



## Mattawoman Watershed Society

*Protecting and preserving Mattawoman Creek for the enjoyment of all*

Courtney Edmonds, Chair  
Members of the Charles County Planning Commission  
c/o Ms. Theresa Pickeral, Clerk  
200 Baltimore Street  
La Plata, MD 20646

April 18, 2013

via email: PickerTh@charlescounty.org  
cc: Steve Ball, PGM: BallSt@charlescounty.org  
Mike Paone, MDP: mpaone@mdp.state.md.us

### **Re: Charles County draft Comprehensive Plan**

Dear Chairman Edmonds and members of the Planning Commission:

The Mattawoman Watershed Society (MWS<sup>1</sup>) appreciates the opportunity to submit these comments on the Comprehensive Plan (CP) in addition to the oral testimony we delivered at the April 8 public hearing. MWS has over 1000 supporters, about 800 of whom reside throughout Charles County.

We must object to the short 10-day period for written comments. This very short period puts individuals and all-volunteer organizations such as ours at disadvantage, and robs the county of the opportunity to gather information.

We request that all citations be included in the public record by reference.

**1. MWS interest** Because land-use directly impacts the integrity of our aquatic systems, *and is specifically implicated in the decline of Mattawoman's living resources and recreational opportunities in the last decade*, we have been involved in every aspect of the CP process from the beginning. Starting with the kickoff meeting of March 29, 2011, our representatives also attended the Marketplace Forum, all Visioning Workshops and Design Charettes, the Open House, and the December 15 public meeting on the Merged Scenario. We have contributed a stakeholder interview and participated in the online survey, and provided written comments at every opportunity. We have also been similarly fully engaged in the Tier Map process, and in additional public meetings and comment opportunities tied to the CP, such as Priority Preservation Areas and the Land Preservation, Parks, and Recreation Plan.

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<sup>1</sup> Abbreviations used:

ACOE: Army Corps of Engineers  
CP: Comprehensive Plan  
MWS: Mattawoman Watershed Society  
TDR: Transfer Development Rights  
TMDL: Total Maximum Daily Load

MDE: Maryland Dept. of the Environment  
DNR: Maryland Dept. of Natural Resources

P.O. Box 201 Bryans Road, MD 20616

[www.mattawomanwatershed.org](http://www.mattawomanwatershed.org)

[info@mattawomanwatershedsociety.org](mailto:info@mattawomanwatershedsociety.org)

301-751-8039

Our interest also stems from our members, Board of Directors, and supporters who use the Mattawoman for recreation, nature study, scientific investigation and citizen science, and aesthetic appreciation. We have members who own land along the Mattawoman that is maintained for recreational pursuits by the public and who are subject to injury due to loss of gamefish populations and aesthetic attributes, as is currently occurring with increases in algae, loss of water clarity, and loss of fish species diversity and abundance .

## **2. The draft Comprehensive Plan jeopardizes a valuable resource for the county, the state, and the nation.**

- In 1992, state fisheries biologists stated that Mattawoman represents “near to ideal conditions” on the scale of the Chesapeake Bay and “should be protected from overdevelopment.” [DNR, 1992]
- In 1998, the federal/state Clean Water Action Plan (CWAP) recognized Mattawoman as a Selected Category 3 watershed meriting additional protection because of pristine attributes. [CWAP, 1998] At the same time, the CWAP rated Mattawoman specifically as a *Priority Category 1 watershed*, a ranking that indicates *degraded aspects requiring restoration*. This combination of ranking singled out only 17 of Maryland’s 138 8-digit watersheds meriting “special attention in order to address degradation that already is experienced in some areas before the pristine resources in the watershed are lost.”
- Mattawoman ranks 8<sup>th</sup> of the 138 watershed in terms of freshwater stream biodiversity. [Task Force, 2012]
- Mattawoman was considered to be “the best, most productive tributary to the Bay.” (emphasis in original) by state fisheries scientists based on its anadromous fish spawning and nursery grounds, its largemouth bass fishery, and the health of its fish community. [DNR, 2005] Note that by 2010, the health of Mattawoman’s fish community had plummeted, which was linked to overdevelopment of the watershed . [DNR, 2010]
- Mattawoman is Maryland’s only western-shore site harboring natural populations of the American Lotus [DNR Heritage, 2013], possesses Maryland’s largest breeding wood duck population; harbors a site exhibiting the greatest herpetological diversity *in the entire state* [MBSS, 2005]; its forests contains two Audubon Important Bird Areas and are a hot spot for rare bird and herpetological species [FWS, 2006].
- Mattawoman serves as the hub of the Potomac River’s internationally recognized bass fishery, with more tournaments launched from its shores than any other location in the entire state. [Task Force, 2012] These include national tournaments. It is ranked among the best bass fisheries on the Atlantic Coast by experienced anglers and professional guides [Penrod, 2008; 2010].

Based on an economic analysis of Maryland’s largemouth bass fishery [Fedler, 1989], we conservatively estimate that the Potomac River’s bass fishery would generate over \$1.5 billion in commerce in Maryland by the CP’s horizon of 2040. Yet, in its exhaustive analysis

of how to improve the CP, *The Interagency Mattawoman Ecosystem Management Task Force* states [Task Force, 2012]:

“Fisheries managers are increasingly concerned that the largemouth bass fishery in Mattawoman Creek will decline as development increases. Limiting future suburban sprawl, redeveloping existing areas into livable, more densely populated urban neighborhoods that absorb more people per area, and conserving remaining natural areas and working farms are important for maintaining Mattawoman Creek’s high quality bass fishery.”

**3. Draft Comprehensive Plan is contrary to public sentiment identified during the public process of 2011** Throughout 2011, we found the CP process to be transparent and welcoming to all citizens. We observed overwhelming concern among the attending public for the protection of natural resources as one of the highest priorities, and were encouraged by a willingness on the part of staff and consultants to consider and to include protective measures and smart-growth elements that were conspicuously absent in previous CPs. With stream-valley protection, the elimination of planned high density in a “development district” larger than Washington D.C., a re-consideration of obsolete grandfathered projects, it appeared as if steps were finally being taken toward the 2006 CP’s stated (but overlooked) goal for “*better integration of watershed perspectives into planning.*”

It was therefore with great disappointment that we witnessed the Planning Commission completely reject all of this effort and more, including:

- rejection of the compromise Merged Scenario produced by the 2011 public process.
- rejection of an exhaustive analysis produced with county encouragement specifically for the CP revision by *The Interagency Mattawoman Ecosystem Management Task Force*. [Task Force, 2012]. This Task Force made dozens of recommendations, but the PC refused to hear even one.
- rejection of an offer (attached) by state agencies to provide, free of charge, an Ecosystem Services Assessment [MD, 2011] to help the county factor in the economic benefits that forested land provides by naturally treating stormwater, controlling erosion, moderating flooding, contributing to stream baseflow, protecting water quality for commercial watermen, anglers, boaters, paddlers, and swimmers, supporting other ecotourism assets (*e.g.*, birding, hunting, wildlife appreciation, aesthetics), and more.
- rejection of widespread calls for an economic analysis of various land-use scenarios.
- rejection of retaining Priority Preservation Areas, with the concomitant loss of preservation funds from recapture of agricultural transfer taxes administered by the Maryland Agricultural and Land Preservation Foundation (MALPF).

After rejecting the above and more, the Planning Commission then drafted a CP that stripped many of the 2006 CP stated goals, and that followed in lock-step a Tier Map developed by, and for, a developers’ lobby. The Tier Map assigns Tier III status to huge areas that state law unambiguously indicates should be Tier IV, including the deferred development district, and perpetuates the outmoded concept of a development district. Coupled with a 40% increase in

the number of units on septic that qualify as a “minor” subdivision (five to seven units), and advancing the date when a parcel is considered to have been subdivided (thereby allowing previously subdivided parcels to be subdivided a second time under the more generous terms), the Tier Map and the CP that followed it promote sprawl throughout the entire county. Hence the draft CP moves further away from the smarter growth principles widely acknowledged as necessary to solve present problems such as declining water quality and recreational opportunities, overcrowded schools, high taxes, and traffic congestion.

In fact, the Maryland Department of Planning (MDP) estimates a differential of \$2 billion in taxpayer cost to service the new sprawl compared to what a smarter growth plan would require.

The outline of this public process is appropriately included in Chapter 1 and should be retained. *We also believe that the plan should include comparison of housing units in the pipeline compared to projected population increases, as was provided the public during the Visioning Sessions.*

**4. Draft plan violates state law, land-use guidelines, and tenants of Smart Growth in Plan Maryland:** Given the Planning Commission’s refusals and rejections outlined above, it is not surprising that the present draft CP had earned indictments from so many agencies responsible for the greater good. Consider (emphases added):

Maryland Department of Planning [MD, 2013]:

“...if adopted, these changes would be the most drastic policy reversal in a comprehensive plan that this agency has ever seen.”

“Building a 4-lane highway [the Cross County Connector] through the low-density residential areas would further facilitate the widespread low-density developments in the Mattawoman Creek and Port Tobacco Creek watershed areas.” [*i.e.*, the opposite the intent of smart growth principles.]

“Technically, the WRE addresses the prescribed water resource analyses, however the outcome of the land use selection is contrary to the findings for water resources conservation, smart growth, and for conformance with SB 236.”

Maryland Department of Natural Resources [MD, 2013]:

“Plan is inconsistent with 12 visions adopted by the Maryland General Assembly in 2012...In particular, the draft plan document demonstrates inconsistency with over ½ of the visions, and as such violates the legal requirements for local government implementation of the Visions as set forth in Article 66 B of the Annotated Code of Maryland.”

“Deferred Development District designation for public water and sewer service is not consistent with stated purpose.”

“Based on Fisheries' projections, Charles County's *impervious surfaces will increase beyond the threshold for productive fisheries* in Mattawoman Creek and Port Tobacco River.”

“Projected losses in Forest Cover indicate that the ‘Preferred Plan’ alternative *is the wrong choice.*”

“[a]reas of high, statewide ecological significance in the County in portions of the Nanjemoy and Mattawoman watersheds should also be added to this Tier [IV] in order to afford protection these important natural systems since these areas currently have ‘significant contiguous forested and agricultural lands’ consistent with the draft Plan's definition of Tier IV areas.”

Maryland Department of the Environment [MD, 2013]:

“Portions of the Charles County Planned Service Areas (water and/or sewer) included in the Charles County Comprehensive Plan overlap significantly with the watersheds...identified as Tier II streams...Tier II streams are high quality waters that must be given extra considerations to protect their quality.”

U.S. Fish and Wildlife Service [FWS, 2013]:

“The current draft Comprehensive Plan...leaves a majority of the county unprotected from sprawl development.”

“...the Planning Commission is proposing a Tier Map that does not adequately adhere to the intent of the law...”

“The Service...has identified several focus watersheds for conservation in Southern Maryland based on their importance to migratory birds, migratory fish, and federally-listed threatened and endangered species. These include Mattawoman Creek, Nanjemoy Creek, and Zekiah Swamp. *Mattawoman Creek is the Chesapeake Bay's most productive nursery for migratory fish like American Shad. We encourage you to see that these watersheds are considered for special protection. Neither the Draft Comprehensive Plan nor the Planning Commission's Tier Map adequately protect these important stream valleys and ultimately will result in increased sediment and nutrient pollution in the Potomac River and the Chesapeake Bay.*”

MWS agrees with the above assessments that the draft CP is inconsistent with the Sustainable Growth & Agricultural Preservation Act of 2012 (SB236, the “septics bill”), and the Land Use Article of the Code of Maryland (formerly Article 66B) both in regard to the Article’s overarching Visions and the Water Resources Element.

**5. Selection of draft CP over the merged scenario is contrary to the Land Use Article**

In particular, the draft PC violates the tenants of the Water Resources Element (WRE) included in the Land Use Article by selecting the worse of two scenarios analyzed for forest loss and impervious cover, metrics used as surrogates for nutrient pollutant loads. State guidelines for the WRE state that after iterating scenarios, the county should “Choose Land Use Plan with the Least Impact.” [WRE, 2007; p.13] However, the draft CP does the opposite. The following table summarizes the draft CP [CP, 2013]:

WRE comparison of impervious-surface increase & forest loss from draft plan's Tables 4-8 & 4-9			
		<b>Overall impervious surface</b>	<b>Forest loss</b>
Charles County as a whole	Draft plan	7.1%	5,474 ac
	Merged (compromise) scenario	6.0%	2,630 ac
	Factor draft plan is worse by	×1.18 (18 %)	×2.08 (208%)
Mattawoman Creek watershed	Draft plan	15.0%	1980 ac
	Merged (compromise) scenario	10.6%	324 ac
	Factor draft plan is worse by	×1.42 (42%)	×6.1 (610%)

The “preferred” plan (*i.e.*, the draft CP) is *by far* the scenario more damaging to water resources, and to comply with the Land Use Article, should not be chosen, yet was.

For Mattawoman Creek, the loss of forest in the draft CP forest exceeds the rejected compromise scenario *by over 600%*, and brings the total forest cover below 50%, known to be key indicator for significant loss of aquatic integrity in a coastal plain system. [Weber, 2007] Furthermore planning for an impervious cover of 15% for Mattawoman essentially condemns what was once the best fish spawning-ground and nursery in the Bay to become a degraded urban waterway. The draft CP is following the trajectory projected by the Army Corps *Mattawoman Creek Watershed Management Plan* [ACOE, 2003] that projects ~23% impervious service for Mattawoman, on par with the Anacostia River. [AWS, 2010]

*We note that the projected impervious cover of 15% evidently does not reflect increases in density enabled by the large swaths of Tier III designation in the Tiers Map. We consider the WRE and the comp plan be incomplete without including these factors in the WRE analysis.*

**If a new airport component is added, a new hearing is required given the likely magnitude of impacts**

At the April 8, 2013 hearing before Planning Commission, the vice chair indicated a responsiveness to appeals by the BGI lobby for a new component in the CP to expand industrialization of the Mattawoman watershed around the airport in Bryans Road. If such a component is added, we feel that a new hearing must be held to consider such a significant change.

The controversial airport expansion elicited unusually strong condemnations from federal agencies that commented on it. The county should take these to heart, and should take steps to limit the damage that this privately owned airport could wreak on western Charles County. As evidence of the significant magnitude of potential impacts, consider these agency comments (emphases added):

National Park Service [NPS, 2001a]

“It is our opinion that *the proposed airport improvements would cause significant long-term adverse effects to Mattawoman Creek*. We believe that the clearing of forest lands, the loss of important wetland and floodplain functions (particularly critical in the headwaters), and the permitting of construction activities on steep slopes in riparian areas would induce siltation and thermal pollution in the unnamed tributaries, as well as to Mattawoman Creek.”

“It appears likely that the airport sponsor would petition Federal Aviation Administration in the future as operations increase to accommodate corporate aircraft requiring a longer runway and a precision instrument approach runway. We are concerned that the proposed improvements to this airport would be segmented or phased over time, and if so, the Environmental Assessment should disclose the cumulative effect of the ultimate design.”

National Park Service [NPS, 2001b] (emphasis added):

“To date, the concerns of the National Park Service regarding the potential effects of the proposed improvements to an unnamed tributary of Mattawoman Creek, a component of the Nationwide Rivers Inventory, have not been resolved. Further, *we believe that such adverse impacts could significantly degrade the existing high water quality* and jeopardize the retention of Mattawoman Creek in the Nationwide Rivers Inventory.”

*“The National Park Service believes that the runway realignment and extension coupled with ancillary facilities as proposed will result in significant impacts to the Mattawoman Creek watershed.”*

“Consequently, this increased discharge is also likely to increase sediment transport to Mattawoman Creek, further degrading the fishery.”

“We believe that the proposed improvements at Maryland Airport will cause significant long-term impacts to Mattawoman Creek and its tributary...”

National Marine Fisheries Service [NMFS, 2001]

“The *runway realignment will have devastating impacts on the subject watershed*...Displacement of a large segment of the existing riparian zone, coupled with installation of man-made storm water management, will alter the current hydrology, likely creating “flashy” flows to downstream areas with alternating periods of flow and dry conditions. *The latter alteration may degrade downstream habitat relative to its suitability for spawning alosids.*”

*“We are also concerned about cumulative impacts this proposal will have on wetlands and instream habitat throughout the local region.”*

Army Corps of Engineers [ACOE, 2001]

“The Maryland Clean Water Action Plan classifies the watershed as having sensitive natural resources, and lists it as a priority for restoration. We consider the filling of 900 feet of the headwaters to be a *substantial adverse impact to the aquatic environment...*”

The draft CP, rather than pursuing policies that would exacerbate the impacts of the airport expansion, should instead be seeking aggressive measures to mitigate the impacts with permanent protection of the deferred development district, return of Bryans Road to a village concept (as is done in the Merged Scenario compromise plan), and additional protections.

We note that light pollution from the airport would also impact the viewshed of Mt. Vernon, which the draft CP purports to consider.

**Cross County Connector should be removed from the Comprehensive Plan—the Army Corps of Engineers determined the proposal “to be contrary to the public interest”**

The Army Corps of Engineers and the Maryland Department of the Environment each denied wetland-destruction permits for the highway. Contrary to public testimony at the April 8 hearing, the justification for the denials was multifaceted in each case.

The ACOE in particular, as required by the National Environmental Policy Act, examined the proposal closely and *determined that the highway was “contrary to the public interest.”* The ACOE found that there were viable practicable alternatives, and that the project

“would have direct and indirect permanent adverse impacts on non-tidal wetlands, waterways, fish and wildlife, recreation and water quality. The project as proposed may result in substantial adverse cumulative impacts to Mattawoman Creek, when added to other past, present, and reasonably foreseeable future actions in the watershed...” [ACOE, 2012]

**Summary** The draft Comprehensive Plan represents a dramatic departure from public sentiments for conservation of natural resources and smart growth precepts that led to a compromise “merged scenario” forged by a thorough year-long public process. The public was responding to the county’s past policies of promoting sprawl development that have led to declining water quality, loss of forest, overcrowded schools, congested roads, high taxes, a less-than-ineffective TDR program, a diversion of investment away from attracting mass transit to a walkable Waldorf, the inappropriate and unpopular expansion of Bryans Road, reduced public safety, the decreased quality of outdoor recreational opportunities, the loss of ecotourism-based economic opportunities, the increased cost to meet TMDLs, the loss of the county’s rural character, and a decreasing quality of life.

The Planning Commission rejected the compromise scenario and instead embraced an approach that extends the sprawl-promoting policies of the past, even amplifying these policies by assigning rural residential zoning to large areas with increased units for minor subdivisions. Similarly, the draft PC rejected stream valley protection, and endorsed the intense sprawl development envisioned for a development district, including a “deferred”

P.O. Box 201 Bryans Road, MD 20616

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[www.mattawomanwatershed.org](http://www.mattawomanwatershed.org)

[info@mattawomanwatershedsociety.org](mailto:info@mattawomanwatershedsociety.org)

301-751-8039

development district larger than Washington D.C. that all scientific agencies agree will lead to the loss of ecological function of Mattawoman Creek.

The draft CP appears to abandon outright goals of past plans, such 2006 goal of implementing the U.S. Army Corps of Engineers *Mattawoman Creek Watershed Management Plan*, which would include the stream valley protection in the compromise merged scenario [ACOE, 2003].

The draft CP eschews the Governor's efforts behind Plan Maryland, specifically violates the Water Resources Element of the Land Use Article (previously Article 66B) of the Code of Maryland, and is contrary to many of the visions in the Land Use Article.

As documented by numerous and incisive comments of federal and state agencies, the draft CP even violates its own "theme" of "balancing this growth with protecting the environment and conserving resources..." [CP, 2013; p. 1-2]

Therefore, we request that the draft Plan be rejected by the Planning Commission, and the process return to the trajectory of the 2011 public process that was subsequently abandoned by this commission.

Respectfully submitted on behalf of the Mattawoman Watershed Society,

Jim Long  
President

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**DECISION PAPER**

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9492

DEPARTMENT: Planning & Growth Management

DIVISION CHIEF: Steven Ball

SIGNATURE: *Steven Ball*

DATE: 8-2-11

**SUBJECT**

This is a request for the Commissioners to consider authorizing the Maryland Department of Natural Resources (DNR) to work with County staff and develop an Ecosystem Service Assessment Pilot Project. A letter which outlines the pilot project from Dr. Christine Conn, Director of Strategic Land Planning, Office for a Sustainable Future, is attached.

**BACKGROUND**

The concept of determining an economic value on maintaining and managing the county's natural resources continues to be an area of public discussion in the comprehensive plan update process. By determining the economic value of a natural resource, the fiscal impacts and costs for properly managing such resources or conversely to remove, replace or mitigate the loss of such resources, can be determined. This was first discussed at the Land Use Marketplace Forum held last spring. DNR is offering their services at no charge to the county to perform an evaluation of the economic benefits provided by the county's natural assets which would focus on forest management and associated benefits to maintaining clean water, promoting ecotourism, maintaining healthy fisheries and the potential use for carbon sequestration. They would also examine the relationship of maintaining a healthy forest to the fiscal impacts for potential job creation. Another benefit of this analysis may be further guidance in development of the county's Watershed Improvement Plan (WIP II) efforts.

**DISCUSSION**

The DNR estimates that it would take approximately 6 months to complete such a study. They would essentially be acting as our consultant on this project and the PGM Planning Division would be taking the lead in managing the project by providing data, reviewing and commenting on the analysis and editing draft reports. The results could be incorporated into the new Comprehensive Plan if they are able to complete the study in time. A briefing on the findings would be provided to the Commissioners.

**RECOMMENDATION**

Staff recommends that the Commissioners authorize the staff to direct DNR to begin the pilot study on behalf of Charles County and for staff to coordinate and manage the project. Also, to have the draft document presented to the Commissioners for review and approval.

DEPARTMENT HEAD:

Approved                       Recommended to the County Administrator

Comment: \_\_\_\_\_

Signature: *Steven Ball*

Date: 11.16.11

COUNTY ADMINISTRATOR: REBECCA B. BRIDGETT

Approved                       Recommended to the Commissioners

Comment: \_\_\_\_\_

Signature: *R. Bridgett*

Date: 11/17/11



*Martin O'Malley, Governor*  
*Anthony G. Brown, Lt. Governor*  
*John R. Griffin, Secretary*  
*Joseph P. Gill, Deputy Secretary*

August 1, 2011

To: Mr. Steven Ball  
Director, Department of Planning and Growth Management  
Charles County Government

Fr: Dr. Christine Conn  
Director, Strategic Land Planning  
Office for a Sustainable Future

Re: **Ecosystem Service Assessment Pilot Project**

Thank you for your interest in working with the Department of Natural Resources to develop a preliminary Ecosystem Service (ES) assessment for Charles County. Throughout the ongoing public process related to updating the Comprehensive Plan, DNR understands that the county has received numerous requests for an evaluation of the economic benefits provided by the county's natural assets. DNR is offering to create a pilot approach, with the participation of Charles County, that provides meaningful information for decision-making and can be transferred to other counties and municipalities in Maryland.

Maryland's natural open spaces provide a wealth of valuable services to our economy and society. We routinely recognize and account for the direct value of some of these services (ex. lumber, fisheries, recreation). However, our ecosystems also provide a wide variety of important indirect services (ex. clean water, clean air, habitat for pollinators necessary for agriculture, protection from floods, etc) which we do not routinely account for in the costs of doing business. When these services are lost, society must replace them. In Charles County, many concerns have been raised over the potential loss of forest land and the consequent loss of ecosystem services. This pilot study will focus on evaluating the economic benefits of forest land in Charles County.

### **Project Overview**

#### **Selection of Ecosystem Services to be evaluated:**

To some degree, all lands and water bodies provide ecosystem services. For this project, the focus will be on forest lands. The number of ecosystem services evaluated will be restricted, in order to complete the project within a timeframe compatible with the comprehensive planning process. Based on discussion with Charles County planning staff, the following ecosystem services have been nominated. Other services have also been listed as additional options that could be selected by the Commission.

Nominated ecosystem services:

- Providing clean water to streams and the Chesapeake Bay
- Maintaining stream hydrology for healthy, productive and diverse streams
- Supporting recreational and ecotourism based economies
- Contribution to local and regional commercial fisheries
- Providing high quality terrestrial and aquatic habitat
- Regulating global climate change through carbon sequestration

Other ecosystem services to be considered by the Commission:

- Protecting and recharging groundwater systems
- Protecting communities from flooding
- Controlling soil and shoreline erosion
- Providing food and timber
- Increasing resiliency of ecosystems to climate change
- Providing pollinator habitat

### **Valuing Ecosystem Services**

The economic benefits of each service will be evaluated. Particular emphasis will be given to the current and future fiscal impacts to the county. Data available at the county or regional level will be preferentially used. Relationships to jobs will also be examined.

### **Applications related to Chesapeake Bay Watershed Implementation Plans:**

This pilot study is exploratory and should, in itself, lead to more detailed questions and applications. However, this study will investigate how ecosystem service benefits can be leveraged for improved cost efficiencies and greater environmental gains in the development and implementation of the Chesapeake Bay Watershed Implementation Plan

### **Deliverables, Timeline and Staff Commitments**

#### **Deliverables**

DNR: Report accompanied by public-friendly fact sheets. Maps may be included if relevant.  
Charles County: Development of a county review team, provision of data and coordination of study results with comprehensive planning process.

#### **Timeline**

The project will be completed within 6 months of kick-off and will follow this schedule.

0-1 months: County reviews proposal with Commission and identifies 4-5 key ecosystem services for in-depth evaluation.  
1-2 months: DNR research team identifies methods and data needs to value ecosystem services selected by the county.  
2-5 months: County reviews approach, provides need data and DNR conducts evaluation.  
5-6 months: DNR writes report and delivers to county.  
Post-Project: County and DNR identifies future work if warranted.

#### **Staff Commitments**

County: Timely provision of data and timely review of documents and approaches.  
DNR: The Principal Investigator for this project will be Christine Conn, Ph.D., who commits 20% of her time over the study period. Additional DNR staff have pledged support as reviewers, analysts and subject matter experts. Time commitment will vary depending on the specific needs of the project. The DNR project team includes the following staff.

- Forests: Anne Hairston-Strang, Ph.D., MD Forest Service
- Fisheries: Jim Uphoff and Margaret McGinty, Fisheries Service

- Ecological Economics: Sean McGuire, Office for a Sustainable Future
- Water Quality and Watershed Implementation Planning: Claudia Donegan and Cathie Shanks, Chesapeake and Coastal Watershed Services
- Water Valuation and Non-coastal Climate Change Resiliency: Marcus Griswold, Ph.D., Office for a Sustainable Future
- Coastal Hazards, Sea-level Rise, Shoreline Management and Marsh Migration: Catharine McCall and Chelsie Papiez, Chesapeake and Coastal Watershed Services
- Wetlands: Erin McLaughlin, Chesapeake and Coastal Watershed Services
- Wildlife Habitat: Gwen Brewer, Ph.D., Natural Heritage Program
- Non-Tidal Aquatic Habitat: Scott Stranko, Maryland Biological Stream Survey
- Recreation and Eco-tourism: MD Park Service
- Mapping and Analysis: Kevin Coyne, Chesapeake and Coastal Watershed Services
- Land Conservation: Kelly Collins, Land Acquisition and Planning

DNR is very encouraged by the willingness and interest of Charles County to explore these new and innovative concepts and appreciates your offer to work with us. Please review this proposal in light of how it will benefit the county's planning and natural resource management efforts. As a next step, we would like to receive confirmation from the county regarding the approval of this project and any desired modifications to the proposal. Thank you again for inviting this collaborative work between our agencies. I look forward to hearing from you soon.

*Christine Coan*

Cc: John Griffin, Secretary  
 Joe Gill, Deputy Secretary  
 Dave Goshorn, Director, Office for a Sustainable Future