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# CALUMET STORMWATER COLLABORATIVE

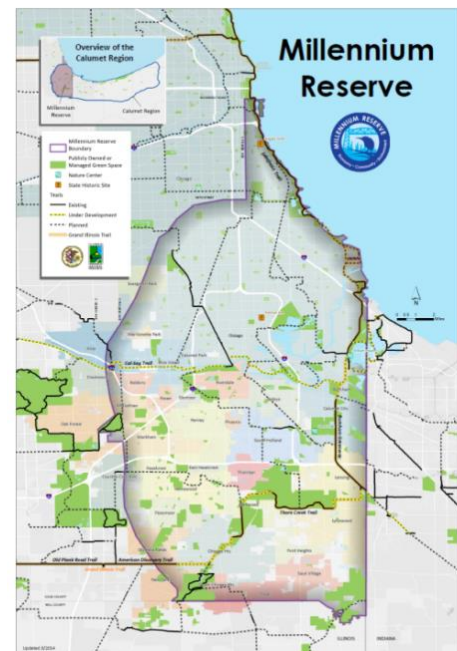
MEETING SUMMARY - September 5, 2014

Metropolitan Planning Council, 140 S. Dearborn, Suite 1400,  
Chicago



## Attendees

Cristina Negri, Argonne  
Ryan Wilson, Center for Neighborhood Technology/Elevate Energy  
Mason Throneburg, CH2M HILL  
Nora Beck, Chicago Metropolitan Agency for Planning  
Zhanna Yermakov, Chicago Park District  
Nancy Williamson, Chicago Wilderness  
Megan Elberts, Christopher Burke Engineering  
Michael Berkshire, City of Chicago Department of Planning & Development  
Benet Haller, City of Chicago Department of Planning & Development  
Aaron Koch, City of Chicago Department of Water Management  
Amy Ellingson, Cook County – Office of Commissioner Gainer  
Alex Simmons, Cook County Land Bank Authority  
Matt Harrison, Delta Institute  
Jeff Edstrom, ECT  
Mark Willobee, Geosyntec  
Mary Ellen Guest, Historic Chicago Bungalow Association  
Lisa Cotner, Illinois Department of Natural Resources  
Amy Walkenbach, Illinois Environmental Protection Agency  
Margaret Schneemann, Illinois-Indiana Sea Grant  
Edith Makra, Metropolitan Mayors Caucus  
Josh Ellis, Metropolitan Planning Council  
Tim Oravec, Metropolitan Reclamation District of Greater Chicago -  
Office of Commissioner Shore  
John Watson, Metropolitan Reclamation District of Greater Chicago  
James Yurik, Metropolitan Reclamation District of Greater Chicago  
Mollie Dowling, OAI Chicago Southland  
Charles Twichell, Prince Charitable Trusts  
Reggie Greenwood, South Suburban Mayors and Managers  
Association  
Bob Newport, U.S. Environmental Protection Agency  
Hanh Pham, Loyola University  
Mary Pat Mattson, University of Illinois



## **Agenda Highlights**

### **Introductions**

Josh Ellis opened the meeting by walking everyone through the progress to date - the three fundamental challenges the Collaborative has chosen to tackle, the optimal conditions we have chosen to pursue, the initial work items to achieve those conditions, and some potential measures of success in doing so.

Josh asked the group to consider these challenges along with the previously decided optimal conditions throughout the meeting to ensure that the projects within the work groups are achieving the Collaborative's overarching goals.

Fundamental challenges:

- Causes and consequences of non-overbank flooding
- Declining performance and sufficiency of grey and green infrastructure over time
- Drain on public and private resources from repeated ineffective and partial interventions.

Optimal conditions:

- Gap between expected runoff and expected capacity is eliminated.
- Available funding is prioritized to highest impact, most cost-effective maintenance and capital improvement projects.
- Long-term comprehensive planning for integrated green/gray infrastructure capital improvements increases at multiple levels of government.
- Maximum stormwater management value is derived from existing assets.
- Messages about causes and solutions to fundamental challenges are consistent, shared, and acted upon by Collaborative members.
- Capacity for targeted, property-specific green/gray infrastructure improvements increases.

Projects/action items (discussed in detail below):

- Short-term information sharing and long-term research alignment – Aaron Koch, City of Chicago
- Fast-tracking Section 319 planning and approval – Bob Newport, US EPA and Amy Walkenbach, Illinois EPA
- Data sharing and modeling – Mason Throneburg, CH2M HILL
- Streamlining green infrastructure design and permitting – Vanessa Roanhorse and Matt Harrison, Delta Institute
- Understanding green infrastructure installation, trouble-shooting and maintenance – Margaret Schneemann, Illinois-Indiana Sea Grant and Reggie Greenwood, South Suburban Mayors and Managers Association
- Lateral line diagnostics and property interventions at scale – Brent Shraiberg and Tim Oravec, MWRD, Office of Commissioner Shore
- Land banking as a stormwater tool – Alex Simmons, Cook County Land Bank Authority and Emy Brawley, Openlands and Brent Denzin, Ancel Glink

Possible measures of success:

- Reduction in peak wet weather flows
- Reduced risk of basement backups in reasonably expected precipitation events

- Number of government units with green/gray infrastructure projects embedded in long-term capital improvement plans or comprehensive plans increases
- Number of partners using shared messaging
- Audience reached with shared messages
- Reduced reliance on grant funding for green infrastructure installation
- Number of government units using optimization tools (e.g. H&H models) increases

In subsequent discussion, members of the Collaborative suggested some additional success measures be considered:

- Increase in public recognition that we are making progress toward improved stormwater management
- Number of interjurisdictional partnerships spawned by Collaborative
- Increased in connectivity between Collaborative members (i.e. evidence that communication and partnerships between members increases)
- Full-time equivalents (FTE) created through this work (or perhaps a future project would be to develop a method of tracking that)

## **Report Outs from Work Groups** (in order as listed above, not in the order they were presented)

### *Foundational actions*

#### Short-term information sharing and long-term research alignment – Aaron Koch, City of Chicago

Aaron Koch explained the group's goal to identify information which exists today, in the possession of one or more Collaborative members, which can be shared and cataloged. Currently, there is a range of useful info that exists, but it is housed in separate places, which makes accessibility an issue. By developing a list of existing information that could be shared at or between future Collaborative meetings, we can build the total knowledge base of the Collaborative.

The group also hopes to develop long-term scopes for future research to fill data gaps that are recognized to exist. For example, he explained that currently there is a lack of data regarding the cost and performance of green infrastructure, as well as relatively poor understanding of soil permeability throughout Cook County.

The group intends to produce a "wish list" expressing the need, cost, and potential scope of research projects that solve problems that the Collaborative is focusing on. This wish list would serve as an action plan for the Collaborative.

It was asked if the group was looking at tree inventory, for which Aaron responded no, not yet. The group is working to prioritize how to incorporate certain data points that have multiple benefits across a large spectrum – trees included. Collaborative members encouraged the data group not to overdevelop the variables, and to maintain a stormwater focus.

## *Capacity building and planning actions*

### Fast-tracking Section 319 planning and approval – Bob Newport, US EPA and Amy Walkenbach, Illinois EPA

Bob Newport gave a detailed description of the Section 319 planning process, grants and their importance. Section 319 grants are a good funding source for some forms of green infrastructure in particular, but it is also likely that as Illinois EPA develops protocol for administering loans for stormwater projects through the State Revolving Fund, an approved Section 319 plan will likely be a pre-requisite.

At present, none of the six MWRD detailed sub-watershed plans in Cook County are Section 319 approved – the MWRD plans focus on overbank flooding, while Section 319 emphasizes water quality issues. This group is exploring strategies, such as appendices to the existing MWRD sub-watershed plans, which will allow for approval from IL EPA.

John Watson explained some of the sub-watershed plans. River modelling software was used to determine where rivers flood and how far that flooding goes. In terms of hydraulics and hydrology, the quantity component of the model is complete. These plans have led to many gray and green infrastructure projects to minimize overbank flooding.

Mollie Dowling asked if either Section 319 or State Revolving Fund applications ask about job creation. She suggested that even if it is not being asked that workforce impact would be an interesting thing to track. The response to her question was that applications do not ask for job creation information, however, the governor would like to hear about it and that especially within green infrastructure, there is an opportunity for people entering the workforce. If the Collaborative can highlight that as a benefit, then projects will be more attractive to funders.

Jeff Edstrom warned that both Section 319 and State Revolving Funds are available for capital costs, rather than maintenance costs. Bob Newport noted that when selected projects, the capacity to maintain work and the ability to pay back loans are considered.

The next step for US EPA and Illinois EPA is to draft a scope of work that would communicate steps needed to secure Section 319 approval for the existing sub-watershed plans. In theory, what works for the two sub-watershed plans that have any bearing on the Calumet would also work for the other four sub-watersheds in Cook County.

### Data sharing and modeling – Mason Throneburg, CH2M HILL

Mason Throneburg gave update on CH2M HILL and MPC's investigation of the current state stormwater modeling in the region. First he explained the general terms of models, which he described as some of the tools used to understand an existing system. Some of the bigger models are the City of Chicago combined sewer model, MWRD's MetroFlow model, and the Detailed Watershed Planning Model. This group is administering a survey to identify what models are currently being used and the group is still determining a way to summarize these findings.

Mason shared two generalizations that have been realized so far. First, there is already a lot of data sharing and collaboration taking place, which provides a good foundation. Second, however, is that not everyone is aware of all the tools that are out there for modeling and infrastructure optimization. Mason noted that getting information to everyone is a priority and that the group acknowledges that data sharing is good and beneficial, but he stressed that the end goal of this group is to work toward how data sharing can make models better and more useful.

Mason said the biggest barrier to data sharing so far is that some people are not always comfortable sharing certain datasets due to the risk of misinterpretation or whether the data is being shared with the appropriate audience. He suggests that protocols be further established.

It was asked if it is possible to extrapolate how many roads are owned by who from these models so that the Collaborative could look at a problem or opportunity area for multiple purpose reasons. Mason responded that they are still thinking about ways that the data within these models can be used. Specifically, in regards to ownership, those characteristics are not always explicitly noted in a model. Josh Ellis commented that folks like IDOT and Cook County are not necessarily using these tools yet to inform their own investments, but there is a potential for that if the data is shared efficiently.

It was suggested that the group look at the SSMMA GIS Stormwater Tool and possibly add Megan Lewis to the group. Both recommendations are being acted on.

#### Streamlining green infrastructure design and permitting – Vanessa Roanhorse and Matt Harrison, Delta Institute

The group has had one meeting during which they came up with ideas of what they want to achieve as a working group by assessing currently available design templates and permitting processes. Some of the goals include developing five templates, building on the Illinois Urban Manual, and creating a project scalable beyond this region. Also, the group has reached out to municipalities to learn more about needs. This work group's next meeting will focus on how to achieve and measure these things.

Josh Ellis commented that there is a steep variation between what is allowed in certain municipalities, resulting in a need to overdesign. That might be stifling some of the private market installations because the cost becomes excessive. The templates that this work group are producing could curb this.

Reggie Greenwood commented that natural resource and habitat restoration need to be incorporated into design along with stormwater management services. Matt Harrison agreed and added that the maximum benefits should be highlighted to help leverage funding.

#### Understanding green infrastructure installation, trouble-shooting and maintenance – Margaret Schneemann, Illinois-Indiana Sea Grant and Reggie Greenwood, South Suburban Mayors and Managers Association

Margaret Schneemann shared that the premise and purpose of this work group is to align the efforts of multiple groups to develop workforce capacity and train volunteers in relation to installation, trouble shooting, and maintenance, primarily of green infrastructure. The defined outcome is to increase the long term effectiveness of green infrastructure. A logic model was identified as a potential product to help break down the goal in to short and medium actions that effectively work toward the long term goal of ensuring long term functionality and green commitment in the region. The logic model will also help to identify information gaps. An overarching concern or need is for green infrastructure social marketing to make these efforts sustainable and exciting.

It was asked if there are any main obstacles to which Margaret replied that the lack of excitement after an installation phase, the lack of budgeting, and maintaining appropriate expectations within public-private partnerships serve as challenges. Josh Ellis added that identifying maintenance needs and identifying what types of people have the right skills for the work as well as whether or not we have a workforce with these types of people is another main obstacle.

#### *Opportunities for near-term Collaborative impact*

Lateral line diagnostics and property interventions at scale – Brent Shraiberg and Tim Oravec, MWRD, Office of Commissioner Shore

Tim Oravec explained that MWRD is increasingly focused on reducing Infiltration and Inflow, particularly in MS4 communities, and has been encouraging municipalities to write plans that require smoke testing, as well as other diagnostic tests for I&I, and that while this is a needed policy, there are a few other realities that communities are dealing with, such as not enough financial resources or staffing and even if they have these resources they may not know how to efficiently use them. One result is that the results of these diagnostic tests – which should provide property owners with sufficient direction to modify something on their property – often do not lead to implementation. A more robust program of diagnostic testing, supported by property-by-property assessments of needed modifications, and then support for implementation – would be more effective and lead to better results.

Tim then shared three core goals of this working group:

1. Ensure economic efficiency. How can communities comply with mandates and affordably reduce I & I?
2. Ensure communities are technically precise. There are other ways to detect I & I and we want to make sure communities are using the best method for them.
3. Increase community engagement and community buy-in. Community members may not understand smoke testing or other methods, and thus be unwilling to make property modifications.

Moving forward toward these core goals, there is a need to identify what kind of communities the Collaborative should work with first and whether there are metrics that should be looked at to determine which communities should be a priority. The work group is also considering sending out a survey to better understand what efforts are currently being done with I & I and whether or not awareness exists. Finally, the work group wants to learn the costs of implementing any findings and make sure implementation is financially feasible.

Collaborative members commented that there is a need to ensure that the right people with the right skills are available to implement these strategies and that in the end, homeowners know exactly who to call when they have a problem. Collaborative members also commented that this is an opportunity for alternative green infrastructure to be advertised – such as a recommendation for disconnecting a downspout.

Land banking as a stormwater tool – Alex Simmons, Cook County Land Bank Authority and Emy Brawley, Openlands and Brent Denzin, Ancel Glink

Alex Simmons from the Cook County Land Bank Authority (CCLBA) shared background information on CCLBA. He explained that the mission of CCLBA is to reuse and redevelop abandoned and foreclosed properties so that they are sustainable and efficient. The most relevant component of this process in terms of stormwater is land conservancy. There are many properties that are available for acquisition, but not suitable for residential or retail. The land bank wants to identify end users before acquiring such properties. Having a way to screen these properties and having a list of end users will help CCLBA move quicker.

Currently, this work group is considering producing a survey to find out what different actors' priorities are and based on that response, whether or not certain actors are potential end users. The work group discussed taking quantitative data or spatial data to come up with a policy recommendation and streamline the selection process of end users.

Collaborative members suggested the CCLBA prioritize different degrees of flooding within floodplains to help determine potential development and, ultimately, a potential end user. Collaborative members warned that because CCLBA does not intend to sit on titles indefinitely, there is still an issue of property maintenance. Finally, collaborative members suggested looking to examples in Milwaukee and using a recent US EPA vacant parcel webinar as resources.

## **Aligning actions toward common goals**

Josh Ellis asked if anyone thinks the Collaborative or work groups are off track or if anything is missing.

- Collaborative members commented on an overlap between the Data and Research group and the Stormwater Modeling group. The distinction between these two is that the data and research group has a focus on getting information, while the Stormwater Modeling group focuses on finding ways to use information. Collaborative members suggested that rather than looking at this as an overlap, that it be looked at more so as how one work group feeds into another.
- Collaborative members noted that funding is missing. The Collaborative is currently funded to think about this issues and make recommendations, but there is not funding for implementation. At some point, the Collaborative will need to discuss strategies.
- Mary Pat Mattson shared that she is instructing a green infrastructure studio that has a goal to develop a framework plan for this area. Currently, she is deciding where to work and would like input from the work groups to add to the process. She would like to produce mapping and site scale design that can be used for the Collaborative.

Josh asked whether these projects can all be aligned to achieve optimal conditions and whether the Collaborative can actually track or measure how this is happening. Additionally, are these the correct optimal conditions?

Collaborative members responded with the following:

- Would like to see visuals of how the projects connect to each other, how they lead to optimal conditions, etc., and connections between policy and programs that are already existing.
- Would like to see the concept of cross-jurisdictional efforts better represented as a measure.
- Mollie Dowling had previously mentioned a need to measure the number of jobs created though the Collaborative's work and noted that the mechanism to do this could serve as a metric or outcome of its own.
- We should better track public recognition and acknowledgement about the work within this group to infuse more positivity into the community.
- Further discuss how water quality is being addressed across work groups.

## **Next Meeting**

Friday, October 3, 10:15am – 12:15pm

Offices of the South Suburban Mayors and Managers Association, 1940 17<sup>th</sup> St, Hazel Crest