

Transportation

With its prime location near the City of Baltimore and the BWI Airport, the Brooklyn Park area is well served with a system of freeways, major arterial highways, and public transit options. The transportation network serving the area is shown on Map 5.

Existing Road Network

The road network serving the Brooklyn Park planning area consists of major freeways, arterial highways, and collector roads. The Baltimore Beltway (I-695) lies to the south and provides access to major points within the Baltimore metropolitan area. The Beltway can be accessed via Ritchie Highway and by Baltimore-Annapolis Boulevard. The Harbor Tunnel Thruway (I-895) and Glen Burnie Bypass (I-97) provide a north-south connection into Baltimore or Glen Burnie. There is no direct access onto the Thruway or Bypass in Brooklyn Park other than from the Baltimore Beltway.

Principal arterial highways in the Brooklyn Park area are Ritchie Highway (MD 2), Belle Grove Road (MD 170), and Baltimore-Annapolis Boulevard (MD 648). MD 2 and MD 648 provide access between Baltimore City and Glen Burnie and points south. MD 170 provides access between Baltimore, Linthicum, the BWI Airport, and Odenton. Minor arterial roadways in Brooklyn Park include Hammonds Lane, connecting MD 648 and MD 2; and Church Street (formerly MD 171) which connects MD 2 with Pennington Avenue (MD 173) in Baltimore City.

The State Highway Administration (SHA) has completed two major road reconstruction projects in recent years along Ritchie Highway and Church Street in Brooklyn Park. These projects involved improvements to or installation of road surfaces, sidewalks, crosswalks, lighting, landscaping, curbs and gutters. The table below lists transportation projects in Brooklyn Park currently in the State’s *Consolidated Transportation Program (FY2003-08)* or in the County’s *Capital Budget and Program (FY2003)*, or recently completed.

Table 10. Current Transportation Improvement Projects and Planning Studies

Project	Description	Status
<i>State Roads</i>		
MD 695/Baltimore Beltway	Add an additional lane in each direction from I-97 to MD 10 (1.25 miles)	Construction completed.
MD 170/Belle Grove Road	A Neighborhood Conservation Project for urban street reconstruction. Phase I: MD 648 to I-895; Phase II: I-895 to MD 2	Preliminary concept studies are underway for Phase I. Study on hold due to lack of funds.

Project	Description	Status
MD 171/Church Street	An urban street reconstruction project from MD 2 to the Baltimore City line	Construction completed.
<i>County Roads</i>		
West Edgevale Road Reconstruction	Reconstruct deteriorated roadway and sidewalk	Budgeted for design phase.
Old Riverside Road	Reconstruct deteriorated roadway	Budgeted, in construction phase.

Public Transit Network

The Brooklyn Park Planning Area is served by Baltimore’s Central Light Rail Line. The Maryland Transit Administration (MTA) operates the Light Rail service over a 29-mile distance between Hunt Valley north of Baltimore and Glen Burnie in Anne Arundel County. The Light Rail system provides service to downtown Baltimore, BWI Airport, and to connecting MARC and Amtrak service at Baltimore’s Penn and Camden stations. The Light Rail also connects to the existing Baltimore Metro Subway that provides service between downtown Baltimore and Owings Mills. Current weekday ridership along the Central Light Rail Line is over 26,000 trips, and recent projections indicate that ridership may increase by 15 to 20% over the next ten to fifteen years. Seven Light Rail stations are located in Anne Arundel County along B&A Boulevard and Camp Meade Road, with a spur running to the BWI Airport terminal. The Nursery Road and North Linthicum stations are located at the western border of the Brooklyn Park Planning Area along B&A Boulevard. The current number of average weekday boardings at each station is listed below:

- Nursery Road station: 440
- North Linthicum station: 494
- Linthicum station: 380
- Ferndale station: 127
- Cromwell station: 1,497
- BWI Business District: 360
- BWI Terminal 1,109

MTA is planning to double track portions of the Light Rail Line, including a section between the Linthicum and Ferndale stations. This project is currently under construction. MTA is also currently conducting a parking needs assessment to determine which Light Rail stations may require additional parking over the next several years. With regard to long range plans for the Light Rail system, the Baltimore Region Rail System Plan (March 2002) projects an

Map 5

extension of the Light Rail Line from the BWI Airport to the BWI Amtrak Station, Arundel Mills Mall, the Dorsey MARC Station, and eventually to Columbia Town Center in Howard County.

The MTA also provides bus service in the Brooklyn Park area connecting downtown Baltimore and Annapolis. Bus routes primarily serve the Ritchie Highway corridor. MTA local bus routes include Route 14 with service between Annapolis, the Patapsco Light Rail Station, and downtown Baltimore. Additionally, the BWI Business Partnership runs the LINK, a shuttle service in the BWI Airport area.

Proposed Hiker-Biker Network

There are currently no established hiker-biker routes in Brooklyn Park. However, the area is in close proximity to an excellent trail network. The BWI Trail circles the airport along Aviation Boulevard and extends up to the Linthicum Light Rail Station. At Dorsey Road and B&A Boulevard, the BWI Trail connects with the B&A Trail, which extends approximately 13 miles to its terminus at Jonas Green State Park on the Severn River at the U.S. Naval Academy Bridge. Concept plans for the SHA's Neighborhood Conservation Project along Belle Grove Road include an 8-foot wide paved hiker-biker trail along the north side of Belle Grove Road. If implemented, this trail could eventually connect to the BWI Trail in Linthicum as well as to planned trails in Baltimore City.

Anne Arundel County recently adopted a *Pedestrian and Bicycle Master Plan* in 2003. The master plan proposes a regional network of bicycle and pedestrian routes in the County and identifies roads where improvements are needed to accommodate either bicycling or walking or both. Map 6 identifies the roads in the Brooklyn Park Planning Area that are recommended for improvements. The master plan identifies Ritchie Highway and Belle Grove Road in Brooklyn Park as Tier 1 recommended improvements, meaning that these are important road segments that need to be retrofitted in order to better accommodate bicycling and walking. The master plan also identifies Church Street and Baltimore-Annapolis Boulevard as Tier 2 recommended improvements, which indicate routes that are recommended for future improvements as opportunities may arise, but that are of a lower priority than the Tier 1 routes.

Assets and Issues

Brooklyn Park is well served by a network of freeways, arterial highways, and local streets, as well as by the MTA's Light Rail System connecting to points throughout the Baltimore metropolitan area. State and County highway improvement projects have been completed in recent years along Ritchie Highway and Church Street, and streetscape improvements are currently being planned for Belle Grove Road.

Future needs and improvements that have been identified include taking measures to improve traffic safety at specific locations in the Planning Area; a need for additional pedestrian

Map 6

facilities; a desire for a local bike trail to connect to the BWI Trail; and a desire to further improve the appearance of Ritchie Highway. Belle Grove Road has been cited as a high priority to receive needed roadway improvements. Improving pedestrian access to local public facilities and to the nearby Light Rail Stations is also a priority.

Goals and Recommendations

Goal: Maintain and improve the local roadway system to allow for safe and efficient traffic flow.

Recommendations

1. Study alternatives and allocate resources to provide road and/or intersection improvements at the following locations where safety is an issue.
 - Belle Grove Road and 10th Avenue: The angle of this intersection creates a dangerous situation. Determine whether the intersection can be realigned to improve the sight distance.
 - Ritchie Highway and Church Street: Turning movements at this intersection are dangerous, where traffic enters Ritchie Highway from Church Street and from the shopping center on the west side of Ritchie Highway. Determine feasible improvements to improve capacity and safety.
 - Hammonds Lane just west of Ritchie Highway: Provide improvements at the entrance to both the Southview Shopping Center and the Rite Aid parking lot to improve access, traffic flow, and safety in this area.
 - 6th Avenue at Belle Grove Road across from the Belle Grove Elementary School: Poor sight distance is an issue at this intersection. Study this corridor to identify capacity and safety improvements.
 - Baltimore Annapolis Boulevard and Belle Grove Road: Determine whether traffic calming measures are appropriate and can be installed to reduce speeding on Baltimore Annapolis Blvd.
2. Conduct a survey of local roads in the area to identify needed improvements in road infrastructure, including curb and gutter, street lighting, and pavement repairs, to improve traffic and safety conditions. Work with Public Works officials and local civic groups to prioritize infrastructure needs for the purpose of requesting capital funding for the improvements.
3. Continue to participate in and promote the State Highway Administration's planning efforts for improvements to Belle Grove Road. Improvements needed include traffic calming, drainage improvements, resurfacing, lighting, and pedestrian crossings.

Goal: Improve the streetscape appearance along Ritchie Highway to be more compatible with the adjoining neighborhoods.

Recommendations

1. Conduct a conceptual planning study to explore options for creating a more neighborhood friendly streetscape along Ritchie Highway.
 - Study the feasibility of eliminating some of the street junctions to limit access points onto Ritchie Highway from neighborhoods and businesses. Closing off some of the local streets at Ritchie would create opportunities for additional green space and landscaped areas along the corridor.
 - Study the feasibility of improving the alley that runs parallel on the west side of Ritchie between 11th Avenue and 4th Avenue for local traffic use leading to access points onto Ritchie Highway.
2. Request that the State Highway Administration provide increased landscaping and maintenance in the median along Ritchie Highway from Belle Grove Road to Cedar Hill Lane.
3. Provide bus shelters on southbound Ritchie Highway at the Church Street and Hammonds Lane stops.

Goal: Provide sidewalks, crosswalks, and other pedestrian facilities where needed to connect neighborhoods to shopping areas, schools, parks, public transit, and other major destinations and to improve the overall pedestrian access in Brooklyn Park.

Recommendations

1. Conduct a survey of the area to determine where sidewalks or other facilities are needed to improve pedestrian safety and access. Locations which should be given high consideration are as follows:
 - Baltimore Annapolis Boulevard between Hammonds Lane and Nursery Road.
 - Ritchie Highway between Hammonds Lane and Cedar Hill Lane.
 - Walton Avenue between Ritchie Highway and Redmond Street.
 - Hammonds Lane between Mark Road and Baltimore Annapolis Boulevard.
 - Ballman Avenue between Townsend Avenue and Church Street.
 - Marshall Road between Belle Grove Road and 13th Avenue.
2. Improve pedestrian access to the Light Rail Stations.
 - Improve pedestrian crossings at the intersection of MD 170 and Baltimore Annapolis Boulevard.
 - Provide a pedestrian connection from the Pumphrey community to the Nursery

Road Station.

Goal: Improve or expand public transit service within the Brooklyn Park area.

Recommendations

1. Provide shuttle bus service from local public transit stops to the North Linthicum and Nursery Road Light Rail stations.
2. Expand public transit opportunities beyond the Ritchie Highway corridor and provide service from Brooklyn Park to major employment centers in the County, such as those along the BW Parkway corridor.

Goal: Provide linkages to implement the County's adopted Pedestrian and Bicycle Master Plan.

Recommendations

1. Continue planning and design efforts for provision of a hiker-biker trail along Belle Grove Road which would connect to the BWI Trail in Linthicum.
2. In conjunction with the State Highway Administration, provide adequate road shoulders or designated bike lanes to accommodate bicyclists along Ritchie Highway, Baltimore Annapolis Boulevard, and Church Street.

Goal: Provide adequate parking at the area's community facilities and public transit stations.

Recommendations

1. Work with MD Department of Natural Resources staff to determine the feasibility of providing a public parking area for the Patapsco Valley State Park and discourage users from parking along Belle Grove Road.
2. Study options for provision of additional public parking at the 10th Avenue Park (Brooklyn Park #1).
3. Study options for future parking expansion needs at the area Light Rail Stations, and ensure that local land use plans will accommodate future needs.
4. Make provisions for adequate parking at the Chesapeake Arts Center.

Natural and Historic Resources

Existing Conditions

The Brooklyn Park Area contains several significant environmental features. It contains many streams and creeks that feed the Patapsco River and the Chesapeake Bay. The wetlands along the southern shores of the Patapsco provide safe havens for much of the wildlife in the northern portion of the county. Some of these features are shown on Map 7 and are described in the following sections.

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.

Map 7

Map 8

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, non-tidal wetlands, Natural Heritage Areas, and other areas of local significance.

The Critical Area within the Brooklyn Park Small Planning Area follows the shoreline of Curtis Bay, Cabin Branch Creek and the Patapsco River along the northern perimeter of the planning area. Map 8 depicts the Critical Area designations in the Brooklyn Park area. Cabin Branch in the eastern portion of the planning area has a buffer of both RCA and IDA critical area, while the Patapsco River is buffered on its southern shore with IDA, LDA and RCA critical area classification.

Streams and Watersheds

The Brooklyn Park Small Area lies within the Patapsco tidal and non-tidal watersheds. Several area streams feed into the Patapsco, but are unnamed at this date. The Cabin Branch Creek, which flows east-west, flows into Curtis Bay at Cabin Branch.

The estuarine portions of the Patapsco watershed, including the Patapsco River and Curtis Bay, are classified by the Maryland Department of the Environment (MDE) as Use I streams. Use I waters are defined as being suitable for water contact sports; fishing and propagation of fish [excluding trout], other aquatic life and wildlife; and agricultural and industrial water supply. Although classified as Use I waters, during past years the State has periodically posted fish advisories recommending limits on consumption of fish from the Patapsco River and some of its tributaries, due to poor water quality. The Brooklyn Park Area does not have any Use II waters which are suitable for shellfish harvesting.

As part of an effort to characterize the health of the State's streams, the Maryland Department of Natural Resource's Maryland Biological Stream Survey (MBSS) examines stream habitat, insect populations, and fish populations. By comparing measurements made in study streams to conditions measured in pristine reference streams, the overall level of stream health can be determined. Measurements were made in the Patapsco River and Cabin Branch Creek, both of which border the Brooklyn Park Planning Area. Overall, stream habitat ranged from good to very poor. Stream dwelling insect populations were mostly very poor or poor while fish populations were mostly very poor. In general, biological communities in the

Patapsco watershed were depressed which indicates that water quality parameters are impacting biological communities.

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. The Patapsco River is a sub-watershed of the Patapsco Back River Tributary Basin.

One method of stream and shoreline protection that should be encouraged is the provision of vegetated buffers. Vegetated buffers along streams and wetlands are one of the most effective measures of protecting water quality and riparian habitat. Buffers are also important in controlling nutrient and sediment runoff, maintaining stream temperatures, and providing aquatic and wildlife habitat. Opportunities for expanding vegetated buffers should be pursued.

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. These master plans will address the impacts of stormwater runoff, soil erosion and sedimentation, flooding, and pollutant transport. The plans will recommend management alternatives to address current and potential impacts to area waterways. A similar plan for the Severn River watershed was initiated in February 2001, and the remaining watershed plans will be drafted over the next few years.

A capital project is currently underway to restore approximately 200 feet of eroded stream channel below the storm drain outfall at Park Road. The stream channel drains into the Patapsco River to the north. The County also recently completed retrofits to an outfall in the Sunnyfield Estates community which discharges to Cabin Branch Creek. The County has also identified a need for stream restoration in a segment of Cabin Branch Creek in the vicinity of Cedar Hill Lane.

Wetlands and Flood plains

Wetlands

The majority of wetlands in the Brooklyn Park Planning Area are tidal and non-tidal riparian wetlands, according to mapping from the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps. Major tidal wetlands include those at the headwaters of the Patapsco River, and non-tidal wetlands are found along Cabin Branch Creek. 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.

Non-tidal 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 non-tidal wetlands, such as forested wetlands, scrub-shrub wetlands, and wet meadows to name a few. Non-tidal 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 non-tidal 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 non-tidal 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. 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.

Brooklyn Park contains both tidal and non-tidal floodplains along the southern shore of the Patapsco, particularly in the area of the Pumphrey community, and along both sides of Cabin Branch Creek in the eastern portion of the planning area.

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 non-tidal 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.

Steep Slopes

Steep slopes are defined in the County Code as slopes characterized by increased runoff, erosion, and sediment hazards and that (1) have an incline greater than 15% and (2) in the Critical Area have an incline of 15% or greater. 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. A variance is required in order to develop on steep slopes within the Critical Area. Outside of the Critical Area, development may occur within steep slope areas as per the provisions of Article 21 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. In the Brooklyn Park area, steep slopes are found in the Pumphrey area, in the Cedar Hill Lane vicinity, and along stream valleys.

Forest Conservation

Much of the forest cover in the Brooklyn Park planning area is fragmented in small

patches, since the majority of the land area is developed. The only large contiguous forested areas are in the Patapsco Valley State Park and in an area south of Cedar Hill Lane and north of the Baltimore Beltway.

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.

Although both the Critical Area Law and Forest Conservation Act provide for replacement of lost forest land due to development, retention of existing forest and afforestation in areas without forest cover should be encouraged in addition to reforestation. The retention and enhancement of forested areas is important because of the significant air quality, water quality, energy conservation, and wildlife habitat benefits they provide.

Greenways and Protected Lands

Permanently protected land in the Brooklyn Park area consists primarily of State or County-owned parkland. Additional acreage is preserved in dedicated flood plain areas. Much of this area has been zoned as Open Space by the County. The intention of Open Space zoning districts is to preserve open areas for recreational use and to protect persons and property from the hazards of flooding.

In 2002 Anne Arundel County adopted its first countywide *Greenways Master Plan*. The goal of the plan is to create an interconnected network of greenways in the County that protects ecologically valuable lands for present and future generations and provides open space, recreational, and transportation benefits and opportunities for people. The County used five criteria in assessing land as potential greenways: habitat value; size; connections to other land with ecological value; future potential, that is the potential to create greenways where they do not currently exist; and national and countywide trails. The greenway network is a system of connected hubs and corridors. The plan defines a "hub" as an ecologically significant natural area of at least 250 acres with a high ratio of interior versus edge habitat. A "corridor" is a natural area at least 200 feet wide. Portions of two segments in the greenway network lie within

the Brooklyn Park area: the Cabin Branch Creek segment and the Patapsco Valley 1 segment.

In all, the entire greenway network covers over 70,000 acres of land. Approximately 50 percent of the network is currently protected, either as a publicly-owned land, a private conservation land, land that is in the County's Open Space zoning district, or land protected under an agricultural or environmental easement. In the Brooklyn Park Area, as seen on Map 9, the Patapsco Valley 1 greenway segment is protected as State-owned land in the Patapsco Valley State Park. Most of the Cabin Branch Creek greenway segment in the Planning Area is also protected as floodplain area which is zoned Open Space. The County will continue to work with other public agencies, land trusts, and private owners to preserve the remaining segments of the greenway network.

Brownfield Sites

With its proximity to the ports and industries of the City of Baltimore, many neighborhoods within Brooklyn Park are near commercial and industrial sites. Some of these sites continue to produce, refine and export goods while others have been abandoned or have been adopted for other uses. To ensure that chemical and petroleum products are not discharged into the surrounding ground, land or water the Environmental Protection Agency (EPA) requires that operating industries working with hazardous materials are registered with the local State authority, in this case Maryland Department of the Environment (MDE).

Abandoned or underutilized commercial and industrial sites are referred to as Brownfields. These sites which are usually located in urban areas are either contaminated or perceived to be contaminated. These sites are eligible for State monies to aid in the clean up of hazardous materials through the MDE Voluntary Cleanup and Brownsfields Revitalization Incentive Program. This program helps to convert contaminated and vacant sites into usable areas such as warehouses, apartments and other uses.

In 1980, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was passed by congress. This EPA program taxes all chemical and petroleum industries and provides broad Federal authority to respond to the release of or threat of release of hazardous substances that may endanger public health. Hazardous substances are defined as having the potential to contribute to serious illness or having qualities of ignitability, corrosivity, reactivity, and toxicity. The Curtis Bay Coast Guard Yard is the closest Federal Superfund site to the Brooklyn Park planning area. Samples collected at the Coast Guard show a presence of semi-volatile organic compounds, metals, polychlorinated biphenyls, pesticides and dioxin. Many of the original sources of these pollutants have been removed, but the contaminated soil and sediment could be a threat to Curtis Creek. The site is pending a decision from the EPA as to whether it will be placed on the National Priorities List of most hazardous sites.

As part of the Smart Growth Initiatives, the Maryland Department of the Environment (MDE) instituted the Environmental Restoration and Redevelopment Program (ERRP). This

program works like the Federal Superfund Program in that it investigates the clean up of

Map 9

abandoned and uncontrolled hazardous waste sites to protect the environment and public health. At present there are nine sites on the State List that lie within Anne Arundel County. There are two sites which lie within or just outside the Brooklyn Park Planning Area. A petroleum company, located on Pennington Avenue in Baltimore City at the city line, has been cited for ground contamination due to buried tanks and improper dumping. The site was closed by the State for petroleum storage in 1997 and has been monitored ever since. As part of the remediation, the property owner has installed a total of nine on-site monitoring wells which are reviewed by the State on a quarterly basis. The second site, which lies within the Brooklyn Park area, is the Snow Hill Lane Site, located in the eastern portion of the planning area, north of I-695, and east of Mount Calvary Cemetery. This site has been cited for soil contamination as the result of illegally dumping damaged and empty 55 gallon drums. Testing revealed increased levels of zinc, lead, and chromium in the soils. In 1991 over 700 drums and debris were removed from the site and the 86-acre site was fenced. In cooperation with the EPA, MDE is monitoring the site to assure that the site remains stable and no future contamination occurs.

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. Those sites found in the Brooklyn Park Small Planning Area are listed in the table below and are shown on Map 10. 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.

Map 10

In 1851, the City of Brooklyn was laid out by the Patapsco Company. It was arranged in a traditional town grid plan with a public square. In 1866, Henry Ballman and several of his neighbors constructed a continuation of the County Road running east which is now Ritchie Highway. One important historic structure within Brooklyn Park that is still standing is Sunnyfields, built circa 1820, which is on the National Register. The County offers protection to these historic sites through Federal and State regulations, as well as County legislation.

Table 11. Historic Resources in Brooklyn Park Small Planning Area

Site Number	Name	Street Location
AA0112	Toll Keeper’s House	B&A Boulevard
AA0116*	Sunnyfields	825 Hammonds Lane
AA0117	Jackson’s Chance (site)	East Ordnance Road
AA0766	Patapsco River Bridge (site)	B&A Boulevard
AA0983	Ballman/Gischel House (site)	Ballman Avenue
AA1042	Hammonds Lane House (site)	Hammonds Lane
AA1069	North Linthicum B&A Railroad Trestle (site)	over B&A Boulevard
AA1086	Masonic Lodge	Cedar Hill Lane
AA1087	Williams Cemetary	Cedar Hill Lane

* Listed in the National Register of Historic Places

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.

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
 - a. Implementation of measures for (a) preservation, (b) protection, and (c) recognition based on the classification of the road.

There are no roads within the Brooklyn Park Planning Area with a Scenic and Historic Road designation.

Assets and Issues

The Brooklyn Park Planning Area is a fairly dense suburban community, and as such does not contain many large natural areas. It is, however, bordered by the Patapsco Valley State Park which is an important natural resource. The quality of the Patapsco River and other local streams in the watershed has become degraded over many years. Most of the Brooklyn Park Area was developed prior to the creation and adoption of the more stringent stormwater management and waste management regulations that are in place today, and as a result area streams have been degraded by siltation, erosion, and pollution. Improvement of the local waterways through improved stormwater management strategies and retrofits to aging infrastructure is an important goal in the area. Local citizens would like to be able to safely use the Patapsco River for fishing, swimming, boating, and enjoying scenic views. Given that the Planning Area is largely developed, there is also a need to create opportunities for increasing and preserving open green space in local communities using mechanisms such as conservation easements.

Goals and Recommendations

Goal: Improve the water quality and overall health of local streams and wetlands in the Patapsco River watershed.

Recommendations

1. Prepare a watershed management plan for the Patapsco tidal and non-tidal watersheds that identifies specific actions needed to improve water quality in area streams.
2. Provide funding as needed for stream restoration along Cabin Branch Creek in the Cedar Hill area.
3. Identify locations where stream restoration, sediment and erosion control, storm drain retrofits, or other improvements are needed to decrease impacts from stormwater runoff, and develop a feasible and proactive schedule for providing these retrofits. Pursue incentive-based approaches to encourage property owners to retrofit their properties with up-to-date stormwater management facilities.
4. Establish a regulatory mechanism to protect non-tidal stream buffers by requiring a minimum width of undisturbed riparian buffer along all intermittent and perennial streams.
5. Identify any potential wetland mitigation sites in the area and promote their availability for mitigation projects.
6. Determine whether improvements to stormwater management can be made in the Lynnbrook community to reduce erosion problems in local drainage channels.
7. Identify large parking lots in the Planning Area that are underutilized, and work with property owners using voluntary mechanisms to encourage replacement of excessive impervious areas with landscaping or green areas.
8. Provide drainage infrastructure as needed where feasible to control runoff from the sand and gravel operation on Baltimore Annapolis Boulevard.

Goal: Maintain a system of open spaces, natural areas, and greenways that is well managed and protected.

Recommendations

1. Establish an ecological greenway network in the area to protect important natural resource areas.

2. Use available mechanisms to preserve a minimum 200-foot wide corridor along the Cabin Branch Creek greenway segment, as recommended in the County's *Greenways Master Plan*.
3. Identify potential reforestation sites, especially in riparian buffers along the Patapsco River and Cabin Branch Creek, and target reforestation funds to those areas.

Goal: Preserve significant historical resources in the Brooklyn Park Area.

Recommendations

1. Conduct a study to determine the historical significance of the Pumphrey community. Determine whether there are individual sites that can be designated on the Maryland Inventory of Historic Properties or whether portions of the community can be designated as a historic district.

Goal: Promote environmental stewardship through education, volunteer programs, and community partnerships.

Recommendations

1. Foster community education about environmental issues through cooperation with local citizen groups, public schools, and park and recreation programs in the Brooklyn Park Area.
2. Organize environmental clean up projects in the area and involve the local Teen Club.