

**7400 Watershed Assessment Section**

**7428 TMDLs for Bacteria for the Murderkill 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 the Murderkill River Watershed are impaired by high levels of bacteria and that the designated uses are not fully supported due to levels of this pollutant in these waters.

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. A TMDL is composed of three components, including a Waste Load Allocation (WLA) for point source discharges, Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS).

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

**2.0 Total Maximum Daily Loads (TMDLs) Regulation for Murderkill River Watershed**

Article 1. The nonpoint source bacteria load in the fresh water portion of the Murderkill River Watershed shall be reduced by 32 percent from the 1997-2005 baseline level.

Article 2. The nonpoint source bacteria load in the marine water portion of the Murderkill River Watershed shall be reduced by 67 percent from the 1997-2005 baseline level.

Article 3. All point source bacteria loading in the Murderkill River Watershed shall be capped at the current, geometric mean concentration level of 35 CFU *enterococcus*/100mL.

Article 4. Based upon cumulative distribution analyses 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 Murderkill River Watershed.

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 Team, other stakeholders, and the public.

**10 DE Reg. 1039 (12/01/06)**