



Flood Economics:

An Economist Intelligence Unit (EIU) Web Project

ASFPM Conference
May 2017



FEMA

**The
Economist**

Intelligence
Unit

Agenda

- Project Strategy
- The Economist Intelligence Unit (EIU)
Introduction
- Flood Economics
 - Research and Methodology
 - Site Tour
- Next Steps
- How You Can Participate
- Q&A

Project Purpose

Changing the Conversation About Flood Mitigation

- **The Challenge**
 - A lack of credible, prominent voices expressing the value of mitigation action that are accessible to nontechnical audiences.
- **The Solution**
 - Flood Economics brings a well-respected, independent research institution's perspective to the flood mitigation discussion to:
 - Assert a strong economic and business case for mitigation action
 - Highlight the need (and utility) for investment in mitigation
 - Link mitigation more closely to the dialogue on resilience



Intended Use

Flood Economics is designed to:

- Increase decisionmakers' **awareness** of flood risk and its relevance to their communities;
- Increase their **knowledge** of how to mitigate a community's flood risk; and
- Encourage people to **share** this knowledge with key industry experts and affected stakeholders, creating a ripple effect.

➤ **All designed to spur flood mitigation action**

Audience

Flood Economics has three primary target audiences:

- **Nontechnical Decisionmakers:**
The key decisionmakers
 - Mayors and local council members
- **Community Leaders:**
The voice of the community
 - Association presidents and community advocates
- **Flood Mitigation Specialists:**
The subject experts and advisors
 - Floodplain managers and hazard mitigation professionals



The Economist Intelligence Unit

- **The EIU** is the research and analysis division of The Economist Group, a sister company to The Economist newspaper.
- Created in 1946, the EIU has **70 years of experience** in developing timely, reliable, and impartial analysis of economic, policy, and development strategies.



Research Overview

RESEARCH DESIGN



Comprehensive literature review

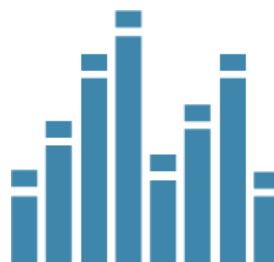


Expert working group

RESEARCH PROGRAM



Flood Loss Avoidance Studies



FEMA Hazard Mitigation Grants database

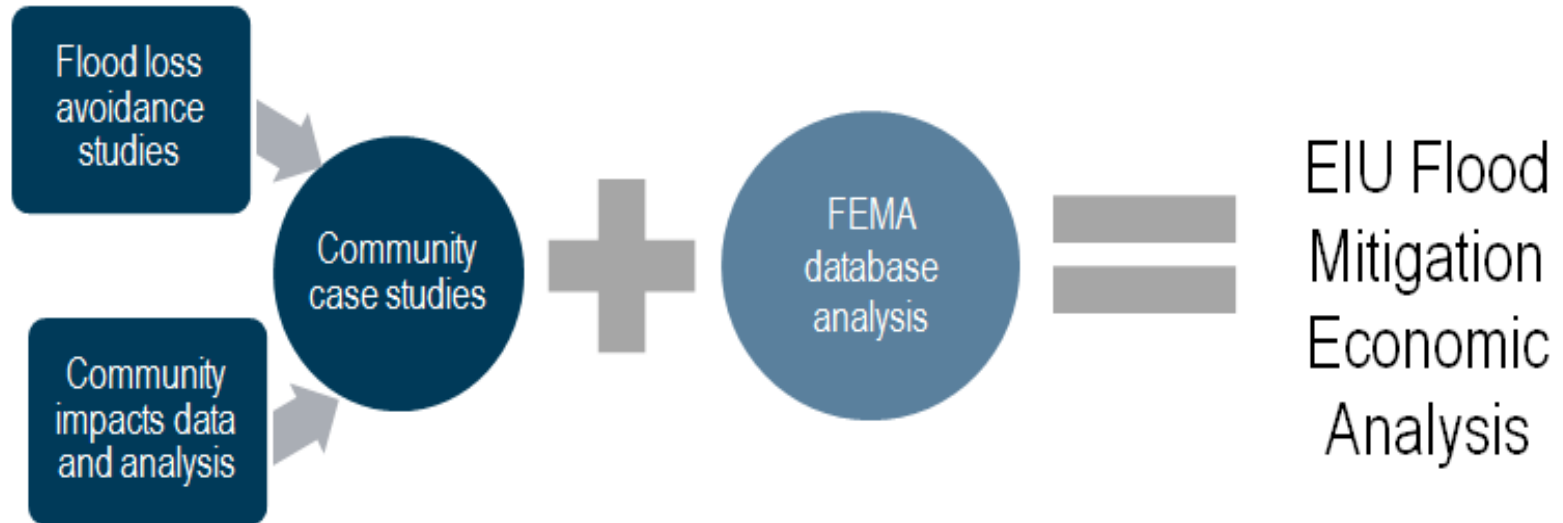


Primary interviews with experts and community leaders



FEMA and U.S. census data on communities

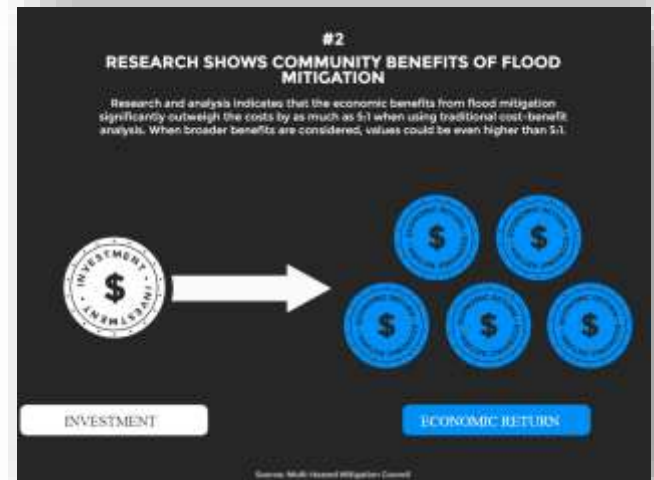
EIU Research



The core of the research program is the 11 community case studies.

Flood Economics Key Takeaways

1. Flood mitigation benefits go beyond dollars and cents
2. Research shows that communities benefit from flood mitigation
3. Solutions exist to support funding challenges
4. Communities that mitigate may benefit from flood insurance premium discounts of up to 45 percent
5. The benefits of flood mitigation result from local action



The online tool:
<https://www.floodeconomics.com>

Flood Economics: Supporting Your Ongoing Efforts

Some ideas:

1. Offer data that demonstrates the direct benefits of specific mitigation actions (case studies and State-level data)
2. Leverage ideas for talking with elected officials when updating a Hazard Mitigation Plan (case studies and State-level data)
3. Help communities in the Community Rating System (CRS) program demonstrate activities that translate into CRS credits (case studies)
4. Develop ideas to support brainstorming and identify next steps during a Resilience Meeting (case studies and State-level data)

Next Steps

1. Virtual Event and Other Marketing Efforts

- Launch and promotion: Starting now, to November 2017
 - Virtual event: June 2017
 - Media outreach (both traditional and social)
 - Three roadshow community events: Summer/Fall 2017
 - Presented at National Hurricane Conference in April 2017
Planning to present at NLC in November 2017
 - Podcast

Q&A

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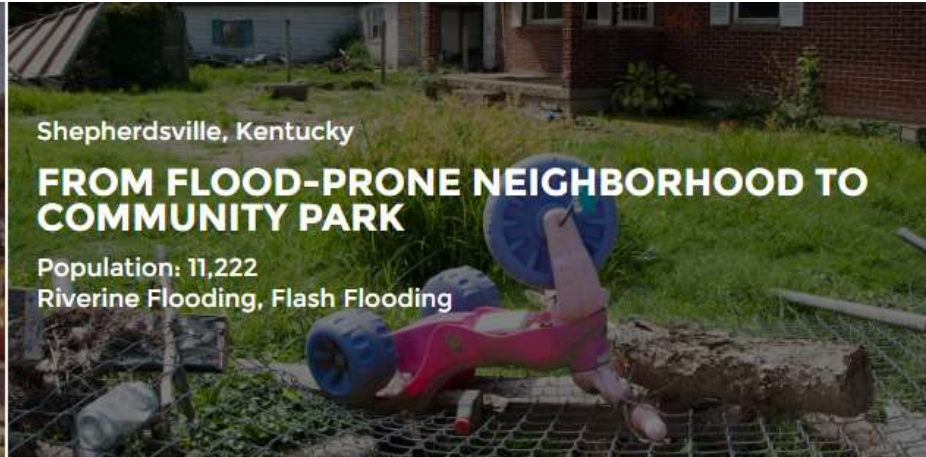
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Appendix

Community Case Studies



Community case studies

BENEFITS OF MITIGATION

Economic

\$985,308

Total monetized benefits

Return on investment

443.4%

Estimated return on investment

Benefit-cost ratio

5.4

Benefit-cost ratio of the Elkader projects

Source: Federal Emergency Management Agency. (2010). Loss Avoidance Study, Iowa, Flood Reduction Projects.

PROJECT CHALLENGES

“Finding matching funds was tough for the small town.”

The city had to come up with roughly \$70,000 to meet the 50% match for the \$135,000 project. It was a significant investment, but it was well worth it, says Cowsert.

The United States Takes Action

Select a state to discover the investment, returns and benefits of flood mitigation action from 1996 to 2016 as funded by FEMA Hazard Mitigation grants ([View methodology](#))

California

STATE SUMMARY FOR CALIFORNIA

Average return on investment

65%

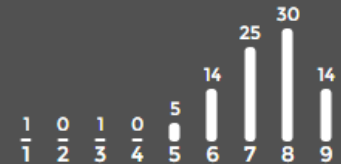


Average benefit-cost ratio

1.65



CRS communities by class



Number of projects

909

1996-2016

Total investment

\$571.0m

1996-2016

Total benefits

\$705.9m

1996-2016

The United States Takes Action

Planning and Education

Mitigation planning	179 projects	\$39,398,922 invested
Public awareness and education	21 projects	\$4,476,572 invested
Hazard identification and risk assessment	0 projects	\$0 invested

Building-related

Buyouts (acquisitions and relocations)	30 projects	\$49,505,309 invested
Elevations	32 projects	\$53,246,922 invested
Floodproofing (wet or dry)	0 projects	\$0 invested

Environmental

Vegetation management	1 project	\$1,998,602 invested
Land stabilization (shoreline and landslide)	3 projects	\$3,279,439 invested
Wetland restoration/creation	0 projects	\$0 invested

Critical Infrastructure

Critical infrastructure, utilities and stormwater systems	146 projects	\$167,604,036 invested
Flood control (levees, floodwalls, dams)	8 projects	\$16,674,988 invested
Warning systems	13 projects	\$27,923,645 invested
Generators	10 projects	\$2,446,750 invested
Technical assistance	0 projects	\$0 invested

The number of mitigation projects by type do not sum to total Number of projects in the State Summary, due to the exclusion of several smaller mitigation project types for which there is little or no investment data.