



Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
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August 13, 2015

RE: STAC Forage Base Report

Nicholas DiPasquale, Chair, Chesapeake Bay Program Management Board
U.S. Environmental Protection Agency
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Cc: Management Board; Sustainable Fisheries Goal Implementation Team; Local Government Advisory Committee; Citizens Advisory Committee.

Dear Mr. DiPasquale,

Please see the attached STAC workshop report entitled, “Assessing the Chesapeake Bay Forage Base: Existing Data and Research Priorities.” This report provides a summary of STAC’s November 12-13, 2014 workshop and includes specific recommendations identified by workshop attendees.

The purpose of this workshop was to produce a system-wide synthesis of the forage base and to develop actionable recommendations for its management in support of managed fished species in the Chesapeake Bay. This report provides guidance on the development of forage abundance indices and indicators for the Chesapeake Bay system, as an important step towards ecosystem-based fisheries management in the Chesapeake Bay. The workshop also provides an improved understanding of which taxa constitute the key and important forage of the Chesapeake Bay, and identifies the most critical data gaps that need to be addressed, both to understand these ecologically valuable species and the implications of their trends in abundance on production of iconic Bay species like the striped bass. In addition, the report provides a review of the environmental and anthropogenic habitat factors that constrain forage populations, a review of existing literature, and a summary of existing data sets on forage. This report supports the Sustainable Fisheries Goal Implementation Team (SFGIT) in the development of both the “Forage Fish” and “Fish Habitat” Management Strategies.

The four most urgent recommendations from the workshop include:

- Conduct a strategic review and data-mining of all currently available data to quantify forage.
- Develop a standard set of metrics and indicators to track forage abundance, and better understand forage dynamics and trends; use these to begin to set targets and thresholds for triggering management actions.

- Re-establish zooplankton monitoring to develop an index of feeding conditions for key forage (e.g., Bay Anchovy) and to develop abundance indices for key forage taxa (e.g., mysids).
- Relate forage trends to predator trends.

Some additional recommendations from the workshop include:

- Establish shallow water monitoring in soft-bottom, marsh, and SAV habitats to complement existing monitoring surveys, including up-tributary habitats.
- Improve understanding key forage with limited or no current data (e.g., mysids), both at a system-scale and a specific habitat-scale.
- Surveys used for forage groups should be conducted seasonally, sampling all life history stages of predators and forage in all important habitats. Careful development of sentinel sites can minimize the cost of new monitoring.
- Estimate predator demand and forage supply by habitat.
- Continue the development of quantitative ecosystem models that integrate information from various data sets to better frame management questions in an ecosystem context. Such models are needed to identify and evaluate ecological thresholds or critical habitat levels and to understand ecosystem effects of large-scale system changes on the forage base (and on their predators), especially for conditions and stressors for which data are lacking (i.e., climate change).
- Consider current forage status relative to available records of historical forage abundances and distributions when developing thresholds for management. This is especially important for species (e.g., shads and river herrings) that were once important but no longer abundant; such information can support development of benchmarks for restoration plans and targets, important for long-term management of the forage base.

We hope the Management Board, Goal Teams, and various workgroups find the workshop recommendations to be useful, and STAC looks forward to your feedback. STAC respectfully requests a written response to the workshop findings and recommendations from the CBP Management Board Chair by November 12, 2015.

Please direct any questions you may have about this report and its recommendations to Rachel Dixon, the Chesapeake Bay Program's Scientific and Technical Advisory Committee Staff, and Tom Ihde, at the NOAA Chesapeake Bay Office.

On behalf of the entire STAC, thank you again for considering these recommended next steps, and we look forward to working with you closely on this in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'KH', with a long horizontal line extending to the right.

Kirk Havens
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee