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For Discussion Purposes Only

Title 26 Department of the Environment
Subtitle 08 Water Pollution
Chapter 11 Chesapeake Bay Restoration

.01 Purpose.

These regulations establish requirements and procedures for offsetting loads of nitrogen from changes in land use in order to achieve and maintain Maryland's Chesapeake Bay Total Maximum Daily Loads for nitrogen, phosphorus and sediment as established by the U. S. Environmental Protection Agency, and the State-developed Total Maximum Daily Loads for nitrogen, phosphorus and sediment applicable to Maryland's portion of the Atlantic Coastal Bays.

.02 Scope.

These regulations apply to any development or redevelopment that:

A. Results in a change in land use and
B. Disturbs one (1.0) or more acres of land in the Maryland portions of the Atlantic Coastal Bays or Chesapeake Bay Watersheds.

.03 Definitions.

A. In this chapter, the following terms have the meanings indicated.
B. Terms Defined.
   (1) "Atlantic Coastal Bays (Coastal Bays)" means Newport Bay, Isle of Wight Bay, Assawoman Bay, Sinepuxent Bay and Chincoteague Bay.
   (2) "Atlantic Coastal Bays Total Maximum Daily Load (Coastal Bays TMDL" means the load allocated as established in the State-developed TMDL.
   (3) "Best Available Technology (BAT)" means a technology that has been approved by the Department as a best available technology for removing nitrogen from onsite sewage disposal systems.
   (4) "Bay Model" means U. S. Environmental Protection Agency's Chesapeake Bay Program's Watershed Model 5.3.2 or the most recent revision.
   (5) "Biological Nutrient Removal (BNR)" means the process of removing contaminants from wastewater and household sewage to produce effluent equal to or better than 8 milligram per liter total nitrogen.
   (6) "Chesapeake Bay Total Maximum Daily Load (Bay TMDL)" means the load allocated to Maryland as established by the U. S. Environmental Protection Agency.
   (7) "Change in land use" means:
      (a) Conversion of land from an agricultural, forest, recreational or other natural land use/land cover type to an industrial, commercial, institutional or residential use;
      (b) Increase in residential density; or

(c) A change in the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

(8) "Chesapeake Bay Program" means that regional partnership that leads and directs Chesapeake Bay restoration and protection; the partners are the states of Maryland, Pennsylvania, Virginia, West Virginia, Delaware and New York, and the District of Columbia, the Chesapeake Bay Commission, and the U.S. Environmental Protection Agency.

(9) "Delivered load" means the amount of a pollutant delivered to the main stem of the Chesapeake Bay or Coastal Bays.

(10) "Enhanced Nutrient Removal (ENR)" means the process of removing contaminants from wastewater and household sewage to produce effluent equal to or better than 4 milligram per liter total nitrogen.

(11) "Edge of Stream (EOS)" means the amount of pollution reaching surface waters at the boundary of a Chesapeake Bay Watershed Model segment.

(12) "Environmental Site Design (ESD)" means the use of small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources, as required by the Maryland Stormwater Management Act of 2007.

(13) "Equivalent dwelling unit (EDU)" means a measure of wastewater generated where one unit is such that:

(a) If a local government or billing authority for a wastewater facility has established a definition for "equivalent dwelling unit" on or before January 1, 2004, the average daily flow of wastewater generated that the local government or billing authority has established to be equivalent to the average daily flow of wastewater generated by a residential dwelling, which may not exceed 250 gallons; or

(b) If a local government or billing authority has not established a definition for "equivalent dwelling unit" on or before January 1, 2004, or if a local government or billing authority has established a definition that exceeds 250 gallons of wastewater generated per day, an average daily flow of 250 gallons of wastewater generated.

(c) A non-residential establishment shall use "Design Guidelines for Wastewater Facilities" Maryland Department of the Environment, Engineering and Capital Projects Program (2012) to determine the number of EDUs; however, a business establishment may not have a value less than one (1) EDU.

(14) "Forest" means, for purposes of this regulation, land having the characteristics of a forest as defined by the Forest Conservation Act or, if within the Critical Area, by the Maryland Critical Area Act; other wooded areas are considered to be pervious surface.
(15) "Impervious surface" means roads, rooftops, parking lots and other hardened surfaces that do not allow precipitation to penetrate into the soil.
(16) "Load" means the mass of total nitrogen in pounds per year.
(17) "Loading rate" means number assigned in the Bay Model to represent the mass of nitrogen per acre, by land use.
(18) "Nutrient Cap" means the permitted point source wasteload allocation for nutrients.
(19) "Offset" means:
(a) Counterbalance an increase of nitrogen loads with other reductions; or
(b) The pounds of nitrogen loads that must be counterbalanced.
(20) "Pervious surface" means an area that has a surface that permits water to penetrate underlying soil.
(21) "Redevelopment" means any construction, alteration, removal, or improvement performed on existing impervious area at a site where existing land use is commercial, industrial, institutional, or multifamily residential and existing project site impervious area exceeds 40 percent.
(22) "Secondary treatment" means the process of removing contaminants from wastewater and household sewage to produce effluent equal to or better than 18 milligram per liter total nitrogen.
(23) "Total Maximum Daily Load (TMDL)" has the meaning stated in § 303(d)(1) of the Clean Water Act, 33 U.S.C. § 1313(d)(1).
(24) "Wasteload allocation (WLA)" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution by a TMDL.
(25) "Wastewater Treatment Plant (WWTP)" means a facility designed and constructed to receive, treat, or store sewage or sewage combined with other waterborne waste that holds a discharge permit issued by Maryland.

.04 Except as provided in Regulation .05 D and E of this chapter, if there is a change in land use as a result of development or redevelopment that disturbs one (1.0) or more acres of land in the Maryland portions of the Coastal Bays or Chesapeake Bay Watersheds, the developer must offset the post-development loads in accordance with these regulations.

.05 Calculation of post-development load and offset amount.

A. Except as provided in Regulation .05 D and E of this chapter, the EOS post-development nitrogen load shall be calculated as follows:

(1) Subsurface discharges and land application of wastewater.

(a) 4.93 lbs of total nitrogen per year per EDU for each new residential or non-residential BAT subsurface system;

(b) 9.86 lbs of total nitrogen per year per EDU for each new residential or non-residential conventional septic system; and

(e) Zero (0) lbs of total nitrogen per year for development served by a system with land application of treated wastewater subject to a discharge permit requiring zero discharge of nitrogen to groundwater.

(2) Surface discharge through a Wastewater Treatment Plant.

(a) Zero (0) lbs of total nitrogen per year for development served by WWTPs that can treat and discharge the wastewater in compliance with the WWTP's discharge permit and nutrient WLA.

(b) New development may not connect to a WWTP that does not have available capacity below its discharge permit and nutrient WLA unless the WWTP is able to offset the new load in accordance with applicable law, regulation, and permit conditions; the load to be offset in lbs of total nitrogen per year shall be calculated as the product of the number of EDUs times:

(i) 13.7 for WWTPs using secondary treatment;

(ii) 6.1 for WWTPs using BNR; and

(iii) 3.1 for WWTPs using ENR.

(3) Post-development stormwater load for development in accordance with the Maryland Stormwater Management Act of 2007 shall be calculated as follows:

$0.5 * [(L_i)(A_i) + (L_p)(A_p)] + [(L_f)(A_f)]$, where:

L_i = The State-wide impervious surface loading rate before ESD (currently 15.34 lb N /acre/year)
L_p = the State-wide average pervious surface loading rate before ESD (currently 10.78 lb N /acre/year)
L_f = the State-wide average forest loading rate (currently 3.0 lb N /acre/year)

A_i = Acres of impervious surface on the parcel, post-development
A_p = Acres of pervious surface on the parcel, post-development
A_f = Acres of forest on the parcel, post-development,

(4) Post-development stormwater load for development that received an Administrative Waiver from the requirements of the Maryland Stormwater Management Act of 2007 under COMAR 26.17.02.01-2 or that is otherwise exempt from the Stormwater Management Act of 2007 shall be calculated to reflect the actual EOS post-development nutrient pollution load.

(5) Nitrogen from mobile sources associated with development.

(a) No offset for nitrogen from mobile sources is required for a non-residential EDU.

(b) If the centroid of the development is in a census tract with density equal to or greater than 10,000 persons per square mile, the post-development load from mobile sources is 0.5 pounds of nitrogen per residential EDU;

(c) If the centroid of the development is in a census tract with density less than 10,000 persons per square mile, the post-development load from mobile sources is 1.0 pound of nitrogen per residential EDU.

B. The total post-development load, expressed as EOS, is the sum of A(1), A(2), A(3), A(4) and A(5).

C. Post-development EOS loads will be converted to delivered loads for purposes of determining how many credits are needed as offsets.

D. No offset of the post-development stormwater load is required for redevelopment that complies with the Maryland Stormwater Management Act of 2007.

E. After December 31, 2025, if the Chesapeake Bay is not meeting water quality standards for dissolved oxygen or clarity or is otherwise impaired by nutrients or sediments, development :

(1) Except as provided in Regulation (2), the offset for any development in the Chesapeake Bay watershed shall be four (4)

times the post-development load, as calculated in Regulation .05 of this chapter, of the pollutants for which the water quality standards are not met; and

(2) If the developer can demonstrate, to the satisfaction of the Department, that the county where the development will be located has implemented actions designed to meet the Bay TMDL, the post-development load shall be as calculated in Regulation .05 of this chapter, except that the stormwater offset in Regulation .05A(3) of this chapter shall not require an offset for post-development loads from forest;

.06 Obtaining offsets.

A. Offsets must be continued as long as the load being offset exists; in most cases, this means the offsets must be permanent or that the developer demonstrates, to the satisfaction of the Department, that the stormwater offset structure or facility will be operated and maintained perpetually, and replaced when necessary.

B. Examples of permanent offsets are forested buffers that are protected by covenants or easements recorded in the land records, septic systems that are upgraded to BAT standards to remove nitrogen and point source credit generated by WWTPs in accordance with Maryland Nutrient Trading Policy.

C. If a local government that assesses a stormwater utility fee enters into a Development Rights and Responsibilities Agreement with the developer to operate, maintain perpetually, and replace when necessary the stormwater offset structure or facility, the developer will be deemed to have assured that the offset is permanent.

D. Offsets may be purchased from the Maryland Nutrient Trading Program (http://mdnutrienttrading.org/).

E. Offsets may be directly purchased, constructed or planted provided they meet the requirements of Maryland's Nutrient Trading Policies and these regulations.

.07 Proof of Nutrient Credits

A. General Requirements.

(1) The developer must provide satisfactory documentation of offset credits to the Department prior to the issuance of a General Discharge Permit or an individual discharge permit issued under COMAR 26.08.04.

(2) Only point source credits certified by the Department or another legally authorized certifier, and nonpoint source credits certified under the Maryland Agricultural Nutrient Credit Certification process or another legally authorized certifier, can be used for offsets.

B. Expiration of Nutrient Credit Certification.

(1) Except as provided in Regulation (2), if a nutrient offset certification is not used, it shall expire after a period of three years from the date of issuance if construction has not commenced, or after a period of 5 years under any circumstances.

(2) If a request for an extension is made, the Department may, for good cause shown, extend the certification of the credit for an additional period of time.

C. Specific information requirements. The developer shall submit to the Department the following:

(1) The location of the development.

(2) Estimated date of start of construction.

(3) Estimated date of completion of construction.

(4) The estimated total acreage of the planned development.

(5) The percent impervious, pervious and forest of the planned development at completion.

(6) The method of sewage disposal.

(7) A calculation, consistent with Section .05 of this regulation, showing the post-development nitrogen load for the completed development.

(8) A demonstration, satisfactory to the Department, that the offsets will continue to provide nutrient reductions at least as long as the loads that they are offsetting will be generated.

(9) Evidence of a sufficient number of credits to offset the delivered post-development load from the development, certified by the Department, other legally authorized certifier, or under the Maryland Agricultural Nutrient Credit Certification process.

D. The Department or its agent may require more information and an onsite examination before accepting certified credits. The Department may require

proof of legally enforceable contractual obligations and direct monitoring to ensure that all load reductions are met and maintained.