



Proponents say VA trading plan will speed cleanup

By Karl Blankenship

Virginia wastewater treatment plants may soon be able to buy and sell nitrogen and phosphorus as readily as some people buy stocks and bonds.

Legislation approved by the Virginia General Assembly this year establishes the first watershed-based nutrient trading system in the Bay region that will allow dischargers to buy and sell credits from each other to meet their 2010 nutrient reduction goals.

Eventually, the legislation envisions a system in which industries, municipal wastewater treatment plants and other point source dischargers will offset their projected growth over the long haul by helping to clean up other nutrient sources by paying farmers and others to plant streamside forest buffers, fence livestock out of streams or take other actions.

"It is a huge, landmark step in the cleanup," said Jeff Corbin, a scientist with the Chesapeake Bay Foundation's Virginia Office. "We are starting to figure out what point sources will have to do, and how localities will be allowed to grow in the future."

The action is particularly significant for Virginia because—outside the District of Columbia—it is the only jurisdiction in the Bay watershed where the greatest single contribution of nitrogen, about 33 percent, is from point sources, not agriculture, which generates 29 percent of the state's total.

Chris Pomeroy, an attorney representing the Virginia Association of Municipal Wastewater Agencies, noted that Virginia was the only state to spell out in law—not just regulations—how it will implement permit programs to control all of its point sources.

"If you wanted to gauge the progress of the states by the certainty of their programs," he said, "I would suggest that Virginia has clearly stepped up and out in front of the others by laying it down in the law."

The legislation initially affects all 120 significant municipal wastewater treatment

plants and industries in Virginia's part of the Bay watershed—plants that discharge more than 500,000 gallons a day into nontidal waters, or more than 100,000 gallons a day into tidal waters. But it will expand to include plants that discharge as little as 40,000 gallons if they are new or are expanding.

The legislation emerged after lengthy negotiations between the CBF, wastewater treatment plant operators and state agency officials. The CBF had been filing suits demanding specific nitrogen limits in discharge permits, and the administration had launched two rule-making processes aimed at setting new nitrogen and phosphorus limits in permits.

At the same time, local governments and some lawmakers were worried about the high costs of achieving the nutrient reductions that would be in permits as well as having the sewer capacity to handle future growth.

The compromise, representatives of all parties say, could help to achieve nutrient reductions faster, and at less cost, than would otherwise happen. The resulting bill, sponsored by Del. Preston Bryant, R-Lynchburg, and Sen. John Watkins, R-Midlothian, provides the certainties of a permit program and the flexibility of a trading program.

In signing it and other environmental bills in March, Gov. Mark Warner said the legislation was part of the General Assembly's "best environmental session in a generation...A bipartisan coalition of legislators came together with the conservation community, local governments and the business community to do the right thing for Virginia's environment."

Not everyone was pleased with the bill. Some environmental groups boycotted the signing ceremony. Among their concerns was uncertainty over how much public input will be allowed in the trading program. Further, the bill does not flatly guarantee that nutrient reduction goals will be achieved by 2010. And, the groups object to the fact that some plants would be able to meet their discharge limits strictly through trading.

Trading proponents point to the success of air pollution trading programs, which achieved a 50 percent reduction in sulfur dioxide emissions at far less cost than predicted, and a recent nutrient trading program for Connecticut wastewater treatment plants, which has achieved nitrogen reductions faster than expected.

"Some people might be uncomfortable with the concept of trading because it builds

some flexibility into it," Corbin acknowledged, "but you still have to get to the same endpoint."

The legislation does not flatly guarantee that dischargers collectively will meet their nutrient reduction goal by the end of the decade as set by the Bay Program's Chesapeake 2000 agreement. Rather, it calls for meeting the goals "as soon as possible in keeping with the 2010 timeline."

"I can't point to anything specific in the law that says, 'OK this is going to make us move faster'," Corbin said. "But we have a program that all parties will be more comfortable with. Instead of fighting the process, we can move forward. Unfortunately, we are going to need a considerable amount of money, still, and that is where our focus is going to be."

One problem, Pomeroy said, is a lack of enough skilled contractors to upgrade all of the treatment plants between now and 2010. "There is only so much we can do without running out of qualified engineers and available contractors and artificially driving prices to the moon."

But, Pomeroy said, the legislation will allow larger plants, where upgrades are more economical, to install nutrient controls first and sell excess credits to smaller plants where upgrades—per pound of nutrient removed—tend to be most costly. "It helps put off some of the most expensive projects a little bit," Pomeroy said, "and it helps address the construction logjam a little bit by removing as much of the nutrients as possible from those facilities with the lowest costs."

Alan Pollock, who heads the Department of Environmental Quality's Office of Water Quality Programs, said the legislation, with its use of watershed general permits, should achieve reductions faster than relying strictly on placing nutrient limits in a plant's individual permit, which only comes up for renewal every five years. "It would be five years before some people would even get their permit," he said. "That means it would be 2010 before they even had to start."

Under the legislation, the DEQ early next year will issue general permits that cover all significant dischargers within Virginia's portion of the Bay watershed. That permit will be structured by river basin and will assign a total annual nitrogen and phosphorus load for all point sources within the watershed, and then allocate that load among each individual discharger within the watershed.

Within nine months of the permit, dischargers need to submit compliance plans to the DEQ, which will outline any construction projects needed to meet their goal, and set an implementation schedule for achieving their assigned reductions. Those plans can rely on trading to meet the discharge limits.

If a plant fails to comply with its permit through trading or other means, it will be required to pay into the Virginia Water Quality Improvement Fund to achieve the equivalent nutrient reductions in the same tributary.

That's a change from the past when money from permit violations went into other programs. "We would never see it again," Corbin said. "Now that money is actually going to get nutrient reductions."

The legislation gives the DEQ the flexibility to write a less stringent technology requirement for a particular plant if the owner can show it is not technically or economically feasible for that facility to achieve the required technology.

But the department can also require a plant to meet its goals by reducing its discharges—not trading—if the discharges are affecting local water quality, not just downstream areas.

The most strict part of the legislation comes in how it maintains the overall nutrient cap in a particular watershed.

To allow communities to grow yet maintain the watershed caps, the legislation requires that new or expanding facilities, as of July 1, install stringent new nutrient control technology. In addition, it requires the plants to offset their entire additional nutrient discharge so there is no increase from the watershed.

Those offsets may be obtained by purchasing credits from other dischargers, or by paying farmers, municipalities or other land owners to install technologies, such as planting streamside forest buffers, to control a similar amount of nutrient-laden runoff.

The details of how such a trading program would take place were left to be worked out in regulations. Because nutrient reductions from runoff, or nonpoint sources, are more difficult to monitor than those from point sources, trading programs usually call for the use of "trading ratios" in which point sources may, for instance, have to offset each pound of its excess nitrogen load with two pounds purchased from a nonpoint

source to provide a margin of error.

Also, the law requires that offsets purchased from a nonpoint source must take place in the same watershed and achieve nutrient reductions “beyond those already required by or funded under federal or state law” or required under the state’s tributary strategy plans. That prevents double-counting runoff control efforts to meet both point, and nonpoint, allocations for watersheds.

The law says that responsibility for ensuring the runoff control practice takes place and is maintained would become a condition of a discharge permit. A permit holder may, for instance, need to show evidence that a forest buffer has been planted and protected.

“The easiest part is getting down to the cap,” Corbin said. “The hard part is how do you stay there. We have never addressed that. I think the trading bill, and the trading regulations, are going to be the first time you have to address that.”

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Karl is the Editor of the Bay Journal.

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