



ENVIRONMENTAL RESOURCES PLAN

8.1 OVERVIEW AND RECOMMENDATIONS

A major goal of this plan is to protect the natural resources and environmental qualities which are important to the residents of North Bethesda-Garrett Park. Environmental concerns within the planning area include loss of mature woodlands, degradation of stream systems, air pollution and roadway noise.

The environmental resources of North Bethesda-Garrett Park are recognized in the land use recommendations of this Plan on a site-by-site basis. The review of specific development projects in the planning area should include consideration of this Plan's recommendations, and of the guidelines in the Planning Board's "Environmental Management of Development in Montgomery County, Maryland."

The Environmental Resources chapter discusses issues and makes recommendations concerning tree preservation, greenways, "green corridors," air quality, noise, stormwater management, billboards, and water and sewer service. A tree inventory is included as an appendix to this Plan.

A. ENVIRONMENTAL RESOURCE OBJECTIVES

- Protect and enhance the environmental resources of North Bethesda-Garrett Park.

B. PLAN RECOMMENDATIONS

Tree Preservation

- Protect woodlands, green space, steep slopes and wetlands through land use recommendations and development regulations.
- Support the adoption of a County-wide comprehensive tree program as required by State law that addresses tree preservation, maintenance, and reforestation.
- Retain mature trees as buffers in new residential development to create visual separation from major roads.
- Retain the maximum number of specimen trees on sites where they occur.
- Provide additional trees along existing streets, in median strips, and in parking lots whenever feasible.



- Require that every new road recommended by this Plan have a streetscape plan with an emphasis on tree planting.
- Require commercial and residential developers to plant more trees, particularly native shade trees, consistent with County tree legislation.
- Support retention of much of the existing open space resources of North Bethesda-Garrett Park, both public and private.

Greenways

- Preserve a significant portion of the Montrose Parkway right-of-way as a greenway.

Green Corridors

- Extend the County's "Green Corridors Policy" along major roadways in the planning area.

Billboards

- Support necessary action to have existing billboards removed or phased out expeditiously in accordance with the 1986 billboard law.

Air Quality

- Endorse the concept of transit shuttle systems, which will reduce short trips and diminish traffic congestion and vehicle emissions.
- Improve air quality by encouraging higher density development near transit stations and thereby placing less emphasis on the need to use the private automobile.

Noise

- Provide noise attenuation walls when the I-270 spurs are widened at locations where existing residences will be subjected to high noise levels.
- Include noise attenuation measures in the design of the proposed transitway between Rock Spring Park and Grosvenor and in the design of the Montrose Parkway.

Stormwater Management

- Endorse corrective measures to reduce flooding and to improve stream quality by retrofitting developed sites.
- Implement existing stormwater management regulations through the County Department of Environmental Protection to assure that existing problems are addressed for new development and redevelopment.
- Implement a stream water quality monitoring program through local government and citizen participation.

- Support maintenance and enhancement of existing stormwater management facilities.

Water and Sewer

- Design and build any new sewer or water lines to protect the area's natural features.

8.2 TREE PRESERVATION

Since 1963, the acreage of woodlands in North Bethesda has declined by approximately 30 percent. Much of the remaining mature forest in the planning area is found in stream valleys and the Montrose Parkway right-of-way. These assets are complemented by the wooded areas of large properties such as Parklawn Cemetery, the Georgetown Preparatory School and the Society of American Foresters. Mature subdivisions also make a substantial contribution to the tree resources of North Bethesda. The Town of Garrett Park leads by example and illustrates how community interest, an arboretum philosophy that encourages diversity, and good management practices can maintain a tree canopy cover that approaches 70 percent. Street trees are also a significant asset. Boulevard trees, such as the pin oaks and Bradford pears on Executive Boulevard and Democracy Boulevard, provide inspiration for what can be achieved. Tree preservation is important in retaining the character of the planning area, as well as providing a wide variety of environmental benefits, including reduced erosion, reduced flooding, shade to moderate temperature extremes, cover for wildlife and visual relief from the urban landscape.

On July 1, 1992, new legislation mandated by the State of Maryland and passed by the County requiring tree preservation and reforestation will take effect. The law will require developers to compensate for trees removed during construction by placing new trees on site or, if there is insufficient space on site, at designated off-site locations. Appropriate off-site locations for reforestation may include publicly owned land, such as stream valleys, land owned by homeowners' associations, and other open space. Adopt-a-park areas may also be appropriate locations for implementation of this program.

Many of the remaining vacant and redevelopable parcels in the planning area contain mature trees worthy of preservation. (See Appendix G, "Tree Inventory," in the Plan Appendices.) Under the provisions of the County law, these trees must be considered as tree-save candidates. Lots, roadways and utility easements should be sited to minimize unnecessary loss of healthy trees. In instances where replanting on the same site will not compensate for tree removal, and where an off-site location is unavailable, the County law requires payment of fees to the County Tree Fund. These funds will be dispensed by the County to implement tree planting when appropriate sites are located.

The Maryland Department of Natural Resources (DNR) also sponsors a "TREE-MENDOUS Tree Planting Program." This program sells small trees to be planted by citizens on public open space. The Forest, Park and Wildlife Service of DNR distributes trees to interested citizens and community groups.



8.3 GREENWAYS

Greenways are corridors of open space that link people, parks, and natural areas. The opportunity exists in North Bethesda-Garrett Park to delineate a network of such corridors. The proposed system includes bikeways and sidewalks and links natural areas, residential areas, commercial and employment centers, and public facilities. The system builds upon the stream valley park system, the recommendations of the 1978 Master Plan of Bikeways, existing streets, and existing rights-of-way to provide an interconnected system of greenways and trails within the planning area and connecting to a regional system.

The Rock Creek hiker-biker trail winds through the Rock Creek Regional Park on the eastern side of the planning area, and portions of the trail are within the planning area boundaries. The Waverly-Schulykill connector was recently completed, providing a trail access from the Town of Garrett Park and the Rock Creek hiker-biker trail. The Waverly-Schulykill connector also provides access to the MARC train station in Garrett Park.

The Montrose Parkway right-of-way is a linear greenway that connects a number of County parks, namely the Cabin John, Old Farm and Rock Creek stream valleys parks, as well as Matthew Henson State Park. This linear greenway would be a substantial addition to the County's open space. This Plan recommends that a significant portion of the right-of-way be preserved as a greenway.

The greenways system proposed by this Plan, which includes both bikeway and sidewalk recommendations, can be found in the Transportation chapter.

8.4 GREEN CORRIDORS

To ensure the identity and integrity of residential areas along major roadways, and to strengthen community identity by creating attractive transportation corridors, the Plan proposes a Green Corridors policy that addresses the visual effects of roadways and abutting properties. The Green Corridors policy is recommended to protect and enhance the residential character of the Planning Area. The policy applies to the following roadways, which differ widely from one another in character:

Old Georgetown Road	Twinbrook Parkway
Rockville Pike	Parklawn Road
Randolph Road	Executive Boulevard
Montrose Road	Strathmore Avenue
Democracy Boulevard	Edson Lane
Tuckerman Lane	Grosvenor Lane

The following is the Green Corridors policy for the North Bethesda-Garrett Park Planning Area.

1. Maintain and enhance planting of vegetation along roadsides and in medians of major highway corridors.

Design guidelines include: placing a landscaped buffer between the curb and relocated sidewalks, placing trees in medians and along curbs, screening of front yard parking, and relocating utility poles to allow for optimum tree planting and sidewalks. Visibility for highway safety must also be considered. Protection and enhancement projects will require coordination between the Maryland State Highway Administration and the Montgomery County Department of Transportation, as well as local property owners and civic associations.
2. The Board of Appeals should require full adherence to the following guidelines for special exceptions in Green Corridors.
 - Require screening for parking, even when less than six parking spaces are involved.
 - Retain green space, particularly when it provides trees that screen buildings.
 - Screen existing buildings with plant material.
 - Additions to existing buildings should be compatible with the existing residential architecture and adjoining neighborhoods. Visibility of buildings to residents of nearby communities should be taken into account. Additions should be as unobtrusive as possible, and should be landscaped to provide screening.

8.5 BILLBOARDS

In 1986 the District Council enacted legislation that prohibits off-site commercial advertising within the County. Zoning Ordinance Text Amendment 86007 was enacted by the District Council on July 29, 1986.

Existing billboards in the planning area—for example, on Randolph Road—as well as in the rest of the County, are all illegal under the present Zoning Ordinance. These billboards pose significant urban design and enforcement problems. They violate Master Plan and Sector Plan objectives for attractive design and appropriate signage to identify businesses or to provide necessary directions for motorists. Billboards are a form of visual pollution; they are incompatible with the existing or planned character of development in Montgomery County, especially within highly developed down-County areas such as North Bethesda-Garrett Park. This Plan recommends enforcement of the 1986 billboard law to have existing billboards removed or phased out expeditiously.



8.6 AIR QUALITY

The primary air pollution problems in this planning area are ozone and carbon monoxide. High ozone levels occur as a region-wide problem in the metropolitan Washington, D.C., area. Measures to control the production of this pollutant will, of necessity, have to be implemented on a regional or national scale.

Carbon monoxide may be found in high concentrations at major roadway intersections where there is significant traffic congestion. One such intersection is at Rockville Pike and Randolph Road. However, an air quality monitoring station set up by the State of Maryland Air Management Administration at this intersection has shown only one violation of the federal air quality standards for carbon monoxide since the start of the monitoring in January 1983. The violation occurred in 1983. The conclusion can be drawn that tighter regional emission standards appear to be compensating for increased traffic volumes.

This Plan's land use and zoning recommendations aim to encourage higher density development near transit stations and place less emphasis on the need to use the private automobile, with the objective of improving air quality.

8.7 NOISE

Roadway traffic, railroad traffic, and Metrorail—above or at ground level—are the major sources of noise in the planning area. Noise levels in residential areas adjacent to major roadways such as I-495, I-270, Montrose Road, and Old Georgetown Road may be very intrusive at certain times. Unfortunately, in developed areas there are few noise mitigation options available. Most of these options require the acoustical treatment of existing buildings for interior reduction of noise levels, or the use of physical barriers.

Capital Beltway (I-495) and I-270 noise is particularly intrusive because of large traffic volumes, greater night-time traffic activity, and higher percentages of heavy truck traffic. As part of the State Highway Administration project to widen I-270, noise barriers have been constructed between Tuckerman Lane and Old Stage Road to protect existing houses affected by traffic noise.

This Plan endorses the ongoing effort by the State Highway Administration and residents adjacent to other sections of freeway to work out a cooperative funding mechanism to provide additional noise barriers.

Development of any undeveloped or redevelopable land adjacent to major highways should use noise-compatible land use and site design and other mitigation measures recommended in the "Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development."

Substantial noise mitigation measures have been implemented at the Grosvenor Mews townhouse subdivision, which is bounded by I-270, Rockville Pike and Grosvenor Lane. These measures include berms and noise attenuation walls.

The CSX/MARC Railroad line is a noise source for residences adjacent to the railroad right-of-way. Noise attenuation measures, such as low walls, may be needed to minimize noise for adjacent residences. The Department of Housing and Urban Development recommends a minimum 100-foot setback for residences from rail lines for vibration and noise purposes.

The Metro line near the Grosvenor station has created noise problems for people living nearby for several years. The high noise levels have been generated from various sources associated with the operation of the Metro line, including “flat” spots on train wheels, vibration of the rails on the aerial structure south of the Grosvenor station, train horns, and high train speeds.

WMATA has implemented measures to correct some of these noise problems, including improved wheel maintenance, the installation of noise attenuation walls, and nighttime speed restrictions. Flexible rail fasteners have been installed on the tracks of the aerial structure in order to muffle resonance. Montgomery County Department of Environmental Protection (MCDEP) Environmental Planning and Monitoring, Noise Control Division closely monitors WMATA’s noise levels.

Noise attenuation walls should be provided at locations where existing residences will be subjected to high noise levels when the I-270 spurs are widened. Noise attenuation measures should also be included in the design of the proposed transitway between Rock Spring Park and Grosvenor and in the design of the Montrose Parkway.

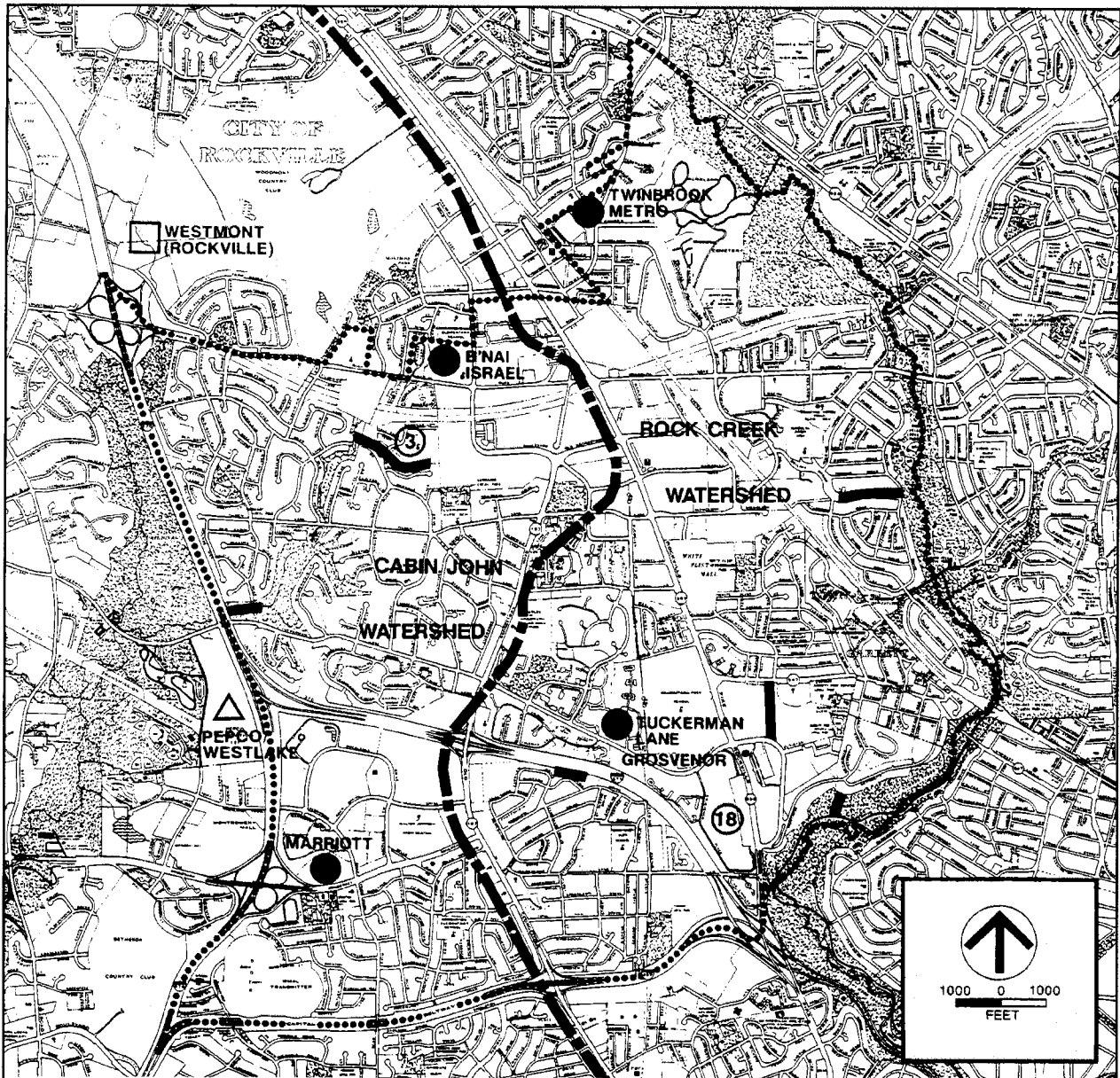
8.8 STORMWATER MANAGEMENT

The North Bethesda-Garrett Park planning area lies within the Rock Creek and Cabin John drainage basins. The location of existing regional stormwater management facilities in the planning area is shown in Figure 73.

Most of the planning area is developed, and much of this development occurred before flooding hazards were documented or controlled. Land surface that was paved for roads, parking lots and driveways is now impervious and therefore not available for water percolation. Instead, precipitation travels rapidly as surface flow, increasing the frequency and magnitude of stream flooding. The clearing of woodlands has further aggravated this situation.

Within the planning area, the main stems of Cabin John Creek and Rock Creek and some of the Old Farm Branch are within parkland. The preservation of natural stream valleys in parkland reduces the negative effects of urbanization. However, park designation does not completely preclude stream channel erosion, water quality degradation and the habitat destruction associated with storm drain outfalls, concrete or piped channels, sanitary sewer crossings, unsightly litter, and stream flow alteration.

Severe stream erosion problems occur in a tributary to the Old Farm Creek and in another tributary to Rock Creek between Strathmore and Weymouth. Streambank erosion and/or construction related sedimentation has also contributed to siltation of the ponds at Grosvenor. The Montgomery County Department of Environmental Protection (MCDEP) will be conducting a stream inventory in the Cabin John and Rock Creek watersheds in order to rectify such stream



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- Existing Stormwater Management Facility/Structure
- △ Proposed Stormwater Management Facility/Structure
- Stormwater Management Facility/Structure in Design Phase
- Area of Accelerated Stream Erosion
- ③ Number of Dwelling Units in 100-Year Floodplain
- Watershed

erosion problems. Depending upon the location and nature of streambank erosion problems, corrective measures may also be undertaken by the Montgomery County Department of Transportation (MCDOT), the M-NCPPC Department of Parks, individual homeowners' associations and developers of new construction projects.

The water quality of streams in the planning area is no longer monitored on a regular basis. A MCDEP County-wide stream monitoring program was discontinued in 1980 due to budgetary constraints.

This Plan supports the reinstatement of the MCDEP water quality monitoring program. This program is necessary to assure the existing stormwater management programs are effective. In conjunction with the MCDEP monitoring program, a citizen stream monitoring program should be established to augment local government efforts.

A general strategy for stormwater management in the Rock Creek and Cabin John watersheds is contained in the following:

Stormwater & Water Quality Management Study for Rock Creek
(CH2M Hill, 1977)

Cabin John, Rock Run and Little Falls Watershed Study
(CH2M Hill, 1982)

Approved and Adopted Functional Master Plan for Conservation and Management,
Rock Creek Basin, M-NCPPC, 1980

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This Plan supports the recommendations contained in the Rock Creek Functional Plan and the implementation of existing state and local stormwater management regulations. As required by state and local regulations stormwater management techniques to be used in the planning area should be considered in accordance with the following hierarchy:

1. Infiltration
2. Flow & Pollutant Attenuation
3. Retention
4. Detention

This Plan also supports continued maintenance and enhancement of existing stormwater management facilities and the efforts of MCDEP to inventory and prioritize those areas in the watershed in need of remedial measures.



8.9 WATER AND SEWER

The North Bethesda-Garrett Park planning area lies within the Montgomery Main Zone. The planning area is served by the Potomac Water Filtration Plant.

WSSC has determined that the existing water transmission system will be adequate for the Montgomery Main Zone until approximately the year 2000. The WSSC is currently preparing a facility plan to address the adequacy of the existing water distribution system to serve the Montgomery Main, as well as other water pressure zones, beyond the year 2000. The first phase of the facility plan will address specific siting and other planning concerns, some of which may apply to the North Bethesda-Garrett Park area. The WSSC facility plan is not yet available for review.

A WSSC construction easement exists on the northern edge of the I-270 east spur. This Plan recommends that any future WSSC project to increase transmission capacity from the Potomac Water Filtration Plant to the Montgomery County Main Zone, using this easement, preserve the existing woodlands by all means possible, including tunneling.

The planning area lies within two sewer service basins, Cabin John and Rock Creek. Evaluation of sewerage capacity is ongoing. Any further improvements will be recommended as part of WSSC's Strategic Sewerage Plan and Capital Improvements Program.