7400 Watershed Assessment Section

7418 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.

10 DE Reg. 1038 (12/01/06)