed were completed. The most recent Severn River study is one that was initiated as part of a comprehensive watershed master plan program involving all twelve watersheds

Environmental Features map

throughout the County. These studies address natural resources in need of protection and set forth recommendations pertaining to future development activities in the watershed.

In addition to the watershed management activities ongoing in the county, the Department of Public Works has also implemented a storm drain infrastructure management program. Through this program, storm drain systems throughout the county are inspected and areas in need of maintenance are identified. This program coincides with the County's Stormwater NDPES permit requirements. These permit requirements include a component to identify and locate all major storm drain outfalls and stormwater management ponds, assess their structural condition, assess the downstream channel conditions, and identify stormwater quantity controls and the quality of the stormwater discharged from management facilities.

Anne Arundel County also promotes the planting of native emergent shore grasses through the Emergent Grasses Program. This program provides native wetland plants to homeowners for revegetating tidal wetland areas. County staff also works with the U.S. Fish and Wildlife Service to determine areas of the County's tidal waters where native submerged aquatic vegetation can be planted to re-establish sea grass beds (refer to map 5 and 6).

Natural Resource Goals and Recommendations

Goal: Encourage the retention of forested areas on publicly owned lands and promote the undertaking of reforestation activities (stream restoration efforts, nonstructural shore erosion measures, growing of seed oysters, etc) where appropriate, to address the environmental damage done to Broadneck's natural resources.

Recommendations:

- Protect and improve environmentally sensitive lands, including forested areas; tidal and non-tidal wetlands; rare, threatened, and endangered species habitats; steep slopes; and stream buffers.
- Preserve and improve the water quality of the Broadneck area's rivers, stream, and groundwater.
- Promote natural greenways, including the reforestation of areas along streams and areas that link existing forested areas and other natural areas of significance.
- Ensure better and more consistent enforcement of environmental regulations.
- Protect wildlife through refuges, such as Greenbury Point.
- Encourage preservation of archeological and historical sites by increasing county resources.

- Promote the undertaking of restoration activities (stream reforestation efforts, non-structural shore erosion measures, growing of seed oysters, etc.) where appropriate to address the environmental damage done to the Broadneck’s natural resources.

Storm Water Management

Goal: Improve stormwater management to reduce, and where possible, eliminate the negative environmental impacts of stormwater runoff

The County should prepare a non-point-source storm water management plan for non-RA zoned land, including alternatives for paying for implementation to comply with pending state and federal regulations.

Recommendations:

- Implement a watershed approach to storm water management, land use planning, development, permitting, and capital improvement program planning and execution to ensure that potential cumulative impacts of land use changes are fully addressed prior to implementation of those land use changes.
- Ensure all engineering design for storm water management facilities is site appropriate and strictly adheres to the Maryland Storm Water Design Manual or County Storm Water Design Manual, whichever is more stringent.
- Encourage the use of innovative approaches to storm water management and low impact development site design in the land development process (e.g., “Better Site Design: A Handbook for Changing Development Rules in Your Community”, 1998, prepared by the Center for Watershed Protection, Ellicott City, MD).
- Continue and, if possible, accelerate the County’s ongoing effort to comprehensively identify, analyze and, where needed, retrofit storm water management problem areas.
- Account for and minimize impacts to the 100-year floodplain with respect to storm water runoff increases and the need for storm water management design to accommodate increases in runoff resulting from comprehensive and site-specific rezoning.
- Establish a comprehensive storm water infrastructure preventative maintenance and management program that reduces environmental degradation and extends infrastructure useful life.
- Aggressively pursue incentive-based approaches (e.g., state grant funds) to achieve retrofitting of areas in need of improved storm water management.

- Ensure that all governmental sponsored land use projects adhere to the highest environmental regulations and standards with regard to site design and storm water management facilities, thus setting the environmental standard to be followed.
- Implement, where possible, a minimum 100 foot riparian buffer to all tributary streams in the County to minimize impacts of storm water runoff on these sensitive tidal and non-tidal aquatic systems.
- Foster community education about storm water issues through cooperation with local citizen groups, public and private schools, park and recreation programs, and use of the Internet.
- Develop and implement, on a continuing basis, a program to stencil storm drains to enhance community awareness that these storm drains direct runoff to tributaries of the Chesapeake Bay.

Forest Conservation

Acre for acre, forests are the most beneficial land use for protecting the Chesapeake Bay and its tributaries by improving water and air quality, providing wildlife habitat, enhancing the aesthetic quality of communities and providing recreational opportunities. Riparian forests along streams, rivers, and shorelines provide critical habitat for half of the terrestrial wildlife species. They also influence the quality of adjoining water, acting as a living filter capturing rainfall, regulating storm water and stream flow, filtering nutrients and sediments, and stabilizing soils. Conserving forests through a variety of land use regulations, incentive programs, and sustainable use provides a benefit from forests today while still granting the option for future generations to use them tomorrow.

Recommendations:

- Encourage protection of continuous forest stands through design controls, donation of conservation easements, purchase of development rights and acquisition of critical property.
- Require reforestation of stream buffers.

Historical Resources map 7

Scenic and Historic Roads

In 1997, the County Council passed Resolution No. 45-97 which requested that the County Executive establish a program to protect, preserve and recognize the county's scenic and historic roads by restricting changes to their alignment, appearance, and character. The program would have the following components:

1. Procedures for designation and classification of scenic and historic roads
2. Establishment of measures for protection of designated roads including development of abutting land and improvements to designated roads.
3. Implementation of measures for preservation, protection, and recognition based on the classification of the road.

The Broadneck area has four such treasured roads: Whitehall Road, Pleasant Plains Road, St. Margaret's Road and Joyce Lane. While the importance of protecting the scenic and historic aspect of these roads is clear, their protection must be balanced with the need for safe roads and appropriate development.

Recommendation: The Scenic and Historic Roads Program should be a priority. This includes incorporating appropriate changes in the subdivision regulations, zoning ordinances and road improvements and also taking interim measures until these actions can be implemented. Preservation of archaeological and historical sites should be encouraged by increasing County resources for inventorying, documenting and preserving these sites.