How Federal Policy Causes Flood Disasters

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* The high cost of flood disasters

* We do not know what floods cost.
* Published estimates do not include all costs of disasters.
* Economic losses are at least one to two times as high as the direct food damage.
* Including economic losses pushes the average annual cost of flood disasters to $40 to $60 billion.
The high cost of flood disasters

* The National Weather Service estimates flood damage a year after a disaster, never goes back.
* It takes FEMA at least 5 years to get good figures on the cost of infrastructure projects.
* Other costs may take longer to be manifested.
The high cost of flood disasters

Average Annual Flood Damage by Decade 1931-2010 (2010 $)

- Damage
- Damage+100%
- Damage+200%
- Damage Trend
- 100% Trend
- 200% Trend
The high cost of flood disasters

Projected Average Annual Flood Damage 2010 - 2050 (2010 $)

- Damage Trend
- 100% Trend
- 200% Trend
* Reason for increasing flood damage: Increasing floodplain development

* Research shows that from 1900 to 2005, hurricane damage is proportional to coastal development.

* There is reason to think the same is true for riverine floodplains.

* INCREASED FLOOD DAMAGE IS DUE TO FLOODPLAIN DEVELOPMENT AND REDEVELOPMENT.
How Federal Flood Policy Increases the Cost of Flood Disasters

* “It’s OK to build in floodplains.”

* Taxpayers provide financial support for floodplain development and redevelopment.

* Executive Order 11988: A good policy that is not implemented.
* Federal Flood Policy: “It’s OK to build in floodplains.”

* Federal floodplain maps.
* Federal flood insurance.
* Coastal and riverine construction standards.
* Federal flood control projects.
Federal Flood Policy: Financial support for floodplain development

* Subsidized flood insurance.
* Public disaster assistance.
* Casualty loss clause in IRS rules.
Executive Order 11988 adopted in 1977.
Each federal agency shall take action to reduce flood damage and restore and preserve natural floodplain functions.
Federal lands and facilities.
Federally financed projects.
Federal activities and projects.
* Federal Flood Policy: Failure to Enforce Executive Order 11988

* For the last 36 years, EO 11988
  * Should have applied to all federal installations, including military bases.
  * Should have applied to most schools, hospitals, highways and other public works projects.

* EO 11988 was not considered in appropriations for 2005 hurricanes, Sandy or other major flood disasters.

* Was it applied to new DHS facilities on the Anacostia River?
Federal Flood Policy: Poor Floodplain Management Standards

* Using the “best estimate” underestimates flood hazard and increases flood damage.
* Ignoring dams and levees understates flood hazard, increases flood damage.
* Ignoring larger events (larger floods, tsunamis) increases flood damage.
* Filling floodplains, channelizing rivers, building levees increase the flood hazard, flood damage.
Federal Flood Policy: Inadequate Floodplain Maps

* Floods are unique hazards because their locations can be mapped with precision.
* Without good floodplain maps, we cannot manage floodplains.
* Congress has never provided funds to map the nation’s floodplains.
* The NFIP has detailed maps for only 8% to 10% of our riverine floodplains.
Federal Flood Policy: Inadequate Floodplain Maps

* If all floodplains are not mapped, flood damage is higher than expected.
* If SFHA is too small, flood damage is higher than expected.
* If maps are out of date, flood damage is higher than expected.
* FIRMs are created for flood insurance, not floodplain management.
* Federal Flood Policy: We All Pay

* Under current federal flood policy, average annual flood damage will be between $140 and $220 billion by 2050.

* By 2050, flood disasters will cost Americans between $3 and $5 trillion.

* Taxpayers “insure” all uninsured flood damage through disaster assistance, tax relief and inflation.
Federal Flood Policy: Summary

* The total cost of flood disasters is much higher than has been reported.

* The cost of flood disasters is rising rapidly.

* Flood damage, and the total cost of disasters, is proportional to floodplain development.
Current federal flood policy stimulates development and redevelopment of our floodplains.

“It’s OK to develop floodplains.”

Providing financial incentives.
Recommended Changes in Federal Flood Policy


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