# Urban Stormwater Education Subgroup

**Meeting Minutes**

Wednesday, October 25, 2023
1:30 – 2:30 pm
*Via Zoom*

## Meeting Summary

**Welcome and Introductions**

*Eliana Brown, Illinois Extension and Illinois-Indiana Sea Grant*

Eliana welcomed the group. She introduced our agenda, speakers, and a new member of the Extension team for this semester. Katy Solak is a new graduate student working with Extension who has experience with water quality. She plans to work on updating and adapting the CMAP resource repository.

**CMAP Resource Repository Overview and Next Steps**

*Kate Evasic, Chicago Metropolitan Agency for Planning and Eliana Brown, University of Illinois Extension*

Kate shared the history and status of the CMAP resource repository with the group. The Calumet Stormwater Collaborative developed a resource repository over several years and it has been posted online in a few places. Eliana walked the group through a potential plan to engage Katy Solak to update, expand, and adapt the resources to be included in the Illinois Groundwork website. The group agreed that this work would be helpful. The next steps included updating broken links on the existing repository and follow-up conversations with working group members to learn more about the resources they use in their day-to-day work.

**Lawn to Lake Program Overview**

*Steph Mueller, Illinois-Indiana Sea Grant*

Steph shared background information about the Lawn to Lake program, including the underlying problem of the gulf hypoxia and the massive amount of lawn in the US. She shared some information about some of the pollutants that can come from lawncare practices and shared some of the natural lawncare principles of the Lawn to Lake program. She mentioned the many resources available on the website and encouraged folks to use the site and share with their networks.

***Round Robin Member Updates***

Carmen Franks and Tyler Carpenter had updates and questions for the group. See below for details.

## Meeting Minutes

*In attendance: Eliana Brown, Illinois Extension and Illinois-Indiana Sea Grant; Tyler Carpenter, Greater Egypt Regional Planning Commission; Amanda Christenson, Joan Cox, Illinois Extension; Illinois Extension; Kate Evasic, Chicago Metropolitan Agency for Planning; Carmen Franks, City of Urbana; Layne Knoche, Illinois Extension; Steph Mueller, Illinois-Indiana Sea Grant; Trevor Sample, Illinois Environmental Protection Agency; Margaret Schneemann, Illinois Extension, Sea Grant, and Chicago Metropolitan Agency for Planning; Katy Solak, Illinois Extension*

**Welcome and Introductions**

*Eliana Brown, University of Illinois Extension*

Eliana welcomed the group, introduced herself, and then introduced Katy Solak. Katy introduced a little about herself. She is a grad student at U of I and in the Water Resources Engineering and Science Program. She has a

lot of experience with water which spans across different areas. She has worked on a wide range of water-related projects, including hydrologic studies with stormwater flooding simulations, microplastics, algal wastewater treatment/biofuel, and wastewater treatment plant design. She has modeled with GIS/USEPA WATERS/USGS SPARROW to analyze temporal and spatial data related to nutrient and contaminant transport throughout the watershed. She designed, 3D printed, and tested a weir to measure a green roof overflow and studied carbon sequestration from native vegetation. Katy is working with Illinois Extension this semester to update the resource repository.

**CMAP Resource Repository Overview and Next Steps**

*Kate Evasic, Chicago Metropolitan Agency for Planning and Eliana Brown, University of Illinois Extension*

Kate introduced herself and shared info about the Resource Repository project with the Calumet Stormwater Collaborative (CSC). Kate is a senior planner at the Chicago Metropolitan Agency for Planning (CMAP). Her focus at CMAP is on climate resilience work and she has been involved in our stormwater planning and flood mitigation work for several years now, which connected her with the CSC. The CSC is a group of government, nonprofit, private, and community organizations who are focused on advancing better stormwater management and equitable flood relief in the Calumet region, which is in the south side of Chicago. In 2018, the CSC finalized developing a repository of relevant stormwater resources. The goal of this project was to have a curated list of resources that both CSC members and the Calumet communities at large could use to help drive much-needed investments in stormwater management and flood mitigation.

The CSC has different working groups, and this fell under the planning and policy work group that Kate was co-leading with IDNR Coastal Management. Members from the Center for Neighborhood Technology, Cook County Forest Preserve, Metropolitan Planning Council, and University of Illinois were helping to drive this work on a volunteer basis. First, they prioritized and compiled the resources into one document, which was completed in 2018. Then they saw potential phase two, which was to build out an interactive and useful website, but then the project was put on hold. They realized that it took a long time just to compile the resources, so they took 2019 to socialize the document, then in 2020 with the pandemic this project has been on hold ever since. Kate shared the development process with the group, which included creating the spreadsheet, populating it with initial resources, sharing a draft with the CSC, and asking for additions and feedback at a CSC meeting.

They worked in Excel, creating a sheet with many different tabs by category. Categories included data and tools, design and implementation, education and engagement, funding and financing, and policies and regulations. They divided the work amongst the group based on our individual interests and alignment with their work. They started to populate the spreadsheet with resources, looking at what resources are locally relevant to the Calumet region. They wanted to take stock of local resources but then also included regional, state, and national resources.

They developed the initial information, then presented it to the CSC for feedback. Some discussions were had but feedback did not provide many additional resources. She mentioned that she found the resource to be valuable and had used it here and there. Kate went over some of the shortcomings of this project, including maintenance, usability, and promotion of the resource. She elaborated by saying that the resource repository maintenance was an issue, especially when it came to the funding and financing resources. With the recent infrastructure bill the funding landscape has changed and that type of information can quickly become out of date. There are also issues with access and usability of the resource repository because it is a PDF of a spreadsheet buried within the CMAP website. They did promote the resource through the CSC and CMAP, but it

had its shortcomings with regards to promotion. Kate then showed us the resource repository PDF and mentioned a few questions that need investigation. Are these tools still relevant? Are people using them?

Eliana thanked Kate and demonstrated where the resource repository was also housed on the IllinoisFloods.org website, also buried at the bottom within text. Eliana transitioned to the next steps by stating that they hired Katy Solak to investigate updating the repository. She asked the group if they would like to see Katy update this resource and provide feedback on tentative plans to do so. Katy is already looking at the existing spreadsheet and identifying whether links are active. Katy found that 40% of the links were inactive and those were primarily from MWRDGC and Army Corps of Engineers. A possible goal would be to put an updated resource repository list into the Illinois Groundwork Resource Library. Eliana recapped the Illinois Groundwork project and showed the group where resources are housed on the website. There are 172 resources listed on this website already and they have been categorized by filters. The resource repository would need to be curated to fit the filters, after the list was cleaned up. Eliana mentioned that they could create a new filter that would indicate that a resource came from the CSC project. The plan would include using the same steps laid out by Kate but expanding to more statewide resource representation. She then asked for feedback on this plan from the group. We also want to identify some stormwater professionals that we could interview and have follow up conversations to find out what resources they are using. She encouraged the group to unmute and begin discussion.

Discussion:

- Steph Mueller: I do think that there is value in having a list for us as a reference. Maintenance is significant but I think it is worth it.
- Tyler Carpenter: I would love something like that. We have recently run into the issue that we live in a stormwater professional desert in southern Illinois. It would be beneficial for us to know these resouces even if they are north of us.
- Steph: Maybe using Google Sheets would make it more collaborative and easier for folks to add input.
- Eliana: Any thoughts about making this part of Illinois Groundwork? Then it might have a greater presence. Again, we're not a hundred percent sold on any of the things that we're bringing up today.
- Steph: I think Groundwork is as good a home as any.
- Eliana: Is anyone opposed to putting it on Illinois Groundwork? Would it be confusing if we added a filter on the Illinois Groundworks website that referred to the resources that were originally a part of the resource repository or is a resource just a resource? Hearing none, the group moved on. Would any of you be willing to talk to us if Katy reached out for a follow up conversation about what resources you use in your day-to-day work?
- Carmer Franks, Tyler Carpenter, and others nodded in agreement to talk with Katy.

**Lawn to Lake Program Overview**

*Steph Mueller, Illinois-Indiana Sea Grant*

Steph introduced herself as a pollution prevention outreach assistant for Illinois Indiana Sea Grant (IISG) here to talk about the Lawn to Lake Program. She shared a map demonstrating lawn and impervious surface sizes in the suburbs and in urban Chicago. As the urban stormwater working group, we're concerned about flooding, stormwater, and using green infrastructure and nature-based solutions as opportunities to build resilience in our urban areas. More than half of the US population lives in urban areas. NASA used predictive modeling to map how much of the US is covered in lawn and turf grass, which was calculated to be over 40 million acres. This is

three times more than irrigated corn, which makes turf the larges irrigated crop. To put it in perspective, the entire state of Illinois is about 37 million acres meaning that turf grass would more than cover Illinois.

IISG likes to encourage people to think about their lawns as part of a watershed and consider how landscaping choices affect the health of nearby waterways and plants, animals, and people who use those resources. Water that can't soak into the soil flows off quickly, from people's property into nearby waterways. As water flows across lawns, it may pick up pollutants like pet waste, pesticides, fertilizers, and other contaminants. The Gulf of Mexico hypoxic zone is caused by runoff from the Mississippi River Basin which covers 41% of the contiguous United States. Nutrients can result in algae blooms that create a range of problems, including contaminated water, reduce access for recreation, lowered property values, and the creation of dead zones.

There are hidden costs of lawncare, including water, energy, pesticide, and fertilizer use. For water, a typical suburban lawn uses 10,000 gallons of irrigation water per year and resident residential lawns consume 2.5 billion gallons of water per year. Much of this is in areas that rely on groundwater that is being depleted. Many of these lawns are the same species of turf grass even in different ecosystems and soil conditions. For energy, 580 million gallons of gasoline are used in lawn mowers and 270,000 BTUs are used to produce a single 100-pound bag of fertilizer. For pesticides, 67 million pounds of synthetic pesticides are used on residential lawns and homeowners use three times more pesticides per acre than farmers. For fertilizers, three million tons per year are applied to residential lines. Pesticides are labeled with many names, grub control is an insecticide, broadleaf dandelion spray is an herbicide, weed and feed are herbicides combined with fertilizers, and fungal control is just another name for fungicide.

The Lawn to Lake program focuses on natural lawncare as a sustainable solution. It focuses on the soil as the foundation and treats problems instead of focusing on symptoms. Problems like weeds can be indicative of poor soil health or management. Instead of applying a product to kill the weeds, natural lawncare thinks about the soil, the types of plants and the management of the area to mitigate the weeds. The goals are to inform homeowners and communities how actions taken on land have effects on watersheds. IISG offers resources to encourage adoption of sustainable lawn and landscaping practices. They use seven natural lawncare principles, including having the right plant in the right place, fertilizing appropriately, managing lawn pests responsibly, watering efficiently, composting, attracting wildlife, and reducing stormwater runoff. She encouraged us to look at the lawn to lake website. They have the basics, a more advanced in the weeds section, a calendar, lawncare quiz, fertilizer calculator, pest management recommendations, and resource library. They have a selection of videos plus outreach products like guidebooks and brochures available on the site.

Over the summer IISG Interns surveyed Indiana residents about lawncare practices, modelled after the survey they did in Illinois. They are working to compile that data and have a better understanding of Indiana residents soon. Then she opened it up for questions.

Discussion:

- Comment (Eliana Brown): Margaret Schneemann is here today, and she is the person who is responsible for bringing Lawn to Lake to IISG from Vermont. We owe her a debt of gratitude for this work.
- Comment (Trevor Sample): Could you please go back to the slide discussing the amount of lawn acres in Illinois?
- Comment (Steph): Yes, this was from Milesi, NASA, A strategy for Mapping and Modeling the Ecological Effects of US Lawns .

- Comment (Carmen Franks): Can I publicize the Lawn to Lake program in our next Better Homes and Gutters newsletter through the City of Urbana.
- Comment (Steph): Yes, that would be great.
- Comment (Eliana): Are there any ways for municipalities or other agencies to promote the website? How do they access the brochures? Do they need to ask?
- Comment (Steph): We are pushing the website because we put a lot of resources and work into building it. We encourage others to promote it as well. If you want brochures, we can send you some, but we mostly encourage folks to print them from the resource page. You do not need to ask anyone, just do it. I'm always happy to talk to folks too.

**Round Robin Member Updates**

- Carmen Franks: We are updating our credit and incentives manual for Green Infrastructure for the city of Urbana. Does the group have any resources from other cities that you could share? We're trying to make this manual more user friendly so that we're encouraging more residents to implement green infrastructure.
- Eliana: I'd look at what DuPage County is doing. They tend to do a nice job with that kind of outreach. I did receive a note from the Champion County Master Gardener who runs their Facebook page that someone had a question about this. I directed them to the website where it shows the stormwater utility fee rebate and credit program. It could mean that there are several folks that are ready to act to put in rain gardens, etc. I think that would be well received.
- Carmen: That is one thing that we are planning to change about the manual is that it won't just be a rebate for residential properties, we would like to allow them to get a fee reduction as we do for the non-residential properties. I know we're going to have some public education efforts that need to go out early next year when the manual is completed to share this information with everybody. We just haven't gotten to that point yet.
- Margaret: There was a great example presented by DuPage at the last training I'll try to dig it up.
- Carmen: The Champaign County Stormwater Working Group are going to meet with some folks from DuPage County via Zoom next week to talk about their SCARCE sustainable design program so it might be an opportunity to ask them some questions about that.
- Tyler: Carbondale is in an interesting situation after the 2020 census classified them as de-urbanized. Our urbanized area status has been lost but 2 other areas in our region have just gained urban area status, so we still haven't been told how that's going to impact our MS4. Do any of you have any thoughts on this? We just got a grant through the Delta Regional Authority to create a stormwater master plan for the city of Carbondale. We're still going to guide it off MS4 principles because it makes the most sense, but we just wanted to know if that will stand.
- Trevor: Tyler, I emailed you after that meeting but did not receive a response.
- Tyler: Trevor, I'll look at that email.
- Margaret: It's the Downers Grove bioswales program I was thinking of. It's funded by a stormwater fee. Ditch Your Ditch: Village of Downers Grove Bioswale Program

**Next Steps**

Katy will reach out to group members with questions about favorite resources and any other contacts we should connect with. We will report back her findings at the next meeting. Eliana thanked the group and we adjourned at 2:30.