

Virginia's recently enacted nutrient credit trading program demonstrates "the power of cooperation and consultation ... to achieve workable and effective solutions ... a model not only for the Chesapeake Bay partners but also for watersheds across the country."

U.S. EPA Assistant Administrator for Water Ben Grumbles
Richmond Times-Dispatch (6/4/05)

In recent years, the Chesapeake Bay (Bay) has been a watershed management and policy "laboratory." The various experiments conducted in the Bay have sought better answers to challenging water quality questions, especially regarding equitable and cost-effective policies for correcting nutrient-related water quality impairments. One of the most significant efforts to date is the Commonwealth of Virginia's (State's) passage of legislation that creates a watershed permitting and nutrient credit trading program. This innovative program has the potential not only to reduce compliance costs for publicly owned treatment works (POTWs) – a typical driver for a trading program – but also to minimize their exposure to Clean Water Act (CWA) non-compliance and liability while maximizing use of the Bay's limited assimilative capacity.

Background

Although non-regulatory efforts – including numerous POTW upgrades – successfully halted the Bay's decline over the past 20 years, the waterbody still experiences low dissolved oxygen (DO) levels attributable largely to excess nitrogen and phosphorus. In 1999, two total maximum daily load (TMDL) related events focused Bay restoration efforts on a more traditional CWA approach. First, the U.S. Environmental Protection Agency (EPA) added the Bay to Virginia's impaired waters list over

the objection of the Virginia Department of Environmental Quality (DEQ). Second, EPA settled a citizen suit by agreeing to a 12-year TMDL development schedule for Virginia's impaired waters.

These decisions were not without controversy. The State's POTWs, through the Virginia Association of Municipal Wastewater Agencies, announced their plans to challenge in court EPA's listing of the Bay due to serious regulatory program deficiencies. In particular, Virginia POTWs were concerned that the State's DO water quality standard (WQS) for the Bay was fundamentally unattainable due to natural conditions, such as the lack of re-aeration in the Bay's deep trenches.

These concerns led the six Bay states and the District of Columbia, EPA, and the tri-state Chesapeake Bay Commission to adopt a TMDL transition plan. Under the plan, new site-specific WQS would be developed, followed by development of TMDL-like "tributary strategies" based upon those WQS. Then, the tributary strategies would be implemented through nutrient limits in Virginia Pollutant Discharge Elimination System (VPDES) permits for Bay dischargers. To this end, EPA issued guidance endorsing annual average permit limits for nutrients, in lieu of limits with shorter averaging periods. This decision not only

addressed POTW cost and compliance concerns, but ultimately would facilitate point source trading in the Bay. Then, DEQ began to develop implementing regulations.

Proposed Regulations Disappoint

DEQ's 2004 proposed regulations, however, proved to be unworkable to Virginia POTWs. The proposed regulations would have required:

- enhanced nutrient removal (ENR) upgrades (3 mg/l total nitrogen and 0.3 mg/l total phosphorus annual average) by 2010 at 120 "significant" facilities (design flow greater than 0.1 or 0.5 MGD depending upon location) and upon startup at any new or expanding facility;
- biological nutrient removal (BNR) upgrades (8 mg/l TN and 1 mg/l TP annual average) for all "non-significant" facilities (design flows less than the significance threshold but greater than 40,000 GPD) during their first permit term after 2010;
- offset requirements for new or increased discharges; and
- a cumbersome nutrient trading procedure involving individual permit modifications.

The proposed regulations effectively would have required all point sources to concurrently bid and complete major capital projects, even though a much smaller number of ENR projects at only the largest facilities could meet the combined point source wasteload allocations (the point source cap) more cost-effectively.

Activist Law Suits

Meanwhile, the leading citizen activist group, the Chesapeake Bay Foundation (CBF), launched a litigation initiative including two circuit court appeals seeking ENR concentration limits in VPDES permits. In response, DEQ issued 2004 guidance requiring immediately effective interim mass load limits calculated in a manner that would have resulted in non-compliance for many POTWs.

A Legislative Solution

Virginia POTWs embarked on a legislative effort to eliminate the need for multiple appeals of regulations and of unattainable permit limits. A legislative approach could improve the broader policy situation and ultimately establish a practical, cost-effective approach with better prospects for achieving nutrient load reductions in a timely manner.

Several conditions made the climate right both for legislation and for trading. The Virginia General Assembly was grappling with massive funding needs to continue Virginia's successful state-local partnership for POTW nutrient control projects. EPA's estimate that trading could reduce point source upgrade costs by \$200 million made trading attractive to legislators interested in environmental progress and fiscal responsibility. Legislation also could provide an alternative to DEQ's troubling proposed regulations.

The trading bill was introduced in both houses of the Virginia General Assembly (HB 2862 and SB 1275) with a strong number of co-patrons. After initial hesitancy, the various stakeholders came to the negotiating table. The resulting legislation, which passed nearly unanimously, established the *Chesapeake Bay Watershed Nutrient Credit Exchange Program (Exchange Program)* (see <http://leg1.state.va.us/cgi-bin/legp504.exe?051+ful+CHAP0710+pdf>).

Key Features of the Legislation

The law memorializes the General Assembly's determination that a watershed permit and nutrient credit trading program will assist in meeting the point source cap cost-effectively and as soon as possible, while accommodating continued economic growth and development. The *Exchange Program* will provide a convenient mechanism for permittees to temporarily or permanently share the portion of their wasteload allocations unused in any given year. The result is a greatly expanded ability to

actually use the total authorized point source wasteload allocation. The law's features include:

- **Watershed General Permit.** DEQ will issue a general permit covering all dischargers in early 2006. No interim limits will be issued, and the general permit will supersede interim limits already in effect. The general permit provides a uniform "start date" for all facilities, which will help coordinate trading and sequence projects to achieve and maintain the point source cap.
- **Schedule Relief.** The legislation exchanged DEQ's broadly applicable proposed 2010 compliance deadline for a long-term general permit compliance schedule requiring the point source cap to be met "as soon as possible." The general permit will include a tentative compliance schedule that takes into account (1) opportunities to minimize costs to the public or facility owners by sequencing multiple projects; (2) the availability of required services and skilled labor; and (3) the availability of funding from the Water Quality Improvement Fund, the State Revolving Fund (SRF), and other mechanisms. Schedule adjustments will be made when permittees submit facility-specific compliance plans nine months after general permit issuance. These plans will propose how and when each facility will be able to meet its individual wasteload allocations (*e.g.*, via treatment and/or trading). Achievement of the point source cap is anticipated to take 10 years, but the schedule could be shortened if trading reduces the number of required upgrades.

Although EPA is generally supportive of the *Exchange Program*, the Agency has expressed concern about the potential for a schedule in the permit longer than the five-year permit term. EPA would prefer to use enforcement actions to implement the new

permit. Given that a feasible permit schedule was a high priority for the 2005 General Assembly, it remains to be seen whether EPA will press this issue with the State's elected officials. EPA's concerns ultimately may be mitigated as the *Exchange Program* demonstrates progress.

- **Trading Framework.** Permittees are authorized to create the Virginia Nutrient Credit Exchange Association (*Exchange*) to coordinate and facilitate their participation in the *Exchange Program*. The *Exchange* cannot assume any of its members' compliance obligations, but will play the central role in coordinating treatment plant upgrades and trading activity necessary to meet and maintain the point source cap. Trading occurs among members, rather than through the State.
- **Annual Compliance Trading.** While trades will be planned and agreed to years in advance, actual trades will be conducted on an annual basis considering actual performance during the calendar year. All trades must be completed by the middle of the following year. If there is a shortage of credits, a safety net exists in the opportunity to acquire additional credits from the state's Water Quality Improvement Fund. Thus, a facility's risk of non-compliance can be eliminated through its good faith participation in the *Exchange*.
- **Owner Bubbles.** Additional flexibility exists for multiple facilities under common ownership. At the owner's discretion, wasteload allocations for its multiple facilities can be aggregated and managed collectively. The result is a streamlined process enabling a single owner to trade loadings among its own facilities.
- **Offset Protection.** Trading also comes into play when offsetting loads from new

facilities or expansions of existing facilities that exceeded their wasteload allocations. The permittee must exercise good faith in attempting to secure offsets from point or nonpoint sources. In the event that offsets are not reasonably available from these sources, offsets may be secured from the state Water Quality Improvement Fund in the same manner as year-end compliance credits discussed above.

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- **Deferred Upgrades for Non-Significant Dischargers.** Finally, rather than upgrading all smaller facilities with BNR, these facilities will be required to upgrade only in the event of any future expansion.

Current Status & Next Steps

DEQ now is developing the general permit, which it plans to issue in March 2006. The *Exchange* is developing a trading optimization model and conducting a study to determine a feasible compliance schedule. Based on the results of these efforts, the *Exchange* members will devise and implement a plan to achieve and maintain the point source cap cost-effectively.

For additional information on Virginia's legislation or any of the issues discussed in this article, please contact Chris Pomeroy with NACWA affiliate law firm AquaLaw PLC. Mr. Pomeroy can be reached by telephone at 804/716-9021 or via e-mail at chris@aqualaw.com.

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Legal Perspectives is a publication of the National Association of Clean Water Agencies (NACWA). NACWA thanks Chris Pomeroy for his work on this issue.

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