Testimony on H.R. 258.
Chesapeake Bay Accountability and Recovery Act of 2011
Submitted to
Committee on Natural Resources
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by

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Subject: H.R. 258: Chesapeake Bay Accountability and Recovery Act of 2011.

Mr. Chairman, Members of the Committee, it is a pleasure to be here today in response to your invitation to provide testimony on H.R. 258: the Chesapeake Bay Accountability and Recovery Act of 2011.

My name is Roger Mann. I am a Professor of Marine Science and Director for Research and Advisory Services, Virginia Institute of Marine Science, College of William and Mary. I have been a researcher examining natural ecosystems and their management for both ecological services and sustained harvest of commercially valuable products for thirty five years. For the past twenty five I have been active in fisheries resource management and restoration in the Chesapeake Bay, in particular in the field of oyster restoration. The comments that I present today represent not just my own, but a strong consensus of colleagues with whom I have discussed this important bill. Collectively, their expertise amounts to several hundred person years of direct experience in Chesapeake Bay science, management, and policy.

In my testimony today I wish to highlight three statements:

1. Adaptive management is a dynamic and responsive process that includes stakeholder participation, setting of goals, monitoring, modeling, experimentation, research, and continual re-evaluation with modification of end points and goals as directed by this iterative process.
2. With respect to the Chesapeake Bay restoration effort, the required dynamic and responsive process would be much improved by a fresh re-engagment of the science community.
3. Constructive peer review is the backbone of science. Appointment of an

Independent Evaluator for bay restoration is essential to insure that only the very best science guides these actions.

The Chesapeake Bay has been described as a National Treasure – a description with which I wholeheartedly agree. The largest estuary in the continental United States, the bay watershed includes over 100,000 streams, 150 major rivers, and 11,500 miles of shoreline in a 64,000 square mile footprint in the states of New York, Delaware, Maryland, West Virginia, the Commonwealths of Pennsylvania and Virginia, and the District of Columbia. The bay watershed is also home to approxmately 15,000,000 people and an ecosystem under significant stress. Over 4.4 million acres have been developed, at least half of that in the past fifty years. Agricultural, urban and industrial development have inevitable impacts on receiving waters. Direct expolitation of living resources and modification of bay shorelines to shipping channels have lasting signatures.

The need to restore and maintain the Chesapeake Bay has long been recognized and enjoys wide public support. Formalized through the 1983 Chesapeake Bay Agreement and susbequent instruments, the bay partners (the federal government, represented by the Environmental Protection Agency, joined the State of Maryland, and the Commonwealths of Pennsylvania and Virginia, and the District of Columbia) commited to "share the responsibility for management decisions and resources regarding the high priority issues of the Chesapeake Bay." This is an ongoing commitment. The task before us in these difficult economic times may be stated thus: "How do we maximize progress towards restoration goals per dollar invested?"

Maximizing progress in restoration requires a responsive, dynamic structure to support actions that lead to progress by the state partners. Progress in the early days of the Chesapeake Bay Program was realized by coordinated actions of external scientific involvement, a robust Scientific Technical Advisory Committee, Bay researchers, and a small but efficient Chesapeake Bay Program whose directive was to support the states. A return to this model requires re-engagement of the greater Bay scientific community in an open review process.

The baseline of environmental challenges is moving as the Bay is stressed not only by population growth but also by sea level rise and climate change. Restoration goals and the means to attain them must be flexible in response. In practically all applied economic, social, engineering and scientific endeavors the current approach is to employ numerical models to evaluate current knowledge and guide project actions. Continuing revision of the goals and actions are expected as more information emerges. The Bay monitoring programs have produced enormously rich data sets that can be used to assess progress to date and plan future action. The role of the Chesapeake Bay Program, and the Bay scientific community is to do a better job of making existing numerical models both more accurate and understandable to the non-technical Bay community who are also the stakeholders in the process. This can be achieved with appropriate resources.

The current generation of numerical models is complex, but their development times and

costs are decreasing while the output is increasingly sought for societal purposes – progress in tidal surge models associated with storm events provide a good example. Engaging a wide representation of the science community to build such proactive tools is tractable, but progress also requires a commitment to change what does not work, redefine acceptable outcomes if required, not confuse activity with accomplishment, refocus efforts outside of the original goals if new options emerge in the management process, incorporate new findings, and engage new talent where talent is needed. Bay restoration must be progressive science, not just progressive bureaucracy and policy.

H.R. 258 proposes appointment of an Independent Evaluator. Critical, independent, open, constructive peer review is the backbone of scientific progress. Peer review is the key to achieving restoration goals and doing it with highest cost efficiency. The current Bay Program effort is large with complex infrastructure and lacking in flexibility. Re-engaging the scientific community in a flexible, dynamic approach to restoration actions will achieve better results. The states, in both academic institutions and the state agencies, are reservoirs of enormous talent that can be engaged with short lead times and high cost efficiency because in many instances the task specific talents and infrastructure already exist within those agencies. Independent review by the proposed Office of the Independent Evaluator will, I have no doubt, highlight these opportunities.

In summary, I again thank the Committee for the opportunity to provide testimony. I applaud the goals stated in H.R. 258 of developing a cross cutting budget as a tool to evaluate progress in Bay restoration activity and appoint an Independent Evaluator. The challenges are significant, but with a concerted effort to re-engage the science community, use state of the art proactive modeling tools as drivers, and adopt a more flexible, dynamic and responsive operations structure these challenges can be met. Let us proceed. This completes my testimony.