Office of the Registrar of Regulations,
Legislative Council,
State of Delaware

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF WATER RESOURCES

Statutory Authority: 7 Delaware Code, Chapter 60 (7 **Del.C**. Ch. 60)

FINAL

Secretary's Order No. 2006-W-0051

Approving Final Regulations for Total Maximum Daily Loads for the Broadkill River, Cedar Creek, and Mispillion River Watersheds

Date of Issuance: November 14, 2006
Effective Date: December 11, 2006

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") under 29 **Del.C.** §§8001 *et seq*, 29 **Del.C.** §§10111 *et seq*. and 7 **Del.C.** §6010(a), the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding to establish Total Maximum Daily Loads ("TMDLs") for the Broadkill River, Cedar Creek, and Mispillion River watersheds.

Based on the record, including the public hearing record reviewed in the November 7, 2006, Hearing Officer's Report ("Report"), attached as Appendix A, I find the proposed regulations are well supported and are not arbitrary or capricious. The Report reviews and summarizes the combined public hearing record, including the August 22, 2006, public hearing. The Report recommends approval of the proposed regulations as final regulations without modification. I agree with the Report and adopt it as part of this Order along with its reasons.

The proposed regulations are based upon sound scientific evidence, are consistent with state and federal law, and are a reasoned exercise of the Department's authority to issue regulations to improve water quality. The TMDLs will limit the release of harmful levels of nitrogen, phosphorous and bacteria into the waters within each watershed. The regulations identify the level of reduction in the harmful pollutants that will enable the waters to improve to meet clean water standards. The TMDLs will allow the Department to establish Pollution Control Strategy for the watersheds, which will enforce compliance with the TMDLs. Thus, these TMDLs are an important part of a multi-step federal and state regulatory process that will result in the waters within these three watershed attaining the Clean Water Act's standards.

The Report notes the public comments, including comments submitted by the Mid-Atlantic Environmental Law Clinic ("MAELC"). The Department welcomes the comments. Some of the comments were instrumental in making some changes to the technical support documents, but did not change the TMDLs set forth in the proposed regulations. The Department encourages MAELC to work with the Department's experts towards assisting in the development of the best possible TMDLs for the common goal of improving Delaware's water quality. The promulgation of the final regulations will satisfy the federal court's consent decree.

In conclusion, the following findings and conclusions are entered:

1. The Department, acting through this Order of the Secretary, adopts the proposed regulations as final regulations, as set forth in the Appendix A to the Report, under 29 **Del.C.** §6010(a);

2. The approval of the proposed regulations as final regulations will protect and improve the water quality within three watersheds, as defined by elevation maps. The TMDLs as regulations will allow the Department to develop Pollution Control Strategies to control the releases of nitrogen, dissolved oxygen, and bacteria, which are the pollutants that are impairing the water quality of the waters within the three watersheds;

3. The TMDLs that are approved by this Order were developed consistent with the applicable law and regulatory standards, and are adequately supported by expert technical analysis;

4. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations, held a public hearing in a manner required by the law and regulations, and considered all timely and relevant public comments in making its determination;

5. The Department's proposed regulations, as published in the August 1, 2006, *Delaware Register of Regulations,* and set forth in Appendix A to the Report, are adequately supported, not arbitrary or capricious, are

consistent with the applicable laws and regulations, and should be approved as final regulations to go into effect ten days after their publication in the next available issue of the *Delaware Register of Regulations*; and that;

6. The Department shall provide written notice to the persons affected by the Order, as determined by those who participated in this rulemaking at either the public workshop or at the public hearing, including participation through the submission of timely and relevant written comments.

John A. Hughes
Secretary

7418 Total Maximum Daily Loads (TMDLs) for the Broadkill River Watershed, Delaware

1.0 Introduction and Background

Water quality monitoring performed by the Department of Natural Resources and Environmental Control (DNREC) has shown that the waters of Broadkill River and several of its tributaries and ponds are impaired by high levels of bacteria and elevated levels of the nutrients nitrogen and phosphorous, and that the designated uses are not fully supported due to levels of these pollutants in these waterways.

Section 303(d) of the Federal Clean Water Act (CWA) requires States to develop a list (303(d) List) of waterbodies for which existing pollution control activities are not sufficient to attain applicable water quality criteria and to develop Total Maximum Daily Loads (TMDLs) for pollutants or stressors causing the impairment. A TMDL sets a limit on the amount of a pollutant that can be discharged into a waterbody and still protect water quality. TMDLs are composed of three components, including Waste Load Allocations (WLAs) for point source discharges, Load Allocations (LAs) for nonpoint sources, and a Margin of Safety (MOS).

DNREC listed Broadkill River on several of the State's 303(d) Lists and proposes the following Total Maximum Daily Loads regulation for nitrogen, phosphorous, and *enterococcus* bacteria.

2.0 Total Maximum Daily Loads (TMDLs) Regulation for Broadkill River

Article 1. The total nitrogen load from the four point source facilities in the Broadkill River watershed (Town of Milton, Allen Family Foods, Perdue Georgetown, and SAW Georgetown) shall be limited to 245.6 pounds per day. The nitrogen waste load allocation for each facility includes: 36.5 pounds per day for the Town of Milton, 73.0 pounds per day for Allen Family Foods, 116.8 pounds per day for Perdue Georgetown, and 19.3 pounds per day for SAW Georgetown.

Article 2. The total phosphorous load from the four point source facilities in the watershed (Town of Milton, Allen Family Foods, Perdue Georgetown, and SAW Georgetown) shall be limited to 28.0 pounds per day. The phosphorous waste load allocation for each facility includes: 13.1 pounds per day for the Town of Milton, 5.21 pounds per day for Allen Family Foods, 8.34 pounds per day for Perdue Georgetown, and 1.38 pounds per day for SAW Georgetown.

Article 3. The *enterococcus* bacteria load from the four point source facilities in the watershed (Town of Milton, Allen Family Foods, Perdue Georgetown, and SAW Georgetown) shall be limited to 1.67E+09 colony forming units (CFU) per day. The *enterococcus* bacteria waste load allocation for each facility includes: 4.37E+08 CFU per day for the Town of Milton, 4.73E+09 CFU per day for Allen Family Foods, 7.57E+09 CFU per day for Perdue Georgetown, and 1.25E+09 CFU per day for SAW Georgetown.

Article 4. The nonpoint source nitrogen load in the entire Broadkill River watershed shall be reduced by 40 percent from the 2002-2003 baseline level. This shall result in a yearly-average total nitrogen load of 2224.2 pounds per day.

Article 5. The nonpoint source phosphorous load in the entire Broadkill River watershed shall be reduced by 40 percent from the 2002-2003 baseline level. This shall result in a yearly-average total phosphorus load of 94.7 pounds per day.

Article 6. The nonpoint source *enterococcus* bacteria load in the entire Broadkill River watershed shall be reduced by 75 percent from the 2002-2003 baseline level. This shall result in a yearly-average *enterococcus* bacteria load of 1.0E+11 CFU per day.

Article 7. Based upon water quality model runs and assuming implementation of reductions identified by Article 1 through Article 6 above, DNREC has determined that, with an adequate margin of safety, water quality standards will be met in the Broadkill River.

Article 8. Implementation of this TMDLs Regulation shall be achieved through the development and

implementation of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with the Tributary Action Teams, other stakeholders, and the public.

7419 - Total Maximum Daily Loads (TMDLs) for the Cedar Creek Watershed, Delaware

1.0 Introduction and Background

Water quality monitoring performed by the Department of Natural Resources and Environmental Control (DNREC) has shown that the waters of Cedar Creek and several of its tributaries and ponds are impaired by high levels of bacteria and elevated levels of the nutrients nitrogen and phosphorous, and that the designated uses are not fully supported due to levels of these pollutants in these waterways.

Section 303(d) of the Federal Clean Water Act (CWA) requires States to develop a list (303(d) List) of waterbodies for which existing pollution control activities are not sufficient to attain applicable water quality criteria and to develop Total Maximum Daily Loads (TMDLs) for pollutants or stressors causing the impairment. A TMDL sets a limit on the amount of a pollutant that can be discharged into a waterbody and still protect water quality. TMDLs are composed of three components, including Waste Load Allocations (WLAs) for point source discharges, Load Allocations (LAs) for nonpoint sources, and a Margin of Safety (MOS).

DNREC listed Cedar Creek on several of the State's 303(d) Lists and proposes the following Total Maximum Daily Loads regulation for nitrogen, phosphorous, and *enterococcus* bacteria.

2.0 Total Maximum Daily Loads (TMDLs) Regulation for Cedar Creek

Article 1. The nonpoint source nitrogen load in the entire Cedar Creek watershed shall be reduced by 45 percent from the 2001-2003 baseline level. This shall result in a yearly-average total nitrogen load of 587.6 pounds per day.

Article 2. The nonpoint source phosphorous load in the entire Cedar Creek watershed shall be reduced by 45 percent from the 2001-2003 baseline level. This shall result in a yearly-average total phosphorous load of 23.25 pounds per day.

Article 3. The nonpoint source *enterococcus* bacteria load in the entire Cedar Creek watershed shall be reduced by 96 percent from the 2001-2003 baseline level. This shall result in a yearly-mean *enterococcus* bacteria load of 7.15E+10 colony forming units (CFU) per day.

Article 4. Based upon water quality model runs and assuming implementation of reductions identified by Article 1 through Article 3 above, DNREC has determined that, with an adequate margin of safety, water quality standards will be met in the Cedar Creek.

Article 5. Implementation of this TMDLs Regulation shall be achieved through the development and implementation of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with the Tributary Action Teams, other stakeholders, and the public.

7423 Total Maximum Daily Loads (TMDLs) for the Mispillion River Watershed, Delaware

1.0 Introduction and Background

Water quality monitoring performed by the Department of Natural Resources and Environmental Control (DNREC) has shown that the waters of Mispillion River and several of its tributaries and ponds are impaired by high levels of bacteria and elevated levels of the nutrients nitrogen and phosphorous, and that the designated uses are not fully supported due to levels of these pollutants in these waterways.

Section 303(d) of the Federal Clean Water Act (CWA) requires States to develop a list (303(d) List) of waterbodies for which existing pollution control activities are not sufficient to attain applicable water quality criteria and to develop Total Maximum Daily Loads (TMDLs) for pollutants or stressors causing the impairment. A TMDL sets a limit on the amount of a pollutant that can be discharged into a waterbody and still protect water quality. TMDLs are composed of three components, including Waste Load Allocations (WLAs) for point source discharges, Load Allocations (LAs) for nonpoint sources, and a Margin of Safety (MOS).

DNREC listed Mispillion River on several of the State's 303(d) Lists and proposes the following Total Maximum Daily Loads regulation for nitrogen, phosphorous, and *enterococcus* bacteria.

2.0 Total Maximum Daily Loads (TMDLs) Regulation for Mispillion River

Article 1. The nonpoint source nitrogen load in the Mispillion River watershed shall be reduced from the 2001-2003 baseline level by 88 percent for King's Causeway Branch and 57 percent for the remaining parts of the watershed. This shall result in a yearly-average total nitrogen load of 756.5 pounds per day.

Article 2. The nonpoint source phosphorous load in the Mispillion River watershed shall be reduced from the 2001-2003 baseline level by 88 percent for King's Causeway Branch and 57 percent for the remaining parts of the watershed. This shall result in a yearly-average total phosphorous load of 13.23 pounds per day.

Article 3. The nonpoint source *enterococcus* bacteria load in the Mispillion River watershed shall be reduced from the 2001-2003 baseline level by 87 percent. This shall result in a yearly-mean *enterococcus* bacteria load of 2.92E+11 colony forming units (CFU) per day.

Article 4. Based upon water quality model runs and assuming implementation of reductions identified by Article 1 through Article 3 above, DNREC has determined that, with an adequate margin of safety, water quality standards will be met in the Mispillion River.

Article 5. Implementation of this TMDL Regulation shall be achieved through the development and implementation of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with the Tributary Action Teams, other stakeholders, and the public.