

Chesapeake Plenary Session – 29 August 2011

Chesapeake Bay Plenary Panel and Discussion Session

Moderated By: Dr. Jonathan Kramer, Director, Maryland Sea Grant College Program

Mr. Richard Batuik, Associate Director for Science, Chesapeake Bay Program Office, U.S. Environmental Protection Agency

Ms. Frances Flanigan, Former Director, Alliance for the Chesapeake Bay

Mr. Richard Hall, Secretary, Maryland Department of Planning

Dr. Court Stevenson (replaced Dr. David Secor) Horn Point Laboratory, University of Maryland Center for Environmental Science

Dr. Jonathan Kramer

Considered by many to be “the estuary that defines all estuaries” Chesapeake Bay is a complex socio-ecological system influenced by a watershed that is home to almost 17 million residents. Historically, the Bay has been stressed by nutrient enrichment and unsustainable use of natural resources. It is the focus of an extensive restoration effort that will face increased challenges as the population of the watershed grows and climate change alters the ecosystem. The speakers in this plenary have all dedicated their careers to finding and implementing opportunities to conserve and restore the Bay. They have a unique set of perspectives to share.

Mr. Richard Batuik

There are three challenges that shape the science, technology and policy interface in the effort to restore the Bay’s water quality. Our focus is chiefly on reducing nitrogen enrichment. To do this we must first allocate responsibility for the nutrient loads among the watershed’s many residents. Second we must capture all the sources of nitrogen — a particularly difficult task since these are diffuse non-point sources in many cases. All sources must take their equitable share as all parties involved expect to be treated fairly. Third, there must be a defensible regulatory framework with well-defined mechanisms for legal and financial accountability. The total maximum daily load (TMDL) or pollution “diet” now being implemented in the Bay watershed brings together these three elements. It provides a strong context within which watershed residents, managers, regulators and politicians can develop best practices and assume their equitable share of responsibility for the Bay.

Ms. Frances Flanigan

Building an effective and engaged constituency is critical if we are to both prevent further degradation and restore the Bay. Achieving this will require a 4-part strategy. Central to this effort is the notion that we want to prevent degradation of coastal waters before we incur the cost of much more expensive restoration efforts. To do this we must first develop very clear messages. These must speak to non-scientists in simple and compelling language and employ informative graphics to draw in the audience so they care about the situation. The recent implementation of TMDLs has shifted us from a voluntary to a regulatory approach. Clearly this has

shown people we are serious about restoring the Bay. This message must be communicated to many different kinds of audiences — farmers, business people, students and people using the bay for recreation and speak to scientific and political concerns in a comprehensible manner.

Second, messages must be coupled with good outreach efforts. Key groups of stakeholders must be identified. Success will depend upon building relationships with these key players so that there is a strong basis of trust in the information and the messages they are given. Outreach staff is essential in this effort. In addition a diversity of communication efforts need to be utilized, including using the media, social networking, education in classrooms and public meetings. Network building should be ongoing and into the future.

Third, success will depend on active community engagement. People have to be involved in substantive ways and commit to specific projects that build an effective constituency. Examples include: support programs, volunteer efforts, tree plantings, urban and rural clean ups, and citizen monitoring work. Each allows people to get up close and personal with the issues. People protect what they love and care about so getting them into the environment and showing them what they can do will help them care. Engagement efforts should acknowledge and accommodate the different education levels, backgrounds and lifestyles of stakeholders.

Finally, our ultimate goal is to create behavior change. This starts with understanding the outcome you want and then determining what the new behavior should be. Personal responsibility is key and their needs to be support of governmental methods to protect the environment. People have to be willing to pay something or pay more than they do already. In effect, we need to reinforce the notion that every little bit matters. Businesses and corporations must be responsible and must be willing to pay, act and change. “Living green”, needs to be a permanent mindset, not just a passing trend. But we need to determine and convey what “green” actually means in terms of water quality Behavior change has to be permanent, and there must be demonstrated benefits that will occur.

Dr. Court Stevenson

In 1972, Hurricane Agnes hit the Chesapeake Bay, and we realized the bay was changing drastically. After Agnes, submersed aquatic vegetation didn't come back at the same levels as before. Some other things have gotten worse 40 years later as well. After the Chesapeake Bay Program started, there were three goals; focusing on Submerged Aquatic Vegetation (SAV), nutrients and toxicants.

To solve problems there need to be clear goals established. In our case, clearer goals over shorter time periods would be helpful so people can see what their efforts are actually doing. We also need better measures of success. Both agriculture and sustainability are huge problems for the Bay. Understanding all the interactions is complex. For instance, regulating farmers hurts food production, and when farmers move out and sell to suburban development this causes more pollution and runoff. There can be cascading effects (many driven by global scale drivers) that impact us. Currently, pollution problems seem to be beyond our ability. Our capacity is limited to collect enough data to make decisions in short order.

Growing populations are also a large problem. Increasing development and more people put more pressure on the resources. Everyone wants to have their share of a “romanticized” bay, but they don’t protect it. Every time we do restoration we learn new things, but it seems we are focusing on a moving target. We don’t have much time to get organized before we act.

Mr. Richard Hall

Two actions that could be taken to help solve the Bay’s problems are to focus on smart growth and water resource management. While we recognize that addressing smart growth and local land use issues is important there is currently a considerable degree of disconnect and disagreement over this issue. Land use planning and sustainable development would really help the bay pollution problems, but these are difficult to address, at the local, state and federal levels. In addition, it is critical to address population growth. The population of Maryland is currently 5.8 million people, and might grow by another 1.0 million in 20 years. This impacts restoration efforts and pollution prevention measures as well.

Historically, more traditional methods of controlling pollution, such as point sources have been examined. There has been clear success for Maryland with wastewater treatment issues that counteract growth. Stormwater management, development, and septic systems now need to be examined and managed more closely. The continuing reliance on septic system usage is one area where a lot of changes could be made. Overall, we need to look at the whole picture, including prevention, growing smart, re-growing cities, and advancing sewer technology in new and old areas.

Discussion questions for the panel:

We know that the Bay has fundamentally changed, in a natural and social context. Have we reached a tipping point where we can’t go back?

Rich Batuik: The recent severe drought in the Chesapeake Bay region gave us excellent dissolved oxygen levels and improving sea grass distributions. This occurred because the drought slowed nutrient runoff. Unfortunately, people also had to drill deeper wells to access water and farmers struggled to keep their crops alive. For long-term success we still have to reduce nutrients or go on a “nutrient diet”.

Court Stevenson: Some people believe the tipping point for the Bay was when we lost the aquatic vegetation, in the 1970’s. The question is do we have the willingness to pay to return the Bay to the state it was before it degraded? The Bay may be able to recover, but it would be very expensive. On the Eastern Shore most people don’t want to spend more money, because they have spent so much already. It’s a sociological problem as well as economic and ecological.

Given the intense economic pressures we all are experiencing how can we sustain an expensive restoration effort?

Court Stevenson: Bay restoration and protection has to be about more than fish, so people understand what benefits they will get for their investment. — this

has to be brought closer to home for the community. Shorter-term goals are essential. People need 1-2-year goals to be able to see changes that occur. Even though it is hard to keep people focused we must sustain a level of public interest and commitment.

Richard Hall: One important issue to examine is the balance between agriculture, developed and natural lands. While the environmental community talks about management, it is not in the minds of the public. We need people to think about growing smart, it is something they can understand if they have information about how this works and why they would benefit. We can do much more prevention when we plan for future growth.

Rich Batuik: We are currently focusing on allocating responsibility for pollution in the Chesapeake Bay by moving from a voluntary to a regulatory approach. The public is not happy about new regulation measures. The health of Chesapeake Bay has varied over the past 40 years but generally it has stayed the same despite our restoration efforts. People need to understand that they have a responsibility to the bay even if they are not a point source polluter.

Fran Flanigan: People feel a sense of responsibility for their house, town, and possibly their city. People who live in and around Baltimore care about the condition of the harbor, because it is something they can see. Currently there is an initiative called Healthy Harbor, which is a road map to make Baltimore harbor fishable and swimmable by 2020. If you can generate that much engagement on each small piece of the system, the entire system will benefit.

Rich Hall: We have an out of sight out of mind issue as far as septic systems are concerned. If we want population growth, it would be much easier to plan around what kind of wastewater systems that will be needed. Whoever is upstream is responsible for downstream pollution that is caused. Encouraging human responsibility is the hardest part of the whole situation. No one wants to have to take the responsibility. An important question is, how can we give incentives for people to support the environment?

Fran Flanigan: For Baltimore Harbor, people were asked how much they would be willing to pay to clean the harbor. At first they said they were not willing to pay anything, but after informing people how they would benefit, people said they would be willing to pay up to \$100 per year. If there is a public health problem concerning water quality, people will usually back restoration efforts 100%. This resonates best on the local level.

How do we balance growth, development and conservation?

Rich Batuik: We have had some successes, in the Severn River, and the Patuxent River, although the Patapsco River has been doing poorly. We need more of an overall program like the TMDL instead of a tributary to tributary approach. There is a tremendous amount of resistance, but everyone has a responsibility for their actions, and people are starting to understand. In TMDL meetings, if everyone else has to take responsibility then the community and constituents agree that they will comply as long as things are equitable.

Richard Hall: The main problem is; how can we take action if funds are so low? Does the public feel that they have to do everything on their own without any

extra resources? Another question is, are we doing enough or can we possibly do enough to restore the bay? How will we reduce pollution and nutrient runoff, when we have a new person and/or a new property increasing everyday? How do we restore and protect in response to continued population growth? We are beginning to answer these questions, but there must be equity and community involvement and a constituency if we wish to restore the Chesapeake Bay.