

CALUMET STORMWATER COLLABORATIVE



1st Quarter Report: May - August 2014

Where We Started

Millennium Reserve Priorities

The Calumet Stormwater Collaborative, convened by the Metropolitan Planning Council with funding from The Chicago Community Trust, was formed to pursue the Millennium Reserve priority to “Improve Stormwater Management.” [Read more about this Millennium Reserve priority and others here.](#)

Where We’ve Been

Exploratory Phase

The negative impacts of precipitation, or “stormwater,” in the Calumet region and southeast Chicago lakefront, from flooding to poor water quality, result from historic land use decisions, declining infrastructure sufficiency and increasingly severe storms. These drivers work at a larger scale than the scope or jurisdiction of any one organization or agency. Systemic change necessitates solutions at the scale of the problem.

Throughout the exploratory phase – April to August, 2014 – the Calumet Stormwater Collaborative’s approach was “go slow to go fast;” taking the time to agree on the definition of the problem and identify root causes allowed the Collaborative to cultivate shared goals and identify opportunities for collective action.



Making the Case for Collaboration

Established to improve stormwater management in the region, the Calumet Stormwater Collaborative is made up of diverse stakeholders who recognize the need for coordinated and strategic interventions to make a lasting and significant impact.

To set the stage, the initial objectives of the Collaborative were to (1) reveal the lack of coherence in defining the problem and (2) make transparent the motivations, both organizational and individual, for participating in this effort. After the introductory meeting, members of the Calumet Stormwater Collaborative discussed the many ways in which “stormwater” is defined and experienced in the Calumet region. It quickly became clear that a common understanding of the problem, and even common terminology, were missing.

Motivations for Participating in Collaborative,

as articulated by Collaborative participants

- Discover what others are doing.
- Understand where there is need.
- Find opportunities for collaboration.
- Reduce flooding and combined sewer overflows.
- Leverage, coordinate, and direct funding.
- Ensure water quality and healthy habitats.
- Implement solutions at the regional scale.
- Develop new business opportunities.
- Promote and coordinate planning of green stormwater infrastructure.

Understanding the Problem

To reveal new opportunities for better coordination and alignment, a shared understanding of the problem is a prerequisite. Thus, the Collaborative's next step was to co-create a diagram of the stormwater system to identify:

- Positive and negative impacts of precipitation in Calumet;
- Key drivers of those impacts;
- Key issue or problem areas in the system;
- "Implementers," stakeholders who have direct control over the system; and
- "Influencers," those who have the ability to influence the implementers.



The act of diagramming the system not only established a common understanding of the problem, but also facilitated the sharing of expertise and knowledge among stakeholders. Participants reflected on the whole system, beyond the specific areas in which most stakeholders work.

From this system diagram, the Collaborative distilled nine fundamental challenges to more effectively managing stormwater in the Calumet region and southeast Chicago lakefront.

Fundamental Challenges, *as articulated by Collaborative participants*

1. **Consequences of non-overbank flooding**
Examples: Property damage. Public health related to mold and direct sewage exposure. Excessive street ponding.
2. **Consequences of overbank flooding**
Examples: Impaired right of ways as a result of flooded streets and underpasses. Stream channel erosion. Loss of recreational opportunities due to flooded ball fields and parks.
3. **Drain on public resources from repeated, ineffective, partial interventions**
Examples: Costs of individual municipal rain barrel programs. Street patching as opposed to pipe repair. Demonstration projects that have not added up to anything greater.
4. **Drain on private resources from repeated, ineffective, partial interventions**
Examples: Foundations and other private resources spent on disjointed efforts or temporary fixes.
5. **Degraded water quality from non-point source pollution**
Examples: Algal blooms in surface waters from nutrient runoff.
6. **Degraded water quality from point source pollution**
Examples: Public health implications of combined sewer overflows. Limited recreational use of the Chicago River.
7. **Declining infrastructure performance and sufficiency over time**
Examples: Infiltration and inflow of stormwater in sewer pipes of separate systems. Loss of functionality of green stormwater infrastructure without maintenance.
8. **Overconsumption of potable water for non-potable needs**
Examples: Rain not used as a resource. Algal blooms in potable water fed lagoons due to phosphorus additions. Treatment and energy costs associated with toilet flushing with potable water.
9. **Underutilization of existing assets**
Examples: Loss of storage potential associated with non-"smart" sewer system that overflows before all pipes fill up. Some assets not yet recognized as potential assets: i.e., vacant land.

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Identifying Common Goals & Opportunities

Of the nine fundamental challenges, Collaborative identified the following four as those that they, collectively, can make an impact on today:

- Consequences of non-overbank flooding.
- Drain on public resources from repeated, ineffective, partial interventions.
- Drain on private resources from repeated, ineffective, partial interventions.
- Declining infrastructure performance and sufficiency over time.



To address these fundamental challenges, the Collaborative is beginning to identify strategic opportunities for collaboration to create positive change.

Where We're Headed

Plan, Act and Evaluate

The Collaborative's work is now focused on developing and implementing key actions necessary for bigger, better, and faster impact on managing stormwater in the Calumet region. During the June 27th meeting approximately a dozen intervention actions were suggested, and these were vetted further and prioritized at the August 1st meeting. The results are in the table below. Three potential action items were tabled for the time being, these are noted in the table as well.

Initiate Action on Strategic Interventions

Implementation working groups were scoped out on August 1st and work on these initiatives will commence immediately, led by self-identified project leaders from the Collaborative.

Priority Intervention Actions *as articulated by Collaborative participants*

Foundational knowledge building actions

1. **Stormwater Project Inventory:** Catalog existing stormwater work in the Calumet Area, including on-the-ground projects, planning, policy, and funding efforts in the region.
2. **Data & Research Needs:** Identify data and research needs, as well as necessary information for building common base of understanding stormwater management in the Calumet, in order to support greater strategic investment in leveraging full range of technologies in cost effective way. Assess whether other Collaborative members have some of this information available, or whether it must be secured via other means.

Capacity building and planning actions

3. **Section 319 planning** Identify barriers and opportunities for developing EPA-approved Section 319 watershed plan(s) for the Calumet area, in order to enable area constituents to secure funding for projects that will improve water quality and flooding mitigation.
4. **Stormwater Modeling** Build sewershed and water modeling capacity across Collaborative members, as well as information sharing systems and protocols.
5. **Design Guidelines** Standardize and deploy shared design guidelines on green stormwater infrastructure solutions.
6. **Installation, Troubleshooting & Maintenance Training** Train volunteers and develop workforce in installations, troubleshooting and maintenance, of green stormwater infrastructure in particular.

Opportunities for near-term Collaborative impact actions

7. **Smoke Test & Downspout Disconnections** Build an inter-jurisdictional collaborative effort for large-scale, smoke testing, downspout realignment and rain barrel deployment throughout Municipal Separate Storm Sewer System (MS4) communities.
8. **Land Bank Recommendations** Jointly recommend policies and practices for the Cook County Land Bank and South Suburban Land Bank so as to deploy those land management tools for stormwater management and related green stormwater infrastructure initiatives.

Intervention actions tabled for the immediate future

9. **Mayoral Compact** Establish a mayoral stormwater compact, akin to the Greenest Region Compact or Clean Air Counts (tabled until results of preceding action items clarify major commitments needed from local governments).
10. **Communications Assessment** Assess effectiveness and consistency of existing communications programs and educational tools (tabled until results of preceding action items clarify major communications needs).
11. **Rainfall Data Update:** Act together to work with the Illinois State Water Survey to develop climate change projections for potential future rain patterns (tabled because Collaborative action is not necessary; the City of Chicago is already working with ISWS on this and will share information for all of Cook County).

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Who We Are

Calumet Stormwater Collaborative Members

Chicago Metropolitan Agency for Planning
Chicago Park District
Chicago Wilderness
City of Blue Island
City of Calumet City
City of Chicago Department of Planning & Development
City of Chicago Department of Transportation
City of Chicago Department of Water Management
Cook County Department of Environmental Control
Cook County Department of Highways
Cook County Department of Homeland Security & Emergency Response
Cook County Department of Planning & Development
Delta Institute

Forest Preserve District of Cook County
Illinois Department of Natural Resources
Illinois Environmental Protection Agency
Metropolitan Mayors Caucus
Metropolitan Planning Council
Metropolitan Water Reclamation District of Greater Cook County
Openlands
South Suburban Mayors and Managers Association
U.S. Environmental Protection Agency
Village of Homewood
Village of Midlothian
Village of Park Forest

Resource Group Members Active to Date

Ancel Glink
Argonne
Cardno JF New
CDMSmith
CH2M HILL
Chicago Community Trust
Christopher Burke Engineering
Conservation Design Forum
Cook County - Office of Commissioner Gainer
Cook County Land Bank Authority
ECT
Foresight Design Initiative
Friends of the Chicago River
Geosyntec
Historic Chicago Bungalow Association
Hitchcock Design Group
Illinois-Indiana Sea Grant
MacArthur Foundation
OAI Chicago Southland
Sierra Club, Illinois Chapter
Skidmore, Owings & Merrill
University of Illinois

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