DIVISION OF WATERSHED STEWARDSHIP
Surface Water Discharges Section

7431 Total Maximum Daily Load (TMDL) for the Lums Pond Sub-Watershed, Delaware

1.0 Introduction and Background

1.1 Water quality monitoring performed by the Department of Natural Resources and Environmental Control (DNREC) has shown that, within the Lums Pond Sub-Watershed, a small tributary southeast of Lums Pond that connects the Pond to a marina on the C&D Canal (Summit Marina) is impaired because of low dissolved oxygen. This small tributary receives pollutants from nonpoint sources, Lums Pond overflow, and the Lums Pond State Park Wastewater Treatment Plant discharge. A reduction of oxygen consuming pollutants and nutrients from point and nonpoint sources within the sub-watershed is necessary to improve water quality in this tributary and attain applicable water quality standards.

1.2 Section 303(d) of the Federal Clean Water Act 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 has three components including a Waste Load Allocation (WLA) for point source discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS) to account for uncertainties and future growth.

1.3 DNREC has listed the Lums Pond Sub-Watershed on Delaware's 303(d) Lists and proposes the following Total Maximum Daily Load Regulation for nitrogen, phosphorus, and 5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) material.

2.0 Total Maximum Daily Load (TMDL) Regulation for the Lums Pond Sub-Watershed, Delaware

2.1 The total nitrogen waste load allocation from the Lums Pond State Park Wastewater Treatment Plant shall be limited to 9 pounds per day.

2.2 The total phosphorus waste load allocation from the Lums Pond State Park Wastewater Treatment Plant shall be limited to 2 pounds per day.

2.3 The 5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) waste load allocation from the Lums Pond State Park Wastewater Treatment Plant shall be limited to 13 pounds per day.

2.4 The nonpoint source nitrogen load in the sub-watershed shall be reduced by 40 percent from the 2009-2011 baseline level. This shall result in an average of 30 pounds per day of nitrogen load.

2.5 The nonpoint source phosphorus load in the sub-watershed shall be reduced by 40 percent from the 2009-2011 baseline level. This shall result in an average of 1 pound per day of phosphorus load.

2.6 The nonpoint source $CBOD_5$ in the sub-watershed shall be reduced by 40 percent from the 2009-2011 baseline level. This shall result in an average of 88 pounds per day of $CBOD_5$ load.

2.7 Based upon water quality model runs and assuming implementation of reductions identified by subsections 2.1 1 through 2.6 above, DNREC has determined that water quality standards will be met in the Lums Pond Sub-Watershed with an adequate margin of safety.

16 DE Reg. 538 (11/02/12)