CONCEPT FOR STAC RESEARCH WORKSHOP AGENDA
Draft for USWG Review 11/06/2013

The Peculiarities of Perviousness:
a workshop to define, measure and model the nutrient dynamics
from the mosaic of land cover known as pervious land

Workshop Objective: The objective of this workshop is to characterize the key source areas and pervious cover types that generate nutrients and or reduce runoff in the urban landscape and determine whether it is feasible to utilize them in Phase 6 of the CBWM, by answering the following questions:

1. Does the source or cover type depart in a meaningful way from the average nutrient loading for generic pervious land?

2. If so, are their existing or future mapping tools that can accurately measure the source or cover type at the scale of a county and the entire Bay watershed?

3. If so, can the pollutant dynamics of the source or cover type be accurately simulated in the context of existing or future versions of the CBWM?

4. If so, would the source or cover type respond in a unique manner to the application of a new or existing urban BMP type?

Based on the answers to the preceding questions, the outcome of the workshop would be to analyze current research and recommend the best process to create a scientifically sound pervious land sub-classification system for the purposes of simulating and managing nutrient loads in the Bay watershed.

AGENDA AT A GLANCE		
9:00 to 10:30	T-1: Setting the Stage	
10:45 to 12:15	T-2: Review of Urban Wet and Dry Weather Monitoring	
1:00 to 4:30	T-3: Urban Stream Corridor as a Land Use	T-4: Changes in Urban Fertilizer and Atmospheric Inputs
4:30 to 5:00	Recap	
9:00 -12:00	T-5: Pervious/Impervious Connections	T-6: Effect of Tree Canopy on Pervious/Impervious Cover
12:45: 2:00	T-7 Nutrient Enrichment of Sediments in Urban Landscape	
2:30: 5:00	T-8: Synthesis Session/Next Steps	
Note: Agenda slots may change		

PROPOSED SESSIONS

Track 1: Setting the Stage
Track Organizer: Tom Schueler, CSN

Session 1: Objectives and Products to be Developed From the Workshop

Session 2. The CBWM and Pervious Land. How does the current CBWM simulate pervious and impervious land? What are the current categories and how do we differentiate the loading?

Session 3. CBP Land Use Modeling. What pervious land uses can we likely differentiate spatially? What is the partnership process for creating the land use data set?

Session 4: Lumping and Splitting: What are the Proposals for New Urban Land Use Classifications in CBWM? Review of the land use list and discussion of the four technical criteria, and review the decision time line..

Track 2: Review of Dry and Wet Weather Urban Water Quality Monitoring Data
Track Organizers: David Sample, VA Tech and Karl Berger, MWCOG

Session 5. What have we learned about pollutant concentrations from mixed urban land over the past three decades, and how does that knowledge inform how we manage pervious and impervious land?

- Urban Runoff Monitoring Data from 208,NURP and Occoquan and other VA monitoring efforts
- Review of National Urban Outfall and Source Area Monitoring Studies (e.g., NSQD)
- Small watershed monitoring studies
- Dry and wet weather urban nutrient data at different spatial scales

Track 3. The Urban Stream Corridor as its Own Land Cover Type.
Track Organizer: Bill Stack, CWP, and other CWP Staff

Session 6: How do stream bank erosion, illicit discharges, and sewage transmission losses influence nutrient and sediment loading and processing within the stream corridor? How does the stream corridor itself act to process nutrients and sediments delivered from upland and adjacent urban land? How should we define and map the stream corridor as unique entity for processing nutrients and sediments?

- Difference in nutrient/sediment concentrations in outfalls versus small streams
- Stream and floodplain nutrient dynamics
- Sediment trapping capability of Piedmont floodplains
- Mapping stream corridors and floodplains

Track 4. The Impact of Changes in Fertilizer and Atmospheric Deposition Inputs on Urban Lands

Track Organizers: Tom Schueler, CSN and Norm Goulet

Session 7. How many types of turf cover should be simulated? Should turf cover be sub-divided into different types based on nutrient risk, fertilizer application rate or other factors? If so, can these factors be measured at the local or Bay watershed scale?

- Key findings of UNM Expert Panel
- Key Research on Lawn nutrient dynamics
- Prospects for estimating non-farm fertilizer inputs

*Session 8. Construction sites as an urban source area***.** What do we really know about runoff and pollutant generation from the many different stages associated with construction from land clearing to final stabilization ? How are sediment and nutrient loads influenced by the use of traditional or enhanced erosion and sediment control practices?

- Key findings on sediment and nutrient pathways from ESC expert panel
- Data availability and quality for quantifying construction activities.

Session 9: Past and Future Trends in Air Deposition of Nutrient Inputs for Impervious and Pervious Land: How will trends in wet and dry weather atmospheric deposition rates change the availability for wash-off of nutrient inputs on pervious and impervious land?

Track 5: Interconnections Between Pervious and Impervious Areas in Urban Watersheds

Track Organizer: Peter Claggett, USGS

Session 10. Pervious and Impervious Interconnections. Are different runoff volumes or nutrient loads produced by impervious areas that are connected to pervious areas as compared to those that are directly connected to stream corridors via proximity or storm drains? How pervious are pervious surfaces?

Track 6. The Effect of Tree Canopy on Pervious and Impervious Cover Lands.

Track Organizers (Sally Claggett and David Sample

Session 11: Tree Canopy Interactions? Some pervious land has tree canopy (urban forest) that may function differently than normal forest or turf cover when it comes to runoff generation and nutrient loading. What forms of nutrient exchange occurs between urban trees, biomass and adjacent impervious cover?

Track 7. Urban Nutrient Enrichment in the Urban Landscape: Is it a Predictive Tool for Loading or Urban BMPs ?
Track Organizer: Norm Goulet and Cecilia Lane

Session 12: Nutrient Enrichment in the Urban Landscape. Can different levels of nutrient enrichment in urban soils, street solids, BMP sediments, bank sediments, and vegetative detritus be used to define or predict nutrient loading in the urban landscape? or help predict the impact of certain BMPs

Track 8: Synthesis Session:
What Does the Data Tell Us Where to Go
Track Facilitator: Tom Schueler, CSN

Session 13: Track Report Outs. Each of the Track Organizers (or Recorders) for Tracks 2 through 8 would provide a 5 minute summary of key points of synthesis relative to the four technical criteria, with 30 minutes for audience discussion

Session 14: Next Steps in the Process for Defining Pervious Land in the CBWM. The final interactive session would feature a facilitated discussion to identify critical research needs and define a draft charge for a future expert panel.