FINANCING EQUITABLE WATER INFRASTRUCTURE SYSTEMS

Water and Planning Connect

September 12, 2018
The Challenges

1. There is no single simple financial solution to adapt communities to the effects of a changing climate

2. The communities that will be hit the hardest by the effects of climate change will be, and have already been, those with the fewest resources to adapt and rebuild

Image Source: Joe Raedle, Getty Images
The Opportunity

- As communities rethink their approach to water management, they open opportunities to create multiple benefits for their residents.

- To achieve the equity and climate adaptation goals we want, we can embed these considerations into the day to day components of our water management systems, including capital investment decisions.
CCI Believes

1. Big problems require **collaborative approaches**. No one institution or leader can solve complex challenges.

2. If you don’t put **equity at the center**, you won’t succeed in your efforts to create opportunity in your community.

3. There are no easy answers or linear solutions to the challenges we’re taking on. So creativity and an **adaptive mindset** are required.

4. We’re going to have to **shift business as usual** and introduce new practices, relationships, structures, policies . . . to get where we’re trying to go.

5. We need **divergent perspectives** to understand the systems we’re trying to change and shape solutions. Working together in an aligned and intentional way, we can have impact.

6. Capital matters. If we’re going to get to a scale that is transformational, we need to **shift investment flows**.
Framework

Shared Priorities
Create a shared vision specific enough to shape decisions

Pipeline
Generate deals and projects that add up to the realization of the community’s shared priorities

Enabling Environment
Shape the context that promotes or impedes the execution of the pipeline
Connect Capital

- Assist communities attract and deploy capital at scale to improve residents’ health and increase their access to opportunity

- Provide each team with a suite of supports
  - Customized coaching
  - Facilitated peer learning
  - Two-year, $200,000 grant from the Robert Wood Johnson Foundation to fund a “team coordinator,” a local staff position dedicated to advancing the team’s work

- The Teams
  - Appalachia
  - Coachella
  - Miami
  - Milwaukee
  - Richmond
  - Seattle
To Learn More:

See the resources on our website at: www.centerforcommunityinvestment.org

Or contact Omar Carrillo at: ocarrillo@centerforcommunityinvestment.org
Financing Equitable Water Infrastructure Systems: Milwaukee, WI

September 12, 2018
Karen L. Sands, AICP, ENV SP
Milwaukee Metropolitan Sewerage District

We Serve:
• 1.1 Million Customers
• 28 Municipalities
• 411 Square Mile Planning Area

Using Grey Infrastructure:
• Collector Sewers
• 2 Treatment Plants
• 521 MG Tunnel In-line/Remote Storage

To Protect the Environment:
• Convey/Store/Reclaim Wastewater
• Manage Out-of-bank Flooding
• Repurpose Resources: Fertilizer, Energy
• Much More...
The Region’s Sewers

300 Miles
MMSD Sewers

3,000 Miles
Municipally Owned Sewers

3,000 Miles
Private Laterals
Water Reclamation Facilities

Jones Island

South Shore
ISS/Remote Storage Tunnels

- Designed to minimize basement backups and for 1-2 overflows per year.

- 300 Feet Below ground
- 521 Million Gallons of Storage
- 28.5 Miles Long
- 17- to 32-feet In Diameter

9/10/2018
Overflow Reduction Plan

- $1 Billion Spent by 2010
- Reclamation Facility Upgrades
- Deep Tunnels
- Sewer Rehabilitation
End Result!
Disaster Breeds Opportunity
Flood Management vs. Stormwater Management
MMSD Infrastructure: Today

• Grey Infrastructure
  • Capacity
  • O&M

• Green Infrastructure
  • Structural Flood Management
  • Greenseams Acquisitions
  • Distributed Green Infrastructure
Structural Flood Management
Greenseams
Green Infrastructure
MMSD and Connect Capital Changes

• Creative, Planner-Like Thinking
• Project Layering, Creating Synergies
• Creative Financing
Milwaukee Connect Capital Examples

30th St Corridor

KK River Restoration
Key Features:

• Integration with critical planning efforts
• Community engagement
• From engagement/information comes ownership
• Focus on community impact
• Pipeline of projects to connect
MMSD Water Infrastructure Financing

• Past and Present Capital Budget:
  • Budget billed based on via equalized value
  • Project funding sources:
    • Cash financing
    • Clean Water Fund Loans
    • Municipal Bonds
    • Grants (when available)
    • Leveraging (although limited)

• Under Study:
  • Budget billed via impervious cover charges
  • Project funding sources:
    • P3s
    • Leveraging (to a greater extent)
What’s Ahead? One Idea: Multisolving

**Definition:** Solutions that solve multiple problems with 1 intervention (per Climate Interactive)

Three Principles:
- Everyone matters; everyone is needed
- We can succeed by addressing tough problems in an integrated fashion
- Large solutions start small; growth results from learning and connecting
Questions?

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Green infrastructure transforms communities. We partner with cities to deliver more, better, for all.

**Financing Equitable Water Infrastructure Systems**
September 12, 2018
AGENDA

03 - 04
Greenprint Partners

05 - 06
Community-First Approach

07 - 09
Retrofit Incentive Programs

10 - 13
Public-Private Partnerships
Greenprint Partners is a green infrastructure delivery partner that helps cities build high-impact, community-driven green infrastructure at scale.
GREEN STORMWATER INFRASTRUCTURE

(n) The use of vibrant nature systems to manage water right where it falls.

Green infrastructure revitalizes communities, reduces flooding, and supports cities' clean water requirements and goals.

Illustration credit: WE Design
Getting the most good out of green infrastructure...

...Requires us to apply three lenses to every project

**Scalable**
We accelerate cities' ability to absorb the increased stormwater—and risk—associated with changing weather.

**Holistic**
We design our projects and contracts to maximize community benefits and guarantee long-term maintenance.

**Equitable**
We focus on low-to-moderate income communities, targeting benefits where they do the most good.

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**BACKED BY KRESGE**
Greenprint Partners received a program related investment and grant under Kresge’s Climate Resilient and Equitable Waters Systems initiative.

**STRUCTURED FOR IMPACT**
We are a woman-owned small business and a certified B Corporation, meaning we outperform peers on environmental responsibility, social impact, employee well-being, and governance accountability.

**MISSION DRIVEN**
Our experienced team believes that green infrastructure transforms communities, so we partner with cities to deliver more, better, for all.
We provide a holistic partnership that uplifts communities. By putting communities at the center of our work, we help cities achieve far greater impact than simply solving their stormwater challenges.

TARGET FOR IMPACT
Identify program and project opportunities that enable multi-benefit, equitable green infrastructure projects.

STRUCTURE
Structure client partnerships to address their unique needs and facilitate affordable green infrastructure at scale.

ENGAGE + EDUCATE
Engage public and community stakeholders in becoming advocates and advisors for green infrastructure.

DESIGN FOR BENEFIT
Design projects to maximize benefits to the community.

BUILD
Manage design, engineering, and construction subcontractors to build projects.

MAINTAIN + EVALUATE
Maintain assets for the long term while monitoring and reporting on their impact.
BENEFITS-DRIVEN DESIGN
We build green infrastructure solutions that maximize benefits prioritized by the community

**ECONOMIC**
**Reduced costs** - Water bills reduce when property owners earn stormwater credits and landscape upkeep spending can decrease with lower-maintenance designs.

**Property values** - Neighborhoods stabilize as property values improve significantly (11-30%), leading homeowners to stay in their homes.

**Long-term jobs** - New construction and long-term maintenance jobs are created and associated training programs are developed.

**COMMUNITY**
**Safety** - Well designed and maintained green spaces create safer gathering spaces with more eyes on the street, reducing crime.

**Health** - Health and healing rates improve, especially for respiratory, stress and physical activity-related conditions.

**Cohesion** - Community relationships strengthen through access to reflective and inviting outdoor spaces.

**ENVIRONMENTAL**
**Air quality** - Air quality improves when vegetation filters small bits of dust, chemicals, and metals that contaminate our air.

**Heat reduction** - Trees and vegetation provide shade, which cools impervious surfaces and buildings. This can improve pedestrian use and energy efficiency.

**Carbon reduction** - Carbon reduces when it is captured and stored by soil and vegetation.

**Biodiversity** - Biodiversity flourishes when new habitat allows bird, mammal, amphibian, reptile, and insect populations to grow.
EXAMPLE
PROJECTS
GREENPRINT PARTNERS

YOUNGSTOWN GSI MASTER PLAN

Greenprint Partners is working with Youngstown and dozens of local partners to develop a green stormwater infrastructure master plan that will guide the city in using green infrastructure to reduce its combined sewer overflows while also proactively driving improved health, crime, and economic outcomes for communities.

BENEFITS-DRIVEN DESIGN
Greenprint Partners’ Benefits-Driven planning process will intersect data on health, crime, and economic challenges and opportunities with siting and design decisions for green stormwater infrastructure.

ACCELERATED IMPLEMENTATION
By bringing additional expertise and resources to the table, Greenprint Partners is enabling Youngstown to launch their planning process 15 years ahead of its mandated schedule and to begin reaping the benefits of green infrastructure now.

COMMUNITY EDUCATION
Greenprint Partners teamed up with local organizations to launch a citywide #GreenisGood education campaign, and led a Stakeholder Advisory Group, community workshop series, and public surveys.
We integrate benefits into the planning process. Here we overlaid opportunities for: 1) GSI feasibility, 2) “Active living” improvements, and 3) Crime reduction.
CENTRAL BAPTIST: GSI ON PRIVATE LAND

St. Louis Metropolitan Sewer District offers private landowners a per-acre reimbursement for installing green infrastructure, but a variety of barriers prevent some property owners from participating. In 2017, Greenprint Partners identified Central Baptist Church for a high-impact GSI project.

HIGH IMPACT SITE SELECTION
Central Baptist Church is a historic African-American church dedicated to serving its community of 1,500 congregants in a low-to-middle income neighborhood of St. Louis.

COMMUNITY ENGAGEMENT
Greenprint Partners works with a small group of core church leaders to oversee the project, and engages the broader congregation to identify priority co-benefits that drive all green infrastructure design decisions.

BENEFITS-DRIVEN DESIGN
The benefits-driven design process resulted in the prioritization of tree trenches, permeable pavement, an infiltration trench, and a pollinator garden for the congregation's children.
FINANCIAL MODELS
RETROFIT INCENTIVE PROGRAMS
We aggregate and deliver GSI projects on private properties in cities with Green Infrastructure Retrofit Incentive Programs.

$15M/year in funding for incentives.
PWD’s Greened Acre Retrofit Program pays for GSI projects on private properties within the combined sewer zone.

Projects help Philadelphia Water meet its pledge to transform one third of the combined sewer zone into green space by 2036.

$5M+/year in funding for incentives.
MSD’s Rainscaping Large Scale Grants Program pays for GSI projects on private properties within the Grant Program Area.

Each grant helps MSD meet their commitment to invest $100 million to reduce CSOs into the Mississippi River.
We aggregate and deliver green infrastructure projects on private properties in cities with Green Infrastructure Retrofit Incentive Programs, generating revenue from water authority incentive payments.

1. IDENTIFY
   Partner with mission-aligned landowners to identify multi-benefit, equitable green infrastructure projects.

2. AGGREGATE
   Aggregate portfolios of projects to help water utilities accelerate toward citywide green infrastructure.

3. APPLY
   Develop project applications using benefits-driven design practices; submit for water utility approval.

4. BUILD
   Manage design, engineering, and construction subcontractors and collect utility reimbursements.

5. DELIVER
   Deliver validated project to property owners for maintenance; accept final utility reimbursement.
AVAILABILITY PAYMENT P3
Sample program lifecycle overview

PHASE

Partnership Initiation
- We simplify the procurement and management experience to unburden city staff.
- Early stakeholder engagement + education
- Project scoping
- Public procurement process
- Contract negotiation

Pre-Development
- Our contracts absorb many of the risks that can make public projects costly and unpredictable.
- Continued stakeholder engagement + education
- Early stage project due diligence
- Scope and terms refinement
- Availability payment agreement

Design, Build, + Validate
- We drive the most inclusive process to transform regulatory compliance into a community revitalization investment. We deliver validated green infrastructure on time and within budget.
- Benefits-driven design process
- 100% technical design and diligence completed
- Green infrastructure construction
- Plant establishment
- Functional testing for initial capacity and post-establishment capacity
- Co-benefits initial evaluation
- Community engagement through groundbreakings, ribbon cuttings, and other public engagements

Long Term O+M
- Performance-based annual service fees begin only after green infrastructure is functioning as promised. Long term maintenance is guaranteed and drives new, local, long-term jobs.
- Lead long-term operations and maintenance
- Manage ongoing services fees

Availability Payments Begin
- City or Water Authority initiates availability payments based on validated capacity
AVAILABILITY PAYMENT P3 STRUCTURE

Our annual service payment approach is an innovative application of an “availability payment” P3 structure. Availability payment P3s have been used in capital and social infrastructure in cases where the owner does not control revenues (e.g., tolls) or use (e.g., traffic). Fees are based on the level of asset availability provided (e.g., stormwater capacity delivered).