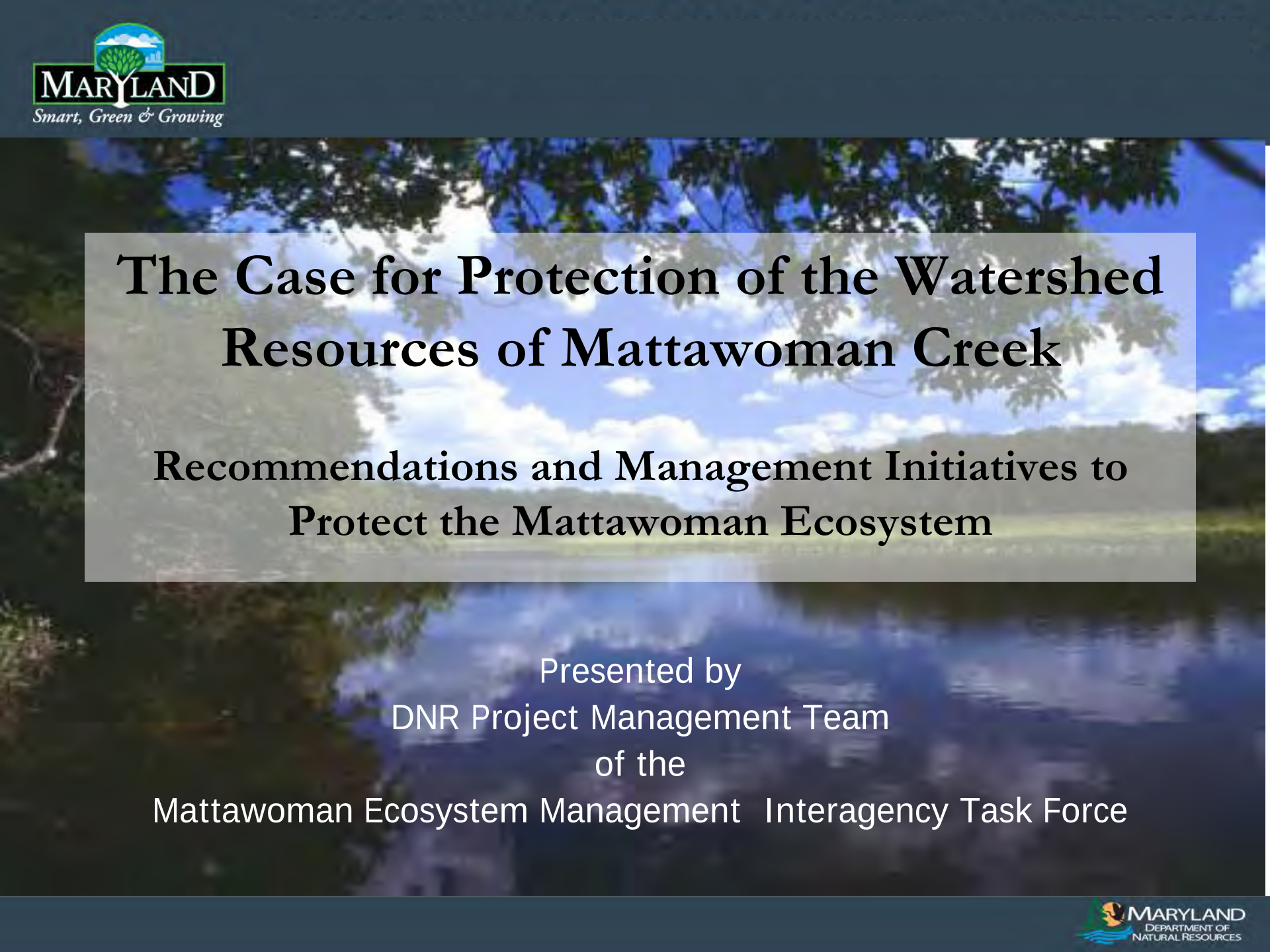


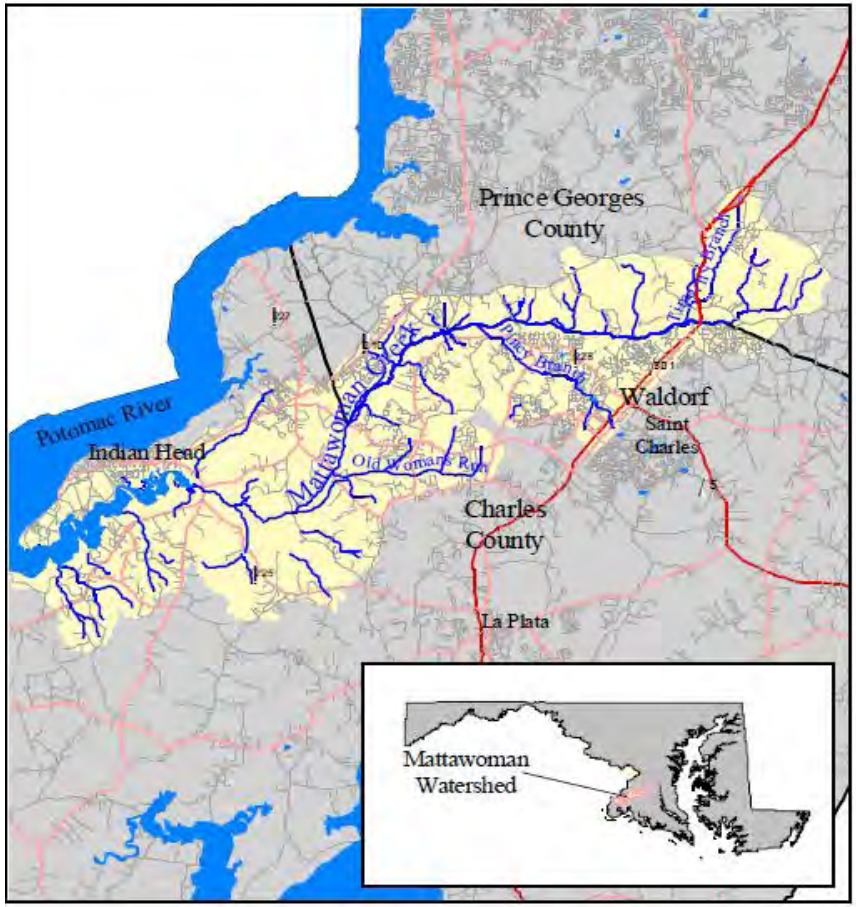
The Case for Protection of the Watershed Resources of Mattawoman Creek

Recommendations and Management Initiatives to Protect the Mattawoman Ecosystem

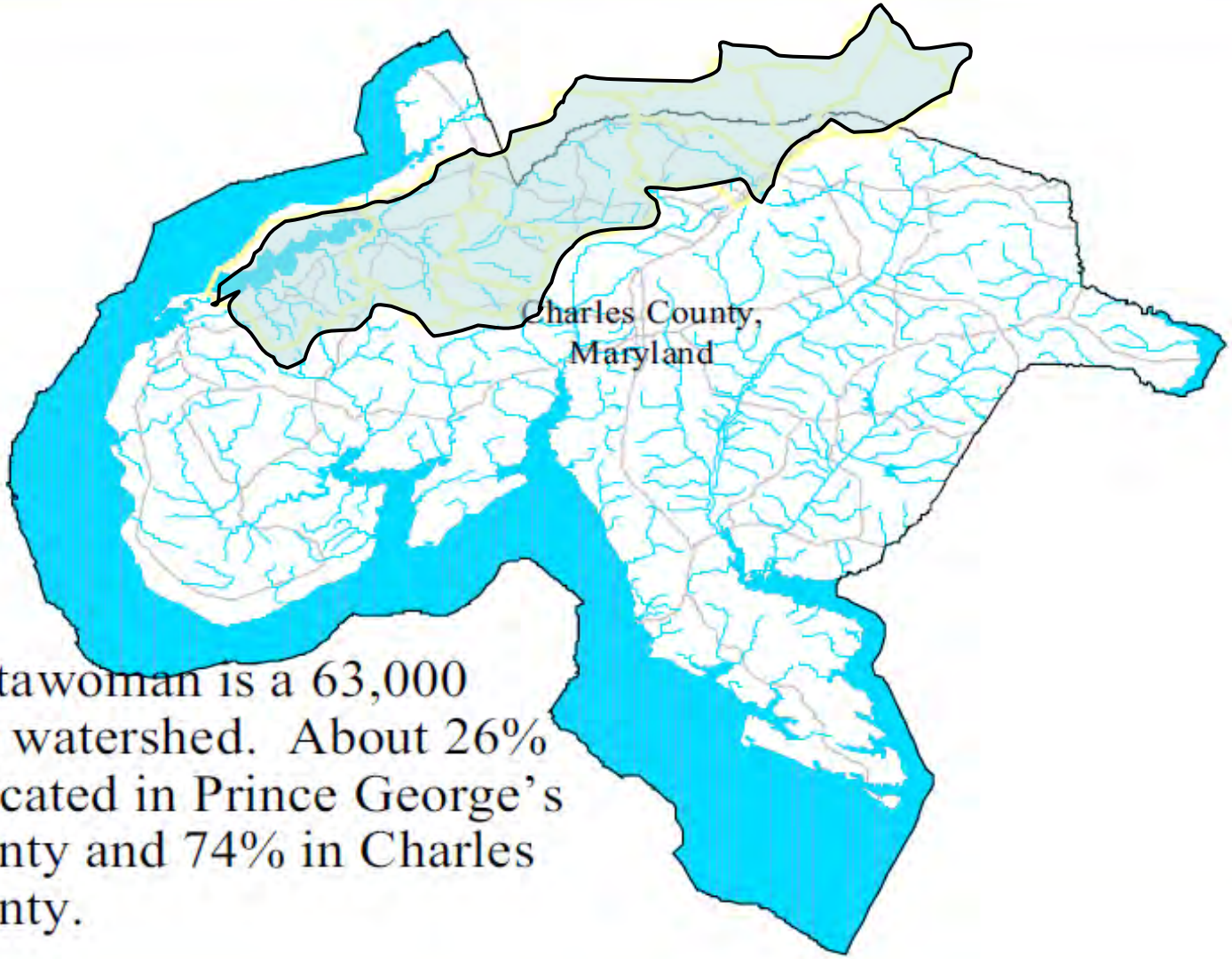
Presented by
DNR Project Management Team
of the
Mattawoman Ecosystem Management Interagency Task Force

The Where

Location of Mattawoman Creek



63,000 Acres



Mattawoman is a 63,000 acre watershed. About 26% is located in Prince George's County and 74% in Charles County.

The Mattawoman is home to:

- Sensitive fish spawning habitat;
- One of the state's premier sites for reptile and amphibian diversity;
- An especially high quality tributary (Old Woman's Run);
- A globally rare Magnolia Bog; and
- 28 species of plants and animals considered rare, threatened, or endangered

Photo courtesy of George Wilmot

The Mattawoman is an Economic Engine

- A world class sport fishery;
- A recreational asset and kayakers delight;
- An important element of the County's targeted eco-tourism industry;
- A key component of the County's landscape, image and core identity.

Photo Source: Charles County, Department of Economic Development

Early Warning Signs

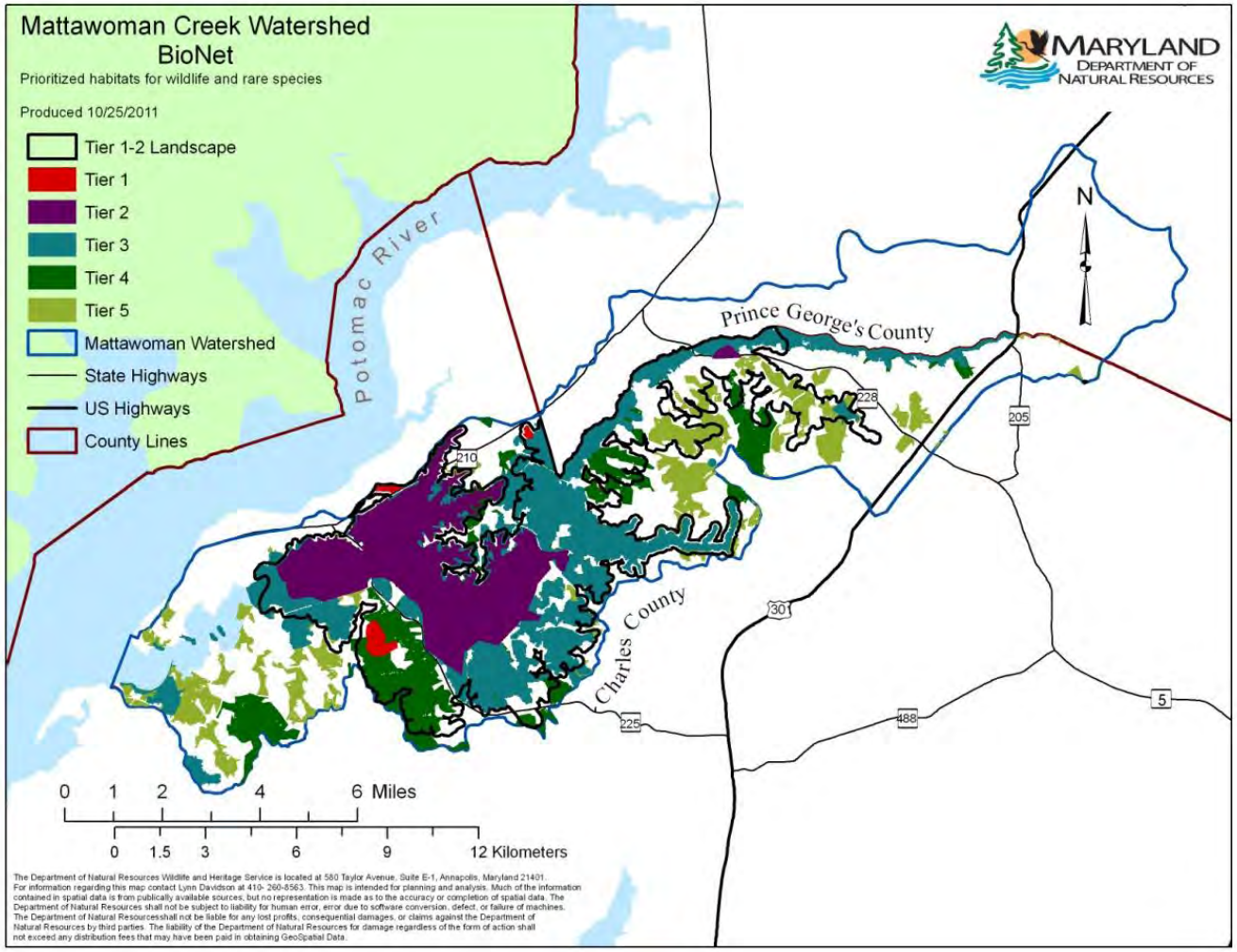
- Decline in fisheries documented during DNR review of permit applications for Cross County Connector (2009)

- Prompted consideration of broader range of planning issues as County was updating Comprehensive Plan.

•Connector extension (CCC-ex) •Western Waldorf Bypass Cross County

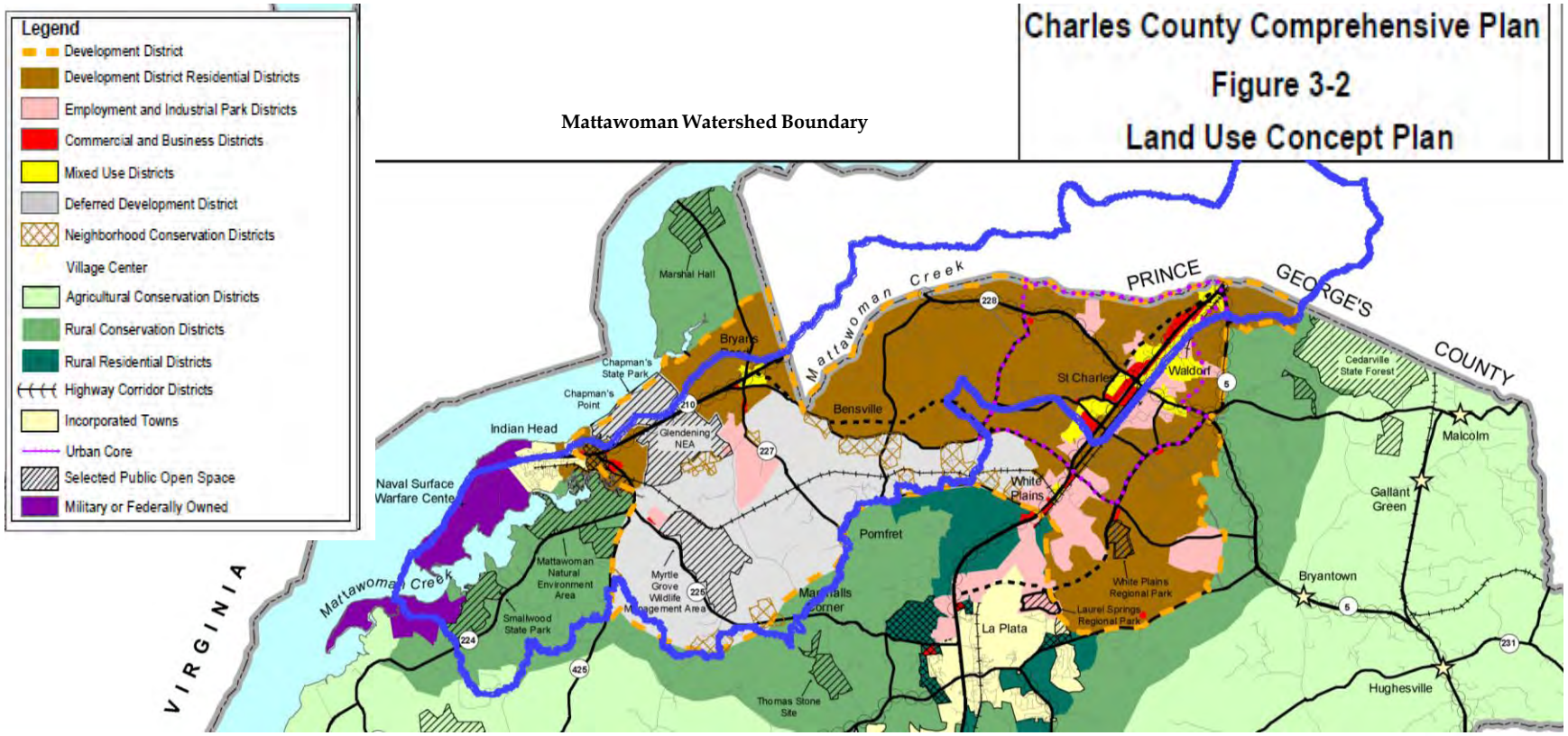
Wildlife and Rare Species Habitats

55% of the watershed provides significant habitat for Maryland's native plants, animals and natural communities.



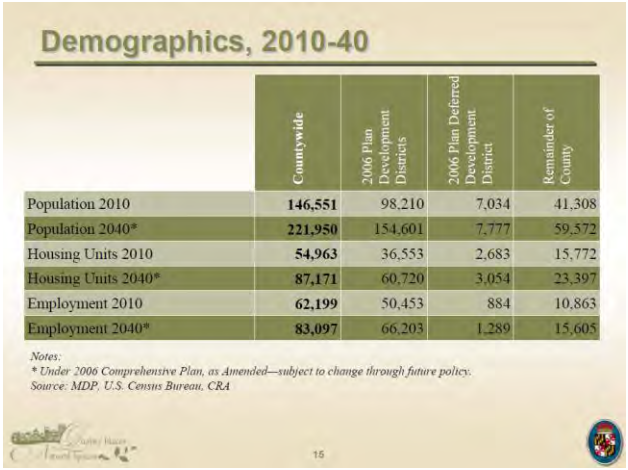
Current Land Use Plan Triggered Concerns

- Mattawoman targeted for development in 2006 Comprehensive Plan



Projected Growth

- Growth will bring increases in impervious surface with corresponding declines in fishery resources.



Demographics, 2010-40

	Countywide	2006 Plan Development Districts	2006 Plan Deferred Development District	Remainder of County
Population 2010	**146,551**	98,210	7,034	41,308
Population 2040*	**221,950**	154,601	7,777	59,572
Housing Units 2010	**54,963**	36,553	2,683	15,772
Housing Units 2040*	**87,171**	60,720	3,054	23,397
Employment 2010	**62,199**	50,453	884	10,863
Employment 2040*	**83,097**	66,203	1,289	15,605

Notes:
** Under 2006 Comprehensive Plan, as Amended—subject to change through future policy.*
Source: MDP, U.S. Census Bureau, CRA

15

Year	2010	2040
Mattawoman Watershed Population Estimates	52,622	81,189

Premise #1

- That statutory authority for land use management rests with local government and therefore local government land use reforms will be key to preventing or mitigating the impacts of development on watershed resources.

Premise #2

- That local government will be more supportive and buy in to initiatives developed in partnership with them as opposed to initiatives driven by higher levels of government in a top down fashion (TMDL's and WIP's).

Premise #3

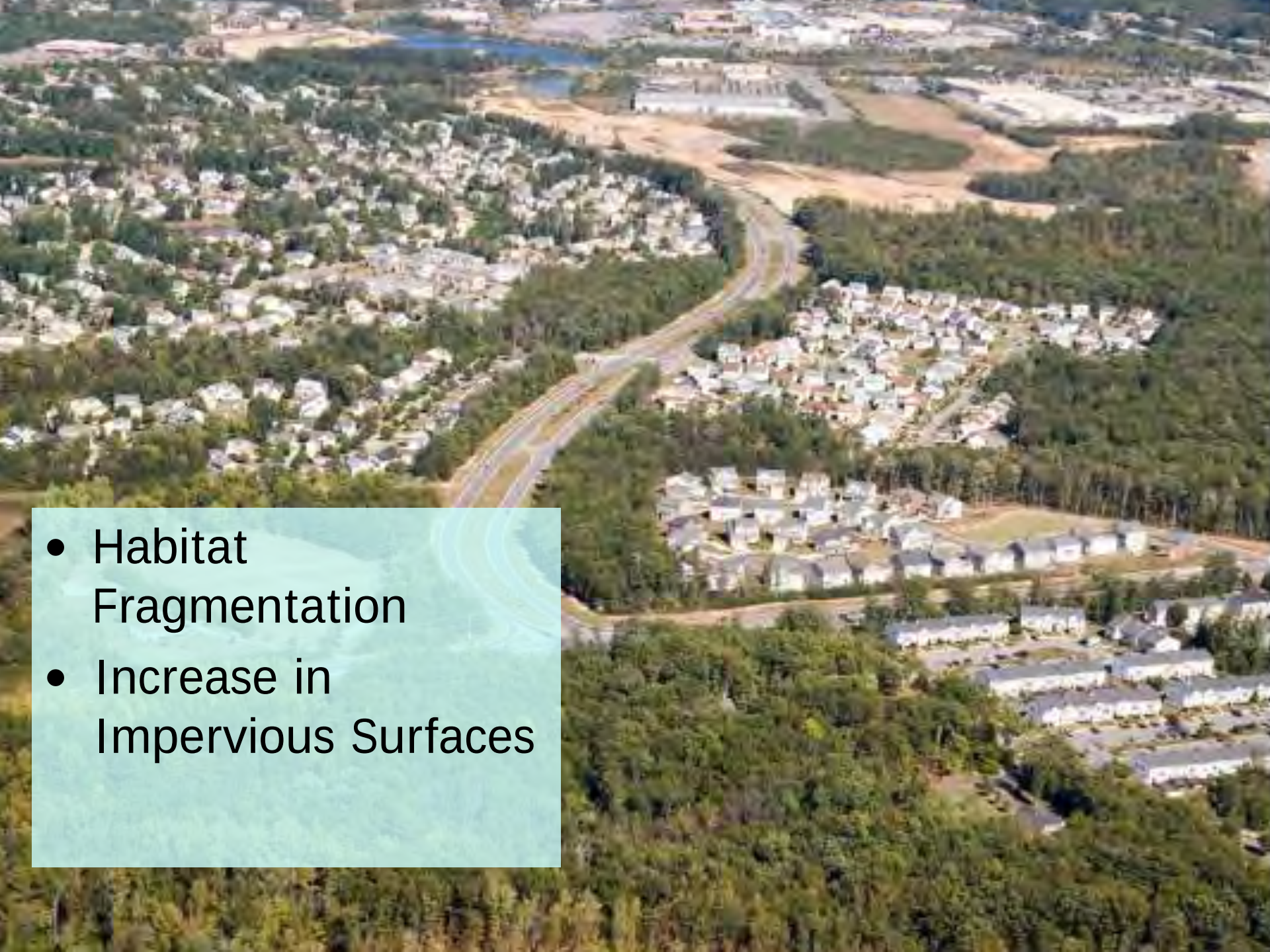
- That focusing on a watershed that has not yet reached substantial levels of impairment (e.g. 15%+ impervious surface levels) may preclude future needs to mitigate or restore damage after it's too late.

Premise #4

- That an "Ecosystem-based Management" program approach represents the most holistic approach to protection of multiple environmental attributes, including water quality, unique habitats, forest cover, rural landscapes and **therefore provides the greatest range of environmental benefits.**

Key Objectives/expected benefits:

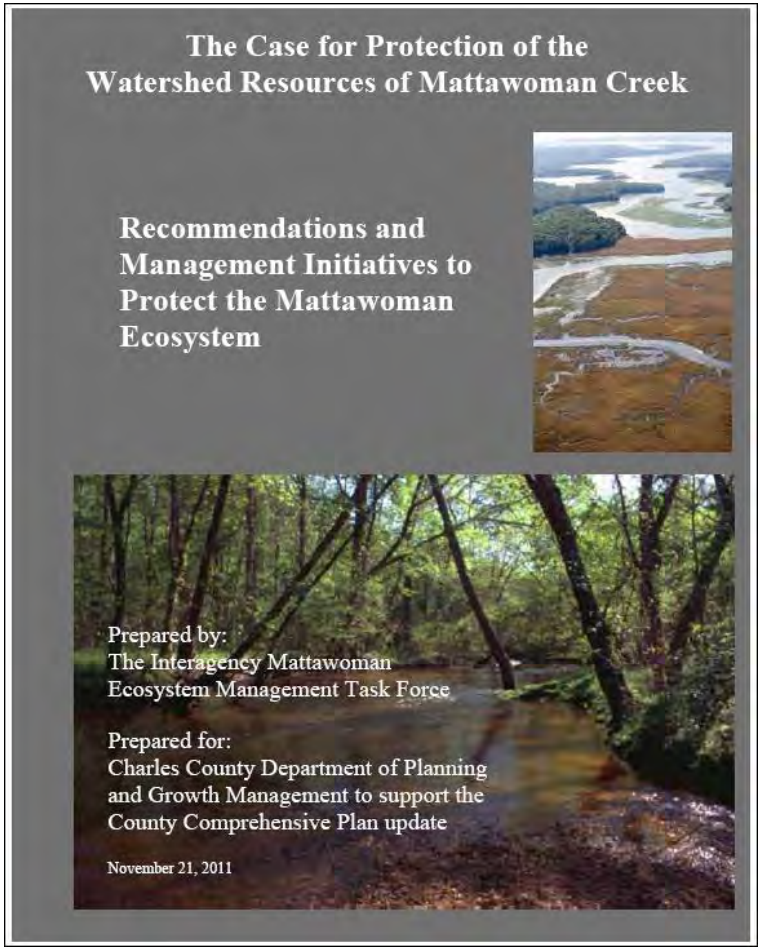
- Protect "most threatened" watershed resources/ecosystems and conditions before it's too late.
- Sustain low levels of impervious surface cover in watersheds currently subject to development pressure.
- Reduce future watershed forest and Agricultural fragmentation



- Habitat Fragmentation
- Increase in Impervious Surfaces

Interagency Report and Project Team

- Met with county (April 2011)
- Staff recommended DNR submit recommendations to support county planning process
- Interagency taskforce formed



Overview

Report identifies Current Status, Trends, Threats and Recommendations for following sectors

- Land Use
- Fisheries
- Streams
- Wetlands
- Coastal Resources and Climate Change
- Forest Resources
- Wildlife and Rare Species Habitat
- Stormwater Management

Forest Cover Protection Recommendations

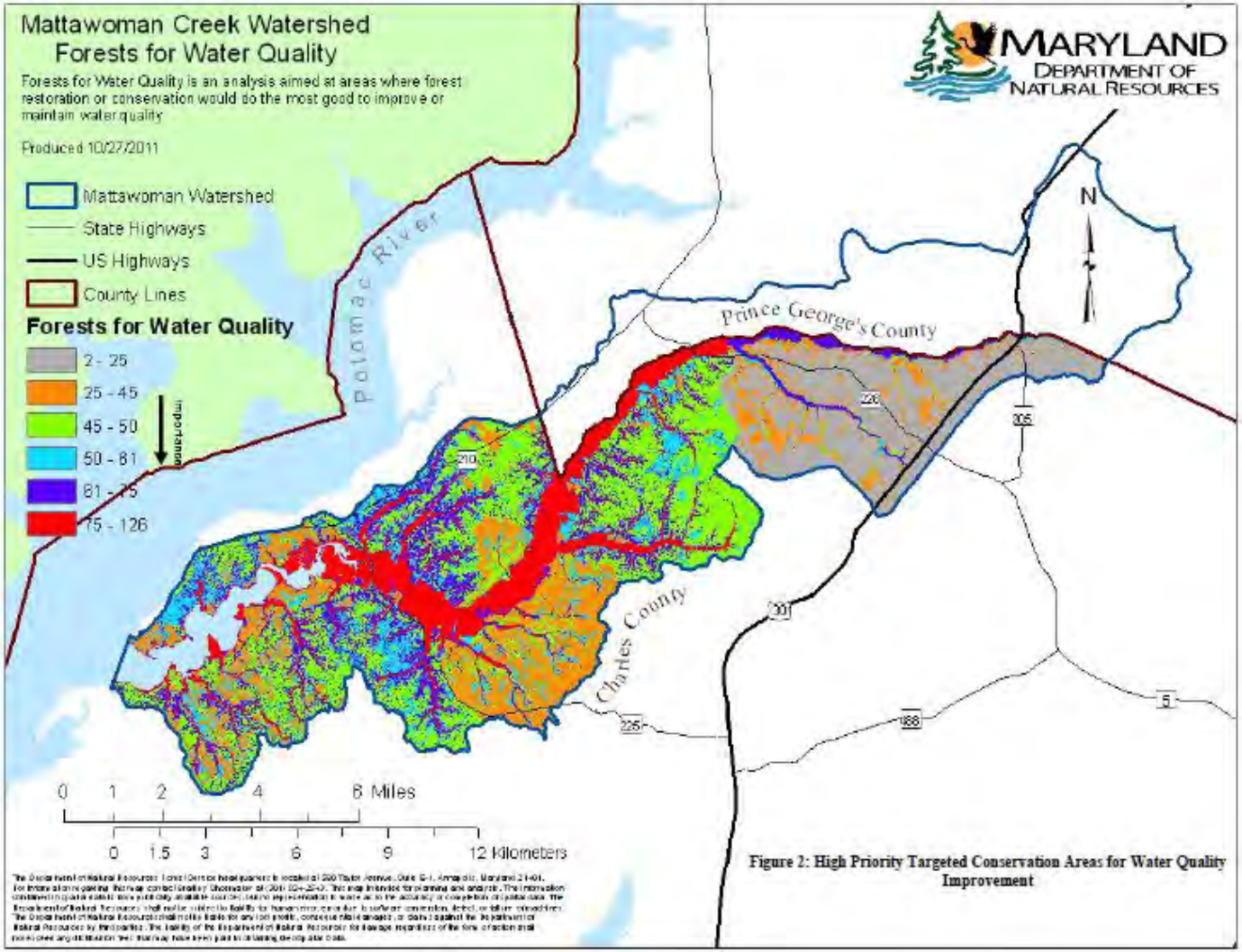
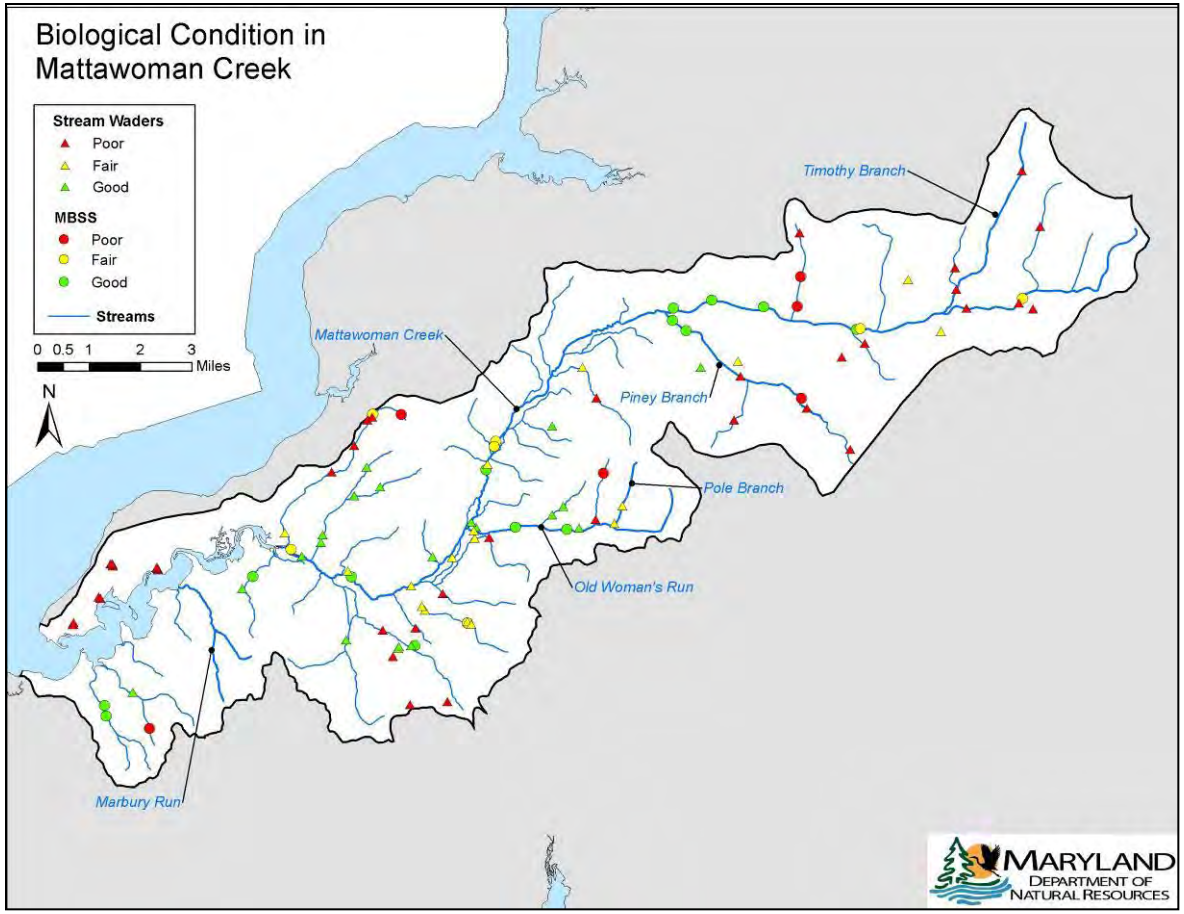


Figure 2: High Priority Targeted Conservation Areas for Water Quality Improvement

Non-Tidal Streams



Warmouth

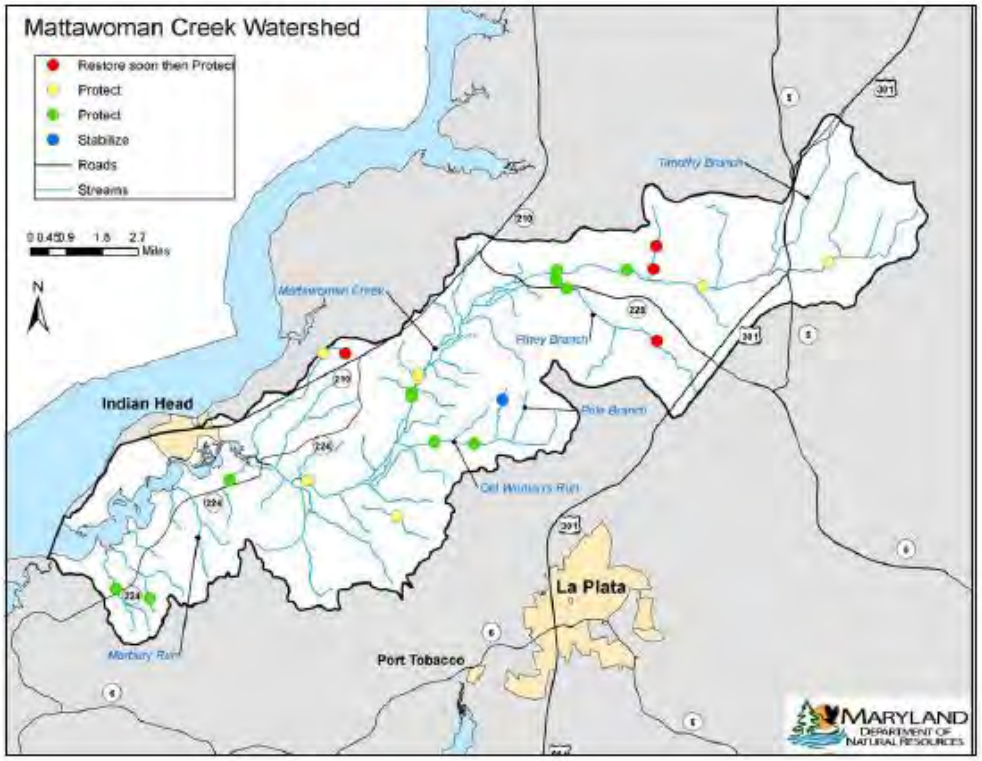
A Maryland Watch-list species

- Triage Approach prioritizes streams for
  - Protection
  - Restoration
  - Stabilization

Table 1: Triage Systems Approach using Stream Ecological Condition

Medical Condition for Triage	Triage Group Priority and Color	Stream Ecological Condition	Range of CBI Scores* (Total Miles)
•Routine or minor but not serious injuries •walking wounded •little or no treatment needed •delayed care is OK •can return to duty in short period of time	Priority 3	•Mostly healthy •comparable to minimally-disturbed reference stream •reduce and prevent threats •PROTECT	4.0 to 5.0 (1804)
•Moderate to serious but non-life threatening injuries •treatment can be delayed •in stable condition but requires medical assistance	Priority 2	•Slightly degraded •minimize threats •PROTECT so stream can heal itself	3.0 to < 4.0 (3263)
•Severe life-threatening injuries •will probably survive if treated soon •cannot wait but must have 1st priority	Priority 1	•Moderately degraded •significant deviation from reference streams •RESTORE soon then PROTECT	2.3 to < 3.0 (1759)
•Critical injuries, beyond help, expectant •likely to die regardless of care received •low priority for treatment •care required is beyond medical personnel capability and time •administer drugs to reduce pain	Priority 4	•Severely degraded •lost cause •STABILIZE then take short-term remedial actions to eliminate hazards to human health, improve aesthetics •DO NOT attempt extensive/expensive restoration	1.6 to < 2.3 (1562)
•Deceased with no vital signs, beyond help	Priority 5	•Critically degraded •only most tolerant biota present, if any: DO NOTHING	1.0 < 1.6 (807)

Map 1: Management guidance for Mattawoman Creek streams based on applying the Triage Systems Approach

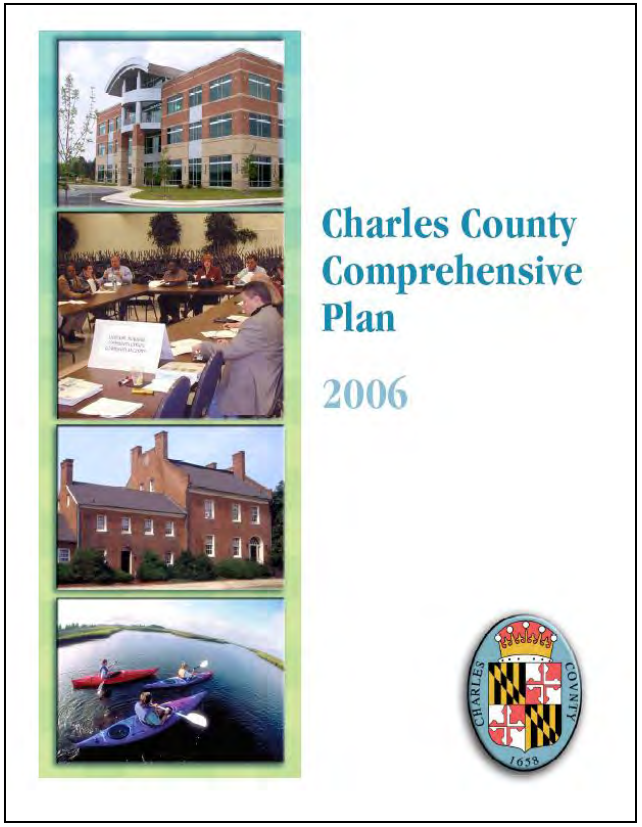


Land Use Findings

- 2006 Comprehensive Plan, if implemented, results in over 20% impervious surface at build-out

Land Use Findings

- Charles County has adopted a number of planning documents and undertaken studies that clearly support the protection of the Mattawoman resources.
  - 2006 (current) Comprehensive Plan Goals
  - 2006 Land Preservation and Recreation Plan
  - Army Corps of Engineer's 2003 Mattawoman Creek Watershed Management Plan

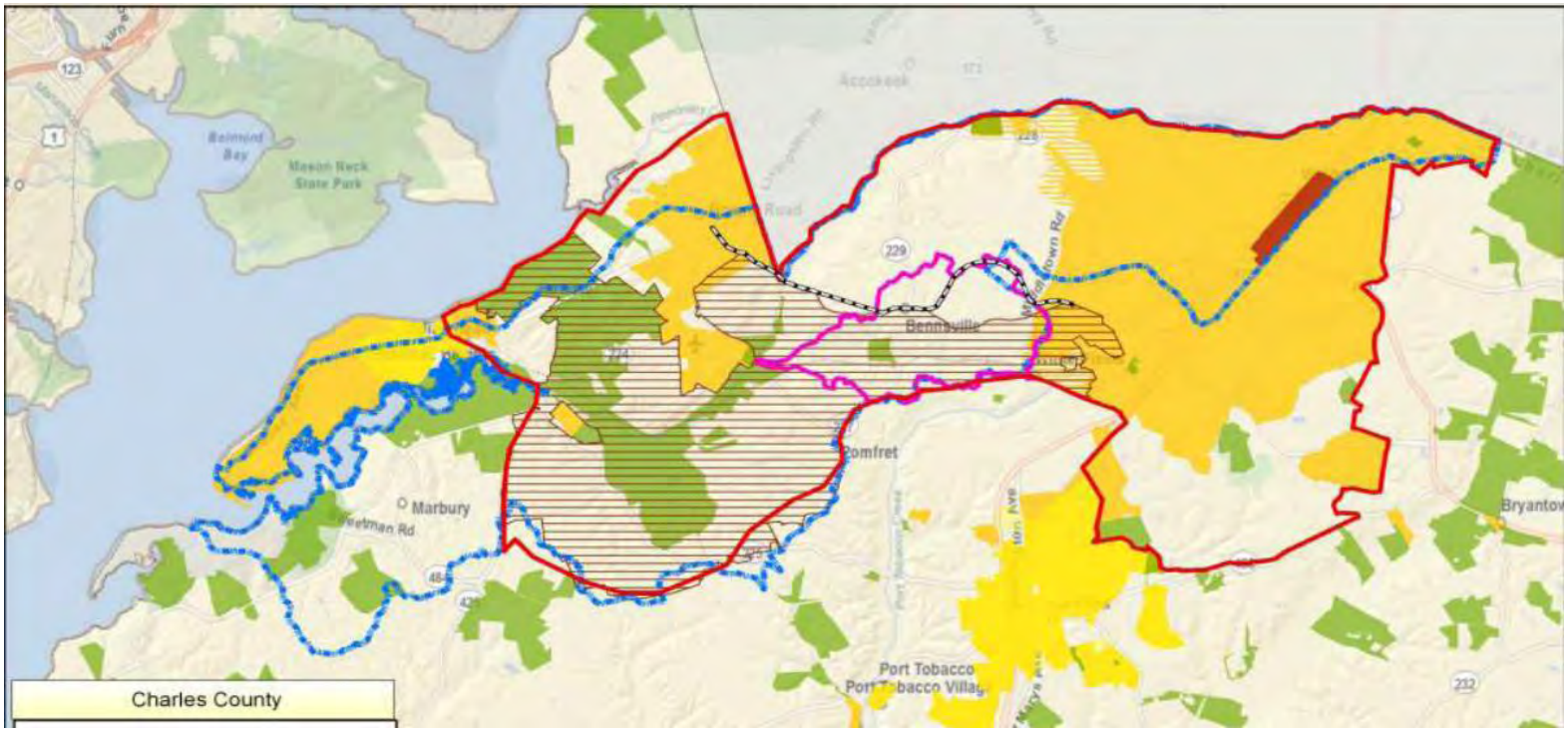


Land Use Findings

- Implementation through current County zoning is not always consistent with Mattawoman protection objectives

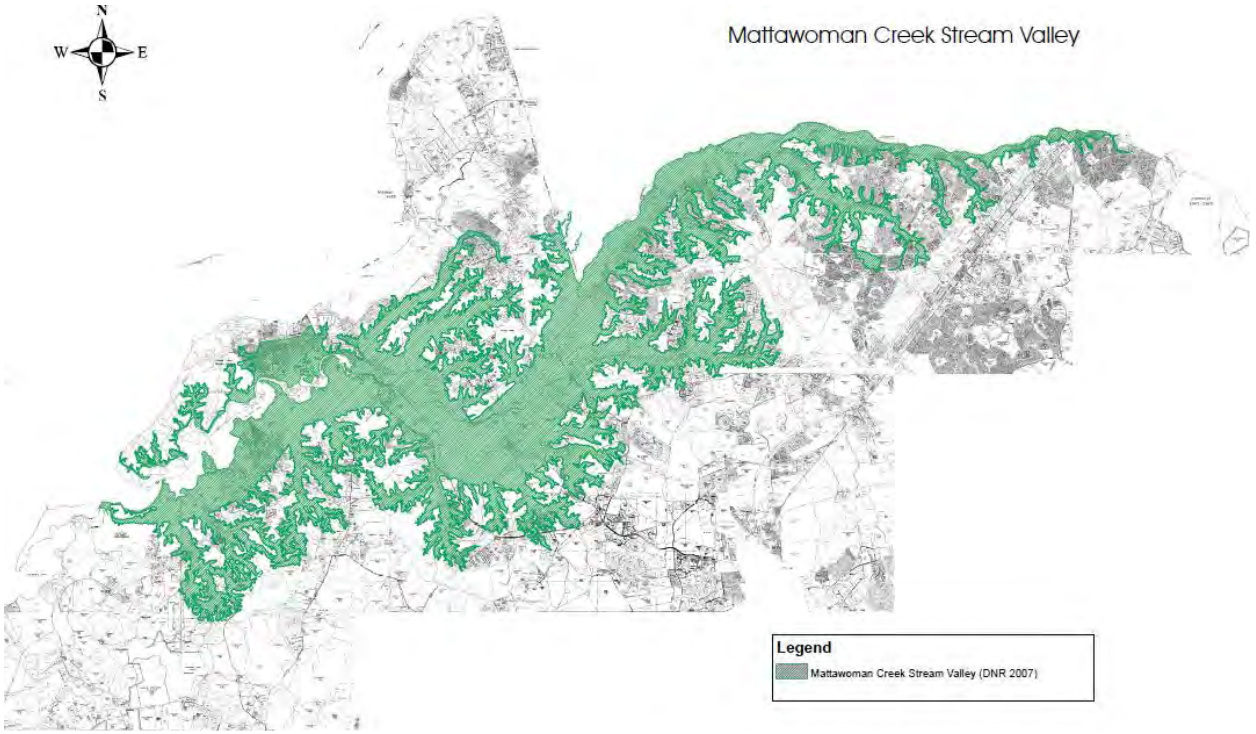
Land Use Recommendations

- Remove portions of the Mattawoman Watershed zoned RC (D) from the Development Service District



Land Use Recommendations

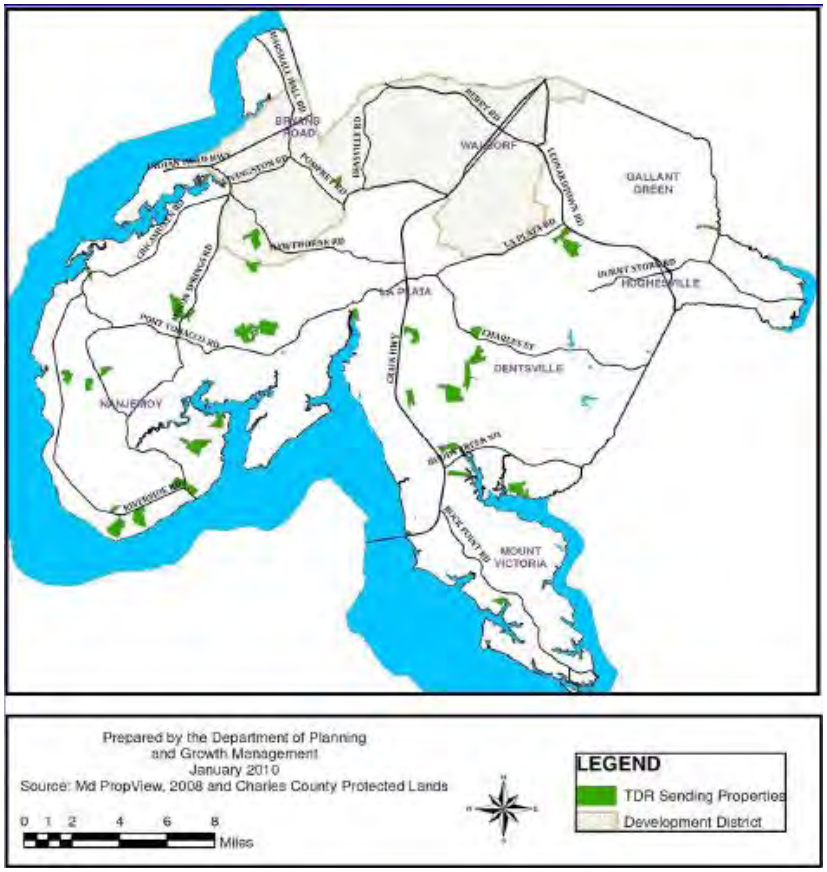
- Protect the Mattawoman Creek Stream Valley
  - This recommendation is already identified for implementation in the County's 2006 Comprehensive Plan and Land Preservation, Parks and Recreation Plan.



Land Use Recommendations

- Limit development in the Rural Conservation (RC-D) to a maximum of 1:20

- Expand TDR to allocate rights to compensate landowners for change in zoning

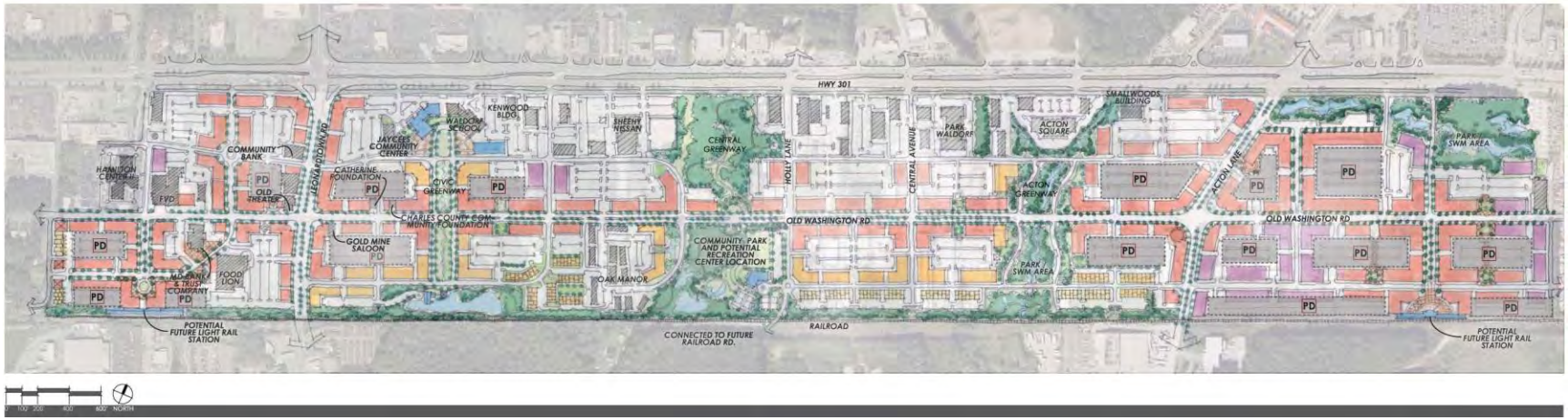


Land Use Recommendations

- Re-evaluate Transferable Development Right (TDR) program opportunities for additional applications
  - Consider creation of a TDR Bank to enhance TDR program function and use.
  - Modify TDR program provisions that allow re-purchase of development rights for use in sending areas.
  - Establish a County Purchase of Development Rights Program to supplement the TDR options and create a dedicated funding source to insure its successful operation over time.

Land Use Recommendations

- Maximize density in Town Centers
  - Require development to achieve minimum densities to assure efficient use of land in appropriate designated growth areas.



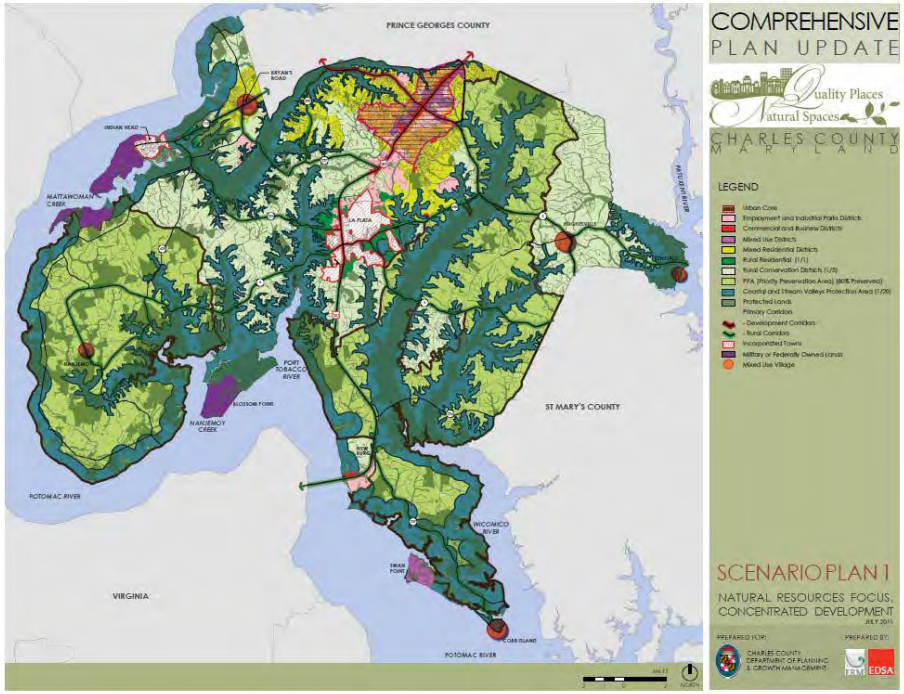
Land Use Recommendations

- Re-evaluate Lot Coverage and Impervious Surface limits and standards established in the County Zoning Ordinance.

- Cap new development at impervious targets appropriate for protection of aquatic life

Weighing Alternatives

- To the County's credit, several of the alternative growth scenarios, that have been explored by the County include measures consistent our recommendations



Draft County Natural Resource Focus, Concentrated Development Scenario

- This Scenario developed by Charles County as part of the County Comprehensive Plan update process, July, 2011

The Future of the Mattawoman

- This may be the county's last chance to make a stand for the protection of Mattawoman Creek watershed