Leveraging FEMA Funding for Nature-Based Solutions to Support Hazard Mitigation

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Agenda

• About Earth Economics
• The big picture
• Nature-based solutions to support hazard mitigation
  • Recent FEMA policy advances
  • Case studies: Wildfire, Flood
Taking Nature into Account
Our Approach

Awareness Building

Place-Based Analysis

Policy and Finance
WHAT HAS VALUE?
How do we measure it?
How do we fund it?
OLD THINKING
Nature as an accessory
NEW THINKING
Nature as the big picture
Natural disasters cost the United States a record $306 billion in 2017. The previous record was $215 billion in 2005.
Hurricane Harvey (2017)
$200 billion in damages
Hurricane Florence (2018) >$17 billion in damages
California Wildfires (2017)
>$18 billion in costs
Hazard Mitigation Grant Program (HMGP)

The key purpose of this grant program is to enact mitigation measures that **reduce the long-term risk of loss of life and property from future disasters**.
Flood Protection
FEMA Policy Advances

• 2013: Environmental Benefits Policy
  • Applies to acquisition projects

• 2016: Policy expansion, new eligible project types
  • Post-wildfire mitigation
  • Aquifer storage & recovery
  • Flood and drought mitigation
  • Green infrastructure
III. POLICY STATEMENT:

FEMA will allow the inclusion of environmental benefits in benefit-cost analyses (BCA) to determine cost effectiveness of acquisition projects.

IV. PURPOSE:

The purpose of this policy is to identify and quantify the types of environmental benefits that FEMA will consider in the BCA for 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
Post-Wildfire Mitigation

Using pre-calculated benefits
Proposal: Acquisition of open space, hazardous fuels reduction, defensible space
Beyond the Bayous
Little White Oak
Traditional buyouts: Acquisitions of Parcels with Structures
Green Infrastructure = Flood Storage Infrastructure
Reconnecting Floodplains for Floodwater Storage
FEMA: New Pre-Disaster Mitigation

• Potential expansion of funding for Pre-Disaster Mitigation (PDM)
• PDM funds similar approaches to HMGP, but is not tied to disaster declaration.
• PDM funding was ~$250 million in FY 2018, could increase significantly in FY 2019.
Thank You
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