



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

27 SEP 2005

Dr. Richard Eskin, Director
Technical and Regulatory Services Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 540
Baltimore, MD 21230

Dear Dr. ^{Rich}Eskin:

On August 3, 2005, the United States Environmental Protection Agency (EPA) received two water quality analysis (WQA) Reports from the Maryland Department of the Environment (MDE). The WQAs evaluated the pH impairment for the Lower North Branch Potomac River and the nutrient impairment for Greenbrier Lake.

The Lower North Branch Potomac River (basin code 02-14-10-01) was identified on Maryland's 1996 Section 303(d) list as impaired by low pH, cadmium, nutrients and sediments. A biological impairment was added to the stream on the 2002 Section 303(d) list. The WQA prepared by MDE evaluates the pH impairment only. The other impairments would still require a Total Maximum Daily Load (TMDL). The WQA assessed 145 samples collected from various stations throughout the watershed by MDE and the Maryland Department of Natural Resources from 1996 through 2004. Three of the 145 samples violated the applicable criteria which states pH values may not be less than 6.5 or greater than 8.5 in standard units. One sample collected in 1996 had a pH value (6.43) below the criteria and two samples collected from station NBP0461 had pH values above (8.8 and 9.0) the applicable criteria. None of the monitoring stations included in the report had a violation greater than 10 percent and EPA concurs that based on the data presented a TMDL for this watershed is unnecessary.

Greenbrier Lake (basin code 02-14-05-02) was first identified on Maryland's 1998 Section 303(d) list for elevated nutrients based in seasonally low dissolved oxygen (DO) values in the deeper portion of the lake. The Greenbrier Lake Watershed is 92 percent forested with only four percent of the watershed developed. The Use III-P waters designation for Greenbrier Lake requires that it not become eutrophic. MDE assessed the total phosphorous concentration using the Carlson Trophic State Index (TSI). The TSI scores for the total phosphorous concentrations in the Lake ranged between 30 and 37. TSI scores in this range are exhibited in oligotrophic-mesotrophic Lake systems. The chlorophyll *a* concentrations from Greenbrier Lake were also assessed. The sampling occurred in the summer during the most critical period for DO concentrations. The chlorophyll *a* concentrations ranged from 1.35 to 2.14 micrograms per liter well below the 10 microgram per liter concentrations associated with eutrophic systems. The data presented by MDE indicates that the Greenbrier Lake system is not eutrophic, and therefore,



not receiving an excessive nutrient load. EPA agrees that a TMDL would not be required for Greenbrier Lake.

If you have any questions or comments concerning this letter, please do not hesitate to contact Mr. Thomas Henry at (215) 814-5752.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Melissa Chatham, MDE-TARSA