

Three point plan to addressing land use and habitat loss impacts on Chesapeake Bay tidal fish and shellfish

1. Establish Principles for Protection of Chesapeake Bay Fish and Shellfish
 - The Fisheries GIT working with other GITs drafts and endorses a set of planning and management approaches that should be considered throughout the local land use planning process for the sake of protecting and sustaining the tidal fisheries resources of the Chesapeake Bay, including revisions to comprehensive plans, changes to codes/ordinances, and subdivision review.
 - Draft Principles are provided below.
2. Identify special places to implement protection principles and other conservation approaches
 - The Sustainable Fisheries GIT working with other GITs, state coastal programs, and stakeholders identifies some special places important to fisheries sustainability and that can be targeted for applying principles of protection (outlined above) and other conservation approaches with the purpose of sustaining tidal fisheries resources and ecosystem services.
 - See draft special places identified at the Fisheries GIT meeting June 2012 and why they are important below.
3. Better engage local stakeholders and community leaders in planning by delivering a resource tool-kit
 - The Fisheries GIT works with partners to develop a guide for local citizens and community leaders, such as such as fishing clubs, charter captains, riverkeepers, conservation organizations, watershed associations, and recreational clubs (at the identified special places) on how to get involved in local planning processes. The Fisheries GIT working with scientists compiles what we know about the special places (what fish and shellfish live there, what habitats support them, and what impacts are expected from development and habitat loss.

1. Establish Principles for the Protection of Chesapeake Bay Tidal Fisheries

Draft #1 – 11/5/12

Impervious Cover: Limit impervious cover to less than 10% of tidally connected watersheds and limit to no more than 5% in buffers adjacent to tidal streams.

Buffers: Maintain stream and riverside vegetated buffers adequate in size to mitigate runoff effects, provide shoreline stability and shading, and preserve natural tidal interaction with uplands.

Estuarine Protected Areas & Sanctuaries: Identify and seek protections for areas known to support intensive spawning and rearing of tidal fish, or areas otherwise known to harbor threatened or endangered species, such as Shortnose Sturgeon (*Acipenser brevirostrum*).

- Take advantage of the emerging efforts to implement Coastal and Marine Spatial Planning (CMSP) to ensure that tidal fisheries resources are considered in the planning process.

Best Management Practices to Preserve Water Quality: Where and when development occurs, implement best management practices designed to prevent NPS pollution, including maintenance of existing tree canopy and intact habitats, sediment and erosion control plans, and ongoing stormwater management techniques.

- Appropriate siting, design, and ongoing operation and maintenance of coastal septic systems is of great importance to sustaining tidal fisheries and near shore aquaculture.

Best Management Practices to Provide Adequate Water Quantity: Where and when development may affect water quantity and streamflow, implement best management practices designed to protect natural flows and prevent foreseeable adverse impacts on tidal fisheries resources. Such measure may be applicable to dam management, culvert design, and outflows from sites such as wastewater treatment plants.

Coastal Habitat Protection: Seek to maintain critical tidal habitats such as salt marshes, oyster beds, and fresh water marshes connected to tidal waters.

- Recognize that protecting existing healthy habitats is far more effective and cost-efficient than attempting to restore degraded habitats.

- Develop effective coordination mechanisms between local and county planners and land conservation entities (e.g., State, NGOs) engaged in the practice of land acquisition and the implementation of conservation easements.

Coastal Habitat Restoration: Consider strategic and targeted restoration of tidal habitats (shoreline, wetland, and in-water) that have the greatest benefit to the diversity of tidal species present in the location.

- Evaluate planning area for opportunities to restore fish passage through dam removal or other techniques.

Protect Headwater Streams: Do no harm where ever possible to intact headwater streams, such that those streams can continue to provide healthy waters and habitats to the overall coastal watershed system.

Smart Growth/Density Allowances: Consider planning approaches that foster dense development, consistent with the NOAA and EPA coastal smart growth elements, in areas unlikely to adversely impact tidal fisheries resources. Additionally, consider restrictive zoning in those areas where density would clearly impact tidal fish resources, such as lands adjacent to critical spawning habitats or threatened tidal habitats.

Fisheries Regulations: Ensure that vulnerable species are protected at critical life stages, such as spawning and early growth, by instituting science-based restrictions on effort and/or take associated with both commercial and recreational fisheries.

Research and Monitoring:

- Use available data and new research to prioritize those areas of the Chesapeake Bay which are most valuable to ecosystem functioning and most vulnerable to loss or degradation for the purpose of informing local and regional acquisition/easements programs, or other protections. Identify land-use changes that have adversely affected tidal fish species and areas within watersheds that if improved or managed differently would restore or sustain healthy tidal fish populations.
- Evaluate the desirability and feasibility of initiating or continuing stocking programs for tidal species of concern.

Consider Ecosystem-Based Fisheries Management Goals in Revising Land Use Planning

Approaches: The goal of ecosystem-based fisheries management is to manage finfish and shellfish species based on their habitat utilization, life history stages, feeding preferences, species interactions, and the hydrographic and physical parameters that influence their

distribution within the Chesapeake Bay over time and space. Thus, as Bay jurisdictions revise and redefine their approaches to managing local land use, they should develop management strategies and actions that consider species' functions within the ecosystem and how habitat parameters are affecting recovery or sustainability of the stock. Ecosystem modeling will become more refined as data becomes available on both multispecies interactions and the impact of land use and water-use activities on fish populations. The models should be used as tools to explore management scenarios and outcomes to inform and direct management measures. This should lead to Chesapeake Bay jurisdictions strategically protecting and restoring finfish and shellfish habitat to sustain Chesapeake Bay species over the long-term.

Modeling: Where feasible consider the outputs of fisheries models to better understand the potential impacts of land use decisions on tidal fisheries resources.

Balancing Coastal Uses: The planning process should strive to balance waterfront development with tidal resource protections, such that uses of tidal fish resources (e.g., recreational fishing, aquaculture, waterfowl hunting) are not adversely affected by new development at the water's edge.

- Working waterfronts and the local economic benefits derived from these areas should be afforded protections in the planning process.

2. Identify special places to implement Protection principles and other conservation approaches

Outcome of Sustainable Fisheries GIT meeting, June 12, 2012

The Sustainable Fisheries GIT used this small-group prioritization exercise at its June meeting as a first attempt at identifying important preservation opportunities. Its purpose is to share the Fisheries GIT priorities with other GITs and stakeholders to identify places where proactive principles of protection (outlined above) and other conservation approaches can be applied with the purpose of sustaining tidal fisheries resources and ecosystem services.

Tributary selection was based on the following criteria developed at the December 2011 full GIT meeting:

- Preservation –protecting the good areas
- Sub-tributary scale (Ex: Mattawoman Creek)
- Impervious surface threshold (<5%)
- High habitat value (SAV, oyster habitat, surrounding marsh, etc)
- Fish spawning and nursery areas
- Multiple conservation opportunities available
- Strong citizen involvement and leadership
- Ability to maintain long-term monitoring programs
- Imminent threats to the area and its resources (i.e. roadways, suburban sprawl and new developments)

The Fisheries GIT workshop participants also used geospatial prioritization tools/data from Maryland DNR and the Virginia Coastal GEMS Program to identify priority conservation areas.

Involvement in local comprehensive planning processes is necessary to influence land use decisions affecting the preservation of any tributary. The comprehensive plan of each county or municipality addresses relevant planning and zoning decisions that impact the watershed health. Maryland requires review of comprehensive plans every 6 years, and Virginia requires a review every 5 years. Regarding TMDLs and water quality management, the final version of the Phase II WIPs and 2012-13 milestones for Maryland, Virginia, and District of Columbia were submitted to the EPA in March of 2012.

Potomac River

The Wicomico River was selected as a priority tributary in the Potomac River watershed. It is located on the Maryland side of the Potomac in Charles and Saint Mary's counties. The Wicomico River is considered a priority preservation area due to presence of herring spawning

habitat, low impervious surface cover, and the surrounding forest and wetland habitat. Point source pollution is a continuing imminent threat to the watershed. Preservation of this area could build off the Mattawoman Creek efforts also in Charles County, which would provide a head start in influencing the county planning process. The Charles County Comprehensive Plan is now up for review during 2012, and the Saint Mary's County Comprehensive plan is up for review in 2016.

Maryland

Mattawoman Creek, located in Charles County off the Potomac River, was selected as a priority preservation tributary. Mattawoman Creek supports a large recreational bass fishery, as well as spawning habitat for many anadromous fish species. Efforts to protect the Mattawoman have made some progress, but more work is needed to influence the planning decisions in Charles County and prevent development that could degrade the watershed's health. Local conservation groups are well organized and have been active for many years, which provide a basis for citizen involvement in conservation. Charles County's Comprehensive Plan is now up for review during 2012.

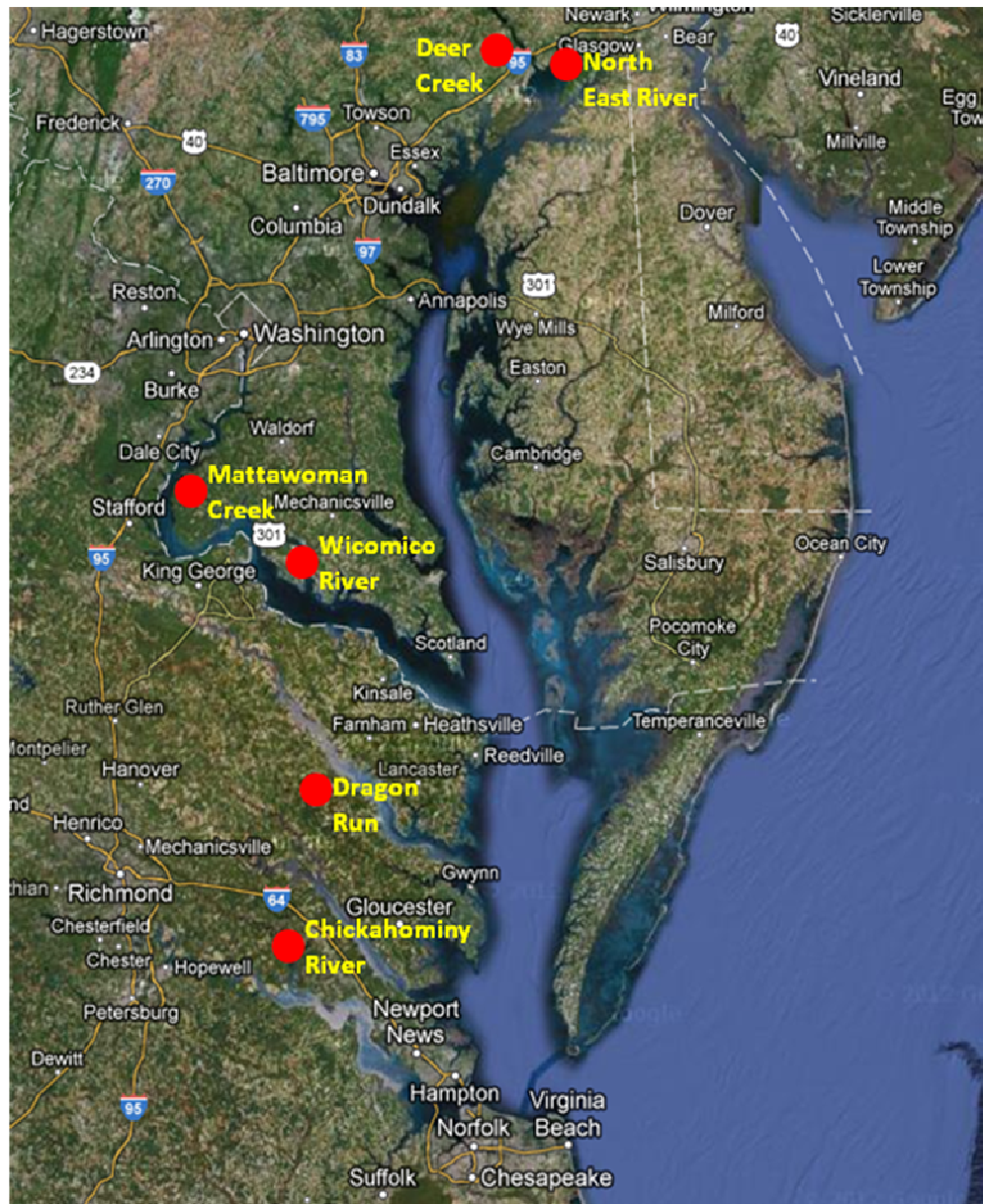
Deer Creek in Harford County and the North East River in Cecil County were also considered as potential priority areas. Both Deer Creek and North East River support migratory fish spawning areas and have state protected land in their watersheds. Harford County's Comprehensive Plan is currently in review during 2012, and Cecil County's is up for review in 2016. The Town of North East's Comprehensive Plan is up for review in 2015, and would also apply to the North East River.

Virginia

The Chickahominy River, which drains into the James River, was selected as a priority area and is located in New Kent, Charles City, and James City counties. This tributary supports nursery habitat for riverine fish species, river herring spawning habitat, and long-term SAV monitoring. There is potential for partnerships with local citizens, including the Chickahominy Tribe, to protect the watershed from the imminent threat of development from nearby Richmond and Newport News. New Kent County Comprehensive Plan is up for review in 2013, and both the Charles City County and James City County plans are up for review in 2014.

The Dragon Run watershed of the Piankatank River is also considered a priority area. It is located across Essex, King and Queen, Middlesex, and Gloucester counties. This pristine watershed was selected because it supports a multitude of fish species, both freshwater and migratory, long-term monitoring of oyster reefs and SAV, and is surrounded by natural forest land. There is existing support from local citizen groups, including Friends of the Dragon Run, who have already been active in conserving the watershed. The comprehensive plans are up for review as follows: Essex in 2013; King and Queen in 2016; Middlesex in 2014; Gloucester in

2016. Additionally the Middle Peninsula Planning District Commission developed Special Area Management Plan for the Dragon Run watershed, which recommends specific conservation practices for landowners in the watershed.



Dates of the next comprehensive plan reviews in the relevant counties and municipalities of the priority watersheds. Maryland requires a comprehensive plan review every 6 years, and Virginia requires a review every 5 years.

	County	Next Comp. Plan Review
<i>Potomac River</i>		
Wicomico River	Charles	2012
	Saint Mary's	2016
<i>Maryland</i>		
Mattawoman Creek	Charles	2012
Deer Creek	Harford	2012
North East River	Cecil	2016
	Town of North East	2015
<i>Virginia</i>		
Chickahominy River	New Kent	2013
	Charles City	2014
	James City	2014
Dragon Run	Essex	2013
	King and Queen	2016
	Middlesex	2014

3. Better engage local stakeholders and community leaders in planning by delivering a resource tool-kit

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- Organizations and individuals often lack the resources needed to effectively combat land development projects in their communities that may negatively affect tidal fish resources, and as such the planning community should seek to proactively consider management approaches that address the protection and restoration of tidal fish.
- Municipal and county governments could provide information upon request or prepare fact sheets providing current fisheries information so that potential impacts to tidal fish resources can be addressed.
- Researchers and agencies should endeavor to provide tidal fish data in ways that explain which species are using which places and why, and how those species can be afforded protections.
- Develop a program that involves land owners, local communities and school systems in stewardship activities that promotes awareness of the value of tidal fish resources and their ecosystems and encourages stewardship.
- Educate the public on the value of healthy tidal fisheries through informational materials.