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Subcommittee on Fisheries, Conservation, Wildlife and Oceans

U.S. House Committee on Science

Oversight Hearing on Introduction of Non-Native Oyster Species to the Chesapeake Bay

Testimony by

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Chairman Gilchrest and members of the subcommittee, thank you for the opportunity to address you today on the important issue of the Chesapeake Bay and oysters—the very species for which this great estuary was named.

I head the University of Maryland Center for Environmental Science, an organization that has developed science for living resource management for 78 years now. We have worked on oyster biology and conservation from the very start—in fact, science has mixed with oyster management even before that extending to the days of Professor Brooks at Johns Hopkins University. Unfortunately, had all of the scientific findings and recommendations been heeded we would not be in the predicament we are today. But here we are, with a fresh set of well-considered recommendations from the National Research Council. My colleagues and I stand ready to work with state and federal agencies and the stakeholders in addressing the questions raised in the NRC report in a careful and credible way.

The University of Maryland Center for Environmental Science has been at the forefront of efforts to restore populations and habitats of the native Eastern Oyster since 1994. Our scientists developed the scientific theory behind the key element of the Maryland Oyster Roundtable action plan, which designates Oyster Recovery Areas into which the importation of diseased oysters is restricted and in which active rebuilding of reefs is pursued. Scientists, the Maryland Department of Natural Resources, and watermen have learned much in the process, leading to management approaches that avoid worsening the spread of the Dermo disease, establish permanent oyster sanctuaries, and seed oyster reserves in which harvest is eventually allowed.

These efforts have been locally successful in areas in which the other oyster disease, MSX, does not occur. In this regard we are more fortunate than in Virginia in that we have extensive areas of low-salinity habitat, which is only threatened by MSX during occasional dry years. Rates of acquisition of Dermo disease by disease-free young oysters planted on fresh shell beds are greatly reduced compared to other areas in which oyster production is supplemented by repletion of naturally occurring, but disease carrying seed oysters. Growth rates on these restored oyster bars range from an inch to an inch and a half per year. The oysters grow vertically producing the complex structure of a natural reef, providing home to substantially greater populations of associated animals. The accompanying photograph shows five-year-old oysters from a reef restored by the Army Corps of Engineers in 1997 and 1998. What you see is a dense colony of five-year-old oysters, each five or more inches long and at a density of 100 to 400 per square meter.

The efforts to restore native Eastern Oysters have been successful on only a local scale at this point. Disease mortality at higher salinities remains a problem and the scale of the restoration effort has to date been modest. The successes that have been realized, however, would have not been possible without the greatly expanded production of disease-free spat by the Center's oyster culture facility at our Horn Point Laboratory. We have doubled production each year, with over 150 million spat-on-shell produced in 2003. The just opening Aquaculture and Restoration Ecology Laboratory at Horn Point will greatly increase our capacity as we work together with the Oyster Recovery Partnership—an amazing organization that does all the heavy lifting, both literally and figuratively—and the Department of Natural Resources, Corps of

Engineers and NOAA. The new laboratory facility also has unique quarantine facilities that will allow our scientists to work on oyster diseases and non-native oyster species under near-natural conditions without the risk of accidental introductions.

The previous speakers have commented on scientific and management issues related to the Suminoe oyster. I will not say much more other than to indicate that my colleagues and I are committed to responsible and probing research on the key questions identified in the NRC report. We have already begun some of this research and look forward to working with the responsible agencies and scientists in other states as the challenging question of introduction is addressed.

Dense oysters at Spaniard Point bar in the Chester River – part of the original Army corps of Engineers site constructed in 1997 & 1998. This site is now 5 years old and the oysters continue to thrive. Their mean size is now larger than 5 inches with many ranging to 8 inches.