



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

DEC 26 2010

Leslie Knapp, Jr.  
Legal and Policy Counsel  
Maryland Association of Counties  
169 Conduit Street  
Annapolis, MD 21401

Dear Mr. Knapp:

Thank you for your correspondence to Secretary Grumbles regarding opportunities for Maryland's Phase I Municipal Separate Storm Sewer System (MS4) permittees to achieve greater impervious acre credit for stream restoration projects. The Secretary appreciates hearing from you, the MS4 permit managers, and the Maryland Association of Counties (MACo), about this important water quality matter and has asked me to respond on his behalf.

In your correspondence you have requested for the Maryland Department of the Environment (Department) to clarify the existing *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits, Maryland Department of the Environment, August 2014* (MS4 Guidance). Specifically, MACo is requesting that additional equivalent impervious acre credit be allowed for stream restoration projects using new Chesapeake Bay Program (CBP) protocols. The Department concurs that the latest CBP protocols can be used for increasing the credit allowed for stream restoration projects under the State's MS4 permit program and offers the following historical context, current analysis, and clarification.

In 2008, the CBP approved a universal stream restoration pollutant removal rate based on a study in the Spring Branch, Baltimore County, Maryland. This allowed bay jurisdictions to use a simple calculation per linear foot of the stream restoration project to determine pollutant load reductions. In Maryland, the Department used the CBP's universal pollutant removal rate and the methods described in the MS4 Guidance to establish an impervious acre credit of 1 acre per 100 linear feet of stream restoration.

MDE recognizes the importance of crediting alternative practices such as reforestation, street sweeping and stream restoration and that these practices can be an important part of a more comprehensive urban watershed restoration portfolio. In MDE's 2014 Guidance, MDE specifically recognized the importance of stream restoration and also stated that "...stream restoration should not be considered a substitute for providing adequate attenuation of untreated impervious area in the upland". At the same time, MDE recognized the importance of outfall protection and the infrastructure resiliency that it can provide, but capped the credit at 2 acres.

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Almost simultaneously with the Department's release of its MS4 Guidance, new pollutant removal rates for stream restoration were being established by the CBP in *Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects, Schueler and Stack, 2014*. In the Report, four empirical protocols were developed for calculating individual stream restoration project pollutant removal rates that replaced the former CBP's universal pollutant removal rate. The Department decided, however, to maintain the MS4 Guidance impervious acre credit of 1 impervious acre per 100 linear feet of stream restoration until the protocols could be more fully tested in Maryland. As stated previously, the Department also wanted to ensure that upland best management practices (BMPs), e.g., wetland systems, bioretention, and rain gardens, that do a better job of reducing pollutants at their source and maintaining natural hydrological drainage patterns, would continue to be implemented for MS4 restoration credit.

More recently, in a Memorandum, *Stream Restoration Crediting for MS4 Permitting Purposes, October 17, 2018*, the Department decided to accept the CBP stream restoration protocols for determining impervious acre credit. The stream restoration credit would be allowed up to the amount of actual impervious acres draining to the end point of the stream restoration project. It is the Department's view that upland accounting of impervious acres credited is separate and distinct from instream accounting. This means that upland credits can be added to instream credits for impervious area accounting and crediting. In summary, by limiting the stream restoration impervious acre credit to the amount in the contributing drainage area and allowing additional upland credits for impervious acres treated, the Department expects to encourage a practical balance of upland green infrastructure BMPs with stream restoration projects for overall local and bay watershed health.

In summary, the Department agrees with MACo in revising the credit amount and is willing to accept CBP stream restoration protocol data for calculating an equivalent impervious acre, but will continue to cap the stream restoration credit to the amount of the actual imperviousness in the watershed. In future iterations of the MS4 Guidance, the Department is willing to explore with MACo more opportunities for additional stream restoration credit as part of comprehensive MS4 watershed management programs for improving local waters and the Chesapeake Bay.

Thank you again for your correspondence. If you would like to discuss this further, please contact me at 410-537-3567 or by email at [lee.currey@maryland.gov](mailto:lee.currey@maryland.gov).

Sincerely,



D. Lee Currey, Director  
Water and Science Administration

cc: Ben Grumbles, Secretary  
Lynn Buhl, Assistant Secretary  
Jennifer M. Smith, Program Manager, Sediment, Stormwater, Dam Safety Program