

# No Adverse Impact - Introduction

A Common Sense Strategy  
for Floodplain Management

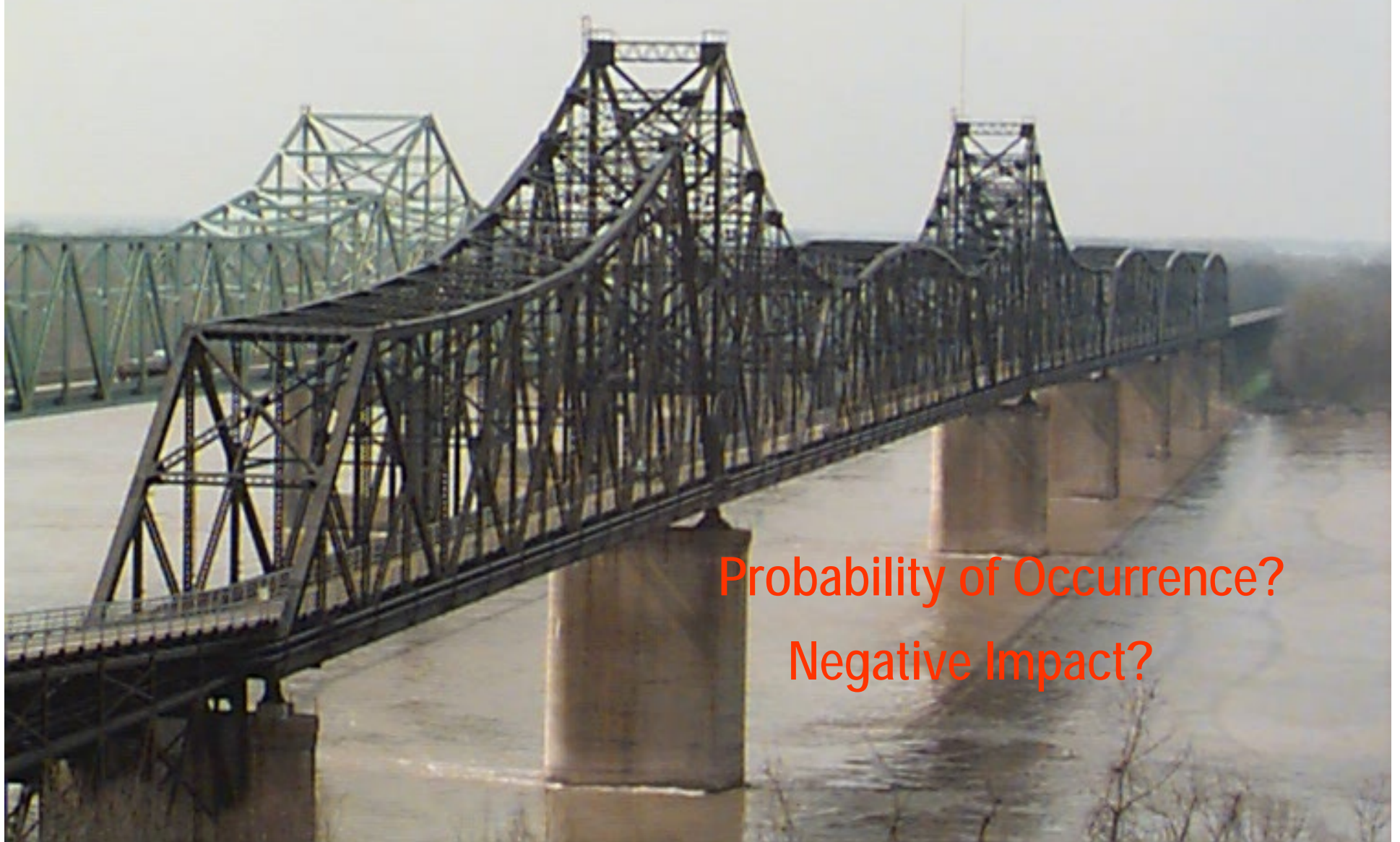




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# What is Risk?



Probability of Occurrence?

Negative Impact?

# What is 'No Adverse Impact'?

No Adverse Impact (NAI) is an approach that ensures the action of any community or property owner, public or private, does not adversely impact the property and rights of others.

Source: ASFPM, *No Adverse Impact: A Toolkit for Common Sense Floodplain Management* (2003)



# Course Outcomes

- Philosophy and History of NAI
- How to Use NAI Toolbox
- Implementation Techniques
- How to proceed with available resources



# Course Outline

- What is the Association of State Floodplain Managers?
- Why NAI?
- NAI History
- Basic Legal Concepts
- Toolkit and NAI Strategies (Seven Building Blocks)
- Local Implementation

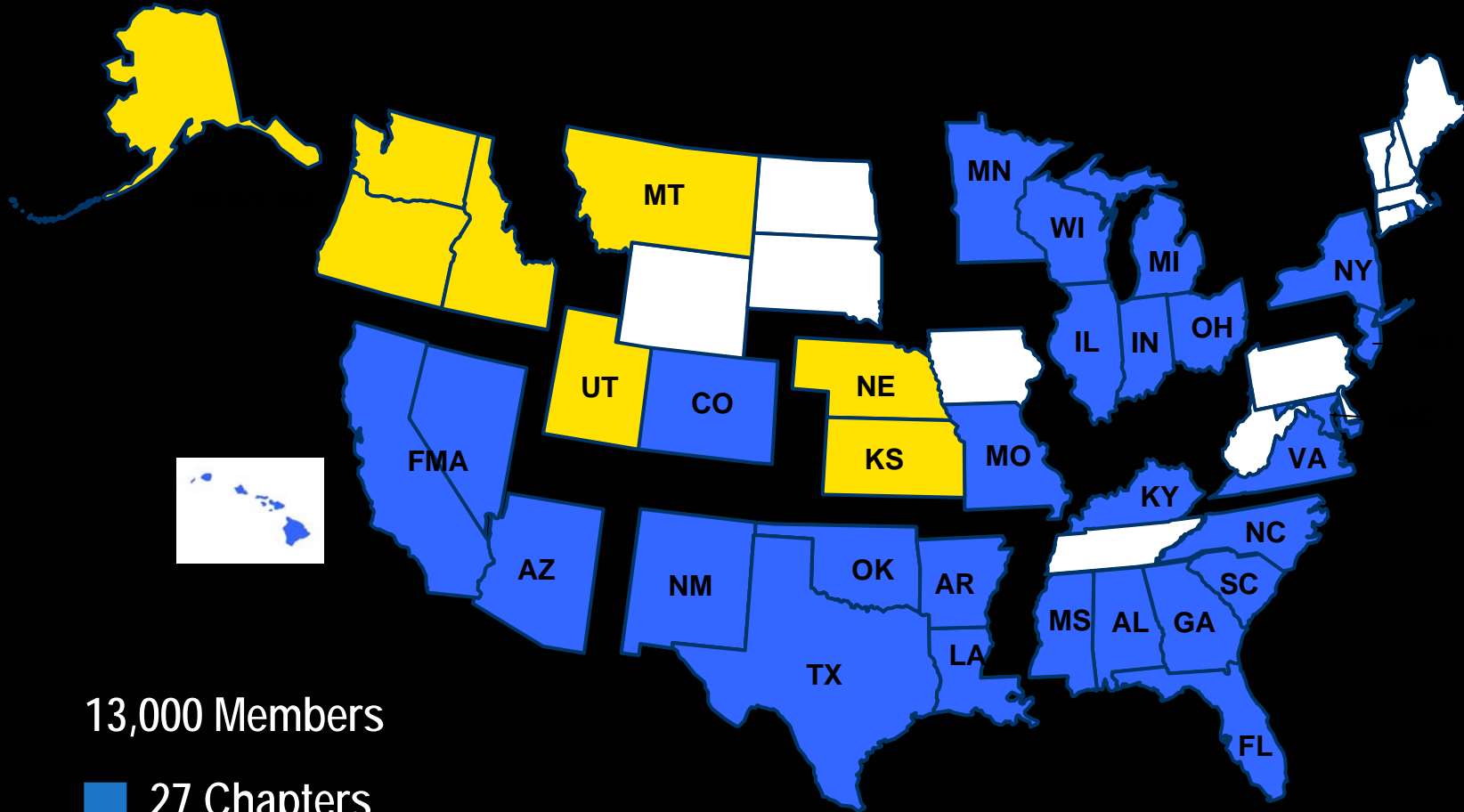


# Association of State Floodplain Managers – History

- National Flood Insurance Program (NFIP) created in 1968
- ASFPM created in 1977 to:



- ◆ Align state and federal mapping goals
- ◆ Facilitate working with FEMA
- ◆ Provide a state voice in floodplain management



13,000 Members

27 Chapters

Several State Associations & Pending Chapters



# ASFPM Mission



Mitigate the losses, costs, and human suffering caused by flooding

*and*

Protect the natural and beneficial functions of floodplains

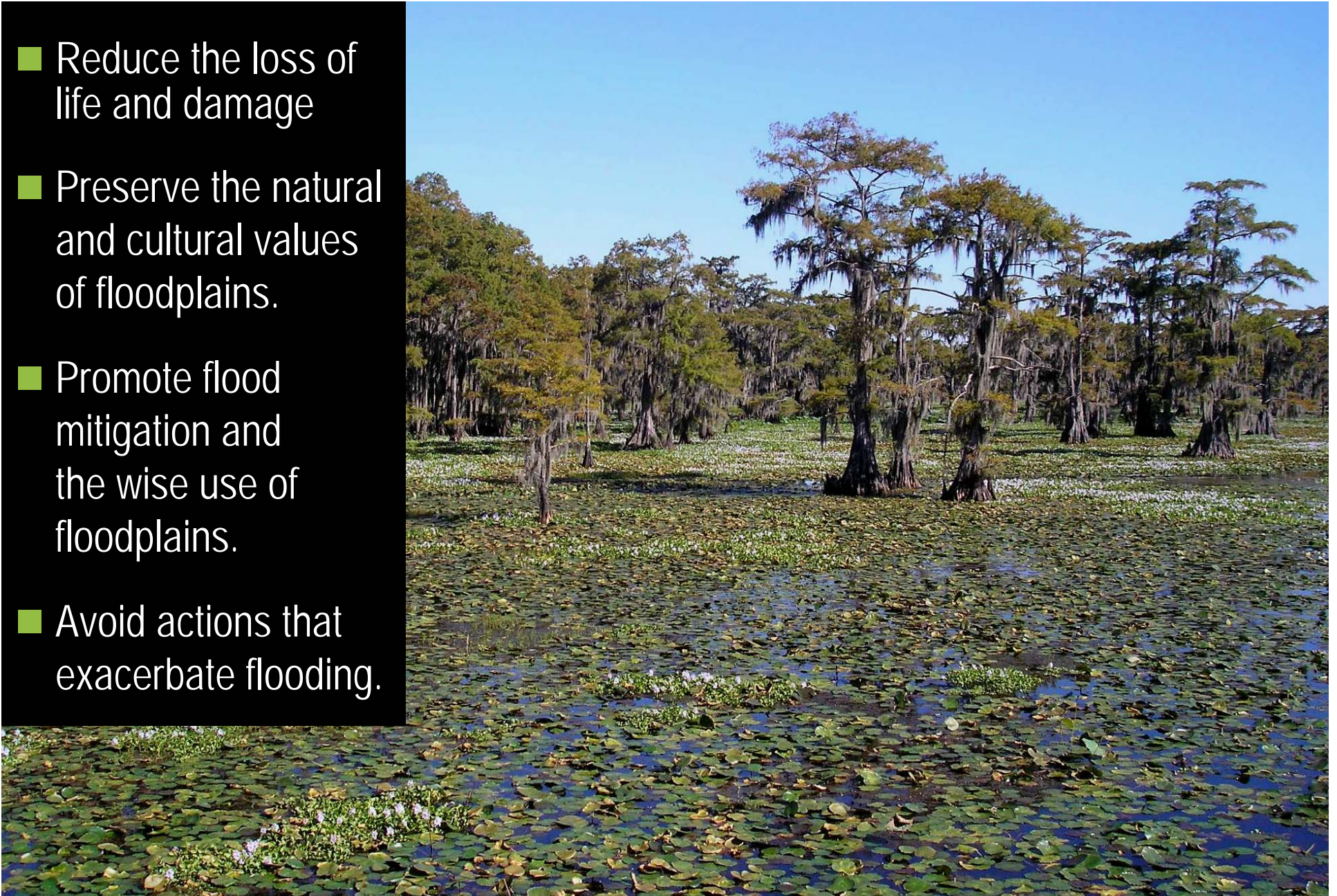
*Without causing adverse impacts.*





# ASFPM Goals

- Reduce the loss of life and damage
- Preserve the natural and cultural values of floodplains.
- Promote flood mitigation and the wise use of floodplains.
- Avoid actions that exacerbate flooding.





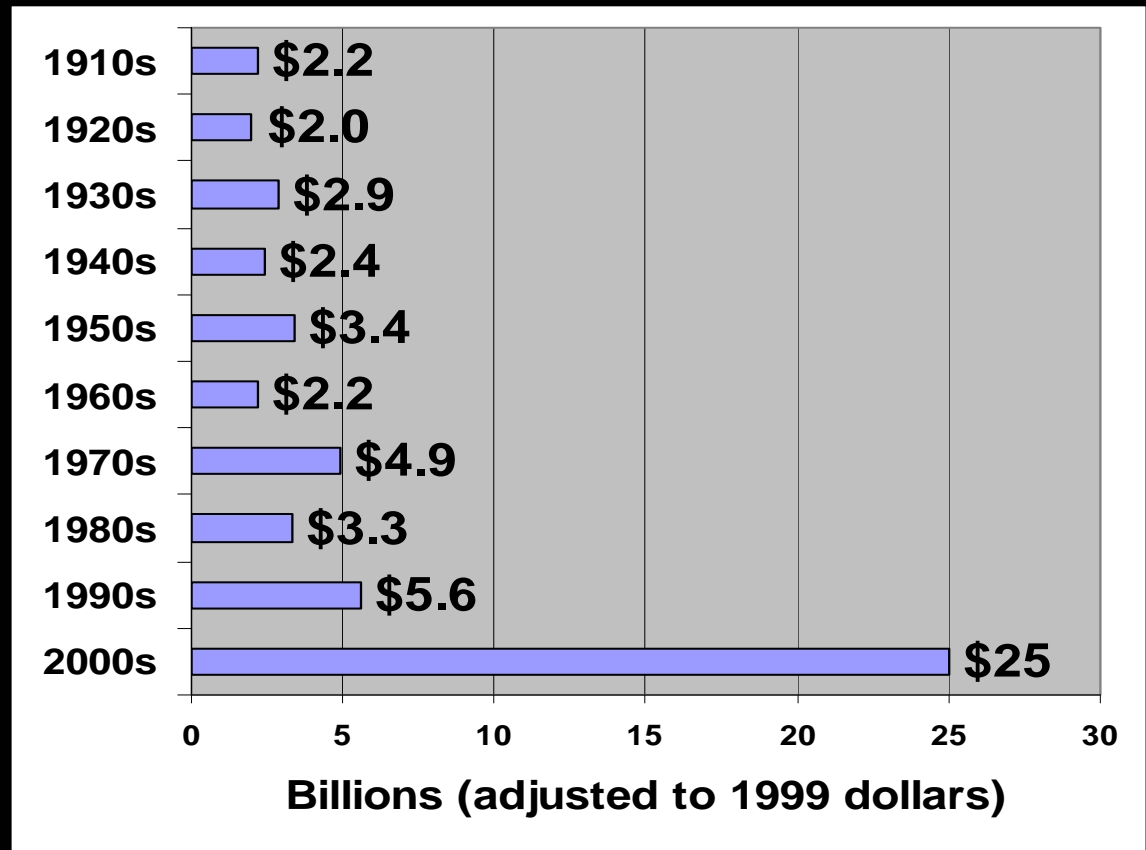
# Current Floodplain Management Approach Influences Damage Trends

- Promotes construction in risk areas
- Ignores changing conditions
- Ignores adverse impacts to existing properties
- Undervalues natural floodplain functions



# Trends in Flood Damages

- \$6 billion annually
- Four-fold increase from early 1900s
- Per capita damages increased by more than a factor of 2.5 in the previous century in real dollar terms
- And then there was Katrina...



## 2005 Hurricane Damage Costs = \$47 Billion

Florida	Katrina	\$ 0.2 B
Louisiana	Katrina	\$ 28.0 B
Mississippi	Katrina	\$ 10.6 B
Alabama	Katrina	\$ 1.2 B
Texas	Rita	\$ 2.3 B
Louisiana	Rita	\$ 2.2 B
Florida	Wilma	\$ 2.5 B



## Central Message:

Even if we perfectly implement current  
National Flood Insurance Program damage  
reduction standards,

**damages will increase.**

# Why No Adverse Impact?

Flood damages and impacts are rapidly increasing *unnecessarily!*



Current approaches deal primarily with *how to build in a floodplain, not how to minimize future damages and suffering and create a sustainable environment.*

Why does your community care?

## NAI – How does it help?

- Reduce flood damages
- Reduce suffering
- Improve quality of life
- Reduce your community's liability




# No Adverse Impact Explained...

NAI is a concept that broadens one's focus from how to develop, to, **do no harm**.



NAI supports property rights by protecting the property rights of those that would be adversely impacted by the actions of others.





# Impacts

- What are Impacts?
- Where Might Impacts Occur?



# NAI Can Reduce Impacts

- Types of adverse impacts:
  - ◆ Reduced flood water storage
  - ◆ Water quality degradation
  - ◆ Bank erosion
  - ◆ Health and safety
  - ◆ Economic loss

... Impacts may occur **anywhere** in the watershed

# NAI Can Reduce Impacts – Flood water storage

- When flood water storage is protected:
  - ◆ Lower flood flows
  - ◆ Reduced flood stage
  - ◆ Lower velocities
  - ◆ Less frequent floods



# NAI Can Reduce Impacts – Water Quality



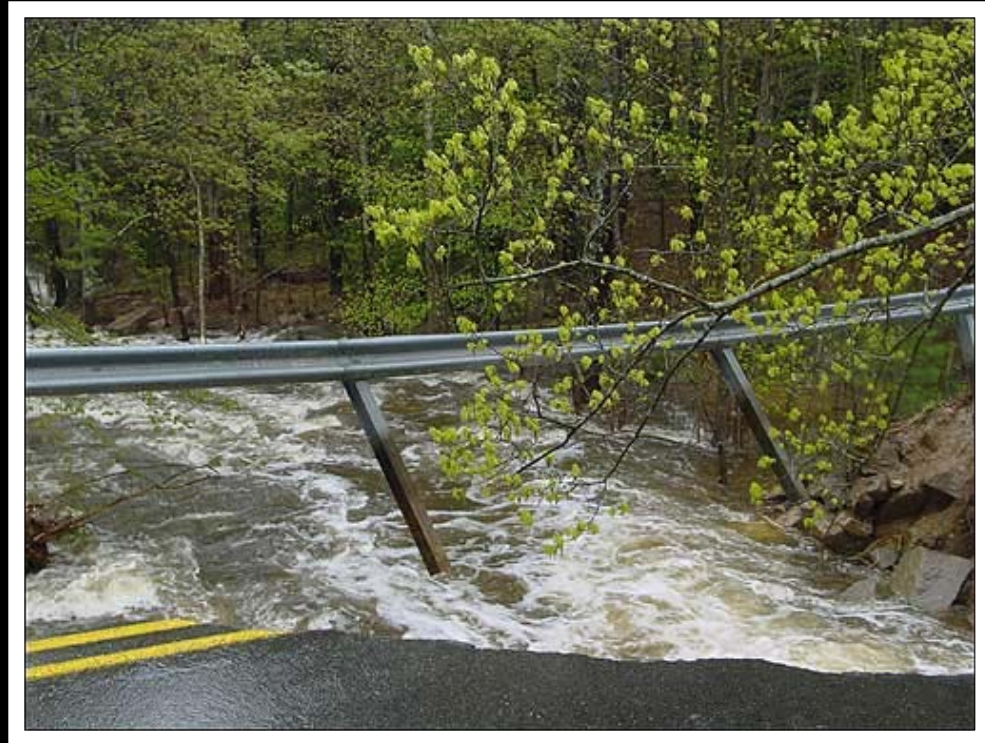
- Water quality improved by NAI:
  - ◆ Buffers filter pollutants
  - ◆ Habitat and ecological integrity
  - ◆ Improved drinking water



# NAI Can Reduce Impacts – Bank Stabilization

- Bank stability is improved by NAI:

- ◆ Roots anchor soil
- ◆ Plants deflect stormwater runoff
- ◆ Erosion/  
sedimentation  
balanced





# NAI Can Reduce Impacts – Health/Safety

- Health and safety protected by NAI:

- ◆ Reduced flood risk to adjacent properties
- ◆ Reduced risk to residents and emergency professionals



# NAI Can Reduce Impacts – Economic Loss

## ■ Economic prosperity protected by NAI:

- ◆ Reduced flood losses
- ◆ Reduced functional downtime
- ◆ Less need for disaster response
- ◆ Fewer impacts to infrastructure





# Causes Behind the Impacts

The current development pattern:

- Allows an increase in impervious surfaces
- Compromises streams, such as through channelization
- Ignores impacts to downstream owners
- Undervalues natural floodplain functions



# NAI Gains and Losses

- Less tax revenue from at-risk development in the short term – but:
- Taxpayers do not pay cost of disaster response – long term reduction in cost of public services and reduced liability and risk
- NAI avoids shift of responsibility from developer to community
- Preservation of natural resources



# NAI is Legally Defensible

- Do no harm – common law
- Water resources held in trust for public
- For more information, consider legal workshops by Ed Thomas





# Landowner Does Not Have All Rights Under the Law.

- No Right to be a Nuisance
- No Right to Violate the Property Rights of Others
- No Right to Trespass
- No Right to be Negligent
- No Right to Violate Laws of Reasonable Surface Water Use; or Riparian Laws
- No Right to Violate "Public Trust"

# Where Might Governments be Held Liable?

- Road or Bridge Blocks Drainage
- Development Increases Flows
- Flood Control Structure Causes Damage



# Trends in Case Law



- Courts have modified common law doctrines to require an increased standard of care over time
- Hydraulic, hydrologic, and geologic models facilitate proof of causation
- Act of God defense has been greatly reduced due to ability to predict hazard events

# Trends in Case Law



- Defense of sovereign immunity has been greatly reduced
- Communities are most apt to pay when development they permit causes damage, not when they deny a permit.
  - ◆ Damage is predictable with current computer models

## Legal NAI Resources



- Community Liability and Property Rights (2003)
- Floodplain Management and Community Liability (2004)
- NAI Floodplain Management and Courts (2005)
- NAI Liability Paper for Water Control Structure Due to Flooding (2006)
- Comparative Look at Public Liability (2008)
- Protecting Property Rights of All: NAI Floodplain and Stormwater Management (2008)

See [www.floods.org](http://www.floods.org)



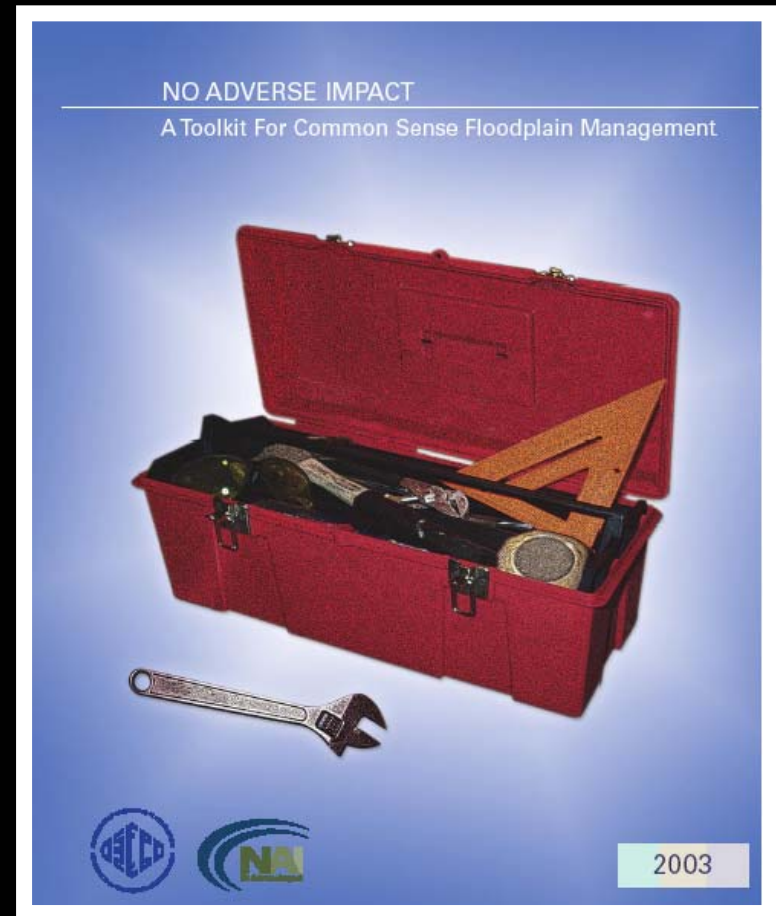
## Moving Forward with NAI

To address impacts caused by current development patterns (as the law provides), the Association of State Floodplain Managers recommends *changes* to existing community activities using the NAI Toolkit.



# NAI Toolkit

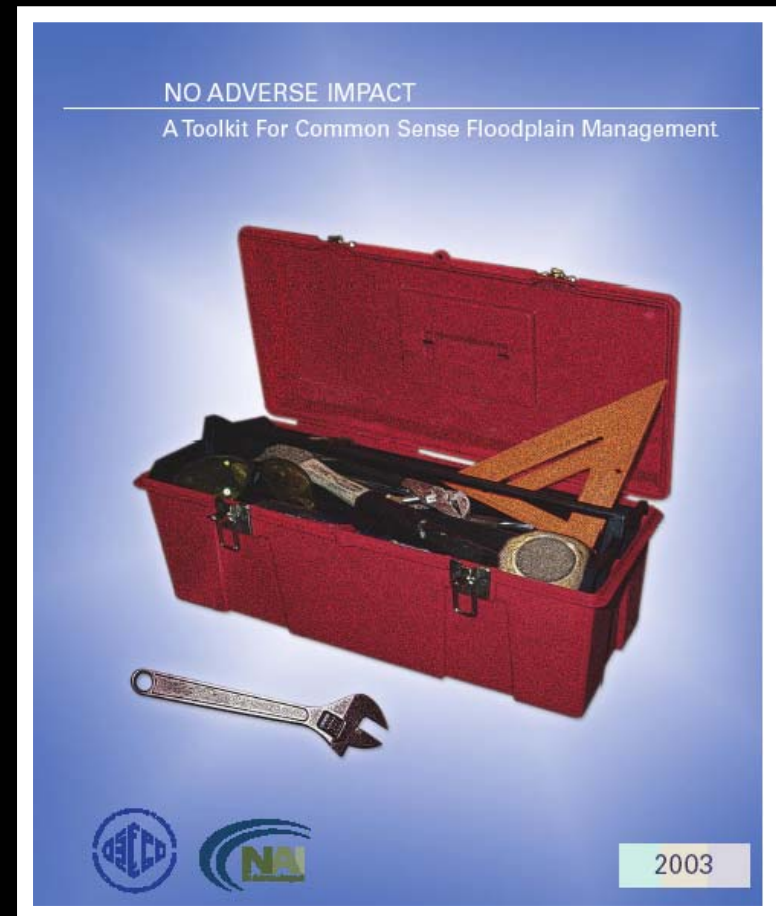
- *No Adverse Impact:  
A Toolkit for Common Sense  
Floodplain Management (2003)*



[www.floods.org/NoAdverseImpact/NAI\\_Toolkit\\_2003.pdf](http://www.floods.org/NoAdverseImpact/NAI_Toolkit_2003.pdf)

# NAI Strategies

- Strategies grouped according to:
  - ◆ Basic
  - ◆ Better
  - ◆ NAI



# Seven Strategies Communities can use to Incorporate NAI

- Hazard identification
- Planning
- Regulations and development standards
- Mitigation
- Infrastructure
- Emergency services
- Education and outreach

