



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029  
8/16/2006

Dr. Richard Eskin, Ph.D., Director  
Technical and Regulatory Services Administration  
Maryland Department of the Environment  
1800 Washington Boulevard, Suite 450  
Baltimore, MD 21230

Dear Dr. Eskin:

The U.S. Environmental Protection Agency (EPA) Region III has reviewed the report, "Water Quality Analysis of Cadmium in Lower North Branch Potomac River, Allegany County, Maryland," which was submitted by the Maryland Department of the Environment (MDE) for final Agency review on July 14, 2006.

EPA agrees with MDE's determination that the recent data show that a cadmium Total Maximum Daily Load (TMDL) is not necessary for Lower North Branch Potomac River. Lower North Branch Potomac River (basin code 02-14-10-01) was first listed by Maryland on its 1996 Section 303(d) list of water-quality limited segments as impaired by cadmium, sediments, nutrients, and low pH. Fecal coliform and impacts to biological communities were added in 2002. This water quality analysis addresses only the cadmium impairment. The listings for sediments, nutrients, low pH, fecal coliform and impacts to biological communities will be addressed separately at a future date.

The water column data collected in October 2004 and May 2005 at thirteen monitoring stations shows that concentrations of cadmium in the water column do not exceed water quality criteria. Cadmium water quality criteria are adjusted for hardness. Cadmium concentrations ranged from not detected to 0.109 µg/L. The cadmium detection limit was 0.038 µg/L. For all samples, hardness ranged from 46.0 mg/L to 219.6 mg/L. The cadmium concentration ranges were well below the fresh water aquatic life chronic hardness adjusted criteria.

Furthermore, sediment toxicity tests conducted in Lower North Branch Potomac River, by the University of Maryland Wye Research Center, established that there is no toxicity in the sediment as a result of cadmium contamination. The bioassay toxicity tests indicated that it is unlikely that cadmium contamination impacts survival and reproduction.

If future evidence suggests that cadmium deriving from the Lower North Branch Potomac River is contributing to water-quality problems, then MDE will need to readdress the cadmium impairment.



If you have any questions or comments regarding this report, please contact Mr. Thomas Henry, TMDL Program Manager, at (215) 814-5752.

Sincerely,

*Signed*

Jon M. Capacasa, Director  
Water Protection Division

cc: Melissa Chatham, MDE-TARSA  
Nauth Panday, MDE-TARSA

10/11/2006

*Erratum: Page 1, paragraph 4, last sentence, "The bioassay toxicity tests indicated that it is unlikely that cadmium contamination impacts survival and reproduction." The word "reproduction" should be "amphipod growth."*

