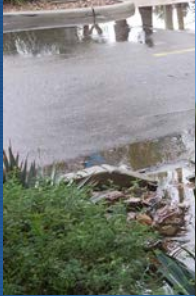


Leveraging Private Capital for Great Lakes Green Infrastructure Implementation

May 10, 2018





The Four Challenges of Stormwater

1. Economic

Never enough in the budget

External costs

2. Environmental

More stringent permits

Real water quality problems

3. Community

Flooding

Inequity

3. Future Uncertainty

Past is not the future



Creating Solutions that Meet Challenges through GSI

- 💧 **Economic** – additional, more diverse revenue from private sector, alternative financing approaches
- 💧 **Environmental** – more GSI, more strategically located for additional benefits
- 💧 **Community** – engage community in creating and caring for solutions, generate co-benefits
- 💧 **Future Uncertainty** – Scalable, flexible, resilient

New and innovative solutions being explored

- 💧 Alternative compliance
- 💧 Stormwater credit trading
- 💧 Green infrastructure incentive programs (e.g., grants, rebates)
- 💧 Environmental impact bonds
- 💧 Public-private partnerships (community-based)
- 💧 Tax increment financing

Stormwater Credit Trading: The Basics

Enables property owners/developers to meet a portion of stormwater management requirements off-site by buying volume-based stormwater “credits”

- 💧 **Buyers:** Developers/property owners subject to stormwater management requirements (**Provides flexibility**)
- 💧 **Sellers:** Property owners that either voluntarily implement GI to gain credits or include excess capacity in GI installations while meeting regulatory requirements.

Stormwater Credit Trading



Photo credit: CSIRO via Wikimedia Commons



Photo: DC Dept of Energy and Environment

- 💧 Different from nutrient trading
- 💧 Single currency meets existing design standards without translation
- 💧 Responsive to future urban/suburban development and redevelopment
- 💧 Key prerequisites
 - 💧 Demand
 - 💧 Regulatory drivers
 - 💧 Supportive funding stream

Design considerations

- 💧 Balancing supply and demand
- 💧 Protecting against water quality impacts
- 💧 Starting up the market
- 💧 Bounding the market
- 💧 Timing of credit use
- 💧 Use of credit ratios
- 💧 Allowing use of extra BMP capacity

Credit Trading?

- 💧 Can we expand mitigation and in-lieu fee program to include credit trading among private entities?



Grand Rapids, MI – Evaluating credit trading potential

- 💧 Mid-sized urban area with substantial development/
redevelopment (aka Beer City USA)
- 💧 City department responsible for stormwater management -
no stormwater utility or fee.
- 💧 MS4 permit submitted to MDEQ
 - 💧 *Address increase in stormwater volume, due to development, as a contributor to
streambank erosion*
 - 💧 *Water quality (Ecoli TMDL)*
 - 💧 *Flooding also a concern among permittees*



Permit Requirements and Proposed Alternative Compliance

- 💧 New standards for re/development:
 - 💧 **WQ:** Treat runoff from 90% percent annual non-exceedance storm (approximately 1")
 - 💧 **Channel protection:** Retain increase in runoff volume/rate for all storms up to and including the 2-year, 24-hour event.
- 💧 Off-site mitigation and Payment-in-Lieu options:
 - 💧 Manage ≥ 0.4 inches onsite, provide a 1:1.5 offset ratio
 - 💧 If infeasible to manage minimum onsite, provide 1:2 offset ratio
 - 💧 Projects must be completed within 24 months



Credit Trading in Grand Rapids: Key Considerations/Questions

Does permit (as written) or draft stormwater manual limit potential market?

- 💧 Do conditions for going offsite restrict potential market?
- 💧 In-lieu fee set on a project-by-project basis
(may compete with market for credits if cost is lower)
- 💧 In-lieu fee currently one-time payment, not a direct comparison for private credit market
- 💧 24-month requirement could conflict with payment in-lieu model
- 💧 Restricted to sewershed

Credit Trading in Grand Rapids: Key Considerations/Questions

- ◆ How can program drive implementation where it is needed most?
- ◆ Are there environmental justice concerns?
- ◆ Can credit price be subsidized if credits meet other community goals/provide additional benefits?

Credit Trading in Grand Rapids: Key Considerations/Questions

What role will ESD need to play (Administrative Burden)?

- 💧 Purchase price guarantee?
- 💧 Contractor certification?
- 💧 Prioritization/hotspots?
- 💧 Provide other incentives to jumpstart market? No stormwater fee makes it difficult for project aggregators.
- 💧 Administrative burdens



Responding to the Four Challenges

1. Economic – brings privately funded green infrastructure into overall portfolio
2. Environmental – additional treatment, meets permit needs
3. Community – achieves investments across community
4. Uncertain future - distributed green infrastructure resiliency

Getting the Most from Stormwater Grant Programs

How can a grant program be tailored to leverage additional funding, involve private sector, and deliver targeted performance?



Grant Program Basics

- 💧 Typically fund larger, more complex projects
- 💧 Can result in **significant cost savings** for utility
- 💧 Well-suited to a range of property types & partners
- 💧 Can incentivize GI at new/redevelopment sites
(proceed with **CAUTION**)
- 💧 Highly visible projects can provide educational benefits
- 💧 Can focus on high priority areas and/or leverage co-benefits

Common Barriers and Challenges

- 💧 Lack of financial and resource capacity of property owners and organizations to design/front projects
 - 💧 Equity concerns
- 💧 Maintenance agreements
 - 💧 Hard to enforce
 - 💧 Property owners can be hesitant to sign
- 💧 Can require extensive coordination/buy-in across city departments
- 💧 Regulations can make it difficult to directly fund projects on private property

The Philadelphia Story

- 💧 **Stormwater Management Incentives Program (SMIP)**
- 💧 **Greened Acre Retrofit Program (GARP):** Allows contractors to aggregate and apply for funding for projects across multiple properties:
 - 💧 Reduces transaction costs
 - 💧 Economies of scale
 - 💧 Decreases administrative burden



What's Working

- Timeline and scale plays a big role
- Counts towards 10,000 greened acres goal
- Clear business case
- Third party administrator and other partners
- Clear guidance/resources
- Suite of programs allows for effective targeting

Remaining Barriers

- Capacity (SMIP as stepping stone)
- Aggregator business models
- Reimbursement strcuture

Northeast Ohio Regional Sewer District: GI Grant Program

- 💧 **Annual budget:** \$1 to 2 million
- 💧 **Program inception:** 2014
- 💧 **Applicants:** CDCs, member communities, non-profits
- 💧 **Eligible properties:**
Residential, non-residential, and institutional properties
- 💧 **Project sites:**
Existing (retrofits), new development, redevelopment
- 💧 **Annual application process**

In 2015:

- 11 projects,
- \$1.73 M
- 7.13 M gallons
- Cost to District:
\$0.24/gallon

Northeast Ohio Regional Sewer District – Overcoming Barriers to Optimize Grant Program

District perspectives

- 💧 Bridging funding gap is difficult for applicants
- 💧 Uncertainty for applicants
- 💧 Normal construction delays
- 💧 Maintenance

Private sector perspectives

- 💧 Aggregation opportunities
- 💧 Development standards don't encourage GI
- 💧 Lack of internal capacity to apply/front
- 💧 Delays caused by permitting
- 💧 Successful models for financing?
- 💧 Not timed with development
- 💧 Only fund portion of project above and beyond requirements
- 💧 Maintenance

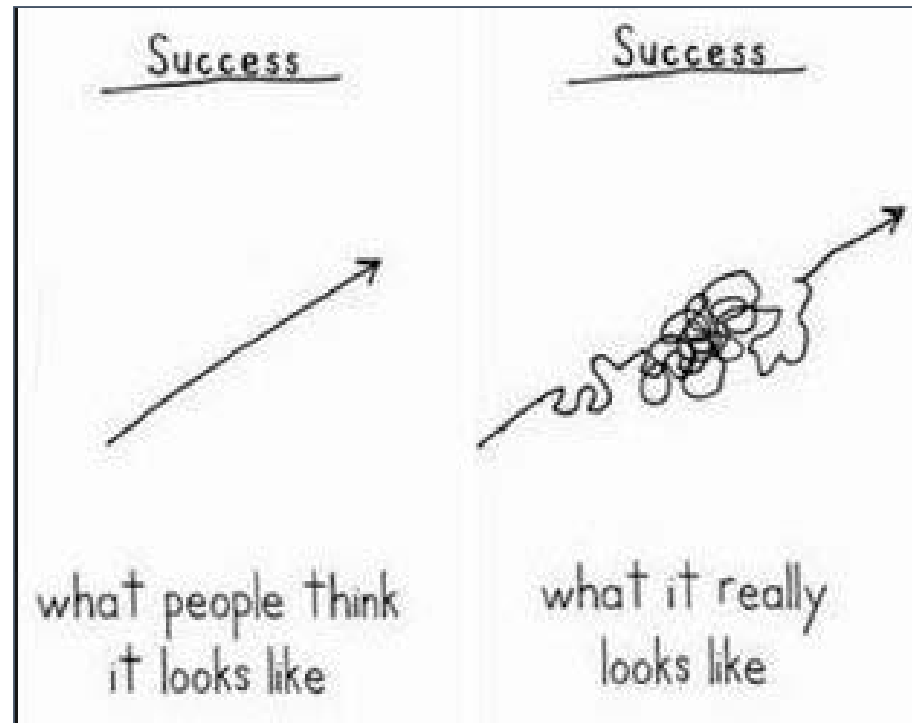
Making a good idea better in Northeast Ohio. . .

- ◆ Project bundling
- ◆ Partnership with Community Development Corporations and other community groups
- ◆ Private sector engagement
- ◆ 3rd Party maintenance providers (jobs!)
- ◆ Targeting investments to meet multiple objectives
- ◆ Prioritize co-benefits/bring in other funding streams
- ◆ Lower barriers to entry for potential applicants
- ◆ Target development/redevelopment through separate programs

But We're Not Philadelphia . . .

Many successful programs
across the country

- Take stock
- Start where you are
- Bigger isn't always better



Responding to the Four Challenges



1. Economic – optimizes grant funds, brings in additional funding
2. Environmental – additional treatment, meets permit needs
3. Community – achieves investments across community
4. Uncertain future - distributed green infrastructure resiliency

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