

# Urban Stormwater Working Group

## Meeting Minutes

Tuesday, April 19, 2022, 2 – 3 p.m.



### Meeting Summary

#### **Welcome** *Lisa Merrifield, University of Illinois Extension*

Lisa welcomed everyone to the meeting and introduced new members. Joan Cox, University of Illinois Extension, replaced Kate Gardiner on the NLRs Facilitation and Coordination Team. New USWG members Carmen Franks, Mike Prusila, Claire Kissane, Tara Jagadeesh, and Janice Milanovich were welcomed, noting the members who were replaced.

#### **Illinois Green infrastructure Inventory Update** *Dr. Reid Christianson, University of Illinois*

Reid presented specific tracking elements that could be used for the Illinois statewide inventory of green infrastructure best management practices (BMPs). Parameters include where, what, how much, and when. BMP list comparisons among various data sources (Calumet Stormwater Collaborative, DuPage County, Region 5 Model, and the NLRs Biennial Report) were made to determine how to best organize the inventory. Reid demonstrated how practices may fall within common categories, which may help ease of tracking without losing the detailed variations in practice types. He presented reasons to distinguish new construction from retrofitted practices. He also noted that quantification of BMPs can be recorded as square feet, cubic feet, linear feet, number, or acres. As such, he advocates for converting all units to a common unit, [watershed] acres-treated, to allow for statewide tallying of GI BMPs and their water quality benefits.

### Round Robin Updates

The following members provided program and project updates: Mary Beth Falsey, DuPage County Stormwater Management; Holly Hudson, Chicago Metropolitan Agency for Planning; Carmen Franks, City of Urbana; Betsy Liggett University of Illinois Urbana-Champaign Facility and Services; Janice Milanovich, Illinois-Indiana Sea Grant; Tara Jagadeesh, Illinois Department of Natural Resources; and Chris Davis, Illinois Environmental Protection Agency.

### Next Steps

Members may send test data this week to Lisa Merrifield at [lmorrisn@illinois.edu](mailto:lmorrisn@illinois.edu). She will send it to the GI Inventory NCSA programmer to incorporate starting next week. Two members requested that a data confidence parameter be incorporated into the development of the inventory data entry interface to facilitate removal of test data and/or data with lower confidence.

### Meeting Minutes

*In attendance:* Eliana Brown, University of Illinois Extension; Reid Christianson, University of Illinois; Joan Cox, Illinois-Indiana Sea Grant; Chris Davis, Illinois Environmental Protection Agency; Mary Beth Falsey, DuPage County Stormwater Management; Carmen Franks, City of Urbana; Stacey Gloss, University of Illinois; Holly Hudson, Chicago Metropolitan Agency for Planning; Tara Jagadeesh, Illinois Department of Natural Resources; Shibu Kar, University of Illinois Extension - Natural Resources, Environment, and Energy; Claire Kissane, DuPage County Stormwater Management; Layne Knoche, University of Illinois Extension; Betsy Liggett, University of Illinois Urbana-Champaign Facilities & Services Division of Safety and Compliance; Lisa Merrifield, University of Illinois Extension; Janice Milanovich, Illinois-Indiana Sea Grant; Mary Mitros, DuPage County Stormwater Management; Trevor Sample, Illinois Environmental Protection Agency; John Sloan, National Great Rivers Research and Education Center; Justin Vick, Metropolitan Water Reclamation District of Greater Chicago; Morgan White, University of Illinois Urbana-Champaign Facilities & Services Sustainability

**Welcome** *Lisa Merrifield, University of Illinois Extension*

Lisa welcomed everyone to the meeting and introduced new staff and members. Joan Cox, University of Illinois Extension, replaced Kate Gardiner on NLRS Facilitation and Coordination Team. New USWG members include Carmen Franks, replacing Beth Reinke as City of Urbana Assistant City Engineer, Mike Prusila replacing Mike Warner as Stormwater Management Coordinator for the Lake County Stormwater Management Commission, Claire Kissane added as Water Quality Specialist at DuPage County Stormwater, Tara Jagadeesh replacing Lisa Krause as Coastal Studies Specialist with Illinois Department of Natural Resources Coastal Management Program, and Janice Milanovich replacing Allison Neubauer as the Lawn to Lake Midwest and Pollution Prevention Program Assistant for Illinois-Indiana Sea Grant.

**Illinois Green infrastructure Inventory Update** *Dr. Reid Christianson, University of Illinois*

Reid presented specific tracking elements that could be used for the Illinois statewide inventory of green infrastructure best management practices (BMPs). He cited the [2018 Progress Report on Coordination for Nonpoint Source Measures in Hypoxia Task Force States](#) in which key measures used to track BMPs include where, what, how much, and when.

Detailed measures for these four elements are summarized here.

	<b>Mandatory BMP measure</b>	<b>Optional BMP measure</b>
<b>where</b>	HUC 8 county	HUC 12 city latitude longitude
<b>what</b>	functional category name if “other”, then description quantity installation completion date	funding program name cost (\$) new development or retrofit
<b>how much</b>	unit (ac., sq. ft., no., ft.)	acres treated (watershed area being treated)
<b>when</b>	installation completion date	

Based on past discussions the following GI data sources will assist in starting BMP tracking: Calumet Stormwater Collaborative, DuPage County, Region 5 Model, and the NLRS Biennial Report. BMP list comparisons among these various sources were completed and Reid suggests that many practices may fall within common categories, which could facilitate merging of lists. Potential categories of BMPs include functional types, such as Conveyance, Detention, Filtration or Infiltration, as well as Land Use, Manufactured, Permeable Pavement, Storage, Green Roof, Street Sweeping, and Other. Categorizing may help ease of tracking without losing details in the variation of practice types.

Reid presented reasons to distinguish new construction from retrofitted practices. New practice construction, which refers to newly treated watershed acres, is dictated by laws intended to mitigate land use changes which can impact water quality, so the net result of installing the practices should be neutral and not count toward tracking of additional acres treated. Contrastingly, retrofits, which add green infrastructure to enhance water quality benefits, function to directly reduce a nutrient load that would have been seen during the baseline years

of 1980 -1996. For these reasons, “new construction” or “retrofit” descriptor should be captured as a “what” parameter.

Quantification of BMPs can be recorded as square feet, cubic feet, linear feet, number, or acres. He advocates for converting all units to a common unit of watershed acres treated to allow statewide tallying of GI BMPs and their water quality benefits. It will be important to do this with all the previously entered data at some point in the future. He alluded to the assumptions made for these conversions and a methodology which is used in the agricultural BMP tracking statewide. These math conversions are explained in a 2019 document, [Data Norms for Practice Inclusion for Agricultural Conservation Practices](#).

## Q & A

Comment: Holly Hudson noted it is always a challenge to use what makes sense from a public engagement standpoint as well as a field practitioner standpoint. In the past she has used IEPAs codes, NRCS practice standard codes, and Illinois Urban Manual codes, noting a few don't even have practice standards. Previously she had around 60 BMPs grouped into 10 categories. She is supportive of the functional categories that Reid presented.

Reply: Reid noted that Mary Beth Falsey had initiated a category idea and that can be overwhelming to organizing 30 practices while capturing important differences among practices installed. He hopes we can quantify better in the future.

Reply/Question: Holly said that once the GI Inventory is live, she intends to follow up with those that put their initial dot on the map. She asked how data will be gathered for the GI Inventory.

Comment/Question: Mary Beth Falsey mentioned that several groups are working on this and there is variation statewide. In some areas ag practices are used, other use specific urban practices heavily. DuPage County wants to be included in the statewide modeling. She asked whether DuPage County data could be counted if they categorize differently.

Answer: Lisa Merrifield told members that sample data is needed for the programmers to build the layers and initiate testing. Anyone is welcome to share data for this building phase. Lisa requested members send test data to her at [lmorrisn@illinois.edu](mailto:lmorrisn@illinois.edu) this week so that it can be initiated with The National Center for Supercomputing Applications (NCSA) programmers next week.

Question: Holly Hudson asked whether it could be flagged as test data since she can go back twenty years with some data samples.

Answer: Reid said yes. Also, it would be best to be inclusive of the various data sources in order to best accommodate existing databases. More data set samples to test will benefit the process.

Comment: Morgan White indicated they would like to send the UIUC campus data. They intend to develop a map of GI on campus properties. The team, which includes Betsy Liggett and Brent Lewis, have had many discussions about what to include, how to define, and which data should be collected. They would like to align with this effort.

Comment: Besty Liggett mentioned that they have an online version in an excel sheet, and she will verify with Brent whether it is up to date. She will share this again if necessary. She is very interested to see what NCSA can design and is eager to have all the data in one place.

Comment: Lisa Merrifield mentioned that the end goal is to have municipalities upload data directly to a map. For now, Extension is a catalyst and assisting with data collection and organization.

Comment: Chris Davis made a request similar to Holly's comment about old data. She asked that an extra column be added to capture the confidence level of the data (weak = 1, strong = 5 or 10). This way, we know which data can stay in the system and which should be discarded after testing. Chris also invited discussion about unifying the practice codes, noting that Illinois Urban Manual would be the most important document to which codes should be linked. She mentioned that IEPA's codes are based on an old numbering system, which was then carried on by the Illinois Urban Manual. Furthermore, NRCS has stepped back from urban practices to concentrate on ag practices, as reflected in NRCS codes.

Comment: Holly Hudson mentioned that some statewide ag codes are applicable, but there are unique codes for some practices. For example, an ag filterstrip and an urban filterstrip each have unique codes. She mentioned that several of the old IEPA codes were lake-related and not necessarily applicable to stormwater reduction BMPs. Taking a good look at the IEPA-independent codes to bring some into practice standards that could be incorporated into the IUM.

Comment: Lisa mentioned that the tentative timeline is to have maps by watershed available to show by Fall. She and Eliana Brown plan to present to various groups and share the updates for the GI Inventory.

### Round Robin Updates

*Mary Beth Falsey, DuPage County Stormwater Management* works with Mary Mitros, and Claire Kissane. The group has continued the GI Inventory for a couple years. Their water quality group works on MS4 permit requirements, watershed-based planning, and they are currently wrapping up the East Branch of the DuPage River Watershed Plan. They recently issued a call for inclusion project proposals from the 41 municipalities and townships within DuPage County, for which they received 5 to 6 responses. Therefore, the inventory will be expanding based on the data from those who responded. Overall it has been difficult to get the information, but they will continue to work with contacts to get more.

*Holly Hudson, CMAP* mentioned that their local technical assistance program that one of their larger programs. A MWRD-Land Use Planning partnership to assist with comprehensive neighborhood plans is on the horizon. They are currently selecting communities. MWRD will assist with stormwater planning and CMAP will assist with land use and transportation planning for these communities. This will happen in fiscal year 2023, so it will be reported eventually in an NLRs Biennial Report. CMAP is also updating their Flood Susceptibility Index to reflect recent flooding events, updated precipitation patterns, updated analytics, and ways to incorporate climate projections to inform future susceptibility. They will be engaging with climate, stormwater, and hazard professionals. They will be collecting data which will be indexed in a summary and shared.

*Carmen Franks, City of Urbana* is the new Assistant City Engineer. She works in public works, stormwater, and transportation. She previously consulted as a design engineer for GI in Washington, D.C. area. She is continuing the City of Urbana's drafted work on the Stormwater Master Plan, which she noted will manage assets, incorporate stormwater utility fee updates, and order GIS data for stormwater maintenance. They will be collecting data to make sure stormwater systems have adequate sizing and are in good condition. She also works to comply with MS4 permits and partners where applicable with UIUC and the City of Champaign.

*Betsy Liggett, UIUC F&S* manages stormwater construction permits. They also have 49 BMPs for which they report metrics to IEPA annually in June. As part of environmental compliance, they complete community outreach, public education and training, and work with coordinators throughout campus on training for maintenance of parking decks, triple basins, car washing, etc. They also work with the cities for street sweeping. They recently complete Boneyard Creek Community Day and a community-wide litter clean-up at seven locations throughout Champaign, Urbana, Savoy, and campus. Her team also works on the iCAP land and water team, making recommendations for projects.

*Janice Milanovich*, IISG works with Sarah Zach on Lawn to Lake Midwest programming. This is an outreach program aimed at protecting water resources in the Great Lakes region and beyond. A new website, <https://lawntolakemidwest.org> promotes lawn care practices that can prevent stormwater pollution and includes a [lawn care quiz](#) about actions individuals can take. They are initiating paid posts on social media, and they made an outreach toolkit with links to videos, brochures, social media graphics and text. The outreach toolkit is available for use, and members should contact her at [janicem@illinois.edu](mailto:janicem@illinois.edu) for the box folder link.

Comment: Holly Hudson requested the link from Janice and mentioned that Lawn to Lakes programming had synergy with upcoming CMAP programming for Lakes Appreciation Month in July.

*Tara Jagadeesh*, IDNR is the new Coastal Management Program Specialist. She is on the steering committee for the Calumet Stormwater Collaborative and is working on the GI Inventory. She is currently working on a coastal nonpoint sources pollution prevention program which has been conditionally approved by USEPA. It will be out for public comment on the federal registrar and she will notify the members when this is out. Following its approval, she will be working on plan implementation.

*Chris Davis*, IEPA is finalizing the 2020-2022 Integrated Water Quality report, which may possibly be approved by May 2022. Illinois GI grant opportunity may post later this year as round two of five potential rounds. It should be similar to round one for implementation of GI BMPs that 1) reduce stormwater runoff, 2) reduce local riverine flooding, and 3) protect water quality. They are making improvements to rankings to improve access for disadvantaged communities. A meeting May 18, 2022 will initiate a potential creation of an Illinois River Watershed Study Group. The intent is to mimic the NE workgroups (Fox R., DuPage R., Des Plaines R., etc.). If any members would like to attend contact Lisa Merrifield at [lmorrisn@illinois.edu](mailto:lmorrisn@illinois.edu). Chris is also in discussions with the surface water section at IEPA to discuss data incorporation by various interested groups into the Integrated Water Quality Report.

### **Next Steps**

Lisa Merrifield requested members send test data this week to her at [lmorrisn@illinois.edu](mailto:lmorrisn@illinois.edu). She will send it to GI Inventory NCSA programmer to incorporate starting next week.

Lisa said the goal is to have a preliminary map and user interface to showcase by Fall 2022. She and Eliana Brown plan to share this with various stakeholder groups for feedback.

Two members requested that the development of the inventory data entry interface include a data confidence parameter to distinguish test data and to distinguish data inputs of lower confidence from strong confidence. This could facilitate removal of test data and weak data from the inventory later.

The next USWG meeting will feature John Bilotta from University of Minnesota Sea Grant Extension who will present a street sweeping training and education program.