Proposed Charge for the
Street, Catch Basin and Storm Drain Cleaning Expert Panel
04-23-2013

EXPERT BMP REVIEW PANEL Street, Catch Basin and Storm Drain Cleaning		
Panelist	***Affiliation***	e-mail Contact
Dr. Stu Schwartz	UMBC	ss@umbc.edu
Norm Goulet	NVRA	
Jenny Tribo	HRPDC	
Tim Karikari	DDOE	
Dr. Neely Law	CWP	Advisor to last panel
Tom Schueler	CSN)	Watershedguy@hotmail.comi

The panelists listed above were on the original panel, and have not been contacted as to whether they are willing to serve again. In addition, Bill Frost of KCI has volunteered to serve. We will also request panel nominations from STAC this time around.

Background

An expert panel recommended sediment and nutrient removal rates associated with intensive street sweeping in 2011 (CSN, 2011), largely based on the research and literature review provided by Law et al (2008). However, the recommendations were made prior to adoption of a uniform BMP review protocol, as outlined in Water Quality Goal Implementation Team (WQGIT, 2011). In particular, the four page memo produced by the panel did not contain detailed recommendations on how to report, track and verify the practice for credit in the Chesapeake Bay Watershed Model (CBWM), nor did it document the full body of research used to derive the recommended rates. Also, the loading protocol developed by the panel is no longer consistent with the manner by which the CBWM currently simulates nutrient and sediment wash off from imperious land.

In addition, many localities have requested that the report be broadened in scope to include more activities that remove sediments and vegetative debris from the storm drain system, such as catch basin cleanouts, municipal leaf collection, and the use of nets and screens to capture urban detritus at the outfalls of storm drain pipes. At the same time, researchers have conducted more monitoring on the performance of the next generation of street sweepers, as well as the nutrient content of sediment and vegetative detritus at various points of the street and storm drain system. Several protocols for defining nutrient and sediment removal rates for these practices have been developed in in response to several TMDLs in the northeastern US which may be applicable, in part, to the Chesapeake Bay watershed.

A wide range of local and state stakeholder agreed at a session of the 2012 Bay-wide stormwater retreat that the expert panel should be re-convened and the BMP expanded

in scope to address the above cited issues, and provide more options for localities to get verifiable credits for more active management of their street and storm drain network.

The initial charge of the panel is to review all of the available science on the nutrient and sediment removal performance associated with the active cleaning of municipal street and storm drain infrastructure:

1. Street cleaning, with an emphasis on new developments in sweeper technology and operation
2. Targeted catch basin cleaning to prevent nutrient and sediment deposits from migrating further down the storm drain system
3. Municipal leaf collection programs to keep detritus out of the street and storm drain system
4. The use of nets, screens and other devices to capture urban detritus from stormwater outfalls prior to its delivery to receiving waters.

The panel is specifically requested to assess:

- The technical assumptions underlying the 2011 memo, along with its supporting research and literature review provided in Law et al (2008).

- New street sweeping research from 2007 to the present, including USGS studies in MA, MD and elsewhere.

- The potential for credits for less frequent street sweeping frequencies than recommended by the original panel (26 times per year).

- The technical support for pollutant reduction protocols for the four practices developed in other regions of the country.

- Studies measuring the nutrient content of sediment and leaf detritus at various points in the urban landscape.

- Provide a specific operational definition for each of the four management practices defined earlier and recommend the qualifying conditions under which a locality can receive a nutrient and/or sediment reduction credit.

- Evaluate whether the existing CBP approved nutrient removal rates for street sweeping in 2011 are reliable, and recommend appropriate procedures and units for reporting, tracking, and verification of the practice.

Beyond this specific charge, the panel is asked to;

- Evaluate whether the current procedures for simulating the wash off of sediments and nutrients from impervious cover (IC) in the CBWM accurately reflect how sediments and vegetative detritus move through the storm drain system, and

whether or not future versions of CBWM may need additional categories of IC to better match urban street conditions and management practices.

- Take an adaptive management approach to refine the accuracy of its removal rate protocol, including any recommendations for further monitoring research that would fill critical management gaps.

- Critically analyze any unintended consequences associated with the nutrient management credit and any potential for double or over-counting of the credit

While conducting its review, the panel shall follow the procedures and process outlined in the BMP review protocol, as amended (WQGIT, 2013).

Proposed Panel Schedule

- Kickoff teleconference in August of 2013 to identify new literature, discuss charge, and plan a research review workshop for later in the Fall

- Continue teleconferences and/or face to face meetings until a consensus is reached, with a goal of having a revised panel report by March of 2014.