

**DRAFT Amendment 1 to the 2019 Maryland Chesapeake Bay Oyster Management Plan**  
**Comments Received from Advisory Groups**  
**July 2022**

COMMENT	DNR RESPONSE
<p>We think it is important that the proposed changes mirror as closely as possible the language negotiated during the OAC consensus process.</p>	<p>The Department's management plans need to provide long term guidance for species management. Exact wording may be altered to meet legal and management requirements of the plan under Natural Resources Article, Section 4-215.</p>
<p>Action 3.0.11 states "Evaluate the effectiveness of bar cleaning in low or underperforming harvest areas to promote improved spat sets." In contrast, the relevant OAC recommendation was "DNR should work collaboratively with the OAC to commission an academic peer-reviewed study to evaluate the ability of bar cleaning in low/underperforming harvest areas to promote improved spat sets." The inclusion of "academic peer-reviewed" and "work collaboratively with the OAC" were not included, but in our view are critical to the ultimate credibility of the results and support for the findings.</p> <p>Hence, we recommend this be reworded as follows:  Action 3.0.11  In collaboration with the OAC, commission an academic peer-reviewed study to evaluate the ability of bar cleaning in low or underperforming harvest areas to promote improved spat sets.</p>	<p>The action was modified to include collaboration with the OAC when requested by the Commission. The action applies the exact text in the recommendation as well allows for more flexibility and general application to other studies that could evaluate the objectives. For example, ongoing surveys with Smithsonian Environmental Research Center.</p>
<p>Concerning the one consensus management recommendation of the OAC related to Eastern Bay. Specifically, it stated "Over the next 25 years, a combination of replenishment, restoration and aquaculture activities should be collectively planned and undertaken in Eastern Bay..." The OMP amendment incorporates new action items (5.0.8 related to sanctuaries; 6.6.5 related to the public fishery) to reflect this recommendation, but no addition is made to the Aquaculture chapter 2 of the OMP to reflect the inclusion of aquaculture in this important effort (and as included in the OAC recommendation).</p> <p>Hence, we recommend the inclusion of a new action item in the Aquaculture chapter of the OMP as follows:  Action 7.0.4  Develop and implement a plan to enhance oyster aquaculture in the Eastern Bay region. Evaluate the effectiveness of this plan every five years.</p>	<p>From the OMP:  Aquaculture Strategy 7.0  Continue to provide incentives for private investment in shellfish aquaculture production and continue to locate areas for leasing within state waters.  Action 7.0.1  Partner with other local, state and federal agencies, academics, non-governmental organizations, industry representatives and other stakeholders to further streamline state and federal permitting and to continue to implement and operate financing, education and training programs and support the development of additional industry infrastructure.  Action 7.0.2  Identify areas suitable for submerged land and/or water column leases where the leases would not adversely impact existing living resources.  Action 7.0.3  Manage the oyster aquaculture industry to assure compliance with state and federal regulatory program requirements.</p> <p>The Department addressed the comment by adding an aquaculture section and text about developing goals and metrics for the Eastern Bay project to the amendment in Sections 5.0, 6.0, and 7.0.</p>

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<p>In general a three-tiered goal aimed at improving restoration, aquaculture and the public fishery should be set for oysters and included in the oyster FMP. In order to build toward this goal in a statewide manner, a pilot project should be conducted in Eastern Bay. The goal should be ambitious, seeking to maximize the use of available hard bottom habitat. Current estimates of restorable bottom in Eastern Bay include approximately 660 acres in sanctuaries and 1,200 acres in public fishery areas. New bottom surveys planned for Eastern Bay may identify additional acres suitable for building oyster reefs. The results of these surveys can be validated by working with industry to ground-truth the findings and produce maps of available bottom habitat. The OAC should use these new survey derived maps to reconsider current zoning practices and establish an oyster restoration, aquaculture, and public fishery plan that maximizes opportunities for each of these sectors, ideally opening up far more bottom than the documented 1,860 acres.</p> <p>An example of an OAC derived, three-tiered goal for Eastern Bay could include acreage, production, and harvest targets and thresholds. Similarly, nutrient reduction BMP targets and thresholds should be set for the project overall as well as for each of the three sectors. Methods for estimating the nitrogen removal related to oysters in the Chesapeake Bay have been established and can be used to set this goal. Approved TMDL crediting is available for aquaculture practices and those for restoration and the public fishery are soon to follow. These goals should be set by the OAC or an OAC appointed group and piloted in Eastern Bay.</p> <p>The FMP should also identify research recommendations. Research into oceanographic circulation, larval transport, larval source and sink dynamics, and meta-population dynamics should be considered in an effort to create a self-sustaining population of oysters in Eastern Bay. Zoning for restoration, aquaculture, and public fishery sites should be reconsidered to allow for a design that enhances benefits from larval spillover, maximizes oyster production in commercial areas, and incorporates three dimensional reef structure utilizing clean alternate substrates, as appropriate, in restoration areas. As new information becomes available the restoration, aquaculture, and public fishery goals should be assessed to ensure they are effective targets to achieving the overarching goal of increasing brood stock of oysters in Eastern Bay.</p>	<p>Eastern Bay:  The Department addressed this by adding an aquaculture section and text about developing goals and metrics for the Eastern Bay project to the amendment in Sections 5.0, 6.0, and 7.0.</p> <p>Research Recommendations:  The Oyster Management Plan allows for research needs (Section 12.0) as well as adaptive management (Section 2.3) based on what was found during the research; therefore, no changes were made in the amendment.</p>
<p>Action 5.0.8  Develop and implement a plan to restore sanctuary oyster bottom in the Eastern Bay region. Evaluate the effectiveness of this plan every five years.</p> <p>Recommend Change:  Action 5.0.8  Develop and implement a plan to restore sanctuary oyster bottom in the Eastern Bay in accordance with the methods employed in the 10 tributaries being restored under the 2014 Chesapeake Bay Agreement region, while allowing for improvement through adaptive management. This should include the application of techniques to identify Currently Restorable Oyster Habitat to maximize the area available for restoration. The plan should include aquaculture and the public fishery (in addition to ecosystem restoration) with production goals, targets and thresholds for all three sectors. The effectiveness of this plan should be evaluated every five years.</p>	<p>The OAC recommendation was:  Over the next 25 years, a combination of replenishment, restoration and aquaculture activities should be collectively planned and undertaken in Eastern Bay, with an equal amount of funding for spat planting in sanctuaries (\$1M annually adjusted for inflation) and for spat and shell planting on fishery bars (\$1M annually adjusted for inflation) in addition to current replenishment and restoration activities. The effectiveness of this option should be evaluated every 5 years.</p> <p>The Department addressed this by adding new actions 5.0.8 and 6.6.5 to the amendment. Existing strategies and actions in Section 7.0 of the OMP also address the comment.</p>
<p>Action 6.0.7  Consider altering the oyster stock assessment model to allow for future projections of abundance and harvest.</p> <p>Recommend Change:  Action 6.0.7  Alter the oyster stock assessment model to allow for control rules to be developed for the public fishery based on Maximum Sustainable Yield and Optimal Yield.</p>	<p>The OAC recommendation was:  Develop the ability to make stock assessment projections of abundance and harvest.</p> <p>The Department addressed this by adding new Action 6.0.7. Maximum Sustainable Yield (MSY) is already in the existing oyster stock assessment model so no changes were made in the amendment.</p>