Mid-Atlantic Panel on Aquatic Invasive Species: Small Grants Competition Summary

Since 2007, the Mid-Atlantic Panel on Aquatic Invasive Species (MAPAIS) conducts a Small Grants Competition encouraging projects that address MAPAIS regional priorities. In 2009, over 60% of submitted proposals were funded. Projects supported by MAPAIS involve a range of *on-the-ground* activities to minimize the introduction and prevent the spread of aquatic invasive species. Below is a summary of some of the MAPAIS funded projects.

Eradication & Control

Nutria Control in Nags Head Woods Ecological Preserve Project. The increasing presence of nutria is threatening Nags Head Woods Ecological Preserve's critical habitat. A GPS grid system will be mapped onto the study area and nutria traps set accordingly. Captured nutria will be removed while collecting population density and movement pattern data in and around the Preserve. The data will serve as the core for a Nutria Control Management Plan for the Nature Conservancy's National Natural Landmark and Globally Important Bird Area. Stakeholder input and extensive outreach to landowners, agencies, and the visiting public will contribute to long-term nutria control that will cross borders and occur statewide.

Virginia Phragmites Mapping Project. Pristine marsh and beach preserves that are the landscape of the Northern Neck reach of Chesapeake Bay shoreline support many species, including the federally threatened northeastern tiger beetle. Eradication of existing Phragmites stands and large scale control to combat potential new infestations to protect native communities is of utmost concern. The Virginia Department of Conservation & Recreation conducted an aerial GPS census as a series of helicopter surveys designed to support the accurate documentation of Phragmites distribution along the shoreline. Maps then serve as the basis for shape files in the Virginia Phragmites Mapping Application, an ArcIMS webtool.

Reporting & Monitoring

Chinese Mitten Crabs Tracking and Reporting Project. Chinese Mitten Crabs were first reported along the East Coast in 2006. To date, over 120 crabs have been confirmed and it is suspected there is a self-sustaining population in New York. The Smithsonian Environmental Research Center (SERC) is expanding efforts to track and report Chinese Mitten Crabs in the Chesapeake and Delaware Bays and the Mid-Atlantic Coast as a key step towards establishing a monitoring network. Facilitating this

process is the implementation of a web based reporting system increasing the capacity for early detection of Chinese Mitten Crabs and rapid response to new sightings. This system will interface with a database and queries for the most up-to-date information. Species data and maps documenting confirmed reports will be accessible. Ultimately, a model framework for regional coordination and effective citizen science will be available for adaptation.

Surveys & Risk Assessment

Species Invasiveness and Ecosystem Vulnerability Project. In the face of climate change, the ability to predict invasions of non-native fish will significantly influence to what extent AIS prevention efforts will be successful. Researchers at Virginia Tech University will determine if certain fish species are more likely to invade particular ecosystems and estimate invasion risk in Mid-Atlantic drainages. Drainage characteristic data has been collected and survey results from regional fishery biologists are nearly complete. Multiple databases, including the USGS Nonindigenous Aquatic Species will also be used to evaluate species invasiveness and ecosystem vulnerability. The creation of predictive models for each river drainage will provide risk estimates that can be used to develop and refine state AIS management plans. A planned website will allow managers to generate risk estimates using these species invasion models.

Education & Public Outreach

Rusty Crayfish Public Awareness Campaign Project. Rusty crayfish were discovered in the Susquehanna River watershed in 2007. The subsequent state ban on the catch, use, and possession of all crayfish in affected river basins intended to contain the rusty crayfish population prompted an outreach campaign led by MD Department of Natural Resources. Signs were posted at all public access points from the Potomac River confluence to the MD-PA border to educate the public concerning the regulation and raise awareness of invasive aquatic species. Recently, the ban was lifted to allow headless crayfish use as bait and new signs posted; however, the ban could be reinstated contingent upon future evaluation.