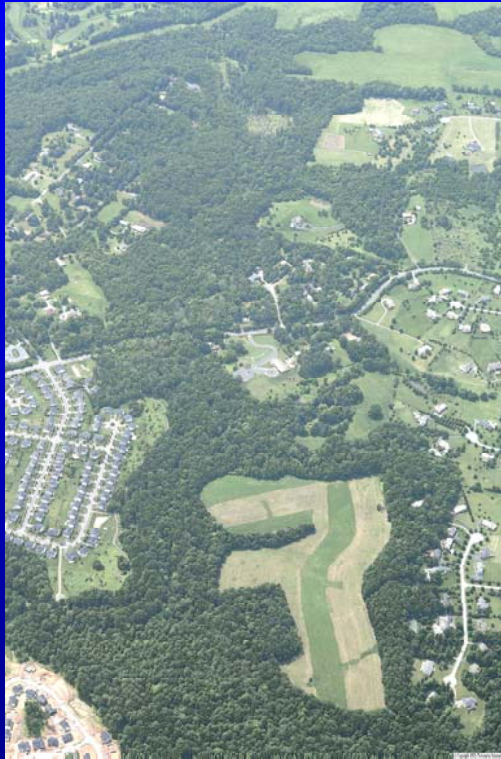


# Montgomery County's Countywide Green Infrastructure FUNCTIONAL MASTER PLAN



**The Maryland National Capital Park and Planning  
Commission**

# INFRASTRUCTURE

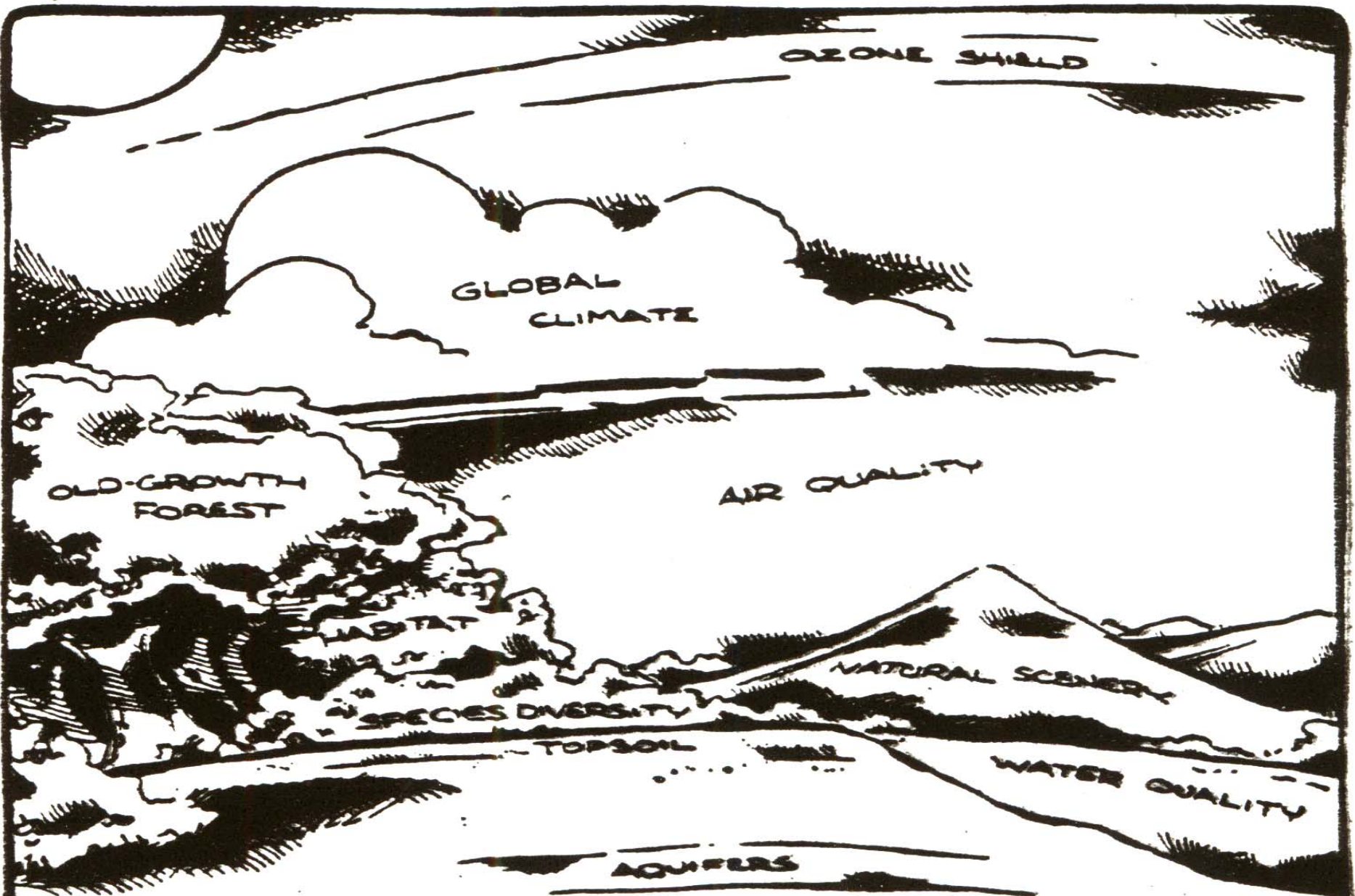
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**“An underlying base or foundation especially for an organization or system”.**

(Source: American Heritage Dictionary)







# The Other Infrastructure

# What Is “Green Infrastructure”?



**A network of waterways, wetlands, woodlands, wildlife habitats, and other natural areas of Countywide significance that supports native species, maintains natural ecological processes, sustains air and water resources, and contributes to health and quality of life.**



# Why Does the County Need a Green Infrastructure Plan?

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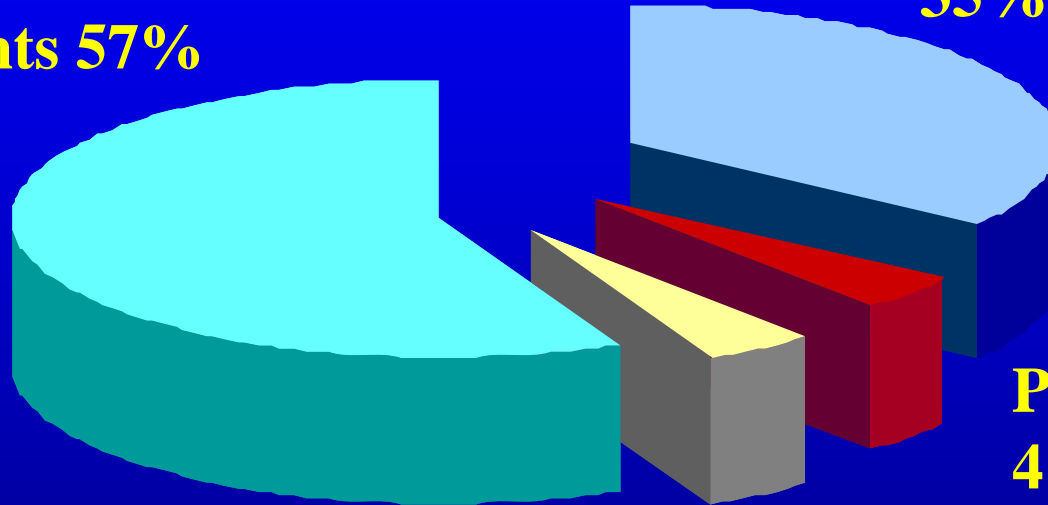


# Montgomery County Forest Protection

(Percent of Total Forest Cover)

Private Land w/o  
Easements 57%

Existing Park\*  
35%



Proposed Park\*  
4%

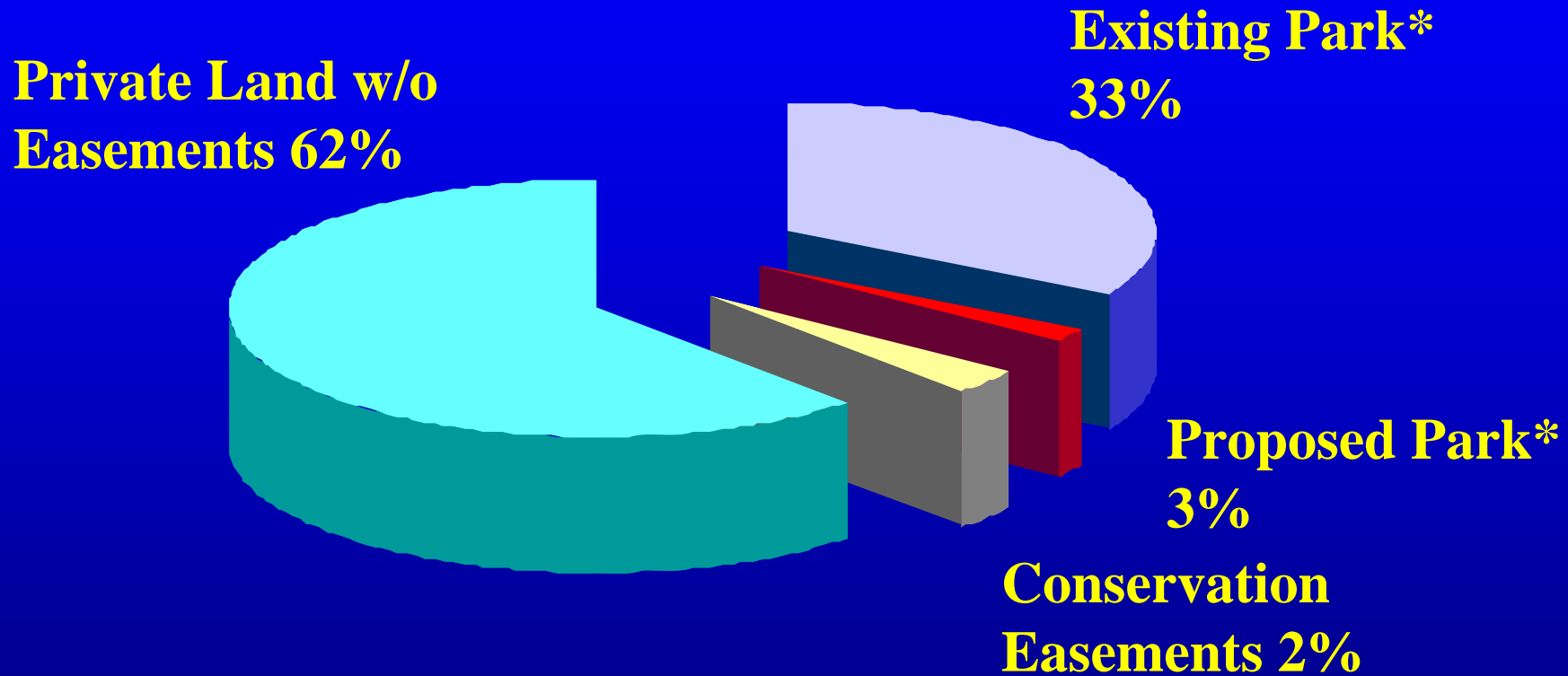
Conservation  
Easements 4%

*\*Note: Existing and Proposed Park acreage includes Federal, State, County, M-NCPPC parkland, and WSSC reservoir protection property.*

# Protection of Sensitive Areas

(Percent of Total Sensitive Area Cover)

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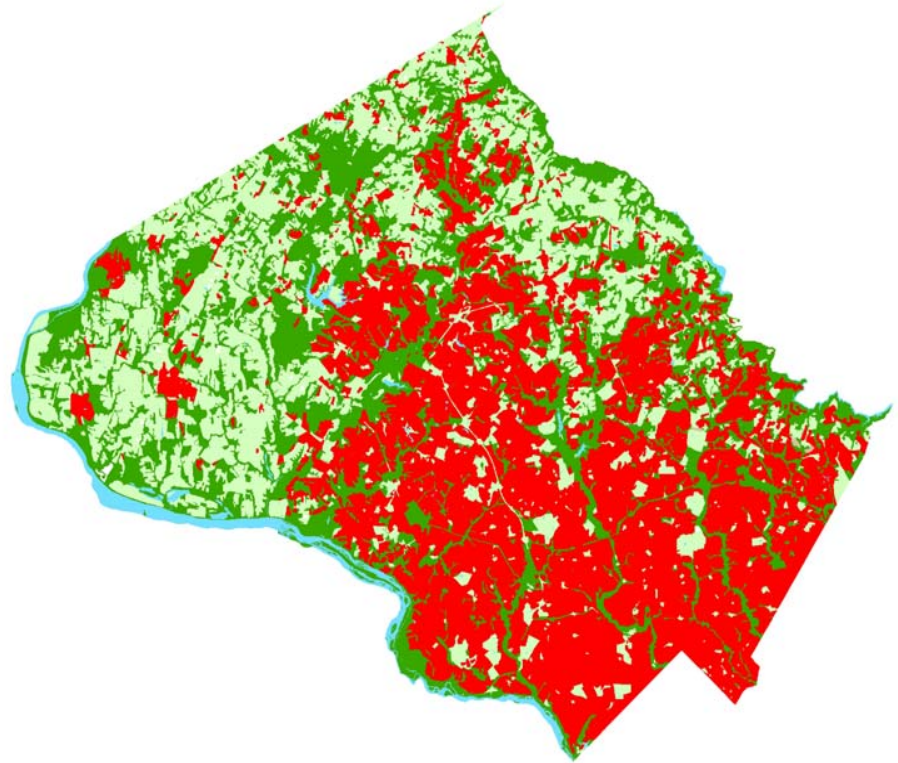
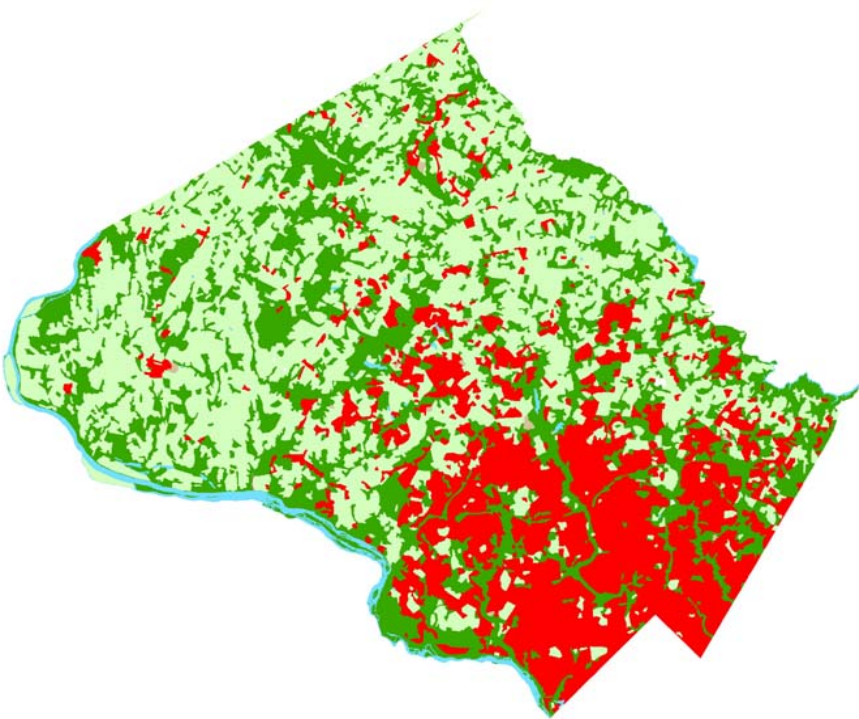


*\*Note: Existing and Proposed Park acreage includes Federal, State, County, M-NCPPC parkland, and WSSC reservoir protection property.*

# Montgomery County Land Use / Land Cover

1973

2002



**LEGEND**  
■ Developed Land  
■ Agriculture  
■ Forest  
■ Water

**MDP**

Maryland Department of Planning  
Governor - Robert L. Ehrlich, Jr.  
Lt. Governor - Michael Steele  
Secretary - Audrey E. Scott

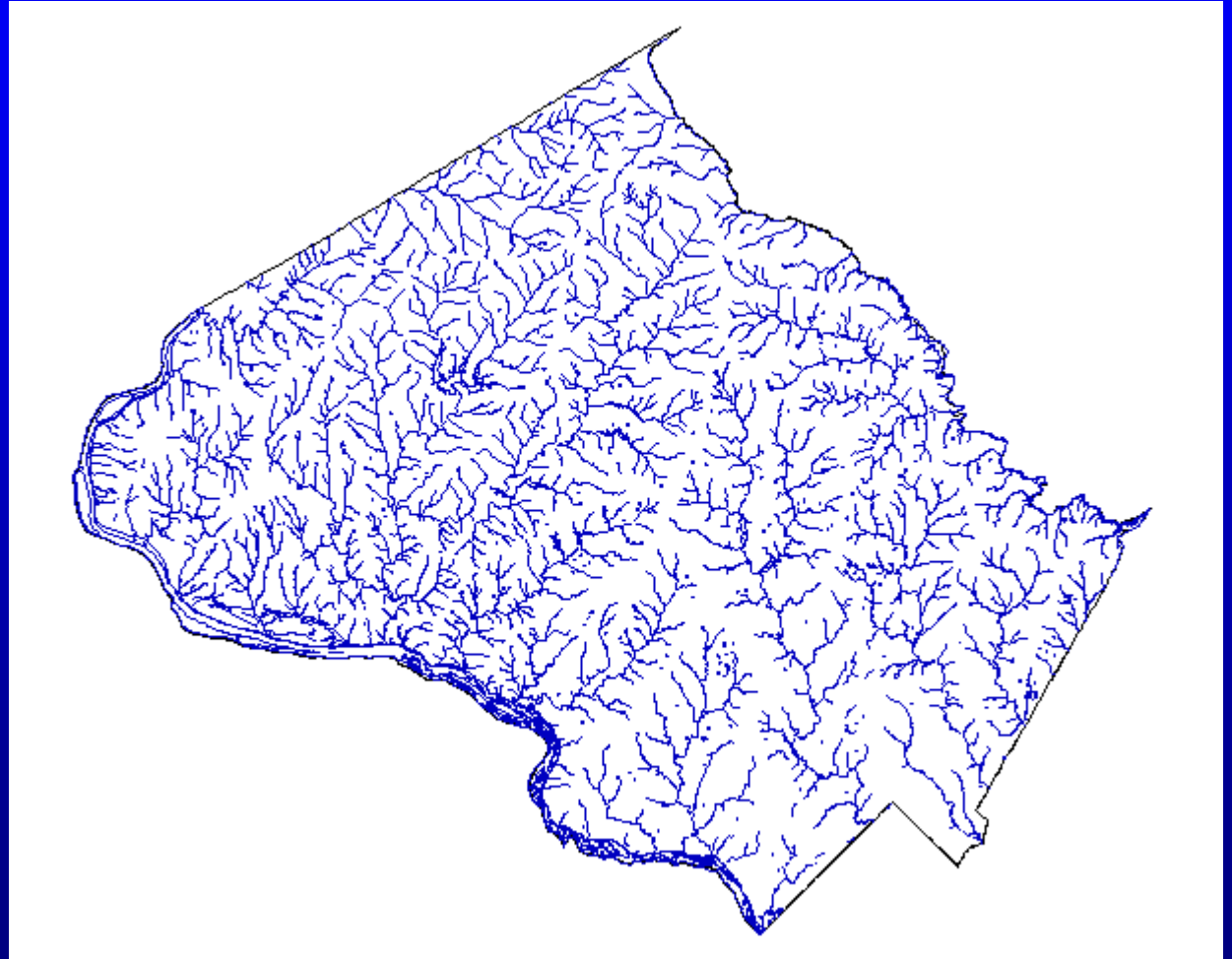
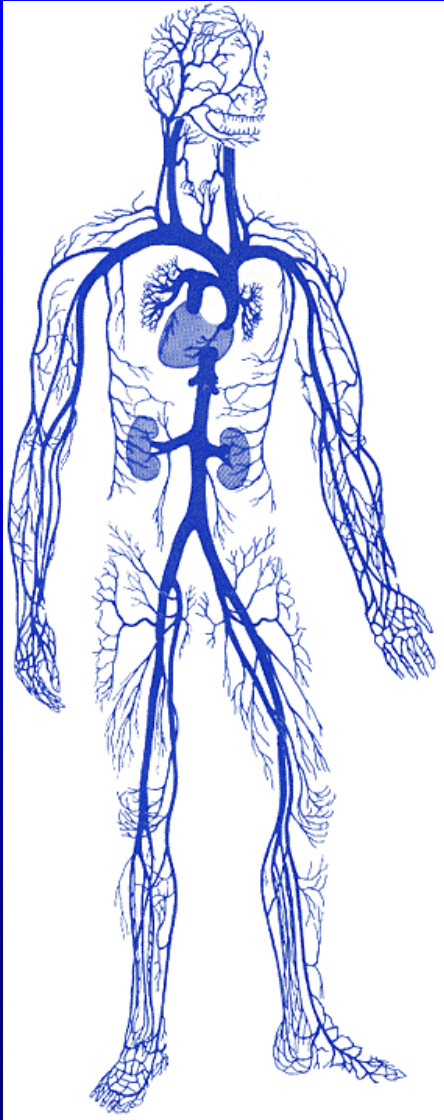
**LEGEND**  
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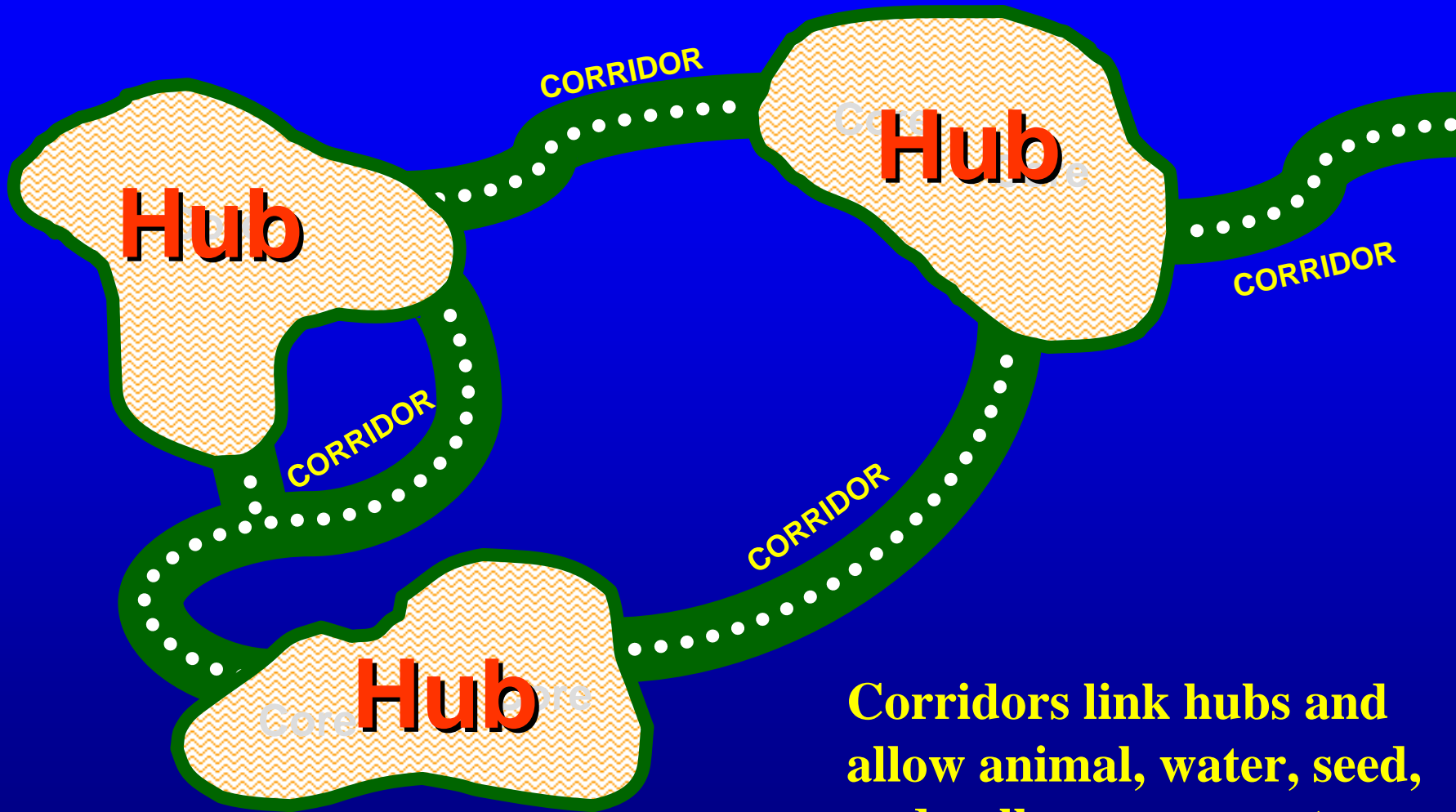


# Healthy Systems Require Vital Connections



# Corridors and Hubs

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Corridors link hubs and allow animal, water, seed, and pollen movement between hubs

# **Relationship to Other Plans and Programs**

## ***The Green Infrastructure Plan is well founded in General Plan Objectives and Strategies***

- **Increase, Preserve, Protect, and Conserve forests, waterways and other natural areas to Preserve and Enhance a diversity of plant and animal species and Protect and Improve water quality.**
- **Plan a Connected System of natural areas to support a diversity of species—identifying necessary Linkages, Minimizing Forest Fragmentation, and Identifying Reforestation areas.**



# What's the Difference Between the State's Green Infrastructure Assessment and the County's Green Infrastructure Plan?

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# State's Green Infrastructure Assessment

- Statewide map completed by the Maryland Department of Natural Resources using a model and satellite images
- Identifies interconnected network of environmental resources of statewide significance for possible GreenPrint Program acquisition
- Maps 1000 foot corridors, and hubs of 250 acres and up

# **Goal of the Green Infrastructure Functional Master Plan**

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**To identify existing green infrastructure elements throughout the County, and propose conservation mechanisms to connect, preserve, protect, restore and enhance these elements.**



# **Objectives of the Green Infrastructure Plan**

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- **Identify a Countywide network of environmentally important areas**
- **Identify the current gaps in that network**
- **Recommend implementation mechanisms**
- **Help realize the environmental objectives and strategies in the General Plan**

# **Objectives of the Green Infrastructure Plan (cont.)**

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- **Support the development pattern in the General Plan, and facilitate Smart Growth**
- **Facilitate environmental analysis and recommendations in Master Plan revisions**
- **Facilitate environmental review and mitigation for public and private development**
- **Ensure meaningful public participation**

# **Benefits of the Green Infrastructure Plan**

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## **Regulatory:**

- **Enhanced and more effective environmental review process**
- **Enhanced effectiveness of Environmental Guidelines and Forest Conservation**
- **Countywide guide for mitigation decisions  
(Prioritized database of mitigation sites)**



# **Benefits of the Green Infrastructure Plan**

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## **Master Planning:**

- **Facilitate master plan updates with a countywide environmental foundation for future revisions**

## **Park Planning:**

- **Maximum eligibility for POS funds**

# **Benefits of the Green Infrastructure Plan**

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## **Park Planning:**

- **Targeting park acquisition and reforestation**
- **Linking Legacy Open Space areas**
- **Opportunities for connecting urban green space with natural areas**
- **Maximize environmental benefits of POS funds**

# **Benefits of the Green Infrastructure Plan**

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## **Other Benefits:**

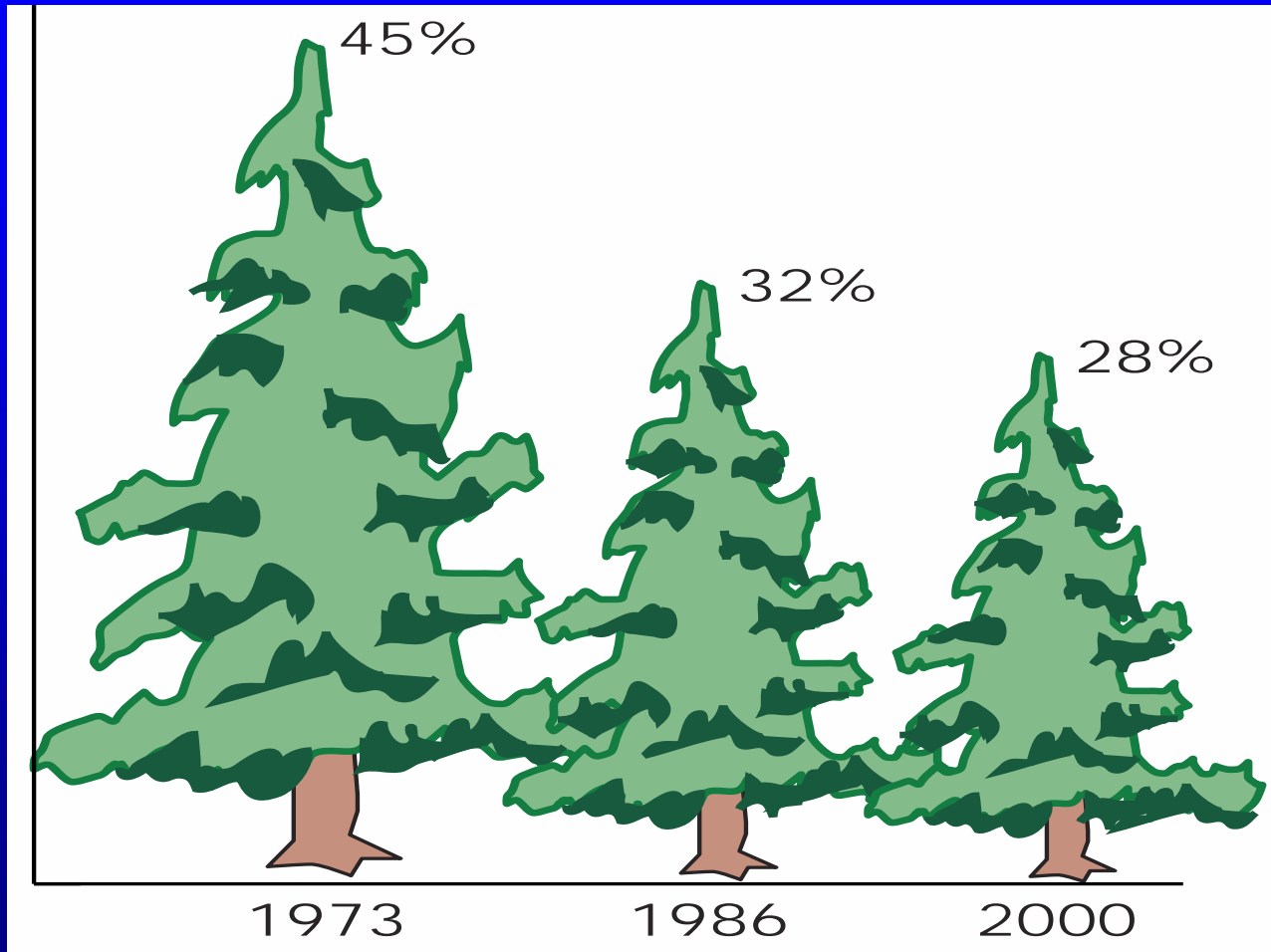
- **Land use planning-based tool for improving water quality**
- **Provide a comprehensive context for reviewing existing environmental guidelines, regulations, plans, and policies**

# **Major Themes and Issues**

- **Support the Development Pattern of the General Plan**
- **Reduce Forest Fragmentation and Preserve Habitat Diversity Through Connection and Enhancement**

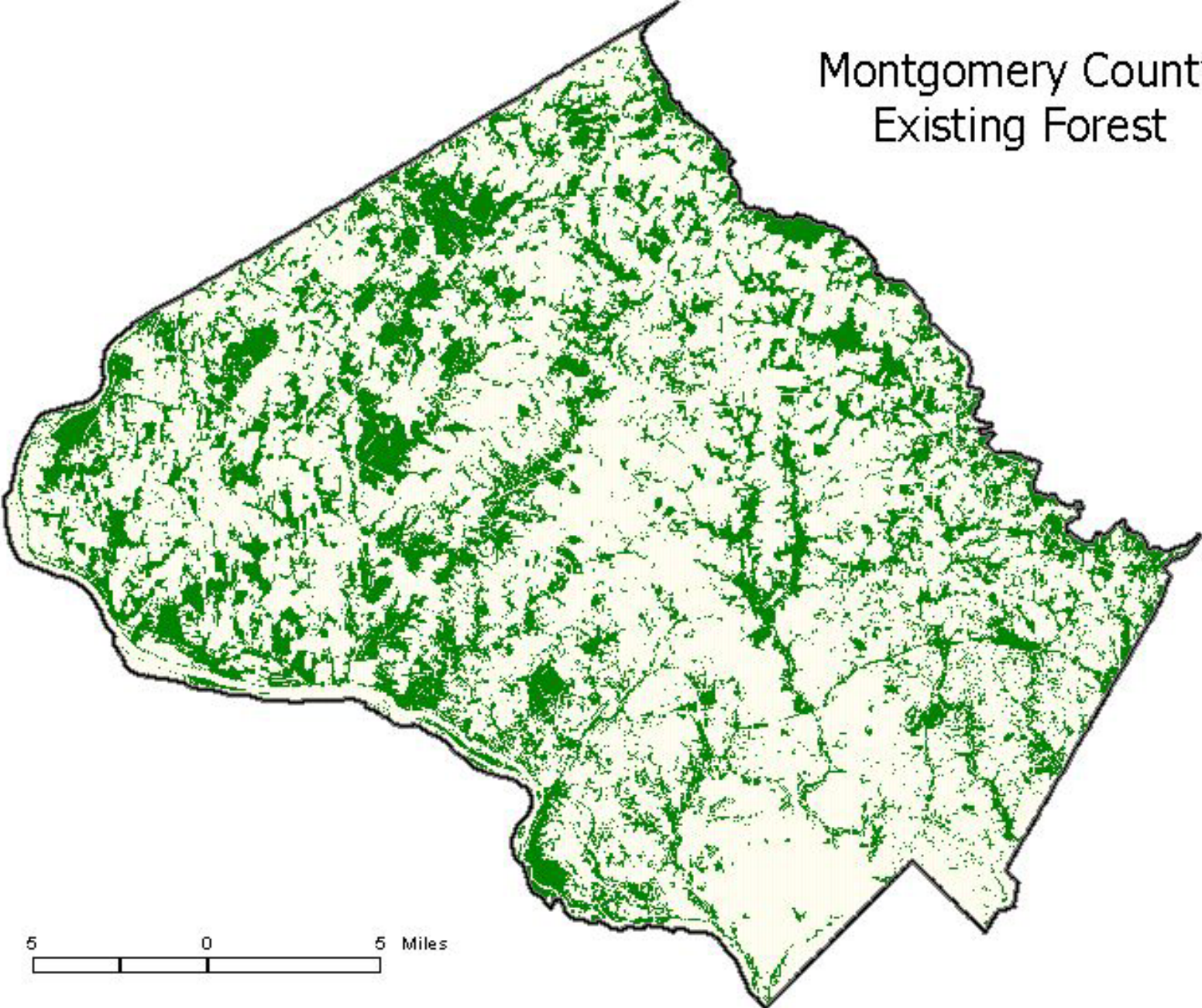
# Montgomery County Forest Change

(Percent of total County area)





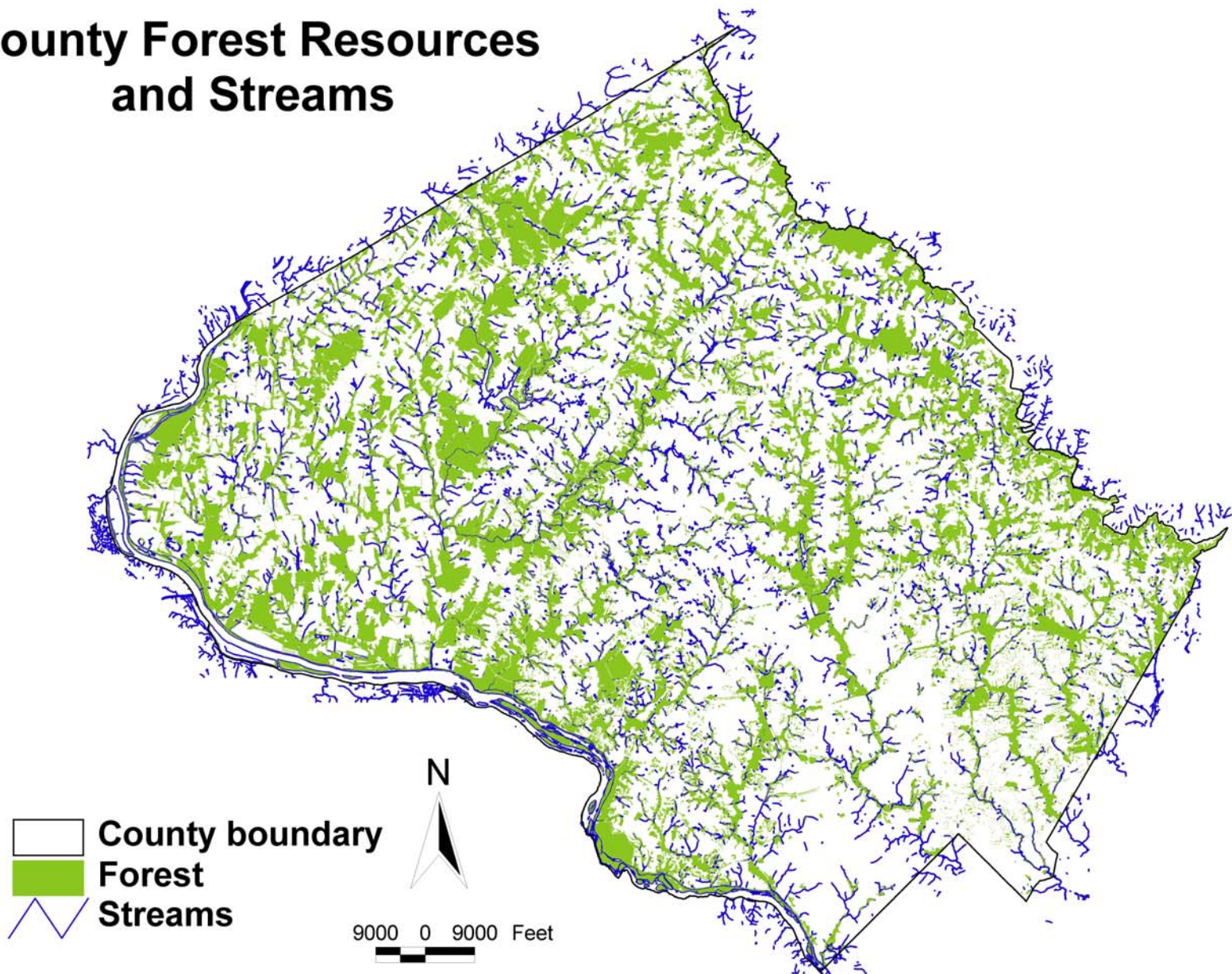
# Montgomery County Existing Forest



5 0 5 Miles

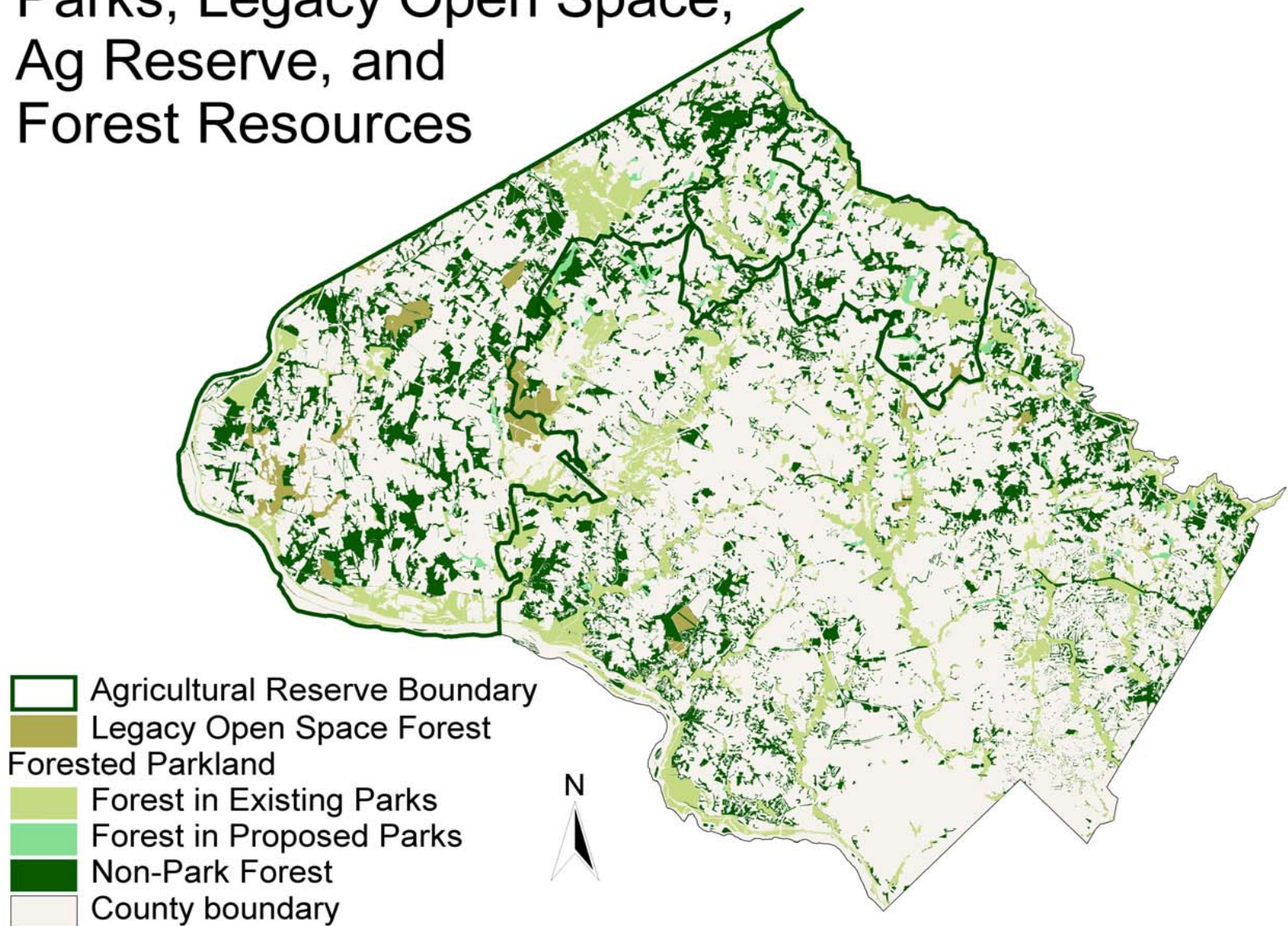


# County Forest Resources and Streams



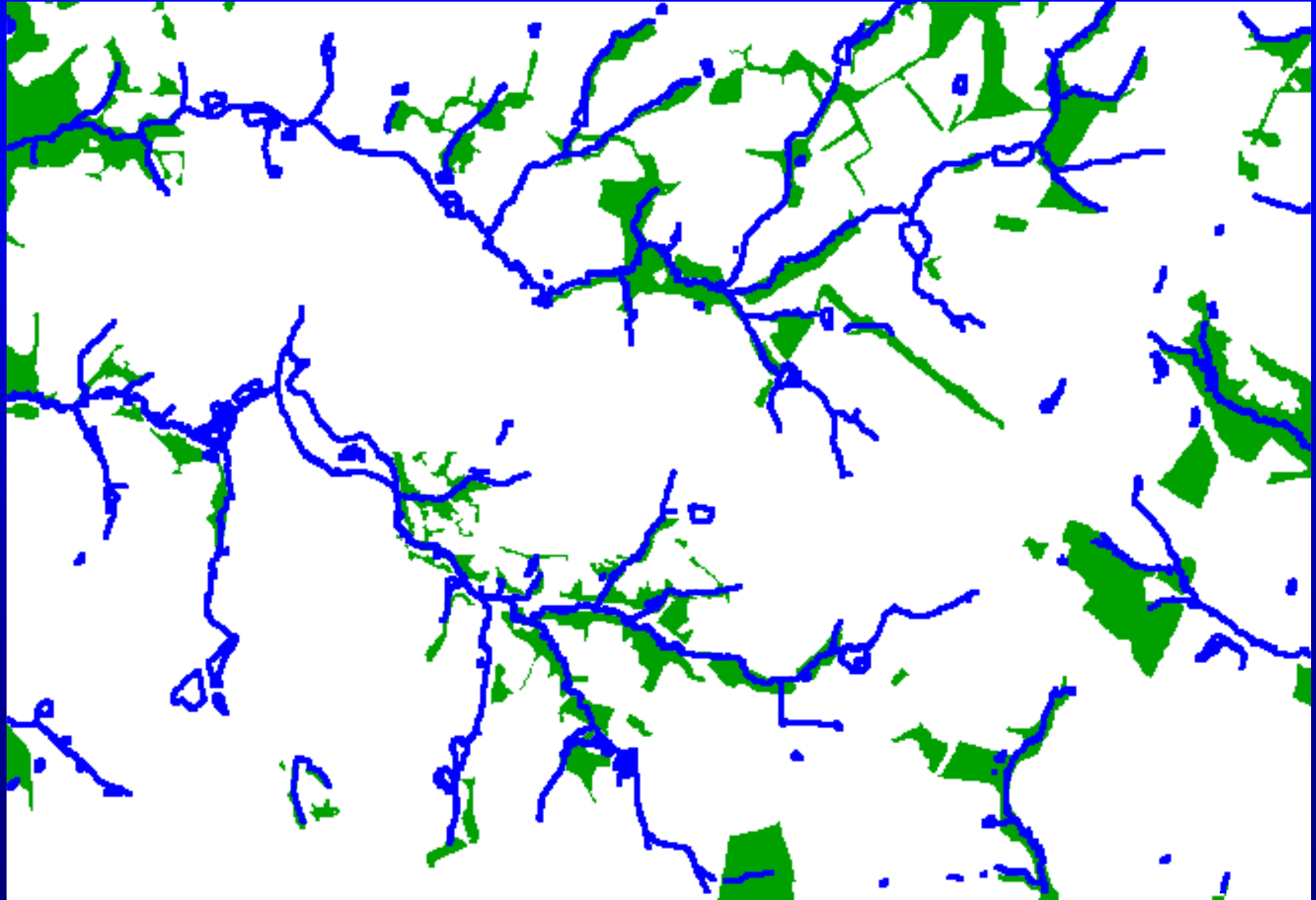


# Parks, Legacy Open Space, Ag Reserve, and Forest Resources



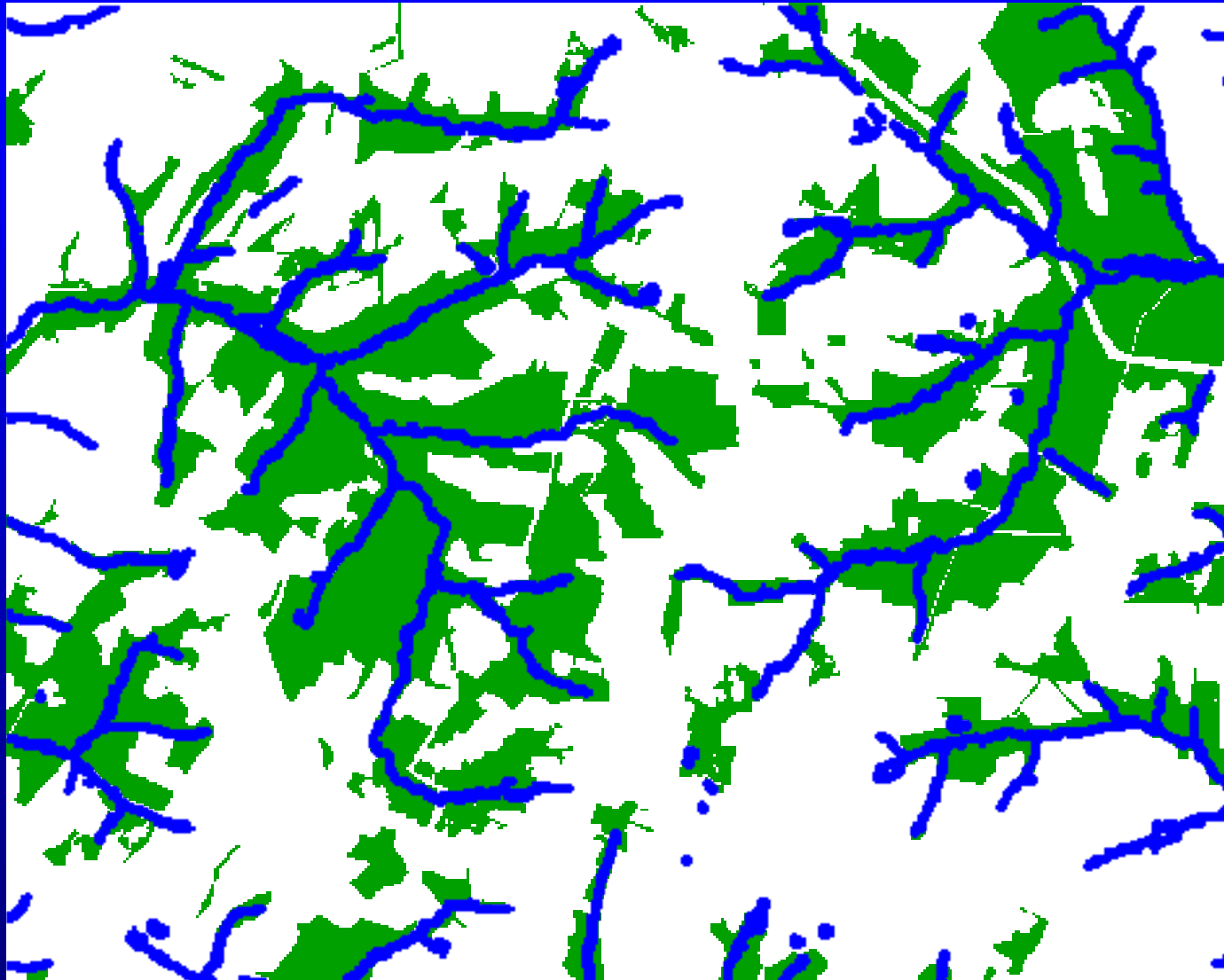


# Fragmented Forest





# And...Less Fragmented Forest



# **Ecological and Social Impacts of Natural Area Reduction and Fragmentation**

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- **Isolation of Plant and Animal Communities**
- **Increased Exotic/Invasive Species**
- **Loss of Biodiversity and Wildlife Populations**
- **Disruption of Natural Landscape Processes**

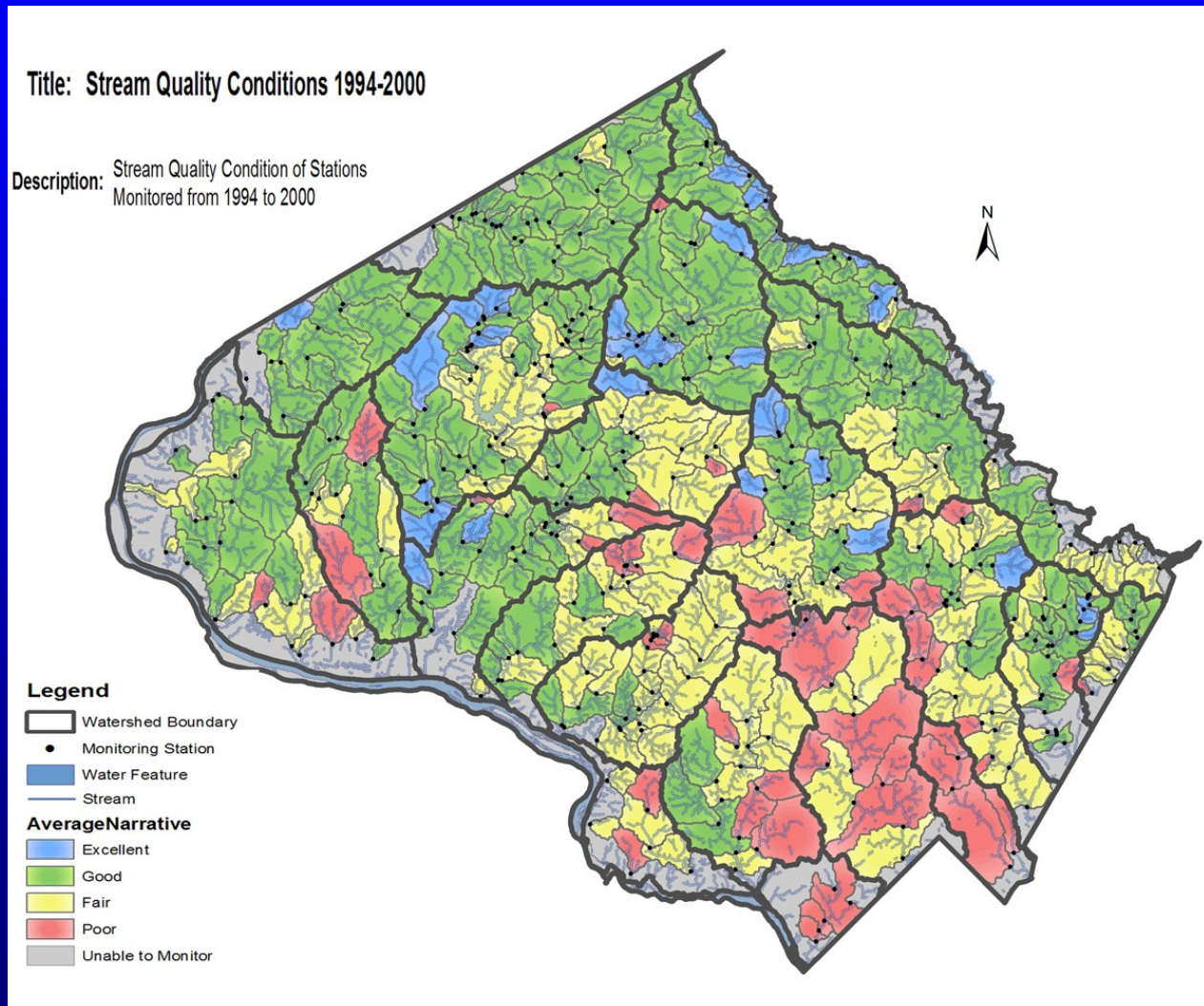
# **Ecological and Social Impacts of Natural Area Reduction and Fragmentation (cont.)**

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- **Degradation of Air and Water Resources**
- **Loss of Services Provided by Natural Systems**
- **Increased Costs for Services to Dispersed  
Development**
- **Decreased Sense of Community/Life Quality**

# Major Themes and Issues (cont.)

## • Enhancement of Water Quality



Source: MCDEP CSPA 2003 Update

# Major Themes and Issues (cont.)

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- **Consider green infrastructure element size and priority in different areas.**
  - **What sizes should be recommended for the county plan?**
- **Identify Implementation goals for the Plan**
- **Identify ways to implement the Plan**
- **Identify measures of success**



# Major Themes and Issues (cont.)

- **Balance Competing Needs and Interests**

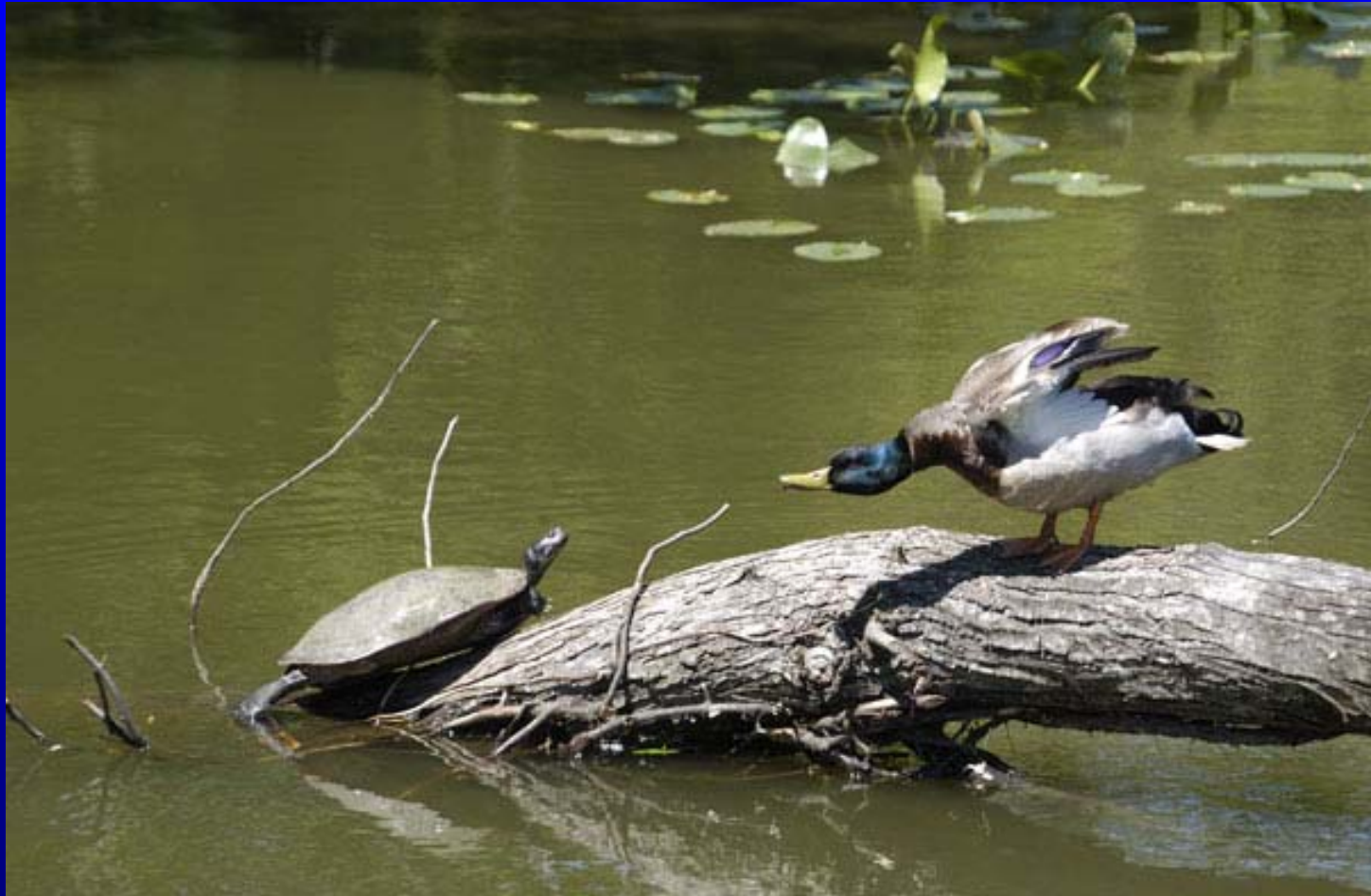


Photo by Carolyn V. Watson ©

# **Basic Green Infrastructure Development Approach**

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- Determine Minimum Corridor Width and Node Area, and Maximum Gap Width**
- Generate Map of Green Infrastructure based on minimum criteria**
- Identify Existing Natural Features and areas protected by existing regulations**

# **Basic Green Infrastructure Development Approach (cont.)**

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- Compare GI Map with Existing Natural Features to identify Gaps and opportunities for additional GI beyond the minimum criteria**
- Assess existing Plans, Policies, and Regulations to determine additional measures needed to provide incentives and mechanisms to implement GI Plan**

# Where Are We in the Plan Development Process?

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# Green Infrastructure Plan

## Functional Master Plan Process

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- ✓ 1. Purpose and Outreach  
Strategy Report – March, 2006
- ✓ 2. Natural Resources GIS Base  
Map – in progress
- 3. Plan preparation using Focus  
Groups and Public Forums  
June 2006 – December 2007  
(Focus Groups in progress)
- 4. Final draft plan preparation –  
June 2008
- 5. Planning Board and County  
Council Review-June 08-June 09





# Green Infrastructure Plan

## Focus Groups

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June – October 2006



1. **Interagency and Public Land Managers**
2. **Agriculture and Forestry**
3. **Environmental Advocacy**
4. **Building Industry and Chambers of Commerce**
5. **Municipalities and Large Civic Groups**
6. **Natural Areas Recreational Users**

# **Green Infrastructure Public Information Forums**

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- **First Public Forum to present alternative mapping scenarios (based on Focus Group input) and to solicit feedback**
- **Second Public Forum to discuss draft staff recommendations, and provide additional opportunities for public comment**

# Next Steps?

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- **June - October 2006: Focus Group Meetings**
- **October 2006 – April 2007: Formulate Draft Alternative Mapping Scenarios**
- **May 2007: Public Forum to Discuss Scenarios**
- **June 2007 – December 2007: Develop Draft Plan**
- **January 2008: Public Forum to present Staff Draft Plan**
- **June 2008 – June 2009: Planning Board and County Council Review**

# Questions/comments?

- **Web site:**

[http://www.mc-mncppc.org/green\\_infrastructure/index.shtm](http://www.mc-mncppc.org/green_infrastructure/index.shtm)

- **e-mail: [mark.symborski@mncppc-mc.org](mailto:mark.symborski@mncppc-mc.org)**

- **Call: Mark Symborski  
Planner Coordinator  
M-NCPPC Environmental Planning Section  
301-495-4636**