

Response to Economic Impact Analysis

The Department of Conservation and Recreation (DCR) has reviewed the economic impact analysis (EIA) of the Virginia Soil and Water Conservation Board's proposed amendments to Parts I, II, and III of the Virginia Stormwater Management Program (VSMP) Permit Regulations (4VAC50-60) prepared by the Department of Planning and Budget (DPB) and generally concurs with the assessment while offering the following specific observations and or qualifications.

First, DCR agrees with the assertion of DPB that the "proposed revisions to the Virginia stormwater regulation will likely produce improvements in the condition of receiving waters" and that the "revisions will produce additional reductions in phosphorus and other effluent loads produced from urban land conversion (land use change to impervious cover and turf)". DCR notes that these "proposed regulations will work to minimize the cumulative impacts of stormwater on humans and the environment and moderate the associated hydrologic impacts. If not properly managed, stormwater can have significant economic impacts and the stream restoration costs to fix the problems after the fact are very costly." DCR also notes that "[t]he Commonwealth needs to employ all possible strategies in its tool box to address water quality improvements on a statewide basis in both agricultural and urban settings, including making marked improvements in its stormwater regulations. The proposed stormwater regulations are a necessary and critical part of the Commonwealth's overall nutrient reduction strategies and the criteria included in the proposed regulations will slow nutrient and sediment increases, and where possible, contribute to water quality improvements. Improved stormwater management through these regulations will have numerous benefits including reductions in flood risk, avoidance of infrastructure costs through the use of LID practices, improved aquatic life, and enhancement of recreational and commercial fisheries." DCR also notes that a wealth of additional information regarding the potential benefits of this regulatory action are presented in the detailed Agency Statement document (TH-02 form) accompanying this regulatory action.

Second, DCR wants to provide qualifications to DPB's statements regarding the proposed statewide 0.28 pounds per acre per year water quality phosphorus standard. The EIA recognizes that the 0.28 water quality standard that would be imposed by the proposed regulations was calculated based upon the nutrient reductions needed to meet Virginia's Chesapeake Bay goals. The EIA goes on to state that "[e]conomic efficiency of the proposed regulation could be improved by applying differential water quality criteria in watersheds across the state based on the relative water quality benefits that can be achieved". DCR notes that discussions occurred during the development of the proposed regulations surrounding the possibility of setting different water quality standards for the Bay and non-Bay areas of the Commonwealth, and DCR remains committed to further examining and discussing the appropriate use of this standard as the regulatory process moves forward. In drafting the proposed regulations, however, a statewide standard was believed to have merit for several reasons:

- Stormwater quality is a recognized problem statewide. Impaired waters are not only prevalent in the Chesapeake Bay, but have also been identified throughout the state. Total Maximum Daily Loads have been established on stream segments throughout the state, including non-Bay watersheds, to address these impairments. Additionally, studies have reportedly shown that nutrient loadings to Virginia's rivers draining to the Ohio and Mississippi basins may contribute to those basins' hypoxia episodes.
- While the 0.28 lbs/acre/year phosphorus standard was established not only to meet specified Bay goals, but also as the target level necessary to minimize nutrient impacts on Virginia's aquatic systems and to maintain the health of aquatic communities.
- Phosphorus is an "indicator pollutant", meaning that targeting its removal will also lead to reductions in nitrogen, sediment, and other potential pollutants that plague the Commonwealth's waters statewide.

- The 0.28 lbs/acre/yr phosphorous load addresses the reductions needed by new development to maintain pre-development phosphorous loads associated with non-urban land. The end result is “no-net increase” in phosphorous from new development, which helps assure that development will not further impact streams statewide.
- Additionally, stormwater additions to western streams may have even greater impacts due to the greater sensitivity of cold and cool water ecosystems (such as trout streams) to nutrient enrichment, sedimentation, turbidity, and dissolved oxygen reductions. These systems also contain some of Virginia’s most ecologically sensitive and rare aquatic communities.
- Establishment of a statewide standard also simplifies and standardizes compliance calculations across jurisdictions, ensuring that no locality has a competitive development advantage and facilitating implementation for both permit applicants and local program administrators.

Third, the EIA observes that “[t]he cost of incremental reductions in nutrient loads from the application of stormwater controls, however, is high relative to other nutrient removal options.” It is recognized that, to date, the Commonwealth has focused its efforts on sources that yield reductions at the lowest cost per pound. Efforts employed so far have been successful in helping to address nutrient removal goals for these sources, notably point sources (wastewater treatment and industrial facilities) and agriculture. Achieving the Commonwealth’s water quality goals, however, requires that a comprehensive approach of addressing all nutrient pollution sources be utilized. These goals will not be achieved by allowing further degradation in stormwater quality and local receiving waterbodies and attempting to fully mitigate this damage through reductions achieved elsewhere. Moreover, while gains continue to be made in addressing other pollutant sources, contributions from stormwater runoff continue to increase.

Among other sources noted in the Department’s Agency Background Document, a 2007 EPA Office of the Inspector General report entitled “Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay; Report No.2007-P-00031; September 10, 2007, noted that “new development is increasing nutrient and sediment loads at rates faster than loads are being reduced from developed lands”. The Chesapeake Bay Program Office estimated that impervious surfaces in the Bay watershed grew significantly – by 41 percent – in the 1990s. Meanwhile, the population increased by only 8 percent. Because progress in reducing loads is being offset by increasing loads from new development, greater reductions will be needed to meet the Bay goals as well as to address stream impairments across the Commonwealth. The Chesapeake Bay Program Office estimated that loads from developed and developing lands increased while loads from agriculture and wastewater facilities decreased. Currently, 32% of the phosphorus loads and 28% of the sediment loads to the Bay watershed are attributed to urban and suburban sources, making it one of the most significant contributors to the Bay’s poor health. In order for the Commonwealth’s waters to be adequately protected, this trend cannot continue, and all sources must be addressed.

Finally DCR reiterates that “[t]hese proposed regulations are thus a necessary part of the overall reduction strategies. We believe that a substantial amount of work done to date shows that proper site planning and designing for stormwater controls early in the development process will ease many difficulties involved with requiring appropriate stormwater controls. These improved stormwater regulations are necessary to protect the public interest. For example, stormwater itself is increasingly being recognized as a resource that should be retained on site and used for irrigation, groundwater recharge, and other beneficial uses. On the other hand, damages to aquatic resources, stream channels, and downstream properties from poorly managed stormwater are significant and are difficult to correct if development has taken place without the necessary design controls.