Financing Green Infrastructure with Environmental Impact Bonds (EIBs)

William & Mary: Resilience Funding Forum
Mary 3, 2019
Agenda

1. Intro: Why We’re Doing This
2. What is an Environmental Impact Bond? How can it help local governments?
3. Chesapeake Bay Watershed Case Studies
4. Lessons Learned
A Quick Video

Introduction to Environmental Impact Bonds: https://youtu.be/aQIVXFwhzho
Why We’re Doing This
Green Infrastructure

Bioinfiltration, D.C. Jeffrey Brainerd

Permeable parking, D.C. DC DOEE

Parking lot infiltration, Stafford County, VA
How is an EIB Structured? Who is Involved?

1. Quantified Ventures coordinates deal, aligns and coordinates stakeholders

2. Investors provide up-front capital through bond investment

3. Public Entity or Partner (e.g., Municipality or Utility) constructs projects to help meet stormwater management or other resilience targets

4. Evaluator verifies that project outcomes are achieved

Public Entity (e.g., Municipality or Utility) repays investors based on achievement of outcomes

green infrastructure or other resilience project deployment
Case Study: DC Water

- Consent decree required addressing combined sewer overflows
- Green infrastructure approved to replace planned tunnel
- Concern remained about performance risk
- Focus on secondary benefit of green job creation
Outcomes Based Financing

Rock Creek Sewershed (Project RC-A)

Pilot (20 acres)

Consent decree requirement (365 acres of GI)

After 5 years, performance payments made based on stormwater captured on-site:

Underperform (2.5% likely): Investors pay DC Water $3.3M – interest rate ~0.5%

Perform as expected (95% likely): No performance payment – interest rate ~3%

Outperform (2.5% likely): DC Water pays investors $3.3M – interest rate ~6%
Environmental Impact Bonds at Work

CBF-QV working with the **City of Baltimore** to help finance 120+ small- to medium-scale urban green infrastructure projects worth $6.2M.

CBF-QV now working with the **City of Hampton** to identify green infrastructure solutions as part of the city’s larger Climate Resiliency Plan, and finance with an EIB.
Lessons Learned: Regulatory Environment

- Assumption: Strong regulatory incentive from MS4 permits
- Awarded credit through Chesapeake Bay Model
- Local governments are not awarded more credit for better performance
- Creative performance metrics
Lessons Learned: Municipal Capacity

- $2-3 million minimum for EIB issuance
- Many of the municipalities in the Chesapeake Bay watershed are smaller, their stormwater budgets & financing needs are also smaller
- Watershed municipalities have not traditionally used outside financing for stormwater infrastructure
Lessons Learned: Planning & Budgeting

- Assumption: EIBs could fill the financing gap for shovel-ready GI projects
- Capital Improvement Plan (CIP) process.
- Earlier stages of project planning & budgeting
- Need for pipeline
Conclusions

- EIBs are a specific tool that can help with:
  - Piloting new project ideas
  - Risk transfer
  - Bringing new investors to a city
- EIBs build off of work around resilience being done at the local level
- Continue to support mechanisms for local governments to plan & prepare