Floodplain Easements in Agricultural Landscapes

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Please credit S. Strassman and American Rivers for this content. The research was primarily conducted while S. Strassman was employed with American Rivers and is not associated with the Wisconsin Department of Natural Resources.
Background

- Research was conducted while working for American Rivers
- ARRA projects were only just being completed at time of report, so some updates were added for this presentation*
- Thank you to the NRCS offices in WI, MN, IA, IL and MO for their assistance with these numbers
The Value of Floodplains

- Flood storage
- Wildlife habitat
- Productive fish nurseries
- Denitrification
- Carbon storage
- Sediment storage
- Agricultural production

“Though representing less than 2% of the Earth’s terrestrial surface, floodplains provide approx 25% of all terrestrial ecosystem services” (Opperman, 2010)

Estimated 94M acres within the 100-yr floodplain in U.S., which amounts to only 4% of total land area, yet represents economic liabilities in the billions of dollars

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Program Background

• ARRA represented a large, one-time investment in a host of sectors, including conservation
• Created opportunity for snapshot analyses

• Purpose of the EWP program is to implement emergency measures to relieve imminent hazards to life & property created by natural disasters.
• Typically funds debris removal, stream bank stabilization and repair of conservation practices, but also includes floodplain easements for lands that have been flooded at least 2 times in last 10 years (or where there is an imminent risk of flooding)
• 75/25 cost share

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Agency Distribution

ARRA by Agency

Education, Department of

Transportation, Department of

Other

Health and H...

Energy, Department of

Housing and ...

Gen...

Enviro...

Comm...

Corps...

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EWP portion of Infrastructure

Awarding Agency Name: Agriculture, Department of > Spending Category: Infrastructure

10.787 - Broadband Initiatives Program
10.781 - Water and...
00.000 - No Pro...

10.780 - C...
10.687...
10.9...

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EWP within UMRB states
Basic funding breakdown

- USDA received $52B total 3% of all USDA funds from ARRA were conservation
- ~10% of the conservation funds were directed into the EWP Program
- EWP total $145M as of Feb 2011
Unmet Need

• Between 2008-2010, 104,992 acres applied for floodplain easements in the 5 UMRB states
• This amounts to 1534 applicants
• In total, 12,790 acres were enrolled with 99 landowners
TOTAL Requested: $466.2M

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Agricultural sector losses

- In the 1993 floods, agriculture-related flood damages have been estimated at $3.8 billion to $8 billion.
- In 2008, the American Farm Bureau Federation estimated more than $8 billion in ag-sector losses from that year’s floods (half of this total was amassed in Iowa).

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Activated floodplain

Assuming a conservative estimate of one foot of floodwater depth in major flood events, EWP-ARRA floodplain easements will hold 21,056 acre-feet of floodwaters. This is equivalent to the amount of water found in East Lake Okoboji in northwestern Iowa.

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Summary Considerations

- Analysis shows that floodplain easements are a low-cost investment in reducing flood losses in the agricultural sector.
- There is sufficient voluntary interest to warrant a standing program to deliver easements within the agricultural sector.
- Floodplain easements could provide significant opportunities for a suite of ecosystem services, particularly if watersheds were managed at a basin scale.

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Mississippi River, Wisconsin

Full report can be found on the American Rivers website under “News & Media” then “Publications & Reports”

www.americanrivers.org/newsroom/reports/

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