Testimony of
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Chairman Davis, Congressman Schrock, members of the Committee, thank you for this opportunity to testify before you today. My name is Ann Pesiri Swanson. I have worked on Chesapeake Bay restoration for more than two decades and have served for the last 16 years as Executive Director of the Chesapeake Bay Commission. It is in this capacity that I share the Commission's perspective on the status of the Chesapeake Bay restoration and offer some ideas as to how best the U.S. Congress can contribute to the campaign's ultimate success.

Let me say right upfront that without enhanced state and federal support, in both dollars and policy, we do not believe that the Bay's health can be restored. Federal interest and funding has served a catalytic role for action in the region. Thus, garnering increased financial support (at both the state and federal levels) has been and remains a principal focus of the Commission's work.

In order for you to place my comments in a context, allow me to provide for the record a description of the Chesapeake Bay Commission, its composition and its work:

Like my colleagues on the panel, the Commission is a partner in the Chesapeake Bay Program – one of six signatories to the agreements that make up its leadership. What makes the Commission unique is the simple fact that it is not an Executive Branch agency and not of a single state, but instead provides a regional voice for the legislature within the Program.

The Chesapeake Bay Commission is a tri-state legislative commission, established in 1980 prior to the creation of the Chesapeake Bay Program, to advise the members of the general assemblies of Maryland, Virginia and Pennsylvania on matters of Baywide concern. The catalyst for our creation was the Environmental Protection Agency's (EPA) landmark seven-year study (1976-1983) on the decline of the Chesapeake Bay. Congressional concern prompted our beginnings and has since contributed handsomely to our success.

Twenty-one members from three states define the Commission's identity and its workload.

Fifteen are legislators, five from each member state. Completing their ranks are the governors of each state, represented by cabinet members who are directly responsible for managing their states' natural resources, as well as three citizen representatives who bring with them a unique perspective and expertise. Hardly a piece of Bay-related policy or legislation -- delving into matters of air, land, water, living resources and the integrated management of all of them -- has come to pass in the past two decades without the Commission's involvement.

Your subcommittee has asked me to provide a "summary on the current state of the Bay, particularly regional cooperation and the role of CBC in bringing together its constituent legislatures to address Bay issues." I have attached to my testimony a list of legislative accomplishments spanning the last 20 years of our work. I ask you to accept this compendium of legislation as testimony to our efforts. Yet, on the same note, I must also emphasize that this body of law only partially addresses the Bay's problems. To complete the list we fully realize that we will have to conquer even tougher legislative and financial challenges, ranging from agriculture to stormwater, point sources to forests, air to sprawl.

The efforts to date have been substantial. Yet, despite two decades of exemplary effort, restoration continues to stall. Reductions in the nutrient load, both above and below the fall line, have yet to translate into measurable increases in the concentration of dissolved oxygen in the mainstem of Chesapeake Bay. Whether from Congressmen like you, state legislators like my bosses or the press corps, the question remains the same: *Why so little improvement?*

Many of the preceding speakers have addressed this point quite thoroughly. Groundwater lag time, weather variability, lack of funding and enforcement power and the sheer size of the watershed all factor in to the equation. Still, there are a few points that I would like to add that do not seem redundant.

My first point deals with the Bay's vulnerability.

Chesapeake Bay is a truly unique ecosystem with two defining characteristics. First, it is a remarkably shallow body of water, averaging 21 feet in depth; it is this shallowness and the ability of the light to penetrate to the bottom that gives the Bay its immense productivity. The second is the massive size of the watershed draining into this shallow tidal system -- 64,000 square miles flowing through 110,000 miles of streams and rivers, some of which are themselves enormous tidal estuaries. Together these characteristics give the Bay a ratio of land area to water volume that is an order of magnitude greater than the next closest body of water on earth.

Quite simply, the Bay's land to water ratio is its Achilles heal. What happens on the land will always define the quality of the water. While 60 percent of the watershed remains forested, the remaining land is characterized by both extensive and intensive farming and a highly urbanized population of 16 million people living and working in the basin. These characteristics make pollution control strategies extremely difficult and complex, and provide some insight into the difficulties inherent in forecasting their effectiveness.

This provides segue to my second point: the relationship between and importance of *both* modeling and monitoring.

Monitoring has always been the Commission's final determinant of success. In countless publications, we have reported conditions of the Bay based on monitoring results and the potential for success based on modeling. The model often tells us that good news is ahead if the nutrient control strategies input are properly implemented, fully funded and appropriately enforced. Tempering the news, monitoring results usually caution us that the Bay is not yet responding.

Clearly, there is a distinct use for each of these tools. Monitoring provides us with the most surefire measure of condition. Modeling, by contrast, allows us to test future conditions based upon a hypothetical scenario. In fact, this predictive capability has proved quite valuable to us, particularly in recent years. The Commission is constantly working to identify and analyze emerging policy issues at the state and federal level. Currently, the Commission is using the model, combined with cost information generated by the Commission, the states and the EPA, to identify those nutrient control strategies that will result in the most cost-effective reductions. This information can be very helpful as our members identify state or federal programs that deserve additional money or attention.

Having said that, let me make it clear that the Commission is fully cognizant that there is a serious water quality problem in the Chesapeake. We know that during the summer of 2003, monitoring data revealed that a "dead zone" inhospitable to most species living in the Bay extended 100 miles south from the Patapsco River near Baltimore to the mouth of the York River, near Hampton Roads. Heavy rains and snowmelt had flushed more than two years of nutrients and sediments into the Bay, nutrients that had been accumulating on the land during the past two years of drought. By early July, scientists reported that the volume of oxygen-depleted—or hypoxic—waters had reached the highest levels seen in the last 20 years. Data from July 7 to 9, 2003, indicated that oxygen levels less than 5 mg/l were prevalent in 40 percent of the water in the main stem. In fact, since the 1950's the volume of Bay water devoid of adequate oxygen has been steadily rising.

In November 2003, the impact of the summer's oxygen-depleted waters was fully reviewed at the Commission's quarterly meeting in Solomons, Maryland. Scientists and watermen provided Commission members with first-hand accounts of murky, sewage-laden waters devoid of fish and crabs. They reported that the prevalence of dead crabs, and the belief that many crabs retreated to hibernation mode due to these stressful conditions, may have contributed to as much as a 40 percent reduction in fishing effort during the 2003 crabbing season.

But discouragement over the summer's poor water quality was tempered by scientists' counsel and my third point: that "nutrients have a short memory."

Unlike some toxic pollutants, whose impacts last for years or even decades, reductions of excess nutrients can trigger a rapid response from the ecosystem. Scientists reported that meaningful reductions in nutrients, particularly those that are delivered directly to the Bay from pipes and hard surfaces, would result in discernable improvement in water quality in just a year or two. My point here is that investments in nutrient reductions provide a short turnaround to results. They are investments that make ecological, economic and, importantly, political sense since changes *can* occur within your tenure.

My fourth observation is that our dependence on modeling versus monitoring is presently shifting. First, a bit of history:

In 1983, the Chesapeake Bay states, the District of Columbia, the Chesapeake Bay Commission and the EPA, on behalf of the federal government, signed the first Bay agreement, a short document setting out a set of broad objectives for the restoration of the waters and living resources of the Bay. This was followed by another agreement in 1987 which established more far-reaching objectives, including the goal to reduce nutrient loadings by 40 percent by 2000.

By the end of the 90's, it was felt that more specific efforts needed to be defined. The result was Chesapeake 2000, containing many new or revised goals for restoration and a multi-tiered, semi-regulatory approach to achieving the necessary water quality improvements. This blended approach of cooperative and regulatory action was primarily the result of a July 1998 law suit brought by the American Canoe Association and the American Littoral Society against the U. S. Environmental Protection Agency (EPA). The suit stated in part that EPA and the Commonwealth of Virginia had failed to (1) identify Virginia waters that did not meet water quality standards and (2) establish total maximum daily loads (TMDL) for the pollutants which caused the impaired water quality. The decree sets out a schedule by which Virginia must develop TMDLs. The Chesapeake Bay is included in Category 1. All of the Category 1 TMDLs must be completed by May 1, 2010. If Virginia fails to complete the work, then EPA must establish the TMDLs by May 1, 2011 at the latest.

In light of this decree, the Bay Program partners, in *Chesapeake 2000*, reaffirmed their intent to resolve the Bay's water quality problems through their voluntary, cooperative restoration program. The partners agreed to correct, by 2010, the nutrient and sediment problems of the Bay sufficiently to remove the Bay and its tidal tributaries from the federal list of impaired waters. The choice of 2010 as the completion date deliberately correlates to the deadline imposed under the consent decree. Through the development of the tributary strategies, the Bay states will achieve the nutrient and sediment reductions necessary to meet the Bay's water quality standards.

At the same time the states are developing tributary strategies, Maryland and Virginia have initiated rulemakings to adopt nutrient water quality standards for the Bay and its tidal rivers. EPA is providing the technical support for this effort and both states are proposing new water quality criteria and use designations that better reflect what we know is the science of the

estuary. Once these new standards are adopted, they will become the measure of success for our nutrient reductions. And what is most important to understand is that achieving water quality standards will be measured by monitoring data, not modeling predictions. Additionally, in order to avoid the imposition of a federal TMDL for the Bay, the states must empirically demonstrate that water quality standards have been met, based on instream, water quality data measuring dissolved oxygen, algae abundance and water clarity. In fact, the states will need to provide three years of monitoring data to remove the Bay from the impaired waters list. Monitoring, then, will provide the ultimate measure of progress in the Bay's restoration.

My final and fifth point is to clearly recognize the Bay Program for what it is: a world class leader.

I truly believe that the Chesapeake Bay Program offers us the best chance in the nation to address watershed degradation that is multi-state in nature and largely non-point source in origin. Our program is advanced, our skill level is high, our constituency's commitment runs deep and our data, in relative terms, is rich. If we cannot do it here, I don't think we can be successful anywhere. Yet if we can be successful, as I believe we must, then the Bay region can provide a model for the entire world to learn from.

Of course, whenever I make this point, I never know whether to be proud or sad. I am proud because our accomplishments are unmatched nationwide. Yet I am sad, as I am sure Ms. Pierno from the Bay Foundation will attest that we have not come far enough. In fact, the sad truth is that the best program of our country is simply not good enough. Must the states and local governments of the region do more? *Yes*. Must the citizens be more engaged? *Yes.* Can we do it without enhanced federal support? *I have to say no*.

Clean water will continue to be elusive with anything but the most stringent nutrient and sediment controls. Our success will be built on installing state-of-the-art nutrient controls for most municipal wastewater treatment plants, aggressive best management practices on most farms, many miles of stream buffers, more rigorous controls on sources of air emissions, cooperation by all states in the watershed, and significant amounts of money.

Just last May, the Commission traveled to Washington to meet with our Congressional colleagues that represent the Chesapeake Bay watershed to make the case that finding resources within existing federal programs is one of the best investments we can make to benefit the Bay. We also urged President Bush to designate the Bay as a "national treasure" and provide one billion dollars of federal funding in FY2005. We reiterate today these requests and we hope that you can help us reach these goals.

No one disputes the significance of the Chesapeake Bay as an economic engine, driving property values, supporting resource-based industries and attracting tourism and recreational dollars. Taking into account all of the benefits and values we recognize today, its worth is vast, reaching well beyond the trillion dollar mark.

It should be no surprise then, that its restoration will require big dollars. Large projects with important benefits require large investments. After all, fifteen billion dollars is the price attached to the restoration of South Florida's Everglades. Nearly $7 billion will cover the upgrades at Chicago's O'Hare International Airport. For the Chesapeake, successful restoration carries a sticker price of roughly $19 billion, $6 billion of which is projected to be forthcoming from existing sources. Clearly, three things will make or break this program: sound policy, a committed constituency and money, to be precise. The U.S. Congress can help with at least two of these.

To help, we ask that you:

1. Promote existing and new federal programs targeted to our region. Build support among your colleagues for authorizations and appropriations bills to support water quality, land conservation, living resource and environmental education goals of the Chesapeake Bay agreements.

2. Provide federal cost-share grants to localities in the six-state basin to pay for the installation of advanced nutrient removal technology for the region's largest wastewater treatment plants. The Blue Plains Sewage Treatment Plant, whose discharges into the jurisdictionally-shared waters of the Potomac River make it the largest sewage treatment plant in the world, must be central to this effort. (Legislative Vehicle: The Chesapeake Bay Watershed Nutrient Removal Assistance Act S827; HR568 and appropriations bills)

3. Improve the federal 2007 Farm Bill's provisions for farmland preservation and water quality improvement. Include programs to support nutrient management, cover crops, conservation tillage, diet and feed formulations and carbon sequestration. In the meantime, strongly support a special USDA-funded program to demonstrate a number of these innovative management practices on agricultural lands in the Bay watershed. (USDA proposal entitled "The Chesapeake Bay Working Lands Nutrient Reduction Pilot Program." Status: Yet to be acted on.

4. Include funding to mitigate the impacts of stormwater runoff from roads and highways which is estimated to contribute 22 percent of the urban nitrogen and 32 percent of the urban phosphorus. (Legislative Vehicle: Reauthorization of the Surface Transportation Equity Act, SAFETEA)

Certainly, this hearing is not the place or the time to discuss the details. But let me assure you that the Commission staff is well versed and would welcome the opportunity to work with you and your staff on any of these proposals. I have attached as Appendix B a summary of pending federal legislation, prepared by the Commission in May 2004 that would assist our

restoration efforts.

I cannot conclude without reiterating that we still have enormous amounts of work to do. Be clear on this. We know what needs to be done. The dispute has been over measuring success to date and clearly the rosier side of the story has been told. I urge you to continue to watch dog the program to ensure that you are always getting the biggest bang for the federal buck along with honest, comprehensive reporting. But I also urge you to continue your support and make every effort to enhance it. The Bay cannot be restored without you.

I encourage you to recognize the Bay for what it is – a National Treasure – and to make sure that this hearing marks the beginning of your *enhanced* commitment to making strong federal policy and ferreting out the federal dollars to ensure the Program's success. The next Virginia Field hearing could then focus on monitoring with grand results.

Thank you for the opportunity to testify. I am happy to answer any questions you may have.

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