Today’s Objectives

Potential Actions → Fundamental Challenges → Manifestations → Requirements → Priority Actions
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work in the Calumet Area, including on-the-ground projects, planning, policy, and funding efforts in the region.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs in order to support greater strategic investment in leveraging full range of technologies in cost effective way.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs.

**Rainfall Data Update.** Act together to work with the Illinois State Water Survey to develop climate change projections for potential future rain patterns.
Potential Action Ideas

Stormwater Project Inventory. Catalog of existing stormwater work.

Data & Research Needs. Identify data and research needs.

Rainfall Data Update. Develop projections for potential future rain patterns.

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.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs.

**Rainfall Data Update.** Develop projections for potential future rain patterns.

**Land Bank Recommendations.** Jointly recommend policies and practices.

**Stormwater Modeling.** Build sewershed and water modeling capacity and information sharing opportunities.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs.

**Rainfall Data Update.** Develop projections for potential future rain patterns.

**Land Bank Recommendations.** Jointly recommend policies and practices.

**Stormwater Modeling.** Build modeling capacity and information sharing.

**Mayoral Compact.** Establish a mayoral stormwater compact, akin to the Greenest Region Compact or Clean Air Counts.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs.

**Rainfall Data Update.** Develop projections for potential future rain patterns.

**Land Bank Recommendations.** Jointly recommend policies and practices.

**Stormwater Modeling.** Build modeling capacity and information sharing.

**Mayoral Compact.** Establish a mayoral stormwater compact.

**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.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

**Data & Research Needs.** Identify data and research needs.

**Rainfall Data Update.** Develop projections for potential future rain patterns.

**Land Bank Recommendations.** Jointly recommend policies and practices.

**Stormwater Modeling.** Build modeling capacity and information sharing.

**Mayoral Compact.** Establish a mayoral stormwater compact.

**Smoke Test & Downspout Disconnections.** Build a collaborative effort.

**Design Guidelines.** Standardize and deploy design guidelines on green stormwater infrastructure solutions.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

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**Rainfall Data Update.** Develop projections for potential future rain patterns.

**Land Bank Recommendations.** Jointly recommend policies and practices.

**Stormwater Modeling.** Build modeling capacity and information sharing.

**Mayoral Compact.** Establish a mayoral stormwater compact.

**Smoke Test & Downspout Disconnections.** Build a collaborative effort.

**Design Guidelines.** Standardize and deploy design guidelines.

**Communications Assessment.** Assess effectiveness of existing communications and educational tools.
Potential Action Ideas

**Stormwater Project Inventory.** Catalog of existing stormwater work.

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**Stormwater Modeling.** Build modeling capacity and information sharing.

**Mayoral Compact.** Establish a mayoral stormwater compact.

**Smoke Test & Downspout Disconnections.** Build a collaborative effort.

**Design Guidelines.** Standardize and deploy design guidelines.

**Communications Assessment.** Assess effectiveness of communications.

**Installation, Troubleshooting & Maintenance Training.** Train volunteers and develop workforce in installations, troubleshooting and maintenance, of green stormwater infrastructure in particular.
Potential Action Ideas

Stormwater Project Inventory
Data & Research Needs
Rainfall Data Update
Land Bank Recommendations
Stormwater Modeling
Mayoral Compact
Smoke Test & Downspout Disconnections
Design Guidelines
Communications Assessment
Installation, Troubleshooting & Maintenance Training

What else?
## Project Criteria

<table>
<thead>
<tr>
<th>Mission Driven</th>
<th>Urgency Driven</th>
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<tbody>
<tr>
<td>Does it address our fundamental challenges?</td>
<td>Is it a foundational step?</td>
</tr>
<tr>
<td>Does it require collaboration?</td>
<td>Is there temporal urgency?</td>
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</table>
Fundamental Challenges

1. Consequences of non-overbank flooding.
2. Consequences of overbank flooding.
3. Drain on public resources from repeated, ineffective, partial interventions.
4. Drain on private resources from repeated, ineffective, partial interventions.
5. Degraded water quality from non-point source pollution.
6. Degraded water quality from point source pollution.
7. Declining infrastructure performance and sufficiency over time.
8. Overconsumption of potable water for non-potable needs.
9. Underutilization of existing assets.
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Root Causes of Challenge

Declining infrastructure performance and sufficiency over time
Declining infrastructure performance and sufficiency over time

Root Causes of Challenge

Insufficient long-term planning and budgeting for stormwater investments

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More precipitation than we used to have, infrastructure systems not designed for it

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Declining infrastructure performance and sufficiency over time
Root Causes of Challenge

- More precipitation than we used to have, infrastructure systems not designed for it
- More water entering sewer system than there used to be, systems not designed for it
- Insufficient long-term planning and budgeting for stormwater investments
- Insufficient maintenance funding over time in many communities has led to considerable backlog that exceeds current willingness to pay
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Declining infrastructure performance and sufficiency over time
Manifestations of Challenge & Root Causes

Root Causes → Declining infrastructure performance and sufficiency over time
Manifestations of Challenge & Root Causes

Root Causes

Declining infrastructure performance and sufficiency over time

Basement backups through pipe network

Combined sewer overflows
Manifestations of Challenge & Root Causes

- Not enough sewer capacity to manage the amount of rain we expect to receive in sewers
- Basement backups through pipe network
- Combined sewer overflows

Root Causes
- Declining infrastructure performance and sufficiency over time
Not enough sewer capacity to manage the amount of rain we expect to receive in sewers

Basement backups through pipe network

Combined sewer overflows

Not enough money to solve problem
Concern/skepticism about ability to pay for maintenance of any future infrastructure

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Root Causes of Challenge

Consequences of non-overbank flooding
Consequences of non-overbank flooding

Root Causes of Challenge

More precipitation than we used to have, infrastructure systems not designed for it
Consequences of non-overbank flooding

More precipitation than we used to have, infrastructure systems not designed for it

More water entering sewer system than there used to be, systems not designed for it

Root Causes of Challenge
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Consequences of non-overbank flooding

- More precipitation than we used to have, infrastructure systems not designed for it
- More water entering sewer system than there used to be, systems not designed for it
- Substantial variation in property-to-property conditions, preparedness, knowledge and financial werewithal
Consequences of non-overbank flooding

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Not all solutions can be affected by public entity

Root Causes of Challenge
Manifestations of Challenge & Root Causes

Root Causes

Consequences of non-overbank flooding
Manifestations of Challenge & Root Causes

Root Causes

Consequences of non-overbank flooding

- Basement backups through pipe network
- Combined sewer overflows
- Property damage from backups onto streets
Manifestations of Challenge & Root Causes

Root Causes

Consequences of non-overbank flooding

- Property-to-property variation in response
- Basement backups through pipe network
- Combined sewer overflows
- Property damage from backups onto streets
Root Causes

Consequences of non-overbank flooding

- Property-to-property variation in response
- Basement backups through pipe network
- Combined sewer overflows
- Property damage from backups onto streets
- Mass, sporadic confusion on causes and solutions to these problems
What Does Optimized Look Like?

- Property-to-property variation in response
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- Mass, sporadic confusion on causes and solutions to these problems
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Gap between expected precipitation and expected capacity is eliminated.
What Does Optimized Look Like?

- Property-to-property variation in response
- Basement backups through pipe network
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Gap between expected precipitation and expected capacity is eliminated

Messages about causes and solutions are consistent, shared, deployed and acted on
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- Property-to-property variation in response
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- Gap between expected precipitation and expected capacity is eliminated
- Messages about causes and solutions are consistent, shared, deployed and acted on
- Ability for targeted property-by-property investments as appropriate
### How We Might Measure Success?

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Drain on public and private resources from repeated, ineffective, partial interventions
Root Causes of Challenge

- Insufficient long-term planning and budgeting for stormwater investments
- Drain on public and private resources from repeated, ineffective, partial interventions
Root Causes of Challenge

- Inconsistent priorities between funders, between implementers, and between funders and implementers
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Root Causes of Challenge

- Inconsistent priorities between funders, between implementers, and between funders and implementers
- Insufficient long-term planning and budgeting for stormwater investments
- Stormwater problems appear to be worsening; public consciousness of stormwater problems appears to be growing
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- Inconsistent priorities between funders, between implementers, and between funders and implementers
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Not all solutions can be affected by public entity

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Not all public stormwater management assets are fully deployed

Root Causes of Challenge
Manifestations of Challenge & Root Causes

Root Causes

Drain on public and private resources from repeated, ineffective, partial interventions
Some assets (i.e. pipe capacity, detention ponds, vacant land) not fully utilized in storms

Grant chasing for demonstration projects

Green infrastructure in particular is built where possible, not where needed

Some assets (i.e. pipe capacity, detention ponds, vacant land) not fully utilized in storms
Infrastructure repairs/fixes are largely reactive to perceived problems, not proactive to known problems

Grant chasing for demonstration projects

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Some communities ineligible for funding programs that require upfront planning.

Infrastructure repairs/fixes are largely reactive to perceived problems, not proactive to known problems.

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Green infrastructure in particular is built where possible, not where needed.

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Long-term planning for capital improvements increases.
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Watershed/sewershed planning occurs to optimize future investments.
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- Maximum stormwater value is derived from existing assets.
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Long-term planning for capital improvements increases

Watershed/sewershed planning occurs to optimize future investments

Maximum stormwater value is derived from existing assets

Clear, established priorities for funders and implementers
How We Might Measure Success?

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<td>Section 319 planning</td>
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<td>Gray and green infrastructure is funded through means other than grants</td>
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Priority Action Ideas?

- Stormwater Project Inventory
- Data & Research Needs
- Rainfall Data Update
- Land Bank Recommendations
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- Mayoral Compact
- Smoke Test & Downspout Disconnections
- Design Guidelines
- Communications Assessment
- Installation, Troubleshooting & Maintenance Training

What else?