

Department of Legislative Services  
Maryland General Assembly  
2002 Session

FISCAL NOTE  
Revised

House Bill 353

(Delegate Schisler, *et al.*)

Environmental Matters

Education, Health, and Environmental Affairs

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Oysters - Nonnative and Native Species - Research and Report

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This emergency bill requires the Department of Natural Resources (DNR) to authorize the study of the Suminoe oyster (*Crassostrea ariakensis*) and other nonnative species. The study must include an analysis of the ecological benefits and risks associated with the introduction of both sterile and reproductively capable species. The study shall proceed in accordance with the findings of the National Academy of Sciences' (NAS) review of the Suminoe oyster. A person may engage in this research in Maryland waters with prior approval of DNR, and DNR must ensure that proper biosecurity measures are followed so that this research does not result in the introduction of a nonnative species into State waters. DNR also must study the current viability of native oysters and measures to increase their health and survival rate. DNR must seek funding for the studies required by the bill. DNR must submit an interim report to the Governor and specified committees of the General Assembly by December 1, 2002. The final report is due by December 1, 2004.

The bill sunsets December 31, 2004.

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Fiscal Summary

**State Effect:** Significant increase in federal and/or State expenditures from FY 2003 through FY 2005 to conduct the required studies and monitor approved research. It is assumed that any increase in expenditures in FY 2002 would be minimal.

**Local Effect:** None.

**Small Business Effect:** Minimal.

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## **Analysis**

**Current Law:** A person may not engage in aquaculture unless the person has obtained a permit from DNR. DNR may not issue a permit for the raising of nonnative species or nonnative stocks unless: (1) the permit limits the aquaculture operation to nontidal ponds, lakes, or impoundments; and (2) the aquaculture operation is constructed in a manner that assures that nonnative stocks are precluded from entering the tidal waters or contaminating the native species of the State.

**Background:** Populations of the native Chesapeake Bay oyster (*Crassostrea virginica*) have experienced a modest recovery in the last few years after hitting record lows in the early 1990s. However, the oyster population remains far below historical highs from the late 19th century. The parasitic oyster diseases, MSX and Dermo, which are responsible for most of the oyster population decline of the last 20 years, continue to plague oysters at moderately high rates.

In an effort to address the shortage of the native population, there has been a growing interest in studying the feasibility of cultivating a nonnative oyster population. In response to legislation enacted in Virginia, the Virginia Institute of Marine Science (VIMS) has been exploring the potential role of nonnative oysters in rejuvenating the state's crippled oyster industry. Over the past few years, researchers at VIMS have been producing sterile versions of *Crassostrea ariakensis* for use in controlled studies. According to VIMS, the Asian oyster appears to be relatively resistant to MSX and Dermo. Reports also indicate that the nonnative species grows much more quickly than its native counterpart. Impressive results from recent tests have led some watermen, aquaculturalists, and resource managers to seek the ability to cultivate the nonnative species by commercial aquaculture or even to introduce reproductively capable versions to establish wild populations in the Chesapeake Bay. Some environmental groups, including the Chesapeake Bay Foundation, have expressed concern over the sanctioning of large-scale aquaculture or outright introduction until there is substantial scientifically validated information about the ecological risks and benefits associated with the introduction of the nonnative species. To prevent the accidental introduction of reproducing oysters, VIMS allows only sterile oysters in the wild. All others are kept in quarantine systems.

Recently, a number of groups, including the State, the Chesapeake Bay Commission, the Chesapeake Bay Foundation, and many federal agencies, have petitioned NAS to conduct both an ecological and economic risk assessment of the potential introduction of the

nonnative species. NAS agreed to conduct the assessments contingent on the raising of \$310,000 necessary to fund the studies. To date, approximately \$170,000 has been raised. According to the Chesapeake Bay Commission, once the study is fully funded, it will take about four months to organize the study and one year from then to complete the study.

**State Fiscal Effect:** Federal and/or State expenditures could increase significantly to fund the studies required by the bill. First, the bill requires DNR to authorize the study of the nonnative species by both private and public research institutions with expertise in the field. Based on information provided by VIMS and DNR, research institutions could incur costs of at least \$250,000 for the design and setup of the study and at least \$1 million to conduct controlled experiments on the cultivation of the nonnative oysters.

Second, the bill requires DNR to ensure proper biosecurity measures so that the approved research does not result in the introduction of a nonnative species into State waters. Accordingly, expenditures relating to those activities could increase. Because the extent to which research will be approved is unknown at this time, a reliable estimate of any increase in expenditures cannot be made at this time. Legislative Services notes that the Virginia Marine Resources Commission, the government agency overseeing the experimentation in Virginia, reports that monitoring costs in that state have been absorbed within existing resources.

Finally, the bill requires DNR to conduct a study relating to the native species and requires DNR to seek funding for the study. In order to conduct the study, DNR advises that it would likely contract with academic institutions in the State. The estimated cost of the required study is approximately \$250,000 annually from fiscal 2003 through fiscal 2005.

DNR advises that it will seek federal funds for the studies required by the bill; should federal funds not be available, DNR will likely seek a general fund or special fund appropriation.

Because the bill is an emergency bill, Legislative Services advises that expenditures could be affected beginning in fiscal 2002. However, any increase in fiscal 2002 is anticipated to be minimal.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** SB 493 (Senator Harris, *et al.*) – Education, Health, and Environmental Affairs.

**Information Source(s):** Department of Natural Resources, University System of Maryland, Virginia Institute of Marine Science, Virginia Marine Resources Commission, Chesapeake Bay Foundation, Department of Legislative Services

**Fiscal Note History:** First Reader - February 5, 2002  
ncs/jr Revised - Updated Information - February 13, 2002  
Revised - House Third Reader - April 2, 2002  
Revised - Enrolled Bill - April 16, 2002

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