

Blue Crab Outcome Sub-Chapter

Blue Crab Outcome: Achieve a sustainable Bay-wide blue crab fishery through cross-jurisdictional coordination that supports healthy blue crab populations and thriving fish communities.

- Maintain blue crab abundance and harvest rate targets as determined by the most recent benchmark status assessment.
- Achieve cross-jurisdictional coordination by annually evaluating and communicating blue crab population status to resource managers and the public through the Blue Crab Advisory Report.

Note: CBSAC clarifies that the term “fish communities” in the outcome should be interpreted as “fishing communities,” reflecting the Committee’s focus on sustainable fishery management and support for the crabbing industry rather than broad ecosystem health. Additionally, CBSAC recommends updating the term “status assessment” to “stock assessment” in the first target statement. “Benchmark stock assessment” is the standard fisheries management term for a formal, comprehensive evaluation of population health, which more accurately aligns with the intent and underpinning science of this target.

Baseline and Current Condition

A significant decline in the blue crab population in 1998 followed by continued low abundances through 2008 drove jurisdictions to rethink the management framework for the blue crab fishery in the Chesapeake Bay. A 2011 benchmark stock assessment emphasized the need to protect the spawning stock and identified female-specific biological reference points for management. These reference points were revised in the 2017 stock assessment update and adopted for management in 2020. Through 2026, the status of the Chesapeake Bay blue crab stock was evaluated by comparing estimates of adult female abundance from the Chesapeake Bay Blue Crab Winter Dredge Survey (WDS) and female exploitation rates from harvest reports to these female-specific biological reference points.

Since 2014, the stock has not been overfished and overfishing has not been occurring as defined by the management reference points; however, concerns resurfaced in 2020 with declining abundances and, in particular, low recruitment (juvenile crabs). In 2023, a new benchmark stock assessment was conducted to re-evaluate the dynamics of the population and the fishery. The benchmark, completed in June 2026, revised the outlook of the stock and recommended new management reference points for both mature females and males. Starting in 2027, the status of the Chesapeake Bay blue crab stock will be determined through an annual stock assessment update that will provide a comparison of sex-specific estimates of abundance and fishing mortality relative to the new corresponding reference points. A recruitment reference point was also developed and can be used to provide additional context for changes in the population and fishery.

Monitoring Progress and Indicators

The status of the Chesapeake Bay blue crab population is assessed annually by the Chesapeake Bay Stock Assessment Committee (CBSAC). Historically, stock status was evaluated solely based on WDS estimates of adult female abundance and calculated female exploitation rates from harvest reports. These estimates were compared to target and threshold reference points for adult female abundance and female exploitation identified in the 2011 benchmark stock assessment and 2017 update. If adult female abundance fell below the threshold reference point, the stock was considered overfished (or depleted). If the female exploitation rate exceeded the threshold reference point, overfishing was occurring.

Starting in 2027, CBSAC will conduct annual stock assessment updates by running the 2026 benchmark stock assessment model using new data from the previous year, including the most recently completed WDS data. Model-estimated abundances and fishing mortalities for both males and females will be compared to the corresponding management reference points. Stock status will be determined based on where the model estimates fall in relation to the threshold reference points. If abundance estimates fall below the threshold, the stock will be considered overfished (or depleted). If fishing mortality estimates exceed the threshold, overfishing is occurring. Abundances below the threshold and fishing mortality above the threshold would indicate that fishery managers need to limit harvest to conserve the population. A recruitment reference point developed in the 2026 stock assessment can also be used as a population indicator.

Each year, CBSAC publishes the abundance and harvest estimates, the stock status, and the resulting management advice in the annual Blue Crab Advisory Report, which is distributed to fishery managers and the public.

Blue Crab Outcome Situation Analysis

The following table identifies challenges that will impact progress towards attaining the Blue Crab Outcome and its targets. This analysis considers scientific, environmental, fiscal or policy-related developments that have already or may influence work during the upcoming six-year Management Strategy cycle. Consideration is given to which challenges are within and outside of CBP's ability to influence. Challenges associated with Changing Environmental Conditions are denoted with an asterisk (*). Challenges listed in bold font have been identified by the Thriving Habitat, Fisheries & Wildlife Goal Team as being priorities for the Blue Crab Workgroup (CBSAC) to seek to address or make progress against through the development of Workplan activities.

Challenges	CBP Within Sphere of Influence	CBP Outside Sphere of Influence
Consistent high male exploitation rates	X	
Improved commercial and recreational harvest estimates	X	
Land-based pollution (hypoxia)*	X	
Changing Environmental Conditions (temperature/salinity)		X
Predation pressure (e.g., blue catfish, red drum)*		X
Standardization of data across jurisdictions (Data Hub)	X	
Habitat availability (SAV, marsh)*	X	
Interjurisdictional Coordination	X	

Snapshot of Signatory Programs

Managing a large and difficult restoration and conservation program with “no assurance about the level of funds that may be available beyond the short term” (GAO, 2028) is a challenging undertaking that requires individual and collaborative action from signatory partners, as well as the many communities and individuals who live, work, play and learn in our region. This “Snapshot of Signatory Programs” seeks to better recognize the significant contribution that individual signatory partners and federal agencies make towards outcome attainment. The existing programs and funding spotlighted below are not intended to represent the full range of resources available or required to support progress towards outcome attainment; only the “biggest ticket” programs are included for each outcome and signatory partner. It is important to note that funding is reported from a single point in time (fiscal year 2025) and is not representative of future investments. Identifying the most critical programs and resources that exist at a particular moment in time can help the partnership focus its collaborative efforts on activities that have the greatest impact, and which don’t duplicate the work of existing programs.

Maryland Department of Natural Resources

- [Blue Crab Winter Dredge Survey](#) (\$80K in FY25, and 3 FTEs) Estimates the abundance of the Chesapeake Bay blue crab population each winter to inform fishery management decisions.
- [Cooperative Data Collection Program](#) (\$28K in FY25, and 2 FTEs) Collects catch composition data in the Maryland blue crab fishery to better understand harvest trends and changes in the population.

Virginia Marine Resource Commission

- Blue Crab Monitoring (\$289K in FY25) Funding to the Virginia Institute of Marine Science for collecting blue crab data, including conducting the Blue Crab Winter Dredge Survey

Management Approaches for Outcome 1: Blue Crabs

Management Approach 1.1.1: Maintain Sustainable Population Based on Best Available Science

CBSAC will assess blue crab stock status annually based on sex-specific abundance and fishing mortality estimates and the corresponding reference points identified in the stock assessment update. CBSAC will make management recommendations for the upcoming crabbing season based on the status of the stock. Jurisdictions will be responsible for responding to CBSAC recommendations through appropriate management action that will ensure a sustainable population.

Management Approach 1.1.2: Enhance Harvest Estimates and Quantification

Jurisdictions will continue to promote electronic reporting systems for commercial crabbing to improve real-time harvest data. Work will continue to address gaps in recreational harvest data and better quantify effort to determine the efficacy of limited-entry, pot-limit, and seasonal closure regulations.

Management Approach 1.1.3: Quantify Environmental and Ecological Drivers

CBSAC will identify and support research needs that will improve understanding of blue crab population dynamics and inform management decisions. Research priorities include habitat availability, predation (e.g., blue catfish), food availability, and environmental stressors (hypoxia, temperature, and oceanic conditions).

Management Approach 1.1.4: Standardization and Accessibility of Data

CBSAC will develop and maintain a data hub to house all relevant blue crab data sets including commercial harvest data, trawl survey data, and WDS data. Standardizing and compiling all of these data sets in one location will streamline the annual stock assessment update process and provide more opportunities for collaborative, Bay-wide blue crab research projects. Access to these data will be provided at the discretion of the data custodians and will be limited to CBSAC members conducting the stock assessment and other applicable research projects and approved research partners.

Participating Partners

The following partners participated in the creation of this Management Strategy and expressed their intention to collaborate on Management Strategy implementation over the next six years. Per the Chesapeake Bay Watershed Agreement, “participation in developing Management Strategies or in the achievement of Outcomes varies by signatory based on differing priorities across the watershed. This participation may include commitments such as sharing knowledge, data or information, educating the public, working on future legislation and developing or implementing programs or verified practices” (2025). Signatory partners may join implementation efforts at any time. Partners also recognize that Signatory participation is voluntary and may vary accordingly.

- **Signatory Partners:**
 - Maryland Department of Natural Resources (MDNR)
 - Virginia Marine Resources Commission (VMRC)
- **At-Large Members of the Blue Crab Workgroup (CBSAC):**
 - Potomac River Fisheries Commission (PRFC)
 - University of Maryland Center for Environmental Science (UMCES)
 - Virginia Institute of Marine Science (VIMS)
 - National Oceanic and Atmospheric Administration (NOAA)
 - Morgan State University, PEARL

Appendix 1. Signatory Statutory Authorities Driving Outcome Attainment

The law and regulation of signatory partners may support, justify or motivate their participation in the collaborative work of the Chesapeake Bay Program related to the attainment of specific Outcomes and Targets of the Watershed Agreement.

The following documentation identifies core statutory authorities that provide part of the impetus for the attainment of Chesapeake Bay Watershed Agreement Outcomes and their related Targets. While Chesapeake Bay Program partners acknowledge that the Chesapeake Bay Watershed Agreement is voluntary, subject to the availability of appropriated funds, and does not preempt, supersede or override any other law or regulation applicable to each signatory, they also acknowledge that the law or regulation of individual signatories can support each partner’s participation in outcome attainment. The table below is not an exhaustive list of all relevant laws and regulations. Rather, this appendix identifies the driving motivators that can bring about signatory partner engagement in efforts described in this Strategic Plan, associated Management Strategies, and Workplans.

Goal 1: Thriving Habitats, Fisheries, and Wildlife

Outcome: Blue Crabs

Signatory	Statutory Authority
Maryland	MD Code, Natural Resources § 4-801 et seq.
Virginia	VA Code § 28.2-200 et seq.