Purpose

During the August 2021 Strategic Review System presentation to the management board, three outcomes in the Healthy Watersheds Cohort requested the jurisdiction management board member to engage with experts in their jurisdiction, discuss factors and priorities, and provide feedback to the workgroup chair. These outcomes were stream health, brook trout, and fish habitat. The management board suggested that a survey would be the best tool for feedback. The questions were developed by the outcome chairs and responses were requested by November or December depending on when the new action plan was due from the outcome. The purpose of this document is to provide a summary of the need and responses to the outcome survey.

Summary of Results from Stream Health Outcome Requests to the Management Board

To make progress, the Stream Health Workgroup (SHWG) needs active and engaged members, as inconsistent or absent participation is a challenge for the team. In a recent member survey, some team members cited a "lack of time" as a major hurdle in participation. Like the Brook Trout Outcome, Stream Health members do not know staff in other programs that may relate to stream health. This outcome needs the help of the Management Board members to assist in making these connections with the related programs in the Bay states. The member survey results also indicated that an updated and comprehensive definition of "stream health" is needed. The questions sent to the Management Board were to help the team address these needs and challenges.

A list of Stream Health Workgroup contacts was provided for each jurisdiction and Management Board members were requested to submit survey responses by close of business Thursday November 18th, 2021. ***Link to Google survey:*** https://forms.gle/yK3UUsSr4wv46MNBA

Summary of Reponses: *5 people from 5 jurisdictions responded to the survey and the names of those who responded were not recorded.* ****THE SUMMARIZED RESPONSES FROM THE JURISDICTIONS CAN BE FOUND IN THE APPENDIX A.***

- **Delaware**: Submitted one response, as requested.
- **District of Columbia:** Submitted one response, as requested.
- **Maryland**: The Management Board member did not submit one, comprehensive response, but instead tasked Maryland representatives, including the Stream Health Workgroup Chairs, to respond to the survey on behalf of the MB member. One response was submitted in February 2022.
- **New York:** Submitted one response, as requested.

- **Pennsylvania:** No response to the requested survey.
- **Virginia:** No response to the requested survey.
- **West Virginia:** Submitted one response, as requested.

The SHWG asked the Management Board to speak with their state workgroup representatives to answer a few questions about the definition of stream health within their jurisdiction. This request had two purposes: Firstly, the SHWG wants to understand how each jurisdiction officially defines and reports on stream health within their state, and what regulatory mechanisms are in place to improve stream health. We will use this information in our work on developing additional indicators. Secondly, and the main purpose of asking the MB to connect with the representatives instead of the SHWG sending out the questionnaire to the workgroup representative directly, was to encourage the MB to engage with their workgroup representatives, to begin a discussion about the complexity of defining stream health. The SHWG has put a lot of effort (and GIT funding) towards literature review and data mining studies to determine the main stressors that impact stream health, how specific best management practices (as defined by the CB model) impact these stressors, and to start to develop additional indicators beyond the existing Chessie BIBI (biological index) that will give us a fuller picture of what is happening in the local streams over time. This is a very complex system, and we want the Management Board to understand why we need to do so much work for continued support. While the SHWG is available to give a presentation to the MB, we think that MB members talking directly to their state representatives will be more productive. It might also highlight gaps in the official state definition that can only be filled through governmental actions which could be initiated by the MB member. Finally, we want to increase our workgroup member participation: many members have limited time to participate in workgroup activities and we hope that with the MB directly engaged in discussions with the member, the workgroup can be prioritized in their tasks.

Summary of Results from Brook Trout Outcome Requests to the Management Board

The Brook Trout Outcome is not on track due to significant and increasing stressors to brook trout occupancy in the watershed (i.e., land-use and climate change) and also due to insufficient resources to protect and restore brook trout habitat. An increase and coordination of efforts that address the interconnected network of land and water is needed to make progress in this outcome. Specifically, this outcome needs to be able to track and collect data on conservation and restoration activities. The Workgroup asked the Management Board members to engage with their jurisdictional Brook Trout Workgroup (BTWG) members and other state partners to discuss opportunities to collaborate on priority action items that will have the greatest impact for brook trout habitat. Priority actions to mitigate the stressors on brook trout habitat include:

- Increasing or maintaining at least 75% riparian forest cover in all brook trout watersheds
- Fencing livestock out of brook trout streams
- Developing better private landowner engagement and conservation incentives
- Promote land stewardship and brook trout benefits

Advancing the priority action items above are often outside the control or authority of brook trout biologists and the workgroup needs Management Board assistance to make progress toward meeting the outcome. To do this, the workgroup also asked each jurisdiction to connect with the programs in the Management Board members' states to identify barriers and opportunities on priority actions. The actions above also addressed other outcomes like Healthy Watersheds, Stream Health, Fish Passage, Forest Buffers, and Protected Lands, as they're intrinsically connected through hydrological and ecological processes.

A list of Brook Trout Workgroup contacts was provided for each jurisdiction and Management Board members were requested to submit survey responses by close of business Friday December 17th, 2021. *Link to Google survey:* https://forms.gle/ vzqc85UWne1T2ySa8

Summary of Responses: *4 people representing 3 jurisdictions responded to the survey and the names of those who responded were not recorded.* ****THE SUMMARIZED RESPONSES FROM THE JURISDICTIONS CAN BE FOUND IN APPENDIX B***

- **Delaware:** Submitted one response, as requested.
- **District of Columbia:** No response to the requested survey.
- **Maryland**: The Management Board members did not submit one, comprehensive response, but instead tasked Maryland representatives, including the Stream Health Workgroup Chairs, to respond to the survey on behalf of the MB member. Two responses were submitted in February 2022.
- **New York**: Submitted one response, as requested.
- **Pennsylvania:** No response to the requested survey.
- **Virginia:** No response to the requested survey.
- **West Virginia:** No response to the requested survey.

The Brook trout outcome is not on track to meet the outcome goal and there was limited survey response to address outcome attainability and identify collaborative opportunities. The BTWG is trying to identify needs and develop staff connections that are specific to the conditions in that state. For example, the biggest need in MD is to increase riparian forest cover. In WV, the best opportunities for brook trout stream restoration is on private lands. We need an integrated effort in each jurisdiction to implement these large-scale priority action items, and to collect and analyze data for all conservation and restoration activities in brook trout streams. This is only possible with broader jurisdiction engagement, and these connections are made at a higher level. The BTWG lacks the capacity to implement or coordinate actions at the scale necessary to overcome the detrimental impacts and achieve the Outcome.

Summary of Results from Fish Habitat Outcome Requests to the Management Board

With the overarching goal of addressing workgroup capacity and participation issues, the Fish Habitat Action Team, in collaboration with other Healthy Watershed cohort outcomes, crafted a survey for the Chesapeake Bay Program's jurisdictional partners. The survey requests Management Board representatives to coordinate with their jurisdictional fish habitat representatives and answer questions related to needs surrounding science, decision support tools, and other products that may be developed by the FHAT.

Summary of Responses: *4 people representing 2 jurisdictions responded to the survey and the names of those who responded were not recorded.* ****THE SUMMARIZED RESPONSES FROM THE JURISDICTIONS CAN BE FOUND IN APPENDIX C***

- **Delaware**: No response to the requested survey.
- **District of Columbia:** Submitted one jurisdictional response, as requested. The District also contacted the FHAT leadership to coordinate for the inclusion of a new permanent representative on the team.
- **Maryland:** Three separate responses were submitted by a variety of members sitting on the Fish Habitat Action Team, but the Management Board member did not submit one, cohesive response.
- **New York:** No response to the requested survey.
- **Pennsylvania**: No response to the requested survey.
- **Virginia:** No response to the requested survey.
- **West Virginia:** Official response noted that there was no internal capacity to complete the requested survey. A couple of names were offered as potential members to attend workgroup meetings.

Although the Fish Habitat Action Team did not receive the expected response from the jurisdictions, the team still feels that its new Logic and Action Plan focuses on priorities important to the active membership. These include actions related to regional assessment development, characterization of species-specific habitat use, and continued opportunities for near-shore restoration. It should also be noted that, separate from the survey, the Fish Habitat Action Team leadership was able to identify new members to represent Virginia (VMRC and VDRW), the District of Columbia (DOEE), and Maryland (MDNR) on the Action team.

APPENDIX A: Stream Health Outcome Survey Reponses

QUESTION 1: How does the SHWG Member's organization define stream health? How is it characterized or quantified? (e.g., water quality, biotic indicators, geomorphic stability, etc.

- **New York:** The definition of stream health should include both macroinvertebrate metrics and presence of diverse fish communities. Geomorphic stability is not always a good indicator, as some sediment transport is present in health streams. NY relies on the Stream Corridor Assessment Guide to determine stream health - http://www.uppersusquehanna.org/usc/usc-teams/stream-team/stream-corridor-assessment-guide/
- **West Virginia:** A waterbody is considered impaired if it violates water quality standards and does not meet its designated uses; most of these impairments are characterized by studying water quality parameters. The exception to this is a biological impairment, which is characterized by a low value of the biological index. In WV it's the WV Stream Condition Index (WVSCI). WVDEP currently utilizes WVSCI - a family level multimetric IBI first developed in 2000 to assess Aquatic Life Use. For other purposes, we utilize a more refined genus level multi-metric IBI. These IBIs are based on benthic macroinvertebrate assemblages.
- **Delaware:** Stream health in Delaware is based on water quality parameters such as nutrient, bacteria, and toxics concentrations. These data are derived from a variety of sources including long-term water quality monitoring sites, fish tissue analysis, and monitoring for special projects. There used to be bioassessment (benthic macroinvertebrate collection) and habitat assessment (geomorphology) components as well, which followed EPA rapid protocols (Barbour et al. 1999). Due to staff and budget constraints, these assessments ended in 2017. Discussions to improve our approach to stream health are ongoing.
    - General info: https://dnrec.alpha.delaware.gov/watershed-stewardship/assessment/water-quality-monitoring/
    - WQ monitoring sites: http://demac.udel.edu/waterquality/
    - WATAR:https://dnrec.alpha.delaware.gov/waste-hazardous/remediation/watar/
- **D.C.:** In the District, geomorphic stability is the most relevant quantifiable metric to measure stream health. We measure for geomorphic stability pre- and post-stream restoration projects. While other metrics like water quality and biotic indicators are important, and we measure for them in our waterways, they are greatly impacted by DC's urban nature and our rates of impervious surfaces. When compared to less urban areas of the Chesapeake Bay Watershed, these indicator results would almost certainly result in unhealthy levels.
- **Maryland:** Stream health is defined in Maryland using biological indicators (benthic macroinvertebrates and fishes). Biocriteria exist in Maryland. Thus, there are thresholds for biological condition (based on reference conditions) that have been used to define this indicator/criterion. These are used to support policies and regulations (e.g., anti-

degradation and impaired waters). Water quality, habitat, etc. are investigated as possible stressors where biological conditions do not meet standards for streams.

QUESTION 2: In the workgroup member's opinion, is this a complete or incomplete representation? If incomplete, what elements may be missing from the definition?

- **New York:** The current outcome is incomplete and should incorporate some of the metrics mentioned above.
- **West Virginia:** This is a reasonable approach, but certainly incomplete. Fish and algae assemblage data would be useful additional indicators. Also, a direct evaluation of habitat like a visual based (or RBP) habitat assessment would be useful. It is incomplete because certain things might be unstable or unbalanced without violating water quality criteria.
- **Delaware:** Pollutant concentrations only provide information on one part of overall stream health. Incorporating biological and geomorphological data would certainly improve our assessment. Collecting additional data would assist in identifying potential causes and solutions to stream health issues (e.g., documenting bank stability and sedimentation issues could aid in targeting BMPs).
- **D.C.:** Using just geomorphic stability to define Stream Health likely presents an incomplete representation, but it is an indicator that will show improvements after stream restoration projects in an ultra-urban area like DC. With regards to utilizing traditional biotic indicators like fish or benthics, we note that it will likely take years for these systems to show the full effects of restoration on aquatic life after construction. Restoration projects are very traumatic events for stream. Because of this, we think that geomorphic data is actually a good metric, as it can be seen right away and some idea of its successful stability can be observed in the first years after restoration.
- **Maryland:** Complete in terms of definition. Information about other potential stressors would be useful.

QUESTION 3: Identify points of contact in your jurisdiction that work in a different program than the Stream Health WG member, but whose work is related to the Stream Health Outcome or metrics.

- **New York:** Lydia Brinkley - Upper Susquehanna Coalition Buffer Coordinator
- **West Virginia:** John Wirts (john.c.wirts@wv.gov) or Jeff Bailey (Jeffrey.E.Bailey@wv.gov), both from WV DEP's Watershed Assessment Branch of Water Resources.
- **Delaware:**
  - DNREC Division of Fish and Wildlife: Edna Setzer, Ian Park, or Jordan Zimmerman
  - DNREC Division of Water: Caitlynn Mitchell
- **D.C.:** DOEE currently has an open position in our Water Quality Division. When hired, this person will help to coordinate on several of the District's compliance efforts related to the MS4 permit and Bay TMDL. There will also be connections to our monitoring work that would likely be relevant to the Stream Health Workgroup. DOEE will keep the workgroup informed on the hiring status and work to incorporate the new hire into the Workgroup once onboarded.

- **Maryland:** There are many points of contact in many county, state, and federal agencies - as well as watershed groups, and other entities. There are individuals from the two state agencies already represented (DNR and MDE) who could be good points of contact for stream health outcomes. [*Points of contact were not included in this response as the list would be too long. The SHWG is aware of these contacts.*]

APPENDIX B: Brook Trout Outcome Survey Reponses

Maryland representatives were tasked with responding to the survey on behalf of the Management Board member. Two responses were submitted, and their answers are collated below.

QUESTION 1: Identify the points of contact and relevant agency/agencies in your jurisdiction responsible for priority actions that directly affect brook trout habitat.

- **New York**: Fred Henson (NYSDEC County Soil and Water Conservation Districts Town Planning Boards)
- **Delaware**: Edna Setzer (DE Fish & Wildlife)
    - **Additional contacts/information pertaining to riparian forest cover**: Regarding the increasing or maintaining of at least 75% riparian forest cover in all brook trout watersheds, it was noted that there are no wild brook trout in DE waters and most stocked trout in the state are rainbow and brown trout. There is little protection for upland forests or riparian buffers in DE.
        - New Castle County has trout-stocked streams and there is a unified development code (http://czo.nccde.org/) that has some provisions for riparian buffer areas (Section 40.10.125), although this code will not result in achieving the target % of forest protection. CONTACT: **Department of Land Use**, New Castle County, Government Center,87 Reads Way, New Castle, DE 19720. Planning & Permits: Phone: 302-395-5400.
        - There is also some level of protection for areas designated as a Natural Area or Nature Preserve - https://dnrec.alpha.delaware.gov/parks/ natural-areas/
    - **Recommended contacts related to fencing livestock out of brook trout streams:**
        - USDA, NRCS in Delaware: https://www.nrcs.usda.gov/wps/portal/ nrcs/site/de/home/
        - Natural Resources Conservation Service, 1221 College Park Drive, Suite 100, Dover, DE 19904, Phone:302-678-4160
    - **Recommended DNREC Private Lands Program contacts related to developing better private landowner engagement and conservation incentives, and promoting land stewardship and brook trout benefits:**
        - Jason Davis (Jason.Davis@delaware.gov), Environmental Stewardship Program
        - Chris Bennett (Christopher.Bennett@delaware.gov); Delaware Nature Society
        - Jim White, Senior Fellow for Land & Biodiversity Management, 302-413-5061

- **Maryland**:
    - Matt Sell has vacated the brook trout specialist position and someone else should be in that role by April 2022.
    - MDNR: Matt Lawrence and Dan Goetz
    - MDE: Jonathan Leiman

QUESTION 2: Identify any barriers that impact coordination and collaboration between/among the contacts and/or programs identified in the previous question. Include any ideas or recommendations that have removed the barriers or may address these barriers.

- **New York**: **Turnover in staff**, which creates a barrier in communication and ability to get work done.
- **Delaware**: **Lack of staff time and resources** to focus on common issues. **Regulatory goals don't align** with the goals of fisheries biologists/managers (who have minimal regulatory authority to protect habitat). The mission of the agencies in Delaware that manage forests or that have regulations pertaining to forests (Dept. Ag, Forest Service, County Governments, etc.) do not necessarily result in the type of protection desired. In some cases, these agencies promote harvest (directly or inadvertently) for silviculture or land development through their programs, policies, and regulations.
- **Maryland**: **MDNR has no barriers at this time**. Staff work together daily and communicate and coordinate with MDE on a regular basis for temperature TMDL development.

QUESTION 3: Identify barriers and opportunities that exist to fund priority projects and/or leverage funding between programs to increase the number of projects that benefit brook trout habitat.

- **New York**:
    - **BARRIERS**: State staff are usually unable to facilitate grant funding due to the administrative burden associated with grants. There is not enough staff available currently. We have encouraged outside partners to apply for funding (i.e., Trout Unlimited) and try to assist them with grant applications and letter of support. The Eastern Brook Trout Joint Venture has been a good source of support for our programs.
- **Delaware**:
    - **OPPORTUNITIES:** Opportunities to partner with NGO groups that focus on land protection would be most beneficial as local and state government employees can be limited in their ability to focus on projects outside their typical purview or to pursue funding for forest protection. There are individuals, land trusts, and NGOs that may be better positioned to leverage resources and staff to focus on forest protection like The Nature Conservancy, Delaware Wildlands, or Delaware Nature Society.
- **Maryland**:
    - **BARRIERS:**

        - Limited MDNR staff resources to directly work on brook trout habitat enhancement projects.
        - Challenges communicating with local governments resulting in a lack of understanding by county leaders on where to prioritize brook trout habitat enhancement project.
    - **OPPORTUNITIES**:
        - Efforts continue for temperature TMDL development and implementation will require MS4 counties to meet USE III stream temperature criteria. This provides opportunities to implement BMPs in brook trout watersheds to decrease stream temperatures (e.g., riparian plantings, cattle exclusion fencing, heated runoff infiltration).
        - Articulating DNR's Coldwater Mapping Tool information to local jurisdictions to inform on where brook trout resources are located and where projects are best suited for conservation."

QUESTION 4: What actions have/will your jurisdiction consider or take to ensure continued engagement and collaboration to advance the priority actions?

- **New York**: **NEEDED ACTIONS**: Without additional funding from the federal level or an increase in staff, NY's ability to collaborate will be limited.
- **Delaware**: The priority actions that pertain to Brook Trout are not as relevant to Delaware because they are not a resident species but are stocked for a ˜put and take"" fishery only.
    - **COMPLETED/IN PROGRESS ACTIONS:** Delaware closely monitors contaminants in fish from the trout streams; currently there are consumption advisories on all resident fishes in all streams where trout are stocked due to legacy contaminants such as PCBs and Dieldrin. Because the trout are stocked and resident for only a short period, the consumption advisories is up to twelve 8oz servings/year.
- **Maryland**:
    - **COMPLETED/IN-PROGRESS ACTIONS:**
        - MDNR worked directly with MDE TMDL groups to inform on brook trout management goals including improving water quality standards for thermal protection and improving requirements for impoundments and stormwater management practices.
        - MDNR worked directly with MDE Dam Safety and water quality standards to minimize temperature issues with surface ponds in brook trout and/or USE III watersheds.
        - MDNR have met with some county leaders to highlight restoration opportunities for brook trout restoration.
        - Outreach efforts to local governments and private landowners are ongoing with both direct communication and communication through NGOs and interested stakeholders.
        - MDNR have convened a coldwater fisheries advisory committee that includes vested stakeholders throughout the state to improve communication, identify immediate and future threats to coldwater

resources, and develop a network of outreach to improve coldwater resource protection.

- **NEEDED ACTIONS:**
  - Riparian buffer law in all USE III or Brook trout watersheds to protect coldwater habitat. Require livestock exclusion fencing on all farming operations. Need to set up a funding source to take the cost burden off producers in order to implement this program."

APPENDIX C: Fish Habitat Outcome Survey Reponses

Maryland representatives were tasked with responding to the survey on behalf of the Management Board member. Three responses were submitted, and their answers are collated below.

QUESTION 1: How do you envision that your jurisdiction will use the fish habitat assessment for fishery management, habitat conservation or restoration decisions?

- **Maryland**: The assessment may supplement our work in some cases. (For example, it could reinforce state developed tools in endorsing conservation of priority watersheds.) Utility will depend on the scope of stressors included. Management questions may not share the scale of the assessment. The data sets being developed could be useful to develop and test hypotheses related to habitat dynamics. (For example, the detailed sediment data could be used to examine impacts of larger scale stressors on micro and macro habitat conditions.)
- Use of the fish habitat assessment for fishery management is predicated on the ability to link habitat condition with some measure of fishery recruitment/production or factor that affects production like natural mortality. If the assessment can demonstrate this linkage, then habitat integration in the empirical side of the fishery management planning process can be advocated for at state and regional levels. The assessment would be useful for identifying and targeting which stressors [on land] to address prior to/during a restoration that cause the decline in habitat condition in a particular area/watershed. For conservation, the assessment would be a useful targeting tool to assess habitat and stressor level.
- Since I am more in the water quality realm, I would combine the targeted protection/restoration areas with nearby water quality and loading status/trends to better understand whether or not this area is improving, degrading and needs additional focus from outside the fisheries world.

- **D.C.:** It is possible that DOEE could use the fish habitat assessment for identifying critical areas that may require additional protection. For instance, we could envision designating a "sanctuary area" where recreational activity may be limited for a designated time to enhance spawning success for a particular species.

QUESTION 2: Are there data sets or other assessments that could be integrated with the fish habitat assessment to improve its utility for your jurisdiction?

- **Maryland**: The ability to have cross-jurisdictional watershed information could be useful in some cases. Combining tidal and freshwater assessments to evaluate compatibility is key to directing sound management that will address cumulative impacts and highlight effective management practices that support fish habitat conservation and restoration.
- Linkage between the fish habitat assessment and the inland (freshwater) assessment would be critical. For example, inland habitat condition may mitigate a stressor and lessen its effect on the tidal system, thereby having a significant effect on fishery management, conservation, and restoration decisions. Additional data/metrics should reflect watershed effect.
- Need to see the actual resolution of results to better be able to recommend specific data sets for integration. However, in general, water quality, loading status and trends.

- **D.C.:** One possible additional assessment may be to look at an ecosystem cost benefit analysis when considering stressor impacts as it relates to invasive species. As a possible example – would the benefits of removing barriers for fish passage outweigh the negative consequences of potentially expanding the range of an invasive?

QUESTION 3: What other information or research needs may improve habitat restoration and conservation for fish sustainability in your jurisdiction?

- **Maryland**: It would be pragmatic to assess the ecological state of watersheds and associated viable ecosystem services. Assessing the ecological state would require an evaluation of the stressors driving that state. Managers could then apply tools to manage stressors to maintain and enhance targeted ecological services. (Or more simply stated, evaluating watersheds based on services they presently provide and managing to maintain and enhance those services is a more pragmatic approach to management than applying the same tools across all watersheds, because the condition of the watershed will predict the effectiveness of the tool.)
- Landscape metrics at catchment, sub-watershed, and watershed scales. The fish habitat assessment's only metrics that relate to the watershed condition are "Proximity to Agriculture" and "Proximity to Impervious Surfaces." Watershed condition is poorly integrated into the assessment.
- Need to have regular and consistent interaction with State and local gov't committees/workgroups/NGO's involved in planning, development activities. Otherwise results may miss window to be incorporated in activities that make maximum impact.

- **D.C.:** A regional or multi-jurisdictional approach to research may improve restoration and sustainability goals. This type of approach will be essential when it comes to cooperatively managing migratory species that are not bound by jurisdictional borders.

QUESTION 4: Are there other individuals that should be included as a fish habitat team member or interested party that could advance the needs you have mentioned or identified?

- **Maryland**: Experts in Evaluating Ecosystem Services, Ecological Condition.
- I do not know of particular individuals.
- Patuxent Commission (tidal product)

- **D.C.:** Because of the small size and vocational continuity that exists at DOEE, a single representative should be sufficient to summarize the interests and needs of the collective group.

QUESTION 5: Are there people, agencies and/or organizations as well as data sets, and or technology that you feel should be considered or included as we explore this issue?

- **Maryland**: Maryland DNR Resource Assessment Services and Fishing and Boating Services are doing similar work. They have put significant effort into this and could add insight and expertise.
- Maryland DNR Resource Assessment Services and Fishing and Boating Services
- No

- **D.C.:** NGO's that have an interest in conservation and sustainably using the resource should have an opportunity to provide input. Industry partners may include Recreational Tournament Directors, Commercial Processors and Distributors, Specific Species Advocacy Groups (Trout Unlimited as an example).

QUESTION 6: Are there other fish-habitat related science needs the jurisdictions would like to be considered by the FHAT?

- **Maryland**: Previously mentioned Ecosystem services research. Consider applying the RAD (Resist, Accept, Direct) approach to manage fish habitat.
- Recommendations for how the assessment results should be interpreted by conservation & restoration practitioners. Do certain scores indicate areas for conservation as opposed to areas of opportunity where restoration has a high likelihood of success (few stressors). Categorization & targeting of scores based on potential for ecological shift [Resist, Accept, Direct (RAD)].

- **D.C.:** The only thing that I can think of would be to consider alternative or secondary approaches to habitat restoration and sustainability. This would be a "next best case scenario" approach in the event that the desired restoration goals are unattainable or unachievable due to economic, social, geographic, or some other obstacle.