

Report Prepared Pursuant to Executive Order 52 (2016)

**DEVELOPMENT OF LONG-TERM, OFFSETTING METHODS WITHIN
THE VIRGINIA NUTRIENT CREDIT EXCHANGE PROGRAM**

I. Introduction

In 2005, the General Assembly established the Chesapeake Bay Watershed General Permit and an associated nutrient credit trading program for the purpose of managing total discharges of nitrogen and phosphorus from municipal and industrial wastewater (known as point sources) dischargers into the Chesapeake Bay watershed in order to meet established water quality standards.

Governor McAuliffe signed Executive Order 52 on January 28, 2016 that established a study committee to make recommendations regarding methods to offset discharges of nutrients by new or expanding point source dischargers in the Chesapeake Bay watershed. The committee roster is attached as appendix I.

The study committee held four meetings over the course of 2016. Dates and the subject matter of each meeting are attached as Appendix II. The committee examined the current status of Virginia's nutrient credit trading program, the form and function of the Nutrient Credit Exchange Association (the Association), possible modifications to the procedures and bylaws of the Association and the role of nonpoint source (pollution that comes from runoff or other diffuse sources) credit generators in filling nutrient credit needs that will be necessary to accommodate new or expanding dischargers over the long term.

With the advent in 2010 of the Chesapeake Bay Total Maximum Daily Load (TMDL), each tributary basin in Virginia that feeds the Chesapeake Bay has been assigned caps on the total amount of nitrogen and phosphorus that can come from point and nonpoint sources. In 2005, the General Assembly passed legislation that established the Chesapeake Bay Watershed General Permit¹ (the General Permit), certain powers and functions of a voluntary nonprofit association of permittees known as the Nutrient Credit Exchange Association² and a framework for addressing the needs of new or expanding wastewater facilities. With the adoption of the General Permit by the State Water Control Board, facilities were apportioned "allocations" of nitrogen and phosphorus based on a calculation that used effluent treatment levels and the design capacity of the wastewater plant. Industrial dischargers were also granted allocations based on similar calculations when the General Permit was adopted for the first time. The allocations made at that time were reflected in large measure in the 2010 TMDL. Also among the state goals of the

¹ § 62.1-44.19:12. et. seq.

² <http://www.theexchangeassociation.org/>

2005 legislation is to provide “a foundation for establishing market-based incentives to help achieve the Chesapeake Bay Program’s nonpoint source goals”³

Since the adoption of the General Permit, point source trades between wastewater treatment plants and industrial facilities have taken place. The majority of trades have been completed under the framework of the Nutrient Credit Exchange Association that sets prices and facilitates trades among its members. While authorized by the Code, trades have not yet occurred between point and nonpoint sources.

While Virginia’s program has been successfully operating for a decade, Governor McAuliffe rightly established this committee to learn from past successes and chart a path for the future. The issues addressed in the Executive Order are not only related to the Commonwealth’s commitments to restore water quality and the overall ecologic health of the Chesapeake Bay but also the capacity to treat wastewater from a growing population and the ability to expand economic activity within the Chesapeake Bay watershed.

Existing Law relating to New or Expanded Facilities

The Code of Virginia⁴ outlines several methods for acquisition of credits by new or expanding wastewater dischargers from any one or a combination of the following: acquisition of allocations or credits from existing facilities, acquisition of certified nonpoint nutrient credits, acquisition of allocations purchased through the Nutrient Offset Fund⁵, acquisition of allocation approved by the Department of Environmental Quality on a case-by-case basis or acquisition of credits or allocation through the implementation of best management practices on land owned or controlled by, or under a contractual obligation with, the new or expanding facility. The Code directs the agency to give priority to acquisition from existing facilities, acquisition of certified credits and allocations approved by DEQ on a “case-by-case basis”.⁶

While this framework is important, additional actions are necessary in order to assure that a supply of credits or allocations are available to meet the caps imposed by the TMDL and to give potential new or expanding dischargers greater certainty regarding their availability. Increased demand for credits may also enhance the demand for nonpoint-source generated credits resulting in a more predictable and stable market.

³ Code of Virginia § 62.1-44.19:12

⁴ Code of Virginia § 62.1-44.19:12

⁵ Code of Virginia § 10.1-2128.2

⁶ Code of Virginia § 62.1-44.19:15.B.3

II. Recommendations

1. Remove the preference in the Code of Virginia (§ 10.1-2128.2.B) for the use of the Nutrient Credit Fund for facilities that generate electricity from animal waste.

Rationale: If public funds are used to acquire credits, those funds should be used as cost-effectively as possible. Therefore to rank one possible source of credits above all others without knowing the cost per pound of reduction would not be a responsible use of taxpayer money. Possible alternatives could include upgrades to municipal or industrial facilities; water reuse projects; certified nonpoint source credits and waste to energy facilities, among others. Cost per pound of reduction, reliability of technology or practice and other factors should be weighed before determining the source of credits that may be purchased by the Fund.

2. Amend the definition in the Water Quality Improvement Act (§ 10.1-2117) of “Nutrient Removal Technology” to include water reuse technologies that result in a reduction of nutrient discharges.

Rationale: Water reuse holds great promise in lowering the discharge of nutrients into waters in the Chesapeake Bay watershed. This change would clarify that grants from the Water Quality Improvement Fund could be used for such reuse projects.

3. Establish a process by which nutrient allocations are reviewed on a periodic basis (10 years) to determine if amendments are warranted in the nutrient allocations granted in the Water Quality Management Planning Regulation because of significant changes in operation or other significant factors that would necessitate a modification. Following such evaluation, use the process of modifying the Water Quality Management Planning Regulation to account for such changes through the expedited process⁷ established in the Code. In light of the relatively recent adoption of the TMDL, the disruption of normal population and business growth precipitated by the 2008 recession and recent investments made to comply with TMDL waste load allocations, the first round of review should focus on the most dramatic changed circumstances. The regular review process should begin later to coincide with the typical minimum planning and financing horizon for municipal wastewater treatment plants.

Rationale: Facilities that have changed their use or implemented changes in their facility that make discharges impossible should not hold nutrient allocations that could be better used by new or expanding facilities or held by the state for future reallocation. Further, a periodic review of estimates of needed capacity should be undertaken under strict guidance, developed in consultation with key stakeholders, that would evaluate any

⁷ § 2.2-4006.14

substantial changes in treatment technology, land uses or other changes within a service district or at the facility itself or the waters to which the facility discharges that would, with little doubt, lead to nutrient discharges at a reduced level for the long term. It is not the intention of this recommendation to discourage voluntary advances in wastewater treatment but to exercise the state's responsibility to see that nutrient caps are maintained and that the allocation process remains consistent with the Commonwealth's previously stated policy to ensure that dischargers are given a high degree of certainty as they continue to operate under the established regulatory framework and make decisions about future investments and needs.

4. Allow for the use of the existing Nutrient Offset Fund for the acquisition of nutrient credits from point or nonpoint sources for valued economic development projects. Such projects should meet minimum economic impact requirements proposed by the Virginia Economic Development Partnership as well as the current requirement to install and operate high levels of nutrient removal technology at such facilities and all relevant sections of the State Water Control Law. Clear criteria should be established for the use of credits from the fund that maximize the economic and environmental benefits and stimulate credit markets.

Rationale: With the nutrient caps established by the TMDL and the requirements of Virginia law, the ability to offset the entirety of the nutrient load from a new or expanded facility will be a critical element for continuing to attract industries and maintain the ability to maintain mandated nutrient caps over time. The ability of the state to offer credits as part of an overall package of economic development incentives will allow Virginia to maintain the cap on nutrient discharges in the Chesapeake Bay watershed while attracting new businesses. Sources of credits could include point or nonpoint facilities and attention should be paid to the overall cost and reliability of the credits generated to ensure that they achieve the desired results.

5. Modify the operating procedures of the Nutrient Credit Exchange Association to allow new dischargers to contract for credits under the existing framework of the Exchange and then become eligible under current law⁸ to become members of the Exchange following registration for the General Permit and the issuance of an individual permit.

Rationale: With the recommended change in operating procedure, the Exchange Association could service the offset needs of new dischargers to access available credits at prices determined in accordance with the Exchange's normal procedures. With this modification, the Exchange could provide available credits for offset purposes pursuant to contracts with credit purchasers that are not yet members of the Nutrient Exchange, pending DEQ action on their permit applications.

⁸ § 62.1-44.19:17.B.

6. Increase the Exchange's "forward trading horizon" to a 10 year rolling basis

Rationale: A ten year rolling basis will add additional understanding of the availability of credits and allow for better planning and implementation of necessary credit producing projects as described in the rationale of recommendation 1 in this report.

7. Modify and upgrade the existing forecasting model used by the Exchange to forecast flows, concentrations and available credits on a 20 year basis. Water Quality Improvement Fund grant funds could be made available for this purpose.

Rationale: While recognizing the inherent uncertainty of 20 year projections, further refinement of this capability would allow for more informed planning by existing and potential new or expanding dischargers.

8. Continue examination of the issues addressed in the Executive Order study by the Secretaries of Natural Resources, Agriculture and Forestry, Commerce and Trade and relevant stakeholders.

Rationale: While the Executive Order study yielded advances in addressing the future needs of new and expanding dischargers, additional issues would benefit from continued examination. There are a number of unresolved initiatives including the pending credit certification regulations under development by the Department of Environmental Quality, regional examination of environmental financing strategies by the Chesapeake Bay Program partners, continued development and examination of the reduction efficiencies of existing and new nonpoint source practices by the Chesapeake Bay program and other actions that will influence credit markets and nutrient credit policy in Virginia. The Secretaries should continue to evaluate the impact of these pending initiatives as well as developing and maintaining markets for nonpoint source credits; examining reduction efficiencies and crediting and their relationship to credit markets and credit availability; developing a means of ensuring a flow of credits into the Nutrient Offset Fund that would be available for distribution and other issues as identified by the Secretaries and relevant stakeholders.

Appendix I

Executive Order 52 Roster of Participants

Secretary Molly Ward (Deputy Secretary Russ Baxter)

Secretary Todd Haymore (Deputy Secretary Sam Towell)

Secretary Maurice Jones (Deputy Secretary Hayes Framme)

Erik Johnston, Deputy Policy Director

David Paylor, Director, Department of Environmental Quality

Rob McClintock, Virginia Economic Development Partnership

Brett Vassey, Virginia Manufacturers Association

Fred Harry, Honeywell Corporation

Chris Pomeroy, Aqualaw LLC, Virginia Association of Municipal Wastewater Agencies

Bob Burnley, representing Tranlin Corporation

Tom Frederick, Loudoun Water

Frank Harksen, Nutrient Credit Exchange Association

Dean Dickey, Prince William Water and Sewer Authority

Peggy Sanner, Chesapeake Bay Foundation

Adrienne Kotula, James River Association

Ann Jennings, Chesapeake Bay Commission

Katie Frazier, Virginia Agribusiness Council

Appendix II

Meeting Dates and Subjects

April 4, 2016: Overview of Chesapeake Bay Watershed General Permit, Water Quality Management Planning Regulation and Nutrient Credit Exchange Association

June 1, 2016: Presentation and Discussion of Possible Options regarding management of nutrient credits in the Chesapeake Bay Watershed

July 27, 2016: Presentation and Discussion of Credit Availability and possible modifications to the operations of the Nutrient Credit Exchange Association

October 14, 2016: Role of Nonpoint Source Credits in Meeting Future Demand, Discussion of Preliminary Recommendations