Urban Stormwater Working Group
Call minutes
August 22nd, 2018 2:00 – 3:00pm

In attendance: Steven Brendel, Madison County; Reid Christianson, University of Illinois; Mary Beth Falsey, DuPage County; Catie Gregg, Prairie Rivers Network; Holly Hudson, Chicago Metropolitan Agency for Planning; Heidi Leuszler, Parkland College; Stephen McCracken, The Conservation Foundation; Lisa Merrifield, Illinois Extension; Allison Neubauer, Illinois-Indiana Sea Grant; Trevor Sample, Illinois EPA; Cindy Skrukrud, Sierra Club; Hal Sprague, Center for Neighborhood Technology; Kelly Thompson, Illinois Environmental Regulatory Group; Leslie Heath, City of Champaign; Amy Walkenbach, Illinois EPA; Eliana Brown, Illinois Extension; and Kate Gardiner, Illinois Extension with guest speaker Tom Schueler of the Chesapeake Bay Stormwater Network.

Tom Schueler from the [Chesapeake Bay Stormwater Network](#) (CSN) will talk to the NLRS Urban Stormwater Working Group about his experience and lessons learned from tracking stormwater BMPs.

Tom Schueler Introduction

- Tom was born in Ann Arbor, MI before moving to the Chesapeake Bay, where he has now been for some time. He has long been involved in urban stormwater BMPs, having founded the Center for Watershed Protection in 1992. In 2007, Tom created the Chesapeake Stormwater Network, with a role to act as urban stormwater czar and help the area with decision-making.

Chesapeake Stormwater Network

- What is it?
  - Chesapeake Stormwater Network is a nonprofit corporation and a network of 11,000 stormwater professionals from both within the Chesapeake Bay Watershed and internationally.
- Mission
  - To promote more sustainable stormwater management in the Chesapeake Bay by advocating for the reform of federal, state and local laws, permits, regulations and design manuals.
  - CSN seeks to improve implementation of more sustainable stormwater management and environmental site design practices in each of 1300 communities and seven states in the Chesapeake Bay Watershed.
    - Chesapeake Bay Watershed states include Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and District of Columbia.
- Duties
  - CSN runs the Chesapeake Bay Stormwater Training Partnership to provide training targeted to stormwater professionals to address stormwater problems and improve water quality. The goal of the training is to integrate efforts of people working on stormwater management across the Chesapeake Bay region.
  - CSN also serves as Stormwater Technical Coordinator for the Chesapeake Bay Program. In this role, they facilitate urban BMP review panels/expert panels, which establish pollutant removal rates for urban B MPs.

- Process
  - Involves expert panel review process (researchers, managers, etc.) which evaluates BMP technologies (major and "boutique"). 8-10 experts review known literature and assess quality of the literature. It's not uncommon to review 80-100 scientific papers and reports. Due to this large workload, it takes about 12-15 months to reach consensus.
  - Once scientists and practitioners come to consensus, there's a second process where bureaucrats at state and fede4ral level make sure BMP recommendations are consistent and can be evaluated in the context of the Bay Watershed model.
- Panel Results
  - Recommendation of N and P removal rates.
  - Outline specific information that needs to be reported.
  - Recommendations on science that's still needed.
- Challenges
  - Most MS4s don't have effective BMP reporting or a way to evaluate systems in place.
  - CSN has a policy of BMP verification that requires field inspection. They developed resources such as Rapid Visual Indicators to help with this.

Questions:

- Reid Christianson: There are lots of BMPs and a need for a unified reporting structure. Since there are so many things on the ground, there is a strong need for generalizations.
  - Tom Schueler: There was concern about the privacy of farmers.
  - Tom Schueler: Yes, there are two types of people, lumpers and splitters, and tracking at the scale needed in the Chesapeake Bay Watershed requires substantial lumping. There could be simplifications on the existing list of BMPs.
- Holly Hudson: You mentioned one of your boutique BMPs that may have limited application are filter strips. Are you thinking of those in an urban setting?
  - Tom Schueler: Yes, on the urban side, filter strips have been shown to be a fairly ineffective urban stormwater practice in terms of failure rate over time and short-circuiting in our area. One of the most challenging panels I worked with was street sweeping; it went on for almost 3 years. Half the people think street sweepers are incredibly effective and half think they are not – the science can be interpreted both ways.
- Reid Christianson: Do you see any components of Chesapeake Bay Program process that could get pulled over to Midwestern states?
  - Tom Schueler: On the urban side, most removal rates are portable to most Midwestern states (differences are in upper Midwest glaciated areas). Rainfall rates and soil types are similar. Impervious cover drives the bus on this issue. Step one would be determining how much money you have for BMP evaluation. If not much, borrow from CSN – particularly the 10-20 most common BMPs. An expert panel costs $100-150K. Ours used a consensus decision making which prolongs the process. These panels are conservative by nature.
- Reid Christianson: There is also a discrepancy between the loads on paper and what is happening to receiving water bodies. You've worked on that, haven't you?

- o   Tom Schueler: BMPs are good, but the other driver is the nutrient loads in the watershed. It's not part of the BMP process, but it's called the Phase Watershed Model and it's a tool that's gone through 30 years of improved calibration.
- Hal Sprague: I heard you say something about rapid assessment indicators, I was wondering if you could expand on that?
  - o   Tom Schueler: One of the things we worked on is how can someone look at a bio-retention area, infiltration trench, or other stormwater BMP and rapidly assess it in the field to determine whether it's working as designed or whether it has bailed. We've put together a series of photo indicators showing a good or bad BMP. We have around 12-18 indicators for a BMP type that the inspector evaluates and uploads them using an iPad or smartphone. The assessment can be taken quickly in about 10-20 minutes. See: https://chesapeakestormwater.net/bay-stormwater/urban-bmp-verification/
- Tom Schueler: Any other thoughts or issues that you've been struggling with?
  - o   Trevor Sample: Funding is an issue.
- Reid Christianson: One thing that has come up is that there isn't a platform to track what folks are doing – different asset management software out there and different communities have their own ways, but there's no common measure between the communities. Thinking about the Chesapeake Bay and how you tie groups together and what they need to report, that's kind of how people decide what to do, right?
  - o   Tom Schueler: It's one of the most difficult things we do is to define what needs to be reported in general. I agree with you that there are dozens of different GIS, database software out there that people use and we can never have a standard or universal way because communities have different needs. But you can ask what things need to go up the food chain for that BMP? It's a pretty significant issue. Reporting and verification on the administrative side matter a lot and it's important to coordinate among private sector and local government to make sure it works well. Pay close attention to administration costs and ensure that it meets the needs of the state.
- Eliana Brown: We're coming to the end of our time. Thanks, Tom, for speaking with us today. If we have any follow up questions, would it be ok to contact you?
  - o   Tom Schueler: Yes, collate and email them. Perhaps we could do a face to face meeting in the next 6 months or so.

- ➢   Next Steps/Future Meetings for USWG
  - o   USWG meeting in Chicago – September 26th, 2018