

**VIRGINIA RECREATIONAL FISHING DEVELOPMENT FUND
SUMMARY PROJECT APPLICATION***



<p>NAME AND ADDRESS OF APPLICANT:</p> <p>Virginia Marine Resources Commission 2600 Washington Ave, 3rd Floor Newport News VA 23607</p>	<p>PROJECT LEADER (name, phone, e-mail):</p> <p>Joe Grist (757) 247-2237 joe.grist@mrc.virginia.gov</p>
<p>PRIORITY AREA OF CONCERN:</p> <p>Research Analysis</p>	<p>PROJECT LOCATION:</p> <p>VMRC</p>
<p>DESCRIPTIVE TITLE OF PROJECT:</p> <p>Adult Red Drum Population Structure Study</p>	
<p>PROJECT SUMMARY:</p> <p>To collect genetic and age information from red drum for the upcoming 2009 ASMFC/SAFMC population assessment to determine if there are distinct state-specific genetic strains of red drum, or if the coastwide population is homogeneous.</p>	
<p>EXPECTED BENEFITS:</p> <p>The 2009 ASMFC/SAFMC stock assessment, utilizing the Southeast Data, Assessment, and Review (SEDAR) process, is meant to provide as thorough an evaluation as possible on the stock status of red drum along the southeast Atlantic coast. State-specific genetic and age information from adult red drum will not only answer key questions concerning how much state stocks mix from north to south, but will also help determine the success of current management practices, age composition and year-class strength in the current population.</p>	
<p>COSTS:</p> <p>Total Costs: \$20,390.00</p> <p>Detailed budget must be included with proposal.</p>	

Updated 6/1/05

*This form alone does not constitute a complete application, see application instructions or contact Sonya Davis at 757-247-8155 or sonya.davis@mrc.virginia.gov : Due dates are June 15 (Jul. – Nov. Cycle) and December 15 (Jan. – May Cycle)

Adult Red Drum Population Structure Study

Need:

As determined at the May Atlantic States Marine Fisheries Commission red drum technical committee meeting, the largest current data deficiency is in knowledge of the adult red drum population structure of the Atlantic region. Genetic population information will allow us to address questions such as what is the adult effective population size, are schools genetically distinct, how much gene flow occurs among schools, estuaries, and states, as well as the possibility of estuary fidelity? Additionally, as South Carolina Department of Natural Resources has extensive genetic information on the subadult populations, comparisons of adult and subadult structuring will allow us to verify the suggested sweepstakes lottery reproduction for red drum and validate the use of subadult populations as indicators of the adult populations. The results of these inquiries will influence management decisions and provide useful information on allele frequencies of the wild population that will allow for evaluation past and current allele frequencies and validation of genetic tagging.

Objective:

To collect genetic and age information from red drum for the upcoming 2009 ASMFC/SAFMC population assessment to determine if there are genetically distinct populations of red drum unique to each state-specific genetic strain of red drum, or if the coastwide population is homogeneous.

Estimated Benefits:

The results of this population evaluation will have management implications, including identifying distinct wild populations, the diversity and health of red drum populations coastwide and the need for coastwide or state specific regulations. Additionally, another critical component of the proposed genetic analysis is the concurrent aging of the sampled fishes. A proposed otolith ageing workshop, to be held in South Carolina in 2008, would allow for the exchange and validation of age structures and methodologies, among states. The result will be a standardized preparation method, establishing conventions for making validated counts and estimates of the variability in ages determined. For Virginia to participate in the otolith workshop and analysis of ~300 genetic samples, the following funding would be needed to complete the work described during the 2008 calendar year.

Estimated Cost:

Item	Total Cost
Genetic processing and analysis (SCDNR)	\$2,493.00
2 Biologists and 1 Research Scientist (1 month) (SCDNR)	\$12,365.00
Biological and genetic collections (fuel and supplies) (VMRC)	\$4,032.00
Otolith Workshop (2 people, 3 days, per diem, hotel, travel)	\$1,500.00
TOTAL ESTIMATED COSTS	\$20,390.00