

# VIRGINIA SALTWATER RECREATIONAL FISHING DEVELOPMENT FUND

## SUMMARY PROJECT APPLICATION\*

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### Applicants:

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### Project summary:

Speckled trout, *Cynoscion nebulosus* (Cuvier, 1830), support an important recreational fishery in Chesapeake Bay. Speckled trout have been extensively studied throughout the Gulf of Mexico and off the Atlantic coast of Florida, with limited studies off the coasts of Georgia and South Carolina. These studies have shown that speckled trout undergo limited movement among estuaries. Some of these studies have used molecular markers to show that different estuaries harbor distinct genetic stocks. However, there have been no genetic studies of Virginia's speckled trout, thus there is no information available regarding genetic connectivity among locations either within Chesapeake Bay or between Chesapeake Bay and other locations. It is unknown if populations in Virginia are self-recruiting or to what extent recruitment relies on input from other geographic areas. The proposed research will use genetic markers to assess the independence of Virginia's speckled trout populations. This information is crucial to appropriate management efforts and is of interest to recreational fishermen across Virginia. To accomplish this work, we propose to use the mitochondrial (mt) DNA control region and nuclear microsatellite markers to survey speckled trout collected from several Chesapeake Bay sub-estuaries. We will compare data both from among these locations and between these locations and collections and from samples taken both north and south of Cape Hatteras to assess the demographic independence of Virginia's speckled trout stock(s).

### Expected benefits:

Knowledge about the demographic independence and stock boundaries of speckled trout populations in Virginia is critical information for management of the speckled trout resource. This information will be provided to the Virginia Marine Resources Commission for use in future stock assessment and management efforts. This will ensure appropriate management and preservation of the speckled trout resource for Virginia's recreational fishermen. Since many recreational anglers will be involved with the study, this will allow them real time access to the results of the analyses and strengthen the relationship between recreational anglers and scientists.