

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
Surface Water Discharges Section

Statutory Authority: 7 Delaware Code, Chapter 60; (7 Del.C., Ch. 60)

FINAL

Secretary's Order No.: 2012-WS-0037

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

Date of Issuance: October 4, 2012

Effective Date: November 11, 2012

This Order of the Secretary of the Department of Natural Resources and Environmental Control (Department) approves proposed regulation **7431 Total Maximum Daily Load (TMDL) for Lums Pond Sub-Watershed, Delaware**, as a final regulation. The Department's Division of Watershed Stewardship, Watershed Assessment and Management Section drafted the proposed regulation, which was published in the *August 1, 2012 Delaware Register of Regulations*. The Department held a public hearing on August 21, 2012, and did not receive any public comments at the public hearing or by September 14, 2012, the deadline for written comments. The Department's presiding hearing officer prepared the attached Report, which recommends approval of the proposed regulation as a final regulation. The Report hereby is adopted to the extent it is consistent with this Order.

Based on the record, as reviewed in the Report, the Department finds that the proposed regulation is reasonable and well supported, and should be adopted to protect the water quality in the Lums Pond watershed. The watershed is particularly important to protect from water pollution because the Department's Lums Pond State Park represents 65% of the watershed's area. The TMDL will require reductions in the pollutants discharged within the watershed, including discharges by the Department's Lums Pond State Park wastewater treatment plant. The 40% reduction in total nitrogen and total phosphorous as required by the TMDL should improve the watershed's water quality so that it will meet the Department's water quality standards. The Department's approval of the TMDL confirms the commitment to reducing discharges of pollutants from point and non-point sources in order to improve the water quality of the watershed.

In conclusion, the following findings and conclusions are entered:

1. The record supports approval of the proposed regulation as a final regulation that will direct regulatory action to improve the water quality within the Lums Ponds watershed so that the water quality will meet the Department's water quality standards;
2. The TMDL approved by this Order was developed by the Department's experts in WAMS based upon scientific methods, data collection, use of an approved computer model and analysis;
3. The Department provided public notice of the proceeding and the public hearing as required by the law and its regulations;
4. The Department held a public hearing in a manner required by the law and regulations, and there were no public comments to consider in making its determination;
5. The Department's proposed regulation is reasonable, adequately supported, and consistent with the applicable law and regulations;
6. The final regulation approved by this Order shall go into effect ten days after its publication in the *Delaware Register of Regulations*;
7. The Department shall publish this Order on its web site and the Department shall provide notice as required by the law and regulations.

Collin P. O'Mara, Secretary

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 (CBOD₅) 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 (CBOD₅) 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 CBOD₅ 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 CBOD₅ load.
- 2.7 Based upon water quality model runs and assuming implementation of reductions identified by subsections 2.1 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.

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