

# **Commonwealth of Virginia**

## **Response to EPA – Sector Growth Issues**

### **February 28, 2013**

#### **INTRODUCTION**

As has been stated in comments from Virginia agencies to date, we believe that the process proposed by EPA is premature and could be addressed as part of the timeframes and requirements that might come from the 2017 reevaluation. Given the upgrades to the model which EPA has committed to, we expect changes inland use, new methodologies to project changes in land use, new BMP efficiencies and new load targets by sector, therefore, any calculations made now are likely to be altered or obscured by these changes.

Virginia does not currently track loadings from agriculture, forestry, septic, regulated, and unregulated urban lands. We do track and report BMP implementation for each of these sectors in compliance with EPA reporting requirements. The Commonwealth does not have the resources to monitor actual loadings from these sectors nor is there a modeling tool currently in use to measure these loadings and include them in Phase 5.3.2 model. The Commonwealth and EPA agree that the state Watershed Implementation Plan based on the adaptive management and therefore EPA should allow the WIPs to be implemented as designed by the jurisdictions.

Virginia's Phase I Watershed Implementation Plan (page 41) established the following approach for ensuring that the 2017 "60%" goal is met:

- Assessing compliance with 2- year milestones based upon total loadings, not by compliance with individual source sector allocations.
- Wastewater treatment plants can operate below their assigned allocations:
- During early years, treatment efficiency is better while wastewater flows are below the design capacity.
- Meeting permitted nutrient concentrations is attainable using installed technology and treatment facilities are typically operated at levels below the limits to ensure compliance.
- Excess "credits" from the wastewater sector can be used to offset loads in other sectors that exceed their allocations; this will aid in meeting the Commonwealth's overall target load until 2017.

In short, even if measurable growth occurs in all source sectors except wastewater (which is unlikely) between now and 2017, we believe that the total delivered loads will achieve the required level of reduction called for in our WIP and expected by EPA.

Therefore, in response to the request by EPA, this paper outlines the current approach for evaluating loads and summarizes existing statutory or regulatory requirements for offsets. Virginia desires to continue discussion with EPA regarding any technical evaluations of load

changes that EPA might propose in the future. Any future actions by Virginia will be dependent on the results of those discussions and the decisions of current and future administrations, the General Assembly, regulatory boards or others. Therefore, we make no commitment at this time to embark on a comprehensive “offset” program. Beyond our current requirements, any future requirements for offsets in any sector will require concurrence of the Governor and passage of legislation by the General Assembly, an inherently uncertain process.

We would also remind EPA that we are currently engaged in a comprehensive rulemaking regarding the certification of nutrient credits. Any future program that might use nutrient credits as a source for offsets would be dependent on the outcome of this rulemaking that will likely not conclude until late 2014 or early 2015. One result of this rulemaking will be the implementation of the requirement to retire 5% of certified nonpoint source credits which will serve to improve water quality and to at least partially offset growth in loads.

## **Current Methods for Tracking WLAs and LAs**

### **Wastewater**

Changes to WLAs are tracked on the registration lists for the watershed general permit. The current registration list includes WLAs affected by seven separate trades or WWTP consolidations. Permanent changes to WLAs for significant facilities will be incorporated in the Virginia State Water Control Board's Water Quality Management Planning Regulation (9 VAC 25-720).

### **Agriculture**

Virginia currently tracks BMP implementation. Recognized problems with the model and currently available data source make meaningful calculations of changes in loads not technically possible.

Virginia continues to implement the elements of its WIP to address the agricultural sector. As called for in the Phase I WIP and programmatic milestones, DEQ and VDACS have signed an MOU relating the evaluation of AFOs and assistance in improving their management. DCR is finalizing standards for agricultural Resource Management Plans and millions of dollars are proposed are being appropriated to support the agricultural best management practice cost-share programs. In December, 2012 the Governor announced a special program to provide 100% cost share for livestock exclusion and associated practices. We anticipate net reductions in this sector.

### **Urban Stormwater**

As was reported in the Phase II WIP, a web-based Stormwater Management ePermitting System is being developed as a management tool for the new stormwater management Regulation to track project information including: location (GIS), size of site, disturbed area, BMPs and area of treatment, date of plan reviews and approvals, inspection and enforcement documentation, permit issuance date, project termination, and fees paid.

DCR is developing the Virginia ePermitting System website to digitally track and report all urban and suburban BMPs. This effort is currently being funded with EPA Chesapeake Bay Regulatory and Accountability Program funds, which DCR will continue to need until the Virginia ePermitting System is fully developed. Data collected through this website will be provided in a digital format that can be uploaded to NEIEN. The MS4 localities must report installed BMPs as a condition of their permit and this direct input from localities will greatly improve the tracking of installed BMPs.

We await improvements in land uses in the next version of the model before we might reasonably expect to be able to calculate true changes in loads.

### **Onsite/Septic:**

VDH tracks the number and type of onsite wastewater systems installed. All new construction permits for onsite wastewater treatment systems have been entered into a statewide database (VENIS) since 2004. Historical data is being migrated into this database as well. This will provide a more refined number of the total number of onsite systems in Virginia when it is completed. Additionally, larger commercial and community systems will be accounted for and delineated in the database. The current Bay model does not differentiate between residential and commercial/community systems, and therefore it likely overestimates the loads from commercial/community systems. Virginia would like to see EPA recognize the larger onsite systems.

Virginia has representatives participating in the Chesapeake Bay Program (CBP) Onsite Wastewater Treatment Systems Nitrogen Reduction Technology Expert Review Panel who are working to develop additional Best Management Practice (BMP) strategies for the onsite sector that will allow credit for nutrient reduction from various system configurations. When those BMPs are finalized and applied, the Virginia database will be modified to track those new BMPs as well.

## **Current Offset Requirements**

### **Wastewater and Combined Sewer Systems**

The combination of adequate wasteload allocations, more advanced nutrient removal technologies, water reclamation and reuse, and point-to-nonpoint source trading is expected to provide adequate capacity to accommodate growth in the wastewater sector through Phase II of the TMDL. § [62.1-44.19:15](#) of the Code of Virginia requires that new sewage treatment plants discharging more than 1000 gallons per day after January 1, 2011 must “demonstrate to the Department that he has acquired waste load allocations sufficient to offset his delivered total nitrogen and delivered total phosphorus loads.”

CSS loads are not expected to grow simply because construction of new combined sewers is prohibited. It is also possible that allocations will be adjusted in 2017 to account for improved stormwater management practices in the watershed that feed the CSS systems. Improved infiltration and control of stormwater will reduce the flow to these systems and potentially

reduce the frequency of overflows and the resultant nutrient loads discharged into Virginia waters.

### **Urban Stormwater:**

Waste loads for future growth for new or expanding facilities with industrial stormwater discharges cannot exceed the nutrient and sediment loadings that were discharged prior to the land being developed for the industrial activity. This approach will result in no net increase of 88 stormwater nutrient and sediment waste load as a result of the new or expanding industrial activity.

It is projected that the vast majority of future growth in Virginia will result from the development of agricultural and forest lands into residential and commercial urban uses. To account for this growth in urban land, Virginia developed a load balancing approach that uses the allocation loads for forest, cropland, pasture and hay land uses in the Chesapeake Bay Program's Phase 5.3 Watershed Model to calculate the average pollutant loads from a generic pre-development acre based on the mix of projected land to be developed for Virginia's Chesapeake Bay watershed. Each new development project will be required to meet these pre-development loads upon completion of the project through a combination of site planning, BMP implementation and, if necessary, off-site reductions. Because the calculation of the generic pre-development acre is based on the allocation loads, the post-development load will produce a no net increase from the average forest, cropland, pasture and hay loads after treatment with the suite of agricultural and forest BMPs as previously identified in this WIP.

We believe that the procedure proposed by EPA for urban stormwater is unnecessary. Virginia has developed and is in the process of implementing post development water quality design criteria developed based on language contained in Virginia's Phase I WIP that established to ensure a no net increase based on 2025 loading levels. Our conservative calculations show that implementation of the new regulations on development and redevelopment would result in a reduction from a "no increase" standard based on the WIP. As a result, we expect a reduction in load from previous land uses. As a result, no offsets would be necessary. We also presume that MS4s, given their WLA requirements are not included in EPA's proposed procedure.

### **Agriculture**

No current requirements.

### **Onsite**

Virginia has electronic data on the actual number of construction permits for onsite wastewater treatment systems issued for the last eight years. In addition, historical paper records are being transferred into electronic files. The period of record for construction permits currently covers both an economic boom and bust period, so an average of construction permits issued over this time frame would give a more realistic estimate of the number of new systems anticipated through 2025 than a projection of growth based on the U.S. Census. The method of using

construction data to predict future growth in the onsite sector predicts a much slower growth rate than EPA's prediction.

Furthermore, new growth impacts will be mitigated by new regulations in Virginia, effective December 2013, which will require all new alternative onsite sewage systems (AOSS) in the Bay watershed to have nitrogen reduction incorporated into their design. This includes commercial and community systems as well.

It is likely, however, that onsite loads will continue to grow unless retrofitting of existing conventional systems is considered, but VDH lacks the authority to require such retrofitting. Due to the enormous expense per pound for this option, it is unlikely that any locality is going to consider that option unless there is state or federal funding associated with it. The only realistic option is to reduce new loads from onsite as much as practical, and then utilize a more cost effective reduction method from other sources to offset the onsite loads. Authority does not currently exist in Virginia to implement this approach.