



Habitat Goal Implementation Team Fall 2019 Meeting
November 6th-7th, 2019
Columbia Crossing Center
41 Walnut Street, Columbia, PA 17512
Conference Line: +1 929-205-6099 Conference Code: 206 058 719
Zoom: <https://zoom.us/j/206058719>

*If you are joining by webinar, please open the webinar first, then dial in.

Christine Conn	Bill Jenkins	Jennifer Greiner	Julianna Greenberg	Megan Ossmann
Mary Andrews	Matt Meyers	Steve Faulkner	Gina Hunt	Scott Phillips
Kristin Saunders	Denise Clearwater	AK Leight	Peter Claggett	Mike Bednarski
Angie Sowers	Emily Major	David Thorne	Tony Watkinson	Pam Mason
Josh Brangle	Matt Robinson	Mark Hoffman	David Cadie	Jill Whitcomb
Emily Trentacoste	Dylan Reynolds	Morgan Corey	Kevin DuBois	

Wednesday, November 6th

10:00 am Welcome, Introductions, Expectations
Bill Jenkins (EPA) and Christine Conn (MD DNR)

10:20 am “Showcase” of Updated Work Planned for 2020-21
Workgroup Chairs will each have 15 minutes to highlight how their groups have adapted their work to changing needs, followed by 5 minutes to field questions from HGIT members before seeking their approval on submitting these to the Management Board.

1. **Fish Habitat** – *Gina Hunt, MD DNR*
 - a. *Invasive species*
 - i. Jennifer G - MAPAIS, the bay program doesn't have a work group and instead co-staffs MAPAIS
 - ii. Julianna G: Talk to your state rep for MAPAIS about what's going on with invasives

- iii. Christine C.: Mark Lewandowski is the Bay program rep on MAPAIS
- iv. Kristin S.— if there are multiple outcomes that have been dealing with that, multiple outcomes should reflect that as a factor that they're dealing with
 - 1. Actions should be reflected based on what the states need
 - 2. These should be factors in the workplan
- v. Gina H. — each state is coming from a different starting point with respect to knowledge of invasive species in their state
 - 1. Dealing with different species
- vi. Steve F. - We need to look at things on a species or guild level, we can't tackle all aquatic invasive species at once with one type of action
- vii. Jennifer G - Follow up action, raise this at a coordinator-staff meeting and ask all the teams to look at where invasives are a factor.
 - 1. Create a consolidated list of actions to give to MAPAIS rep

b. ACCEPTED by GIT

- 2. **Stream Health** – Matt Meyers, Fairfax County
 - a. Collaboration with the Healthy Watersheds GIT
 - b. Christine C. - Fairfax county's thoughts on pooled monitoring?
 - i. Matt M. - We can't do all the monitoring we need on our own, so this effort allows for more collaboration across the bay to get the experts where they need to be

c. ACCEPTED by GIT

- 3. **Fish Passage**— Mary Andrews, NOAA Restoration Center
 - a. Steve F - Federal Energy Regulatory Commission (FERC) issues have been an impediment for my groups, do you think there is a need to evaluate that further?
 - i. Mary A. - Our only FERC projects are on the Susquehanna river and we generally aren't super involved with that.
 - 1. Not a priority for the workgroup moving forward but in other areas of the country it is a larger issue that people are working on.
 - b. Jennifer G - Is there an opportunity for overlap with the CBT Pooled Monitoring Effort?
 - i. Matt M - I don't know if fish passage is an issue that people are looking into for pooled monitoring
 - ii. Jennifer G - Looking at sediment before and after a dam removal would be of interest to people

- c. Denise C - Improved linkages between habitat improvement and crediting protocols for dam removal
 - i. Structures are too small and causing problems, if they can be replaced with a larger structure you could be improving sediment and its relevant to fish passage
 - 1. Jennifer G - Problem with that is for things to get credit there must be a land-use change
 - a. Ask modelers
 - 2. Mary - We're working with a group to develop a crediting system for mitigation crediting related to dam removal and road stream crossing

d. ACCEPTED by GIT

- 4. **Brook Trout**— Steve Faulkner, USGS Leetown Science Center
 - a. Matt Robinson -Temperature monitoring
 - i. Steve F - Put stream temperature gauges throughout the watershed
 - ii. Currently in USGS science plan but nothing has happened yet
 - b. Steve F - Citizen science effort eTrout
 - i. Didn't include in work plan because they don't want to over commit
 - ii. Peter Tango - eDNA could be brought in to citizen science efforts as well
 - c. Jennifer G - How aware are members of LGAC of the recreational fishing needs of their community? Do they care? Would they like a presentation about the recreational value of things in their area?
 - i. Kristin S - They're not aware but might like the presentation
 - 1. Remember to explicitly and specifically identify who your audience is when you request local engagement assistance
 - 2. There is a CBP group who has developed a strategy for taking information from subject matter experts and translating it for the target audience and delivering it through trusted messengers
 - a. Currently trying to translate and distribute information from the Bay Program
 - i. GIT funded project
 - b. Going to meet and figure out a similar strategy for other groups on the ground - i.e. nonprofits, citizen scientists, etc

d. ACCEPTED by GIT

5. **Wetlands**— Pam Mason, Virginia Institute of Marine Science
- a. Scott P- USGS will provide revisions for item 3.2, they have expanded activities to support Wetlands Workgroup
 - b. Kevin Du Bois - For action 5.6 you should specifically coordinate with LGAC
 - c. **ACCEPTED by GIT**

12:00 pm **Lunch**

1:00 pm **STAC Workshop: Microplastics in the Chesapeake Bay and its Watershed: State of the Knowledge, Data Gaps and Relationship to Management Goals – Results and Actions Going Forward**

Matt Robinson, District of Columbia Department of Energy & Environment (DOEE)

- Gina H - Has there been follow up on the recommendations from the STAC workshop?
 - Matt R - We're going around and briefing different groups trying to garner support for an action team and a workgroup to host it.
 - Gina H - Fish habitat is under two GITS, but you're probably dealing with more than just two GITs who would be relevant
- Kristin S — Having an MB member adopt you as a champion can be the easiest way to find a home for a management team. Have you shopped this around other MB members?
 - Matt R - DC would be willing to sponsor, but we need staffing support to coordinate a team like this. Don't think it would be a huge lift for the potential staff
 - We would likely have interest from MD and VA as well because they've already been involved
- Julianna G — Requests from the phone:
 - Denise C — Please follow up with links to papers and more resources
 - Scott P— Request to present at the toxic contaminants work group
 - Kevin Du Bois — Could the STAC workshop and trash TMDL potentially lead to a microplastic TMDL?
 - Matt - Maybe someday but we don't have a good threshold to make a baseline for a TMDL. There hasn't been enough research in the Chesapeake
- Jennifer G - Does CRC have a seat on the management board?
 - Kristin S - Secretary of STAC but probably not a MB member
 - Strategic Science and Research Framework - part of what we're trying to do is source the science needs from existing resources (ORD, EPS, etc) or if there are things that need to be funded that don't have an obvious home. Used to inform GIT funding process, extra money left over that chairs need to decide what money is used for

- Bill J - Does there have to be an action team in place for this topic to become a part of the science and research needs framework?
 - Jennifer G - You would just need support from a GIT or a Management Board representative
- Steve F - Is there energy in the stakeholders to move forward?
 - Matt - Overall, yes. The issue right now is that we need to make this a priority regionally like water quality is
 - We're the only region without a marine debris group
 - Chesapeake Bay area is very behind on microplastics work and research
- Jennifer G - Fertilize in Fall if At All
 - Fertilizer company got involved to avoid product backlash
 - Big communications campaign based on science
- Kristin S - Behavior Change training — can we target a source that is one of the larger contributors?
 - Packaging is the largest source, could potentially target a different large source based on what we can target
 - Matt R - Looking at this info actually inspired the styrofoam and straw bans in DC, so we've started to do this
 - Hired the Alice Ferguson foundation to do an anti-littering campaign but it's been close to a decade since
- Matt R - The ecological risk assessment for the Potomac has been estimated at \$300,000
 - For \$100,000 or less, you could put together a model from literature review and that's something we could start with and take to our partners.
- Jennifer G – **Follow up action:** the Chairs will speak up at the MB meeting in support of the microplastics group

1:45 pm

GIT Chairs Meeting Outcome and Updates

Kristin Saunders, EPA Chesapeake Bay Program Office

- How can we use Cross-GIT mapping exercises to investigate early signals of change and communicate that to state and local jurisdiction?
 - Things are changing on the ground, this is your opportunity to do further research and find out what factors are preventing you from protecting those important areas
 - Signals of change that let you know that something is happening in this particular area before you see other, larger signs
 - Allow state and local decision makers to see what is happening on the ground at an early stage when they can still take proactive action

- Statistically relate watershed characteristics (indirect measurements) to direct assessments like the IBI
- Christine C - these management questions and factors impacting success should be found already in work plans
- Kristin S - Don't ask a management question like "where are the vulnerable areas?", vulnerable to what?
 - Jennifer G - "How would we expect BT habitat to change given a 6-degree temperature change"?
 - Kristin S - Specificity about the relationship between a stressor and an indicator
 - Christine C — Talk about ecological threshold
 - Threshold for a % change in hardened shoreline where you won't get the SAV
- Jennifer G — **follow up action** for the work groups, look at your work plans and tease out signals of change and management questions so that we can use this information
- Julianna G - Comments from the phone
 - AK Leight - started a conversation with Peter about tying this in to tidal fish habitat work
 - Kevin Du Bois - How much of the change in the Brook Trout map is due to dam release streams?
 - Dam released lakes will keep the water cold even with an increase in temperature
 - Is that an indicator of a healthy watershed if those cool areas are artificial?
 - Steve F - probably very little impact from this, not a common enough issue to make a big impact on this
 - Gina/Kristin - this map is a climate change scenario not taking into account the quick fix of a dam release

2:00 pm

Documenting and Protecting Wild Trout Populations in PA

David Kinney, Trout Unlimited

- Gina H - At the time you started the unassessed waters program only a quarter had been assessed. How many streams have you assessed now?
 - David K: Around half of the streams are done now. Low hanging fruit has been taken care of, so the future of the assessment is a little uncertain. Regulatory aspect is one of the main drivers, change in protections after a stream is assessed
- Are there certain regions in the state that have more of the streams that need to be more protected?
 - David K: We've been looking a lot in the DE river basin, so we've generally found more streams there. Eastern Brook Trout Joint Venture has other interests as well, so we work with them and other stakeholders to assess streams in different areas

- Jennifer G - Linked Tributaries *can* be protected, what is the *can*?
 - David K- Fish and Boat Commission says that a linked tributary will be treated the same as a class A stream but it's unclear that when they actually get down to it with protections and regulations, the linked tributaries are actually treated like that
- David K - There is current litigation about a Class A stream that is not high quality and how it is being regulated and restored
- Jennifer G - USFWS is focusing on "at risk" species to preclude the need for listing species. One of the at-risk species is the Chesapeake Logperch. Are some of these Brook Trout streams potentially in the same area? Work being done with riparian forest buffers and long perch.
 - Steve F/David K: Don't know at this point. There's not been much data about the log perch going around.
- David K - How is the data that is being collected used?
 - SF - We don't have a coordinated systematic way to integrate the data yet, but that's our next step. The data is absolutely needed!
- Steve F - As we assess more streams, how does the brook trout outcome change? If we are charged with restoring BT to 8% of habitat, as we find more habitat does the amount of restoration we have to do increase?
 - Christine C- Similar to the issue with Fish passage
- Jennifer G – **Follow up action:** Keep riparian forest buffers on the forefront of our mind because they have some good cross-GIT potential. If the states are going to do more buffers, let's try to put them where they can benefit brook trout!

2:45 pm

Pennsylvania Water Quality Assessment and Restoration Story Maps

Jill Whitcomb, Pennsylvania Department of Environmental Protection

- Gina H - - What are you tracking progress of on the Tracking Progress tab?
 - Jill W - Tracking the progress of factors linked to TMDL and restoration efforts. Looking to update this with the 2020 reports soon
 - Gina H - PA Fish and Boat Commission has a way to track fish habitat restoration, is there a way to integrate that here?
 - Jill W -- There's a lot of overlap between stream restoration and the fish habitat restoration so that's likely why there isn't a separate category right now.
- Jill W - Teachers can use this tool to add on to environmental studies lesson plans. Very helpful for elementary/middle school age in explaining what the state is doing and why it's important
- Jennifer G - This is the same dataset for benthic macroinvertebrates as is submitted to the Chessie BIBI
- Gina H - How do I find this website if I'm another county looking for advice or another impaired stream looking for similar stories?
 - Jill W - We're working on getting this information out in ways other than the website, we use social media for instance, but farmers are very peer-to-peer oriented. We do use Penn State extension and work with

them to educate 4H and FFA groups. A lot of this is using conservation districts as trusted messengers

- Jennifer G - Reminds me of the Wetlands Works website. Currently undertaking an effort to take the info from that website and make it more useful
- Jill W - We are working on a Chesapeake Bay story map as well
- Kristin S - Do you have to pick and choose where you reference the Chesapeake Bay as a whole vs a more local focus on this website?
 - Jill W - Always depends on your audience and where you are geographically. Some places we must focus on TMDL and TMDL development. "Great for PA, good for the bay"

3:00 pm

Chesapeake Bay Watershed Land Use: The Next Generation

Peter Claggett, CBP Land Use Workgroup Coordinator

- Jill W - How are you differentiating different types of buildings i.e. poultry vs dairy and not swine or others?
 - Peter C - Poultry is easy to differentiate because they generally have a characteristic shape. They've also been mapped by hand for the entire Delmarva and we were able to use that to automate their detection. Poultry litter is a big source of pollution so it's important to know where they are. Same with dairy, it can serve as a point source.
 - Jill W- Are you taking this to all the goal teams/WGs?
 - Peter C - Already presented at STAR and don't know how many more we'll do but we are actively looking for input
- Kevin D - Would bulkheads be categorized as "bare shore"? If so, how do you differentiate from sandy beaches/spits or other naturally unvegetated bits of shore?
 - Peter C - Riprap hardened shoreline might show up as bare shore, we would just be mapping this as barren just as we would for any sandy area. With a bulkhead where there is an abrupt change from land to water, not confident that it would even be detected as barren. Probably split in to herbaceous and barren. Probably have to rely on separate data on shoreline condition for that purpose
- Steve F - It seems like land use is managed forest, but the land cover is the plants themselves. What kind of discussion has there been about successional forest and mixed-use forest?
 - Peter C - Having a joint meeting with the forestry and land use work groups to go over these classes. The biggest change in the watershed has been forestry activities. We need to be able to capture that and model it into the future. There's a lot of forests that aren't changing but some of them are. There's a disconnect between what managers are saying and the resource distributors are saying. Different modes of accounting, having these classes and satellite data will be very important in getting a handle on this.

- Kevin D - For tidal wetlands, are the images always taken at low tide for consistency?
 - Peter C - No they're not. We're going to try and get a sense of where in the tidal stage things were when the images were taken in the new data.
 - Kevin D - I was wondering if the bare shore category would include mud flats or sand flats at low tide. How are tidal wetlands defined? Does it really mean VEGETATED tidal wetlands, or does it include both?
 - Peter C - It includes both if they were detectable in the imagery that was acquired. For wetlands, the first dataset we looked at was NWI. When the Conservancy was mapping nearshore areas in MD, they manually changed NWI boundaries when they could see that the wetland was larger or smaller than what was listed. We needed a way to classify a wetland as tidal, so we based it on relative elevation and proximity to water.
 - Kevin D - You have the vegetated portion of the wetland identified and the water identified. If there was a gap between those two sections, would that also be considered wetland?
 - Peter C - Yes. Some of that bare shore should be included in floodplain wetland or tidal wetland. Maybe you don't even really want a bare shore category. One of the reasons we have it, is bc we suspect that it will be one of the most dynamic classes. Even if we know it was taken at low tide or high tide, we really can't alter our maps based on that. We expect bare shore to change pretty strongly between the dates where pictures are taken.
 - Kevin D - So from a metric standpoint, if the same place was shot at a different point in the tide, the amount would be different. So you really can't compare bare shore from year to year.
 - Peter C - We will need bare shore to differentiate between other areas like surface mining, but if we really try to break it down beyond that or to classify it, that's where we are looking for input.
 - Kevin D - Can you make some sort of program taking into account the distance between different types of land use (water and vegetated etc) and use that to help define where wetlands are?

- Feedback from the workgroup by the end of November
 - Send out the spreadsheet Peter sent out
- AKL - Is there a way to break up "turf grass" into smaller categories like golf courses and lawns?
 - Peter C - Probably golf course vs residential lawn. Why would you want to differentiate between them?
 - AKL - Different potential loading signatures because of different management types for those areas. There are different levels of applications of chemicals on different kinds of turf grass.
 - Peter C - We map astroturf the same as real grass which could raise issues, but I will raise this idea to the modelling suite.

3:45 pm CBP Data Dashboard Demonstration

Emily Trentacoste, EPA Chesapeake Bay Program Office

- Gina H - Does this map where BMPs from Tetrattech report are implemented? Could it in the future?
 - Emily T - Tetrattech report did a combination of the BMPs in the phase 5 and 6 versions of The Models. We do have info on the phase 6 BMPs at a county level, so we can look at those on a map (but not the phase 5).
- Emily T - right now you can look at the BMPs in two ways: You can look at all BMPs that benefit an outcome, or you can "explore by practice" and look at a specific BMP and see what it benefits. Right now, you can't look at two priorities at the same time
- Gina H - What are the different shades of green on the county map showing?
 - ET - This map shows the % implementation of BMPs. It is the units of BMPs that have been implemented out of what we consider to be the "universal passable implementation"
- Kristin S - When the Tetrattech scoring for BMPs was added into this dashboard, it was the first attempt to lay out a menu of options to get planners and implementers to start thinking about practices that serve both WQ and habitat. May not be a great planning tool for how this group would plan and implement (more about showing other benefits of WQ practices).
 - Talked earlier today about potentially representing the signals of change from the HWA on the data dashboard
 - Emily T - I think that the dashboard would be a good place to put that information.
 - Gina H - There is currently an outreach project about economic values of living resources being prepared. One of the graphics is a shaded map showing fishing license sales. If you're a county, it might be very interesting to see that map and implemented BMPs right next to each other.
 - Emily T - Data from the dashboard would still be useful for that project even if this is not a product that would live on the dashboard
- Steve F - Not all inferences are equal. The ratings for some of these BMPs are not based on real data but some of them are. Relationships are not all very well

vetted. These ratings are just based on best professional estimate. Maybe add some text to the dashboard as a disclaimer for this section.

- Jennifer G - Maybe add another tab for the healthy watershed assessment or cross GIT mapping projects. Look back at the actions that we previously rated as highly linked to habitat value and see if that's scientifically defensible
 - Steve F - We could also look at it the other way and look at the ones we previously said were unlinked. There are so many factors interacting in complicated ways
- Jennifer G - Using that county map, can we actually see where the counties are falling short of their WIP targets for BMP implementation?
 - Emily T - Right now the WIPs are not integrated in to that graphic but you could compare the existing map to the target WIPs
 - Kristen S - Or you can look at where progress is listed as being higher or lower and use that to target things
- Jennifer G - Who are you planning to engage for your user testing? It would be a good idea to add in some members from the habitat GIT as well
 - Emily T - User testing is an online test where you are given a series of tasks to complete on a website that records your mouse movements so it can track where you go to find the answers for your task. It lets us know how usable the dashboard is. Usually takes 15-20 minutes to complete. Testing will probably start in January 2020.

4:20 pm

Action Items and Wrap Up

- We will forward our 2020-2021 work plans to the management board as approved by the team
- Goal team reps will support the formation of the microplastics action team and/or funding for an ecological risk assessment at the management board meeting next week
- Raise the issue of how to address invasive species across goal teams as a discussion topic for a coordinator-staffer meeting. Request that workgroups identify where invasive species are a factor affecting their outcome.
 - Bring a consolidated list to the CBPO MAPAIS representative
- Ask HGIT steering committee to tease out management questions in our work plans to address Kristin's signals of change.
- Provide feedback to Peter Claggett by November 22 on proposed land use classes.
- Follow up with Emily Trentacoste regarding user testing for the data dashboard and how the data dashboard might be used for each workgroup.
- Spring HGIT meeting 2020 in Virginia, potentially at George Mason University, date is to be determined and will take into consideration the next SRS cycle

4:30 pm

Adjourn

Thursday, November 7th

Field trip to Big Spring Run Legacy Sediment Removal and Aquatic Ecosystem Restoration project site in Lancaster, PA.

Address: 1343 Gypsy Hill Road, Lancaster PA

9:00 am	Meet at Big Spring Run project site for briefing with project managers and landowners. Gear up and walk to the site.
9:15 am	Discussion/presentation
10:00 am	Exploring/walking around the site
10:30 am	Follow-up discussion
10:45 am	Load up and leave
11:00 am	Adjourn for travel home

*This visit will include a chance to walk around the restored site, so waterproof boots are recommended. Participants are responsible for bringing their own water. Bathroom facilities are not available at the site. *