Chesapeake Bay Program
Science. Restoration. Partnership.

Fish Habitat Outcome Office Hours - February 2025

Tuesday , February 25· 11:00am – 12:00pm EST

Meeting Notes

Outcome Language Draft as of 02/25/2025:

"Maintain suitable shallow water habitat area for striped bass and other key species through a primary focus on water quality and conservation improvements, and a secondary focus on habitat restoration, informed by a synthesis of fisheries science and habitat assessments completed by xxxx."

- Outputs:
  - Tidal segment Living resource habitat assessment
  - Status and trends of structured habitat (oysters, SAV, tidal wetlands, shoreline condition) linked to fish productivity if possible to define habitat objectives (how much habitat is needed to sustain x level of productivity)
  - Strategies to build habitat and fish resilience as temperature increases
  - Assessment of forage availability, trends and projections of change. Is there enough food now and going forward for key predators
  - Evaluation of movement and behavior of striped bass and other species relative to habitat conditions

- Indicators:
  - Forage abundance for key species
  - Habitat use and movement patterns (spatial indicators at local, bay and regional scales)
  - Juvenile index

Notes:

- Not good year class following 2018 - confusion over striped bass juvenile? index for MD Chesapeake Bay
  - Striped bass workshop report coming out -
  - May 2025 report from ASMFC (menhaden chesapeake bay workgroup)
- Name Striped Bass or just say key species?

- Limiting ourselves by naming striped bass bc of habitat niche?
  - Summer = not great habitat
- Key species could be sufficient - striped bass can be one of them
- Focus on water quality

- Conservation improvements vs. habitat improvements?
  - Maybe do not need secondary focus on habitat restoration
  - Conservation v. Restoration
    - Balance both strategies
    - Make sure everyone that reads document understands balance
    - Need definition of terms to go with outcome language
      - Define conservation = protecting areas with high functioning habitat & fish productivity
      - Restoration = somewhat degraded habitat where restoration can help improve functioning and increase resilience for species

- Definition of Shallow water? 1.5 m, 2m, or 5m?
  - Shoreline to 5m - to incorporate oysters as important habitat type
  - Extend further to include blue crab habitat?
  - No consensus on definition of shallow water

- Link to TMDL for nutrients?
  - Part of it - structured habitat is important too
  - Opportunity to link to water quality but not only answer to habitat issues
- Water quality - 3mg per liter as threshold

- Idea for one of the “key species” = White perch
  - Correlation with what is happening to white perch and to striped bass
  - White perch stay in bay and inhabit full tidal range- easy to work with and may give better return on what we are looking for
  - Get a response with white perch
  - Good amount of data on white perch exists already
    - Ex: PCB concentration related to development
  - Look at sub-estuaries with different levels of stress (developed v less developed)
  - Monitoring component needed to make outcome meaningful
  - Metrics in mesohaline not the same in fresh tidal system

    - Tandem white perch with another species that is higher saline
        - A couple of different indicators so that everyone feels invested in this outcome
    - Striped Bass - Summer has less habitat- not sure if that habitat is enough or not

- Upstream connection to downstream- how to make separation without something arbitrary?

- Is there a map that shows the extent of shoreline armoring over time to show linear footage increases over time?
    - No trend analysis but there is an inventory - no good trends overtime for shoreline hardening
        - VIMS inventory for MD and VA (natural and hardened shoreline with breakdown of more specific shoreline condition types) - full coverage of bay now
        - Thresholds defined for shoreline hardening for a couple of species - 10-30% of hardened shoreline is where we see decline in certain fish species - threshold map created for the bay to show ranges (map and layer currently available)

- Metrics?
    - White perch as output/metric?
        - No number exists to put into outcome language right now
    - Can still have SMART outcome without specific number if plan is for outputs to help us inform that
        - Our goal is to say “x percent of bay segment suitable”
    - Not all water quality - can also be status and trajectory of structured habitat
        - Analysis may incorporate structured habitat as well as water quality- all feed into modeling?
        - All variables can be fed into model- but depends

- Outcome language should make sure it leads to something measurable- what exactly we use to develop those metrics for segments doesn’t need to be said right now

- Output are the things we need to do to understand what is the condition of suitable habitat in the bay now and where to put effort in to maintain or improve areas that could be suitable or are marginal right now

    - Outputs are things we need to do to meet outcome

- Is MB aware of outputs or do we need to make sure language for outcome hits all targets (timebound etc)?
    - MB should be good with outcome language - need to give flavor of what outputs would be
        - Responsive to change and something we already measure/capture the data
    - Need to define suitable shallow water habitat area (put asterisk next to it and say that this is a metric that we need to develop) - need to make it clear that this is our metric

- MDNR time series for development of MD watershed dates back to the 1950s. There is an intermittent time series of general land use (wetlands, forests, ag.) for MD. Both are based on MD Dept Planning Data

- Plan to put together a map and infographic showing outcomes (oysters, fish habitat etc). Show SAV, water quality etc and how how they connect to various things
    - Will the mapping and infographic be helpful to MB?
        - Send mock up to Gina

- Other species to think about:
    - Blue crab would be another species in response to mesahaline conditions and they are everywhere (if definition of shallow water is expansive enough - 5m or less- we would capture it in the subestuaries). Response in bottom channel water.
        - Blue crab can be an outcome AND output under fish habitat
    - Bay anchovies are another good species - estuary resident, base of food change, dynamics are tougher.
        - Already have habitat suitability model for bay anchovy- Mary Fabrizio study
    - Forage! - blue crab and white perch are also forage

- Deadline for final outcome language = May 8th
    - Plane to have meat on the bone for the outcome by March 27th meeting

- Other people/partners to share outcome language with?

    - Nontidal fish habitat folks - how do we go around and ask around? They are on email list but have not participated so far because of tidal focused work - email may not work, try other approaches
    - Ping people that we know are non-tidal and see if we can set up a non-tidal call - a discussion just towards that- MB is looking for guidance with that

- Fish GIT wants to ensure that outcome also helps DNR and addresses their challenges and concerns
    - Tap more into the information from DNR - they have been doing certain projects for years already
    - Recommendation for Fish GIT to balance focus on states and academics more equally

- Next meeting = March 6th from 2pm-3pm
    - First 15 min on recap
    - Rest of meeting spent on forage