



RECOMMENDATIONS ON SUMINOE OYSTER (*CRASSOSTREA ARIAKENSIS*) AQUACULTURE IN CHESAPEAKE BAY

SUMMARY

The purpose of this document is to communicate the findings and recommendations of the Federal Agencies Committee of the Chesapeake Bay Program with respect to an anticipated proposal to introduce the Suminoe oyster (*Crassostrea ariakensis*) into the waters of the Chesapeake Bay for aquaculture production. The Federal agencies of the Chesapeake Bay Program (acting through the Administrator of the Environmental Protection Agency) are signatories to the *Chesapeake 2000* agreement and expect that the other Chesapeake Bay Program partners will consider these recommendations in their review of any such proposal.

In general, it is the opinion of the Federal Agencies Committee that there are a number of significant, poorly understood risks and potential adverse consequences associated with the prospect of introducing *C. ariakensis* into the open waters of the Chesapeake Bay. Among them are the risks of worsening disease problems, interspecific competition with the native oyster and other organisms, and detraction of funds and effort from the *Chesapeake 2000* commitment to a “tenfold increase in native oysters” by 2010. Also, we expect that the scientific research, risk analysis and environmental impact assessment necessary to adequately address these risks and potential consequences would require significant funding and several years, at a minimum, to complete. Moreover, it is likely that *C. ariakensis* aquaculture in the open waters of Chesapeake Bay would require Federal authorization under Section 10 of the Rivers and Harbors Act, and an environmental impact assessment and alternatives analysis under the National Environmental Policy Act.

Consistent with the 1993 Chesapeake Bay Policy for the Introduction of Non-Indigenous Aquatic Species, it is the opinion of the Federal Agencies Committee that the other Chesapeake Bay Program partners should oppose *C. ariakensis* introduction unless environmental and economic evaluations are conducted and reviewed in order to ensure that the risks associated with the introduction are acceptably low. For the foreseeable future, the Chesapeake Bay Program partners should stay the course with the oyster strategy to which we committed in the *Chesapeake 2000* agreement, which is:

By 2010, achieve, at a minimum, a tenfold increase in native oysters in the Chesapeake Bay, based upon a 1994 baseline. By 2002, develop and implement a strategy to achieve this increase by using sanctuaries sufficient in size and distribution, aquaculture, continued disease research and disease-resistant management strategies, and other management approaches restore the native oyster productivity to Chesapeake Bay.

BACKGROUND

There is consensus in the region to reestablish oyster productivity in the Bay, and the *Chesapeake 2000* agreement commits to a “tenfold increase in native oysters” by 2010. Based on results from several years of experimental oyster restoration in Virginia and Maryland, the general strategy for pursuing this goal is to establish unharvested oyster sanctuaries strategically located throughout the Bay in which concentrations of mature oysters are subjected to natural selective forces, including disease. Over time, these sanctuaries are expected to produce an abundance of disease-resistant native oysters that will populate the sanctuaries and nearby harvestable areas. The details of a comprehensive oyster restoration and management strategy for the Bay are under development. The cost of achieving the tenfold goal has been roughly estimated at \$100 million.

FINDINGS AND RECOMMENDATIONS

Based on current knowledge of benefits, risks, and potential adverse consequences, the Federal Agencies Committee makes the following findings and recommendations:

1. The protocols in the 1993 Chesapeake Bay Policy for the Introduction of Non-Indigenous Aquatic Species should be adhered to should any Chesapeake Bay Program partner receive an application to initiate *C. ariakensis* aquaculture in the Bay. That policy states:

It shall be the policy of the jurisdictions in the Chesapeake Bay basin to oppose the first-time introduction of any non-indigenous aquatic species into the unconfined waters of the Chesapeake Bay and its tributaries for any reason unless environmental and economic evaluations are conducted and reviewed in order to ensure that risks associated with the first-time introduction are acceptably low. All proposals for a first time introduction shall be made to the appropriate jurisdictions and an ad-hoc panel shall be formed by the Living Resources Subcommittee upon receipt of copies of the permit application and supporting documentation.

Also consistent with this policy, any proposal to increase the scope of *C. ariakensis* research or aquaculture in the Bay beyond the current experiments (including an increase in the number of oysters) should trigger an interagency ad hoc review, which should be thoroughly considered by the permitting agency before it decides the disposition of the permit.

2. The Federal Agencies Committee is concerned that a re-direction of Chesapeake Bay oyster restoration funds and effort toward the research, analysis, regulation, monitoring, enforcement and logistic support necessary to support *C. ariakensis* aquaculture would significantly detract from the funding and implementation effort necessary to fulfill the *Chesapeake 2000* commitment to “By 2010, achieve, at a minimum, a tenfold increase in native oysters in the Chesapeake Bay.”

3. Any judgement as to whether to approve an application to initiate *C. ariakensis* aquaculture in Chesapeake Bay should be based on sound science, and there are several significant gaps. *C. ariakensis* aquaculture should not be initiated until significant unanswered questions concerning disease ecology and other potential ecological consequences are addressed through scientific research. Following that research, a thorough independent ecological and economic analysis and risk assessment should be conducted. After the risk assessment, a Chesapeake Bay Program ad hoc panel (including Federal agency representatives) should review the findings.

4. In accordance with Section 10 of the Rivers and Harbors Act of 1899, Federal authorization from the U.S. Army Corps of Engineers would be required for in-water structures necessary to support *C. ariakensis* aquaculture. Consistent with provisions of the Fish and Wildlife Coordination Act, the Corps' public interest review of any Section 10 permit application would include full and equal consideration of potential ecological consequences of the action. In addition, the potential for environmental impacts likely would trigger a thorough evaluation of impacts and alternatives in accordance with the National Environmental Policy Act (i.e., an environmental assessment or environmental impact statement). Alternatives that should be considered in that documentation include, at a minimum, the following:

- a. land-based *C. ariakensis* aquaculture;
- b. use of hatchery-produced disease-resistant native oysters; and
- c. use of naturally-produced disease-resistant native oysters.

CONCLUSION

*I*t is the opinion of the Federal Agencies Committee that any initiation of *C. ariakensis* aquaculture in the open waters of Chesapeake Bay should be supported by sound science. Since the necessary research has not yet been completed, any introduction, at this time, would be contrary to Chesapeake Bay Program policies and goals. Consistent with Chesapeake Bay Program policy and the anticipated need to comply with requirements of the National Environmental Policy Act, significant biological, ecological and economic risk assessment and alternatives analysis remains to be done before an informed decision could be rendered on any proposed initiation of *C. ariakensis* aquaculture. In addition, the potential for a significant diversion of funds and effort to *C. ariakensis* aquaculture risks abandonment of the *Chesapeake 2000* commitment to increase native oysters tenfold by 2010.

FOR THE FEDERAL AGENCIES COMMITTEE



Diana Esher, Acting Director, Chesapeake Bay Program

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