Fish Habitat Workplan Kick Off Meeting Minutes
Tuesday, June 28, 2016, 10:00am – 12:00pm

Participants:

Bruce Vogt	Kara Skipper	Peter Tango
Edna Stetzar	Luke Argleben	Sam Stribling
Emilie Franke	Margaret McGinty	Tom Ihde
Jim Cummins	Matt Ogburn	

Workplan Background:

The Chesapeake Bay Program (CBP) is working to achieve the 31 outcomes outlined in the 2014 Watershed Agreement. The Sustainable Fisheries Goal Implementation Team (SFGIT) is responsible for the sustainable fisheries goal in the Agreement and associated five outcomes: Blue Crab Abundance, Blue Crab Management, Oyster Restoration, Forage, and Fish Habitat (joint with the Vital Habitats GIT).

In 2015, Management Strategies were finalized for each outcome and outlined the approaches and high-level actions that will be taken to achieve each outcome by the year 2025, including monitoring, assessment and reporting of progress. Workgroups developed workplans to support the management strategies by summarizing specific commitments and near-term actions for each individual outcome. The 2016-17 workplans, including the Fish Habitat Workplan were finalized in April 2016.

It is the role of the Fish Habitat Action Team to implement the actions outlined in the Fish Habitat workplan and develop methods for monitoring individual actions to ensure completion within the two year period. This meeting is intended to present the team with the final literature review and matrix from the TetraTech project, provide an update on in-progress actions from this workplan, inform the team of near-term actions and designate a plan for monitoring the implementation of future actions.

TetraTech Fecundity Matrix and Literature Review:

Background: In 2015, TetraTech developed a review and synthesis of habitat requirements for 13 lesser studied fish and shellfish species under a CBP contract to support the management strategies. The Fish Habitat Team received an additional 90 hours of TetraTech time in 2016 to expand the project to better assess threats and stressors to fish habitat in the Chesapeake Bay Watershed. The expanded project adds sculpin to the literature review and expands the matrix to include egg and larval stage habitat stressors and threats to the previously selected species. The project is due for completion on June 30, 2016.

Presentation: Sam Stribling and Bob Murphy (TetraTech) developed a fecundity matrix for the species selected in the previous project. The matrix included available information from literature sources which pertained to species fecundity, egg and larval life stage stressors. The matrix headers are included in the image below:

Study Reference	Fecundity Parameters			Egg Dynamics		Larval dynamics		Intermediate Host
	Stressors	Nesting habitat	Water quality requirements	Egg habitat	Duration	Duration	Prey	

TetraTech produced a literature review on the Potomac Sculpin, as a congener species for the Blue Ridge Sculpin, due to the dearth of available research on the recently discovered Blue Ridge Sculpin. Notable habitat preferences for the sculpin included small to medium sized rivers with swift currents and submerged vegetation.

Discussion: It was noted that identification of the host species in the fecundity matrix was particularly helpful to the team. Members expressed that the ultimate goal of this data collection would be to produce a map of stressors. For Delaware, the map would be provided to planners to inform land use decisions. Historical data is available for Delaware; however the state of Delaware currently does not possess the staff capacity to pull the data together. There is potential to include this data in future endeavors.

Matrix and Literature Review Next Steps:
- Jim Cummins noted that more detail on stressors would be beneficial for the matrix (ex. Chlorine toxicity). Members would like to see more data on road salt toxicity. (Road salt workshop occurred recently with a focus on benthic invertebrates)
- Team members expressed concern that the Potomac Sculpin differs from the Blue Ridge Sculpin in habitat range and may not fit the needs of the original proposal. Geoff and Steve had agreed with the change to the Potomac Sculpin in order to gain more information on cold water stream stressors to sculpin.
- It was suggested that team members select specific habitat requirements to propose to the CBP GIS team to map. The resulting maps could enable the team to focus on priority habitat requirements and take action towards addressing known areas which are particularly harmful to healthy fish habitats. Tom Ihde noted that mapping efforts would need to account for temporal and seasonal considerations.
- The team will look into utilizing the matrices and literature reviews produced by TetraTech to identify data gaps and research needs from this analysis. Team members expressed interest in investigating climate change as a stressor; the Landscape Conservation Cooperative (LCC) had conducted research on climate change effects on fish habitat.
- The team is interested in finding out the practical management applications for identified stressors. It was suggested that we research other models of habitat restoration and conservation to evaluate what approaches would be most feasible for the Chesapeake Bay.
  Actions:
  o **Kara and Bruce will connect with the Water Quality GIT to find additional information and resources pertaining to road salt toxicity and other water quality stressors.**

  o **Sam will contact Geoffrey Smith and Stephen Faulkner to ensure that the literature review provided the cold water stream stressor habitat data they requested and make appropriate changes within the project time frame.**

  o **Sam stated that he could consult with experts to find mapping approaches for stressor data. He would retrieve the name of the road salt study presenter and provide to the team (Carol Wong, Center for Watershed Protection).**

  o **Edna will reach out to the LCC to find out about data availability**

Fish Habitat Workplan:

The 2016-2017 Fish Habitat workplan was completed in April 2016. As the team moves from development of the workplan to implementation of workplan actions, we are faced with the challenge of prioritizing efforts to make the expansive outcome attainable. Suggestions for addressing this challenge are to more regularly collaborate with the Vital Habitats GIT, concretely define fish habitat for our outcome, and divide the team into sub-workgroups that will focus on either freshwater habitats or tidal habitats.
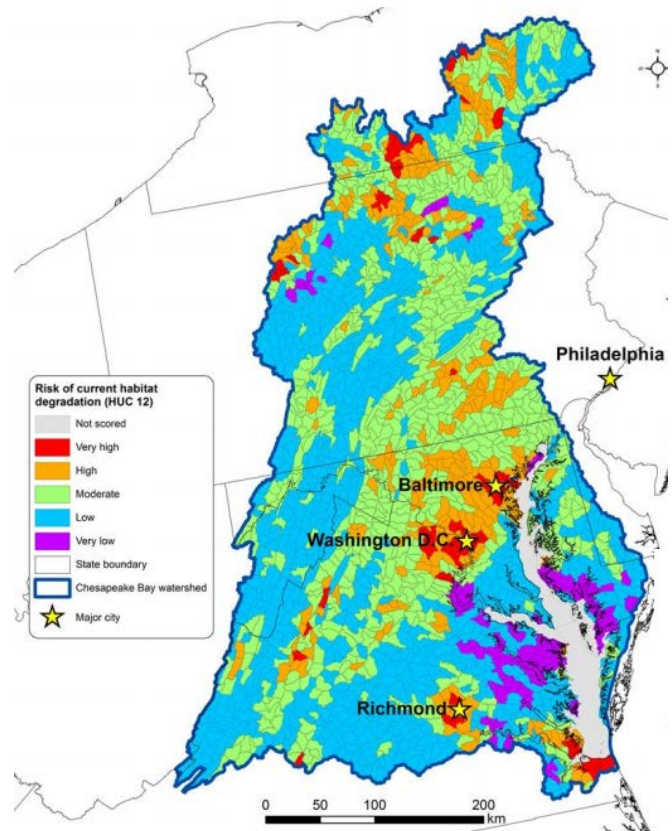
An additional challenge is identifying how to most effectively approach mapping efforts. Team members suggested identifying limiting factors to fish health, and targeting stressors to natural distribution. It was recommended that the team utilize the fish habitat scores that were recently presented to the full SFGIT (detailed below and shown in HUC 12 watersheds at right).

The National Fish Habitat Partnership (NFHP) conducted a vulnerability assessment, which analyzed anthropogenic disturbances and natural variation among fish habitats. The Chesapeake Bay Watershed was scored to indicate the current risk of habitat degradation. Fish Habitat Team members can overlay smaller scale stressors over larger scale watershed. In the NFHP study it was found that the two biggest stressors to fish habitat in the Chesapeake Bay Watershed are fragmentation and development/land use. Higher resolution data sets are needed make this data more usable.

Other potential data sources for mapping efforts include Greenprint, Coastal Geospatial and Educational Mapping System (GEMS), NFHP vulnerability assessment (presentation available here, data will be accessible at USGS website in fall), Fish Habitat Decision Support Tool, and Landscope Chesapeake.

Workplan Action: Evaluate how land use changes are impacting tidal fish communities by developing and applying thresholds of impervious cover Baywide: We will determine what we want this tool to accomplish and gauge the level of accuracy needed to accomplish this action. Maryland has developed a conversion factor for density of impervious cover, which can be used as a method to evaluate land use changes. It was recommended that the team review the Bay Model by Peter Claggett and that the team connect with the Healthy Watersheds GIT, Kristen Saunders, and the other GITs in this effort.

Further actions include developing a communication strategy, ensuring that planners have access to information regarding fish habitat, developing valuation of fish habitat for increased investment, and reaching out to the Local Government Advisory Committee and the Citizens Advisory Committee for their input on how to address stressors.

Actions:
- **Arrange a meeting with the Vital Habitats GIT to identify collaborative opportunities.**
- **Provide a list of available data sources and tools that can be utilized to provide fish habitat data.**
- **Bruce will connect with NFHP to find out about status and availability of marine assessment data and of possibly having the study presented to the Fish Habitat Action Team.**
- **Kara will notify Fish Habitat Action Team members when NFHP study is published.**
- **Connect with the Maryland Department of Planning (Jason Dubow)**
- **Margaret will talk with Christine Conn about land use planning.**

Monitoring and Tracking Workplan Actions

The Fish Habitat Action team agreed to meet on a quarterly basis to monitor workplan actions and report progress. The next meeting will take place in September.