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SENATE BILL NO. 77

Offered January 11, 2012

Prefiled January 5, 2012

A *BILL to amend and reenact §§ 62.1-44.19:13, 62.1-44.19:15, and 62.1-44.19:18 of the Code of Virginia and to amend the Code of Virginia by adding sections numbered 10.1-603.8:2 and 10.1-603.8:3 and by adding in Article 4.02 of Chapter 3.1 of Title 62.1 a section numbered 62.1-44.19:20, relating to the expansion of the nutrient credit exchange program for Chesapeake Bay Total Maximum Daily Load implementation.*

Patron—Watkins

Referred to Committee on Agriculture, Conservation and Natural Resources

Be it enacted by the General Assembly of Virginia:

1. That §§ 62.1-44.19:13, 62.1-44.19:15, and 62.1-44.19:18 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding sections numbered 10.1-603.8:2 and 10.1-603.8:3 and by adding in Article 4.02 in Chapter 3.1 in Title 62.1 a section numbered 62.1-44.19:20 as follows:

§ 10.1-603.8:2. *Nutrient credit certification.*

A. The Board shall adopt regulations for the purpose of establishing conditions for the certification of nutrient credits other than (i) credits generated pursuant to §§ 62.1-44.19:14 through 62.1-44.19:18 and (ii) credits certified by the State Water Control Board and the Department of Environmental Quality pursuant to § 62.1-44.19:20. The Board shall coordinate with such other agencies to avoid any duplication in the scope of their respective certification regulations.

B. The regulations adopted pursuant to this section shall:

1. Provide credit for effective nutrient controls or removal practices that are beyond the baseline requirements of the Virginia Chesapeake Bay TMDL Watershed Implementation Plan, including credits generated from agricultural and urban stormwater best management practices, incineration or management of manures, land use conversion, stream or wetlands restoration, shellfish aquaculture, algal harvesting, and other established or innovative methods of nutrient control or removal.

2. Establish a timely and efficient certification process including application requirements, a reasonable application fee schedule not to exceed \$10,000 per application, and review and approval procedures.

3. Provide certification of credits on an appropriate temporal basis, such as annual, a term of years, or perpetual, depending on the nature of the credit generating activity;

4. Establish credit values using the best available information considering the application and supporting technical information, scientific literature, and monitoring or modeling information, including the Chesapeake Bay Program model in use by the Environmental Protection Agency at the time of certification for the credit generating activity, unless more relevant or accurate technical information is available.

5. Establish operation and maintenance requirements and associated financial assurance requirements to include alternatives such as letters of credit, escrows, surety bonds, insurance, and, where the credits are used or generated by a local government or utility operating an MS4 or point source permitted under Article 4.02 (§ 62.1-44.19:12 et seq.) of Chapter 3.1 of Title 62.1, the local government's or utility's existing tax or rate authority.

6. Establish appropriate reporting requirements.

7. Enable the Department to inspect or audit for compliance with the requirements of such regulations.

8. Provide that the option to acquire nutrient credits for compliance purposes shall not eliminate any requirement to comply with local water quality requirements.

9. Establish such other requirements as the Board deems necessary and appropriate.

C. The Department may establish an online registry indicating the availability of credits certified under this section. Any such registry shall be publicly accessible without charge.

§ 10.1-603.8:3. *Nutrient credit use by regulated municipal separate storm sewer systems.*

A. A municipal separate storm sewer system permittee may acquire and use nutrient credits for purposes of compliance with the provisions of a VSMP permit issued pursuant to § 10.1-603.2:1 and related to the Virginia Chesapeake Bay TMDL Watershed Implementation Plan.

B. The permittee may use such credits for compliance purposes only if (i) the credits, whether annual, term, or perpetual, are generated and applied for purposes of compliance for the same calendar

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59 year; (ii) the credits are acquired no later than a date following the calendar year in which the credits
60 are applied as specified by the Department consistent with the permittee's VSMP permit annual report
61 deadline under such permit; (iii) the credits are generated in the same locality or tributary, except that
62 permittees in the Eastern Shore basin may also acquire credits from the Potomac and Rappahannock
63 tributaries; and (iv) the credits either are acquired from a point source facility that generated such
64 credits in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program
65 (§ 62.1-44.19:12 et seq.) of Chapter 3.1 of Title 62.1, or are certified pursuant to regulations adopted
66 by the Board or by the State Water Control Board.

67 § 62.1-44.19:13. Definitions.

68 As used in this article, unless the context requires a different meaning:

69 "Annual mass load of total nitrogen" (expressed in pounds per year) means the daily total nitrogen
70 concentration (expressed as mg/L to the nearest 0.01 mg/L) multiplied by the flow volume of effluent
71 discharged during the 24-hour period (expressed as MGD to the nearest 0.01 MGD), multiplied by 8.34
72 and rounded to the nearest whole number to convert to pounds per day (lbs/day) units, then totaled for
73 the calendar month to convert to pounds per month (lbs/mo) units, and then totaled for the calendar year
74 to convert to pounds per year (lbs/yr) units.

75 "Annual mass load of total phosphorus" (expressed in pounds per year) means the daily total
76 phosphorus concentration (expressed as mg/L to the nearest 0.01mg/L) multiplied by the flow volume of
77 effluent discharged during the 24-hour period (expressed as MGD to the nearest 0.01 MGD) multiplied
78 by 8.34 and rounded to the nearest whole number to convert to pounds per day (lbs/day) units, then
79 totaled for the calendar month to convert to pounds per month (lbs/mo) units, and then totaled for the
80 calendar year to convert to pounds per year (lbs/yr) units.

81 "Association" means the Virginia Nutrient Credit Exchange Association authorized by this article.

82 "Attenuation" means the rate at which nutrients are reduced through natural processes during
83 transport in water.

84 "Biological nutrient removal technology" means (i) technology that will achieve an annual average
85 total nitrogen effluent concentration of eight milligrams per liter and an annual average total phosphorus
86 effluent concentration of one milligram per liter, or (ii) equivalent reductions in loads of total nitrogen
87 and total phosphorus through the recycle or reuse of wastewater as determined by the Department.

88 "Delivered total nitrogen load" means the discharged mass load of total nitrogen from a point source
89 that is adjusted by the delivery factor for that point source.

90 "Delivered total phosphorus load" means the discharged mass load of total phosphorus from a point
91 source that is adjusted by the delivery factor for that point source.

92 "Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus
93 delivered to tidal waters for every pound discharged from a permitted facility, as determined by the
94 specific geographic location of the permitted facility, to account for attenuation that occurs during
95 riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated
96 using the Chesapeake Bay Program watershed model.

97 "Department" means the Department of Environmental Quality.

98 "Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total
99 phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760
100 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds
101 per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000
102 gallons per day.

103 "Facility" means a point source discharging or proposing to discharge total nitrogen or total
104 phosphorus to the Chesapeake Bay or its tributaries. This term does not include confined animal feeding
105 operations, discharges of stormwater, return flows from irrigated agriculture, or vessels.

106 "General permit" means the general permit authorized by this article.

107 "Permitted facility" means a facility authorized by the general permit to discharge total nitrogen or
108 total phosphorus. For the sole purpose of generating point source nitrogen credits or point source
109 phosphorus credits, "permitted facility" shall also mean the Blue Plains wastewater treatment facility
110 operated by the District of Columbia Water and Sewer Authority.

111 "Permittee" means a person authorized by the general permit to discharge total nitrogen or total
112 phosphorus.

113 "Point source nitrogen credit" means the difference between (i) the waste load allocation for a
114 permitted facility specified as an annual mass load of total nitrogen, and (ii) the monitored annual mass
115 load of total nitrogen discharged by that facility, where clause (ii) is less than clause (i), and where the
116 difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered
117 total nitrogen load.

118 "Point source phosphorus credit" means the difference between (i) the waste load allocation for a
119 permitted facility specified as an annual mass load of total phosphorus, and (ii) the monitored annual
120 mass load of total phosphorus discharged by that facility, where clause (ii) is less than clause (i), and

where the difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered total phosphorus load.

"State-of-the-art nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of three milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter, or (ii) equivalent load reductions in total nitrogen and total phosphorus through recycle or reuse of wastewater as determined by the Department.

"Tributaries" means those river basins for which separate tributary strategies were prepared pursuant to § 2.2-218 and includes the Potomac, Rappahannock, York, and James River Basins, and the Eastern Coastal Basin, which encompasses the creeks and rivers of the Eastern Shore of Virginia that are west of Route 13 and drain into the Chesapeake Bay.

"Waste load allocation" means (i) the water quality-based annual mass load of total nitrogen or annual mass load of total phosphorus allocated to individual facilities pursuant to the Water Quality Management Planning Regulation (9 VAC 25-720) or its successor, *or permitted capacity in the case of nonsignificant dischargers*; (ii) the water quality-based annual mass load of total nitrogen or annual mass load of total phosphorus acquired pursuant to § 62.1-44.19:15 for new or expanded facilities; or (iii) applicable total nitrogen or total phosphorus *waste load allocations under the Chesapeake Bay* total maximum daily loads (TMDLs) *and the Virginia Chesapeake Bay TMDL Watershed Implementation Plan* to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

§ 62.1-44.19:15. New or expanded facilities.

A. An owner or operator of a new or expanded facility shall comply with the applicable requirements of this section as a condition of the facility's coverage under the general permit.

1. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day, or an equivalent load directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters shall demonstrate to the Department that he has acquired waste load allocations sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond his waste load allocations or permitted design capacity as of July 1, 2005, and will install state-of-the-art nutrient removal technology at the time of the expansion.

2. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day up to and including 499,999 gallons per day, or an equivalent load, directly into nontidal waters, shall demonstrate to the Department that he has acquired waste load allocations sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond his permitted capacity as of July 1, 2005, and will install, at a minimum, biological nutrient removal technology at the time of the expansion.

3. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 40,000 gallons or more per day up to and including 99,999 gallons per day, or an equivalent load, directly into tidal or nontidal waters, shall demonstrate to the Department that he has acquired waste load allocations sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond his permitted capacity as of July 1, 2005.

4. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an equivalent load, shall demonstrate to the Department that he has acquired waste load allocations sufficient to offset his delivered total nitrogen and delivered total phosphorus loads, and will install (i) at a minimum, biological nutrient removal technology at any facility authorized to discharge up to and including 99,999 gallons per day, or an equivalent load, directly into tidal and nontidal waters, or up to and including 499,999 gallons per day, or an equivalent load, to nontidal waters; and (ii) state-of-the-art nutrient removal technology at any facility authorized to discharge 100,000 gallons or more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters.

5. An owner or operator of a facility treating domestic sewage authorized by a Virginia Pollutant Discharge Elimination System permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that has not commenced the discharge of pollutants prior to January 1, 2011, shall demonstrate to the Department that he has acquired waste load allocations sufficient to offset his delivered total nitrogen and delivered total phosphorus loads prior to commencing the discharge, except when the facility is for short-term temporary use only or when treatment of domestic sewage is not the primary purpose of the facility.

B. Waste load allocations required by this section to offset new or increased delivered total nitrogen

and delivered total phosphorus loads shall be acquired in accordance with this subsection.

1. Such allocations may be acquired from one or a combination of the following:

a. Acquisition of all or a portion of the waste load allocations *or credits* from one or more permitted facilities in the same tributary;

b. Acquisition of nonpoint source load allocations *or credits* through the use of best management practices acquired through a public or private entity acting on behalf of the ~~land owner~~ *landowner*. Such best management practices shall achieve reductions beyond those already required by or funded under federal or state law, or the Virginia ~~tributaries strategies plans~~ *Chesapeake Bay TMDL Watershed Implementation Plan*, and shall be installed in the same tributary in which the new or expanded facility is located and included as conditions of the facility's individual Virginia Pollutant Discharge Elimination System permit;

c. Acquisition of allocations *or credits* purchased through the Nutrient Offset Fund established pursuant to § 10.1-2128.2; or

d. Acquisition of allocations *or credits* through such other means as may be approved by the Department on a case-by-case basis.

2. The Board shall give priority to allocations *or credits* acquired in accordance with subdivisions 1 a, 1 b, and 1 d. The Board shall approve allocations acquired in accordance with subdivision 1 d only after the owner or operator has demonstrated that he has made a good faith effort to acquire sufficient allocations in accordance with subdivisions 1 a, 1 b, and 1 d and that such allocations are not reasonably available taking into account timing, cost, and other relevant factors.

3. Notwithstanding the priority provisions in subdivision 2, the Board may grant a waste load allocation in accordance with subdivision 1 d to an owner or operator of a facility authorized by a Virginia Pollution Abatement permit to land apply domestic sewage if (i) the Virginia Pollution Abatement permit was issued before July 1, 2005; (ii) the waste load allocation does not exceed such facility's permitted design capacity as of July 1, 2005; (iii) the waste treated by the existing facility is going to be treated and discharged pursuant to a Virginia Pollutant Discharge Elimination System permit for a new discharge; and (iv) the owner or operator installs state-of-the-art nutrient removal technology at such facility. Such facilities cannot generate credits or waste load allocations, based upon the removal of land application sites, that can be acquired by other permitted facilities to meet the requirements of this article.

C. Until such time as the Director finds that no allocations *or credits* are reasonably available in an individual tributary, the general permit shall provide for the acquisition of allocations through payments into the Nutrient Offset Fund established in § 10.1-2128.2. Such payments shall be promptly applied by the Department to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required by or funded under federal or state law or the Virginia ~~tributaries strategies plans~~ *Chesapeake Bay TMDL Watershed Implementation Plan*. The general permit shall base the cost of each pound of allocation on (i) the estimated cost of achieving a reduction of one pound of nitrogen or phosphorus at the facility that is securing the allocation, or comparable facility, for each pound of allocation acquired; or (ii) the average cost of reducing two pounds of nitrogen or phosphorus from nonpoint sources in the same tributary for each pound of allocation acquired, whichever is higher. Upon each reissuance of the general permit, the Board may adjust the cost of each pound of allocation based on current costs and cost estimates.

D. The acquisition of nutrient allocations, credits, or offsets from animal waste-to-energy or animal waste reduction facilities, or the acquisition of such nutrient allocations, credits, or offsets from entities acting on behalf of such facilities pursuant to subdivision B 1, shall be considered point source allocations, credits, or offsets for all nutrient trading purposes and shall not be subject to a two-for-one trading ratio if the best management practice being used to generate such nutrient allocations, credits, or offsets is a point source nutrient removal technology. Point source nutrient removal technology shall include animal waste gasification in which lab analysis of the animal waste reveals the concentration of nutrients in the animal waste being fed into the gasifier, and the fate of the nutrients during the animal waste gasification process, is known and documented using studies such as air emissions tests and ash analyses.

§ 62.1-44.19:18. Nutrient allocation compliance and reporting.

A. Each permitted facility shall be in compliance with its individual waste load allocations if: (i) its annual mass load is less than the applicable waste load allocation assigned to the facility in the general permit; (ii) the permitted facility acquires sufficient point source nitrogen or phosphorus credits in accordance with subdivision A 1; or (iii) in the event it is unable to meet the individual waste load allocation pursuant to clauses (i) or (ii), the permitted facility acquires sufficient nitrogen or phosphorus credits through payments made in accordance with subdivision A 2; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual waste load allocations for each permitted facility.

1. A permittee may acquire point source nitrogen or phosphorus credits from one or more permitted

facilities only if (i) the credits are generated and applied to a compliance obligation in the same calendar year, (ii) the credits are generated by one or more permitted facilities in the same tributary, except that permitted facilities in the Eastern Shore basin may also acquire credits from permitted facilities in the Potomac and Rappahannock tributaries, (iii) the credits are acquired no later than June 1 immediately following the calendar year in which the credits are applied, and (iv) no later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a form supplied by the Department that he has acquired sufficient credits to satisfy his compliance obligations.

2. A permittee may acquire nitrogen or phosphorus credits through payments made into the Nutrient Offset Fund established in § 10.1-2128.2 only if, no later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a form supplied by the Department that he has diligently sought, but has been unable to acquire, sufficient credits to satisfy his compliance obligations through the acquisition of point source nitrogen or phosphorus credits with other permitted facilities in the same tributary, and that he has acquired sufficient credits to satisfy his compliance obligations through one or more payments made in accordance with the terms of the general permit.

B. Until such time as the Director finds that no credits are reasonably available in an individual tributary, the general permit shall provide for the acquisition of nitrogen and phosphorus credits through payments into the Nutrient Offset Fund in accordance with subdivision A 2. Such payments shall be promptly applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required by or funded under federal or state law, or the Virginia tributaries strategies plans *Chesapeake Bay TMDL Watershed Implementation Plan*. The general permit shall base the cost of each nitrogen or phosphorus credit on the average cost of reducing one pound of nitrogen or phosphorus from Virginia publicly owned wastewater treatment facilities for each credit acquired. Upon each reissuance of the general permit, the Board may adjust the cost of each nitrogen and phosphorus credit based on (i) the current average cost of reducing a pound of nitrogen or phosphorus from Virginia publicly owned wastewater treatment facilities for each credit acquired and (ii) any additional incentives reasonably necessary to ensure that there is timely and continuing progress toward attaining and maintaining each tributary's combined waste load allocation.

C. On or before February 1, annually, each permittee shall either individually or through the Association file a report with the Department. The report shall identify (i) the annual mass load of total nitrogen and the annual mass load of total phosphorus discharged by each permitted facility during the previous calendar year, (ii) the delivered total nitrogen load and delivered total phosphorus load discharged by each permitted facility during the previous year, and (iii) the number of total nitrogen and total phosphorus credits for the previous calendar year to be purchased or sold by the permittee. The report shall contain the certification required by federal and state law and be signed by each permittee for each of the permittee's facilities covered by the general permit.

D. On or before April 1, annually, the Department shall prepare a report containing the annual mass load of total nitrogen and annual mass load of total phosphorus discharged by each permitted facility, the number of point source nitrogen and phosphorus credits for the previous calendar year for sale or purchase by each such facility, and to the extent there are insufficient point source credits available for exchange to provide for full compliance by every permittee, the number of credits to be purchased pursuant to this section. Upon completion of the report, the Department shall promptly publish notice of the report and make the report available to any person requesting it.

E. On or before July 1, annually, the Department shall publish notice of all nitrogen and phosphorus credit exchanges and purchases for the previous calendar year and make all documents relating to the exchanges and purchases available to any person requesting them.

§ 62.1-44.19:20. Nutrient credit certification.

A. The Board shall adopt regulations for the purpose of establishing conditions for the certification of nutrient credits other than (i) credits generated pursuant to §§ 62.1-44.19:14 through 62.1-44.19:18 or (ii) credits certified by the Soil and Water Conservation Board and the Department of Conservation and Recreation pursuant to § 10.1-603.8:2. The Board shall coordinate with such other agencies to avoid any duplication in the scope of their respective certification regulations.

B. The regulations adopted pursuant to this section shall:

1. Provide credit for effective nutrient controls or removal practices that are beyond the baseline requirements of the Virginia Chesapeake Bay TMDL Watershed Implementation Plan, including credits generated from activities associated with the types of facilities or practices historically regulated by the Board, including but not limited to water withdrawal and treatment and wastewater collection, treatment, and beneficial reuse.

2. Establish a timely and efficient certification process including application requirements, a reasonable application fee schedule not to exceed \$10,000 per application, and review and approval procedures.

- 305 3. Provide certification of credits on an appropriate temporal basis, such as annual, a term of years,
306 or perpetual, depending on the nature of the credit generating activity.
- 307 4. Establish credit values using the best available information considering the application and
308 supporting technical information, scientific literature, and monitoring or modeling information, including
309 the Chesapeake Bay Program model in use by the Environmental Protection Agency at the time of
310 certification for the credit generating activity, unless more relevant or accurate technical information is
311 available.
- 312 5. Establish operation and maintenance requirements and associated financial assurance
313 requirements to include alternatives such as letters of credit, escrows, surety bonds, insurance, and,
314 where the credits are used or generated by a local government or utility operating an MS4 or point
315 source permitted under this article, the local government's or utility's existing tax or rate authority.
- 316 6. Establish appropriate reporting requirements.
- 317 7. Enable the Department to inspect or audit for compliance with the requirements of such
318 regulations.
- 319 8. Provide that the option to acquire nutrient credits for compliance purposes shall not eliminate any
320 requirement to comply with local water quality requirements.
- 321 9. Establish such other requirements as the Board deems necessary and appropriate.