Sustainable Fisheries Goal Implementation Team (GIT) Meeting
Westin Hotels & Resorts, Annapolis, Maryland
June 11th-12th, 2012

Meeting Report
Facilitated by the Institute for Environmental Negotiation, University of Virginia

Executive Summary

Background:

On June 11-12, 2012 the Sustainable Fisheries Goal Implementation Team (Fisheries GIT) of the Chesapeake Bay Program met in Annapolis, Maryland for its 5th biannual meeting.

The Fisheries GIT is composed of the state fisheries managers from around the Bay and chaired by the director of the NOAA Chesapeake Bay Office. The Sustainable Fisheries GIT draws together a diverse group of managers and scientists to improve management and recovery of oysters, blue crab, menhaden, striped bass and alosines. It focuses on advancing ecosystem-based fisheries management by using science to make informed fishery management decisions that cross state boundaries. Through this approach the Sustainable Fisheries GIT is focused on ecosystem-based fisheries management that encourages sustainable Chesapeake Bay fish populations, which support viable recreational and commercial fisheries, and provides for natural ecosystem function.

Meeting Objectives:

There were 2 primary objectives for the two-day meeting:

1. share the most recent science on Blue Crab abundance and reproduction, oyster restoration, and invasive catfish and discuss how the science informs management objectives
2. identify strategies for protecting areas critical to the sustainability of fishery resources from land development.

Outcomes:

Blue Crabs-
Participants set forth a plan to develop male crab population reference points to pair with the newly implemented female reference points, and identified the need to consider means to increase accountability of the recreational crab harvest. Participants also agreed to begin a discussion on spatial management and allocation of crab harvest between jurisdictions.

Oysters-
Participants recognized that, in order to continue to garner support for oyster restoration efforts (including the resources needed to accomplish such efforts) we need to document and evaluate how achievement of the oyster metrics in a given tributary will achieve multiple benefits (not just ecological outcomes), including jobs, associated social benefits, etc. Presentations indicated oysters are developing resistance to disease, indicating restoration efforts can succeed to increase populations and oysters can account for significant nitrogen removal (denitrification), but several variables need to be considered in evaluating nitrogen removal rates under differing conditions (i.e. reef vs. aquaculture). Five tributaries (Harris Creek and Little Choptank in Maryland and the Elizabeth, Lafayette and Lynnhaven Rivers in Virginia) have been selected by USACE, NOAA, MD and VA as priority tributaries for targeted restoration and a Restoration Blueprint has been completed for Harris Creek, MD detailing acres to restore, number of spat on shell needed and cost estimates.

Blue Catfish-
Research projects are just getting underway and results are expected by the December 2012 Fisheries GIT meeting. We set the expectation for the Invasive Catfish Task Force to meet within the next 6-8 weeks and ensure collaboration across research topics, coordination of investigations (spatially, across watersheds), and integration of data into a central repository for evaluation.

Land use and Fisheries Sustainability-
Participants heard presentations from a panel of experts on the Mattawoman Creek/Charles County example of how fishery resources are affecting land-use decision-making. We were briefed on the activities of Forterra in the Pacific Northwest, illustrating how a broad agenda has been developed to connect citizens and regional residents with a vision for their future. We engaged in a rewarding discussion and questions and answers with these experts that expanded our knowledge and informed our subsequent exercise on where to focus GIT efforts.

Identifying Watersheds for Fishery/Land Use Focus-
Participants broke into small groups, used available map products and GIS, and identified a preliminary set of tributaries for further examination and discussion. These included the Chickahominy and Piankatank Rivers in VA, continued work on the Mattawoman in MD, as well as other possible candidates in MD, including the Wicomico River. We acknowledged that this exercise was preliminary, but already illustrates ways to connect our work with the work of other goal teams (e.g., habitat, watersheds, water quality, stewardship), and that we want to further flesh out available information on these areas.

June 11th – Day One

The first day of the meeting was focused on sharing the research and progress made since the last Fisheries GIT meeting in December 2011. Several scientists gave presentations on their most recent research findings related to blue crabs, oysters, and invasive catfish. The Fisheries GIT chair, Peyton Robertson, welcomed GIT members to the meeting and gave an overview of the agenda.

Tanya Denckla Cobb of the Institute for Environmental Negotiation, University of Virginia, facilitated the meeting. She asked for a round of introductions and then followed by recommending some ground rules for the meeting.

Presentations

The following is a summary of each presentation. The entire deck of PowerPoint slides is online here: http://www.chesapeakebay.net/calendar/event/18200/

Blue Crabs

The first series of presentations focused on recent research on blue crabs. Tuck Hines from the Smithsonian Environmental Research Center (SERC) gave a presentation on evaluating population level impacts of sperm limitation on the Chesapeake Blue Crab stock. Lynn Fegley from Maryland Department of Natural Resources (MD DNR) explained the Chesapeake Bay Stock Assessment Committee (CBSAC) process and the plan for developing male specific reference points. Matt Mullin from the Environmental Defense Fund (EDF) followed with a presentation that previewed a process for increasing accountability in the commercial blue crab fishery. Moochie Gilmer, a local with over 40 years of experience as a waterman, spoke on the significance of watermen's role in the 2012 Commercial Accountability Pilot Study. FinallyLynn Fegley (MD DNR) gave another presentation explaining the necessity for increased accountability in the recreational blue crab fishery.

Implications

The group discussed the implications of new research and management objectives on the blue crab fishery, including:

- Set operational sex ratio goals or total number of male crabs target for adequate reproduction.
- Develop spatial management strategies.

- Use indicators from the winter dredge survey to predict sex ratios and harvest limits.
- Study control tributaries without fishing (military installations).
- Make mid-season and end-of-season adjustments to harvest limit based on harvest quantities to-date.
- Create factsheets: better scientific sophistication, accountability, spatial management.
- Better understand recreational catch and impact on the fishery.

Research was presented that suggested a need to manage fishing in order to ensure the most optimal reproductive output for female blue crabs. Others spoke about the need for better commercial accountability of catch data, and an upcoming project in July that will focus on just that, and also the need for better accountability of recreational catch as well.

Discussion

The discussion that followed the blue crab presentations focused on the need for more accountability, and a consideration for using spatial and temporal management. Another discussion focused on allocations between Maryland and Virginia.

Next Steps

- Develop and document male reference points.
- Address information gaps in recreational fishery.
- Obtain better information on catch data: create a framework for spatial, temporal, size, and gender.
- Begin conversation on allocation among jurisdictions by next meeting in December 2012.

The following are additional comments made during the discussion period:

- The western shore tributaries are most commonly experiencing the male blue crab sperm limitations due to the trotline fishery. Estimates are that females are receiving half of a full load.
- Despite sperm limitations, recruitment numbers are currently the highest they have ever been.
- No other recent data on sperm limitations. Previous results were published in 2003, and that was regarding data comparing Florida and the Chesapeake Bay. The Bay sperm count is lower than in Florida. So, temporal data is available, but counting sperm is a slow process and finding funding is difficult.
- Creating a sex ratio figure is the goal to address sperm limitation and reproductive output. Mating habitats is where we need to look. Goal will be to work with empirical data and long-term data from winter dredge to see if objectives are achievable.

- There is no data regarding sperm limitations on tributaries that have not been fished.
- The Commercial Accountability Study has 80 volunteers participating, and does have a representative proportion of the crab industry.
- From a watermen's perspective, having a threshold for harvesting/catching will be helpful: it will maximize opportunities for watermen when they go under the threshold.
- There is a strong need for more information on recreational harvesting numbers.
- Allocation discussion is important. In Virginia, there are few controls on how to catch but there are rules that manage output controls.
- Factsheet is a great idea, and a good way to address misconceptions that may come. Significant concerns exist, yet some may believe that the mission is accomplished given the high level of recruitment. We want to celebrate good news [recruitment], but don't want others to think that our mission is accomplished.
- There is a size variance in reproduction for blue crabs. Bigger females produce more eggs and tend to mate with bigger males that produce more sperm than smaller individuals.
- Try to be as simple as possible. Sometimes we get too sophisticated and nothing comes of it. Sometimes we regulate for imagined problems.
- Allocation is simpler topic. That can follow when jurisdictions know the numbers better. An allocation before accountability makes the most sense.

Oyster Restoration

The next series of presentations focused on oyster restoration. Ryan Carnegie and Mark Luckenbach from VIMS each gave a presentation. Ryan presented on new perspectives on oyster disease ecology in the Chesapeake Bay, and Mark gave a presentation on scaling ecosystem services to reef development and the effects of oyster density on nitrogen removal and biodiversity. Findings presented suggested that oysters' resistance to disease does not vary with reef elevation and that planning efforts should focus on objectives related to sediment reduction instead of concerns over oyster diseases. Additionally, other findings suggest that oyster restoration may be better for nitrogen removal than previously thought. Stephanie Westby from NOAA-NCBO also gave a presentation on the Harris Creek oyster restoration blueprint that details acres to restore, number of spat on shell needed and cost estimates as well as serves as a framework for tributary-based oyster restoration Bay wide.

<u>Implications</u>

The implications of the oyster restoration presentations were identified as:

- Possible increased use of oysters for nitrogen removal ("denitrification")
- Could the nitrogen removal argument also be a way to drive oyster reef restoration (Justify resources and dollars needed.)?

- Possibility of building oyster disease resistance with:
    - Sanctuaries (areas where harvesting is not allowed)
    - Flushing is more important than healthy water
- Oysters are not the only answer to nitrogen removal. Other avenues should be considered like prevention and outreach.
- Need to be rigorous in the science we use.
- Does disease matter if you can get oysters to the market before they die? (Even if diseased?) – Fish farmers and aquaculturists may not care about disease threats, as long as they do not threaten the harvest. Consumptive stakeholders are less impacted by the effects of oyster disease assuming the oysters reach market size.
- Ecosystem services will vary between sanctuaries and fished areas.
- Reef balls are a good tool in shallows.
- The more reefs, the better.
- Fostering sustainable oyster aquaculture is the best thing we can do. Aquaculture will be the future of the industry – wild fisheries alone will not be enough. Providing relief to the wild fishery could be beneficial to restoration efforts.
- Focus on better land use to support aquaculture and the wild oyster industry
- Oyster restoration takes time and money.
- Coast guard limits on shallow creeks present a barrier – cannot build reefs in waterways that are less than 8 feet deep.
- Limits on shell availability for substrate remediation and impact on shell availability or shell cost for aquaculture – may create user conflict.
- Need to engage shell users.

<u>Discussion</u>

After the presentation on oysters and oyster restoration, a discussion period followed that focused on the use of oysters for denitrification and nutrient trading and on the large scale approach being conducted in Harris Creek.

<u>Next Steps</u>

- Gather additional data on nitrogen removal: difficult to move forward with the limited research collected thus far.
- Approach Coast Guard about permits and constraints (MD has already accomplished this).
- Finish the blueprint for tributary reef restoration.
- Promote aquaculture – relieves pressure on industry and enables restoration.

The following are additional comments made during the discussion period:

- We don't know if benthic macro invertebrates are really helping the oyster resistance to Dermo.

- Disease is still a problem. It is a tremendous agent of mortality, but it has not caused the native oyster to be a lost cause, especially where they have been left alone – they live longer and better. So sanctuaries don't always work.
- From recent data, oyster reefs have more denitrification than other places. But they don't always. You can go from having too much denitrification to having none. Enhanced restoration or other credit will take more attention to detail.
- Having a better ecological balance is better than just having a bunch of oysters.
- Stratification from warmer water is not an issue with three-dimensional reefs.
- TMDL standards based on one study of oysters. We don't have enough data to know for sure yet. We should tread carefully.
- Disease resistance is real and should be further studied.
- Guidance for moving forward: the reef ball is a good idea. The more landing strips there are the better. Getting many reefs is better than having one perfect one.
- Aquaculture is an important tool, but need to balance it with other tools.
- Clarification of restored reef and restored tributary:
    - Restored reef: 50 oysters, 50 grams dry weight, and reef footprint should be expanding
    - Restored tributary: restoring 50 to 100% of restorable bottom.
- Estimate $27 million investment to restore Harris Creek.
    - $12 million already planned
- VA hasn't spent a total of $27 million on restoration efforts in its lifetime
- Public engagement is important. Army Corps of Engineers went around to several meetings to get input, and it did adjust their plan for Harris Creek. This delayed construction for 6 months now.
- Are goals practical? It is doable. The Army Corps of Engineers plan is in the billions. That is a non starter. But if we bring it down to the hundred millions, then we have a chance.

Invasive Catfish (Blue and Flathead Catfish)

The next series of presentations focused on invasive catfish. Greg Garman from Virginia Commonwealth University (VCU) presented a predation study and the 'Catfish Portal'. Robert Hale from VIMS spoke about exploring contaminants' impacts on the expansion of a fishery as a population control strategy. Troy Tuckey of VIMS also presented on the survival rates of blue catfish in the Chesapeake Bay tributaries. Rob Aguilar from the SERC presented his research on trophic dynamics of blue catfish in Maryland. Bob Greenlee of the Virginia Department of Game and Inland Fisheries (VDGIF) presented on catfish predation habits over broad spatial and temporal scales. Finally, Joe Love, from Maryland DNR, presented ongoing research from Mary Groves (MD DNR) regarding a diet analysis study of blue and flathead catfish in Maryland.

Information shared included the creation of an online geospatial database 'portal' to help support ongoing and future fisheries science with catfish data. Others spoke about current projects aimed at evaluating contaminants in blue catfish and the development of models to describe the influence of fish size, gender, and diet on pollutant burdens. Other ongoing research objectives include:

- Estimating the population size of blue catfish in the James River
- Determining blue catfish diet based on size, location, and time of year
- Quantifying the diet of blue catfish, and the relative importance of each dietary item
- Examining the impact of catfish on other species

Discussion

Following the presentations, the Fisheries GIT discussed the expectations for an Invasive Catfish Task Force. Given the amount of expertise expressed in the presentations, the GIT expects the task force to compile and integrate the findings of each of the studies currently occurring with respect to catfish. Furthermore, the task force should also seek to explain the current knowledge on catfish to the general public by creating a poster or factsheet. Other responsibilities for the task force were discussed in the previous GIT meeting in December. GIT staff will follow up and organizing the necessary actions to ensure the task force can complete these objectives by the next GIT meeting in December 2012.

Next Steps

- Ask the Invasive Catfish Task Force to compile and integrate invasive catfish studies.
- Ask the Invasive Catfish Task Force to develop options for managing and controlling invasive catfish.
- Assess options for kill policy for invasive catfish – bounties or incentives (for example, free fishing licenses for the next year) for confirmed catch and kill.
- Ask the Invasive Catfish Task Force to create a poster or fact sheet for public education on invasive catfish.

The following are additional comments given during the discussion period:

- Timeline for completion of these studies: all of them should be completed by December 2012 with the exception of VDGIF sponsored research.
- VDGIF indicates it will take $800,000 over the course of four years to fund further research on catfish populations.
- Sterilization of catfish is not a good idea. Not certain of the effects of having that in waterways or the repercussions on humans, and there are too many catfish to make a difference anyway.
- It is hard to piggyback on pound net fisheries because catfish may eat based on convenience of having food stuck in net, and gastric evacuation happens during catch. Although difficult to coordinate, other commercial harvest may be useful for diet composition studies.

- There is a difference in the diet data collected so far because one study was conducted in Newport News, and another was done further north.
- Blue catfish have replacing other native catfish, and possibly other species.
- Need to create task force to set expectations that information will be integrated and made available.

Discussion on Future Work and Goals – 6 months, 12 months

The GIT concluded the first day by discussing the top goals for the group that need to be completed in the next 6 months as well as priorities for the next 12 months.

Goals to be completed in the next 6 months include:

- Develop blue crab jurisdictional allocation process.
- Develop and evaluate blue crab male reference points.
- Identify funding for oyster restoration by 2025 ($12 million is already slated to Harris Creek).
- Develop and discuss a framework for obtaining reliable estimates of blue crab recreational catch; consider providing spatial resolution in addition to improving recreational accountability.
- Assemble the Invasive Catfish Task Force and discuss future policy options.
- Establish a unified approach amongst jurisdictions for invasive catfish management.
- Develop and present policy options/recommendations to implement the goals from the Invasive Catfish Policy Statement.
- Identify a single tributary that by oyster metrics is seen as restored, and then quantify the ecosystem services and fishery benefits.
- Educate land use decision makers about their impacts on oyster restoration projects.
- Avoid over regulation and negative impacts on the fishery industry. Management decisions should be sound, simple, and enforceable.
- Develop an inter GIT action team focused on streamlining restoration permitting.
- Create a factsheet on the blue crab story explaining the need for accountability and fill the info gap on the future of the blue crab fishery.
- Define and determine the role of the Fisheries GIT in promoting and facilitating aquaculture, and evaluate the use of diploids versus triploids in restoration efforts.
- Develop a draft statement on the possibility of using oysters in nutrient trading.
- Determine who takes the lead (inter GIT) on other important fishery related issues: Fish passage, brook trout essential habitat, and stream restoration.

Goals to be completed in the next 12 months include:

- Clearly identify targets (short and long) at the Fisheries GIT meetings to follow.
- In June 2013, the Fisheries GIT should be prepared to address the Atlantic States Marine Fisheries Commission (ASMFC) determination on menhaden management. Consider implementation strategies based on ASMFC outcomes.
- Identify a set of integrated actions across goal teams from a watershed standpoint. In addition, highlight areas for potential collaboration that are mutually supportive.
- Develop integrated results with clear articulated (Bay-wide) goals for invasive catfish.
- Develop messaging campaign to provide legislators with quantifiable benefits for their constituents (What does $27 million get them?; i.e. ecosystem services, nitrogen removal, fishery productivity, etc.).
- Cost per pound of nitrogen reduction. Use this opportunity to create smart land use decisions in the Harris Creek watershed. Make the connection where the restoration efforts are funded, underway, and successful.
- Make an effort to be proactive and less reactionary in order to allow natural enhancements through preventative regulations.
- Research the documentation concerning post-Katrina oyster restoration.
- Provide economic valuation and cost comparison for restoration (non-fished) versus the "put and take" restoration efforts.
- Provide preliminary numbers for the allocation process in each jurisdiction.
- Recognize the charge to CBSAC in 2011 and implement male biological reference points (bay-wide) for blue crabs by 2013.

June 12th – Day Two

The second day of the meeting focused on sharing effective land use management policies that may affect the fishery resources, and on identifying areas in the Chesapeake Bay where the Fisheries GIT can focus their efforts. Peyton Robertson, Chair of the Fisheries GIT, opened the meeting and welcomed participants. The facilitator then reminded the group of the ground rules established on the previous day and called for a round of introductions.

Case Studies

Several case studies were presented to illustrate the type of strategies that may be most effective for the Fisheries GIT to use moving forward. The first case study was about the Mattawoman Creek in Maryland. A panel of activists, community leaders, planners, and scientists presented on lessons learned from their conservation efforts with the Mattawoman Creek watershed.

The panel began with a presentation by Claudia Friedetzky from the Sierra Club. Her presentation was given from the perspective of a community activist. She spoke on the

need for community engagement and the importance of shaping land use policies. Recommendations from her presentation included:

- Distribution of research reports to general public
- Translation of technical findings for general audience
- More community and press outreach (press conferences; distribution of reports to elected officials, planning commissions, etc.)

The second panelist to speak was Dennis Fleming from Mason Springs Conservancy. He spoke from the perspective of a recreational fishing organization and from the perspective of the Mason Springs Conservancy. Dennis related the difficulties of using science to persuade policy makers, and the need to engage elected officials in order to have success. Tony Redman from the Maryland Department of Natural Resources (MD DNR) was the next panelist to speak, and his presentation was on science outreach and policies important for protection. Tony spoke on the significance of interacting with local government policy makers, and illustrated how to relate scientific findings to decision makers. Finally, Margaret McGinty from MD DNR spoke on the results driving conservation efforts in the Mattawoman Creek. Margaret spoke about research findings that lead to successful conservation efforts by Maryland and on the effects these scientific findings have had on land use policies, particularly the impact of impervious surface cover. Margaret also spoke on how to achieve a county conservation goal by connecting to local resources.

<u>Discussion</u>

Important themes identified by the Fisheries GIT from Mattawoman Creek case study were:

- Importance of distributing significant research findings to the community as well as to decision makers in a easily understandable and useful format.
- Significance of reaching out and connecting with elected officials and other policy makers.
- The need to engage communities in a manner that is consistent with local knowledge and expertise.

The following are additional comments made during the discussion time:

- A lot of people don't have a relationship with the natural resources around them, and cannot connect to it as a result. For these people, a better appeal is in relation to housing and educational resources. Housing, education, and transportation on key issues to focus on for overlap.
- Try to engage the community with a message that is specifically important to the community, and then identify common ground. Afterwards, you can shape a

vision together. Look for ways the MD Green Print and Comprehensive Plan intersect.

- Need to connect community members with conservation design.
- Mattawoman Creek is just a thing for many people. There is limited access to the creek, and many don't see it. That's why it is hard to have others connect to the creek.
- When you get over 10% threshold of impervious surfaces, there is extremely limited environmental response to stormwater reduction techniques.
- In many ways, the TMDL is creating a disincentive for land conservation by not giving it credit somehow.
- Until there is a known threat, most people will be reluctant to adamantly take action.
- Had success with connecting youths from school to creek by sponsoring educational programs in and around the creek.
- Unless the best conservation plan is realistic and embraced by the community then they have no hope of being implemented. Hope is that we can engage communities and focus on sociopolitical obstacles.

Skip Swenson from Forterra, a conservation and community building organization, presented the next case study via conference phone. Skip spoke about his conservation efforts regarding the Puget Sound in the state of Washington. Skip spoke about the relevance of creating an agenda, and the significance of a multi-message platform. He illustrated how a well-constructed comprehensive agenda can engage several stakeholders with varying interests by connecting with local interests and knowledge.

Discussion

The following comments were made during the discussion period:

- Identify opportunities for improvement of current laws in a way that supports conservation efforts. One example of this is the Growth Management Act passed in Washington in response to sprawl.
- Align public and private interest. What doesn't work is having a small conversation around this. There are significant changes and you can't do them behind the scenes. A broad spectrum of stakeholders works best.
- While there are tensions between certain segments of the community, the similarities are closer than the dissimilarities. One way to avoid this is to look into the future and talk about what places you want to live 100 years from now. Immediate surroundings may create the disconnect, but everyone should see the same future
- People really associate with an area. Engage stakeholders in a long term, long view perspective

The final stage of the meeting focused on the identification of core elements of the Sustainable Fisheries GIT vision, and on the selection of three pilot tributaries for the GIT to focus their efforts on in the coming year.

Visioning: Land Use and Fisheries

While the Fisheries GIT already has a charter and mission, the team was asked to identify a vision for the role of the team with respect to the issue of land use effects on fisheries. In order to accurately account for each GIT member's ideas for the team's vision, the Fisheries GIT was asked to write their vision in a concise statement and then pin it on the wall. When the exercise was completed, eight main categories were identified.

The following is a summary of each vision statement grouped into the eight major categories identified:

- Cost Effective
    - Financial and socioeconomic factors
    - Obtaining socioeconomic value of fisheries resources
    - Put dollar value on ecosystem services—fisheries
    - Jobs
    - Learn to evaluate the costs of NOT doing things (What's the cost of dirty water?)
- Goals must be aligned with sustainable economic development and political realities
    - Stop/reduce the loss of wetlands by 1000 cuts
    - Political
    - WIPs
- Protect/conserve best habitat areas for fish
    - County level local fisheries info communication
    - Conserve landscapes that support sustainable production
    - Focus our efforts where they can make a difference: play to our strengths.
    - Build capacity around high priority place-based activities and restoration plans
    - Protect/conserve productive capacity of watersheds through effective land management
    - All fishermen that fish in the Bay watershed are satisfied with the level of support that fishery managers are investing to address fishermen's concerns about land use impacts on fishing resources.
- The GIT is a forum for…
    - Bringing science and stakeholders together for a common voice of concern/advocacy
    - Fishermen and scientists

    - Prioritizing resources and engaging diverse fishing groups with a common voice
    - Identification of areas that represent the most important nursery habitat
- Community outreach and education
    - Citizens prepared to use regulatory tools
    - Environmental education
    - Promote local watershed organizations
    - Improved understanding and dissemination of information on the relationships among land use, living resources, and fisheries.
    - Develop replicable and effective approaches citizen advocacy groups can use at the local level
    - Create and use messages that people "get"
- Land – Water Connections
    - Science and transportation synthesis on land change impacts on fishery resources
    - Aesthetic values
- Public Engagement
    - Public engagement process must address core values of citizens
    - Build sense of place (community)
    - Public health: the link between livable and healthier communities
    - Engage in land use decision making
    - Draw in and energize a wide range of stakeholders
    - Engage and inform residents before threats from development occur
    - Get all user groups to think globally and sustainably
    - Local education tying science to resources/issues
    - Develop effective partnerships: government planners, scientific support, and advocacy groups
    - Fisheries GIT alliances with: Habitat, Water Quality, Stewardship, and Healthy Watersheds GITs, and Chesapeake Bay Commission
- Building coalitions and partnerships
    - Finding common messages that resonate
    - Identify what people will lose
    - "Because you can see [the environment], it's very much an important part of peoples' lives" (Skip Swenson, Forterra).

Tributary Selection

The last segment of the meeting was focused on identifying three tributaries for the GIT to work on in the next year. In order to facilitate the process more efficiently, GIT members were asked to break into three smaller groups. Each group would focus on a specific geographical location, and then discuss within their small group which tributary to select within that location. The three locations were Virginia, Maryland, and the

Potomac River. GIT members self selected which small group they would join for this segment of the meeting based on personal familiarity with that particular location.

Members were encouraged to use the Criteria for Identifying Critical Areas that was created at the previous full GIT meeting in December 2011. The following is the criteria previously identified:

- Preservation – focus on protecting the good areas
- Sub-tributary scale (Ex: Mattawoman Creek)
- Impervious surface threshold (<5%)
- High habitat value (SAV, restorable bottom, etc)
- Fish spawning and nursery areas
- Multiple protection opportunities
- Strong citizen involvement and leadership
- Ability to maintain long-term monitoring programs

Additionally, several GIS-based posters with relevant Maryland data from DNR were displayed along one side of the conference room. These posters included information on Fisheries Priority Habitats, Additional Fisheries Resources, High Value Ecological Areas, Fisheries Landscape Vulnerability Assessment, and Maryland Population Growth. GIT members were asked to reference these posters in order to better inform their selection of a tributary. Geospatial data on the health and impairment of Virginia's tributaries was also provided, online and by phone by Laura McKay (Virginia Coastal Zone Management).

Afterwards, each small group presented to the larger group on their selection. The following is a summary of each group's selection:

1. Potomac River Group
    a. This group selected the Wicomico River for the following reasons:
        i. There is an opportunity to expand its conservation zone
        ii. It is within the impervious threshold identified by DNR
        iii. Its comprehensive plan is set for renewal in 2016
        iv. Ample forest and wetland
    b. Messaging for this effort can focus on the following
        i. Opportunity to affect change
        ii. Build off Mattawoman successes
        iii. Outreach to AGRI for nutrient retention
        iv. Threat of Cross County Connector (CCC)
        v. Cost effective effort aimed at conservation
        vi. Threat of point source pollution
        vii. It's a Herring spawning area
        viii. Habitat connectivity (EPA pr.ws)
2. Maryland Group

a. This group chose to focus on Mattawoman Creek watershed. The decision was made based on the revaluation of the Charles County Comprehensive Plan. Progress has been made, but continued conservation efforts are needed for furthered protection.
b. The group also highlighted the importance of other regions such as the Northeast River and the Deer Creek.
c. In addition, the group saw the need to provide detailed criteria to the future selection of restoration sites and identified the following:
    i. Tributary should be selected based on these criteria:
        1. Define partner roles: evaluate and fine tune with criteria
        2. Political will
        3. Biggest bang for buck
        4. Available science (+socioeconomic)
        5. Threat identification
        6. Possible trends in land use/cover
        7. Success in mitigation and restoration
    ii. Messaging should focus on:
        1. Working landscapes
        2. Place-based
        3. Concise
        4. Clean
        5. Science-based
    iii. Successful restoration should be evaluated by considering the following:
        1. Institutionalization of measures (zoning, comprehensive plan)
        2. Biological controls
        3. Water quality and habitat metrics
        4. Public engagement
        5. Partnerships
        6. Land protection
        7. Aligning core values
        8. Comprehensive plans recognize watershed boundaries

3. Virginia Group
    a. The following tributaries and sub tributaries were considered. (Initial top choices in BOLD)
        i. Chickahominy
        ii. Fort Ambrose Powell Hill
        iii. Quantico
        iv. Dragon Run – Piankatank
        v. Middle Peninsula – Outer Edge
        vi. Northern Peninsula – Poquoson, Plum Tree Island
            1. Most is either already paved or already preserved

2. Largest salt marsh on the Bay

vii. Great Dismal Swamp
viii. Eastern Shore – Outer Edge
ix. Eastern Shore – Bay Side

b. Two top choices were: Chickahominy and Dragon Run-Piankatank. **While both tributaries would make great candidates for focusing protection efforts, the group chose Chickahominy as it's primary focus.**
c. Chickahominy
    i. Fresh water
    ii. More flow through the river
    iii. Opportunity to preserve the good areas
    iv. River Herring Spawn
    v. Existing monitoring of SAV-sub-aquatic vegetation
    vi. Nursery for river fish
    vii. Impervious surface around 5%--probably about equal to Dragon Run
    viii. Less land already conserved
    ix. Partnerships with local citizen groups, agencies: good opportunity for synergies that are not yet capitalized on
        1. Partner with Chickahominy tribe
        2. One local group made a trail guide for tails along the Chickahominy River
        3. Chesapeake Conservancy and the National Park Service are doing work here
    x. Imminent threat is strong. Development pressure from both Richmond and Newport News areas
    xi. Invasive blue catfish are also present
d. Dragon Run – Piankatank
    i. Salt water and tidal fresh water
    ii. Less flow
    iii. Opportunity to preserve the good areas
    iv. Oyster reefs
        1. Existing monitoring with 20 years of data
    v. Existing monitoring of SAV – sub-aquatic vegetation
    vi. Estuary for ocean fish
    vii. Impervious surface around 5% - probably about equal to Chickahominy
    viii. More land already conserved
    ix. **Local citizen groups are already very strong, organized** – Friends of the Dragon Run is very active, has been for about 40 years
    x. Over the long term, probably better protected than Chickahominy. Whatever can be done already has been.

The meeting concluded with a discussion on messaging. The Fisheries GIT Chair pointed out the distinction in messaging between restoration and preservation. For restoration, the message is that "we don't want to waste dollars to save what will be destroyed by land use." For preservation, the message is "we want to preserve the best of what is left." The Fisheries GIT Vice-Chair pointed out that the greatest resource in the community is the people who live in it, but another person warned that the Fisheries GIT should be cognizant of how messages resonant differently across stakeholders with varying interests and experiences.

The next Fisheries GIT meeting will convene in December 2012. To view this meeting's agenda (June 2012) and the PowerPoints presented during the meeting, please use the following link: http://www.chesapeakebay.net/calendar/event/18200/

Appendix A - Attendance

Day One:

Anson Hines
Trent Zivkovich
Ron Lukens
Moochie Gilmer
Mike Slattery
Jessica Coakley
Lynn Fegley
Matt Mullin
Nancy Butowski
Tom Powers
Patrick Campfield
Jack Frye
Ellen Cosby
Peyton Robertson
Tom O'Connell
Jack Travelstead
Dan Ryan
Bevin Buchheister
Emilie Franks
Andrew Turner
Bruce Vogt
Adam Davis
Tanya Denkla Cobb
Megan Gude
Pete Guzman
Matt Mochroan
Troy Tuckey
Ed Houde
Howard Townsend
Stephanie Westby
Peter Tango
Karl Blankenship
Peter Bergstrom
Pam DeAngelo
Ryan Carnegie
Mark Luckenbach

Steve Vilnit
Emily Greene
Bob Greenlee
Greg Garman
Luck Lyon
Frederika Moser
Tim Wheeler (webinar)
Brenda Davis
Jeff Horan
Chris Moore (webinar)
Eddie Durant (webinar)
Matthew Fisher
Stephan Abel (webinar)
Joe Grist (Webinar)
Kevin Shabow
Geoffrey Smith (webinar)
Robert Hale
Charlie Poukish
John Page Williams

Day Two:

Jeff Horan
Tom Powers
Ron Lukens
Bruce Vogt
Emilie Franke
Andrew Turner
Tanya Denkla Cobb
Megan Gude
Pete Guzman
Adam Davis
Mike Slattery
Jack Frye
Peyton Robertson
Laura McKay (webinar)
John Page Williams
Jack Travelstead
Howard Townsend
Peter Bergstrom
Troy Tuckey
Mike Fritz
Nancy Butowski
Margaret McGinty
Tony Redman
Tom O'Connell
Charlie Poukish
Dennis Fleming
Emily Greene
Bevin Buchheister
Bryan King
Pat Buckley (webinar)
Shep Moon (webinar)
Karl Blankenship (webinar)
Patrick Campfield
Claudia Friedetzky
Denise Breitburg
Trent Zivkovich
Daniel Strain
Robert Bromer
Rich Dolesh
Jonathan Doherty

Appendix B – Meeting Survey Responses

Sustainable Fisheries GIT Meeting Survey Responses

The table below contains numbers reflecting the amount of times each category was selected. The highest count (the most popular selection) for each question is highlighted in yellow. Please note that blank boxes indicate that NO selection was made for that category.

How satisfied are you:	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
With the quality of the overall event?	7	10			
With the scope of information presented?	7	12			

With the usefulness of the information?	7	12		
With the quality of the presentations?	7	12		
That you had sufficient time to network and share ideas with peers?	1	11	6	1
With the amount of time dedicated to training?		4	12	
With the meetings' overall value in helping you improve your professional effectiveness?	4	11	3	
That the meeting was a motivational experience for you?	8	8	3	
That you and your peers received appropriate recognition and appreciation at the meeting for your contributions last meeting?	5	6	5	

The following are the annotated copies of each handwritten remark received. The statements below are word-for-word copies of what was originally written on the survey; however, due to the readability of certain words/phrases, a few words may be missing.

Suggestions:

- Text on name tags too small, and make first names larger than last names
- Explicitly recognize greater CBP context in terms of relationships to other GIT missions and follow-up coordination
- Possibly more time for discussion. Much of the presentations presented a problem to group + then create a silver bullet. The group could spend more time effectively outlining problems to successfully engage tools to address the problem.

- Fantastic meeting, motivational and eye opening. Thanks for being welcoming and accepting of an individual who didn't have a direct connection with the project.
- Need a better effort to get attendance by stakeholders and other agency representations
- Form a workgroup to continue to develop criteria and candidate watersheds. Develop guidance document from advocates' experiences
- This was a very well planned and organized meeting with clear objectives. That makes it easier to leave with a sense of accomplishment

Critiques:

- Didn't like the "visioning" session. Seemed muddled and unclear
- I liked the tone of the meeting and the participants which made it easy to chime in with ideas. Ideas were all respected and welcomed. Facilitators also did a great job.
- Besides time management, this went great.
- Great job adjusting the meeting agenda to the needs and discussions!
- Positive: Peyton's summary at end of each session; local food for meals; time management for presenters; clear and concise presentations. Negatives: attendance of fishing stakeholders
- Enjoyed the Cascade presentation of exemplary work outside the Chesapeake – encourage some for future meetings to break from oysters, crabs, catfish.
- Great Rockfish & Oysters! Thanks Andrew & Adam