

Department of Natural Resources and Environmental Control

Division of Water Resources

Statutory Authority: 7 Delaware Code, Chapter 60

Amendment of the 2005 Total Maximum Daily Loads (TMDLs) for the Murderkill River Watershed, Delaware

A. INTRODUCTION and BACKGROUND

On May 12, 2005, the Cabinet Secretary of the Delaware Department of Natural Resources and Environmental Control (DNREC) issued Order No. 2005-W-0025 adopting a Total Maximum Daily Loads (TMDLs) Regulation for nutrients and oxygen consuming compounds for the entire Murderkill River Watershed. The TMDLs, which are developed in compliance with requirements of Section 303(d) of the Clean Water Act (CWA), establish maximum amounts of pollutants that can be discharged to a waterbody from point and nonpoint sources while maintaining water quality standards. The TMDLs include Waste Load Allocations (WLAs) for point sources, Load Allocations (LAs) for nonpoint sources, and a Margin of Safety (MOS).

Since the promulgation of the 2005 amended TMDLs, a multi-year monitoring, research, and modeling study of Murderkill River Watershed by DNREC and other cooperating agencies and institutions concluded that new scientifically-based, site-specific dissolved oxygen and nutrient criteria should be adopted for the tidal Murderkill River. This amendment of the WLA component of the 2005 TMDLs is to comply with these new site-specific dissolved oxygen and nutrient criteria for the tidal Murderkill River.

B. The Amended Total Maximum Daily Loads (TMDLs) Regulation for the Murderkill River Watershed, Delaware

- Article 1. The Kent County Facility shall be the only point source discharge in the Murderkill River Watershed.
- Article 2. The total nitrogen waste load from the Kent County Facility shall be limited to 897 pounds per day to be expressed as an annual average.
- Article 3. The total phosphorus waste load from the Kent County Facility shall be limited to 51 pounds per day to be expressed as an annual average.
- Article 4. The CBOD5 (5-day Carbonaceous Biochemical Oxygen Demand) waste load from the Kent County Facility shall be limited to 544 pounds per day.

Article 5. The nonpoint source nitrogen load in the entire watershed shall be reduced by 30 percent (from the 1997 base-line). This shall result in a yearly-average total nitrogen load of 560 pounds per day.

Article 6. The nonpoint source phosphorus load in the entire watershed shall be reduced by 50 percent (from the 1997 base-line). This shall result in a yearly-average total phosphorous load of 96 pounds per day.