

Green Infrastructure for Clean Water

Public Act 0096-0026

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Illinois Environmental Protection Agency

P.A 96-26, June 30, 2009

- A **Green Infrastructure Study** mandated under § 15 of the Public Act
 - **Illinois EPA** to report to General Assembly by June 30, 2010
 - Report to review “the latest available scientific and institutional knowledge to evaluate and document the following”
 - 1) the nature and extent of urban stormwater impacts on water quality
 - 2) Potential urban stormwater management performance standards

P.A 96-26, June 30, 2009, cont.

- 3) the prevalence of green infrastructure in Illinois
- 4) the costs and benefits of green versus grey
- 5) “existing and potential new urban stormwater management regulatory programs and methods and feasibility of integrating a State program with existing and potential regional and local programs in Illinois”

P.A 96-26, June 30, 2009, cont.

- 6) “finding and recommendations for adopting an urban stormwater management regulatory program in Illinois which includes performance standards and encourages the use of green infrastructure to achieve those standards”
- 7) feasibility and consequences of devoting 20% of the water revolving loan fund to green infrastructure, water and energy efficiency improvement and other environmentally innovative activities

Illinois EPA

University of
Illinois at
Chicago

Center for
Neighborhood
Technology



Green
Infrastructure
Plan

**Focus on
water quality
impairments
due to
stormwater
and CSOs**

Chicago
Metropolitan
Agency for
Planning

Illinois-
Indiana Sea
Grant
Program

Over **100** diverse
stakeholders,
including key
state agencies

Illinois EPA

- Structure
- Funding source
 - Current
 - Future
- Stormwater Program



University of
Illinois at
Chicago

- Extent, nature & effectiveness of Green Infrastructure in Illinois
- Feasibility of State Revolving Loan Fund incorporation
- Potential funding structures

Study Lead



(a) Nature and extent of urban stormwater impacts on **water quality** in watersheds in Illinois

(b) ...the **effectiveness** of green infrastructure practices to achieve certain minimum standards

(c) The feasibility and consequences of **devoting 20% of the Water Revolving Fund** to Green Infrastructure, water and energy efficiency improvements and **other environmentally innovative activities** on a long-term basis [UIC with assistance from CNT]



GOAL: Assess & compare the effectiveness of various kinds of green infrastructure

- Review of scientific literature

- Effectiveness of green infrastructure for
 - Volume reduction
 - TN reduction
 - TSS reduction

GOAL: Use modeling to understand the role of spatial scale and pattern on effectiveness

- Spatially explicit
 - How do layout and configuration matter over a regional scale?
- Ease of inputting data
 - Maps
 - Data from literature review
- Tracks the variables we are interested in
 - Volume
 - TSS
 - TN
- Flexibility to customize



Chicago
Metropolitan
Agency for
Planning

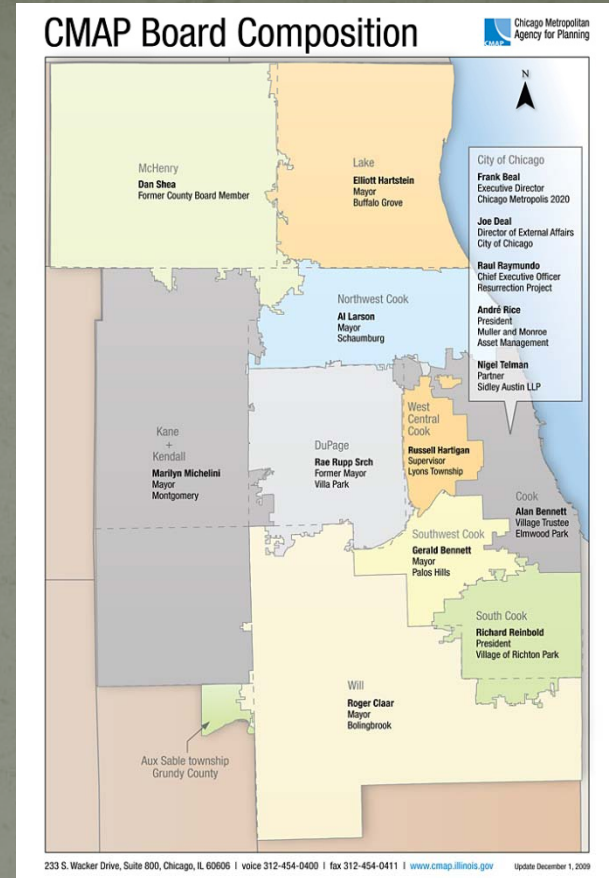
- Suggested performance standards
- Prevalence of Green Infrastructure in Illinois



Chicago Metropolitan
Agency for Planning



- Review and evaluate existing stormwater ordinances northeastern Illinois
- CMAP region
 - Cook
 - DuPage
 - Kane
 - Kendall
 - Lake
 - McHenry
 - Will



Review Criteria

- Volume Control Measures
- Run-off Reduction/BMP Hierarchy
- Water Quality Management
- Release Rates

- Each County Ordinance Reviewed
- City Ordinances Reviewed
 - Aurora
 - Chicago
 - Crystal Lake
 - Homer Glen



Center for Neighborhood Technology

- Cost benefits
- Potential new regulations
- Potential for adoption of performance standards
- Potential funding structures



Redefining Performance with Green Infrastructure

Cost effective
solutions that
deliver multiple
benefits→

1. Reduced and delayed volume
2. Reduced CSOs
3. Reduced pollutant loading
4. Enhanced groundwater recharge
5. Increased carbon sequestration
6. Mitigation of heat island effect and energy savings
7. Improved air quality
8. Additional habitat and recreational space
9. Improved aesthetics
10. Increased land values



Green Infrastructure Requirements in Updated IL40 (general stormwater permit)

1. Education
2. Training of staff and contractors
3. Best management practices
4. Applicability to public surfaces
5. Applicability to existing developed property

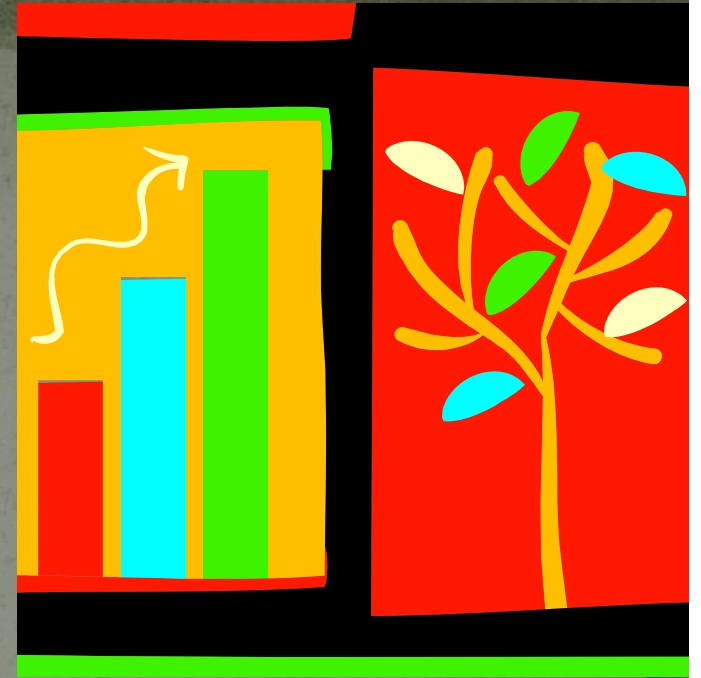
Limitations of IL40

1. Applicability limited to “urban areas”
2. Lack of performance standards
3. Burden rests on municipalities

Green Infrastructure Portfolio Standard

Concept:

Establish a goal of gradually increasing the percentage of stormwater in an area that is managed with green infrastructure.



Portfolio Standard Potential Elements

- Metrics
 - Type of goal to be achieved
 - Eligible green infrastructure technologies
 - Information technology; database
- Administrative body
- Enforcement or incentive mechanisms
- Maintenance program



Illinois- Indiana Sea Grant Program

- Information and education strategy



- Will develop Green Infrastructure **training materials and a dissemination plan** for Illinois EPA over the summer, 2010
 - Directed to local government officials
 - Directed to Regional Planning Agencies



Over **100** diverse stakeholders, including key state agencies

- Sounding board
- Information exchange



What's next...

- June 30, 2010 Illinois EPA report to the General Assembly
- “green grant program”
 - Pilot grant program that would offer grants to projects that are addressing water quality problems attributed to stormwater and CSOs (combined sewer overflows)
 - If funds become available an RFP is anticipated to be released in July

What this means for you...

- Opportunity to focus on stormwater programs at the state and LOCAL level
 - Anticipated increased regulation by U.S. EPA during our next Permit cycle
- Opportunity to bring state funds into stormwater programs
- Opportunity to green your communities and meet stormwater goals simultaneously

More Information....

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www.epa.state.il.us/green-infrastructure