

Provide your thoughts on nutrient reduction strategies

As you know, EPA requires that Virginia submit a draft statewide version of a Watershed Implementation Plan (WIP), as part of the Chesapeake Bay TMDL process, by Sept. 1, 2010. There are eight elements EPA needs to see in each of the WIPs to be developed by the states.

This preliminary plan will address the capacity for state programs and local stakeholders that work across each major pollution sector (wastewater, agriculture, urban lands, etc.) to reach what are still draft nutrient reduction targets. While later this year the state will work closely with localities in developing more than 35 different watershed segment plans with locally-specific strategies to reach final targets, this preliminary plan will look at strategies more broadly from a statewide perspective.

Specifically the preliminary plan will look at progress in pollution reduction (often referred to as “current progress”) and the existing programs and practices responsible for that progress. If it is apparent that the continuation of these programs and practices (future progress) will not meet the target then the plan will have to identify strategies to close the pollution reduction gaps. The plan is then to propose broad strategies to “close the gap” between future progress and the draft nitrogen and phosphorus targets.

This is where it gets tricky. We still do not have final targets to shoot for nor do we have specific numbers breaking down each pollution sector’s share of those targets. But the preliminary plan is due soon. While we are in the process of receiving model runs from EPA, we need to move forward. Also, EPA has informed the state that the lack of final numbers should not be an impediment to move forward with developing a WIP.

State staff is currently working to draft the preliminary WIP which includes developing broad strategies to close the gaps.

This is an opportunity to provide your thoughts to staff as they are putting ink to paper or fingers to keyboard. At DCR we are primarily interested in thoughts on the nonpoint sectors – agriculture, urban/suburban stormwater, onsite wastewater and forestry. In looking at each, consider some of the following:

Are there new incentives or different variations of existing incentives to be explored? What funding sources should be looked at? Are there current laws, regulations or ordinances that present barriers to nutrient reducing practices? Are there consequences to removing or changing them? Are more regulations needed? If so, are there ways to achieve the nutrient reductions while minimizing fiscal impacts?

We have included specific questions below for each of the nonpoint source sectors to help focus. But don’t feel limited to those questions if you have other ideas that go beyond them.

To help shape the preliminary plan we would like comments by July 30. **This is not a formal comment period.** We will not be responding to your comments unless we have follow up questions.

This is not the opportunity for you or your group to “go on the record” for or against any proposals. This is an opportunity to provide your thoughts directly to staff that will be developing the initial proposed gap closing strategies.

If you would like to comment please go to the blog, “Providing preliminary strategy comments” listed on the main VABAYTMDL page. Your comments will be viewable by all other members of the discussion group. If you want to share your comment with only DCR staff, send them in an e-mail to vabaytmdl@dcr.virginia.gov. All comments will be shared with the primary authors for the strategy sections.

Agricultural strategies

Brief overview: Much of the nutrient and sediment reduction effort in the agricultural arena is voluntary, relying on federal and state incentive programs like the Virginia Agricultural Best Management Practices Cost Share program. Cost share is used to help stimulate and document use of these conservation BMPs. State programs are delivered locally by a system of soil and water conservation districts. Nutrient reduction regulations in agriculture focus primarily on nutrient management in poultry and confined animal feed operations.

Questions

1. Enhancing existing programs will be looked at as part of any nutrient reduction strategy moving forward. What areas need enhancement (staffing? incentive funding? enforcement?) What ideas do you have for finding the resources needed for these enhancements? In what have been primarily voluntary programs, how would we meet EPA’s requirement of “enforceable commitments?”

2. Some would argue that program enhancement alone will not meet proposed agricultural allocations, that additional regulations are needed. Others will argue that increasing regulations on farmers already stressed economically will drive them to sell their property to developers leading to an increase in nutrients.

If increased regulation is necessary, what type of regulations should be explored? More importantly are there ways to introduce them that does not include an undue burden on farmers and landowners? Is there a way regulations could be phased in? Current practices grandfathered? Generally, incentives are available only for non-regulatory practices. Could this be changed so that incentives are available, at least initially, for newly regulated practices? Other ideas?

3. Many in the agricultural community cite the considerable nutrient and sediment reducing actions that farmers take on their own initiative without financial incentives or regulatory mandates. Would an accounting or inventory of these voluntary BMPs provide a more comprehensive basis to assess where additional incentives or regulation are necessary? Should farmers be required to provide an account of BMPs implemented on lands they own or lease? In the absence of a reporting requirement, what will motivate farmers to document the BMPs implemented on lands under their control?

Urban/Suburban stormwater strategies

Brief Overview: Localities are responsible for the implementation and enforcement of the state's erosion and sediment control law and regulations with oversight by the state. Land disturbing projects, new construction, requires a federally mandated construction general permit to address stormwater discharges that is administered by the state. The proposed changes to the stormwater management regulations are currently suspended and must be revised to comply with the Bay TMDL. Localities covered by the Chesapeake Bay Preservation Act have adopted and manage their own stormwater management programs. Qualifying localities that own, operate and maintain a municipal separate storm sewer system (MS4) are covered by a federally mandated stormwater discharge permit.

Questions:

1. Are local resources (staff, fees, etc.) adequate to administer and enforce local erosion and sediment controls on land disturbing activities? If not, what avenues are available or should be made available to increase needed resources?
2. Are you aware of local ordinances or state regulations that inadvertently restrict or limit the use of new technologies and practices that would provide nutrient and sediment reductions?
3. Are local resources (staff, fees, etc.) adequate to administer and enforce local stormwater management controls on land disturbing activities? If not, what avenues are available or should be made available to increase needed resources?
4. E&S and stormwater regulations deal with new land disturbing activities. What options are available or should be made available to address nutrient and sediment reductions from existing development? What resources are available or should be explored?
Onsite wastewater strategies

Onsite wastewater strategies

Brief overview: The Virginia Department of Health (VDH) oversees the state's Onsite Wastewater Program. It encompasses all onsite domestic wastewater systems regardless of size, from single family homes to community systems. Onsite systems in Virginia are generally classified as conventional or alternative systems. A conventional onsite sewage

system is defined as a treatment works consisting of one or more septic tanks with gravity, pumped, or siphoned conveyance to a gravity distributed subsurface drainfield. All other onsite systems (systems that do not result in a point source discharge) are termed 'alternative'. Systems that serve single family homes dominate the Virginia inventory as do conventional onsite sewage systems.

Currently, only large onsite systems (>1000 gpd) are required to address Nitrogen. Direct control of N from small onsite systems (<1000 gpd) is difficult, since there are no regulations that require N to be considered in these systems. By utilizing available dispersal technologies that allow for shallow placed systems and dosing, the opportunity for uptake/denitrification of N in the upper soil can be increased. The effluent is maintained in the upper soil horizon in the root zone for longer periods of time where there is more carbon available for denitrification and uptake by vegetation is more likely.

Two new BMPs for onsite will be proposed utilizing the above concept. The first BMP will allow for 50 percent removal of N with secondary treated effluent to a shallow placed, pressure dosed dispersal system. The second BMP will couple a denitrification system (rated at 50 percent N removal) and a shallow placed, pressure dosed dispersal system for a 7 percent N removal rating.

Control of N in large onsite systems has been a policy of VDH for at least 10 years, but older systems often met the concentration requirement through dilution area. Eliminating the ability to use dilution to demonstrate compliance would make this a more stringent standard, but it currently is still allowed.

Other options to reduce the N and P load from septic systems include:

- Setting critical areas for implementation of requiring N reducing BMPs for new and repair sites through Code/regulatory changes
- Increase technical standards for systems, especially small systems, in critical areas such as increasing vertical separation to limiting features; increasing horizontal distance to surface waters; require pressure dosing and shallow dispersal fields to increase N and P removal potential
- Increase reserve area requirements in critical Bay watershed areas
- Provide tax incentives for choosing a N reducing system in the Bay watershed including establishment of riparian buffers
- Encourage the use of Betterment Loans for repairs

Questions

1. What ideas do you have on overcoming political, economic and technical limitations to achieve nitrogen reduction in onsite systems?
2. What needs to be done to retrofit existing onsite systems for nitrogen reduction?

3. Are you aware of any new technological innovations or approaches that can reduce nitrogen from onsite systems?

Cross-cutting strategies:

1. Are you aware of any new technologies, programs or on-the-ground practices that seem to be gaining momentum and from which we can expect significant nutrient or sediment reductions? Any programs or practices which could be significantly accelerated with small amounts of increased resources or capacity?

2. Are you aware of programs or practices which provide several benefits besides reducing nutrients and sediments, and therefore represent good investments overall for communities, the state, or federal government?