Aquatic Life Quarterly Progress Meeting Summary
November 14, 2019

Blue Crab Abundance https://www.chesapeakeprogress.com/abundant-life/blue-crab-abundance

Outcome: Maintain a sustainable blue crab population based on the 2012 target of 215 million adult females. Refine population targets through 2025 based on best available science.

Success and Challenges:

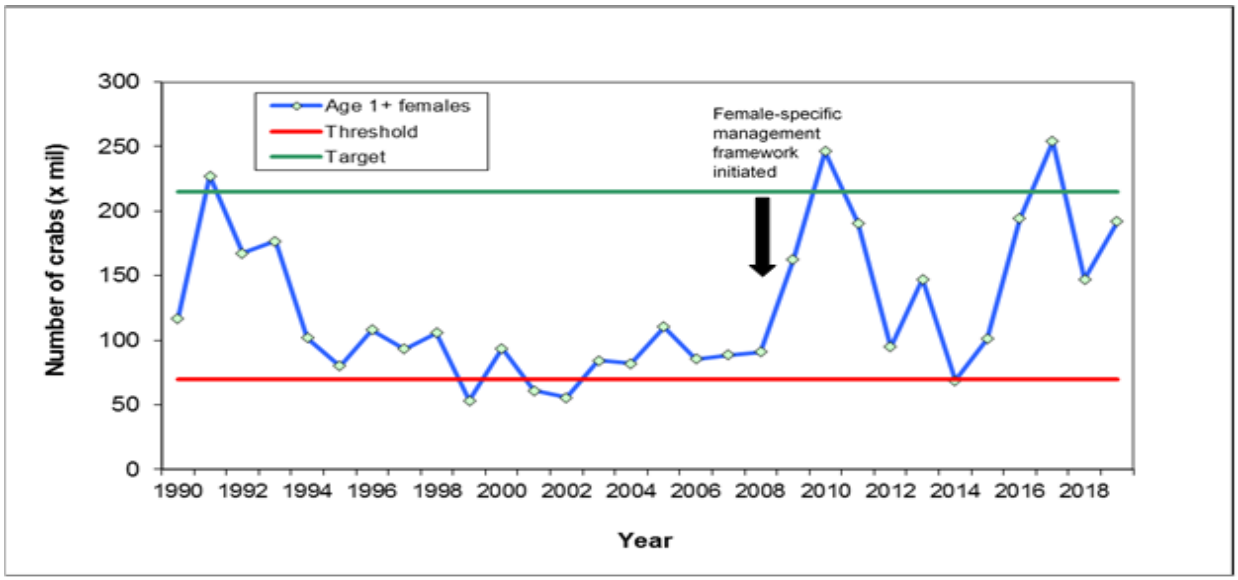
- GIT should primarily focus on science needs → will inform next logic and action plan
- Current management framework is working based on winter dredge survey results
- No need for benchmark stock assessment at this time
- Completed blue crab ecosystem study
    - Need to identify applications of results

We plan to:

- Provide best available science to management jurisdictions
- Focus on scientific and analytical needs to improve population models and stock assessments
- Include annual stock assessment update in the Blue Crab Advisory Report

Help needed:

- Continue to support science and research needs for blue crab population assessment and management
- Modeling and analytical training for staff
- Identify future funding sources for analytical work
    - The analytical needs of the blue crab outcome are unique, which precludes blue crab needs from the co-benefit requirements of GIT funding projects.
- Potential links with habitat and climate outcomes
    - Opportunities to examine ecological factors that impact blue crab population dynamics



The graph shows a time series of the abundance of spawning-age female blue crabs in the Cheapeake Bay.

Forage Fish

https://www.chesapeakeprogress.com/abundant-life/forage-fish

Outcome: Continually improve the Partnership's capacity to understand the role of forage fish populations in the Chesapeake Bay. By 2016, develop a strategy for assessing the forage fish base available as food for predatory species in the Chesapeake Bay.

Success and Challenges:

- Successful funding and execution of relevant research projects
- Indicator development taking longer than anticipated
    - Would like to see long term indicators
    - Could align with other outcomes (specifically SAV, wetlands)
    - GIT/NOAA funded 3 studies relevant to Chesapeake Bay forage → want to use to inform indicators
- Require further engagement of managers and other partners
- Ongoing citizen science project to see how forage fish use nearshore habitat
    - Plan to expand project
- Don't have any metrics of success for this outcome

On the Horizon

- Indicator development: application of shoreline hardening study results and input from other workgroups/outcomes
- Improved understanding of forage fish habitat use and productivity
- Expand citizen science project
- Plan to develop a simple suite of forage indicators

Help needed:

- Linking forage indicators to other relevant CBP workgroups/outcomes (e.g. habitat, water quality)
    - *Who? What? How?*
- Prioritize and support monitoring of nearshore habitats to estimate forage fish productivity (this was also a request from the first cycle of SRS)* common request
    - Request that Management Board make connections with state jurisdictions and engage with them to determine if/how a shallow-water monitoring effort might address some of their needs.
    - Similar support for a plankton survey would provide data on a missing link in the Bay food web
- Analytical training opportunities
    - Ecosystem modeling, R statistical software packages and other tools to help streamline indicator development

Oysters

https://www.chesapeakeprogress.com/abundant-life/oysters

Outcome: Continually increase finfish and shellfish habitat and water quality benefits from restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.

Successes and Challenges:

- Oyster restoration works!
  - An international model of success
  - Ecosystem services; celebrate success stories
  - $20 million per year accrued back to counties in the Choptank region
- Restoration is expensive
  - GIT project helped to reduce monitoring costs
  - Virginia conducting experiments with reef heights
    - If successful, could reduce costs of restoration
  - The ecosystem services gained may make restoration worth the cost
- Low salinity impacted oysters in 2018-2019
- Maryland funding plans are in place to achieve 2025 outcome
- The rate of progress is lagging in Virginia
  - Hope to draw attention to the ongoing projects in Virginia
  - Funding gap remains
- Funding and state support are critical to move forward at the rate needed to achieve the outcome

On the horizon

- Oyster BMP Expert Panel: in progress with recommendations for crediting restoration
  - Moving forward implementation through the WIP process
  - Comprehensive oyster planning
- Strategy for funding oyster restoration

We plan to:

- Emphasize continued construction and monitoring of existing reefs
  - Need to build more reefs more rapidly to meet 2025 goal
  - Groundwork already in place
  - Restoration planning continues

Help needed:

- The major barrier to success is funding
  - Groups aren't opposed to trying to find funding, but *it is expensive*
  - GIT funding project on Finance and Investing Forum in early 2020
- Continued commitment from both Maryland and Virginia to be successful
- MB can directly help by maximizing the use of oysters as BMPs
  - *The BMP Expert Panel is not yet ready, but once it is approved by the Sustainable Fisheries GIT and WQGIT, the oysters workgroup can recommend to the MB on how to help.*

Submerged Aquatic Vegetation (SAV) https://www.chesapeakeprogress.com/abundant-life/sav

Outcome: Sustain and increase the habitat benefits of SAV in the Chesapeake Bay. Achieve and sustain the ultimate outcome of 185,000 acres of SAV Bay-wide necessary for a restored Bay. Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.

Success and Challenges:

- SAV workgroup is on track – progress toward nearly all actions!
  - SAV acreage expansion linked to management actions
- SAV monitoring program funding gap closed!
  - MDE contributed an additional $50,000
  - VA dedicated additional funding
- Hit some logistic and environmental snags
  - Time is a barrier to the logic and action plan
  - Restoration barriers: Water clarity, climate change impacts, and shallow water use conflicts
- Planning to scale back work plan to make it more meaningful and meaningful
- On track to achieve next SAV restoration target of 130,000 acres, *if* we continue on the current overall trajectory
  - To combat impact of climate change and population growth, we need to do more
  - Can predict that 2019 acreage will not exceed 2017 (extensive eelgrass and widgeongrass loss in 2019)

On the Horizon:

- STAC workshop on integration of satellite data into CBP SAV monitoring program
- SAV restoration protocol and technical guidance document
- SAV watchers monitoring and certification program
  - Recruit additional organizations and volunteers
  - Certify additional trainers
- SAV regulatory review
- Update and prioritize research agenda
- Chesapeake Bay sentinel sites
- SAV finance strategy

Help needed:

- SAV workgroup will provide the MB a summary of a GIT funding project review of policies, statutes and regulations that protect SAV in the Chesapeake Bay.
  - Future MB agenda item
- Continue to support efforts to reduce nutrient and sediment pollution to the Bay.
- Consider the implications of competing goals related to shallow water uses.
  - Aquaculture, living shorelines, maintenance dredging, SAV harvesting for navigation

Aquatic Life cohort common requests and themes:

- **Nearshore habitat monitoring, shoreline hardening**