GREAT LAKES REGIONAL GREEN INFRASTRUCTURE POLICY ANALYSIS: ADDRESSING BARRIERS TO IMPLEMENTATION

Great Lakes Legislative Caucus 2018 Annual Meeting
September 22, 2018
A unified voice for the states and provinces
Great Lakes Commission

• Public agency established by the Great Lakes Basin Compact in 1955

• Ontario and Québec joined in 1999

• Allows Great Lakes states and provinces to speak with a unified voice to reach consensus on and advocate for the region’s priorities

“To promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin.”

Great Lakes Basin Compact, Article 1, Section 1
Key Program Areas

- Water Quality
- Water Management and Infrastructure
- Commercial Navigation
- Coastal Conservation and Habitat Restoration
- Aquatic Invasive Species Prevention and Control
- Information Management and Blue Accounting
Great Lakes Commission

• 3-5 commissioners from each of the 10 states and provinces, including GLLC members:
  – Senator Rebekah Warren
  – Senator Carrie Ruud*
  – Senator Ann Rest*
  – Representative Jennifer Schultz*
  – Representative Paul Torkelson
  – Representative Patrick J. Harkins*

Executive Director Darren Nichols, dnichols@glc.org
Policy Director Matt Doss, mdoss@glc.org
GLC’s Green Infrastructure Champions

• Addresses local barriers and capacity through competitive mini-grants and mentoring network

• Policy analysis targets federal, state, and provincial policies that hinder or enable local green infrastructure (GI) adoption
  • Partnership with Credit Valley Conservation
  • Recommendations developed with Advisory Team input and support
  • Congressional briefing held September 5, 2018
GI Champions Advisory Team

- ACF – Convergent Stormwater Technologies Alliance
- American Rivers
- City of Ann Arbor
- City of Southfield
- City of Syracuse
- Cleveland Botanical Garden
- Cleveland Water Alliance
- Conservation Design Forum
- Contech Engineered Solutions
- Credit Valley Conservation
- Environmental Consulting & Technology, Inc.
- Environmental Finance Center – Syracuse University
- Fishbeck, Thompson, Carr and Huber
- F.X. Browne, Inc.
- Fred A. and Barbara M. Erb Family Foundation
- Great Lakes and St. Lawrence Cities Initiative
- Illinois Department of Natural Resources
- Indiana Finance Authority
- Interface h2o, LLC
- Lawrence Technological University
- Michigan Department of Environmental Quality
- Michigan Department of Natural Resources
- Michigan Green Industry
- New York State Department of Environmental Conservation
- New York Water Environment Association
- Oakland County Water Resources Commission
- Ohio Environmental Protection Agency
- Parjana
- Southeast Michigan Council of Governments
- Tetra Tech
- The Nature Conservancy
- United States Geological Survey
- Wisconsin Department of Natural Resources
Why stormwater?

• Increased urbanization leads to more surface runoff or overland flow

• Impacts enhanced by climate change

• Associated water quantity and quality concerns
Why green infrastructure?

- Helps mitigate quality and quantity issues by restoring natural hydrology
- Natural areas, nature-based engineered solutions, and systems that imitate natural infiltration
- Numerous co-benefits
Urban stormwater management: CSS or MS4

• Combined sewer system (CSS)
  • One set of pipes for sewage and stormwater
  • All water conveyed to sewage treatment plant; overflows directly to waterbody

• Municipal separate storm sewer system (MS4)
  • Stormwater conveyed to water body in dedicated pipes
  • Does not go through wastewater treatment plant
GI in the Great Lakes basin

- Regional issue with predominately local solutions
- Policy analysis to assess how federal, state, and provincial policy either promotes or hinders GI progress
- Recommendations to improve top down support to advance GI
Barriers to green infrastructure

• Funding
• Local code/ordinance
• Limited mechanisms to incentivize GI
• Unfamiliarity with technologies/practices
• Uncertainty of compliance, performance, and maintenance
• Public perception

Green roof on Chicago’s city hall. (Credit: EPA)
UNITED STATES (FEDERAL) POLICY
Clean Water Act Discharge Permits

- CSO Control Policy – nine minimum controls
  - Does not include GI or any volume control measures

- MS4 Discharge Permits – six minimum controls
  - Post-construction runoff control MUST include implementation of BMPs
The role of consent decrees

• Come into play *after* Clean Water Act discharge permit violation(s)
• Compels decision-makers to consider GI through prescriptive or descriptive requirements
• May foster innovation, but costly, reactive, and narrow in scope

Fleet Avenue, Cleveland, OH (Credit: NEORSD)
Key federal funding opportunity: Clean Water State Revolving Fund

- Critical source of funding - $126 billion invested since 1987
- 20 percent of SRF funds earmarked for sustainability initiatives
  - Remains under-utilized

“Communities are sometimes reluctant to pursue green infrastructure solutions due to a lack of familiarity, inability to secure a repayment source, or other logistical barriers” (EPA 2015).
Federal resource: Green Infrastructure Collaborative

- Seven federal agencies: EPA, USDA, DOD, DOT, HUD, DOI, and DOE
  - Additional funding sources
  - Technical assistance programs
U.S. Federal Recommendations

• Fully fund CWSRF
  • Incentivize GI projects with interest rate reductions, prioritization, and funding eligibility extension
• Establish performance-based requirements for stormwater management
• Promote and coordinate integration of GI

Connective Corridor: Forman Park (Credit: Save the Rain)
U.S. STATE POLICY
Key aspects of states’ policy

• Discharge permits (MS4)
• Post-construction standards
• Funding opportunities
• Stormwater utilities

Flooding in Sodus Point, New York
(Credit: Veronica Volk, Great Lakes Today)
MS4 Discharge permit

• Best management practices (BMPs) and public education requirements can incorporate GI

• Examples in states:
  - ILLINOIS – GI identified as highest priority BMP, rationale for selection of lower preference BMP must be provided
  - WISCONSIN – consideration of GI practices required
Post-construction standards

• Typically descriptive requirements, using GI makes achieving compliance easier
• May be related to water quantity, quality, or both
• State applications:
  • MINNESOTA – One inch of runoff must be retained from any new impervious service, MS4 communities also required to have no net increase in discharge volume, suspended solids, or phosphorus
  • ILLINOIS – Illinois Green Infrastructure for Clean Water Act of 2009
Funding opportunities

• Critical for all stages – planning, implementation, and operations and maintenance

• Key state programs:
  • PENNSYLVANIA – Pennsylvania Storm Water Management Act, PENNVEST
  • OHIO – Alternative Stormwater Infrastructure Loans

Rendering of Newark Downtown Renovation Project, Newark, OH
(Credit: OHM Advisors)
Stormwater utilities

• Funding mechanism (including repayment source for CWSRF) AND incentive

• Ability to establish varies widely between states:
  • 62 percent coverage (MN, OH) vs one stormwater utility (NY)
  • Bolt Decision (MI)

Green Garage, Detroit, MI (Credit: GLC)
U.S. State Recommendations

• Require consideration of GI to meet NPDES requirements
• Establish performance-based standards
• Dedicate funding and explicitly allow municipalities to establish stormwater utilities and/or levy fees
CANADIAN (FEDERAL) POLICY
Legal framework for water resources

• Federal government not responsible for surface water resources (unless trans-boundary)
• Canada Water Act; Canada Environmental Protection Act
• Federal Gas Tax Fund
Canadian Federal Recommendations

• Prioritize GI under Infrastructure Canada’s funding programs
• Allow funds to be allocated toward GI research
ONTARIO

- Conservation Authorities
- Ontario Water Resources Act; Clean Water Act
- Infrastructure planning promoted strongly
- Drainage Act and Development Charge funding

County Court bioswale, Brampton, ON
(Credit: Toronto Region Conservation Authority)
QUÉBEC

• Sustainable Rainwater Management Guide
• 2018 provisions to Environmental Quality Act (EQA) will implement new permitting regime
• Municipal Powers Act (LCM) allows municipalities to set maximum discharge rate to sewers; establish P3s
• Green Fund; 2017-2027 Infrastructure Plan
Canadian Provincial Recommendations

• Include GI in asset management

• Create new funding mechanisms
Summary Recommendations for States and Provinces

• Comprehensive inclusion of GI in planning
• Create dedicated funding opportunities, reduce barriers to innovative financing
• Increase confidence in GI practices (provide research)
• Establish performance-based standards

Erie Rain Garden, Erie, PA (Credit: GreenEriePA)
Questions?