



Partnership for the Delaware Estuary
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Department of the Army
Norfolk District, Corps of Engineers
Attn: **Mr. Mark Mansfield**
Chief, Planning and Policy Branch
803 Front Street Norfolk, Virginia 23510-1096
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December 12, 2008

Dear Mark,

I am writing in response to your request for comments on the options/alternatives presented in the Draft Programmatic Environmental Impact Statement (PEIS) for Oyster Restoration in Chesapeake Bay Including the Use of a Native and/or Nonnative Oyster. Based on a review of the science and conclusions of the PEIS and input from our watershed's scientists and resource managers, the Partnership for the Delaware Estuary believes that an introduction of the Suminoe oyster could pose a threat to the resources of the Delaware Estuary that has not been adequately considered in the PEIS. **Therefore, we do not support the proposed action or the alternatives presented in the PEIS that involve introduction of *Crassostrea ariakensis* into the Chesapeake Bay (Alternatives 5, 7, 8b, or 8c.) and we strongly urge that they not be pursued.**

As a National Estuary Program responsible for 6,827 square miles of the Delaware Estuary, we are charged with implementing a Comprehensive Conservation Management Plan (CCMP). This plan charges us to sustain the Delaware Estuary's complex ecosystems by integrating management strategies that strike the proper balance among the needs of the Partnership's diverse stakeholders. For more information, the CCMP is described and downloadable from the following webpage: <http://www.delawareestuary.org/aboutthepartnership/aboutus/theccmp.asp>.

One of the ways that we implement the CCMP is to operate a Science and Technical Advisory Committee (STAC), which includes 21 members from state and federal agencies, universities, industry, and environmental non-profit organizations, representing Delaware, New Jersey and Pennsylvania. The STAC provides scientific expertise in areas spanning physical, chemical and biological fields, including shellfish ecology and industry science. Two current STAC members are Past-Presidents of the National Shellfish Association, including our Science Director at the Partnership. These STAC experts were consulted for preparation of this comment letter on the PEIS. The membership and charter for the STAC is provided here: <http://www.delawareestuary.org/scienceandresearch/STAC/index.asp>.

In Section 3 of the PEIS (Affected Environment), Section 3.15 Potentially Affected Resources Outside of the Chesapeake Bay, it states that "The establishment of a self-sustaining, diploid population of the Suminoe oyster in Chesapeake Bay, however, could affect resources outside of the Bay." The section goes on to say "Given these similarities in tolerances, the areas outside

Chesapeake Bay that could be affected by alternatives involving the Suminoe oyster include most of the areas that currently support the Eastern oyster. ... **from the Gulf of St. Lawrence, Canada, through the Gulf of Mexico...**”. Also according to Section 4 Environmental Consequences; 4.15 Potentially Affected Resources Outside of the Chesapeake Bay, **Alternatives 5, 8b and 8c could effect resources outside of the Chesapeake Bay.**

In addition to the main PEIS, in Appendix B, Question 6 addresses our specific concern about the possible implications with the Suminoe oyster to our Delaware Estuary. Specifically Question 6 “Will *C. ariakensis* disperse to areas outside of Chesapeake Bay and pose the kinds of risks identified above?” “If *C. ariakensis* becomes established within Chesapeake Bay, **the risk is high that it eventually would disperse** to areas outside the Bay. Such dispersal would be **more likely to the north of the Bay...** the species in its native range suggest that it tends to **inhabit estuaries associated with large river systems**”. Hence, it appears that the PEIS directly affirms our most significant concern about the potential for the unintended introduction of Suminoe oysters into the Delaware Estuary. Once established, such an introduction would also clearly be irreversible.

The Partnership for the Delaware Estuary is an active participant in a Delaware Bay Oyster Revitalization program, which has been very successful in recent years in rebuilding reefs of native oysters, *Crassostrea virginica*. We promote oyster restoration, along with other native bivalve species, for both the enhancement of the shellfishery and ecosystem services. So while we support the intent of the Chesapeake proposal to boost oyster populations for like purposes, we wish to convey our strong concern regarding the use of non-native species such as the Suminoe oysters. According to your PEIS, the introduction of reproductive Suminoe oysters into the Chesapeake Bay would eventually lead to the introduction of that oyster into Delaware Bay, particularly because of the interchange of water (therefore possibly oyster larvae) through the Chesapeake and Delaware Canal. The Delaware Estuary is likely to be the first adjacent waterbody to be affected should Suminoe oyster populations become established in the Chesapeake. The data collected and presented in the PEIS clearly indicate a strong potential exists for substantial harm to our native oyster fishery and ecology in Delaware Bay through direct competition for food and shell surfaces.

Oyster reefs are functionally dominant in our estuary ecosystems, and data show that *C. ariakensis* and *C. virginica* differ in key physiological functions. Even slight shifts in the nature of filter-feeding (e.g. sizes and types of particles captured) and physiological processes (e.g., digestion efficiencies and nutrient excretion) can lead to substantial changes in the ecological feedbacks that sustain a balanced ecosystem. Our STAC and other regional scientists concur with these appraisals.

Further, the approach of using hatchery produced triploids and other tactics to limit out-planting to sterile individuals is risky due to its dependence on 100% compliance of a large number of different facilities. Despite a high level of scientific study, precautions and enforcement, there are many ways that an accidental introduction (such as a release from a hatchery or field site) or a biological escape (such the inadvertent release of diploids being maintained to produce triploids or even a reversal of triploids to diploids) could occur and so we believe that it would simply be a matter of time until the species would establish itself. In fact, escapes of triploids have already been reported from carefully maintained pilot studies in Virginia (<http://www.bayjournal.com/article.cfm?article=1292>, June 2004). A large scale endorsement of triploid aquaculture will certainly lead to escapes.

According to our CCMP we have several action items for habitat and living resources that pertain to this possible introduction. Specifically the CCMP calls for us to “assure compliance with existing

interstate species management plans and prepare plans for additional appropriate species” (Action H1). Action H9 asks us to “consider priority species in regulatory reviews and environmental impact statements”. More specifically, Action H6 specifies that we “develop and implement an Estuary-wide policy to evaluate proposed intentional introductions of exotic species and prevent unintentional ones.” However, we have not been engaged in development of the PEIS, nor have we been invited to prepare plans or studies of the direct and indirect effects of the proposal on the Delaware Estuary ecosystem or the industries and people that depend on it.

In reviewing the science and conclusions of the PEIS, listening to our watershed’s scientists and resource managers, and reviewing relevant components of our CCMP, the Partnership for the Delaware Estuary believes that an introduction of the Suminoe oyster could have profound impacts on our estuary and that these effects have not been adequately considered in the proposal. We support efforts to restore native oyster populations to the region, and urge that the proposed action and alternatives involving Suminoe oyster introduction not be pursued.

Sincerely,

Jennifer A. Adkins
Executive Director

CC: (Via Email only)

Kathy Bunting-Howarth, Delaware Dept. of Natural Resources & Environmental Control
Kerry Kirk-Plugh, New Jersey Department of Environmental Protection
Andy Zemba, Pennsylvania Department of Environmental Protection
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