

SUSQUEHANNA RIVER BASIN COMMISSION
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**SRBC ISSUES REPORT ON NUTRIENT POLLUTION LEVELS AND
SOURCES IN THE CONESTOGA RIVER WATERSHED**
Point Source Discharges Dominate During Base, Low Flow Conditions

HARRISBURG, Pa. – As part of a 5-year project from 2005 to 2010, the Susquehanna River Basin Commission (SRBC) today released a report, *Conestoga River Watershed Total Maximum Daily Loads Development, An Interim Data Report*, on the sources and quantities of nutrient pollutants – nitrogen and phosphorus – in the Conestoga River Watershed during low flow periods. SRBC cited nutrient discharges from point sources, including wastewater treatment plants, as the dominant influence on water quality in the watershed during low flow periods, when streams are often fed largely by groundwater – a condition known as base flow.

SRBC will combine these base flow findings with results it obtains from water quality samples taken during normal and high flow periods to develop a total maximum daily load (TMDL) for the entire Conestoga River Watershed. SRBC is evaluating the Conestoga River Watershed by the following six study areas: the mainstem Conestoga River and the Little Conestoga Creek, Mill Creek, Muddy Creek, Cocalico Creek and Lititz Run subwatersheds.

“On average, the Conestoga River Watershed contributes nearly 30,000 pounds of nitrogen and 1,900 pounds of phosphorus each day from point and nonpoint sources into the Susquehanna River,” said SRBC Executive Director Paul Swartz. “While discharges from point sources proved dominant under base flow conditions, this is by no means a final conclusion of overall conditions. It is very likely that results will vary when samples are taken for normal and higher flows, and those differences will be accounted for in the final TMDL.”

States are required to develop TMDLs for impaired waterways not meeting the federal standards that call for all waters to be “fishable” and “swimmable.” About 330 miles of waterway in the Conestoga River Watershed are listed as impaired. A TMDL is used to calculate the maximum amount of a particular pollutant a waterbody can receive and still meet the federal water quality standards, and it is used to allocate or identify the amount of pollutant being contributed from specific sources, whether point or nonpoint sources. The Pennsylvania Department of Environmental Protection contracted SRBC to develop the TMDL for the 475-square-mile Conestoga River Watershed that encompasses much of Lancaster County and small portions of Chester, Lebanon and Berks Counties, Pennsylvania.

Under base flow conditions, SRBC determined the contribution of total nitrogen and total phosphorus from each of the six study areas. Nearly 50 percent of the total nitrogen originates in the mainstem Conestoga River; however, the highest concentrations of total nitrogen are found in the Lititz Run Watershed. Total phosphorus loadings range from less than seven pounds per day (Muddy Creek Watershed) to more than 245 pounds per day (Conestoga River mainstem). The highest phosphorus concentrations are located in the Mill Creek Watershed near New Holland. The primary sources of nutrients in the watershed during these flow conditions include the more than 50 permitted nutrient point source discharges and nonpoint sources.

The Conestoga River Watershed includes various land uses, with growth and development an ever-present challenge. Agriculture, however, remains the watershed's dominant land, accounting for 60 percent of the watershed's land use. Nonpoint sources contribute predominantly during storm events and include urban, agricultural, and small residential runoff. At present, contributions from these sources during storm events are the focus of monitoring efforts.

The *Conestoga River Watershed Total Maximum Daily Loads Development, An Interim Data Report* is available on the SRBC web site at www.srbc.net/pubinfo (select technical reports). Hard copies are also available by e-mailing SRBC at srbc@srbc.net or calling (717) 238-0423, ext. 302.

SRBC (www.srbc.net) is the governing agency established under a 100-year compact signed on December 24, 1970 by the federal government and the states of New York, Pennsylvania and Maryland to protect and wisely manage the water resources of the Susquehanna River Basin. The Susquehanna River starts in Cooperstown, N.Y., and flows 444 miles to the Chesapeake Bay at Havre de Grace, Md.

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