

Launching the Urban BMP Panels



Key Practices Nominated for New or Updated BMP Performance Review

Individual Practices	BMP Performance Standards	Community-wide Credits or Deductions
<ul style="list-style-type: none"> •Green Roof •Permeable Pavement •Stormwater Retrofits •Maintenance Upgrades •Reforestation •Upgraded Stream Buffers •Stream Restoration •Green Streets 	<p>Runoff Reduction and Hydrologic Performance Standards ¹</p> <p>Post Development Nutrient Loads</p> <p>Other Performance Standards</p> <p>Treatment Trains</p>	<p>Redevelopment Credits</p> <p>Future New Development that does not Fully Meet New Performance Standards</p> <p>Impact of Local or State Lawn Fertilizer Laws</p> <p>Illicit Discharge Elimination</p>

Sources: 1/31/2011 USWG meeting, and CSN, (2011b), CWP and EPA CBP

1 How to measure aggregate removal when multiple LID or ESD practices are used in a treatment train

Panel 1: Stormwater Retrofits

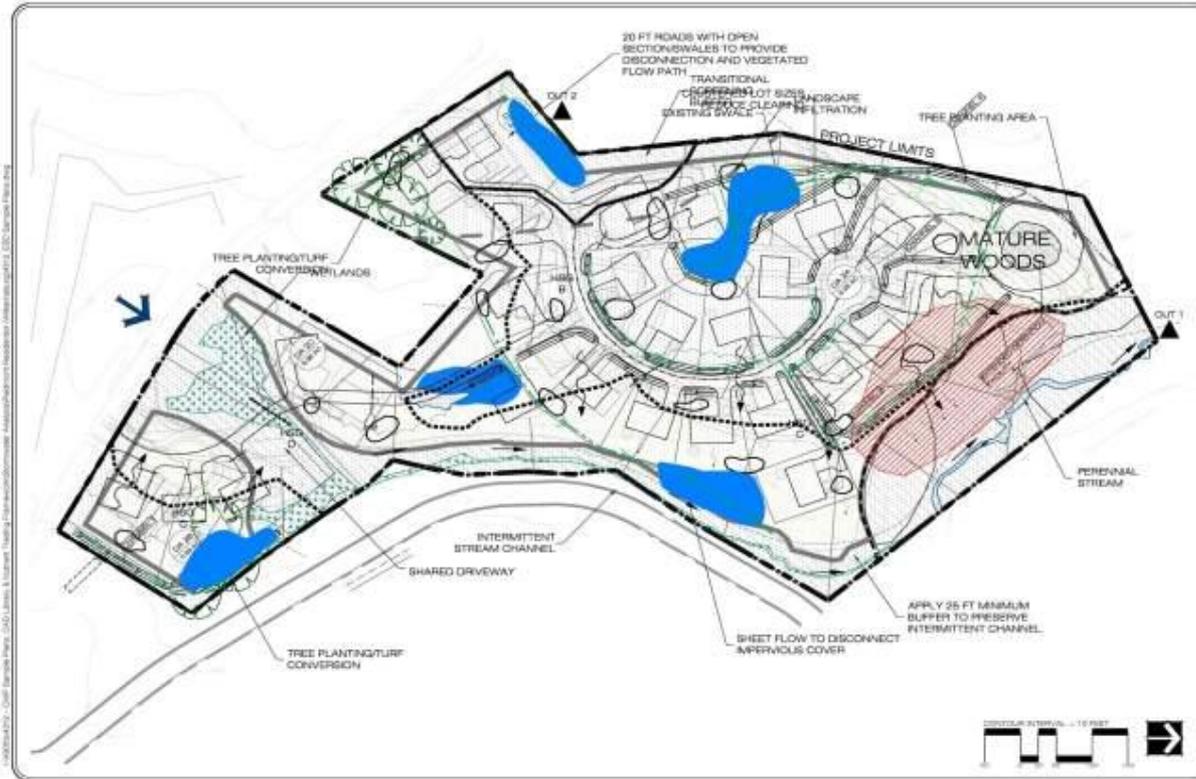
- Five broad retrofit classes
 - New retrofit facilities,
 - BMP conversions (e.g., a dry ED pond to a constructed wetland)
 - Enhance design or volume of existing BMPs
 - Green street retrofits
 - On-site LID retrofits
- Are we missing any important retrofits ?

Desired Skills for Retrofit Panel

- Someone who worked on the retrofit part of MDE (2011)
- Someone w/ experience in simple load models, and/or analysis of runoff quality data
- Designer with extensive experience in various kinds of stormwater retrofits
- Local stormwater manager w/ experience in reporting retrofit data to state
- EPA Bay modeler type who can assess whether the baseline load and retrofit reduction methods are consistent with current Watershed Model outputs
- Others ?

Panel 2

Dealing w/ Composite LID/ESD/RR practices at a site



Desired Skills for Composite BMP Panel

- Rep from each Bay state stormwater agency
- Local stormwater managers that need to report data to the state
- Researchers with experience in runoff reduction of stormwater practices
- Geographer/planner that can provide data on future rates of new and redevelopment
- Others ?

Panel 3 Updated Stream Restoration Rates



- U of MD Literature Review (Kaushal, Newcomer, Groffman and CSN)
- Review of 20 + studies on various parts of the urban stream nutrient cycle
- Develop concept model for predicting rates
- Should be done by early 2012

Desired Skills for Stream Restoration Panel

- Several volunteers from academia, local government, and other agencies
- Others ?

Panel 4 Major Maintenance Upgrades to Existing BMPs

Older BMPs should be downgraded if field inspections reveal that their hydrologic performance has failed due to poor design, installation or maintenance.

The downgrades must be reflected in local WIP **baseline** load

Significant nutrient reductions are possible through these "BMP makeovers"

By Retooling existing Maintenance Budget, it is possible to eliminate eyesores and clean the Bay



Options for Upgrades to Older BMPs

Three Ways:

Go from Level 1 rates to Level 2 on VA DCR spreadsheet

Direct mass reductions for sediment cleanouts (aka street sweeping)

Use Retrofit Design points method (Schueler et al, 2008)



Desired Skills for Maintenance Upgrade Panel

- Local stormwater maintenance program managers
- Private sector maintenance contractors
- CWP "BMP makeover" researchers
- Others ?

How to Account for Nutrient Reductions from Reduced Applications of Urban Turf ?

- Modeled as an application reduction (need model support)



- MD and VA TP Ban in Fertilizer
- Could reduce TP export by the equivalent to 25% of the total target reduction for urban and suburban lands
- Significant science gaps on P runoff from lawns
- How can N be reduced?