Expanding Finance for Conservation and Restoration of Natural Assets

Rowan Schmidt, Program Director
Earth Economics
Our Approach

Awareness Building

Place-Based Analysis

Policy and Finance
Types of Capital

- Built Capital
- Social Capital
- Human Capital
- Natural Capital
- Financial Capital
Pre- and Post-Disaster Funding Opportunities for Conservation and Restoration
Natural disasters cost the United States a record $306 billion in 2017.
The previous record was $215 billion in 2005.
HAZARD MITIGATION

Any action taken to reduce or eliminate long term risk to people and property from natural disasters.
III. POLICY STATEMENT:

FEMA will allow the inclusion of environmental benefits in benefit-cost analyses (BCA) to determine cost effectiveness of acquisition projects.
MEMORANDUM FOR: Mitigation Division Directors
FEMA Regions I-X

FROM: Michael M. Grimm
Assistant Administrator for Mitigation
Federal Insurance and Mitigation Administration

SUBJECT: Benefit Cost Analysis Tools for Drought, Ecosystem Services, and Post-Wildfire Mitigation for Hazard Mitigation Assistance

In September 2015, FEMA released three new activities eligible for the Hazard Mitigation Assistance (HMA) programs: Aquifer Storage and Recovery, Floodplain and Stream Restoration, and Flood Diversion and Storage, known as the Climate Resilient Mitigation Activities (CRMA). These activities can be used for any hazard when appropriate and leverage traditional risk reduction benefits and applicable ecosystem services. Additionally, FEMA developed pre-calculated benefits for cost effectiveness evaluation of soil stabilization, flood diversion, and reforestation projects in wildfire impacted areas to support expedient implementation of post-wildfire mitigation actions. With this memorandum, FEMA is releasing the following additions...
Flood Protection
Eligible Project Types

- Acquisition and Relocation
- Flood Diversion and Storage
- Post-Wildfire Mitigation
- Riparian Restoration
- Aquifer Storage & Recovery
- Green Infrastructure
Hurricane Harvey (2017)
$200 billion in damages
Little White Oak Bayou Plan
Traditional Acquisitions of Parcels with Structures

Legend
- Structures Damaged During Harvey
- Parcels
- 100 Year Floodplain

Sources:
FEMA Floodplains NFHL 2015
Harris County Parcels
Date: 11/2/2018
Green Infrastructure for Flood Risk Reduction
Thomas Fire (2018)
>$2.2 billion in damages
Acquisition of forest adjacent to fire damaged subdivision
FEMA: Pre-Disaster Mitigation

- New law passed by Congress
- Similar process/projects to HMGP
- Annual, nationally competitive program, not tied to disaster
- PDM funding will increase from ~$200 million/year to $billions in 2019
Muni Bond Finance for Green and Distributed Infrastructure
Green and Distributed Infrastructure

- Not a luxury
- Supports service targets and co-benefits
- Practical and cost-effective solution
- Supports resilience and equity
Common Utility Goals

- Conserve water and use it more effectively.
- Avoid stormwater flooding.
- Prepare for sea level rise and droughts.
- Preserve local open space and streams.
- Keep water clean, safe, and healthy.
Permeable Pavement

Stormwater treatment
Water supply
Less severe heat waves
Quieter neighborhoods
Educational opportunities
Green Roofs

Stormwater treatment
Lower utility bills
Cooler cities
Cleaner air
Neighborhood beautification
GI and DI: Other examples

- Water Efficiency Programs
- Recycling and Water Reuse Programs
- Green Infrastructure and Nature-Based Solutions
Utility finance folks often believe that you can only pay for these things out of annual operating cash...

...but annual rate revenue is not sufficient to cover large scale investments.

There is an alternative financing choice available that water agencies are often unfamiliar with.
What’s the Solution?

GASB 62 says an entity with rate setting ability can capitalize ‘business-type activity costs’ that would otherwise be expensed.

Creation of regulatory “asset” supports bond-finance of green and distributed infrastructure.
GO GREEN
MUNI BOND FINANCING FOR CONSUMER REBATES
AND OTHER DISTRIBUTED WATER INVESTMENTS

A PRIMER FOR WATER LEADERS ON HOW TO DEBT-FINANCE DISTRIBUTED INFRASTRUCTURE PROJECTS AND CONSUMER REBATES
Who is Doing this Now?

Seattle and King County

Los Angeles
## Co-benefits can Inform Financing and Partners

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THANK YOU

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