

Natural and Cultural Resources

Existing Conditions

Chesapeake Bay Critical Area

In 1984, the Maryland General Assembly passed the Critical Area Law in response to the environmental decline of the Chesapeake Bay. This law created a special planning area encompassing all wetlands, land, and water areas within 1000 feet of the landward boundaries of the mean high tide or the edge of tidal wetlands as designated on the State Tidal Wetland maps. The Critical Area Commission was also created to formulate protective criteria for the use and development of this area and to oversee the programs developed by local jurisdictions, which were required by the State law to develop their own Critical Area Programs based on the Commission's criteria.

Anne Arundel County's Critical Area program was developed in 1988 to manage land use in these sensitive coastal areas. Pursuant to the State's criteria, the County designated three development categories within the Critical Area. The delineation of the development categories was based on the existing development and available public services as of December 1, 1985. The three categories are listed below.

- Intense Development Areas (IDAs): areas of 20 or more contiguous acres where development predominates and where there is relatively little natural habitat. IDAs can be developed with high density housing, commercial or industrial uses, according to the underlying zoning designation.
- Limited Development Areas (LDAs): areas developed at low or moderate intensity. Additional development must not change the prevailing established land use, and must improve water quality and conserve areas of natural habitat. LDAs can be developed with medium density housing at a maximum of 4 units per acre, commercial and small industrial uses according to the underlying zoning designation.
- Resource Conservation Areas (RCAs): areas characterized by nature-dominated environments such as forests, wetlands, or agriculture. New residential development is limited to a density of one dwelling unit per 20 acres.

Within the Critical Area, there is a 100-foot wide minimum protected buffer from tidal waters, streams and tidal wetlands. Development in both the RCA and LDA designations also requires that impervious surfaces be limited to 15 to 25% of the site. Clearing of forested lands is limited and there are specific requirements for reforestation. Moreover, development of LDA or RCA lands that are not forested includes a requirement to establish 15% of the site in forest.

The State's criteria also required the County to designate Habitat Protection Areas (HPAs) within the Critical Area. These include historic waterfowl staging and concentration areas, colonial

water bird nesting sites, threatened and endangered species and species in need of conservation, anadromous fish spawning areas, existing riparian buffers, forested areas used by forest interior dwelling birds, nontidal wetlands, Natural Heritage Areas, and other areas of local significance.

The Edgewater/Mayo Planning Area covers approximately 7785 acres. Approximately 55 percent of the land area lies within the Chesapeake Bay Critical Area, as shown in Map 1. Almost 50 percent (2,253 acres) of the Critical Area is classified as LDA, based on its land use in 1985. Several Resource Conservation Areas totaling approximately 1,979 acres are scattered through the area. The largest RCAs are along Beards Creek, Glebe Creek and Glebe Bay, Bear Neck Creek, and Beverly Triton Beach Park. Around 520 acres are designated as Intensely Developed Areas, the majority of which fall in the Londontown community.

Forest Cover

As of 1995 approximately 3,788 acres in the Edgewater/Mayo area were forested, comprising nearly 44 percent of the total land area. The extent of forest cover contributes significantly to the area's character. Although much of the forest cover is fragmented into small patches, some large contiguous areas remain, especially north and south of Loch Haven Road, around Beverly Triton Beach Park, and in and north of Camp Letts.

Existing regulations limit clearing and cutting of trees both inside and outside the Critical Area. However, forest loss and fragmentation does occur as a result of development, especially outside the 100-foot Critical Area Buffer. The County administers a Forest Conservation Program in accordance with the requirements of the State Forest Conservation Act. Under this program, development proposals submitted to the County for approval must include a Forest Conservation Plan which identifies and classifies wooded areas on the site and establishes limits of disturbance and areas of forest retention. The Forest Conservation Ordinance specifies conservation and afforestation thresholds according to the type and density of land use. Development plans that propose clearing of existing forested areas must retain at least this minimum threshold, or else the developer will be required to reforest portions of the site or, as a less desirable alternative, to reforest areas offsite. If a developer can demonstrate that reforestation on or offsite cannot be reasonably accomplished, a fee in lieu may be paid to the County's Forest Conservation Fund, to be used by the County in reforesting sites as they become available.

Streams and Water Quality

A watershed is an area of land that is drained by a single stream or other body of water. Most of north and east Edgewater/Mayo lies within the South River watershed, while the south and southwest portions lie in the Rhode River watershed. Most streams in Edgewater/Mayo are short, with small drainage areas that flow to the bays and creeks along the South and Rhode

Map 1

Map 2

Map 3

Rivers. Beard Creek and Glebe Creek are longer streams with a more extensive network of small tributaries. Map 2 indicates the major hydrologic features in the Planning Area, and the subwatersheds draining to individual tributaries of the South and Rhode Rivers are shown on Map 3.

Overall water quality in the South River watershed is fair, according to the 1996 Maryland Water Quality Inventory. Surface waters are suitable for swimming and fishing, but shellfish harvesting is prohibited in many areas because of elevated bacteria levels. Elevated bacteria levels are attributed to runoff, boating activities, failing septic systems, and poor flushing (due to natural causes) in the main stem of the South River. Input of nutrients and suspended sediments to surface waters are mostly due to urban runoff.

Streams in Edgewater/Mayo are classified as “slightly degraded,” according to biological information in the Maryland Biological Stream Survey and Anne Arundel County studies. The fish community is poor with pollution-tolerant fish being the most abundant.

The Maryland Department of Natural Resources (DNR) is the lead agency for the Tributary Strategies Program, a comprehensive approach to reducing nutrient pollution in Maryland’s ten tributary basins to the Chesapeake Bay. Both the South River and the Rhode River watersheds are sub-watersheds of the Lower Western Shore Tributary Basin. The Lower Western Shore Tributary Team members represent constituency groups located throughout the watershed.

Presently, watershed management master plans are being prepared for the County’s 12 major watersheds. The first of these plans was specific to the South River watershed. This master plan identified areas currently subject to adverse impacts of stormwater runoff, and areas that would be subject to stormwater runoff impacts under future conditions if full build-out of current zoning was realized. Specific problems addressed included soil erosion and sedimentation, flooding, and nutrient and heavy metal transport. Management alternatives to address current and potential impacts were then identified and proposed for implementation. Many of these recommendations are being addressed via the County’s Capital Programs. A similar plan for the Severn River watershed was initiated in February 2001.

Warehouse Creek Watershed Study

Warehouse Creek, a tributary to the South River, has been the subject of a more intensive watershed study focusing primarily on effects of stormwater runoff as land uses in this subwatershed change. This watershed study was completed in the Fall of 2001 and included recommendations for stormwater retrofits and stream restoration projects in targeted areas of this subwatershed.

The study began as a response to citizens concerns regarding the widening of MD 2 and the impact that it would have on Warehouse Creek. Residents in the vicinity of the creek observed erosion and sedimentation in the creek and its tributaries.

The Study’s objectives were to look at the existing conditions of Warehouse Creek, with

attention paid to factors that affect its health, to describe the physical conditions of the creek and assess the influence of existing development, to use modeling techniques to provide stream flow and water quality and quantity information based on existing conditions and realistic future development, and to develop management plans to minimize the decrease in stream quality as a result of existing and future development.

The Study was conducted by the County in conjunction with local citizens groups. It is hoped that the study can be used as a pilot to determine the potential impacts of a variety of possible future development and management scenarios on a small watershed like Warehouse Creek.

The Study used modeling to determine stormwater volume, discharge rate and pollutant loadings based on different scenarios including forested conditions, existing developed conditions, and future developed conditions.

The results of the study found that in the Warehouse Creek watershed there is poor aquatic habitat in streams, degraded stream stability and eroding stream banks, high sediment load and deposition exists, and there is a high percentage of impervious coverage (approximately 30%). As a result of the study, the following management strategies were recommended:

- C Stabilize in-stream stability and habitat degradation problems through stream restoration.
- C Identify and recommend homeowner Best Management Practices (BMP) options.
- C Retrofit existing stormwater BMPs to provide for improved water quality management.
- C Implement new, small scale stormwater BMPs in developed areas currently discharging unmanaged stormwater runoff.
- C Develop guidelines and criteria for future development to ensure water quality management, quantity management, and stream channel protection for the Warehouse Creek watershed.

Stream buffers

The term riparian refers to the areas bordering streams. Riparian buffers are vegetated areas that help protect streams from disturbances. Effective riparian buffers have many environmental benefits:

- C They enhance water quality by trapping sediment and removing pollution from runoff and the air,

- C They assist in flood protection by reducing water flow energy,
- C They protect the overall stream environment by moderating temperature and light, and
- C Depending on their width, they can provide important habitat for wildlife. They also assist in deterring invasion by non-native and undesirable plant species.

These benefits also have important economic value in terms of avoiding the cost of repairing damaged streams and engineered approaches to removing pollutants.

Effective buffers are typically between 35 and 100 feet wide, although widths of up to 300 feet may be recommended for wildlife habitat. Forested buffers are typically the most beneficial, although in some situations it is recommended that the outer zone of the buffer include grasses. Forested buffers should include a diversity of native, noninvasive trees and shrubs.

The existing extent and condition of forest buffers in Edgewater/Mayo has not been documented. Review of aerial photographs and forest cover maps plus spot field checks suggests that buffers may be intact along many of the stream miles in the planning area. However, a more thorough review including more extensive field checks is needed to determine actual conditions. Many riparian areas are on private property and landowner permission would be needed for a complete survey.

Within the Critical Area, stream buffers are protected through the required 100-foot wide buffer. However, in much of Edgewater/Mayo the buffer is not intact because it was developed before the Critical Area regulations took effect. Beard Creek, Sellman Creek, the downstream portion of Glebe Creek, and other scattered locations have some buffer protection under the Open Space (OS) zoning. Development in this district is quite restricted and structures must be located outside the “natural drainage system” which includes lands within the coastal floodplain, wetlands, and uplands with a slope over 15 percent. Outside the OS districts and the Critical Area in Edgewater/Mayo, no additional buffer from streams is required beyond the county and state-required minimum 25-foot buffer to non-tidal wetlands.

Septic Systems and Groundwater

Pollution from septic systems has been identified as an issue of concern. In addition to environmental health concerns from failing systems, a major concern is nitrogen percolating from drain fields adding excess nutrients to ground water and surface water.

Most of Edgewater/Mayo’s older communities were established on septic systems. Many of these systems failed and have been replaced with public sewer systems or other types of shared systems. It is estimated that fewer than 10 percent of Edgewater/Mayo’s homes now use septic systems. Some areas such as Edgewater Beach are designated for future sewer

service (extended only for reasons of public health or safety), but extending public sewer to other areas with septic systems may be cost prohibitive and could have other consequences, including opening up areas that are not developable or are planned for low density development to pressures for more intense development.

Nitrogen-removing septic systems are available, and can remove nitrogen in comparable amounts to biological nitrogen removal systems at wastewater treatment plants. Around 300 of these systems have been installed in Anne Arundel County. One subdivision in Gingerville is part of a national on-site sewerage treatment system demonstration. These systems are more expensive than traditional septic systems and require more frequent maintenance by homeowners.

Most of Edgewater/Mayo's homes have private water supply wells, although nearly all of the new development of South River Colony will use the public water supply system. In addition, an amendment to the *Master Plan for Water Supply and Sewer Systems* was introduced in the Fall of 2001 that will change the water service category in Edgewater and Londontown from a No Public Service category to the Planned Service category, allowing the area to be served by public water in the future should these communities choose to petition for extension of public water service. The quality of groundwater in the area is generally good. However, in shallow wells near the shoreline, some cases of saltwater intrusion have been detected. Due to poor maintenance and overflow of septic systems, some nitrates have also been detected in water supply wells. Although there have been some isolated incidences of contaminated well water, the Health Department has found no area-wide pattern or source of contamination.

The Maryland Department of the Environment (MDE) monitors groundwater levels and reports that the groundwater level in the Edgewater/Mayo area is in good supply. Problems with ground water supply have been reported in other parts of the county, relating to falling well-water levels and salt-water intrusion. No reports of such problems have been reported in Edgewater/Mayo. Even though there have been no reports of problems, there still is a concern that additional development could cause failures.

Wetlands

The majority of wetlands in Edgewater/Mayo are tidal and non-tidal riparian wetlands, according to mapping from the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps. However, there are other small, isolated wetlands scattered throughout the area. The NWI maps are a general guide to the presence of wetlands but are not definitive, and wetland delineations have to be performed on an individual site basis to definitively establish their presence and extent.

Wetlands have long been recognized as an important component in the health of the Chesapeake Bay. They provide numerous environmental benefits that include filtering sediment and nutrients from upland runoff, controlling flooding and shoreline erosion, providing nurseries for shellfish

and finfish, absorbing nutrients from the water column, and providing valuable habitat for many aquatic and terrestrial species of plants and animals. Tidal wetlands are important to commercial and recreational fisheries because many of the Bay's commercial fin and shellfish spend some portion of their lives in this environment. The aesthetic value of tidal wetlands is demonstrated by the many residents who want to live on or near the water.

The County protects tidal wetlands through implementation and enforcement of the Chesapeake Bay Critical Area Program. Through the County permit process, any proposed impacts to tidal wetlands are assessed by the permit reviewer to determine compliance with Critical Area requirements.

Nontidal wetlands are areas that are characterized by an ample water supply, saturated or hydric soils, and hydrophobic vegetation. These characteristics distinguish wetlands from upland areas and provide the framework for the regulatory definition of non-tidal wetlands used by the State and the Federal government. There are many types of nontidal wetlands, such as forested wetlands, scrub-shrub wetlands, and wet meadows to name a few. Nontidal wetlands provide many of the same environmental functions as tidal wetlands, including habitat for fish and wildlife, maintaining water quality and flood control, reducing nutrients from runoff, and enhancing groundwater recharge.

The County protects nontidal wetlands through the implementation and enforcement of the Critical Area Program, the Sensitive Area Criteria in the County Grading Ordinance, and cooperation from Maryland Department of the Environment and the U.S. Army Corps of Engineers. An applicant proposing to disturb nontidal wetlands within the Critical Area needs to obtain not only a building and grading permit and State and/or Federal Permit approval, but also a variance to the Habitat Protection Area criteria cited in Article 28 of the County Code (Zoning Ordinance). The State and county require a minimum 25-foot buffer to all non-tidal wetlands.

Floodplains

Floodplains are the areas adjacent to a stream or river that are subject to flooding or inundation during storm events. Floodplains are designated by the Federal Emergency Management Agency (FEMA) as non-tidal, tidal, and coastal high hazard, and are frequently defined in terms of the likelihood of flooding in a given year. For example, the 100-year floodplain is the area adjacent to a stream or river that floods, on average, every 100 years. The major streams draining to the South and Rhode Rivers and the 100-year floodplains of these streams are delineated on Map 2. These floodplains have been identified through the FEMA Flood Insurance Rate Maps (FIRM) and through specific floodplain studies. The non-tidal floodplains on the FEMA maps are based generally on the existing land use as of 1983. The county requires that new developments recalculate the floodplain based on current development plus future development based on zoning.

Most floodplain in Edgewater/Mayo is tidal floodplain consisting of areas that are susceptible to flooding by high tides, hurricanes, storms, and steady on-shore winds. Coastal areas of Edgewater/Mayo, also extending up the creeks, are in the FEMA 100-year tidal floodplain. The entire southern end of the peninsula is in the FEMA 100 to 500-year tidal floodplain. Small areas along

Beard Creek are in the 100-year non-tidal floodplain, where flooding could be caused by downstream flow overflowing the riverbanks.

Anne Arundel County first began protecting streams and floodplains in the early 1950s when platting of lots in the 50-year floodplain was prohibited. However, much of the legislation protecting floodplains was not adopted until the late 1960s and early 1970s. 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. This resulted in stream bank and streambed erosion in many of the County's streams.

Development is generally prohibited in the nontidal floodplain. Through implementation of the Floodplain Management Ordinance (Article 21 of the County Code) and provisions of Article 26 (Subdivision) of the County Code, requirements for development in or adjacent to the 100-year floodplain are set forth. Currently, developers are required to delineate the 100-year floodplain and the County prohibits lots from being platted in that floodplain. The floodplain is to be retained in or restored to its natural state and dedicated and deeded to the County as part of the development process. Although the floodplain may be deeded to the County, the developer reserves an easement to the community or homeowners association for the right to use the area in a manner not inconsistent with the maintenance and preservation of the 100-year floodplain.

In tidal floodplain areas, development is permitted provided buildings and structures are designed to minimize flood damage. The key criterion is for the lowest floor to be elevated at least one foot above the base flood elevation.

Sensitive Species and Habitat Protection

Threatened and endangered species are protected by federal and state regulations. The bald eagle is a threatened species and there is one mapped and at least one unmapped bald eagle nesting site (near Cedar Point) in Edgewater/Mayo.

The entire Edgewater/Mayo shoreline is a designated waterfowl staging area. These are areas that serve as stopover sites or arrival or departure areas for migrating waterfowl. These areas are protected through some Critical Area program criteria.

Submerged aquatic vegetation (SAV) is considered critical to the Chesapeake Bay as it provides important nursery areas, food and habitat for a wide range of bay species. Periodic surveys of SAVs are conducted in the Bay and indicate one individual SAV bed in Brewer Creek. Citizen field observations have identified the presence of SAV (mostly eelgrass and widgeon grass) at numerous locations in Edgewater/Mayo including several locations along Beard Creek.

The Natural Heritage Program under the State Department of Natural Resources maintains lists of both State and Federally listed rare, threatened, and endangered animals and plants. The overriding issue for the protection of species is habitat preservation. The habitat of rare and endangered species is evaluated on a case by case basis as development occurs.

The sensitive areas shown on Map 2 include upland natural areas, natural heritage areas, habitat protection areas, and colonial nesting sites.

Steep Slopes and Highly Erodible Soils

Steep slopes are defined in the County Code as slopes characterized by an increase in runoff, erosion, and sediment hazards and that (1) have an incline greater than 15% and (2) in the Critical Area have an incline equal to or greater than 15%. Generally, steep slopes cannot be disturbed unless the disturbance will improve an existing erosion problem. Moreover, slopes with an incline greater than 25% must have a 25-foot buffer between the top of the slope and any land disturbing activity. Development may occur within the designated steep slope areas as per the provisions of Article 21, §2-302 of the County Code. These provisions include allowing development if at least 30% of the parcel to be developed has less than 15% grade and is contiguous to a County road that allows direct car access to the principal structure.

Steep slope areas in Edgewater/Mayo comprise around 970 acres or 11 percent of the planning area. Most steep slopes occur along Beard Creek, Glebe Creek and the South River shoreline. Some areas, especially in the northern part of the planning area, have slopes with inclines of over 25 percent. Steep slopes help create the rolling terrain that characterizes much of Edgewater/Mayo and contributes to its attractive character.

Large areas of western Edgewater/Mayo contain highly erodible soils. Disturbing highly erodible soils, especially on steep slopes, can result in increased sediments in stream channels, water turbidity, and additional nutrients.

Shoreline

Edgewater/Mayo's extensive shoreline is the area's dominant environmental feature. Shoreline erosion is a regional problem. According to the DNR approximately one third of Maryland's tidal shoreline is eroding at various yearly rates. Shoreline erosion results in the loss of land and the reduction of buffer areas and wildlife habitat, and is also a major contributor to sedimentation, which increases pollution and degrades water quality.

The extent of shoreline erosion in Edgewater/Mayo has not been documented in studies, but is an acknowledged issue of concern. Boat wake is considered a major contributor to shoreline erosion, especially with the long fetch across the South River. Enlarging existing no-wake zones may conflict with recreational boating activity.

Erosion in many locations can be controlled using non-structural shoreline stabilization techniques to create protective, vegetative buffers. To enhance and stabilize the County's tidal shoreline, the County promotes the planting of native emergent shore grasses through the Emergent Grasses Program. This program provides native wetland plants to homeowners for re-vegetating tidal wetland and shoreline areas. County staff work with the homeowners, providing planting instruction and assistance. In some cases, merely curtailing practices such as mowing to the water's edge can stop erosion. Structural shore erosion control methods typically are used to manage higher rates of erosion.

The Department of Natural Resources Shore Erosion Control program provides technical and limited financial assistance to property owners in resolving shoreline and stream bank erosion problems.

Historic and Archaeological Resources

Historic Resources

An historic site or property is a site, building, structure, district, or object that is significant in American history, architecture, archaeology, and culture and is generally 50 years old or older. An historic property usually possesses integrity of location, design, setting, materials, workmanship, feeling, and association. It may be of value to the nation as a whole, or important to the State of Maryland, Anne Arundel County, or simply the community in which it is located. An historic property must possess at least one of the following criteria:

1. Association with events that have made a significant contribution to the broad patterns of our history;
2. Association with the lives of persons significant in our past;
3. Distinctive characteristics of a type or period of architecture, method of construction, or the work of a master architect; high architectural value; or representative of a significant and distinguishable entity whose components may lack individual distinction; or
4. Potential to yield or have yielded information important in prehistory or history.

Historic resources in Anne Arundel County reflect the County's over 300-year history. The Maryland Inventory of Historic Properties in Anne Arundel County lists over 800 historic resources Countywide. These resources include a diversity of sites and/or properties such as dwellings, agricultural buildings, cemeteries, churches, commercial buildings, industrial and engineering structures, bridges, maritime resources, military structures, small villages and towns, and scenic and historic roads. Most of the County's historic resources are privately owned; fewer than a dozen are open to the public. Within the County, 35 historic properties totaling 636 acres are protected by historic preservation easements that are held either by the Maryland Historical Trust or the National Trust for Historic Preservation.

Within the Edgewater/Mayo Small Area, there are a number of Historic Sites and Buildings. The identification of these sites and buildings can be found in Table 1, while Map 4 shows the relative locations of the documented sites. Among the several historic buildings in the area are the William Brown House at Historic London Town and Gardens, South River Club on South River Clubhouse Road, All Hallows Church on MD 2, Gresham on Central Avenue, and Margaret's Fields on Shoreham Beach Road. The County offers protection to these historic sites through Federal and State regulations, as well as County legislation.

Archaeological Resources

In addition to the documented historic resources, Anne Arundel County has more recorded

archaeological sites than any other county in Maryland, with many more sites still to be discovered. These sites span the entire 13,000 years of human presence in the area and represent a unique and non-renewable piece of cultural heritage. The assessment of archaeological potential for unknown sites is generally based on topographic and environmental settings. Several nationally significant prehistoric resources, located in the County, include the 13,000 year old Higgins site, the earliest undisturbed site in Maryland; the Garman Site with the oldest fireplaces excavated in the State; and the Adena Site which contains exotic and unexplained artifacts from the Ohio River Valley. The highest potential for prehistoric sites is along the Bay shoreline and its tributaries or the Patuxent River and its tributaries.

Significant historic archaeological sites include the house sites of the County's first European settlement at Providence in 1649; the Steward Colonial Shipyard burned by the British in 1781; and the lost town of London on the South River. While the oldest of these sites are clustered along navigable waterways, later archaeological and historic sites can be found in more wide-ranging locales such as farmsteads or homes along old roads or railroads. In order to preserve and protect archaeological sites, exact locations of these resources are not released to the public.

Table 1
Edgewater/Mayo Historic Resources

Site Number	Name	Street Location
AA0066	Taylorville House	Riva Road
AA0140*	South River Club	South River Club Road
AA0145	Aisquith Residence (site)	Southwest of Brick Church Road
AA0148	Middle Ridge Farm and Store	East side of MD 468
AA0150*	All Hallows Church	MD 2 at Brick Church Road
AA0162	Cobb Residence	MD 214
AA0163	Tudor Hall	Derbyshire Lane
AA0165**	William Brown House at London Town	Londontowne Road
AA0226	Margaret's Fields	Shoreham Beach Road
AA0230	Edward Collison House	West side of Loch Haven Road
AA0230A	Collison Farm slave quarter	
AA0232*	Gresham	North side of MD 214
AA0762	South River Bridge	MD 2 over South River
AA0767	Hope Memorial Methodist Church	Muddy Creek Road (MD 468)
AA0778	St. Mark's Methodist Episcopal Church	Beverly Avenue
AA0988	Brewer Family Gravestone	Old Point Road
AA1061	Dr. Richard Weems House (site)	Hillmeade Road
AA1062	Newton Brewer House (site)	South side of Pocahontas Drive
AA2060	John B. Owens House	South River Club Road
AA2061	Clydesdale Farm	Clydesdale Road
AA2073	Hope Chapel School (site)	MD 214
AA2074	Brashears/Witt House	Carrs Wharf Road
AA2075	Henry Behlke House	Whitemarsh Lane
AA2076	Willy Behlke House	Germantown Road
AA2077	August Quade House	Whitemarsh Lane
AA2078	Witt House	Whitemarsh Lane
AA2079	Hope Chapel Cemetary	North of Mayo Road

*National Register of Historic Places

** National Historic Landmark

Map 4

Along with Federal and State laws protecting archaeological resources, the County Code also protects such sites during the review of residential and commercial subdivisions, critical area allocations, and zoning change requests.

Scenic and Historic Roads

In 1997, the County Council passed Resolution No. 45-97 which requested the County Executive to 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, and
3. Implementation of measures for (a) preservation, (b) protection, and (c) recognition based on the classification of the road.

Along the border or just outside of the Edgewater/Mayo Small Planning Area, there are two roads and a portion of one State road proposed for Scenic and Historic Road designation. They are Brick Church Road, South River Clubhouse Road, and a portion of Solomons Island Road (MD 2). 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 for appropriate development.

Annapolis, London Town, and South County Heritage Area

In 1996, the Maryland General Assembly established legislation for the creation of a Maryland Heritage Preservation and Tourism Area Program. Designed to assist communities in Maryland through economic development and enhancement of heritage tourism, it also provides mechanisms for the protection, preservation and promotion of historic, cultural, and natural resources. This legislation is intended to help Maryland compete in the heritage tourism industry, an industry in which the neighboring states of Virginia and Pennsylvania have enjoyed great economic success.

In the summer of 2001, the Maryland Heritage Area Authority certified the Annapolis, London Town and South County Heritage Area as the third such area in the State. The heritage area encompasses the area of the county south of Sandy Point Park to the Calvert County line and from Solomons Island Road on the west to the Chesapeake Bay on the east, including Annapolis and London Town, two of the County's most popular tourist destinations. The Heritage Area Program holds the potential for enhancing and strengthening the tourist experience and for improving the quality of life for the residents and businesses in the County that benefit from tourism. As a Certified Heritage Area, the County will receive financial incentives and assistance in developing the area as an important heritage tourist destination.

Issues Related to Natural Resources

Based on public input received at the forums, the overall concerns related to the natural environment center around preserving woodlands, natural areas, wildlife habitats, open space, and wetlands on the Edgewater/Mayo peninsula. The area's natural resources are one of the most important qualities to many of the residents, and there is concern that these may be lost in the future.

Below are listed several issues of concern that were frequently discussed during the planning process and that are addressed in the recommendations that follow.

Loss of forested areas: A strong desire was heard at the public forums and among the Small Area Plan Committee to limit the loss of trees and forested areas on the Edgewater/Mayo peninsula and to prevent fragmentation of large tracts of forested lands. Although developers are required under the County's Forest Conservation Law to provide compensation for areas cleared, this requirement is often met by payment of a fee-in-lieu rather than by actual reforestation. When funds are spent on reforestation projects, the sites are often located in other parts of the County, so that the benefits of the forest conservation regulations are not seen locally by area residents. There is a desire to introduce more reforestation in Edgewater/Mayo, particularly within Critical Areas, whenever trees are cleared for development.

Water quality in area streams: Another area of concern is that of water quality in the South, Rhode and West rivers and their tributaries. Residents attending the forums voiced concerns about the lack of stormwater management facilities in older communities, a need to control runoff to prevent shoreline erosion, and the prevention of any further pollution of the bay. It was noted that river water quality is noticeably worse during boating season, possibly due to a lack of enforcement of holding tank laws and general stirring of the bottom due to increased boating activity during the summer.

Groundwater supply and quality: Wellhead protection has been another concern voiced frequently, since much of the Edgewater/Mayo peninsula utilizes private individual water supply wells. While some problems with groundwater supply, related to falling well water levels and saltwater intrusion, have been reported in other parts of the County, groundwater supply and quality in Edgewater/Mayo is generally good, according to the Health Department and the Maryland Department of the Environment, with the exception of some isolated cases of contamination that have been detected. However, although current studies do not show a draw down of the groundwater in the area, residents are concerned that added development will unduly stress the supporting aquifers and cause salt water intrusion. Experts in this area have presented mixed opinions.

Failing septic systems: Pollution from septic systems was also identified as an issue of concern. In addition to environmental health concerns from failing systems, a major concern is nitrogen percolating from drain fields which adds excess nutrients to ground water and surface water.

Air quality: Air quality is a regional issue of concern to many County residents. The Baltimore-Washington Metropolitan Area, including Anne Arundel County, is a designated Non-Attainment Area for ozone levels, according to federal criteria. Both the Baltimore Metropolitan

Council, of which Anne Arundel County is a member, and the Metropolitan Washington Council of Governments encourage local jurisdictions to adopt policies to reduce ozone levels which are primarily the result of traffic congestion. Local residents in the Edgewater area have also voiced concerns about localized air emissions during the winter due to the large number homes using wood burning stoves.

Goals and Recommendations

Goal: Promote and demonstrate respect for the environment.

Respect for the environment is needed through education in order to understand the sensitive nature of this area and its peninsulas. Approximately 55% of the Edgewater/Mayo area is in the Critical Area, within 1,000 feet from tidal waters and wetlands. Over-development can destroy valuable environmental assets. An understanding of the Edgewater/Mayo peninsula's limitations is needed.

Recommendations:

- 1.1 Create an awareness of valuable environmental assets in the community.
- 1.2 Coordinate efforts with groups such as the Chesapeake Bay Foundation and the Maryland Department of Natural Resources to improve water quality.
- 1.3 Continue to implement recommendations made in the *South River Watershed Management Plan* to improve waterways in the South River watershed.
- 1.4 Prepare a Watershed Management Plan for the Rhode River watershed.

Goal: Protect the health of citizens by adopting policies and plans that serve to protect air and water resources.

Concern for the existing communities and the effects that over development can have on the health of its residents is needed to avoid diminishing the quality of life in the Edgewater/Mayo area. This must weigh heavily against developers' interests. The Small Area Plan should establish guidelines for growth in this area to avoid impacting the ground water and air quality that are essential to the health and well-being of the residents.

Recommendations:

- 2.1 Potential build out in the Edgewater/Mayo area should be used to determine the limitations of future development. Current projections estimate a build out capacity of approximately 4,200 dwelling units in the Mayo area and approximately 6,100 units in the Edgewater area.
- 2.2 Conduct a study to assess air quality impacts due to wood stove emissions.

- 2.3 Work with other jurisdictions in the Metropolitan Baltimore Air Quality Control Region to establish and implement regional policies and measures to reduce ozone levels in the Non-Attainment Area.
- 2.4 Provide information on the impact to shallow wells from buildout. Develop a groundwater management plan to ensure that current water quality does not decline below acceptable standards.

Goal: Protect the environment from degradation that can result from increased population and development.

Edgewater/Mayo is comprised of many peninsulas that must be protected from over-development. The Small Area Plan should be used as a guideline for development during the next two decades. Petitions for increased density must be examined by assessing the effects on the community as a whole.

Recommendations:

- 3.1 Establish a South River/Rhode River Watershed Association, or utilize an existing organization, to help implement the adopted plan, monitor the strategies, and provide unity in issues that affect the Edgewater/Mayo area. The committee should be composed of area residents, environmentalists and County staff.
- 3.2 In order to protect sensitive areas, the Critical Area Law as well as State and Federal wetlands regulations should be adhered to strictly. Growth allocation should not be applied in the Edgewater/Mayo area.
- 3.3 Amend Subdivision Regulations to consider sensitive areas earlier in the development process. Consider higher bonding requirements for sediment control in sensitive areas.
- 3.4 Support development that protects and enhances open space and forest.
- 3.5 Identify specific wildlife habitats that need protection.
- 3.6 Parkland uses in the Critical Area must be environmentally sensitive. Parks located in Resource Conservation Areas should be limited to passive activities in order to keep land disturbance to a minimum.
- 3.7 Improve stormwater management and erosion control for highway and commercial projects through stricter enforcement.
- 3.8 Protect rivers and streams from new septic systems. Where it is more practical than extending sewer into the critical or sensitive areas, use specially designed septic systems for new construction.

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- 3.9 Properly maintain Mayo sewer system to manage gray water.
 - 3.10 In communities with failing septic systems and high nitrogen levels, promote public support for sewer installation.
 - 3.11 Provide citizens with results of river pollution studies.
 - 3.12 Provide communities in the area with information and incentives on methods that can be used by homeowners and businesses to reduce lawn and chemical usage. Develop a plan to educate residents on the positive steps that can be achieved for area water quality, native plants, wildlife habitat and air quality.
 - 3.13 Support State enforcement of holding tank laws for boats. Monitor boaters for compliance and notify them of pump out stations, and encourage greater use of spot checks by the Department of Natural Resources.
 - 3.14 Provide increased recycling opportunities in the community, including recycling of hazardous wastes and other recyclable material.

Goal: Enhance the environment through activities such as reforestation, restoration of natural areas, and education.

Most communities in the Edgewater/Mayo area are waterfront communities. They often have community-owned “common areas” that can be restored to a more natural state that will provide increased habitat to animals and native plants. A second benefit would be to improve the quality of the creeks and streams by enhancing shoreline and stream buffers.

Recommendations:

- 4.1 Take proactive and aggressive steps to locate reforestation sites in Edgewater/Mayo. Use reforestation funds to create larger buffers, forest open space, or reestablish native plants. Retain or create corridors between isolated forest patches.
- 4.2 Establish a stream buffer restoration program for Edgewater/Mayo.
- 4.3 Create a neighborhood program to identify community sites where native vegetation can be planted to increase shoreline buffers.
- 4.4 Reestablish colonial nesting sites for waterfowl in neighborhood communities.
- 4.5 Create a Heritage and Environmental Center along MD 2 to encourage, educate, and enhance environmental and historic elements. One possible location for such a center is the County police station at the corner of MD 2 and Virginia Avenue, once the new police station is constructed on Stepney’s Lane.

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

Recommendations:

- 5.1 Implement a watershed approach to stormwater 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.
- 5.2 Ensure all engineering design for stormwater management facilities is site appropriate and strictly adheres to the Maryland Stormwater Design Manual or County Stormwater Design Manual, whichever is more stringent.
- 5.3 Encourage, to the maximum extent possible, the use of innovative approaches to stormwater management and low impact development site design in the land development process.
- 5.4 Continue and, if possible, accelerate the County's ongoing effort to comprehensively identify, analyze and, where needed, retrofit stormwater management problem areas.
- 5.5 Account for and minimize impacts to the 100-year floodplain with respect to stormwater runoff increases from new development. Where comprehensive or site-specific rezoning is expected to result in increases in runoff, the need for additional stormwater management, or retrofits to existing facilities, should be determined and accommodated.
- 5.6 Establish a comprehensive stormwater infrastructure preventive maintenance and management program that reduces environmental degradation and extends infrastructure useful life.
- 5.7 Aggressively pursue incentive-based approaches (e.g., state grant funds) to achieve retrofitting of areas in need of improved stormwater management. Offer tax incentives to businesses and homeowners for retrofitting their property with modern stormwater management.
- 5.8 Ensure that all government-sponsored land use projects adhere to the highest environmental regulations and standards with regard to site design and stormwater management facilities, thus setting the environmental standard to be followed.
- 5.9 Implement, where possible, a minimum 100-foot riparian buffer to all perennial and intermittent tributary streams in the County to minimize impacts of stormwater runoff sheet flow to these systems.
- 5.10 Foster community education about stormwater issues through cooperation with local citizen groups, public and private schools, park and recreation programs, and use of the Internet.

- 5.11 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.

Goal: Improve water quality in the Warehouse Creek Watershed and other watersheds in the Edgewater/Mayo Small Planning Area.

Recommendations:

- 6.1. **Stream Restoration** - reaches 2,3,5 and 7 have been identified in the Warehouse Creek Watershed Stormwater Management Master Plan (WCWSMMP) Draft, dated October 3, 2001, as candidates for stream restoration. Opportunities to implement stream restoration in these areas should be pursued through capital, developer, and/or community projects.
- 6.2 **Individual Homeowner Opportunities** - homeowners should be encouraged to implement one or more of the following techniques to manage stormwater on-site:
- C install rain barrels, cisterns, bioretention/rain gardens or dry wells.
 - C stabilize areas of exposed soils with grass or other vegetative cover to prevent contamination of stormwater runoff.
 - C disconnect impervious surfaces to direct stormwater runoff to lawns, depression areas, infiltration trenches, cisterns, drywells or rain gardens to reduce the impact on the rate and amount of runoff.
 - C adopt lawn care methods consistent with the Maryland Cooperative Extension Service for the Prince George's County Department of Environmental Resources (1993).
- 6.3 **Existing Stormwater Best Management Practice (BMP) Retrofits** - the Warehouse Creek Watershed Stormwater Management Master Plan draft identified three existing stormwater management BMPs in the watershed as water quality retrofit opportunities. These include the Giant Food Pond, the State Highway Administration Service Road Pond, and the North Mayo Road State Highway Administration Pond. Opportunities to implement BMP retrofits in these areas should be pursued through capital, developer/property owner, and/or community projects.
- 6.4 **BMPs for Existing Developed Properties** - ten green space areas were identified in the WCWSMMP as potential BMP sites for existing developed properties. These green spaces offer potential candidate sites for implementation of innovative, source control stormwater BMPs such as vegetated swales, infiltration trenches and dry wells, rain barrels, alternative pavement, and bioretention. These environmental and landscape enhancements can provide stormwater management quality and quantity management. These areas are located near the Safeway and Giant food stores, along Mayo Road between Marlboro Road and Ridgeville Road, along MD 2 between Mayo Road and Dental Road, and along Mayo Road in front of Edgewater Elementary School. Opportunities to implement BMPs for Existing Developed Properties in these areas should be pursued through capital, developer/property owner, and/or

community projects.

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- 6.5 **New Development SWM Regulations** - new developed sites and redevelopment areas present another opportunity for improved stormwater management. Development in the Warehouse Creek watershed must comply with all new stormwater management regulations. New development and redevelopment in selected subbasins is encouraged to meet additional requirements to reduce pollutant loads, increase water quality volume storage, and limit imperviousness as recommended in the WCWSMMP draft dated October 3, 2001.

Goal: Encourage preservation of archaeological and historic sites by increasing County resources.

Recommendations:

- 7.1 Strengthen existing County codes and regulations to protect historic and archaeological resources, including scenic and historic roads.
- 7.2 Protect historic sites and structures by adding them to the Maryland Inventory of Historic Properties and the National Register of Historic Places.
- 7.3 Protect archaeological sites by adding them to the Maryland Archaeological Site Survey and the National Register of Historic Places.
- 7.4 Establish incentive programs, including tax deductions or credits, grant and loan funds, and technical assistance for property owners that protect and preserve significant historic and archaeological resources.
- 7.5 Promote and utilize opportunities in the Maryland Heritage Preservation and Tourism Program, including tax incentives and other funding sources, for preservation, renovation, and revitalization. This program includes the identification, protection, and promotion of significant historic and cultural resources that contribute to the development of tourist related functions.

Goal: Establish and implement a Countywide Scenic and Historic Roads Program.

Recommendations:

- 8.1 Encourage the County Executive to implement, as a priority project, the Countywide program recommended by the Scenic and Historic Roads Commission and by the County Council.
- 8.2 Incorporate the regulatory tools necessary to fully implement the scenic and historic roads program, as set forth in Resolution No. 45-97, into the zoning laws, the subdivision laws, the transportation master plan, the road design manual, the landscape manual, the forest conservation ordinance, and other land use laws.