



# Atlantic States Marine Fisheries Commission

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## MEMORANDUM

**TO:** Horseshoe Crab Management Board  
**FROM:** Caitlin Starks, Senior Fishery Management Plan Coordinator  
**DATE:** April 26, 2023  
**SUBJECT:** Work Group Recommendations and Report on Biomedical Best Management Practices

### Background

In 2022, the Horseshoe Crab Management Board (Board) appointed a work group to review and update the best management practices (BMPs) for handling biomedical catch. The original BMP document was developed by a similar work group in 2011 and included BMPs for the various steps throughout the biomedical process, from collection to release. Many of these practices were already in use by the biomedical companies in order to sustain the horseshoe crab population and ensure a steady and reliable supply of product to the pharmaceutical market.

Formation of the 2023 work group was prompted by the Board's recent discussions about biomedical mortality and follows the recommendation to periodically review the BMPs for the continued successful management of the horseshoe crab resource. The work group includes technical committee and advisory panel members with expertise in horseshoe crab biology, ecology, and biomedical processing. The BMP document that was included with the Board's meeting materials includes a modified list of BMPs, as recommended by the 2023 work group. It also provides background on the horseshoe crab biomedical fishery, information on current regulations in the Commission's Horseshoe Crab Fishery Management Plan (FMP) related to biomedical collections, as well as descriptions of general processes used to collect and transport horseshoe crabs for biomedical purposes. Finally, it includes a set of research recommendations that could inform future improvements to the BMPs.

### Additional Work Group Recommendations

Over the course of several meetings between January and April, 2023, the work group reviewed the BMPs and proposed modifications to more accurately characterize the practices that are expected to minimize the mortality and injury of horseshoe crabs collected for biomedical purposes. Through these discussions the work group identified several additional recommendations for the Board's consideration.

First, the work group recommends the Management Board task the Technical Committee (TC) with reevaluating the calculation of the coastwide biomedical mortality estimates presented in Commission documents. It came to the attention of the work group that the current calculation process, which applies a 15% estimated mortality rate to bled crabs and adds that number to the number of observed mortalities, may result in double counting of some horseshoe crab mortalities. The TC should review the data and recommend a method for calculating the overall estimated mortality of crabs collected for biomedical use on an annual basis.

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The work group also recommends that where it describes biomedical processes, the Commission's FMP be modified to use language that accurately reflects the practices used by the industry. For example, the FMP refers to collections of biomedical horseshoe crabs as "harvest." However, given the requirement to release these crabs back to the water, the work group believes such take would be more accurately described as "collection." Other misleading terminology in the FMP (e.g., shipping versus transport) continues to create public confusion about biomedical handling processes.

The work group also discussed that, in addition to the five biomedical operations along the Atlantic coast that are licensed by the US Food and Drug Administration (FDA), there are other operations along the coast that are not licensed by the FDA but are still permitted to collect blood from horseshoe crabs for other purposes such as health or medical research. The work group recommends each state provide a report to the Board on any such operations in their state, including the permitting and reporting requirements for these operations.