Countywide Park Trails
Plan
July 1993

THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION
Montgomery County Department of Park & Planning
8787 Georgia Avenue, Silver Spring, Maryland 20910
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

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2) The acquisition, development, operation, and maintenance of a public park system.

3) In Prince George's County only, the operation of the entire County public recreation program.

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COUNTYWIDE PARK TRAILS PLAN

Prepared by

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Montgomery County Department of Park and Planning
8787 Georgia Avenue
Silver Spring, Maryland 20910

July 1998
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
</tr>
<tr>
<td>What This Plan IS—And What This Plan IS NOT</td>
<td>1</td>
</tr>
<tr>
<td>Terminology</td>
<td>2</td>
</tr>
<tr>
<td>Planning Process and Public Involvement</td>
<td>2</td>
</tr>
<tr>
<td>Relationship to the General Plan Refinement of the Goals and Objectives for Montgomery County</td>
<td>3</td>
</tr>
<tr>
<td>Relation to Regional Trail Network</td>
<td>3</td>
</tr>
<tr>
<td>Plan Concepts</td>
<td>7</td>
</tr>
<tr>
<td>Guiding Principles</td>
<td>7</td>
</tr>
<tr>
<td>Trail Destinations</td>
<td>8</td>
</tr>
<tr>
<td>Trail Corridors</td>
<td>10</td>
</tr>
<tr>
<td>Natural Surface Trail Plan</td>
<td>12</td>
</tr>
<tr>
<td>Hard Surface Trail Plan</td>
<td>14</td>
</tr>
<tr>
<td>Non-park Trail Connectors</td>
<td>16</td>
</tr>
<tr>
<td>Trail Recommendations by Corridor</td>
<td>17</td>
</tr>
<tr>
<td>Overview</td>
<td>17</td>
</tr>
<tr>
<td>Plan Analysis</td>
<td>17</td>
</tr>
<tr>
<td>Trail Recommendations By Corridor</td>
<td>18</td>
</tr>
<tr>
<td>Corridor 1: Patuxent River</td>
<td>18</td>
</tr>
<tr>
<td>Corridor 2: Seneca Greenway</td>
<td>20</td>
</tr>
<tr>
<td>Corridor 3: Northwest Branch</td>
<td>23</td>
</tr>
<tr>
<td>Corridor 4: C&amp;O Canal</td>
<td>24</td>
</tr>
<tr>
<td>Corridor 5: Rock Creek</td>
<td>28</td>
</tr>
<tr>
<td>Corridor 6: Capital Crescent</td>
<td>31</td>
</tr>
<tr>
<td>Corridor 7: Eastern County</td>
<td>32</td>
</tr>
<tr>
<td>Corridor 8: Upcounty</td>
<td>40</td>
</tr>
<tr>
<td>Bikeways and Other Non-Park Trail Connectors</td>
<td>43</td>
</tr>
<tr>
<td>Bikeways</td>
<td>43</td>
</tr>
<tr>
<td>I-270 Corridor Bikeway</td>
<td>43</td>
</tr>
<tr>
<td>Bikeway Planning</td>
<td>44</td>
</tr>
<tr>
<td>Public Use Easements</td>
<td>47</td>
</tr>
<tr>
<td>Utility Rights-of-Way</td>
<td>47</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>47</td>
</tr>
<tr>
<td>Implementation Recommendations</td>
<td>49</td>
</tr>
<tr>
<td>Ten-Year Trail Completion Priorities</td>
<td>49</td>
</tr>
<tr>
<td>Trail Priority Criteria</td>
<td>49</td>
</tr>
<tr>
<td>Funding</td>
<td>51</td>
</tr>
</tbody>
</table>
Table of Contents (Continued)

Trail Implementation Guide ........................................ 51
Improving High-Volume Trail-Road Intersections ..................... 53
Trail Mapping .......................................................... 53

Technical Appendix
The Technical Appendix is published as a separate document and includes the following:
  Chronology of Public Involvement Activities
  Park Trail Use as Documented by the 1997 Park, Recreation, and Open Space Survey for Montgomery County
  Guiding Principles Related to Natural Resource Protection
  Trail Alternatives Evaluated in Vicinity of Matthew Henson Park

List of Figures

1. Plan Process .......................................................... 3
2. Regional Trails Map .................................................. 6
3. Regional/Recreational Park Destinations .......................... 9
4. Countywide Trail Corridors ........................................ 11
5. Natural Surface Trail Plan: Connectivity to Potomac and Patuxent Rivers .. 13
6. Hard Surface Trail Plan: Interconnected Upcounty & Downcounty Trails .... 15
7. Countywide Park Trail Concept: Patuxent River Corridor ............ 19
8. Natural Surface Trail Concept: Seneca Greenway Corridor .......... 21
9. Countywide Park Trail Concept: Northwest Branch Corridor ........ 25
10. Countywide Park Trail Concept: C&O Canal Corridor ............... 27
11. Countywide Park Trail Concept: Rock Creek Corridor .............. 29
12. Countywide Park Trail Concept: Capital Crescent Corridor ......... 33
13. Countywide Park Trail Concept: Eastern County Corridor .......... 35
14. Rock Creek-Sligo Creek Hard Surface Trail Connections ............ 39
15. Countywide Park Trail Concept: Upcounty Corridor ............... 41
16. I-270 Corridor Bikeway Concept .................................. 45

List of Tables

1. General Plan Refinement Goals, Objectives & Strategies Related to Park Trails ........ 4
2. Trail Corridors and Related Plan Objectives ........................ 10
4. Trail Priority Criteria ................................................ 52
5. Recommended Priorities for Safety Improvements at High Traffic Volume Trail-Road Intersections ............. 54
6. Plan Implementation Recommendations ........................... 55
Introduction

The Countywide Park Trails Plan proposes a 250-mile interconnected system of hard surface and natural surface trails of countywide significance. Although the Plan focuses on trails within the more than 25,000 acres of parkland owned by The Maryland-National Capital Park and Planning Commission (M-NCPPO), some trails in parkland owned by Federal, State, and municipal agencies have also been included.

The Plan also addresses the importance of facilities such as bikepaths that are located outside of parkland but provide safe, attractive access to park trails.

History

Park trail planning in Montgomery County has a long tradition beginning in the 1930's with the planning and development of Rock Creek and Sligo Creek stream valley parks.

Over the years, trail planning has continued as master plans for different parts of the county and different parks have been completed. A Planning Guide to Trails was done in 1991 but focused primarily on trails within county parks and left the issue of connecting to trails and bikeways outside the park system largely unaddressed. A Staff Draft Update to this Guide was distributed in 1995 but the Update was never finalized.

The absence of an updated county-wide concept for Trails has made it difficult to understand how a particular trail proposal relates to an overall county system and has made prioritizing funding for trails difficult.

In the summer of 1996, the Montgomery County Planning Board recognized the need to comprehensively examine all these planning efforts and establish from them an integrated, Countywide vision for park trails. The Planning Board directed staff to prepare a plan of trails of county-wide significance. This Plan is the result of that directive and has been reviewed and approved by The Board.

What This Plan IS—And What This Plan IS NOT

This Plan IS a concept plan that:

- Proposes an overall vision for Countywide Park Trails.
- Identifies potential trail and bikeway linkages between key destinations.
- Relies on approved and adopted master plans as a starting point.
- Proposes routes and corridors that are of Countywide significance.
- Focuses on hard surface and natural surface trails.

This Plan IS NOT:

- A detailed plan of trail alignments that have been field checked and approved by all involved.
This level of analysis will occur sometime after the concept plan has been approved. Potential connections must be subjected to an analysis of alternatives and appropriate environmental and engineering feasibility analysis.

- A trail management plan which designates which user groups should use which trails.

This Plan focuses on two major types of trails—hard surface and natural surface—but makes no attempt to determine what user groups should be allowed or prohibited on these trails. This Plan recommends that the Park and Planning Department develop a comprehensive strategy for determining trail use in conjunction with the preparation of specific park master plans.

- An acquisition plan.

This Plan does recommend some trail corridors in areas not owned by the public. Determining the appropriate location of a trail and whether easements could be used in lieu of purchase should be made in the context of subsequent trail studies and future master plans.

- A comprehensive map of all the recreational trails and bikeways in Montgomery County.

This Plan focuses on trails of countywide significance. There are many trails (such as public use easements obtained for equestrian enjoyment) and bikeways which exist or are planned which are not reflected in this Plan. The intent of this Plan to reflect “big picture” concepts and to rely on local master plans and park master plans to show the complete local network.

- Everyone’s ideal plan.

Preparation of this Plan included numerous public meetings and workshops. Although there seems to be general agreement that a comprehensive concept plan like this is needed, individual comments vary as to what this Plan should include and propose. The concepts proposed in this Plan are intended to strike a balance among all viewpoints heard during the Plan process.

Terminology

In terms of park trails, this Plan uses the terms “hard surface” and “natural surface” trails rather than “paved” and “unpaved.” Hard surface trails may include paved surfaces but they may also be any firm and stable surface capable of supporting most on-road or hybrid bicycles (the C&O Canal towpath, for example). Natural surface trails are typically narrow (2-4 feet wide) dirt trails. Surfaces may include wood chips or stones. These trails generally involve no major tree cutting, but may involve water bars, stairs, boardwalk, or erosion control measures, where necessary.

In terms of non-park trail connectors, this Plan identifies bikeways, public use easements, utility rights-of-way, and sidewalks as ways of providing safe and attractive access to park trail corridors.

Planning Process and Public Involvement

The Countywide Park Trails Plan planning process is shown in Figure 1.

Public input has guided the development of the trail concepts contained in this draft. A complete list of meetings and other activities is included in the Technical Appendix.
Plan Process

Plan Process Initiated
(August 1996)

Staff Draft Plan
(September 1997)

Public Hearing Draft Plan
(December 1997)

Planning Board Public Hearing
(January 1998)

Planning Board Worksessions
(February - July 1998)

Planning Board Approval
(July 1998)

Relation to Regional Trail Network

The trail network does not stop at the County borders. Many of the trails described in this Plan connect to similar facilities outside Montgomery County.

Using these existing and proposed connections, hikers, cyclists, and other trail users can reach trails and bikeways of regional and even national significance. This Plan seeks to reinforce the county’s links to the regional trail system. Major regional trails are shown in Figure 2. Descriptions of the regional trails and how they link to Montgomery County trails is discussed below.

- C&O Canal Trail—One of the oldest trails in the region, the C&O Canal Trail runs from Georgetown to Cumberland, Maryland. The canal corridor is managed by the National Park Service as the Chesapeake and Ohio Canal National Historical Park. The hard-packed soil of the towpath allows for use by most bicycles as well as hikers and other uses. Montgomery County residents can access the trail at several spots including Great Falls Tavern Visitor’s Center Park. The Capital Crescent trail parallels the towpath for 2.5 miles between the Key Bridge and Fletcher’s Boathouse with many connections in between. However, north and east of Fletcher’s Boathouse, connections between trails in Montgomery County and the towpath are more difficult and less direct.

- Mount Vernon Trail—The Mount Vernon Trail runs from Theodore Roosevelt Island to Mount Vernon along the west bank of the Potomac. Connections to Montgomery County include the Capital Crescent and Rock Creek Trails via the Key Bridge and Memorial Bridge respectively.

Relationship to the General Plan Refinement of the Goals and Objectives for Montgomery County

As with most planning efforts in Montgomery County, this Master Plan relies on the County’s General Plan for guidance. Originally adopted in 1964 and amended in 1993, the General Plan establishes the vision for the County’s future, taking into account land use, housing, employment, transportation, community facilities, and the environment. A summary of the General Plan Refinement Goals related to this Plan is included in Table 1.
Table 1

General Plan Refinement Goals, Objectives & Strategies Related to Park Trails

<table>
<thead>
<tr>
<th>Provide a coordinated and comprehensive system of parks, recreation, and open space (Land Use Objective 8).</th>
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<tr>
<td>• Give priority to open space, park, and recreation investment in areas with the greatest existing or proposed residential density and in areas with important environmental features.</td>
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<td>• Use open space, parks, and recreation facilities to shape and enhance the development and identity of individual neighborhoods, cluster developments, existing communities, and transitions between communities.</td>
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<td>• Integrate open space, parks, and recreational facilities into urbanized areas to promote public activity and community identity.</td>
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<td>• Plan for and encourage the provision of greenway to connect urban and rural open spaces, to provide access to parkland, to connect major stream valley park areas, and for recreational purposes such as walking and biking.</td>
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<td>Provide pedestrian and bicyclists safe, direct, and convenient means of travel for transportation and recreation (Transportation Objective 6).</td>
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<td>Connect parks and conservation areas to form an open space and conservation-oriented greenway system (Transportation Objective 2B).</td>
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<tr>
<td>• Conserve County waterways, wetlands, and sensitive parts of stream valleys to minimize flooding, pollution, sedimentation, and damage to the ecology and to preserve natural beauty and open space (Environment Objective 4).</td>
</tr>
<tr>
<td>• Identify and protect wetlands and other sensitive parts of watersheds.</td>
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<tr>
<td>• Prohibit development too close to streams, in the 100-year ultimate floodplain, and in flooding danger reach areas of dams, unless no feasible alternative is available.</td>
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<tr>
<td>• Maintain the natural character of drainage areas in the immediate vicinity of streams, rivers, and lakes.</td>
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<tr>
<td>• Minimize impacts from construction and operation of public and private facilities located in stream valleys, buffers, and floodplains; first priority should be given to preserving natural areas (avoidance), second priority to mitigation, and third priority to replacement with functional equivalents.</td>
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<tr>
<td>• Mandate “no net loss” of wetlands.</td>
</tr>
<tr>
<td>Preserve and enhance a diversity of plant and animal species in self-sustaining concentrations (Environment Objective 6).</td>
</tr>
<tr>
<td>• Plan a system of parks, conservation areas, subdivision open space, and easements to support a diversity of species in self-sustaining concentrations.</td>
</tr>
<tr>
<td>• Ensure protection of environmentally sensitive habitats and unbuildable land through the master plan and development review process.</td>
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<tr>
<td>• Minimize forest fragmentation to protect habitat continuity.</td>
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</table>
- **Washington and Old Dominion Trail**—Combined with Arlington Virginia’s Four Mile Run Trail, the W&OD trail stretches from the Mount Vernon Trail along the Potomac to Bluemont, Virginia in Loudon County. The W & OD trail can be reached from Montgomery County through DC via the Rock Creek or Capital Crescent Trails and one of several bridges crossing the Potomac to Arlington, or via ferry at White’s Ferry to Leesburg.

- **Monocacy Scenic River Greenway Trail**—Frederick County has proposed a greenway and trail along with Monocacy River, which flows from Pennsylvania to the Potomac River at the Montgomery County Border. Such a trail would link the C&O Canal, Sugarloaf Mountain Park, the Monocacy Natural Resource Management Area, and Buckeystown Community Park. Montgomery County residents could access the proposed trail from the C&O Canal towpath.

- **Rock Creek Trail**—The Rock Creek Trail extends from Lake Needwood in Rock Creek Regional Park, through Rock Creek National Park to Georgetown. However, there is no trail from East-West Highway in Montgomery County to Wise Road in the District of Columbia. Trail users must use on-street routes in this section. An extension of the asphalt trail to within 1/4-mile of the DC borderline has been approved and funded by the Planning Board. However, funding for Phase 2, the last 1/4-mile to the border has not been approved due to a pending Master Plan for Rock Creek National Park.

- **Anacostia Trail System**—Prince George’s County recently completed the Anacostia Tributary Trail System, a network of paved trails in the Northwest Branch, Sligo Creek, Northeast Branch, Indian Creek, and Paint Branch stream corridors. Some of these trails are part of the coast to coast American Discovery Trail. Montgomery County residents can access the trail system from Sligo Creek or Northwest Branch Trails. This Plan also shows a desire line along the Paint Branch that would connect into the Anacostia Tributary trails.

- **Washington, Baltimore and Annapolis Trail**—The proposed WB&A rail trail runs along an old trolley line from the Glenarden (near the Beltway in Prince George’s County) to the Baltimore and Annapolis Trail in Anne Arundel County. Both Anne Arundel and Prince George’s Counties have budgeted money for design and construction of the trail. Montgomery County residents will be able to use the Anacostia tributary system to reach the WB&A Trail.

- **Capital Crescent and Metropolitan Branch Trails**—These trails, described in more detail later, are the backbone of the down-county system and important connections to the District of Columbia.
1. C & O Canal Trail
2. Mount Vernon Trail
3. Washington and Old Dominion (W & OD) Trail
4. Monocacy Scenic River Greenway Trail
5. Rock Creek Trail
6. Capital Crescent/Metropolitan Branch Trails
7. Anacostia Trail System
8. Washington, Baltimore and Annapolis Trail
Plan Concepts

Guiding Principles

The following principles have guided preparation of this Plan:

- Maintain a Countywide perspective
- Emphasize connectivity
- Provide variety
- Establish guidelines to aid decisions at the local planning level
- Seek balance among recreation, transportation, and environmental concerns
- Establish the priority of key components of the Countywide network
- Designate a network which is responsive to population centers, both existing and planned
- Recommend implementation strategies
Trail Destinations

Parkland in Montgomery County totals almost 50,000 acres (see below).

The largest component of the park system consists of over 28,000 acres owned by M-NCPPC. The M-NCPPC park system is categorized into different park “types” for planning purposes. Larger parks that serve countywide recreation or conservation needs include regional, recreational, special, conservation, and stream valley parks. These parks contain more than 25,000 acres, over 90% of the total acreage owned by M-NCPPC.

This Plan identifies many of these countywide parks as destinations for purposes of trail planning (see Figure 3). These park destinations are the basis for a comprehensive, countywide park trail system.

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<thead>
<tr>
<th>1998 PARK ACREAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
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<td>M-NCPPC</td>
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<tr>
<td>State of Maryland</td>
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<tr>
<td>National Park Service</td>
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<tr>
<td>Municipalities</td>
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<tr>
<td>Washington Suburban Sanitary Commission</td>
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<tr>
<td><strong>TOTAL</strong></td>
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Trail Corridors

The eight park trail corridors shown in Figure 4 are keyed to parks and recreation areas of Countywide significance, whether they are owned by federal, state, county, or municipal agencies. The recreational trail corridors incorporate all the trail destinations and interrelate to create a natural surface and hard surface trail network for the county.

The Plan objectives for each of the trail corridors are shown in Table 2.

The Patuxent River, Seneca Greenway, Northwest Branch, and C&O Canal Corridors include the most important elements of the proposed natural surface trail network.

The Rock Creek, Capital Crescent, Eastern County and Upcounty Corridors include the most important elements of the hard surface trail network.

Table 2
Trail Corridors and Related Plan Objectives

<table>
<thead>
<tr>
<th>Trail Corridor</th>
<th>Plan Objectives</th>
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<tbody>
<tr>
<td>1. Patuxent River</td>
<td>Provide a continuous natural surface trail system along the river.</td>
</tr>
<tr>
<td>2. Seneca Greenway</td>
<td>Provide a continuous natural surface trail from the Potomac to the Patuxent.</td>
</tr>
<tr>
<td>3. Northwest Branch</td>
<td>Provide a natural surface trail that provides a high-quality passive recreational experience.</td>
</tr>
<tr>
<td>4. C&amp;O Canal</td>
<td>Improve trail connections to the C&amp;O Canal towpath.</td>
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<tr>
<td>5. Rock Creek</td>
<td>Expand the trail system in Rock Creek Regional Park northward to Olney and the Patuxent River and southward to the Potomac River.</td>
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<tr>
<td>6. Capital Crescent</td>
<td>Provide a continuous trail corridor through Bethesda and Silver Spring to the Metropolitan Branch Trail in the District of Columbia.</td>
</tr>
<tr>
<td>7. Eastern County</td>
<td>Enhance east-west hard surface trail connectivity between parks and park trail systems.</td>
</tr>
<tr>
<td>8. Upcounty</td>
<td>Provide a hard surface recreational trail to serve the existing and future residents of Germantown, Clarksburg, and Damascus.</td>
</tr>
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</table>
CORRIDORS

1. Patuxent River Corridor
2. Seneca Greenway Corridor
3. Northwest Branch Corridor
4. C & O Canal Corridor
5. Rock Creek Corridor
6. Capital Crescent Corridor
7. Eastern County Corridor
8. Upcounty Corridor

← → I-270 Corridor Bikepath
Natural Surface Trail Plan

The Plan concept for natural surface trails takes advantage of Montgomery County's extensive frontage along two significant rivers: the Potomac to the south and the Patuxent to the north. The C&O Canal extends the length of the Potomac. The State of Maryland and the Washington Suburban Sanitary Commission own or intend to acquire most of the frontage along the Patuxent. Natural surface trails already exist in the state-owned portions of the Patuxent River waterfront.

This Plan:

- Proposes a natural surface trail system along the entire length of the Patuxent River.

- Proposes three cross-county natural surface trails to link the Potomac and Patuxent Rivers (see Figure 5):

  - The Northwest Branch Corridor includes a natural surface trail that extends from the Capital Beltway to the Patuxent River.

  - The Muddy Branch-Watts Branch Rock Creek Corridor is largely in public ownership. The City of Gaithersburg has designated the Muddy Branch stream valley a part of the City's greenway system. Gaps in trail connectivity in northern Olney are being addressed as part of the subdivision review process; public use easements are being obtained as development occurs. Gaps in the Shady Grove area will need further study.

  - The Seneca Greenway Corridor is already owned by public agencies and only one "gap" near the Patuxent River needs to be closed to make the greenway continuous from the Potomac to the Patuxent.

- Proposes that natural surface trail access be improved to the C&O Canal.

- Proposes that trails associated with the Underground Railroad in Montgomery County be identified and integrated into trail planning for Montgomery County.
NATURAL SURFACE TRAIL PLAN: CONNECTIVITY TO POTOMAC AND PATUXENT RIVERS

Figure 05

Natural Surface Trails

1. Northwest Branch
2. Muddy Branch-Watts Branch-Rock Creek
3. Seneca Creek

Hard Surface Trails of Regional Significance

Countywide Park Trails Plan

Montgomery County, MD
Hard Surface Trail Plan

Hard surface, multi-use trails are increasingly popular in Montgomery County with cyclists, walkers, and in-line skaters (depending on surface type). This Plan seeks to enhance the hard surface trail system, particularly in the Upcounty where such facilities are scarce. The Plan's intent for the Downcounty is to improve connections between existing trails (some of which were built in the 1930's) and to extend trails to population centers like Olney.

The proposed Upcounty and Downcounty trail networks are connected by a bike path, which adjoins roadways in the I-270 Corridor.

This Plan:

- Proposes an Upcounty hard surface trail system to serve the residents of Germantown, Clarksburg, and Damascus (see Figure 6).

Although the Germantown Master Plan addresses pedestrian circulation in great detail and the planning area enjoys an extensive network of bikepaths along roadways, the Germantown area does not have many recreational trails for cyclists and walkers. This Plan suggests a hard surface recreational trail concept that includes the Clarksburg Greenway Concept proposed in the 1994 Clarksburg Master Plan, the existing Magruder Trail in Damascus; the North Germantown Greenbelt and a portion of the Seneca Greenway.

- Recommends a hard surface trail system for Downcounty which links the existing Sligo Creek, Rock Creek, and Capital Crescent hiker-biker trails to proposed trails in the eastern portion of the County (Montrose parkway, Matthew Henson Park, and the ICC right-of-way).

- Recommends hard surface trail access to the C&O Canal towpath be improved west of I-270.

- Recommends that an already planned and largely implemented bike path in the I-270 Corridor link the Upcounty and Downcounty hard surface trail systems.

- Does not distinguish between paved or packed surfaces.

The type of trail surface should be determined by more detailed studies at time of trail design.
HARD SURFACE TRAIL PLAN: INTERCONNECTED UPCOUNTY & DOWNCOUNTY TRAILS

- Hard Surface Trails of Regional Significance:
  - C & O Canal Towpath
  - Capital Crescent Corridor
  - Rock Creek Trail
  - Sligo Creek Trail

- Upcounty and Downcounty Hard Surface Trail System

- I-270 Corridor Bikepath
Non-park Trail Connectors

This Plan focuses on park trail “corridors.” For the most part, land in these corridors is either owned or envisioned to be owned by federal, state, or local governmental agencies. When this is not the case, trail connectivity will depend on non-park trail connectors such as:

- bikeways
- public use easements
- utility rights-of-way
- sidewalks

All four types of connections are essential to achieve a comprehensive network of countywide trails.

The illustration below is an example of how a public road right-of-way can be re-designed to serve as a safe, attractive connection between park trails.

The Wayne Avenue Green Trail, proposed in the Silver Spring Master Plan, will link the Rock Creek and Sligo Creek regional trails. The Wayne Avenue right-of-way will be reconfigured to provide separate trails for pedestrian and cyclists while still accommodating bus and automobile traffic. The Green Trail will consist of a two-way bikepath and a separate sidewalk flanked by two rows of trees.
Overview

This Plan identifies eight significant trail corridors oriented to recreational and regional parks and Plan objectives for each (see Figure 4).

These corridors are the basis of a long-range vision for a well planned, organized, well maintained, and accessible trail network. This Plan focuses on trails of Countywide significance and builds upon existing or planned trail systems. New trails are proposed to extend trail systems, to provide new trail opportunities for existing and/or planned population centers, or to improve access to key recreational destinations. This Plan recommends generalized trail routes within each corridor. These routes are conceptual.

The level of field work and site analysis associated with trail location and design is beyond the scope of this Plan. More detailed planning and design studies will be needed. The Implementation chapter discusses how and when these studies will be undertaken.

Plan Analysis

This section describes the process used to arrive at this Plan’s recommendations.

Step #1: Identify Key Destination Points

The key destinations for the trail corridors are shown in Figure 3 and include:

- Major parks including Recreational and Regional M-NCPPC Parks as well as State and municipal parks;
- The Potomac River (C&O Canal);
- The Patuxent River; and
- Existing or planned park trails.

Step #2: Designate Corridors Which Link Key Destinations

After identifying destinations, potential linkages or corridors between the key destinations were mapped. Corridors may function as links between destinations but also as destinations themselves.

The Park Trail Corridors are depicted in Figure 4.

Step #3: Identify Generalized Trail Routes Within Each Corridor

This Plan proposes trails within each of the corridors for further study. These trails are
discussed by corridor in the next section. During the Master Plan process, public concern arose over environmental and other impacts of the proposed trails. It should be emphasized that the proposed trails, as described in the text and depicted on the maps, are not specific alignments and are subject to further review of their feasibility. The feasibility review should consider a range of options that avoids environmentally sensitive areas.

Relation of Environmental Concerns to Recreational Trail Planning and Design

Environmental protection and recreational objectives must be balanced at every stage of the trail planning and design process. Environmental concerns which need to be addressed as trails are implemented include:

- Protection of stream and stream valley quality
- Protection of wetlands and other environmentally sensitive areas
- Protection of rare, threatened, or endangered plant and wildlife species

These concerns and how they should be addressed will be included in the Trail Implementation Guide (see Implementation chapter).

Trail Recommendations By Corridor

The Trail Corridors are shown in Figure 4 and discussed below.

Corridor 1: Patuxent River

Plan Objective: Provide a continuous natural surface trail along the Patuxent.

The extensive frontage along the Patuxent River is owned by two public agencies. The Washington Suburban Sanitary Commission (WSSC) owns approximately 2200 acres extending from the Prince George's County line to Georgia Avenue (see Figure 7). The WSSC acquired and manages this waterfront acreage to protect two important water reservoirs: Triadelphia Reservoir and Rocky Gorge.

The balance of the Patuxent River acreage is owned or will be owned by the State of Maryland and managed by the Maryland Department of Natural Resources (DNR) as the Patuxent River State Park. Roughly half of the 6,647 acre park falls in Montgomery County and half is in Howard County.

Several trail corridors proposed by this Plan terminate at the Patuxent including the Seneca Greenway, Rock Creek, and Northwest Branch corridors. A natural surface trail system along the Patuxent would link all these trails.

Existing Conditions and Plans

WSSC allows limited recreation in both Patuxent Watersheds. The Duckett Watershed contains an equestrian trail for most of its length on the Montgomery County side of the River. The Triadelphia Watershed contains a short nature trail at its western end as well as informal trails throughout the watershed, and a dirt road that runs along the perimeter of the watershed property boundary.

WSSC has not determined whether a formal trail the length of their watershed is desirable due to potential erosion and lack of resources for the maintenance of trails. M-NCPPC will continue to work with WSSC and its citizens’ advisory board to address their concerns and pursue the possibility of a more extensive, formal trail system.
Northwest of the WSSC land lies the Patuxent River State Park, a relatively undeveloped park with limited public facilities. About 1,800 of the 6,647 acres are designated as State wildlands, where DNR only allows activities “consistent with wilderness character of the area,” including “hunting, fishing, trapping, hiking, horseback riding, nature interpretation, bird watching, research, and appreciation of natural processes.” Informal trails run throughout the State land, but there is no designated trail through the Patuxent corridor. DNR is not opposed to such a trail Concept. However, because Patuxent River State Park currently receives minimal staff time and funding, the State could not undertake the development and maintenance of a trail.

Recommendation

- Explore with representatives from M-NCPPC, WSSC, and the State of Maryland, how a continuous natural surface trail system could be provided along the Patuxent.

Where State or WSSC-owned land is too narrow or constrained to support a trail, explore whether trail connections could be provided on private land as subdivision activity occurs along the Patuxent.

Issues Needing Further Study

- Extending trail system through land not owned by public agencies.

- Trail maintenance.

- Connection to other trail corridors.

- WSSC policies toward trails in watersheds.

- Interagency coordination for trail development, maintenance, and management.

Corridor 2: Seneca Greenway

Plan Objective: Provide a continuous natural surface trail in the Seneca Greenway from the Potomac to the Patuxent.

Existing and planned State and County parkland combine to form a 25-mile greenway along Seneca Creek from the Potomac River to within one mile of the Patuxent River. About half of the corridor, from the Potomac to MD 355 is contained in Seneca Creek State Park. Most of the portion northeast of MD 355 is owned and managed by M-NCPPC as Great Seneca Extension Park and several properties within the Corridor north of Davis Mill Road are identified for future acquisition.

Existing Conditions and Plans

In 1995, the Maryland Department of Natural Resources, in cooperation with volunteers from the Coalition for Seneca Creek Greenway Trail, began to develop a 15-mile natural surface trail along Seneca Creek. The trail begins at the Potomac River near Riley’s Lock on the C&O Canal and extends to a trailhead at MD 355 in Gaithersburg.

Recommendations

- Extend a natural surface trail system from Seneca Creek State Park through Great Seneca Extension Park to the Patuxent River (see Figure 8).

- Close the trail gap near the Patuxent River, the only gap in the Seneca Greenway Corridors.

The only gap or break in the Seneca Greenway concept occurs between the M-NCPPC owned Great Seneca Extension Stream Valley Park Extension and the
Patuxent River State Park. A strategy to close this gap needs to be explored, whether it be additional park acquisition or voluntary dedication of a public trail-use easement on private property.

- **Identify a desire line for a natural surface trail from the Seneca Greenway west to Sugarloaf Mountain in Frederick County.**

  Support the efforts of private organizations and individuals seeking trail easements in this part of the county.

  The alignment would be determined as public use easements are designated.

- **Identify a desire line for a natural surface trail from Seneca Greenway eastward to the Rock Creek Corridor.**

  This trail would serve Montgomery Village and the upper Rock Creek area. The Green Farm Conservation Park would be an important link in this system.

- **Provide a hard surface trail connection from the trailhead parking lot on MD 355 to the proposed Upcounty Corridor.**

  This Plan recommends a hard surface trail concept to serve the residents of the Upcounty (see Upcounty Corridor). This concept affects portions of the Seneca Greenway and is described more fully later in this chapter. Further study is needed of this concept, but it is the intent of this Plan to provide two trails: a hard surface trail and a natural surface trail in the County-owned Great Seneca Extension Park. This approach of providing two separate trails would be feasible in areas where a wide band of parkland is available but may prove more difficult where parkland narrows or where combinations of constraining conditions, such as steep slopes and large wetlands, present a barrier to implementation. In these areas, additional parkland may have to be acquired, or some neighborhood streets used for short distances.

**Issues Needing Further Study**

- Any trail proposals for Little Seneca Creek from the B&O Railroad Bridge south of Little Seneca Lake downstream to the confluence with Bucklodge Branch must be carefully evaluated since this is a Use III stream area.

- Minimizing disturbance to Natural Heritage Protection Areas identified by Maryland Natural Heritage Program. There are five such protection areas in the Seneca Greenway Corridor.

- Providing safe crossings of roadways. Because the Seneca Greenway traverses densely populated areas along the I-270 Corridor, many major road crossings are involved. An underpass provides access below MD 355 and Great Seneca Highway, but more work is still needed to provide safe crossings on these roads and others such as Watkins Mill Road, Brink Wightman Road, Woodfield Road, Creamery Road and Damascus Road (MD 108). The DNR and the Coalition for the Seneca Creek Greenway Hiking Trail are resolving road crossings in the State Park for roads such as I-270, Clopper Road, and others.

- Analyzing of other potential constraints, such as steep slopes, rare and endangered species habitat, wetlands, and forest interior bird habitat areas.
Corridor 3: Northwest Branch

Plan Objective: Provide a natural surface trail from the Beltway north to the Patuxent River that provides a high-quality passive recreational experience.

In Montgomery County the Northwest Branch of the Anacostia River begins at the Prince George’s County line and extends to the Sandy Spring/Ashton area. Most of the stream valley lies in existing or proposed parkland. Because the stream and trail continue south into Prince George’s County and link with both Sligo Creek and the Anacostia River, Northwest Branch is a key component of the countywide trail system.

Northwest Branch is known for its diverse riverscapes and scenic areas, particularly south of Colesville Road, an area noted for its scenic beauty by Theodore Roosevelt. The stream is designated Use IV (Recreational Trout Waters) by the Maryland Department of Natural Resources, which stocks trout on a put-and-take basis. There are several areas of wetlands and sensitive species discussed in more detail below. In parts of the park, a "wilderness" feeling is created by the dense vegetation.

Historic resources also exist near tributaries to the Northwest Branch. In the Sandy Spring/Ashton area there are several historic homesteads, the Friends Meeting House, the Sandy Spring itself, and other sites that commemorate the area’s agrarian past and the County’s role in the Underground Railroad. Further south near Randolph Road is Valley Mill, a historic mill race.

Existing Conditions and Plans

The portion of the Northwest Branch Corridor currently owned by M-NCPPC extends from the Prince George’s County line to Woodlawn Manor Park in Sandy Spring, for a total length of 11 miles (see Figure 9). Existing and proposed unpaved trails extend nearly the entire length of Northwest Branch.

The White Oak Master Plan, which covers the Northwest Branch from the Beltway to the ICC right-of-way, shows an existing natural surface trail from the Beltway to Randolph Road and proposes a paved trail from Randolph Road north to the ICC right-of-way and improvements to neighborhood connections. The Cloverly Master Plan recommends a bikeway between the ICC right-of-way and Ednor Road, the location and surface to be determined in an environmental feasibility study. Both plans reference the environmental sensitivity of the Northwest Branch and the potential conflict between intensive use and resource protection.

The Sandy Spring/Ashton Master Plan proposes a Rural Legacy Trail along the portion of Northwest Branch between Ednor Road and MD 108.

This Plan recommends the extension of the Northwest Branch natural surface trail concept north of MD 108 to the Hawlings River through public use easements or possible acquisition of land for a trail.

The Cloverly Master Plan proposes an equestrian trail connection between the Paint Branch mainstem and Northwest Branch via the Left Fork and the equestrian trail in the Hampshire Greens Golf Course.

Recommendations

- Study and plan the Northwest Branch Corridor comprehensively as a natural surface trail system.

One of the objectives of the study should be to explore alternatives to park acquisition to complete the trail system, particularly north of MD 108 in Sandy Spring/Ashton. The designation of public use easements at time of
subdivision could complete the trail system in this area.

- Incorporate the Rural Legacy Trail concept proposed in the Sandy Spring/Ashton Master Plan.

- Affirm the White Oak Master Plan objective to enhance the Northwest Branch Stream Valley Park trail system to provide better access and connection to adjoining communities and neighborhoods.

**Issues Needing Further Study**

The following issues must be addressed in more detailed planning studies for the Northwest Branch Corridor:

- Environmental Constraints. Segments of the corridor contain wetlands, steep slopes and other environmentally constrained geography, requiring special attention when designing and constructing a trail.

- Biodiversity Areas. These areas contain rare, threatened or endangered species as designated by the Maryland Natural Heritage Program. There are three Biodiversity Protection Areas in the Northwest Branch.

- Dangerous Road Crossings. There are several dangerous road crossings for existing and proposed trails in the Northwest Branch Corridor including Colesville Road, Bonifant Road, Ednor Road and Norwood Road.

- Trail head Opportunities. There is inadequate access to trails.

- Bridge Opportunities. Access from the east side of Northwest Branch is not available to the west side.

- Opportunities To Connect To Schools. Northwest Branch passes by several schools including Springbrook High School, Westover Elementary School, and Northeast High School. Bridges and trail connections could improve access to schools.

- Connections With Other Trails and Bikeways. Northwest Branch crosses several other existing and proposed trails and bikeways including Franklin Avenue, Randolph Road, Bonifant Road, the proposed ICC trail, and Ednor Road.

- Easements/Acquisition. North of MD 108, the proposed trail corridor crosses private land. Development of the trail will require public use easements on this land or possibly acquisition of land for a trail.

**Corridor 4: C&O Canal**

**Plan Objective: Improve trail connections to the C&O Canal towpath.**

The most significant trail in the western part of the County is the C&O Canal towpath managed by the National Park Service as the C&O Canal National Historical Park. The Canal towpath extends 180 miles from Washington, D.C. to Cumberland, Maryland; the portion of the trail in Montgomery County is approximately 38 miles in length. The C&O Canal towpath is a compacted mix of gravel and clay. An estimated 300,000 cyclists, pedestrians, and equestrians use the trail each year.

**Existing Conditions and Plans**

In the western, less densely populated portion of the County, hard surface trail access to the C&O Canal towpath occurs on roadways which cyclists share with motorists. Several scenic bike routes have been identified by M-NCPPC in the vicinity of the Canal.
COUNTYWIDE PARK TRAIL CONCEPT:
NORTHWEST BRANCH CORRIDOR

Figure 09

Natural surface recreational trails
Existing: ••••• Proposed: ◦◦◦◦◦

Hard surface recreational trails

Non-park connector between recreational trails

Bikeway

Other (See Text)

Regional/recreational park destinations
In the more populated Potomac planning area, over 130,000 people live in residential communities within four miles of the C&O Canal towpath. Three linear M-NCPPC parks offer varying degrees of access to the towpath from these communities:

- Cabin John Regional Park has a signed and maintained natural surface trail (5.8 miles in length), courtesy of the Potomac Appalachian Trail Club, that extends to the Cabin John Local Park at MacArthur Boulevard. A Master Plan for Cabin John Regional Park is now underway and the need for an improved network of trails will be one of the issues studied. Passage from Cabin John Local Park to the C&O Canal is possible, but involves a dangerous crossing on MacArthur Boulevard and a steep combination of an informal dirt path and old steps in poor condition.

- Watts Branch Stream Valley Park contains an informal trail from the PEPCO right-of-way to just south of Piney Meeting House Road.

- Muddy Branch Stream Valley Park extends to Blockhouse Point at the C&O Canal towpath. In addition to the informal trails which run throughout Muddy Branch, there are some formal trails near the Maryland Horse Center and a formal trail system in Blockhouse Point Conservation Park. Federal, state, and M-NCPPC lands meet at the point where the Blockhouse Point trail meets the C&O Canal.

Recent sewer line work in Muddy Branch has opened up a passageway that may provide a trail alignment option. A gap in the informal system occurs between Turkey Foot Road and Eworthy.

All of the above trail systems which offer or potentially offer access to the towpath are natural surface.

**Recommendations**

- Explore ways to improve access to the C&O Canal towpath in the context of the Potomac Master Plan Update and the M-NCPPC trails program, including the Cabin John Master/Management Plan, now underway.

Presently there is conflicting policy guidance on recreational trail access in terms of Cabin John, Muddy Branch, and Watts Branch parks. The 1978 Master Plan of Bikeways calls for paved bike paths in all three stream valleys. The 1980 Potomac Subregion Master Plan concurs with these recommendations. In contrast, the 1991 Planning Guide to Trails proposes unpaved trails in all three stream valleys. All three stream valleys represent valuable natural resources and all three have sensitive environmental features.

Although decisions regarding trail surface should still await the Potomac Plan update, the Plan recommends, based on environmental studies done to date, a natural surface trail is most likely in Watts Branch. Opportunities exist for a hard surface trail in portions of Muddy Branch due to sewer line construction. Again, final decisions on trail surface must await the Potomac Master Plan update.

Plan recommendations to provide improved trail access to The C&O Canal are shown in Figure 10.

**Issues Needing Further Study**

The Potomac Master Plan Amendment and the trails program should:

- Evaluate the potential for both a hard surface trail and a natural surface trail in Muddy Branch to provide improved access to the C&O Canal for all types of users.
COUNTYWIDE PARK TRAIL CONCEPT: C & O CANAL CORRIDOR

Figure 10

C & O CANAL TOWPATH

EXISTING PROPOSED

NATURAL SURFACE RECREATIONAL TRAILS

HARD SURFACE RECREATIONAL TRAILS

NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS

Bikeway

Other (See Text)

ON ROAD SCENIC BIKE ROUTES

REGIONAL/RECREATIONAL PARK DESTINATIONS

Countywide Park Trails Plan

Montgomery County, MD
• Coordinate with State and federal agencies to provide natural surface trail access from the three stream valleys to the C&O Canal.

• Add surface and alignment options and environmental review to the Capital Improvement Program as a Facility Planning Project.

• Provide a more direct connection from River Road to the canal through Blockhouse Point and Pennyfield Lock.

• Explore ways to improve trail connectivity to the cities of Rockville and Gaithersburg.

• Improve east-west trail connectivity between Cabin John, Muddy Branch, and Watts Branch Stream Valley Parks. One possible option would be use of a power line right-of-way which traverses all through parks.

Corridor 5: Rock Creek

Plan Objective: Expand the trail system in Rock Creek Regional Park northward to Olney and the Patuxent River.

The Rock Creek Corridor, which extends from the District of Columbia to the Patuxent River, includes both the main stem and North Branch of Rock Creek. A 14-mile hard surface hiker-biker trail and numerous informal natural surface trails exist in Rock Creek Stream Valley Park. The hard surface trail system in Rock Creek Regional Park extends from Lake Needwood to East West Highway in Silver Spring. A 1.2 mile extension to the District line is funded and is under design.

Existing Conditions and Plans

An updated Master/Management Plan for Rock Creek Regional Park is underway and is expected to be completed in early 1998. Trail planning will be an important component of the Plan. However, the scope of the Master/Management Plan does not include areas north of the Park nor does it include Gude Landfill re-use as a park. Thus the Plan recommendations presented here would have to be studied in the context of a subsequent trail analysis of the entire Rock Creek Corridor.

The 1978 Master Plan of Bikeways proposes paved trails through both branches of Rock Creek. There have been no subsequent approved plans changing this recommendation. The Olney Master Plan, adopted in 1980, incorporates the 1978 Master Plan of Bikeways recommendations so the paved trail concept is part of that Plan as well. The paved trail proposals are quite controversial because of environmental concerns.

The 1991 Planning Guide to Trails shows the extension of the paved hiker-biker trail north past Lake Needwood through Rock Creek Stream Valley Park to the Agricultural History Farm Park.

Recommendations

• Extend natural surface trails from Rock Creek Regional Park to the Hawlings and the Patuxent Rivers.

The 1991 Planning Guide to Trails proposes a natural surface trail from Rock Creek Regional Park along the North Branch of Rock Creek, through Olney to Reddy Branch, Rachel Carson Park and the Hawlings River. This Plan endorses that proposal and expands the concept further.

As shown in Figure 11, this Plan also suggests a natural surface trail along the North Branch of Rock Creek and suggests crossing the Oaks Landfill (which will be closed in the near future) to link to Rachel Carson Park. Staff have already been working with developers in this portion of the Olney Planning Area to have public use easements designated as part of the regulatory review process.
The final link to the Patuxent from the Hawlings River and Rachel Carson Park is shown as a proposed trail in Figure 11.

- Explore ways to connect the Rock Creek natural surface trail system to the Seneca Greenway.

This concept is discussed in the Seneca Greenway Corridor section.

- Explore ways to make the Rock Creek trail system connect to the City of Gaithersburg’s proposed Muddy Branch Greenway.

As shown in Figure 4, a natural surface trail connection is proposed along Muddy Branch and Rock Creek between the Potomac and the Patuxent Rivers. A critical component of this trail proposal is the City of Gaithersburg’s greenway. Trail proposals need to be coordinated with the City.

- Provide a hard surface trail connection between Rock Creek Regional Park and Olney.

Figure 11 illustrates this concept. A hard surface recreational trail will be constructed in parkland near Bowie Mill Road by private developers. The extension of this trail southward to Rock Creek Regional Park would offer the 30,000 residents of Olney access to the park by a recreational trail. Further study is needed as to the exact alignment of the trail and whether there are alternatives to a trail in the stream valley to make this connection.

In Olney the proposed trail would connect to the existing multi-use path along MD 108.

- Provide a hard surface trail connection from Rock Creek Regional Park to the I-270 Corridor bike path.

One of the major Plan concepts is to link hard surface trail systems in the Upcounty and down county to the I-270 Corridor bike path. (See Figure 6.) The opportunity exists to make this connection in terms of Rock Creek Regional Park through the former Gude Landfill, which adjoins Rock Creek and fronts Gude Drive, an important link in the I-270 Corridor bike path.

The Gude Drive Recreational Park Concept Master Plan should include this proposed connection.

Another opportunity for a connection to Rock Creek Regional Park is the Crabbs Branch stream valley. This trail would provide access from the vicinity of the Shady Grove Metro to the Lake Needwood area. More study will be necessary to determine trail surface and alignment since boardwalk will likely be necessary given the large amount of non-tidal wetlands in the area. Alternative routes to the stream valley should be considered in the context of the Master Plan of Bikeways Update or the Upper Rock Creek Master Plan Amendment, since connecting to Metro is an important transportation-oriented objective.

- Provide a hard surface trail from the Lake Needwood recreation area to the ICC right-of-way.

The Rock Creek Park Master Plan, now underway, proposes the hard surface trail terminate at Needwood Road rather than the ICC right-of-way to avoid sensitive environmental areas. This makes it very important that strategies be developed to make Needwood Road safer for cyclists.

Alternatives which should be considered:

- The Upper Rock Creek Master Plan will be initiated in the next two years and should address the cross-section for Needwood
Road to better accommodate casual cyclists. The Upper Rock Creek Master Plan (July 1985) proposes an on-road (Class II) bike lane from Rock Creek Park to Redland Road. An off-road bike path (Class I) or on-road bike land (Class II) should be shown on Needwood Road from the park trail to the ICC right-of-way.

- Expand park boundary lines east of Lake Needwood to the ICC right-of-way so that a hard surface trail can be provided on park land to the ICC right-of-way rather than relying on a bike route on Needwood Road.

**Issues Needing Further Study**

The following issues are to be addressed in subsequent studies relating to implementation of these trail concepts:

- Protection of areas which are particularly sensitive or in need of special consideration. These areas include:

  Rock Creek Regional Park area surrounding Lake Bernard Frank from Norbeck Road to Muncaster Mill Road, particularly those areas north of the Avery Road parking lot entrance and north of the former Trailway Drive entrance parking lot. There already exists a vast network of natural trails around the entire lake area and Meadowside Nature Center area, as well as a paved trail and wide natural surface trail around much of the lake. This is a Biodiversity Area and trail proposals, particularly hard surface, will be carefully evaluated.

  Rock Creek Regional Park area north of Needwood Road to Muncaster Mill Road and west to Shady Grove Road. Trails currently exist through wetlands and along both Mill Creek and Rock Creek. This is a Biodiversity Area that contains sensitive wetlands and numerous rare plants. Trail proposals, particularly hard surface, will be carefully evaluated.

- North Branch Stream Valley Park north of Muncaster Mill Road. A wide trail already exists along the stream and wetlands in this area, as well as a series of smaller natural surface trails. This area contains large acreage of contiguous forest desirable for forest interior wildlife, and has considerable wetlands and rare plant and animal species. The area is designated as a Biodiversity Area, and any trail proposals therein should be carefully evaluated for environmental impact.

  - The Rachel Carson Conservation Park contains five watch list plants. The park also contains one of the largest tracts of high quality mixed-deciduous forest in the county.

  - The area just north of Needwood Road is a wide floodplain, making construction of a hard surface trail difficult. Rachel Carson Conservation Park also contains significant amounts of floodplain and wetlands.

  - High-quality forest habitat, including forest interior.

**Corridor 6: Capital Crescent**

Plan Objective: Provide a continuous trail corridor through Bethesda and Silver Spring to the Metropolitan Branch Trail in the District of Columbia.

The Capital Crescent Corridor serves as the backbone of the trail system in southern Montgomery County (see Figure 12). The trail corridor follows an abandoned rail line that runs from Washington, D.C. to Silver Spring. From Silver Spring, it continues as the Metropolitan Branch along an active CSX rail line into the District of Columbia, terminating at Union Station. Over 115,000 county residents live within
roughly one mile of the Capital Crescent/Metropolitan Branch corridor.

Recreation destinations along the Capital Crescent include:

- C&O Canal, a national park, canal, and trail that runs from Georgetown in the District of Columbia to Cumberland, Maryland.

- Little Falls Stream Valley Park which parallels the trail for two miles.

- Rock Creek Stream Valley Park with its trail south to Rock Creek National Park and north to Needwood Lake.

- Sligo Creek Stream Valley Park, which connects north to Wheaton Regional Park and south to the Anacostia system in Prince George’s County.

Existing Conditions and Plans

The first stage of the Capital Crescent Corridor, a hard surface 10-foot wide trail from Georgetown to Bethesda, completed in 1996, is already the most popular trail in the county and one of the busiest trails in the country. An interim trail made of crushed stone is in place from Bethesda to Silver Spring while state and county governments determine the fate of the proposed Georgetown Branch Transitway. All transitway alternatives include or allow for a trail. The Silver Spring CBD Plan of 1993 describes the proposed route of the Metropolitan Branch Trail from the Silver Spring Transit Center to the DC line. The proposed design for the Transit Center also provides for the bikeway as part of the multi-modal facility.

Issues Needing Further Study

- The Capital Crescent Trail crosses over the Rock Creek Trail on a 120-foot railroad trestle. An appropriate route needs to be designated and signed from the Rock Creek Trail to the Capital Crescent Trail.

- Appropriate signs should direct trail users from the Silver Spring Transit Center, where the Capital Crescent and Metropolitan Branch trails meet to downtown Silver Spring and to the Sligo Creek Trail.

- Appropriate, well marked bike facilities should direct trail users from the end of the partially completed Bethesda Trolley trail near NIH, through downtown Bethesda to the Capital Crescent Trail.

- Whether or not a transitway is built is a key decision that must be made before a permanent trail can be completed from Bethesda to Silver Spring. Cyclists and other trail users are divided on the issue of the transitway. Some see it as a viable trail partner, while others see a light rail system or busway as incompatible with the trail. For most of the corridor, current studies show a 10-foot trail adjacent to the transitway. In certain areas, the transitway would compromise trail design (width, clearance) such as the Rouse Building (Silver Spring Metro Plaza) in Silver Spring adjacent to the Transit Center, where the proposed trail would be only five to six feet wide. An alternative alignment for the trail would follow sidewalks on Second Street.

Corridor 7: Eastern County

Plan Objective: Enhance east-west hard surface trail connectivity between parks and park trail systems.

The County's most extensive and widely used hard surface, multi-use trails are located in the eastern part of the County. Sligo Creek and Rock Creek Trails are of regional importance as they extend beyond Montgomery County. In the Paint Branch
COUNTYWIDE PARK TRAIL CONCEPT:
CAPITAL CRESCENT CORRIDOR

Figure 12

HARD SURFACE RECREATIONAL TRAILS

EXISTING PROPOSED

NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS

Bikeway

Countywide Park Trails Plan
Stream Valley, a paved trail extends from Martin Luther King Park north to Fairland Road. All of these trails, shown in Figure 13, extend in a north-south direction with no east-west links. The Capital Crescent Trail intersects the Rock Creek Trail system but not Sligo Creek.

**Existing Conditions and Plans**

Virtually all of the existing east-west links in the eastern portion of the County are sidewalks or bike paths along roads, including Randolph Road, Fairland Road, and Forest Glen Road. Master Plans for the eastern portion of the county have proposed the following east-west hard surface trail connections:

- **Forest Glen.** The Forest Glen Sector Plan proposes a bikeway on Forest Glen Road that will help connect Sligo Creek with Rock Creek.

This Plan concludes existing high traffic volumes and the lack of shoulders along Forest Glen Road do not afford casual cyclists a safe passage and recommends that a combination of Seminary Road, Columbia Boulevard, and Linden Lane should be studied as an alternative during The Silver Spring Master Plan process.

- **Matthew Henson right-of-way.** The 1994 Aspen Hill Master Plan proposes a bike trail in the Matthew Henson right of way.

- **The ICC Bikeway:** The Cloverly, Fairland, and White Oak Master Plans recommend a bikeway within the ICC Right-of-Way. The bikeway would be part of the design and construction of the master planned major highway.

- **The Cloverly and Fairland Master Plans** recommend a bikeway trail within the Potomac Electric Power Company (PEPCO) right-of-

way in the Patuxent watershed. This trail begins at the county line and ends at Ednor Road.

- **The Cloverly and Fairland Master Plans** recommend a bikeway along MD 198 from Prince George's County to the Northwest Branch and would be constructed as part of the proposed MD 198/Norbeck Connector. This bikeway provides east-west connectivity between the Northwest Branch and the Paint Branch stream valley parks.

The Cloverly, Fairland, and White Oak Master Plans recommend extensions of the Northwest Branch and Paint Branch stream valley trail system. These extensions need to be implemented in order to connect to the east-west connections recommended in this Plan.

**Recommendations**

- **Implement the Paint Branch Stream Valley trail recommendations made in the Fairland and White Oak Master Plans.** The key recommendations are summarized as follows:

The White Oak and Fairland Plans recommend extension of the Paint Branch Trail south to Old Columbia Pike crossing under US 29, on the east side of the stream. The Fairland Plan recommends extension north from Fairland Road to Columbia Local Park with connections to the ICC, adjoining streets and communities using alternative routes on local streets north of the ICC because of environmental constraints. Both Plans acknowledge the environmental conditions that may make a hard surface trail difficult to locate and construct in any of the proposed segments and reference the need for environmental feasibility studies to determine location and surface of the trail. The Plans also
note the need for safe crossings at Randolph Road and Fairland Road.

- **Explore ways to provide a natural surface recreational trail connection between US 29 and the Trail system in Prince George's County.**

This Plan shows a potential future extension of the Paint Branch trail south of US 29. This connection is not recommended in either the White Oak or Fairland Master Plans. Although the White Oak Plan does recommend that parkland additions to the Paint Branch Stream Valley Park should be pursued if compatible with the General Services Administration's master plan for the FDA relocation. Although there will be difficulties in trying to cross two other federal installations along the Paint Branch (the Adelphi Laboratory and the Beltsville Agricultural Research Center) and the I-495/ I-95 interchange area to reach the paved trail at Cherry Hill Road in Prince George's County, this Plan supports a connection between the two trail systems.

- **Explore ways to provide a trail connection between the existing and proposed Paint Branch hard surface trail and a future hard surface trail in the ICC right-of-way.**

Finding a way to link the existing Paint Branch paved trail to a future hard surface trail in the ICC right-of-way is extremely important if the Paint Branch trail is to be part of a larger trail network. This Plan proposes a hard surface connection, which uses a sidewalk/bikeway along the south side of Fairland Road, to a connection north to the ICC right-of-way proposed in The Fairland Master Plan.

- **Provide east-west connections between existing north-south hard surface trails in the vicinity of Silver Spring and Forest Glen. Connectors will be identified and designed during the Silver Spring Master Plan process.**

- **Provide a hard surface trail in the vicinity of the Intercounty Connector (ICC) right-of-way, whether or not the highway is built.**

The ICC Master Plan right-of-way is shown in Figure 13. If a highway is built on any portion of the right-of-way, a bike/pedestrian path will also be provided. This path will provide east-west connectivity between the I-270 Corridor/Gaithersburg area and Rock Creek Regional Park, Martin Luther King Regional Park, and Fairland Recreational Park.

Staff recommends a trail throughout the length of the ICC (with or without a highway). However, its exact location and design should remain flexible in order to minimize its environmental impact.

At the present time, the State Highway Administration and federal agencies have deemed the portion of the ICC master planned right-of-way through Northwest Branch and Paint Branch to be environmentally unsuitable for construction of a major highway.

This portion of the ICC right-of-way in combination with Matthew Henson Greenway, would help provide an integrated hard surface trail system which would connect every major park facility in Eastern Montgomery County. For this reason, this area is critical to implementing the overall trail concept for Eastern County. If the ICC is not built, trail opportunities along the ICC right-of-way should be considered. Trail opportunities outside the right-of-way should also be explored.
• Initiate a comprehensive trail study in the Northwest Branch Corridor once the future of the ICC is determined.

The issue of trail connectivity between Northwest Branch and Wheaton Regional Parks needs to be addressed comprehensively. The Wheaton Regional Park Master Plan does not propose any recreational trails in the northern part of the park and there is no park trail between the Sligo Creek hard surface trail and Wheaton Regional Park. The park acquisition areas proposed in this Plan need to be further refined to assure that hard surface and natural surface trails can be accommodated and still address environmental concerns in Northwest Branch. Finally, trail locations within Northwest Branch park need to be identified. Whether or not a road is built in this portion of the ICC right-of-way will greatly affect the location and design of trails so this study should await final decisions on the ICC.

• Provide trail connections between Rock Creek Regional Park and Sligo Creek Park trails.

The hard surface trails in Rock Creek and Sligo Parks are the oldest in the county. Both these trails are of regional significance since they connect to adjoining counties and municipalities. Both go north south but there is no east-west connection between the two trail systems.

This Plan proposes connecting the two trails as shown in Figure 14, thereby creating a 16-mile hard surface downcounty "loop."

The Matthew Henson State Park and Greenway and the Northwest Branch Stream Valley Park are both critical to this concept. This Plan recommends a hard surface trail in these parks be provided in two phases:

Phase I Provide a hard surface park trail in the portion of Matthew Henson State Park and Greenway between Rock Creek Trail and Alderton Drive. Cyclists wishing to reach Wheaton Regional Park would do so via bike lanes on Layhill, Randolph, and Kemp Mill Roads. Cyclists could ride north on Alderton to reach Bonifant Road and the future trail proposed in the ICC right-of-way.

Phase II Provide a hard surface park trail from Alderton Drive east to Northwest Branch and south to Wheaton Regional Park. Phase II affects the Northwest Branch Stream Valley park. The Northwest Branch includes sensitive environmental areas and is an important part of this Plan's proposed natural surface trail system between the Potomac and Patuxent. For this reason, this Plan recommends that additional parkland be acquired to allow a hard surface trail connection outside the stream valley to emphasize protection of the Northwest Branch. An opportunity for such acquisition would occur if the Indian Springs Golf Course ever redevelops.

The Technical Appendix includes all the options studied for improving connectivity between Rock Creek and Sligo Creek trails. The Plan concept shown in Figure 14 was selected because it:

- Places the highest environmental protection priority on the Northwest Branch Stream Valley system and recommends alternative hard surface trail locations be studied.
In comparison to the Matthew Henson Greenway, the Northwest Branch Stream Valley Unit #5 is a highly environmentally sensitive area. A natural surface trail in this stream valley would provide the best protection for the erodible and hydric soils, the mature trees, the herpetological pond areas, the breeding, migratory, and interior dwelling birds which use these woods and uncommon plants and their communities. In addition, the historically significant Kemp Mill pond and millrace are found in this area. In view of the existing intrusions by gas and WSSC utility lines, extraordinary steps are deemed appropriate to preserve the aesthetics of the natural forest setting experienced in this developing urban area.

- Recognizes that a hard surface trail system in the Matthew Henson Greenway will provide residents of the more than 16,000 housing units with an attractive outdoor experience within roughly one mile of their homes.

The Matthew Henson Park is the only backyard for the residents of nearby multifamily dwellings. A hard surface trail built to ADA standards would greatly expand the recreational opportunities in Matthew Henson. People in wheelchairs, rollerbladers, and strollers are not able to use typical natural surface trails. Recent trail user counts in Montgomery County have indicated over 10 times as many people using hard surface versus natural surface trails.

- Provides a connection to the Montrose Parkway Trail.

The Matthew Henson Corridor was originally proposed for a highway. A corresponding right-of-way continues west of Rock Creek where the Montrose Parkway is proposed. Current designs call for a separate bike path along Montrose Parkway. A hard surface trail in Matthew Henson would complement the proposed Montrose Parkway trail.

- Expands the Northwest Branch stream valley park boundaries to accommodate the trail while minimizing environmental impacts.

Unlike in Matthew Henson Park, there is an opportunity to expand park boundaries in this portion of the Northwest Branch park to accommodate a hard surface trail. Future park acquisition lines already exist on the Indian Springs Country Club property. Only slight revisions to these park take lines would be necessary to accommodate a hard surface trail.

This approach means construction of a hard surface trail would await redevelopment of the golf course. However, this is an appropriate trade-off given the opportunity to protect a highly sensitive environmental area which deserves a high level of protection.

Reconstruction of sewer lines in the Stream Valley in the future may also provide opportunities for a hard surface trail.

In terms of the environment, studies were done as part of the Trail Environmental Feasibility Study of Matthew Henson State Park, Matthew Henson Greenway, and Northwest Branch Stream Valley, prepared in 1995 and reviewed in January 1996. This study concluded that a multi-purpose trail could be developed that could be permitted under current environmental guidelines. The proposed alignment would require additional environmental evaluation and careful design and
engineering in order to avoid and minimize to the extent possible impacts to wetlands, stream channels, floodplains, and sensitive habitats.

More detailed environmental studies are beyond the scope of this plan but will be undertaken as part of the facilities planning process for the trail. One study which should be initiated immediately is a survey of rare, endangered, and threatened species. Such studies may affect trail alignment options.

Corridor 8: Upcounty

Plan Objective: Provide a hard surface trail to serve the existing and future residents of Germantown, Clarksburg, and Damascus. Most of Montgomery County's hard surface trails are located in the southern, more densely populated portion of the County. The 3.3 mile Magruder Branch hard surface multi-purpose trail in Damascus and approximately 3 miles of asphalt trail in Black Hill Regional Park are the only significant hard surface recreational trails in the Upcounty area.

The 1989 Germantown Master Plan proposed an extensive and well-planned system of pedestrian connections and bike paths along roadways. However, community master plans have not traditionally proposed hard surface recreational trails, relying instead on park master plans to meet this need. Although individual park master plans in the Upcounty area, such as the Plan for Black Hill Regional Park, include paved trails, there is a strong need for a comprehensive look at how a better network of paved recreational trails can be provided in the Upcounty area.

Existing Conditions and Plans

The Magruder Branch and Black Hill trails do not connect to many of the growing neighborhoods in Germantown and Clarksburg or to other existing and proposed Upcounty parks.

The 1994 Clarksburg Master Plan proposes a trail connection to Damascus Recreational Park as part of the 11-mile greenway network proposed for Clarksburg. The Germantown Master Plan features a greenbelt concept which includes parkland owned by M-NCPPC and the State of Maryland. The 1995 update of the Planning Guide to Trails proposes a multi-use trail through the North Germantown Greenbelt.

Recommendations

- Provide a hard surface trail system that links Little Bennett, Ovid Hazen Wells, Damascus Regional, Goshen Recreational, and Ridge Road Parks.

The concept, shown in Figure 15, features the existing Magruder Branch multi-purpose paved trail, the future Greenway Trail concept included in the Clarksburg Master Plan, the northern section of the Germantown Greenbelt, and a portion of the Seneca Greenway.

The concept also proposes a new trail connection extending in a north south direction from North Germantown Greenbelt through Goshen Recreation Park northward to Damascus Recreational Park. The concept recognizes Little Bennett Regional Park as a future major destination in the Upcounty.

- Assign the Upcounty hard surface trail system highest priority in the park planning work program.

Several significant park planning studies affecting the Upcounty are presently underway or soon to be underway. They affect the following parks:

- Black Hill Regional Park
- Ovid Hazen Wells Park
COUNTYWIDE HARD SURFACE CONCEPT: UPCOUNTY CORRIDOR

Figure 15

EXISTING

PROPOSED

HARD SURFACE RECREATIONAL TRAILS

NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS

Bikeway

Other (See Text)

REGIONAL/RECREATIONAL PARK DESTINATIONS

Countywide Park Trails Plan

Montgomery County, MD
• Ridge Road Recreation Park
• The Clarksburg Greenway
• Little Bennett Regional Park
• South Germantown Recreational Park

At the same time, Germantown continues to build out and Clarksburg will soon open to development. A well-thought out trail concept to guide both private and public development is essential now. Without such a concept, opportunities for public-private partnerships to implement trails will be lost and individual park master plans will suffer from the absence of an overall trail vision.

This Plan recommends the same type of concept plan is also needed for natural surface trails. This concept Plan should be established when this corridor is studied further.

Issues Needing Further Study

• The following issues must be addressed during planning, design, and implementation of the proposed Upcounty trail system:

• Providing hard surface trail access from Germantown neighborhoods to South Germantown Park.

• Connecting Magruder Branch Stream Valley trail system to the North Germantown Greenbelt.

The Great Seneca Extension connects the Magruder Branch Stream Valley and the North Germantown Greenbelt, but opportunities for a hard surface trail in this portion of the Seneca Greenway may be limited due to topography, and the relatively narrow width of the Great Seneca Extension at this location.

For this reason, this Plan suggests an alternative hard surface trail connection be studied which avoids the Great Seneca stream valley. This suggested option, shown in Figure 15, would integrate Goshen Recreational Park (owned by M-NCPCC but not yet developed) into the trail system.

• Evaluating the potential for hard surface trails in North Germantown Greenbelt.

• Providing safe trail crossings of key roadways, including MD 27, Clopper Road, and MD 355.

• Providing a hard surface trail in a segment of the Great Seneca Extension.

• Making Black Hill Regional Park and the Clarksburg Greenways part of the overall trail concept.

• Linking the Upcounty trail network to the I-270 transportation-oriented bikeway.

• Avoiding Biodiversity Areas in Goshen Special Park and in Damascus Regional Park.

• Recognizing the following areas will require these special considerations:

Black Hill Regional Park north of Black Hill Road (public boat launch area) to Old Baltimore Road. This area contains at least two wetlands and a trail already exists along the utility easement and along the stream valley. Any new trail proposals will be evaluated as part of the Black Hill Master Plan development.

Great Seneca Extension Park south of Brink Road. Informal trails already exist in this area. It has excellent habitat for forest interior dwelling birds and other wildlife. Hard surface trails could open up the forest canopy and interrupt the contiguous wooded acreage that is necessary for these species. Trail proposals will be carefully evaluated.
Bikeways and Other Non-Park Trail Connectors

This Plan focuses on trails within parks. However, there are trail facilities outside parks which are critical to creating an integrated trail system. Bikeways built as part of roadway projects are a key example.

Others are public use easements, utility rights-of-way, and sidewalks. All these facilities can enhance connectivity both between and within the eight park trail corridors.

Bikeways

Bikeways that function as non-park trail connectors of Countywide significance should have the following characteristics (based on criteria developed by the Traffic Institute, Northwestern University):

- Safety
- Attractiveness
- High quality pavement surface
- Security
- Good maintenance
- Safe intersection crossings
- Clear, informative signs

For the most part, bikeways separate from roadways will be the most desirable type of bikeway connector. However, as long as the above characteristics can be achieved, on-street connections would be suitable.

Bikeway connectors of Countywide significance are identified on each of the Trail Corridor maps.

I-270 Corridor Bikeway

Although not one of the eight park trail corridors, the I-270 Corridor Bikeway is an essential part of this Plan because bikeways here will connect the Upcounty and Downcounty hard surface park trails.

The opportunity exists in the I-270 Corridor to create a continuous bikepath, separate from major roads, the entire length of the corridor, from the Capital Crescent Trail to Clarksburg Town Center. This concept is shown in Figure 16. Community master plans for Gaithersburg, Rockville, Shady Grove, Germantown, and Clarksburg include segments of the bike path and the bike path already exists in many areas.

This bike path offers wonderful access to key elements of this Plan's proposed park trail system and connects the hard surface recreational trails proposed for Upcounty and DownCounty as shown in Figure 5.

Existing Conditions and Plans

The I-270 Corridor Bikeway includes the following existing or proposed bikeways:
- The Bethesda Trolley Trail, a combination of on-road bikeways and separate trails, provides a critical connection from Bethesda and the Capital Crescent Trail to the City of Rockville.

- The Rockville Bicycle Beltway is included in the City’s 1997 bike plan update, as well as several other bikeways thorough Rockville.

- Gude Drive/Key West Avenue/Great Seneca Highway bike paths extend from Rockville north to Germantown.

- The proposed Corridor Cities Transitway, which runs from the Shady Grove Metro Station to Clarksburg, also includes a separate bike path, linking destinations such as the Shady Grove Life Sciences area, the National Institute of Standards and Technology, Germantown, and the Clarksburg town center.

- The MD 355 bike path is proposed for most of Md 355 north of Rockville.

- The Ridge Road/Md 27 I-270 Interchange bike path offers safe crossing of I-270.

- The MD 355 bikeway in the Milestone area of Germantown east of I-270 continues the bikeway to the Clarksburg planning area.

- The Clarksburg Master Plan bikeway system, which will be built as development occurs, will complete the I-270 Corridor bikeway.

**Recommendations**

- Designate a bike path from Rock Creek Park to Gude Drive as part of the Gude Recreational Park Master Plan.

- Improve and maintain the Gude Drive bike path.

- Sign the I-270 Corridor bikeway and make the necessary improvements to upgrade and maintain this important bike route.

- Designate bike routes between the Rockville Bicycle Beltway and the Capital Crescent Trail capable of accommodating basic cyclists.

- Implement the Bethesda Trolley Trail concept to Rockville’s bicycle beltway and the Rockville Metro

- Designate a route from the end of the Bethesda Trolley Trail near NIH to downtown Bethesda and Friendship Heights.

- Provide shoulders along Beach Drive in Rock Creek Park and Sligo Creek Parkway to accommodate advanced cyclists.

**Bikeway Planning**

The following recommendations are intended to help strengthen the bikeway planning process and to help assure that bikeways provide good access to the Countywide park trail system:

- **Amend the 1978 Master Plan of Bikeways.**

The 1978 Master Plan of Bikeways remains a good policy document even though it is 20 years old. However, it is outdated in several areas:

- The Master Plan of Bikeways Map, which identifies specific routes, has been amended by so many subsequent community master plans that it is no longer an accurate representation of Countywide policy.

- The list of existing and programmed bikeways is out of date.
• The Plan preceded the completion of Metrorail.
• Design standards need to be re-examined.
• The Plan’s proposed staging program is outdated.

Updating the Master Plan should be added to the MCPD Work Program. The Master Plan Update should:

• Provide a county-wide map of bikeways which reflects approved and adopted community master plans.
• Suggest strategies to close gaps in bikeways which might become evident as bikeways are mapped at the county-wide level.
• Identify problem areas where the Montgomery County bikeway design standards or the recommended design standards are not possible.
• Integrate bikeway plans with other transportation facilities and recommend design features that enhance community character.
• Incorporate, where appropriate, the results of a current study by the Washington Area Bicycle Association, a group commissioned by M-NCPPC to identify imperfections in the current bikeway system.

• Codify the Montgomery County bikeway design policies and signing standards into a single document.

At present, bikeway design and signing standards are not codified in a single document and there is confusion as to which standards govern bikeway design. Different agencies have different perspectives on bikeways, particularly bikeways which are on-road. Uniform policies should be established in cooperation with Maryland State Highway Administration, Montgomery County Department of Public Works and Transportation, and Montgomery County Park and Planning Department to guide review of subdivisions, site plans, and mandatory referrals.

As stated in the 1978 Master Plan:

"Bikeway design should be standard and consistent county-wide...this requires that all agencies and developers constructing facilities abide by uniform standards for adequate, safe, and similar design treatment..."


• Establish a working group of representatives of Maryland Department of Transportation (SHA), Montgomery County Department of Public Works and Transportation (DPWT), and Montgomery County Park & Planning Department (MCPPD) to develop policies for implementing on-road bikeways and establish criteria for bikeways appropriate to specific situations.

Such criteria should include traffic volumes and speeds, available right-of-way, truck mix, etc. A great deal of research on this topic is being performed by groups such as the Northwestern University Traffic Institute, the Federal Highway Administration, and the Bicycle Federation of America, and should be applied to bicycle planning in Montgomery County. To determine which facilities are appropriate for which roadways, a suggested guide is FHWA's Selecting Roadway Design Treatments to Accommodate Bicycles (1994).
Although there has been widespread implementation of separate bike paths along roadways in Montgomery County, implementation of on-road bike facilities has been far less successful. Community Master Plans have been recommending these types of bike routes for decades, yet implementing agencies have been reluctant to designate, stripe or sign these routes. Policies and criteria to address concerns of implementing agencies need to be developed.

This group could function similarly to the Road Code Committee (Rococo) which is a cooperative advisory group that focuses on roadway design standards.

- Amend the submittal requirements for subdivision review to require bikeways be shown and include bikeways as a layer of information on the MCPPD GIS mapping system.

The provision of bikeways is an important element in the subdivision review process. However, keeping track of which bikeways have been dedicated and built is not being done in a consistent and comprehensive fashion. This means that the review of a subdivision in terms of bikeways is often hampered by the absence of information on bikeways in adjoining subdivisions and neighborhoods.

Public Use Easements

Public use easements are deeded and recorded routes for use by the general public. They are typically natural surface. The Trail Riders of Today (TROT) have been very successful in obtaining equestrian/public easements. Public use easements are generally dedicated during the subdivision process and provide important connectors between park trails.

Utility Rights-of-Way

Overhead transmission rights-of-way and sewer line rights-of-way are linear in nature and crisscross the County. The opportunity exists to use some of these rights-of-way to provide connections between Countywide park trails.

Sidewalks

Sidewalks become very important non-park connectors when linkages are needed through developed areas (such as the cities of Rockville and Gaithersburg).
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Implementation Recommendations

The Countywide Park Trails Plan is a long-range, visionary guide and will take many decades to implement.

This Plan recommends and sets priorities for routes that should be acquired, developed and open for public use in the next ten years. As trails are completed, the ten-year priority listing should be revisited and amended. Trail priority criteria are included to help guide this process.

This chapter also includes recommendations relating to trail design and management. A “Trail Implementation Guide”, described in this chapter, will be prepared in the next year.

Other implementation strategies are summarized in Table 6.

Ten-Year Trail Completion Priorities

Proposed trail project completions for the next ten years are summarized in Table 3.

Approximately 13 miles of hard surface trails and 31 miles of natural surface trails are proposed for completion in the next decade. Proposed trails must be subjected to an analysis of alternatives and appropriate environmental and engineering feasibility analysis. This analysis will usually take place during the facility planning stage of a project. It may be found, more likely in the case of hard surface than natural surface trails, that a trail requires further engineering work to mitigate environmental concerns and this may affect the trail completion date.

Natural surface trail projects are proposed in five of the eight Countywide Park Trail Corridors. The proposed priorities for natural surface trails reflects an aggressive program to upgrade several well-used informal trails to become part of the formal M-NCPPC trail system. A continued level of effort in new trail construction could complete the system in approximately 25 years. The timing of completion of many of the trails will depend on when additional parkland is received through the subdivision process.

Trail Priority Criteria

Table 4 lists the criteria that were used to formulate the ten-year priority list of trail completions. These same criteria should guide identification of future priorities. Eight criteria were used to evaluate hard surface trails, and one additional criterion was used for natural surface trails. The criteria echo the basic concepts of the Plan, including connectivity and geographic balance. In addition, the criteria reflect other important factors that the Board has emphasized in work sessions: public support, finishing what has been started, and fiscal responsibility.
<table>
<thead>
<tr>
<th>Plan Corridor</th>
<th>Hard Surface Trail Completions</th>
<th>Natural Surface Trail Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patuxent Corridor</td>
<td>NA</td>
<td>Jurisdiction of WSSC and State</td>
</tr>
<tr>
<td>Seneca Greenway Corridor</td>
<td>NA</td>
<td>Seneca Trail</td>
</tr>
<tr>
<td>Northwest Branch Corridor</td>
<td>None</td>
<td>Kemp Mill Road to Ednor Road</td>
</tr>
<tr>
<td>C&amp;O Canal Corridor¹</td>
<td>None</td>
<td>Muddy Branch</td>
</tr>
<tr>
<td>Rock Creek Corridor</td>
<td>Rock Creek Trail Extensions</td>
<td>Ag History Farm Park/Airpark</td>
</tr>
<tr>
<td></td>
<td>Gude Connector</td>
<td>Drive</td>
</tr>
<tr>
<td></td>
<td>Lake Needwood-Lake Frank</td>
<td>Underpass/Pope Farm</td>
</tr>
<tr>
<td></td>
<td>Connector</td>
<td>Rachel Carson Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lake Needwood to Ag History</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Farm</td>
</tr>
<tr>
<td>Capital Crescent Corridor</td>
<td>Capital Crescent Trail</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>(interim)</td>
<td>Drive</td>
</tr>
<tr>
<td></td>
<td>Metropolitan Branch</td>
<td>3.20</td>
</tr>
<tr>
<td></td>
<td>(interim)</td>
<td>Rachel Carson Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>Eastern County Corridor</td>
<td>Matthew Henson</td>
<td>Fairland Recreational Park</td>
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<tr>
<td></td>
<td>Wheaton Regional to Randolph</td>
<td>1 to 2</td>
</tr>
<tr>
<td></td>
<td>Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paint Branch Extension</td>
<td></td>
</tr>
<tr>
<td>Upcounty Corridor</td>
<td>Magruder Branch Extension</td>
<td></td>
</tr>
<tr>
<td>TOTAL MILES</td>
<td>12.70</td>
<td>31.20</td>
</tr>
</tbody>
</table>

¹ Subject to Potomac Sub-Region Master Plan.
Funding

While the construction of major new trails such as those depicted on the Countywide Park Trails Master Plan map is important for meeting present and future demand for trails, there are other components of the trail program that are also vital to the functioning of a complete trails program. Major renovations, upgrades and amenities for existing trails, as well as the construction of local community and neighborhood trails are all funded through the Capital Improvement Program (CIP). These types of projects are often given low priority compared to large, well-known projects, and are sometimes deferred. Another essential component of the trails program is an adequate Park Operating budget for policing, management, and maintenance. Funding and staffing for park operations has not kept pace in recent years with the construction of new facilities. Trails pose particular difficulties for operations due to their linear nature and location often in otherwise undeveloped areas of parks. As with all other park facilities, for the safety and comfort of trail users, operating costs must be considered in the planning and scheduling of new trail construction.

Trail Implementation Guide

This Plan will be followed by preparation of a Trail Implementation Guide, with an anticipated completion date of 1999.

The Trail Implementation Guide will be a technical, working document that is a companion document to the Countywide Park Trails Plan. The Plan provides the conceptual framework for the continued development of the Countywide trail network and designates the existing and proposed trails of regional significance. The Trail Implementation Guide will provide the technical details to guide the trail development and management processes.

The Guide will:

- Clarify and streamline the trail development process, through development standards and a written process and protocol, so that facility planning, design and construction of trail projects can proceed more smoothly, yet in an environmentally sensitive manner;

- Provide trail design and cross-section standards. Flexibility is necessary to address unique conditions, and would be allowed through exceptions. The Guide will be updated as new trail design and construction techniques and materials become available.

- Consolidate and update the trail design standards for private developers, now in the Recreation Guidelines, and the standards for park development, and

- Provide guidance and a level of standardization to trail management and maintenance throughout the county trail system.

Some of the topics to be addressed in the Trail Implementation Guide are:

- Natural Resource Protection: Where are different types of trails appropriate?

- Mitigation: What and how much mitigation will balance anticipated environmental impacts of a proposed trail?

- Permitting: What materials, techniques and processes can be identified through a cooperative effort with permitting agencies to make the permitting process run more smoothly?
<table>
<thead>
<tr>
<th>Issue Area</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| Land Availability/Development Approvals | • Is the land for the trail in M-NCPCC ownership now?  
• Is land acquisition or dedication needed before trail development can proceed?  
• When is land acquisition/dedication anticipated? Short term or long term?  
• Are there approvals or coordination with other public or private agencies expected (besides normal permitting) that may cause delays in trail development? (i.e. trail is proposed within a sewer easement, on County landfill property being converted to park land, partially on road or railroad right-of-way, etc.) |
| Constraints                    | • What is the environmental sensitivity of the trail corridor?  
• Are there known areas that will pose difficult engineering constraints for designing the trail?                                                                                                         |
| Stage of Project               | • Has the trail planning begun for the project? Has some of the field work been done? Has a general alignment been selected?  
• Have any formal studies or plans been completed? (i.e. Park Concept or Master Plans, Trail Feasibility Studies or Trail Concept Plans)  
• Has the facility design and/or permitting been started or completed?                                                                                                                                |
| Need/Demand/Public Support     | • Does the demand for the trail, based on population density, commercial intensity and proximity to public facilities, exist now, or is the trail needed primarily to serve future growth of the vicinity?  
• When is the area in the vicinity of the trail expected to experience its growth? In the near future? Long term?                                                                                  |
| Cost                           | • What is the total estimated cost for the project?  
• Is the cost per mile for this project anticipated to be high, medium or low, compared to other hard surface trails?                                                                                     |
| Similar Trails in Vicinity     | • Geographically, how close is the project site to existing hard surface trails that can meet a portion of the demand for the new trail?  
• How close is the project site to similar trails that are expected to be built in the near future?  
• Does the project serve as a connector to existing hard surface trails, thereby optimizing the use of the existing trails?                                                                        |
| Additional Criterion for Natural Surface Trails | • Is there an existing informal trail in the corridor? (Informal trails are those that are on park land and have built up over time with public use, but that were not built and are not maintained by M-NCPCC.)  
• How much use does the informal trail(s) receive?  
• What is the condition of the informal trail? Are there problems that need to be fixed soon due to safety, erosion, or environmental concerns?                                                                 |
• Design: What design standards should be used?

• Construction: What specific equipment or techniques should be required in trail construction contracts for various types of trails?

Improving High-Volume Trail-Road Intersections

As part of this Plan process, potentially dangerous hard surface trail-road intersections have been identified based on the following criteria:

• Traffic volumes for all hard surface trail-road intersections were reviewed, then the analysis was narrowed to include only roads with an average daily traffic of 20,000 or more.

• The analysis focused on trail-road intersections that may warrant special treatments including a grade separated crossing, such as an overpass or underpass, because these are the types of crossings that are the safest for trail users. However, they are the most expensive and most difficult to implement, and therefore require the most advance planning.

The results of the traffic analysis are summarized in Table ... These are presented in priority order based on factors such as traffic volume, speed, distance from a pedestrian crossing signal, existence of a median, and sight distances. These are the highest priority intersections which should be considered for safety improvements, including possibly grade separated crossings such as a trail overpass or underpass. More thorough analysis of each intersection will be required to determine the appropriate design treatment.

Recommendations

• Considering the trail-road intersections listed in Table—for safety improvements, including grade separated crossings.

• Forwarding the tables to the State Highway Administration and the County (Department of Public Works and Transportation) as recommended projects for their work programs for safety improvements or grade separated crossings.

• Identifying trail overpasses/underpasses as ISTEAs Enhancements projects (now called Transportation Equity Act for the 21st Century, popularly known as TEA21).

• Assessing trail-road intersections during the trail planning and development process to assure safe road crossings.

Trail Mapping

Adequate information on the trails is essential to maximize usability. Maps of the trail system and of individual trails enable the public to locate trails in their area. The outdated Take a Hike Map assisted people with the use of paved trails, but there is no comprehensive map of unpaved trails in the County. It is essential that the Take a Hike Map be updated and reprinted as soon as possible. In addition, park trail maps of individual hiker-biker trails are out of date, and virtually no maps exist of stream valley park natural surface trails. These maps should be developed and printed for public distribution.

Information for trail users when they are on the trail is also important so that they know where and how far they are going. This can take the form of trail signs at trailheads and key intersections indicating distance and destinations. On natural trails, blazing or signage is often necessary to mark the trail.
Table 5
Priorities for Safety Improvements at
High Traffic Volume Trail-Road Intersections

<table>
<thead>
<tr>
<th>Name of Trail/Park</th>
<th>Road Intersection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Hard Surface Trails</strong></td>
<td></td>
</tr>
<tr>
<td>Sligo Creek Trail</td>
<td>Colesville Road</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>Connecticut Avenue</td>
</tr>
<tr>
<td>Rock Creek Trail</td>
<td>Randolph Road</td>
</tr>
<tr>
<td>Sligo Creek Trail</td>
<td>University Boulevard</td>
</tr>
<tr>
<td>Rock Creek Trail</td>
<td>East-West Highway</td>
</tr>
<tr>
<td>Sligo Creek Trail</td>
<td>Piney Branch Road</td>
</tr>
<tr>
<td>Rock Creek Trail</td>
<td>Viers Mill Road</td>
</tr>
<tr>
<td>Sligo Creek Trail</td>
<td>New Hampshire Avenue</td>
</tr>
<tr>
<td>Little Falls Trail</td>
<td>River Road</td>
</tr>
<tr>
<td>Little Falls Trail</td>
<td>Massachusetts Avenue</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>Bethesda Avenue</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>Woodmont Avenue</td>
</tr>
<tr>
<td><strong>Proposed Hard Surface Trails</strong></td>
<td></td>
</tr>
<tr>
<td>Paint Branch Trail</td>
<td>Route 29/Columbia Pike</td>
</tr>
<tr>
<td>Matthew Henson Trail</td>
<td>Viers Mill Road</td>
</tr>
<tr>
<td>Mill Creek Trail</td>
<td>Shady Grove Road</td>
</tr>
<tr>
<td>Matthew Henson Trail</td>
<td>Georgia Avenue</td>
</tr>
<tr>
<td>Muddy Branch Trail</td>
<td>Darnestown Road</td>
</tr>
<tr>
<td>Matthew Henson Trail</td>
<td>Connecticut Avenue</td>
</tr>
<tr>
<td>North Branch SVP Trail</td>
<td>Muncaster Mill Road</td>
</tr>
<tr>
<td>Northwest Branch Trail</td>
<td>Randolph Road</td>
</tr>
<tr>
<td>Mill Creek Trail</td>
<td>Redland Road</td>
</tr>
<tr>
<td>Mill Creek Trail</td>
<td>Muncaster Mill Road</td>
</tr>
<tr>
<td>Metropolitan Branch Trail</td>
<td>Georgia Avenue</td>
</tr>
<tr>
<td>Metropolitan Branch Trail</td>
<td>Burlington Avenue</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>CSX/Metrorail Corridor</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>16th Street</td>
</tr>
<tr>
<td>Capital Crescent Trail</td>
<td>Colesville Road</td>
</tr>
</tbody>
</table>

Source: M-NCPPC, Office of Park Planning and Development
### Table 6

#### Plan Implementation Recommendations

<table>
<thead>
<tr>
<th>Implementation Mechanism</th>
<th>Plan Recommendation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>• Insure trail planning, design and construction programs are included in the Capital Improvements Program (CIP).</td>
<td>Trail facility planning, design and construction is primarily funded through the six-year Capital Improvements Program (CIP) which is revised every other year. For hard surface trails, new projects are first included as facility planning projects to specifically provide a Natural Resource Inventory/Forest Stand Delineation, to evaluate trail surfacing, study storm water management issues, identify environmental mitigation and improvements, and specific cost estimates. If the facility planning process results in a decision to go forward to provide with the trail proposal, then the project would be proposed for design and construction in the CIP. Natural surface trails require less complicated construction and thus the Capital Improvements Program for this type of recreational trail combines planning, design, construction and renovation into one project. A conscious effort should be made to identify grant windows of opportunities and utilize them to maximum advantage. Joint projects for transportation connections to trails should be explored with the Department of Public Works and Transportation and the Maryland Department of Transportation. The new Rural Legacy Grant Program has the potential to provide for trails in rural areas.</td>
</tr>
<tr>
<td></td>
<td>• Utilize ISTEA Enhancement Program and other grant programs wherever possible</td>
<td></td>
</tr>
<tr>
<td>Trails and Regulatory Review Process</td>
<td>• Review subdivision plans for needed trail and bikeway connections to the countywide corridor proposals.</td>
<td>This is an extremely critical component of trail implementation as opportunities will be forever lost if they are not captured at the subdivision stage. Modifications to the subdivision and Recreational Guidelines are needed to update Trail Implementation Guide design standards and requirements. This is necessary to keep up with changing user requirements and improved technology. These recommendations will be included in the Trail Implementation Guide.</td>
</tr>
</tbody>
</table>
### Table 6 (Continued)

**Plan Implementation Recommendations**

<table>
<thead>
<tr>
<th>Implementation Mechanism</th>
<th>Plan Recommendation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory Referrals</td>
<td>• Review mandatory referrals for road improvements and new bridges to assure adequate accommodation of trails and bike paths.</td>
<td>Utility line construction plans should also be reviewed to determine areas where the utility easement corridor could provide needed trail connections. Utility construction (particularly sewer and water lines) often create a disturbed corridor that provide opportunities for hard surface trails with little additional environmental disturbance, and also can often be easily converted to a natural trail.</td>
</tr>
<tr>
<td>Trail Design and Management Standards</td>
<td>• Prepare Trail Implementation Guide to provide trail development standards and trail management guidelines.</td>
<td>See text for discussion.</td>
</tr>
<tr>
<td>Volunteer Programs</td>
<td>• Establish a trail volunteer program to help construct and maintain natural surface trails.</td>
<td>Park staff are developing a new program (The “Trailblazers Program”) to utilize volunteers.</td>
</tr>
<tr>
<td>Community and Park Master Plans</td>
<td>• Incorporate trail proposals into community master plans</td>
<td>As community master plans are updated and amended, trails and connectors which link communities to the countywide corridors should be designated.</td>
</tr>
<tr>
<td></td>
<td>• Incorporate trail corridors and trail locations into all ongoing and future park master plans.</td>
<td>Existing community master plans should incorporate the park trail proposals shown in this Plan.</td>
</tr>
</tbody>
</table>

Park master plans will recommend appropriate uses for trails during the planning process. Input to this decision will be sought from trail user groups as well as M-NCPPC staff including the following: Park Management, Park Police, Natural Resources, Park Planning and Development, and Community-Based Planning. Use designations will be reviewed periodically and adjusted if conditions change.
Acknowledgements

Montgomery County Department of Park and Planning
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Montgomery County Parks
Donald K. Cochran, Director

Montgomery County Planning
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*Former staff member