

Workshop to Broaden and Enhance Regional Freshwater Mussel Partnerships in the Chesapeake Bay

Executive summary:

On April 13, 2022, the National Fish and Wildlife Foundation and the state of Maryland hosted a regional workshop to connect mussel biologists, hatchery leads, environmental scientists, policy makers, nonprofit organizations, and funding entities that are working within the Chesapeake Bay Watershed. The goals of the workshop were to: (1) recognize the synergies of biodiversity and ecosystem services inherent to mussel restoration; (2) identify mussel restoration challenges, needs, and gaps in the Chesapeake Bay Watershed; (3) build upon current efforts by leveraging partnerships to maximize potential restoration outcomes and avoid duplication of efforts; (4) develop consensus around key regional mussel restoration priorities and goals; and, (5) recommend strategies moving forward for implementation.

A recurring point throughout the workshop centered on developing landscape level strategy and regional planning. The value of a comprehensive, multi-disciplinary approach for ecosystem restoration was acknowledged and discussed. Utilizing adaptive management will be essential, especially in addressing climate resiliency concerns. Despite the many synergies and commonalities identified for mussel restoration initiatives throughout the region, two primary goals were identified: biodiversity conservation and water quality improvement. While both paths have the potential to utilize and conserve freshwater mussels, the issues, strategies, and partners are decidedly unique.

Identification of watersheds for protection or restoration was identified as the most important area of strategic collaboration. Specifically, developing species and site selection metrics that can be applied throughout the watershed. The development of a strategic plan for freshwater mussels within the Chesapeake Bay Watershed would provide the framework for prioritizing watersheds and restoration projects as well as guide funding decisions.

A number of mussel restoration challenges, needs, and gaps were identified. The consensus was that there is a lack of contemporary surveys of mussel communities. Quantification of the baseline is necessary to identify the most appropriate restoration approach, assess carrying capacity, determine stream suitability, and measure success. A concern for balancing the gathering of information and implementing projects was discussed. It was pointed out that there is already an allocation of resources to all aspects of restoration (propagation, monitoring, surveys, and research); the key is to optimize these resources through coordination and communication.

A majority of the funding resources for freshwater mussel projects apply to only one of the two primary goals for mussel restoration that were identified in the workshop. Below is a cursory list of funding available within the Chesapeake Bay region.

Water Quality Goals	Biodiversity Goals
Chesapeake Bay Trust Fund	Chesapeake Wild
Pooled Monitoring	Fish and Wildlife Service at risk species initiative
Chesapeake Bay Stewardship Fund	America The Beautiful Challenge
Innovative Nutrient and Sediment Reduction (INSR) Grants	Multi-state State Wildlife Grant
Small Watershed Implementation Grants	RAWA (if passed and funded)
Small Watershed Planning and Technical Assistance Grants	

Next steps

During the workshop, participants were invited to complete the survey to rank the priority of several areas of strategic collaboration within the framework of freshwater mussel restoration. On that survey, 23 individuals expressed interest in participating in a work group for one or more of the areas of strategic collaboration. As a follow-up to the workshop, it seems prudent to form two work groups: one to identify watersheds for protection/restoration [biodiversity focus] and one to address science gaps [water quality focus]. Coordinated data collection (i.e., protocols and metrics) would be a key component of both projects.