

7400 Watershed Assessment Section

7426 TMDLs for the St. Jones 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 St. Jones 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 St. Jones 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 St. Jones River

Article 1. The total nitrogen load from the two point source facilities in the watershed (Dover McKee Run and Reichhold Chemicals) shall be limited to 9.2 pounds per day. The nitrogen waste load allocation for Dover McKee Run will be 7.7 pounds per day and for Reichhold Chemicals will be 1.5 pounds per day.

Article 2. The total phosphorous load from the two point source facilities in the watershed (Dover McKee Run and Reichhold Chemicals) shall be limited to 0.37 pounds per day. The phosphorous waste load allocation for Dover McKee Run will be 0.24 pounds per day and for Reichhold Chemicals will be 0.13 pounds per day.

Article 3. The *enterococcus* bacteria load from the two point source facilities in the watershed (Dover McKee Run and Reichhold Chemicals) shall be limited to 1.67E+09 colony forming units (CFU) per day. The *enterococcus* bacteria waste load allocation for Dover McKee Run will be 1.1E+09 CFU per day and for Reichhold Chemicals will be 5.7E+08 CFU per day.

Article 4. The nonpoint source nitrogen load in the entire St. Jones 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 860.3 pounds per day.

Article 5. The nonpoint source phosphorous load in the entire St. Jones 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 63.01 pounds per day.

Article 6. The nonpoint source *enterococcus* load in the entire St. Jones River watershed shall be reduced by 90 percent from the 2002-2003 baseline level. This shall result in a yearly-average *enterococcus* load of 1.63E+11 CFU per day.

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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 St. Jones 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. 1037 (12/01/06)