



Reforming Federal Support for Risky Development

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for Webinar

Natural Floodplain Functions Alliance

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Howdy!

We appear today in a *pro bono* presentation on behalf of:

Natural Floodplain Function Alliance

&

The Natural Hazard Mitigation Association

This is not and cannot be legal advice; nor does this presentation necessarily represent the views of anyone other than Ed Thomas & David Conrad

This presentation based on general principles of law, ²

Our Message

- Disasters are bad, getting worse; **will continue to get worse unless we change** our development and redevelopment practices quite dramatically;
- **There are multiple paths** to reduce misery and suffering include:
 - Federal Reform For Development Activities
 - Insurance Industry efforts
 - State, Local and Community based efforts

Fundamental Thought

- *A Question for the Group:*

What is the Best Form of Disaster Relief?

Social Science Suggests We Start To Solve Problems With Facts

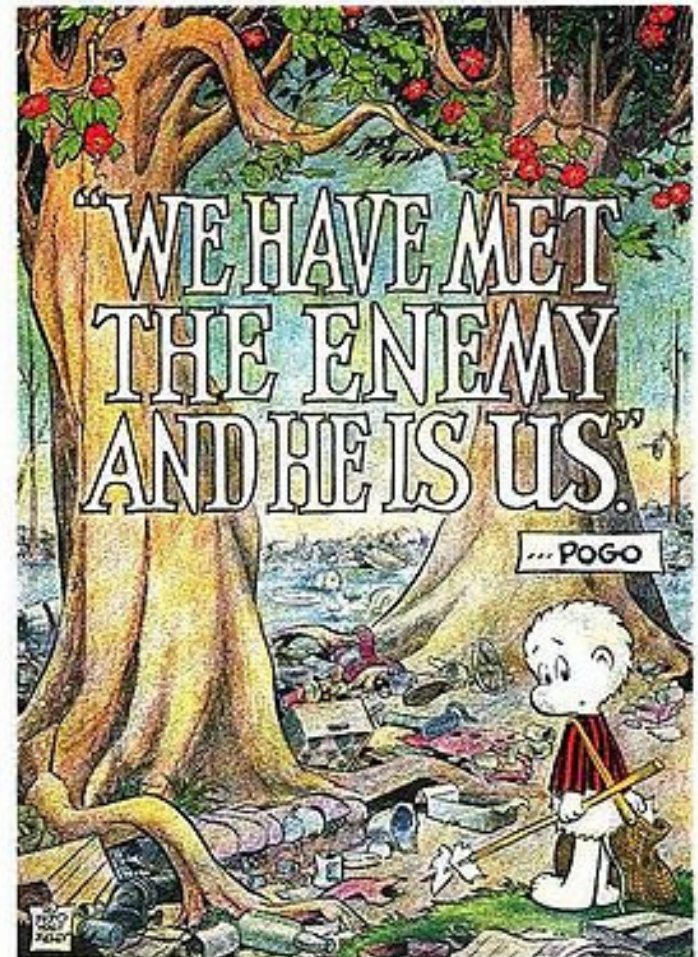
Fact A: Does Nature Cause Disasters?

- Some Folks Say: Global Warming Sea Level Rise- Causes Harm:
- Others: Extreme weather increased by global change
- Others: Synergies of Stresses increasing...
- So... Mother Nature to blame?
- But... are Natural Disasters “Natural”?
- Dr. Gilbert White Stated What I Believe to be Correct:
“Floods are Acts of Nature; But Flood Losses Are Largely Acts of Man”

The Enemy Is Us!

Should we blame Mother Nature or some other “force” for our devastating flood losses?

BIG Role of human engineering, architectural and construction building improperly in areas where natural processes like tsunamis, tornadoes, floods, hurricanes, wildfires will foreseeably take place.



Walt Kelly's poster for the first Earth Day



Introduction

- Genesis of paper - Brookings Institution – Hamilton Project
- Budget-related series – 15 papers – Using economic applications for Budget savings and benefiting public policy broadly – February, 2013
- Enduring social safety net, tax policy reforms, beneficial revenues (i.e. carbon tax, user fees for transportation infrastructure), military-related savings.
- Economic theory should be more broadly applied to national flood and disaster policy

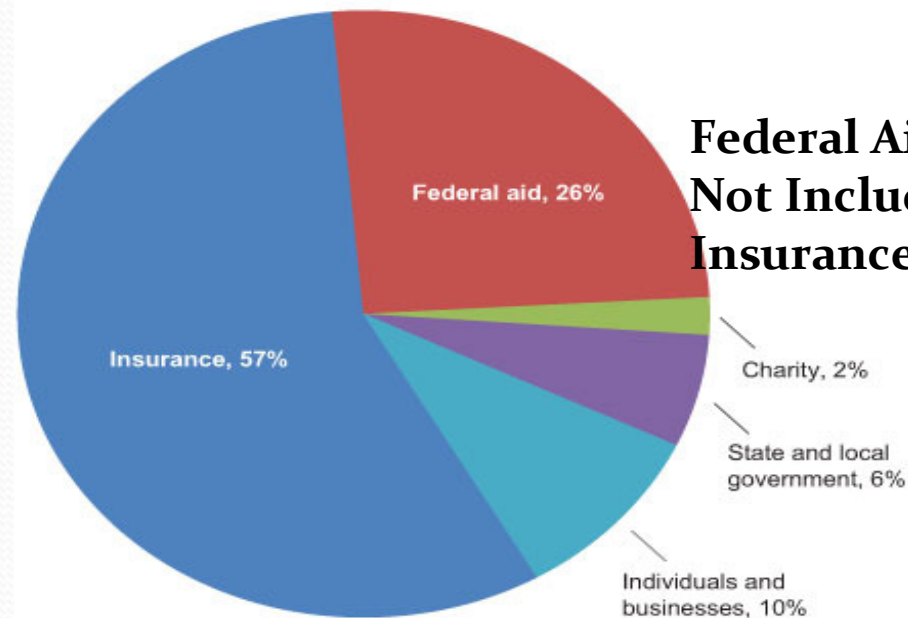
Federal disaster cost proportions are rising

- In distant past – most disaster assistance was state or local level
- In 15 years prior to Katrina federal aid/total losses averaged 26 percent
- 1989 – 2008 federal aid/total losses = 37 percent average
- 2005-2008 federal aid/total losses = 69 percent (Katrina, Rita, Wilma, 2008 Midwest flooding, Gustav, Ike)

Federal costs of Disasters Escalation

- The Federal Reserve Bank of New York blog published a report "How Will We Pay For Superstorm Sandy?" by *Jaison R. Abel, Jason Bram, Richard Deitz, and James Orr*

Share of Costs Paid for Major U.S. Hurricane Events, 1989-2004

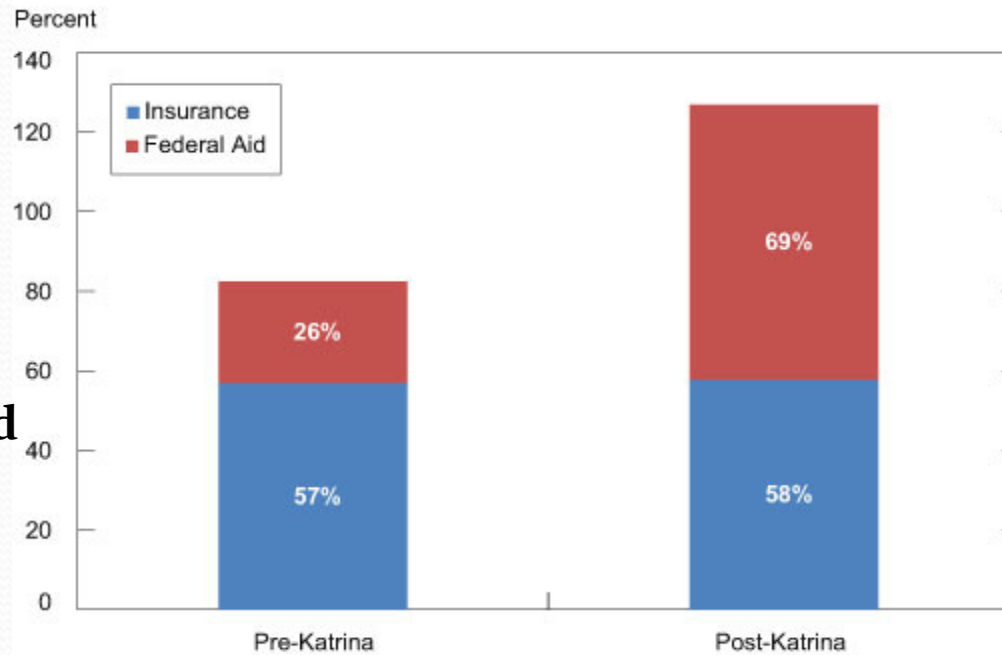


Federal Aid Shown Does Not Include Flood Insurance!

Source: Authors' calculations, based on "Federal Financial Exposure to Natural Catastrophe Risk," by J. David Cummins, Michael Suher, and George Zanjani, 2010. In *Measuring and Managing Federal Financial Risk*. NBER Conference Report. Chicago: University of Chicago Press.

Pre and Post Katrina Disaster Assistance

Share of Costs Paid by Insurance and Federal Aid for Major Hurricane Events Before and After Katrina



Federal Aid Without Flood Insurance!

Source: Authors' calculations, based on data in Cummins, Suher, and Zanjani (2010).

The authors observe: “This pattern suggests that an excess amount was distributed to state and local governments and affected individuals and businesses, although it’s not clear in what proportion. Clearly, though, some businesses or individuals may not have been fully reimbursed for their out-of-pocket expenses, despite the excess payments in aggregate.”

Federal aid ratios: 1989 – 2008

Source: Cummins, Suter and Zanjani, Federal Financial Exposure to Natural Catastrophe Risk, Bureau of Economic Research, University of Chicago Press, 2010

Federal Financial Exposure to Natural Catastrophe Risk

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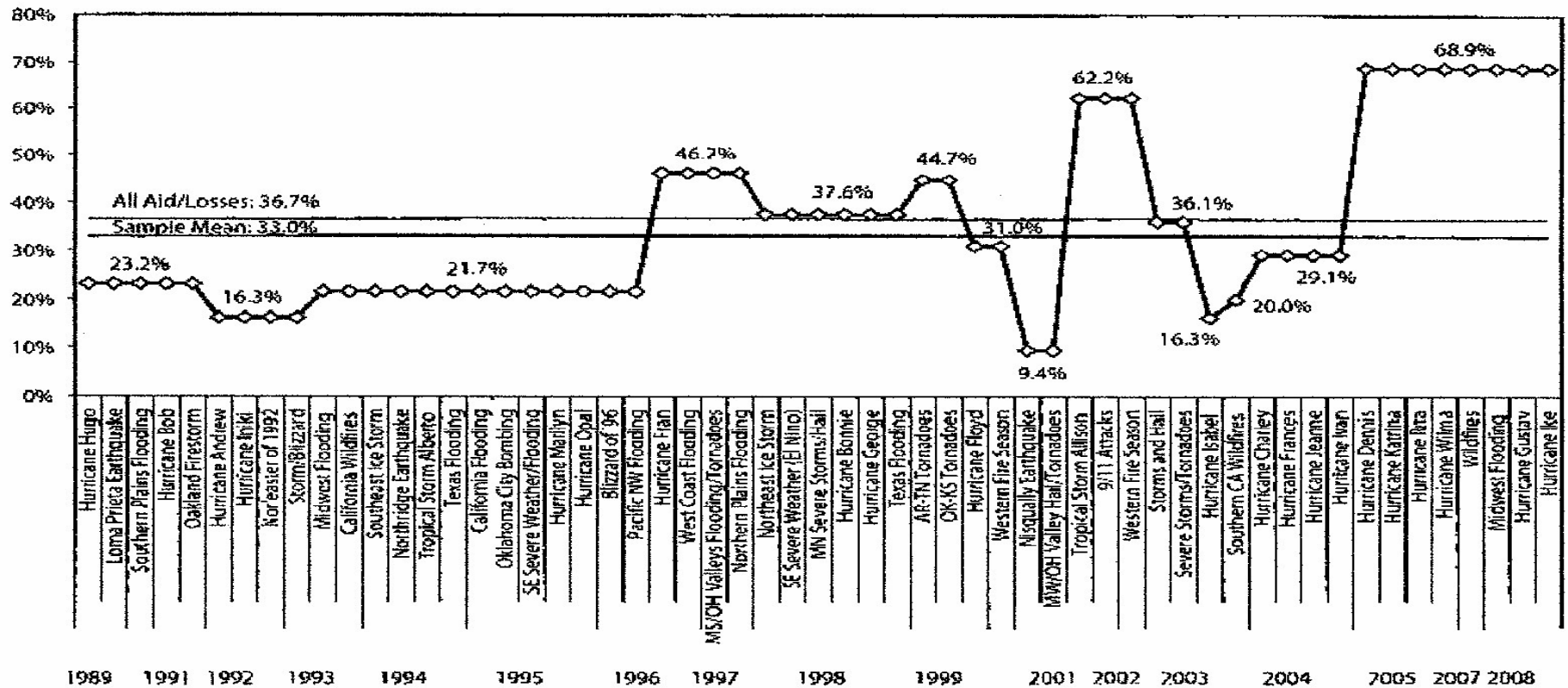


Fig. 4.3 Federal aid ratios: 1989 to 2008

Note: Each data point represents a specific disaster in our sample, with labels for the most significant disasters. The “all aid/losses” ratio is computed after adjusting loss and aid figures by our 2008 exposure index. This index captures both price-level changes and changes in the size of the housing stock. This yields a ratio that is not overweighted by recent disasters.



Disaster assistance as “stealth entitlement”

- “Disaster spending has become a sacred cow. . . . Again and again in the aftermath of disasters, representatives from the affected states have insisted that their constituents deserve no less than what other victims received and that the particular nature of their disaster might justify even more.” D.A. Moss (1999)
- Using an “expected annual [federal disaster] expense” of \$14 billion and adjusting for “rising federal standards” of assistance and “growing private exposure,” over next 75 years unbudgeted federal disaster liability is estimated to be \$1 - \$5.7 trillion. (Cummins, Suher, Zanjani, 2010 and 2012)
- Compares with projected Social Security shortfall at \$4.9 trillion.
- Quite conservative estimates – Federal disaster spending: **FY 2011 - \$21.4 b; FY 2012 - \$40.6 b; FY 2013 - \$ 74.5 b.**

Reforming Federal Support for Risky Development

- Overall federal and national costs of disasters rising at alarming rates
- Much population growth and urbanization moving into riskier areas (e.g. coastal development, wildfire-prone areas; Florida hurricane-exposed property up 27 percent to \$2.5 trillion from 2004-2007)
- Most federal disaster spending is off-budget , including IRS deductions and 35 emergency supplementals in past two decades
- Climate change and rising sea-levels will drive costs higher

Disaster Damages Will Continue To Increase Due To Past Development Practices

- **Even if climate stopped changing, we ALREADY have millions of people at risk**
- **E.g. Dr. Roger Pielke superimposed models of storms which actually took place on today's land use and occupancy**
 - **The results are downright scary**

Growth in Hazardous Locations: Miami Beach 2006

Miami Beach 1926

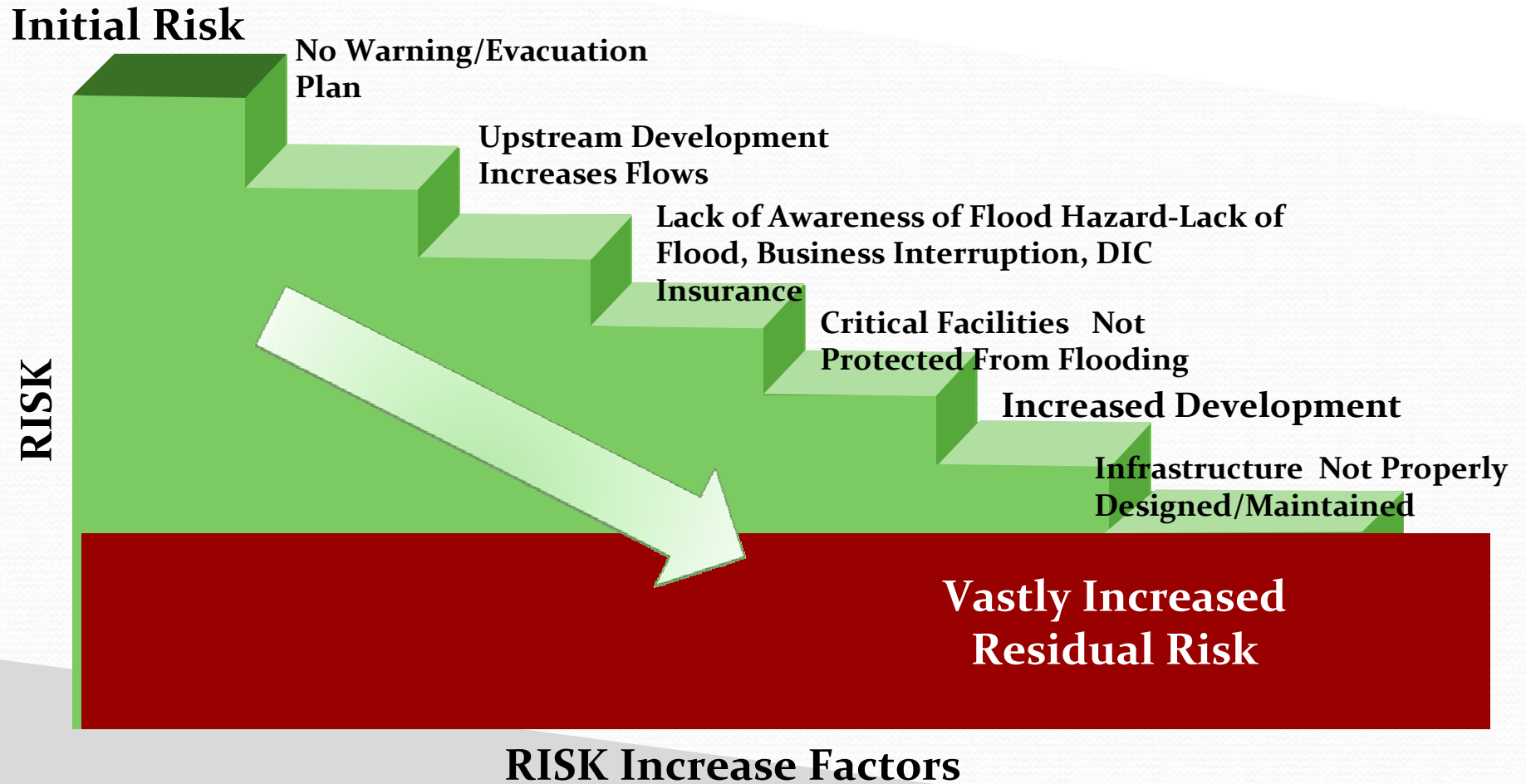


Wendler Collection

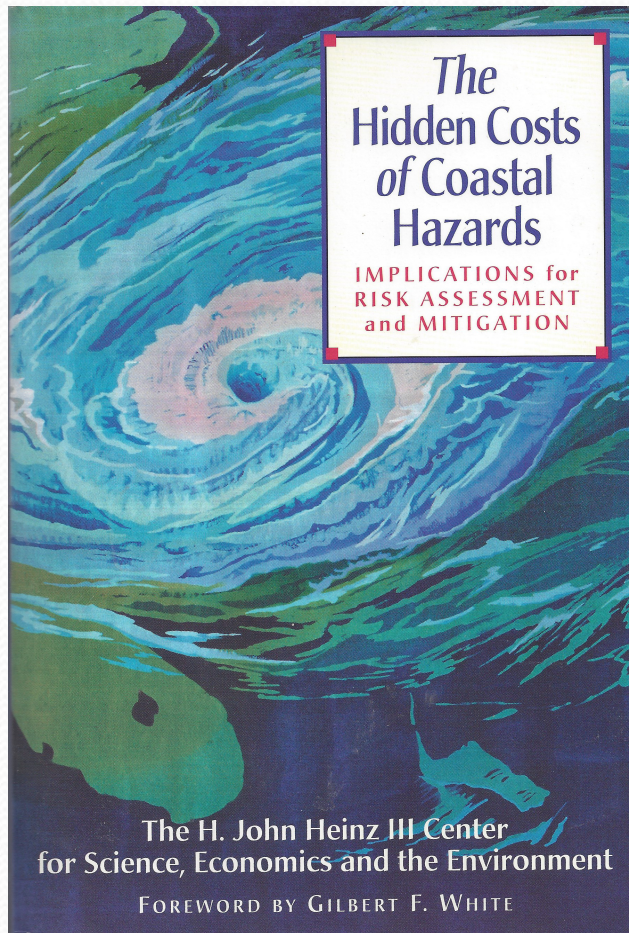


Joel Gratz © 2006

What Are We Typically doing About Risk?



Societal costs of natural catastrophes are much greater than reported



- Heinz Center 2000 report showed costs of catastrophes much deeper and greater than reports indicate
- Social costs, bankruptcies, families and educations disrupted, mental health, early equipment failures, etc.



CBO recognized weakness in policies

“Many analysts believe that current federal budget procedures can lead to inappropriate evaluations of the trade-offs involved in providing assistance and can reduce incentives for mitigation and recovery efforts of state and local governments.” Douglas Holtz-Eakins, CBO (2005)



Proposal

- Incentivize and otherwise implement disaster-resistant development standards for any type of federal support for new or reconstructed public and private housing, industry and infrastructure investments.
- Require greater private and local cost-shares of disaster costs
- Further reform NFIP and other federal programs to reduce subsidies that promote risk-prone behavior and better inform and incentivize hazard mitigation at all levels
- \$40 billion in federal savings over 10 years



Proposal – Crop Insurance

- Lower federal crop insurance premium taxpayer subsidy
 - Taxpayers now paying 60 percent of insurance premium; record crop insurance payments are now being experienced
 - 10 percent reduction could save \$12 billion over 10 years (GAO, CBO)
 - Subsidies drive cropping into high risk areas; require conservation compliance



Proposal – Reduce subsidies for infrastructure and real estate development in risk-prone areas

- Stafford Act disaster assistance
- IRS deductions for mortgage interest and uninsured casualty losses – eliminate deductions in high-risk areas
- Coastal Barrier Resources Act – CBRA provides a model for removing development subsidies in high-risk and high cost areas
- Consider removing tax deductions for buildings not in compliance with NFIP minimum standards, with consideration for elderly and lower income residents



Proposal – Invest in mitigation and improve zoning and environmental regulations

- Pre-Disaster Mitigation - \$500 million from '04-'08 has present value of \$1.6 billion in losses saved (CBO)
- Enforce E.O. 11988 (floodplain management) and E.O. 11990 (wetland conservation) through all federal programs, including for all critical facility support
- Wetland protections have come more clearly in focus for coastal Louisiana – post Katrina



Proposal – Modify federal cost-sharing

- Stafford Act Public Assistance, Community Development Block Grants, Department of Transportation Highway and Transit grants, Corps flood control and disaster assistance, EPA water infrastructure
- Strengthen flood and hazard mitigation standards to accompany federal assistance
- Consider community rating for sliding cost-shares that encourage local communities and states' hazard mitigation efforts (egs. land-use planning, open space, stronger building codes, wildlife habitat, future conditions planning, etc.)

Proposal – NFIP

- Continue to move rates to actuarial for Biggert-Waters 2012 properties; use vouchers or other means to address low-income and hardships
- Move similarly toward reduce subsidies for grandfathered primary residential properties, while offering vigorous mitigation, where cost-effective.
- Strengthen minimum federal standards; incorporate climate change, sea level rise and future conditions; 500-year flood mapping; erosion set backs; limit use of fill
- Consider CBRA approach of withdrawing subsidies and federal insurance for likely future sea-level rise inundation areas.
- Consider private reinsurance for NFIP catastrophic risk

Key Issues

- We are losing the battle for a safe and sustainable society in the United States and throughout the world
- Looking to the past for a vision of future risks, in an era of climate variability and change is even less likely to work than ever before

In Addition to the Conrad-Thomas Proposals

How Can We Proceed?

- Ignoring the confusion surrounding Climate Change or fervently held beliefs about the topic is not going to work
- We need principled negotiation and outreach to others
- We need to deliver our message about Safe & Sustainable Development to other folks, who may not share our beliefs, or even have any sort of affinity with or liking for us in:
 - A) their lingo
 - B) about their concerns, passions, beliefs, fears, and vision

Messages:

Safe Development Is Affordable

- The American Institutes for Research has conducted a detailed study on the cost of floodproofing and elevation
- That study supports the idea that elevation and floodproofing costs add very small sums and have a significant societal payback
- The Multihazard Mitigation Council, a group which includes private industry representatives, reports that hazard mitigation has a proven 4-1 payback when retrofitting past mistakes
- NHMA has begun working on a White Paper which indicates that the payback for “Safe Development” from the beginning of a project may be more than 100-1

Message:

The Choice of Development or No Development is a False Choice!

The Choice We Have as a Society is Rather Between:

- 1. Well planned development that protects people and property, our environment, and our precious Water Resources while reducing the potential for litigation; or**
- 2. Some current practices that are known to harm people, property, and natural floodplain functions-... and may lead to litigation and other challenges**

Message:

Should Everyone Concerned With Development Wish To Consider Higher Standards?

Consider:

- A) Uncertainties in flood elevations-50% confidence
- B) Consequences if a factory, water treatment plant or other critical facility is flooded
- C) 50% chance that 1% flood will be exceeded within 70 years
- D) Changes in flood heights and velocities due to factors such as upstream wildfires and mud slides/mudflow
- E) Climate variability and climate change
- F) Effect of poor development practices on threatened and endangered species

Message:

Many Factors Will Drive Estimated Flood Elevations Higher

- Think about the following scenarios-
 - Debris blockage (models assumes no blockage)
 - Wildfires (exacerbated flows from burned vegetation-hydrophobic soils etc.)
 - Technical assumptions and other uncertainties
 - Sea Level rise
 - Climate Variability & Uncertainty



Implementing Safe Development in the Real World

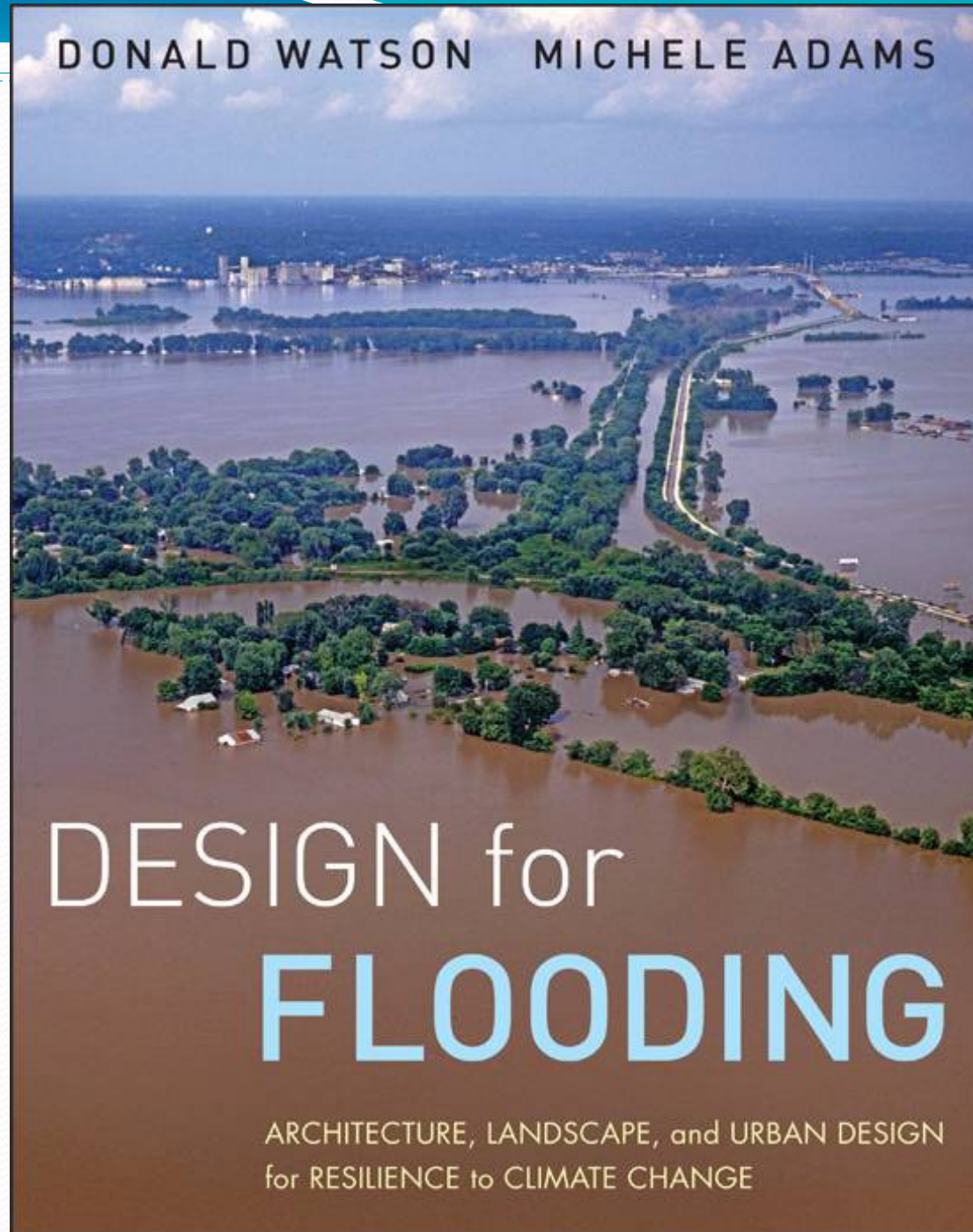
- Comprehensive watershed future conditions water resources mapping looking at water supply-water quality-stormwater management and flooding
- Interim Measure
 - Require a demonstration that **all** development does not change the hydrograph for the 1-10-50-100-500 year BOTH flood and storm

We Need To Do Low Impact Development (LID)

Exceptional Book

Available on Amazon

**A must read, must
have for your library,
if you care about
floods, or climate
variability**



NHMA
Natural Hazard Mitigation Association

How To Use Basic Principles To Address The Growing Toll Of Disasters?

- Business as usual is not working well enough
- Build bridges-links
- Make more friends and allies - many have very little knowledge or strong positive feelings about hazards
- We need to reach those we may not like:
 - government, civil servants, bureaucrats, and a whole lot more
 - Those who believe things we don't believe!
- **ENGAGE POTENTIAL ROADBLOCKS!**

We Need to Reach Folks Who Normally Do Not Like Or Agree With Us

- Our message of safety and disaster reduction must be prepared for delivery to many audiences
- We need to know and understand what they care about, so we can develop a message of safety they will care about
- We need to take advantage of any crisis to begin discussions

Messaging

- Many folks who fervently believe Climate Change is hooey or a plot have other beliefs...
- E.g. believe in God, the United States, helping one's neighbor, and the need to love and protect land
- Believe in reducing the role of government in our lives
- So... How do we get a harm prevention message across to them?

Faith Based Messaging

- Stewardship of the Earth
- Do unto others...
- Reduce the cost of disasters to our society, save taxpayer dollars
- Protect the land for future generations
- Avoid litigation

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A Crisis Need Not Be A Disaster: Rather it can be an **Opportunity**

- Concerned About **Wildfire**? Relate the discussion to climate change or variability & implications for disasters
- Wildfire can totally change the H&H of the afflicted portions of a watershed, potentially for many years. Discuss implications for floods, water quality, economic implications etc.
- **Any crisis is a terrible thing to waste** if we can lead the discussion around to providing a message of safe development, delivered focused on what the audience care's about

The Crisis Need Not Be A Disaster: Rather it can be a Discussion About Some Recent Topic

- Concerned about unusual, or record **drought** conditions?
Discuss fact that droughts often lead to floods on parched soil
 - Lead the discussion around to message of safe development
 - **First, learn** what the audience really needs, wants, desires, fears, loves.
-
- **Know your audience!**

Speaking of Crisis

- *Koontz v. St. Johns River Water Mgmt. Dist.*,
No. 11-1447, (U.S. June 25, 2013)

There has already been discussion within the legal community and in the popular press of the likely impact of this case

Many commentators view this case as a major victory for property owners and a defeat for government regulation.

There are all sorts of alarmist articles quoting attorneys who are basically predicting that subjecting monetary exactions to taking analysis will be "devastating" to land use planning and will limit the ability and incentive of local governments to negotiate for conditions that mitigate the impacts of proposed development.

Koontz Outcome

- Case has gone back to the Florida courts
- The Supreme Court seems to agree with safe development based planning

Justice Alito wrote in the majority opinion:

- "Insisting that landowners internalize the negative externalities of their conduct is a hallmark of responsible land-use policy, and we have long sustained such regulations against constitutional attack. See *Village of Euclid v. Ambler Realty Co.*, 272 U. S. 365 (1926)."

Ed Thomas and Professor Lisa Sun did a webinar on the Koontz case and other US Supreme Court Cases decided this term. It is available at:

<https://www.dropbox.com/sc/hv376dkgopodiq4/QfmXdP7oZ>

So, Now What Do We Do About *Koontz*?

- Case is almost sure to encourage litigation
- We do have suggestions about how to avoid such litigation
- NHMA has been presenting workshops and webinars on principled, successful safe development/No Adverse Impact Negotiations
- We give examples of where this has worked
- We have updated and tweaked to suggest next steps following *Koontz*
- Would very much like to work with all of you to help fix our development mess based on strong harm prevention principles

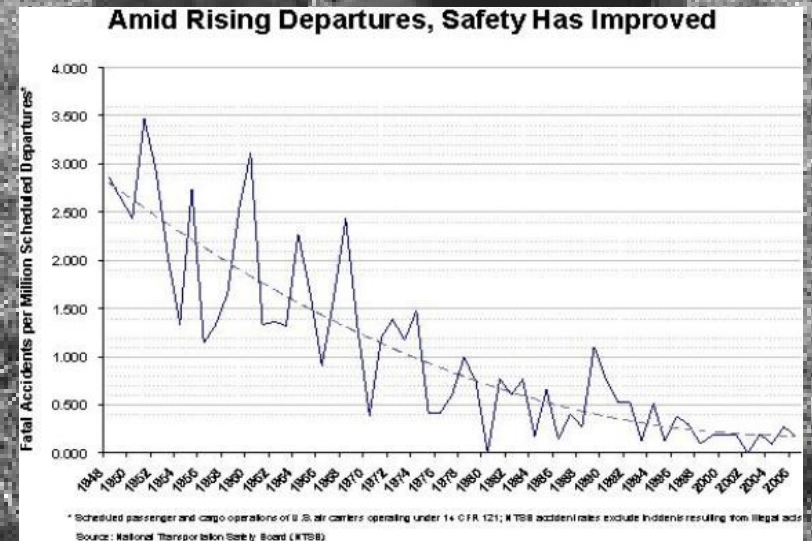
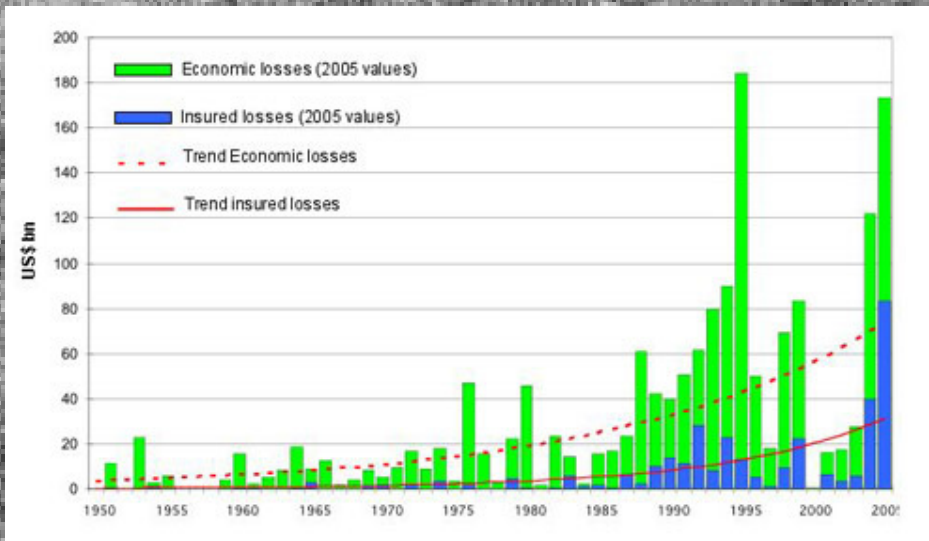
So What Can We Do?

- Six Models I Would Like To Discuss:
 - A) Reduction in Incidence of Airplane Disasters
 - B) Reduction in Incidence of Urban Fires
 - C) Partnership with other Water Resource Managers
 - D) Activities of the Urban Drainage and Flood Control District (UDFCD)
 - E) Resilient Neighbors Network
 - F) Community Rating System

A) Reduction in Incidence of Airplane Disasters

Enormous Success
in the
20th Century

...learning from experience



B) Insurance & Reduction in Urban Fires

FEMA Publication

America at Risk

America Burning Recommissioned

FA-223/June 2002

Fire Loss in Urban United States

“Today, the threat of fires is still with us. But we have done a lot to address the risk, minimize the incidence and severity of losses, and prevent fires from spreading. **Our states and localities have an improving system of codes and standards; most of us are aware of the risks;** We have accomplished a lot, but we have much more to do.”

From: *America at Risk*

America Burning Re commissioned

FA-223/June 2002

American Bar Association

Summary of ABA Resolution 107 E:

“The following recommendations of the Financial Services Round Table Blue Ribbon Commission on Megacatastrophes are highly desirable loss mitigation suggestions:

- > **State of the art building codes**
- > **Cost-effective retrofitting**
- > **Land use policies** that discourage construction posing high risk to personal safety or property loss.
- > **Property tax credits** to encourage retrofitting

These and related elements of loss mitigation are designed to ultimately bring to market affordable insurance policies with broadened coverages.”

C) Partnerships With Other Hazard Managers & Those Interested In Climate Adaptation

- DHS/FEMA is Continuing Its Efforts to Modernize Flood insurance Maps
- As Part of that Effort there is a Cooperating Technical Partners Program.
- Think of Other Hazard Managers With Whom to Partner on NAI, **Possibly** Through the FEMA CTP Program!
- Other Partners: Center For Clean air Policy, EPA Wetlands, Watershed, USGS, Others?

D) Urban Drainage and Flood Control District

- Many Possible Examples of Success by UDFCD Could Be Cited
- In the Interest of Time I Would Like To Mention Just One:
- A) Publication on Economic Basis for Proper Design and Construction

E) Resilient Neighbors Network

- Some places like Tulsa, Oklahoma, Charlotte-Mecklenburg County, the Metropolitan Denver area, and other locations are heroically overcoming obstacles and reducing losses
- NHMA is forming a network of such communities called:

Resilient Neighbors NET (RNN)

More information on RNN on the NHMA website: www.nhma.info

F) Comments on the National Flood Insurance Program & The Community Rating System

- **The National Flood Insurance Program has, in my professional opinion, been the most cost effective program of harm prevention and hazard mitigation in our nation's history**
- **But both the NFIP and All Federal Support for Development must made better-especially through federal, state & especially local action**
- **That is a fundamental message we are trying to get across**

Community Rating System (CRS)

- What is it?
- Why do we need it?
- How does it help?



Earning Credits Through CRS

- Public Information
- Mapping and Regulations
- Flood Damage Reduction
- Flood Preparedness



Comparison: Credits/Rates/Reduction

CREDIT POINTS	CLASS	PREMIUM REDUCTION SFHA *	PREMIUM REDUCTION NON-SFHA **
4,500+	1	45%	10%
4,000 – 4,499	2	40%	10%
3,500 – 3,999	3	35%	10%
3,000 – 3,499	4	30%	10%
2,500 – 2,999	5	25%	10%
2,000 – 2,499	6	20%	10%
1,500 – 1,999	7	15%	5%
1,000 – 1,499	8	10%	5%
500 – 999	9	5%	5%
0 – 499	10	0	0

*Special Flood Hazard Area

**Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage. The Preferred Risk Policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. The CRS credit for AR and A99 Zones are based on non-Special Flood Hazard Areas (non-SFHAs) (B, C, and X Zones). Credits are: classes 1-6, 10% and classes 7-9, 5%. Premium reductions are subject to change.

CRS by the Numbers

- **21,705 NFIP Communities**
- **1,211 CRS Communities (5.57%)**

CRS: Part of the Solution

- **Adopting Higher Standards**
- **Reducing Potential for Liability**



Recent Activity with CRS

- **New Coordinator's Manual is Available:**
 - www.CRS2012.org, *See Manual Update*
- **New Training Course Available in 2013**
 - **Community Rating System (E278)**
 - Available Through the Emergency Management Institute (EMI)

Summary

- Fundamentally our society must and will choose either:
- Better standards to protect resources and people
- or
- Standards which inevitably will result in destruction and litigation

The higher regulations of the FEMA Community Rating System are, I think, taking us in the right direction

Each of you will play a key role in helping create a safe and sustainable future; or in continuing & making worse the incredible mess in which we are, already.

Please keep going!

In Closing, A Thought from the American Society of Civil Engineers (ASCE)

- The first Fundamental Canon of the American Society of Civil Engineer's (ASCE) Code of Ethics states that:

“Engineers shall hold paramount the safety, health, and welfare of the public....”

“This canon must be the guiding principle for rebuilding the hurricane protection system in New Orleans.

And it must be applied with equal rigor to every aspect of an engineer’s work – in New Orleans, in America, and throughout the world.”



Questions
Comments?

Thanks for
Inviting Us!

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