



**Mississippi River  
Cities & Town Initiative**  
An Effort of U.S. Mayors



# **Mississippi River Environmental Impact Bond (EIB) Challenge**

**Todd Appel, Managing Director, Quantified Ventures**

**Ben Cohen, Director, Quantified Ventures**

**Colin Wellenkamp, Executive Director, MRCTI**

**October 29, 2019**

# Agenda

- **Who is Quantified Ventures?**
- **What is an Environmental Impact Bond (EIB)?**
- **Case Studies**
- **EIB Challenge Request for Statement of Interest Overview**
- **Questions**

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**Quantified Ventures** is an  
**outcomes-based capital firm**  
that drives transformational health,  
social, and environmental impact.

# We Need Innovative Ways to Pay for Solutions

- **The challenges are complex:** Most challenges involve multiple stakeholders. Both public and private sectors need bold solutions to solve big and complex health, social, and environment challenges.
- **But budgets are strained:** Resources are finite and funding for services and infrastructure has been flat or declining for decades. There is a \$1.4 trillion shortfall in infrastructure investment alone through 2025.\*
- **Investors are motivated:** They are increasingly looking for opportunities to deploy capital to solutions that yield both financial and social returns. Impact capital is estimated at over \$500 billion and growing worldwide.\*\*

\* 2017 Infrastructure Report Card, American Society of Civil Engineers (ASCE)

\*\* Global Impact Investing Network (GIIN)



# We Bring Impact Capital to Critical Environmental Projects and Partnerships



# Our Practice Areas



**Forestry and  
Land Use**



**Urban and Coastal  
Resilience**



**Agriculture**



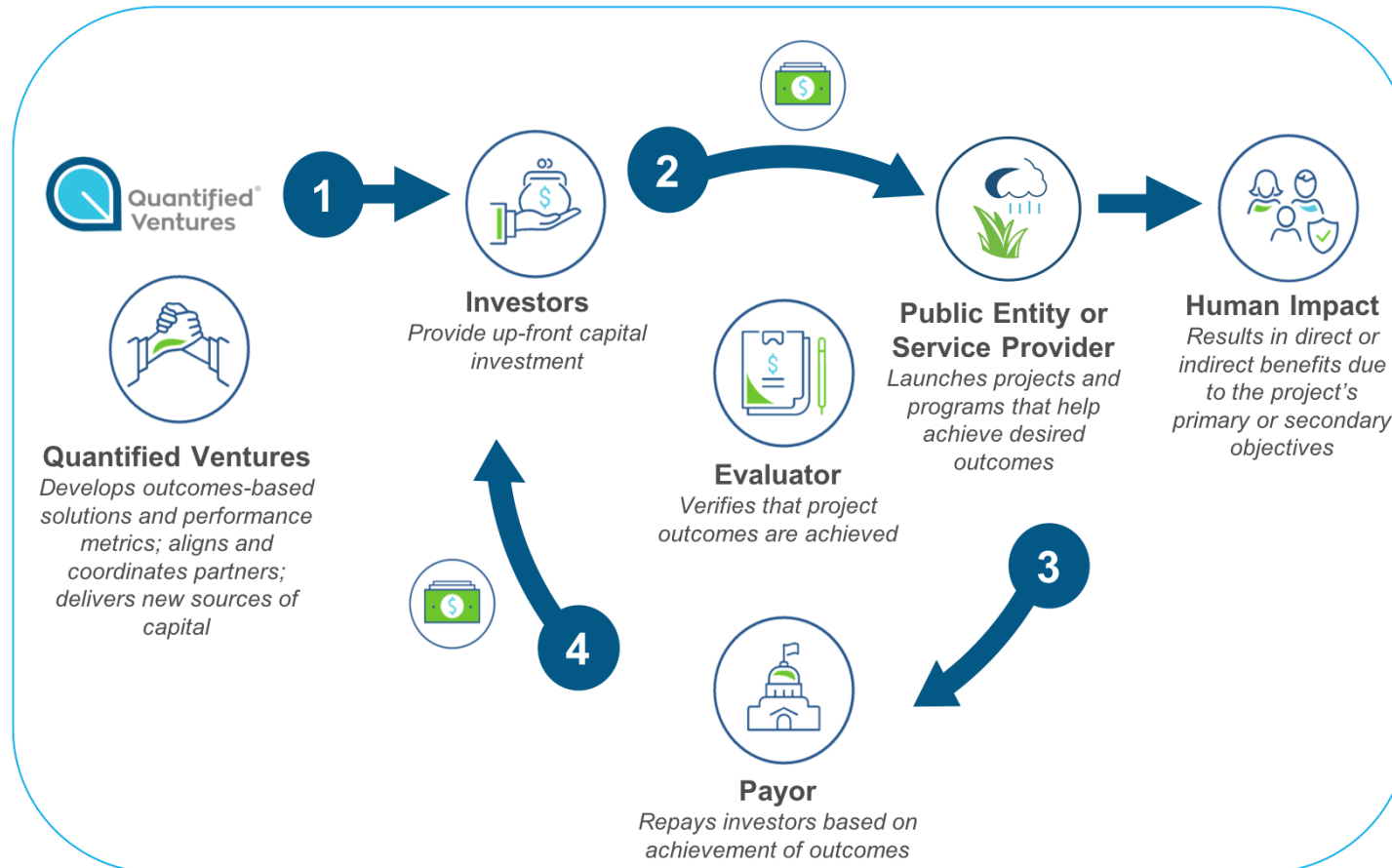
**Health and Human  
Services**

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# An Environmental Impact Bond (EIB) Ties Repayment to Project Performance



# Benefits of Outcomes Based Financing

- **Transfer performance risk** of innovative projects to investors
- **Access new sources of investment capital**
- **Showcase partners** and their projects, attracting internal and external support
- **Engage diverse and new stakeholders** benefiting from projects
- **Measure and track outcomes** through embedded performance evaluation
- **Establish external accountability structures** that foster commitment and support sustained partnerships



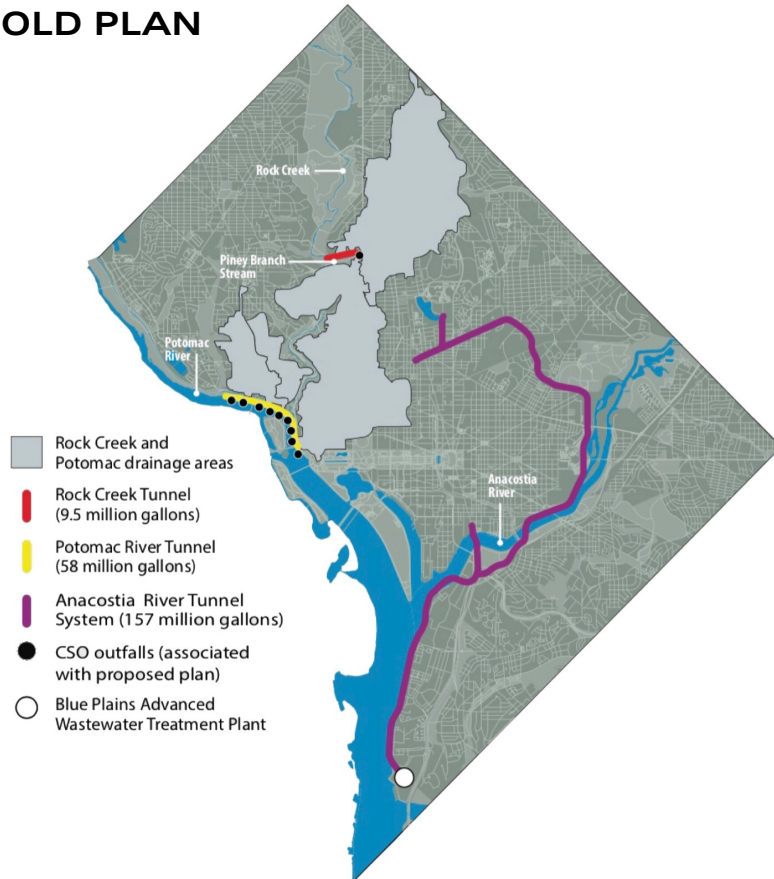
*Photo courtesy of WEF*

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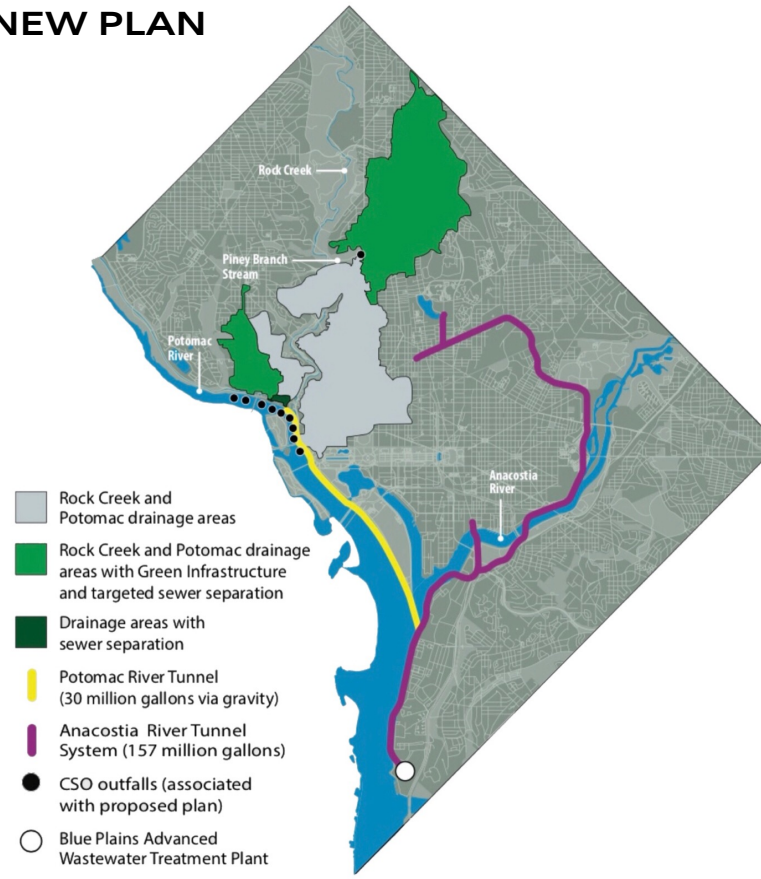
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# Case Study: DC Water's Green Infrastructure Program

**OLD PLAN**

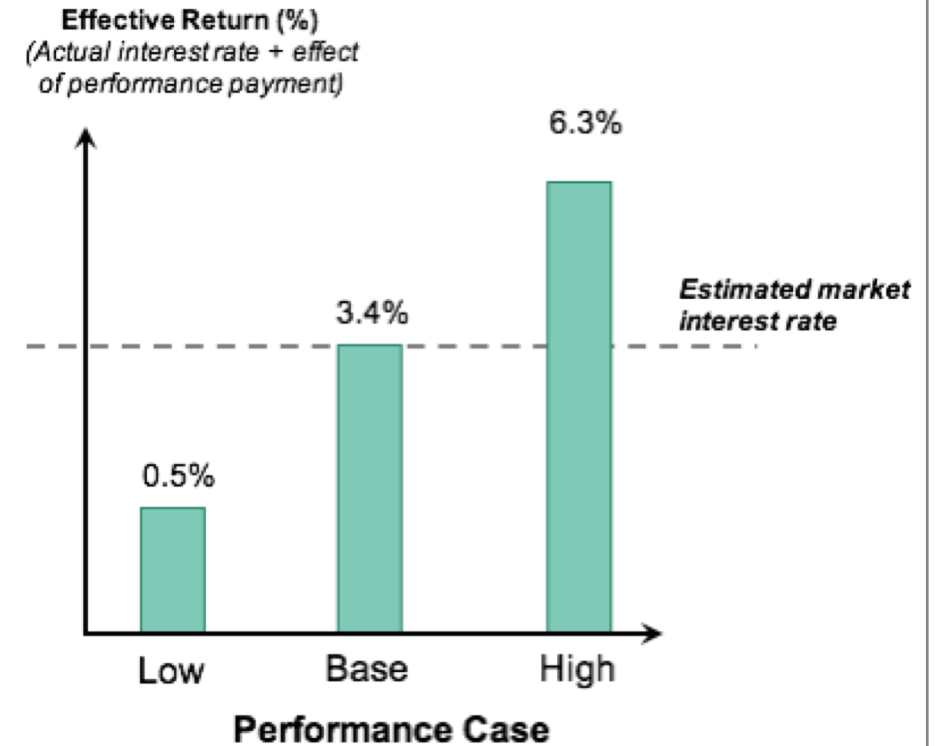
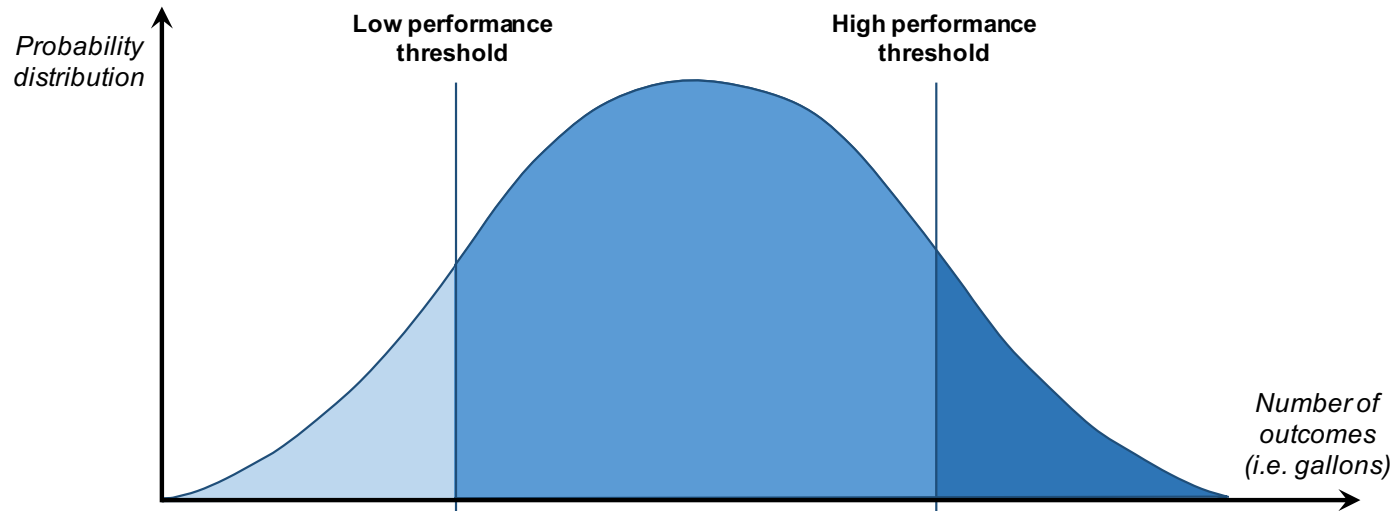


**NEW PLAN**



- Consent decree required addressing combined sewer overflows
- Green infrastructure approved to replace planned tunnel
- Concern remained about performance risk
- Focus on 20 acres of green infrastructure out of estimated 365 acres

# DC Water Issued an Environmental Impact Bond to Fund A Portion of Planned Green Infrastructure



Performance:	Low	Base	High
<b>Fixed (Actual) Interest Rate:</b>	3.43% <i>(market rate)</i>	3.43% <i>(market rate)</i>	3.43% <i>(market rate)</i>
<b>Additional Payment:</b>	\$3.3M Clawback <i>(Investors to DC Water)</i>	None	\$3.3M Payment <i>(DC Water to investors)</i>
<b>Probability:</b>	2.5%	95.0%	2.5%

## Reducing Risk while Focusing On Outcomes



*Photo courtesy of Martina Frey*

“Through the use of the EIB, **DC Water was able manage or hedge a portion of the risk associated with large-scale implementation of GI** in the District.

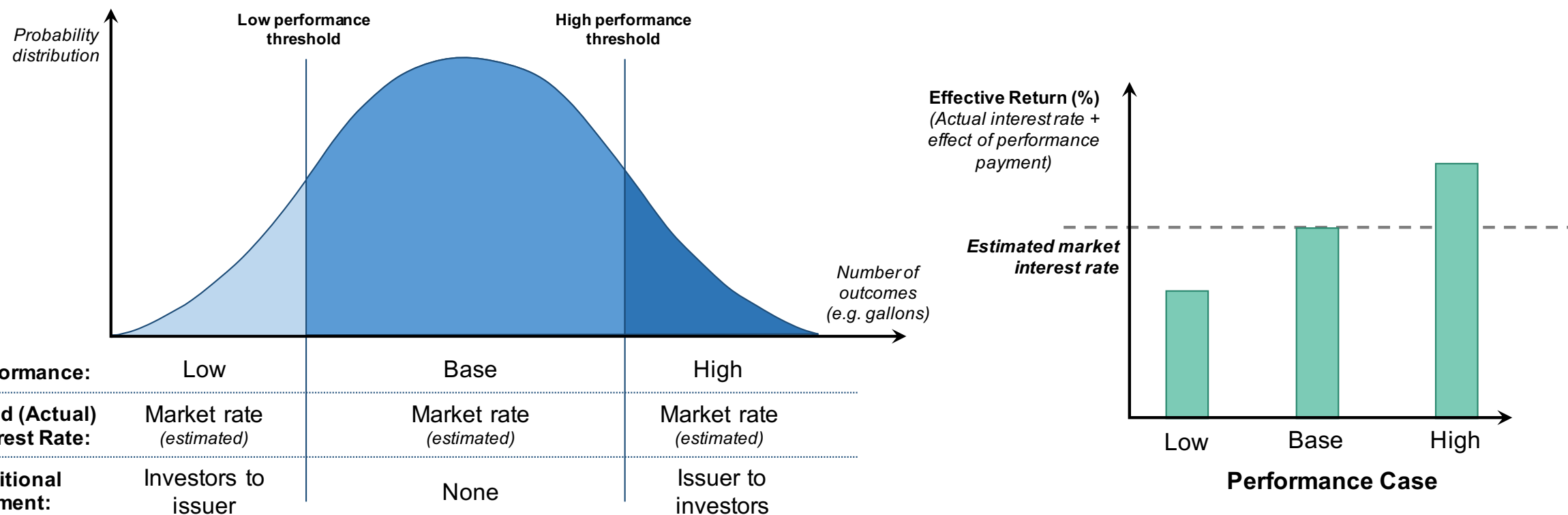
By structuring a contingent payment based upon the effectiveness of green infrastructure, **DC Water focused on outcomes (in that case reducing stormwater runoff) that aligned with the regulatory driver of the Consent Decree** that DC Water was already structured to achieve.”

***Bethany Bezak, Green Infrastructure Program Manager,  
DC Water and Sewer Authority***

## Green Infrastructure EIBs: A Replicable but Flexible Structure

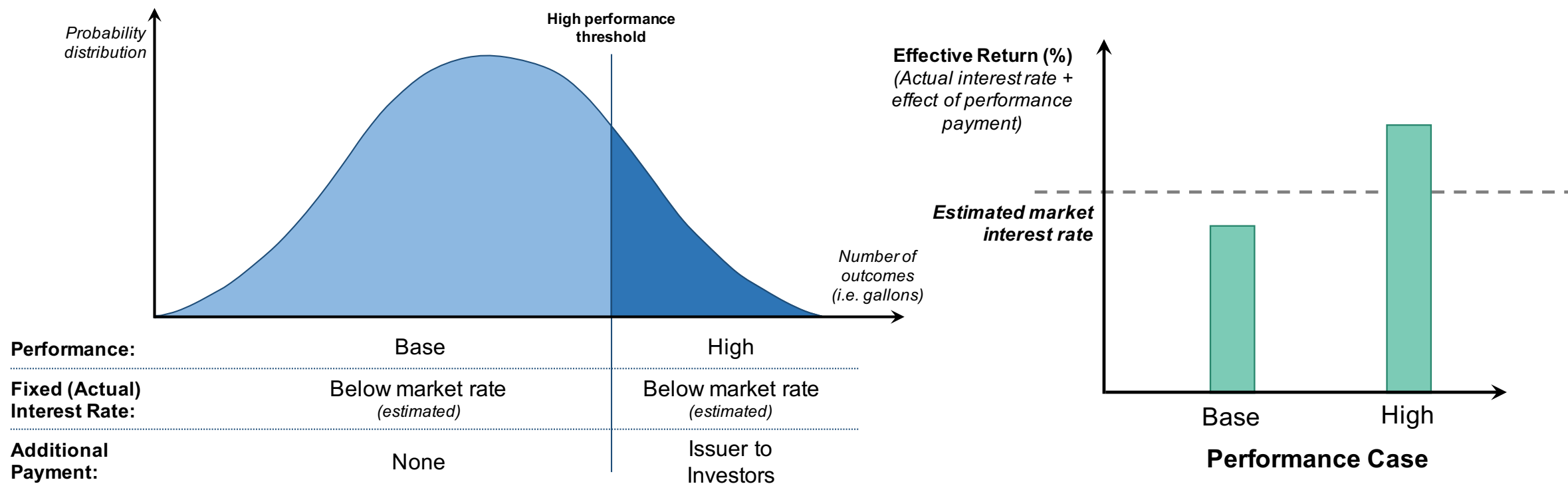
	 <b>WASHINGTON, DC</b>	 <b>ATLANTA, GA</b>	 <b>BALTIMORE, MD</b>
<b>Primary Value Proposition of EIB</b>	What is the cost-effectiveness of green vs. grey infrastructure for CSO reduction?	How can green infrastructure improve local flooding, water quality, and economic conditions?	What are the ongoing operational costs and viability associated with green infrastructure?
<b>Size</b>	\$25,000,000	\$14,020,000	\$6,200,000 (est.)
<b>Term</b>	30 years (5 year re-tender)	10 years	7 years
<b>Placement</b>	Private	Limited Public	Private
<b>Structure</b>	3-tiered	2-tiered	3-tiered
<b>Outcome Metric</b>	Volume capture (flow / runoff)	Volume capture (capacity / storage)	Plant survivability
<b>Regulatory Driver?</b>	Yes	No	Partial
<b>Types of GI</b>	<ul style="list-style-type: none"> <li>● Right of way planters</li> <li>● Bioretention on public parks</li> </ul>	<ul style="list-style-type: none"> <li>● Right of way planters</li> <li>● Bioretention on public parks</li> <li>● Stream &amp; floodplain restoration</li> </ul>	<ul style="list-style-type: none"> <li>● Right of way planters</li> <li>● Bioretention on public parks</li> <li>● Stream &amp; floodplain restoration</li> <li>● Impervious surface removal</li> </ul>

## 3-Tiered Structure (e.g. DC, Baltimore)

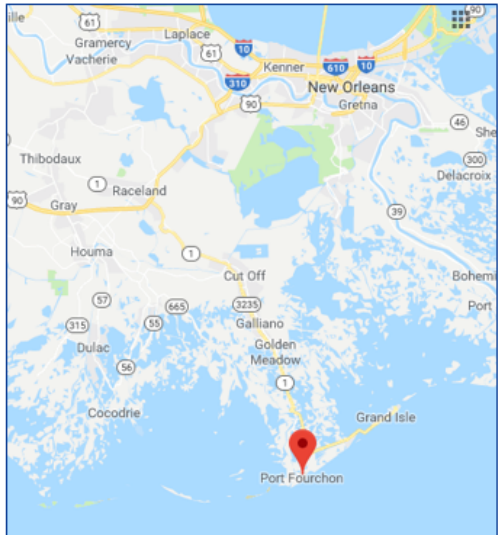




## 2-Tiered Structure (e.g. Atlanta)



# Coastal Louisiana: Filling Capital Gaps for Wetland Restoration



## Challenges

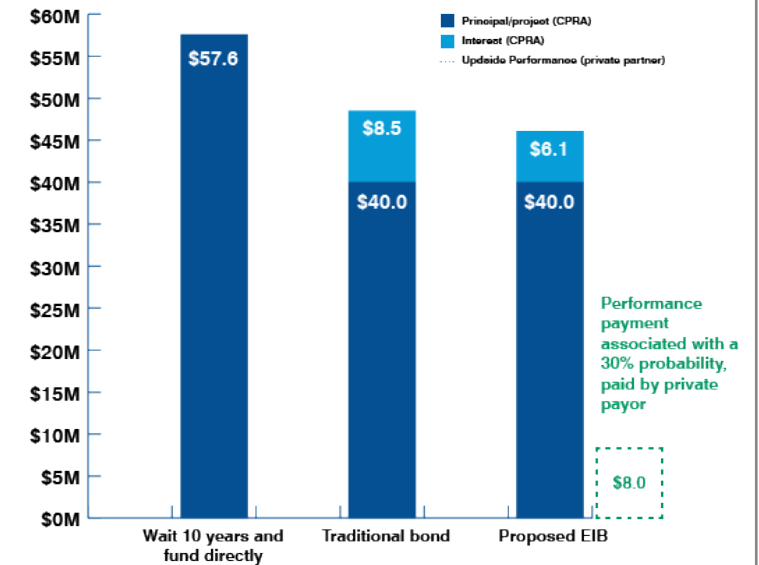
- Coastal Master Plan requires \$50B-\$90B over the next 50 years
- Only \$9B-\$12B to support wetlands restoration have been identified, mostly from Deepwater Horizon settlement funds
- Projects get more expensive over time as seas continue to rise and land erodes

## Solutions

- Access to “up-front” capital to deploy restoration projects sooner
- New sources of capital for restoration

## Project Goals

- Cost-effectiveness
- Create a simple, scalable and replicable model
- Create benefits for all: CPRA, investors, asset owners and residents.



### Additional benefits

Additional benefits	Wait 10 years and fund directly	Traditional bond	Proposed EIB
Build projects sooner	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Engage additional payors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Measure economic wetland benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



# Colorado: Environmental Impact Fund

## Multi-payor fund enables long-term cross-boundary wildfire risk mitigation

### Wildfire Mitigation EIF Goals:

- Increase the scale of interventions around the San Juan National Forest (nonfederal land) to reduce wildfire risk
- Stack payors, investors, biomass revenues, and public and philanthropic contributions to minimize funding required of small rural communities while repaying on risk mitigation outcomes
- Support local biomass industry (renewable power, biochar, etc.)
- Use public bond issuance to capitalize a revolving fund, enabling treatments to be implemented and self-sustainable over the long term

● **Outcomes:** restored forests, reduced risk of wildfire, protected water resources, avoided economic costs, resilient communities in wildland-urban interface



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## Scope of Services Awarded

**Through support from the McKnight and Walton Family Foundations, Quantified Ventures will provide the two (2) winning applicants the following technical assistance services to structure and issue Environmental Impact Bonds (EIBs):**

- Confirm size, scope, and objectives of the project(s) and EIB transaction
- Develop comprehensive economic model of project outcomes
- Design the transaction, including financial structure, outcome measures, and outcome payment triggers
- Establish evaluation model and support evaluator selection
- Develop technical memoranda to enable investor due diligence
- Undertake investor marketing

## Who is Eligible?

### The following entities are eligible:

- County or municipal government
- Utility
- Water or sewer authority
- Located near or along the Mississippi River

### Who have:

- Demonstrated appetite and capacity for innovation
- Financing authority, such as ability to issue bonds, a strong credit rating, and a revenue source to repay investors
- Buy-in and support from relevant stakeholders to ensure successful EIB issuance

## What Types of Projects are we Looking For?

- Preference given to green infrastructure projects to address flooding and/or water quality, but all projects that help build resilience for communities along the Mississippi River will be considered
- Projects already in planning stages that could be construction ready by Winter 2021
- Projects that will cost at least \$5 million (large enough to warrant an EIB issuance)
- Both single projects and suites of projects are eligible

## What is the Timeline?

- **September 19:** EIB Challenge Kickoff at MRCTI Summit in Memphis
- **October 29:** Submission period opens, with rolling acceptances
- **November 27:** Submission deadline
- **December 18:** Final selections announced
  
- Early notices of intent to apply are encouraged, but not required
- Direct all applications, notices of intent, communications, and questions to Todd Appel, [appel@quantifiedventures.com](mailto:appel@quantifiedventures.com).
- **Download Request for Statement of Interest here:** <https://www.quantifiedventures.com/mrcti-mississippi-river-eib>



# Proposal Guidelines

**A. Executive Summary:** (1 page max)

**B. Project Scope and Fit with EIB Model:** (3 page max)

1. Context of stormwater management or resilience problems in city or region to be addressed through this project
2. Proposed project or projects that will be funded through the environmental impact bond, including the current status of planning or development of these projects as of the time of application
3. How this project/these projects fit within broader green infrastructure, stormwater management, and/or resilience plans in the City or region
4. Project timeline, including feasibility of commencing implementation of these projects in the 12-15 month timeframe
5. Community/communities served, including location, demographics, population size, and other relevant demographic information
6. Estimate of Environmental Impact Bond transaction size (\$)

# Proposal Guidelines

## C. Organizational Capabilities: (1 page max)

1. Financial resources and ability to issue bond, including track record of bond issuance and credit rating
2. Plan for staff hours allocation and designation of project leadership
3. Existing relationships with local stakeholders required for successful project implementation, including specific points of contact and current status of discussions and plan development. (Letters of support from these stakeholders may be provided in the Appendix)
4. Proposed decision-making process and engagement plan for working with necessary stakeholders to issue EIB, including which parties will be required to approve the deal
5. Willingness to make a \$10k cost share match

# Proposal Guidelines

## **D. Impact:** (2 page max)

1. Description of the communities served or impacted by the proposed project(s)
2. Evaluation of benefits to these communities (e.g., environmental, economic, health, social) of implementing these projects
3. Description of the need for EIB financing approach, including what financing the proposed project in this way will allow the City or payor to do that would otherwise not occur

## **E. Appendix:**

Applicants may include letters of support and commitment from relevant project stakeholders within and outside the public sector, as well as planning, design, legal, or other documents detailing the development status of projects to receive funding

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# Thank You!



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Managing Director, Quantified Ventures  
[appel@quantifiedventures.com](mailto:appel@quantifiedventures.com)



**Ben Cohen**

Director, Quantified Ventures  
[cohen@quantifiedventures.com](mailto:cohen@quantifiedventures.com)



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