

# Funding Watershed Restoration AND Hazard Mitigation / Resilience Strategies and Sources

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ENVIRONMENTAL  
FINANCE CENTER

# Agenda

Strategy / Approach to Funding Projects

Project Planning Tips

Funding and Financing Resilience Projects

Federal & State Funding Sources



A background image showing two people's hands and arms as they work on a large blueprint or map spread out on a table. One person, wearing a grey button-down shirt, has their hand resting on the paper. The other person, wearing a red and white striped shirt, is holding a pencil and appears to be drawing or pointing at a specific area on the blueprint. The lighting is soft, and the focus is on the hands and the paper.

# Strategy & Approach to Funding Projects

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Improving Resilience Funding and  
Financing Capacity

# Objectives and Benefits of Projects

What are you trying to achieve (or restore back to)?

- Ties into funding opportunities, as well as the feasibility of projects
- Wildlife habitat tends to be an “extra” or bonus thing



# Objectives and Benefits of Projects



# Feasibility

If current or future **flood mitigation** is an objective...

You should be VERY realistic about what can be achieved

- Type(s) of flooding, scale of issue, size of watershed, land cover, etc.
- So many structures and infrastructure built within floodplains
- So many—and often drastic—hydrological modifications
- Removing bigger trees to restore streams → change stream temps?
- Win-win projects (e.g. road-stream crossing improvements)

# Feasibility

If **heat mitigation** is an objective...

You should be VERY realistic about what can be achieved

- Time lag for tree plantings to generate measurable cooling benefits
- Can we quantify near-term benefits (e.g. de-paving + vegetation)?

**\*Maintaining existing shade trees and forest cover\***

A background image showing two people's hands and arms as they work on a large blueprint or architectural drawing spread out on a table. One person, wearing a grey button-down shirt, has their hand resting on the drawing. The other person, wearing a red and white striped shirt, is holding a pencil and appears to be drawing or pointing at a specific area on the blueprint. The scene is dimly lit, with the primary light source coming from above, highlighting the hands and the drawing.

# Project Planning Tips - with Funding in Mind

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Improving Resilience Funding and  
Financing Capacity



# Resilience Project Planning Tips

General

- Adopt integrated planning efforts
- Consider funding options early in the planning process
- Establish a portfolio of viable implementation projects
- Pursue cost reducing strategies
- Identify and evaluate funding and financing options
- Develop a diverse mix of funding and finance strategies

# Resilience Project Planning Tips

General

- Stages of project development
- Other sources of technical assistance
- Non-federal cost-share
- Benefit-cost analysis (BCA)\*

# Resilience Project Planning Tips

General

- Non-federal cost-share
  - Timing
    - Getting project into municipal and county budgets
    - Applying for other grants, loans
  - Pursue multiple sources
    - Funding “quilt”
  - Strategies for smaller communities
    - Collaborative projects
    - Cooperative procurement, resource sharing

# Resilience Project Planning Tips

FEMA in particular

- Benefit-cost analysis (BCA)
  - Start early with help from technical partner
  - Rough BCA to see if worth doing detailed BCA
  - Gather available info so don't have to redo steps for BCA
    - Plan to fill in gaps ahead of actual application
  - Include critical infrastructure, lifelines, wider area in projects (“community-level benefits”)

The background of the slide features a close-up, blue-tinted image of a calculator, several coins, and a line graph. The calculator is in the upper left, showing buttons like 'M+', '÷', '+', and '1'. To the right, there are several coins, including a Euro. Below the coins is a line graph with a grid. The graph has a vertical axis with values 6,000, 6,250, 6,500, and 6,750. The horizontal axis has labels for months: AUG, SEP, OCT, NOV, and DEC. The line graph shows a fluctuating upward trend. The overall image is in a cool blue color palette.

# Funding and Financing Resilience Projects

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Strategies and Sources



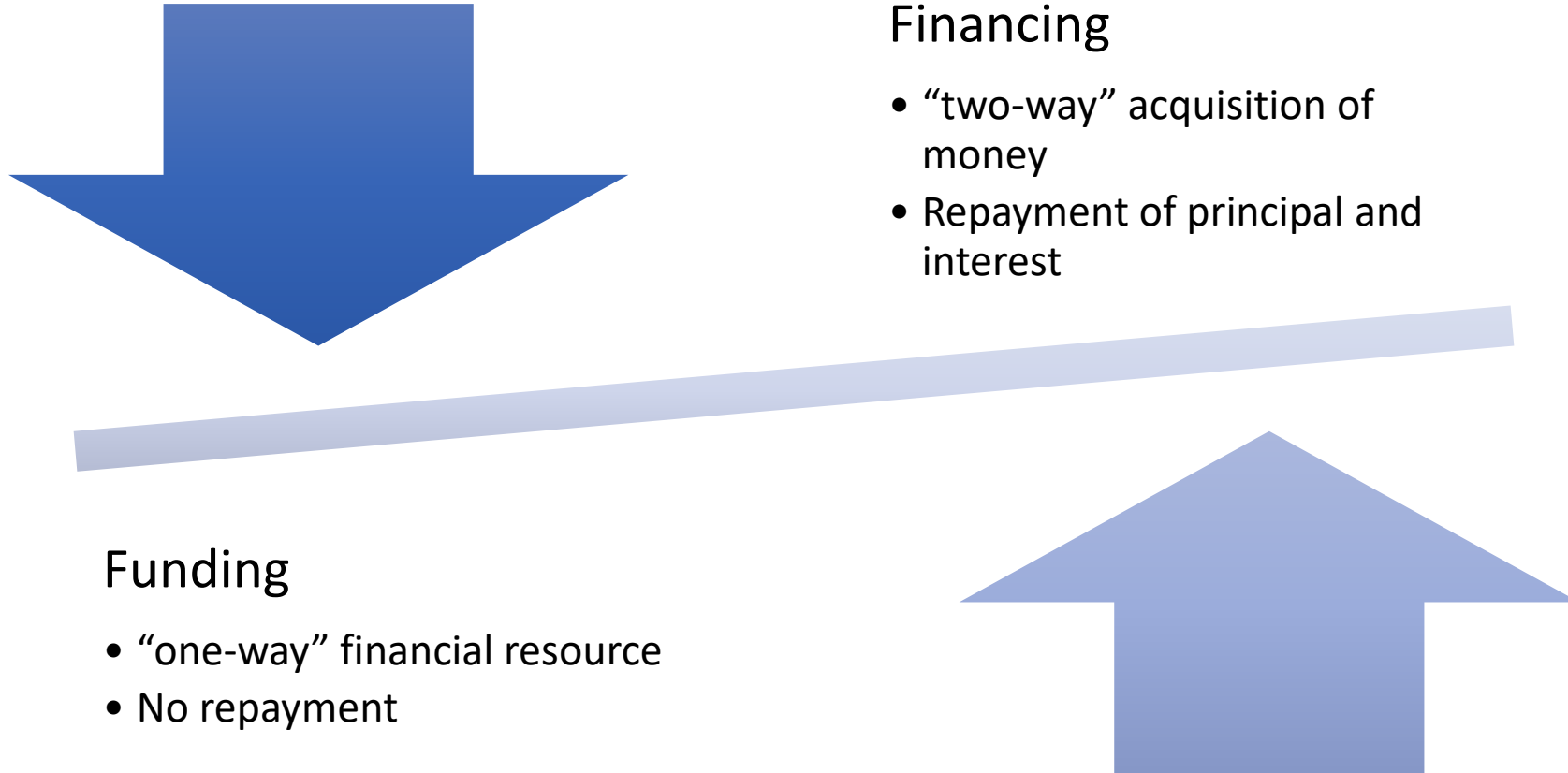
A comprehensive resilience funding strategy will use a combination of tools

- Incorporating funding and finance earlier, especially in integrated planning processes
- Develop a balanced funding & financing strategy
  - Cost reducing activities
  - Revenue streams



# Developing a Balanced Strategy

Funding and Finance



# Developing a Balanced Strategy

## Cost Reducers and Revenue Streams



### **Cost Reducers**

Integrated Planning

Capital Improvement Programs

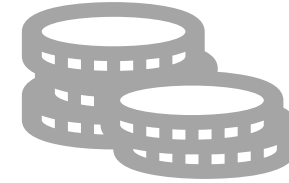
Asset Management

Procurement Partnerships and Resource Sharing

Public Private Partnerships

Rebates and Tax Credits

Regulations and Policy



### **Revenue Streams**

Taxes

Fees

Bonds and Loans

Grants

Crowdfunding

# Cost Reducers for Resilience

- Integrated Planning
  - Integrating with Comprehensive Plan, Hazard Mitigation Plans, other Community Plans
  - Integrating with regional and state plans
- Embedding Resilience into Current Processes (esp. Capital Improvement)
  - Asset Management
    - Assessing vulnerability
    - Updating maintenance and replacement schedules
    - Updating infrastructure design standards and plans
  - Budget and Procurement
    - Establishing resilience criteria as priority
    - Assessing long-term viability
- Bundling Projects
  - Portfolio of projects
  - Coordinating with neighboring jurisdictions



# Revenue Streams for Resilience

- General Funds
  - New taxes or special assessments
  - Enterprise funds
  - Tax Increment Financing Districts or Special Improvement Districts
- Fees
  - Permit Fees
  - Utility Fees
  - Impact Fees
  - Fee In-lieu
- Bonds
  - Municipal
  - Green
  - Impact
- State Revolving Funds (SRFs)
  - Clean Water SRF & Drinking Water SRF
    - Green Project Reserves
  - Newer Resilience Revolving Loan Funds: Federal STORM Act





# Revenue Streams

## Federal Grants

## Federal Funding and Technical Assistance Programs

Note: FEMA Pre-Disaster Mitigation (PDM) Grant Program is now Building Resilient Infrastructure and Communities (BRIC)

	Green Infrastructure	Natural Infrastructure	Urban Focus	Habitat Restoration	Flood Prevention	Water Quality	Pollution Abatement	Disaster Mitigation
EPA Building Blocks for Sustainable Communities								
EPA Clean Water Act Nonpoint Source Grant (Section 319)								
EPA Clean Water State Revolving Fund (CWSRF)								
EPA Great Lakes Restoration Initiative (GLRI)								
EPA Greening America's Communities Program								
EPA Superfund Redevelopment Initiative (SRI)								
EPA Urban Waters Small Grants Program (UWSG)								
FEMA Flood Mitigation Assistance (FMA) Grant								
FEMA Pre-Disaster Mitigation (PDM) Grant Program								
HUD Community Development Block Grant (CDBG)								
NOAA Community-based Restoration Program								
USDA Urban and Community Forestry (UCF) Program								
USFWS (U.S. Fish & Wildlife Service) Coastal Program								

## Recommended Resources

- [Flood Funding Finder](#)
- [Nature-Based Solutions Resource Guide 2.0](#)\*\*
- [Federal Funding for Green Infrastructure and Nature-Based Solutions Summary Table](#)\*
- [Webcast - Navigating Federal Funding for Green Infrastructure and Nature Based Solutions](#)\*
- [EESI Fact Sheet - Federal Resources for Nature-Based Solutions to Climate Change](#)
- [Funding Sources By State Or Territory](#) (infrastructure)
- [Federal Funding for Water and Wastewater Utilities in National Disasters \(Fed FUNDS\)](#)



**FEMA**

**HUD**

**DOT / FHWA**

**NOAA**

**EPA**

**USDA / RD + NRCS + US Forest Service**

**DOI / USFWS**

**DOD**

**USACE**

**(NFWF)**

# Revenue Streams

Federal Grants

Federal Funding and Technical  
Assistance Programs

# Cost-Share for FEMA

## Sources

### Acceptable federal match

- Dept. of Defense - Readiness and Environmental Protection Integration (REPI) Program ([www.repi.mil](http://www.repi.mil))

### Federal pass-through funding that loses federal identity

- EPA via SRF
  - “SRFs can be used a bridge loan or supplement until reimbursement by FEMA”
- HUD CDBG via state or county
  - Disaster Recovery (DR) - after declared disasters
  - Section 108 Loan Guarantee Program

# Revenue Streams

## State Funding

- 319 nonpoint \$
- DOT \$
- SRF's
- Open space preservation
- Ag BMP cost-share

- Maryland
  - MDE Comprehensive Flood Mgt. Grant Program
  - DNR Chesapeake and Coastal Grants Gateway
- Pennsylvania
  - Growing Greener
  - Community Conservation Partnership Program
  - Fish & Boat
  - DCED
- Virginia
  - Community Flood Preparedness Fund (CFPF)
- Delaware
  - Chesapeake Bay Implementation Grants (CBIG)
  - Local Government Implementation Funding Grants (LGIF)
  - Clean Water Trust Fund\*
  - Tax / drainage ditches



# Takeaways

- There is no magic bullet
  - Funding *is* difficult to acquire
- Be prepared to take advantage of new funding by:
  - Considering funding options early in the planning process
  - Evaluating available cost-share options
  - Establishing a portfolio of viable implementation projects
  - Integrating resilience into traditional infrastructure projects
- Seek technical partners familiar with that agency's applications to assist with project development
- Partner with nearby communities to pool match and expand population benefited by projects
- Develop a diversified strategy by mixing various funding and finance strategies to implement projects

# Questions



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