7400 Watershed Assessment Section

7412 TMDLs for the Chester River Watershed in Delaware

1.0 Introduction and Background

Water quality monitoring performed by the Department of Natural Resources and Environmental Control (DNREC) has shown that the Chester River is impaired by elevated levels of the nutrients nitrogen and phosphorous, and low dissolved oxygen, and that the designated uses are not fully supported by water quality in the stream.

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 Chester River on several of the State's 303(d) Lists and proposes the following Total Maximum Daily Load regulation for nitrogen and phosphorous.

2.0 Total Maximum Daily Loads (TMDLs) for the Chester River Watershed in Delaware

Article 1. The nonpoint source nitrogen load in the entire watershed shall be capped at the 2001-2003 baseline level. This shall result in a yearly-average total nitrogen load of 708 pounds per day.

Article 2. The nonpoint source phosphorus load in the entire watershed shall be reduced by 40 percent from the 2001-2003 baseline level. This shall result in reducing the yearly-average total phosphorous load from 54.6 pounds per day to 32.3 pound per day.

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

Article 4. Implementation of this TMDL Regulation shall be achieved through 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.

9 DE Reg. 1102 (01/01/06)
10 DE Reg. 1041 (12/01/06)