

Presentation to Senate Committee on Environment and Public Works

Annapolis Field Hearing

Congressman Gerald E. Connolly, VA-11

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Thank you, Chairman Cardin, for convening this field hearing. As you know, despite investing billions of dollars in sewage treatment plant upgrades the health of the Chesapeake Bay has failed to improve. Although we have witnessed some recovery of subaquatic vegetation, oysters and fisheries have continued to decline. Despite laudable achievements in sewage treatment plant upgrades and combined sewage overflow capacity enhancements, and unprecedented investments in conservation through the 2008 Farm Bill, it is clear that we must reduce impervious surface areas in the Chesapeake Bay watershed in order to reach overall Bay restoration objectives.

Between 1990 and 2000, population in the Bay watershed grew 8%, while impervious surface area grew 41% and covered an additional 250,000 acres in our region. According to the Woods Hole Research Center, 'developed area' in the Bay watershed increased 61% from 1990 to 2000. Those impervious surfaces increased the volumes of nitrogen and phosphorus entering the Bay, while wreaking havoc on stream channels and causing increased erosion and sedimentation. As documented by the Chesapeake Bay Program and the Woods Hole Research Center, the increase in impervious surface area is a major contributor to sediment and nutrient loading in the Bay. The Chesapeake Bay Foundation summarizes these findings in its citizens' guide to stormwater management: "While runoff from farms is decreasing with improved agricultural practices, urban runoff is increasing as more forest and agricultural land is developed." I would encourage the Committee to address impervious surface areas and stormwater management in forthcoming authorization legislation, because without aggressive legislative action growing expanses of pavement in suburban regions of the Bay will continue to offset our achievements in reducing pollutants from point sources and agriculture.

I represent parts of Fairfax and Prince William Counties, the two most populous jurisdictions in Virginia. These counties have grown dramatically over the past 50 years, and are predominantly suburban in character. Prior to the 1970's, there were no requirements for stormwater detention or treatment. Our older neighborhoods, particularly in Fairfax and southern Prince William, have storm drains that lead directly to streams. This method of stormwater management—get it off site as quickly as possible—has destroyed stream channels in older neighborhoods throughout Fairfax County. Streams such as Holmes Run, Pimmit Run, and Accotink Creek are severely channelized, and erosion of their streambanks has resulted in increased volumes of sediment being transported both to local ponds and the Chesapeake Bay.

In the 1970's and 1980's, the state and Fairfax County began to require stormwater detention for new development. Typically developers built stormwater detention ponds that are sometimes

known as “BMPs.” While these grassy ponds detain some stormwater, they do little to remove nitrogen or phosphorus from runoff, and do not sufficiently account for the increasing impervious surface areas that they are supposed to mitigate.

Prior to my election to Congress, I served as a district Supervisor and as Chairman of the Fairfax County Board of Supervisors. I was elected to Supervisor in 1995 and Chairman in 2003. In my race for Chairman, I pledged to enact an aggressive environmental agenda that would address, among other subject areas, stormwater management and stream health. Prior to my election, there was no source of dedicated funding for stormwater management or watershed restoration. During my first term as Chairman, I initiated a successful effort to dedicate a penny’s value on the real estate tax rate to stormwater management. This revenue stream generated \$17 to \$23 million annually, and for the first time enabled the County to take some corrective actions to infiltrate stormwater and repair damaged streams.

We used that penny to fund a baseline stream health assessment for the County’s watersheds. Not surprisingly, we found that stream health in older neighborhoods was very poor. Streams located in watersheds with impervious surface areas in excess of 10% suffer from poor health of benthic macroinvertebrates and poor diversity of fish species. These local findings echo Chesapeake Bay Program findings that imperviousness in excess of 10-15% causes significant problems in terms of nutrient loading, sedimentation, and altered hydrologic performance of streams. Benthic macroinvertebrates like stoneflies, caddisflies, and crayfish are excellent indicators of stream health. Some benthic macroinvertebrates are highly sensitive to factors such as chemical pollution, sedimentation, and water temperatures, whereas others are more tolerant of these disturbances. Similarly, some species of fish, such as trout, are highly sensitive to stream temperature, pollution, and sedimentation. The last known native trout perished in Fairfax County streams sometime in the early 1990’s, due to sediment loads and increased stream temperatures resulting from increasing impervious cover.

Fairfax streams with high levels of imperviousness, ranging from 15-40% of the watershed, have very poor fish diversity and few of the benthic macroinvertebrates that generally form the foundation of the stream’s food pyramid. In contrast, streams such as Kane Creek on Mason Neck, which has almost no impervious cover, have maintained high levels of benthic macroinvertebrate and fish species diversity. We have seen that there is a spectrum of stream health, from undisturbed areas on Mason Neck to very low density rural watersheds in the Occoquan watershed to highly impervious areas inside the Beltway. An examination of the stream baseline data suggests that there is a strong negative correlation between impervious surface cover and stream health.

Following completion of the stream baseline assessment, we used the penny fund to pay for watershed management plans for all 30 watersheds in Fairfax County. These plans identified the projects that would be necessary to return the streams to good health, with projects ranging from rain gardens to regional stormwater management ponds. These watershed management plans have proven to be very useful because they demonstrate just how much damage has been done and precisely what level of investment would be necessary to restore our streams’ health. Using the resources from the

penny fund, we have funded numerous water quality restoration projects identified in the watershed management plans. For example, in Fiscal Year 2008 the County completed fourteen projects to infiltrate or detain stormwater, including construction of a green roof, rain gardens, infiltration trenches, and a major stormwater management pond. We also used that funding to plant vegetation in existing stormwater management ponds, which reduces the amount of nitrogen and phosphorus entering the Bay. In the same year, we completed 2,085 linear feet of streambank and riparian buffer restoration.

In addition to using a dedicated revenue stream to assess and restore watersheds, we enhanced the County's stormwater management regulations. In Fairfax, the Public Facilities Manual (PFM) establishes minimum criteria for new development. In order to reduce stormwater runoff, the County revised the PFM by creating stricter "adequate outfall" requirements. Adequate outfall refers to the volume of stormwater leaving a site during a storm. By lowering the maximum volumes of stormwater runoff that is acceptable, we required developers to either reduce impervious surface area or enhance on-site detention.

The Board of Supervisors also amended the Public Facilities Manual (PFM) to allow for the use of Low Impact Development techniques (LIDs) in new construction. Since we amended the PFM to allow LIDs, developers have incorporated rain gardens, tree box filters, green roofs, infiltration trenches, pervious pavement, and other LIDs in projects throughout the County. These LIDs dramatically reduce the volume of stormwater entering our streams and the Bay, and play an important role reducing the volume of nitrogen, phosphorus, and sediments that are preventing the Bay from recovering. Using revenue from the dedicated penny fund, County staff studied the efficacy of these LID techniques and found that green roofs and rain gardens can infiltrate in excess of a one inch of rain, which represents a significant storm.

When I left the Board of Supervisors in January of 2009 to come to Congress, we were working on adoption of a Comprehensive Plan amendment for Tysons Corner. With over 1,600 acres, Tysons Corner is larger than downtown Boston. If overlaid on Washington DC, it would stretch from Georgetown to the Anacostia River. Because most of Tysons Corner was developed prior to stormwater management regulations, 70% of it has no stormwater management. As a result, streams such as Old Courthouse Branch and Scotts Run are nearly devoid of life, and have suffered severe streambank erosion. Fortunately, we have a plan to restore these waterways. Following three and one half years of deliberation, a task force composed of citizens, landowners, developers, and affordable housing advocates recommended a set of Comprehensive Plan amendments that included restoring hydrology at Tysons Corner to pre-development forested conditions. This aggressive goal had the support of environmentalists and developer representatives on the Tysons Task Force. If adopted by the Board of Supervisors, it will set a new standard for stormwater management and watershed restoration. This is an important local example because it demonstrates that restoration of our streams, and ultimately the Bay, is compatible with continued economic growth in our region. Tysons Corner is the economic engine of Fairfax County and Northern Virginia. In the region, it trails only Washington DC as an employment center. The fact that the President of the Chamber of Commerce and the environmental community concurred on the stormwater elements of the proposed Comprehensive Plan amendment

demonstrates that restoration of the Bay is compatible with continued prosperity and economic growth, including in suburban and exurban regions.

The key is that continued growth has new standards for stormwater management. Our standards for new development and for transportation infrastructure are insufficient to protect the Bay. I would encourage the Committee to pursue rigorous new standards for stormwater management that will provide a regulatory framework within which local governments can reduce impervious surface areas. Our objective should be to maintain or return to pre-development forested hydrology, just as Fairfax County is doing in Tysons Corner. Because of resource constraints made more acute by the housing crisis, this regulatory framework should not come as an unfunded mandate. However, properly structured and funded it could serve as the critical enabling legislation to achieve, at long last, our shared objectives for Bay restoration.

I appreciate the opportunity to testify today and look forward to working with the Committee as it prepares Chesapeake Bay authorization legislation. I share your desire to restore the health of the Bay and offer my full assistance in advocating for these objectives in the House of Representatives.