

Urban Stormwater Working Group

Meeting Minutes

Wednesday, April 26, 2023

1:30 – 2:30 pm

Via Zoom



Meeting Summary

Welcome and Introductions

Eliana Brown, University of Illinois Extension and Illinois-Indiana Sea Grant (IISG)

Eliana welcomed the group and thanked participants for coming and for contributing to the NLRs Biennial Report. Amanda Christenson took notes.

Illinois Green Infrastructure Inventory Updates

Lisa Merrifield, University of Illinois Extension

Lisa presented an update on the Illinois Green Infrastructure Inventory (GII). She highlighted the project partners who contributed and explained the purpose of the inventory. The purpose is to measure and evaluate stormwater practices across Illinois, compare existing data on nutrient levels in surrounding waterways, better understand long term impacts of green infrastructure on water quality and flooding, allow communities to make informed decisions to reach goals, serve as a statewide data source of stormwater BMPs that can be used by researchers, students, and planning commissions, and help communities choose the best solution for their stormwater management challenges. She highlighted [The Great Lakes to Gulf Virtual Observatory website](#) and showed us the interactive map. Lisa ended noting that the Great Lakes to Gulf will maintain the data collected for the GII and that the IEPA is considering options for adding updates.

Illinois Groundwork Website

Margaret Schneemann, CMAP and Illinois-Indiana Sea Grant

Margaret is a water resource economist, and her position is part of a partnership between Illinois Indiana Sea-Grant, the Chicago Metropolitan Agency for Planning (CMAP), and Extension. Margaret presented the new [Illinois Groundwork Website](#) for the group and highlighting some background on this project. One of the priority issues that they identified was a lack of urban soils knowledge and characterization. This was important because this lack of soil knowledge in urban areas is a barrier for effective Green Stormwater Infrastructure (GSI). She explained that the purpose of Illinois Groundwork is to provide GSI research, tools, and resources to stormwater professionals, local leaders, and community members so that they understand GSI design, research, tools, and other resources. People who use this website will be able to integrate those resources into GSI design projects, ultimately resulting in reduced flooding and improved water quality. Margaret encouraged us all to explore the website. There are three different sections of the website: GSI Design, Design Process, and Resources. The intent of the website design is to make it visually engaging, but also to have accessible introductory information with the option to drill down into more detail. This website takes the results of Illinois research and presents it in a way that non-engineers can understand the relationships between soil characterization and other GSI design attributes such as the width, depth, and type of green infrastructure. She concluded by asking for feedback and help promoting the site, which can be found at illinoisgroundwork.org

2023 NLRs Biennial Report Updates

Eliana Brown, University of Illinois Extension and IISG

Eliana thanked everyone for submitting their spreadsheets and narratives. This year the NLRs Facilitation and Coordination Team is led by Joan Cox. New this year we will only include the name and a two to three sentence

summary in the body of the report in the current programs and projects section. However, the appendix will include one-to-three-page narrative for each program or project description. As a reminder, we print the main section of the report, but the appendix is only available online. The Urban Stormwater Working group has an opportunity to review Chapter 6 on July 13-19. Please mark your calendars to be ready. Those comments are critical to ensure that we have USWG feedback and support of the content in this biennial report. Many USWG members have provided photos in the past and it is appreciated because it enhances the report and makes it more meaningful. Please send any photos that represent the stormwater sector by Friday, June 16th to Layne at lknoch2@illinois.edu. Eliana will send an email reminder with the upcoming dates of note for this group.

Round Robin Member Updates

Holly Hudson, CMAP

- Holly said that the Illinois EPA is working with the area wide planning agencies, both CMAP and Greater Egypt, beginning the process of reviewing the Illinois Water Quality Management Plan. They aim to assess it and develop a strategy and framework to update the Statewide Water Quality management plan to reflect current policies, programs, and resources available. Over the next few years, many USWG members will be asked to be involved in technical advisory groups around the state to assist in this update.

Tyler Carpenter, Greater Egypt Regional Planning and Development Commission

- Tyler reported that his organization recently lost its status as a Metropolitan Planning Organization (MPO) because we were dropped from the urbanized area status. This makes the future of the MS4 status uncertain. Tyler said he had reached out to Melissa Parrott with the MS4 program but had not heard back yet. He clarified that it was because of population decline prevented them from continuing the urbanized status and encouraged the group to reach out to him if they have any information that might help at tylercarpenter@greateregypt.org.

Scott Marlow, IDOT

- Scott said that IDOT has been doing a study with the Illinois Center for Transportation and the University of Illinois to research alternatives to current erosion control blankets that have a plastic mesh in them. The study is about halfway complete and then they will work on implementation. Scott mentioned that one of the issues they have with erosion control blankets is wildlife entanglement. He explained that certain styles and blankets have a movable joint in the blanket and snakes get stuck in there because they can't move backwards.

Meeting Minutes

In attendance: Dean Alonistiotis, Metropolitan Water Reclamation District of Greater Chicago; Eliana Brown, University of Illinois Extension; Tyler Carpenter, Greater Egypt Regional Planning and Development Commission; Amelia Cheek, Illinois Farm Bureau; Amanda Christenson, Illinois Extension; Maggie Cormack; Joan Cox, University of Illinois Extension; Rachel Curry, University of Illinois Extension; Carmen Franks, City of Urbana; Holly Hudson, Chicago Metropolitan Agency for Planning; Tara Jagadeesh, Illinois Department of Natural Resources; Shibu Kar, University of Illinois Extension; Claire Kissane, DuPage County Stormwater Management; Layne Knoche, University of Illinois Extension; Scott Marlow, Illinois Department of Transportation; Stephen McCracken, The Conservation Foundation; Lisa Merrifield, University of Illinois Extension; Stephanie Mueller, Illinois-Indiana Sea Grant; Mike Prusila, Lake County; Karoline Qasem, Geosyntec; Colleen Ruther, University of Illinois Urbana-

Champaign Facilities & Services Division of Safety and Compliance; Trevor Sample, Illinois Environmental Protection Agency; Margaret Schneemann, Chicago Metropolitan Agency for Planning; John Sloan, National Great Rivers Research and Education Center; Emily Steele, Illinois Extension; Drew Williams-Clark, Metropolitan Planning Council

Welcome and Introductions

Eliana Brown, University of Illinois Extension and IISG

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Illinois Green Infrastructure Inventory Updates

Lisa Merrifield, University of Illinois Extension

Lisa presented an update on the Illinois Green Infrastructure Inventory. She highlighted the project partners who contributed and explained the purpose of the inventory. The purpose is to measure and evaluate stormwater practices across Illinois, compare existing data on nutrient levels in surrounding water ways, better understand long term impacts of GI on water quality and flooding, allow communities to make informed decisions to reach goals, serve as a statewide data source of stormwater Best Management Practices (BMPs) that can be used by researchers, students, and planning commissions, and help communities choose the best solution for their stormwater management challenges. The team collected about 2,000 records, with reports from Calumet Stormwater Collaborative, DuPage County, University of Illinois, and MS4 reports. They had nearly 750 BMPs without enough information to map. She asserted that the inventory is not comprehensive because didn't have capacity to make phone calls or visits to all the sites to gather missing information. Data collected for these sites include the BMP name, HUC 8 and 12, GPS location, category, and type of practice. When available, information included funding source, size, installation date, cost, drainage area, gallons treated, new development or retrofit, and construction status. Lisa shared the Great Lakes to Gulf Virtual Observatory (GLTG) website, an interactive application that provides user-friendly access to water quality information about the Mississippi River and its tributaries. The website is <https://greatlakestogulf.org/>. She mentioned that Great Lakes to Gulf will maintain the data and that the IEPA is considering options for updates.

Discussion:

- Lisa Merrifield: There is some discussion going on about what the maintenance is going to be. IEPA is considering options for keeping this information updated. I saw that Trevor was on the line and he might have some further updates to share.
- Trevor Sample: I'll just say that we realize that we need to have a way to easily update this layer and add more information. We're going to be exploring options. One suggestion from today is to have folks submit the data to Extension. We can put a call out for the information. It's just updated manually that way. Perhaps having some sort of portal where people could go in and enter their own information would be good.
- Holly Hudson: A portal sounds like a neat idea. Get the ask out to the municipalities, townships, counties, etc., and have them do the inputting? Right? That sounds great.
- Trevor Sample: Yeah, we'll just have to talk to Great Lakes folks and see what's doable. It would probably involve having usernames and passwords.

- Lisa Merrifield: Yeah. I think that was our original dream was that municipalities would be able to go in and enter their own information and keep it updated and feel interested in compelled to do that.
- Eliana Brown: Anyone have any other thoughts on that?
- Holly Hudson: Then they get bonus points for their next Green Infrastructure Grant Opportunities (GIGO) application if they've put their information in the portal.
- Trevor Sample: Nice try, but it could be a requirement of GIGO Grants that you must go and put your information in. Thanks, that's a good idea.
- Eliana Brown: That is a good idea.
- Lisa Merrifield: In the data sources we did also include anybody who's had a GIGO Grant. I should have included that.
- Eliana Brown: Drew not to call you out, because it was really your predecessor, Justin, that Lisa worked with at the Calumet Stormwater Collaborative to include your green infrastructure inventory data. I'm wondering how we could make sure that anything that would be entered into your systems would still stay compatible with the statewide version.
- Drew Williams-Clark: I think we would want to stay in touch and make sure that they are compatible. Right now, we're just trying to make sure that we have staffing and resources to make sure that those things continue. I'm also just aware that in the city, Meg is working on a way to augment that with more data from the city of Chicago. So, as we get that in and integrate it with the GIBI, we can share that back with you and make sure that it you know it's a virtuous circle. I hope that's helpful.
- Lisa Merrifield: Definitely. Thank you.
- Drew Williams-Clark: Yeah, no problem. This is great work. Thanks for sharing.
- Eliana Brown: Colleen, I think that that also goes for you and Betsy. I'm trying to think if there's others. I know that CSC is the one entity that was gathering a lot of information in that region.
- Lisa Merrifield: Yup. That was the bulk of our data. So, we greatly appreciate your willingness to share and we might have some data we could share back with you because the students dug in and added information to what your people had entered. So, we may have a little bit more we can share.
- Drew Williams-Clark: That would be incredible. If you're willing to share, we could have someone look and make sure that it's updated with the most current information that you're able to find. Thank you.
- Holly Hudson: Lisa, I was just thinking back to the one map you showed where some of the counties were. You know, salmon colored. What was what was the meaning of that?
- Lisa Merrifield: Oh, that was a map that showed the county data from any source. Now that I think about it, it is probably an old map. And then the MS4 reports came out and filled in a little bit more.
- Holly Hudson: Okay, because. I imagine that there were MS4 reports from many more counties. But maybe again, there wasn't enough information to include the database.
- Lisa Merrifield: Right. A lot of the 750 where we suspect there are BPMs in place, but we don't know where it is or what it is, were from those MS4 reports.
- Dean Alonistiotis: Are we connected to this group? <https://giexchange.org/>. This is a national cohort of green infrastructure practitioners, and I thought it might be a good resource for us, given the work on groundwater within this working group. I just wanted to put that in in the chat and see what you thought. I'm happy to make connection if that makes sense.
- Drew Williams-Clark: You're talking about the Leadership Exchange team. Yeah, that's a good call.
- Lisa Merrifield: Well, thanks so much. And again, I really must give credit to Gabe Harper-Hagen and Piper Siblik, who did the lion's share of this work. I'm grateful to them. Gabe is right now, finishing up his master's degree, and Piper is off doing amazing things in Montana. They have moved on from us but did fabulous work.

Illinois Groundwork Website

Margaret Schneemann, CMAP and Illinois-Indiana Sea Grant

Eliana introduced Margaret and mentioned that she and Layne have also been involved with creating this Illinois Groundwork website that Margaret is going to talk about. The website helps set communities up for success on green infrastructure projects. Margaret is a water resource economist, and her position is part of a partnership between Illinois Indiana Sea-Grant, the Chicago Metropolitan Agency for Planning (CMAP), and Extension. Margaret is representing the Illinois Groundwork team to discuss the new website illinoisgroundwork.org

She provided some background on how they identified the needs, people, and funding that led to creation of Illinois groundwork. The [Calumet Stormwater Collaborative](#) (CSC) is a Chicago collaboration that address the stormwater impacts in the Calumet region. Members include government agencies, research institutions, NGOs, communities, community groups, consultants, and more. Early on the CSC worked together to identify priority needs for communities to address stormwater management issues in the region. One priority issue identified was a lack of urban soils knowledge and characterization. This was important because this lack of soil knowledge in urban areas leads to a barrier for effective Green Stormwater Infrastructure (GSI). This is because using existing modeling tools to model GSI performance relies on assumptions about soils data that could include things like using very low resolution or extrapolated soil status. Models miss-estimate and give biased predictions of GSI performance and that ultimately results in inefficient design and siting and even to installation failures. To address this need and to fill the urban soils design gap in the Calumet region, they undertook a soils research project. She called this Cal-Soils, which was led by Mary Pat McGuire at the University and funded by IISG. The research premise was to look at how coordinated GSI, taking soils data into account, is a better investment than implementing opportunistic GSI. One of the great things about this research is that it brought together an interdisciplinary group of researchers, students, and Extension across the university. They accomplished several things including native sub-soils characterization in the Calumet region integrating the soils data into GSI research modeling and ultimately research design highlighting this work with two communities in the Calumet region. They also had the goal of extending this research to benefit other communities, both within the Calumet region and across the entire State.

They began creating the toolkit and fall of 2019. As part of this process, they engaged both the entire CSC membership, and formed and facilitated a smaller working group of people who together created a concept map that gave an outline for creating a toolkit. They created a toolkit and process guide explaining how to integrate soils research into GSI design. They had a great opportunity through the University of Illinois Extension collaboration Grant, for which Eliana led the application. They received that grant, which was instrumental in augmenting capacity to build the Illinois Groundwork site. It brings together research across the University and Extension with the aim of highlighting the collaborative and interdisciplinary nature of GSI. This also highlighted the incredible amount of expertise that the University of Illinois has within disciplinary domains and departments on GSI. This will also hopefully provide a framework to think about how to integrate that expertise across departments and within Extension.

She explained that the purpose of Illinois Groundwork is to provide GSI research, tools, and resources to stormwater professionals, local leaders, and community members so that they understand design, research, tools, and other resources. People who use this website will be able to integrate those resources into GSI design projects, resulting ultimately in reduced flooding and improved water quality.

Margaret encouraged us all to check out the website. There are three different sections of the website: GSI Design, Design Process, and Resources. Goals of the website design are to make it visually engaging and accessible with the ability to drill down into more detail. She clicked through the main areas of the website.

The GSI Design section was developed from the frequently asked questions of the toolkit and was geared towards people who are completely new to GSI. This research and this website are unique in the emphasis on the role of soil. During the Cal-Soils project, they encountered confusion about what soils are and issues that people have with distinguishing between soils as a growing medium for plants and native soils or subsoils, so this site helps clarify that. Another section is about who might be involved in GSI design. She asserted that GSI has a wide range of people involved in the process. They feel that GSI is fundamentally multi-disciplinary and lends itself to community engagement in a way that grey infrastructure doesn't. She hopes that in listing all the people that we involved in the pilot process will start to get people thinking about the range of expertise, voices, and perspectives that can potentially be leveraged to design effective GSI.

The second section, Design Process, was based on the toolkit and process guide developed by the Cal-Soils working group. This section walks the user step by step through integrating soils research into GSI design. They also include information for people interested in delving into the pilot projects. This site emphasizes how all these other resources fit into the planning process that is centered around integrating soils, distinguishing it from other GSI resources. Each section has a quick overview of the steps, outcomes, and who might be involved.

The last section of the website is the resource library, which is a curated collection of GSI resources that are filterable by things like topic, step of the design process, and type of resource. It includes resources from within the University of Illinois system but also resources recommended by our stakeholder group. Other resources are the plant finder, which is searchable, filterable, and highly visual resource for finding plants that that go with the GSI design in terms of the soils research, and a sizing tool. This website takes the results of research and presents it in a way so people can understand the relationships between soil characterization and other GSI design attributes such as the width, depth, and type. The site also includes case studies, guidance on co-benefits, and a list of regulations in a State of Illinois that that impacts design projects. The site is technically done; however, the team is still working to incorporate feedback. They have plans for adding sections maintenance and funding sources. She encouraged us to look at the site and send her any comments. She also encouraged the group to help promote the website.

Discussion:

- Holly Hudson: I look forward to digging in and applying it to our watershed-based planning with the CMAP community. Other folks here work with their communities in their parts of the State. I think it looks like a great resource. Thinking of all the places where you can promote it, how about the Metropolitan Mayor's Caucus and their environmental group. There are probably many groups that have an environmental type of committee that can spread the word to their different communities on the county level.
- Drew Williams-Clark: I want to echo what Holly's saying. This work is incredible. I was thinking about some of the NGOs in the suburbs that tend to do the sort seeding work, like metaphorically, in terms of organizing folks around GI projects. The Conservation Foundation and a few others like that would be really good sources of that work, but there's probably a dozen of them spread out all over the place. They are regularly going out doing the educating, and I think that that just might be a good force multiplier strategy for you all to get them using it and then talking about it. Wild Ones or DuPage Stormwater Commission have been active, do cool things, and having engagement.

- Margaret Schneemann: We do not have a fully developed marketing, branding, and outreach strategy. We have a partially developed one thanks to Extension and Sea Grant. Think about who should be on distribution list. We should be giving presentations to those kinds of groups, that would be very helpful. Thank you for having me to talk about it.
- Eliana Brown: It was really Margaret's brainchild, and took a lot of her effort, and a ton of Layne's effort too. I really encourage everyone to go look at Plant Finder, especially if you're looking at establishing a rain garden or native plant garden. I have used it, and I know that Layne included about 800 photographs in the database.

2023 NLRS Biennial Report Updates

Eliana Brown, University of Illinois Extension

Eliana thanked everyone for submitting their spreadsheets and narratives. This year the NLRS Facilitation and Coordination Team is led by Joan Cox. Eliana asked the group to submit photos and went over the Biennial Report Production schedule mentioning that we'll send the chapter for their review in mid-July.

There are two main sections, the implementation report and partner projects. The implementation report includes spreadsheet data that has been analyzed into resource measures and into the outreach information measures. The stormwater sector has all these great projects that keep building year to year. It is important for the people to see what the State of Illinois is doing in the stormwater sector statewide. Something that is a little different from prior reports is that the main body of the report only includes project or program name and a two to three sentence summary. However, the appendix will include one to three pages for each program or project description. As a reminder, the main section of the report will be printed and online, but the appendix is only available online.

The policy working group will be receiving chapter 3, 4, 5, 7, and 8 from June 8-June 21. The Urban Stormwater Working group looks at Chapter 6 on July 13-19. The stormwater review is a little bit later, to allow inclusion of the latest information from the MS4 reports. Please mark your calendars to be ready for the Ch 6 review. Those comments are critical to make ensure USWG feedback and support of the content in this biennial report. Many USGW members have provided photos in the past and it is appreciated because it enhances the report and makes it more meaningful. Please send any photos that represent the stormwater sector by Friday, June 16th to Layne at lknoch2@illinois.edu. Eliana will send an email reminder with the upcoming dates of note for this group.

Round Robin Member Updates

Holly Hudson, CMAP

- Holly said that the Illinois EPA is working with the area wide planning agencies, both CMAP and Greater Egypt, beginning the process of reviewing the Illinois Water Quality Management Plan. They aim to assess it and develop a strategy and framework to update the Statewide Water Quality management plan to reflect current policies, programs, and resources available. That plan is from December 1992 and there is a continuing planning process document from January 1994. The statewide plan has been amended. The stormwater sector has certainly come a long way with water quality management and stormwater management and regulations. So, it is time to begin that process to update the statewide plan. Over the next few years, many USWG members will be asked to be involved in technical advisory groups around the state to assist in this update.

Tyler Carpenter, Greater Egypt Regional Planning and Development Commission

- Tyler reported that his organization recently lost its status as a Metropolitan Planning Organization (MPO) because we were dropped from the urbanized area status. This makes the future of the MS4 status uncertain. They are one of three MS4 areas that may lose that status in the country. He has tried to investigate some guidance on this, but not sure there is much. He asked if anyone had any guidance. Trevor asked if Tyler had talked to anyone at IEPA about this. Tyler said he had reached out to Melissa Parrott with the MS4 program but had not heard back yet. Scott Marlow asked for more information on why they are losing their MPO. Tyler clarified that it was because of population decline prevented them from continuing the urbanized status. Tyler encouraged the group to reach out to him if they have any information that might help at tylercarpenter@greateregypt.org.

Scott Marlow, IDOT

- Scott said that IDOT has been doing a study with the Illinois Center for Transportation and the University of Illinois to research alternatives to current erosion control blankets that have a plastic mesh in them. The study is about halfway complete and then they will work on implementation. Hopefully, the implementation aspect of this will be that there is some kind of special provision that IDOT will use. IT's not known yet if it would be construction site wide or just specific areas depending on the national resources. He is excited and thinks the industry is headed this direction. Holly chimed in and mentioned that they were using a jute mesh erosion control blanket on one of their projects. Scott mentioned that one of the issues they have with erosion control blankets is wildlife entanglement. He explained that certain styles and blankets have a movable joint in the blanket and snakes get stuck in there because can't move backwards. He thinks it'll be dependent on if we have snakes listed in a project area, IDOT might call for one sort of style of blanket if cost is effective. They can look at plastic free construction site wide depending on costs and availability. They don't tell the contractors what products to use; instead, they simply give them a menu of choices, and then contractors are free to pick from those based on what's available.