

Technical Memorandum

Significant Nutrient Point Sources in the Bohemia River Watershed

EPA requires that Total Maximum Daily Load (TMDL) allocations account for all significant sources of the impairing pollutant or pollutants. The TMDL analysis for Bohemia River addresses total nitrogen (TN) and total phosphorus (TP) loads during the low-flow conditions (May – October). This technical memorandum identifies, in detail, the significant surface water discharges of TN & TP used as modeling input when computing the TMDL.

There is one minor point source in the Bohemia River contributing nutrient loads, the Cecilton Wastewater Treatment Plant. Even though this source does not contribute a major role in developing the nutrient TMDL for the Bohemia River, an allocation has been made to this source based on its approved water and sewerage plan discharge flow. Table 1 below provides the allocation of nutrients nitrogen and phosphorus attributed to the point source in the Bohemia River.

Table 1
Loads Attributed to Significant Point Sources Used to Compute the
Low-Flow TMDL^a (May – October)

Point Source Name	Permit Number	Nutrient Loads (lbs/month)		Flow (mgd)	Concentration(mg/l)	
		TN	TP		TN	TP
Cecilton	MD0020443	365	102	0.08	18	5

^a These loadings correspond to model Scenarios 1 & 2 in the Draft Total Maximum Daily Load of nutrients for Bohemia River, Cecil County, August 2000.

^b This allocation scenario assumes a 0.08 mgd discharge based on the Cecilton Plant's approved water and sewerage plan flow.

Nonpoint sources were estimated on the basis of observed in-stream data. Thus, it is not possible to show a distribution between different land uses. The nonpoint source loads that were used in the model account for both “natural” and human-induced components. The Maryland Department of the Environment (MDE) expressly reserves the right to allocate the TMDLs among different sources in any manner that is reasonably calculated to achieve water quality standards.