



No Adverse Impact

A Common Sense Strategy for Floodplain Management

presented by

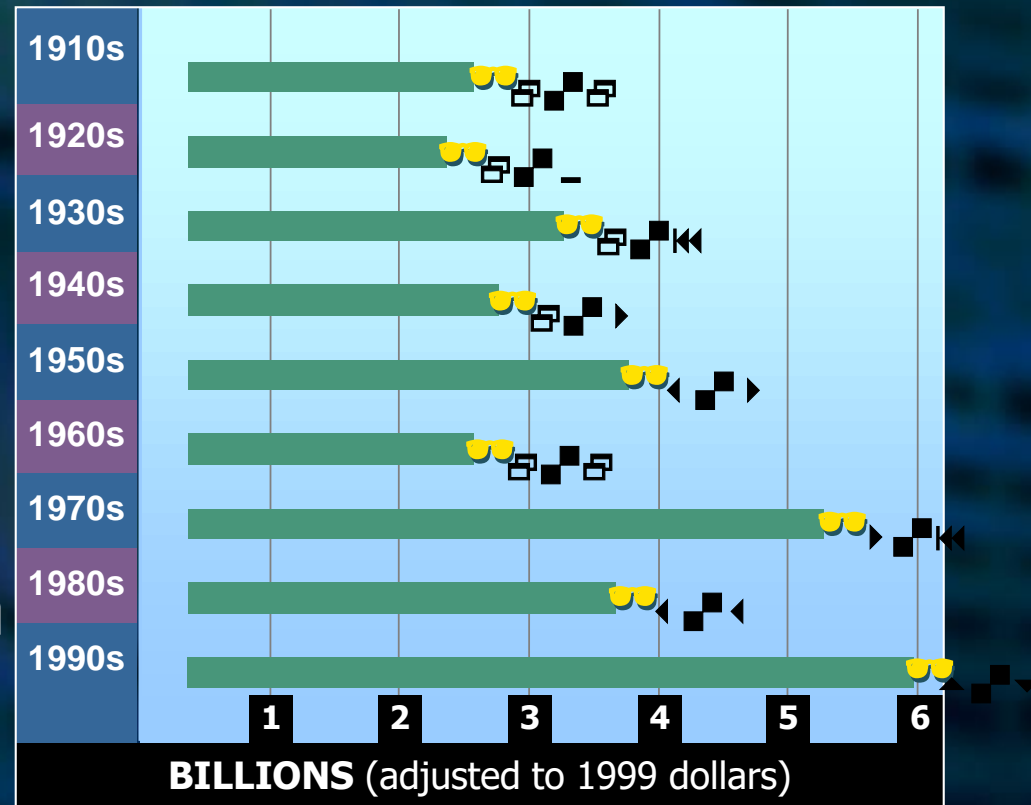
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Trends in Flood Damages

- \$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



What is Influencing the Trend?

Increased Property at Risk

Current policy:

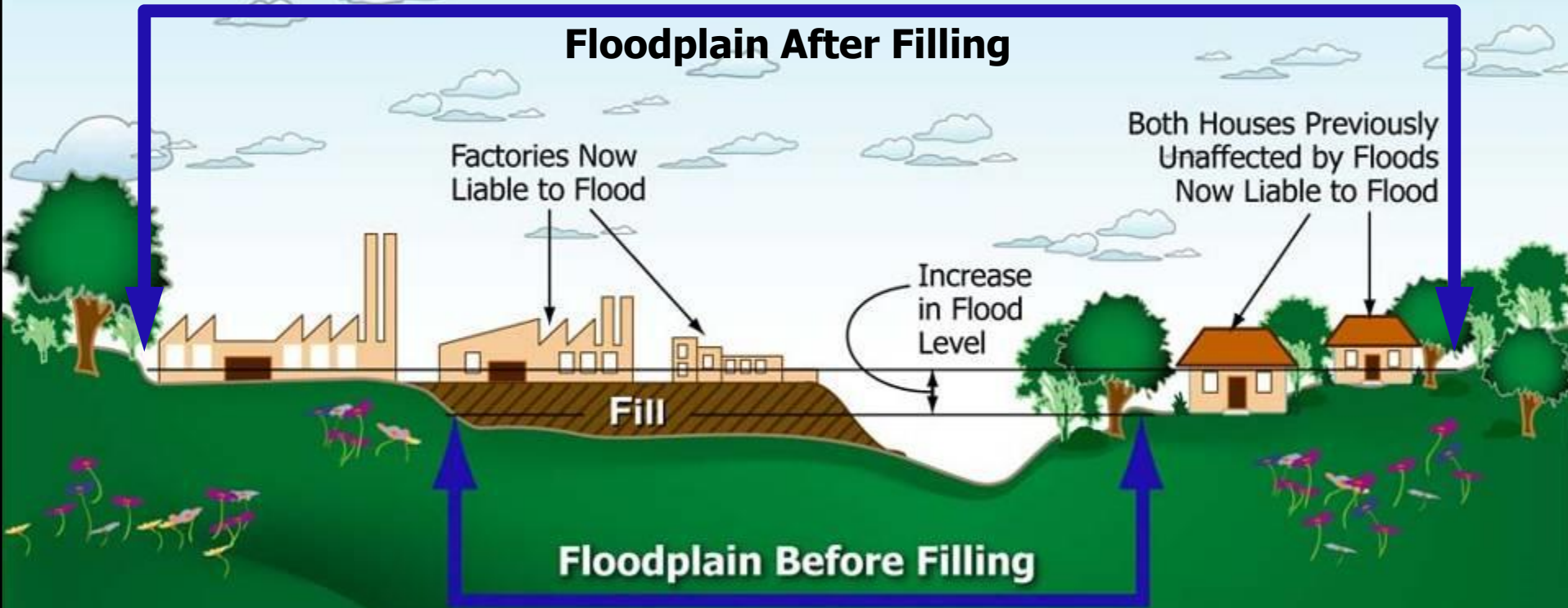
- Allows more development in risk areas
- Doesn't consider changing conditions
- Doesn't address adverse impacts to existing properties
- Undervalues natural floodplain functions

Central Message

Even if we perfectly implement
current standards,
damages will increase.

Remember, we have done a number of
positive things, both non-structural and
structural, but...
We'll discuss why that is...

Today's Floodplain Is Not Necessarily Tomorrow's Floodplain



**If large areas of the floodplain are filled, then there will be an increase in the land area needed to store flood waters.
This means your home or business may be impacted.**

Why No Adverse Impact?

Flood damages are rapidly increasing
unnecessarily!

Current approaches deal primarily with *how to build in a floodplain vs. how to minimize future damages*

No Adverse Impact Explained

NAI is a concept/policy/strategy that broadens one's focus from the built environment to include how changes to the built environment potentially impact other properties.

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

No Adverse Impact Defined

Activities that could adversely impact flood damage to another property or community will be allowed only to the extent that the impacts are mitigated or have been accounted for within an adopted community-based plan.

No Adverse Impact Roles

Local government is the key

- Develop and adopt NAI community-based plans
- Adopt NAI strategies
- Educate citizens on the “Good Neighbor Policy”



No Adverse Impact Roles

State government

- Provide locals technical & planning assistance
- Adopt policies with incentives to encourage NAI

Federal government

- Provide technical assistance
- Adopt policies with incentives to encourage NAI
- Evaluate how we measure success

ASFPM Support:

- Identify NAI Project Examples-Case studies
- Provide Toolkit on NAI to locals
- Document the Benefits of Mapping Future Conditions
- Support Local NAI Principles
- Community liability and “takings”
 - ◆ Legal workshops with Chapters/States
 - ◆ Legal Q&A brochures

NO ADVERSE IMPACT

A Toolkit For Common Sense Floodplain Management



2003

Community Activities that can Incorporate NAI:

- Hazard Identification
- Education and Outreach
- Planning
- Regulations and Standards
- Mitigation Actions
- Infrastructure
- Emergency Services

Levels of Effort to Implement NAI:

- Basic: what is usually done to meet minimum requirements of NFIP, state and federal rules
- Better: floodplain management activities that are more effective in protecting properties
- NAI: most effective ways to protect property and prevent increased problems



Hazard Identification

- Basic: Use FEMA FIRMs
- Better: Fill in the data gaps
 - Require more detailed flood data from developers
 - Use future condition hydrology
 - Use a better base map
- NAI: Develop maps that accurately depict flood hazards now and in the future
 - NFIP regulations include definitions for future conditions hydrology and allow those to be shown on FIRMs

Education and Outreach

- Basic: Answer questions
- Better: Conduct pro-active outreach
 - Provide information to make people aware of the hazards and protection alternatives
- NAI: Education
 - Goes beyond providing information. Objective is to change attitudes and behavior
 - Officials involved in floodplain management should get training through the FEMA Emergency Management Institute.
 - Show examples of what happens when future adverse impacts cause by development are not accounted for

Planning

- Basic: Land Use Planning and Zoning
- Better: Ensure that plans address flooding
 - Conduct a vulnerability analysis to identify flood prone development and the impacts of flooding
 - Hazus is one tool for this
 - Develop land use plans and zoning ordinances restrict development in hazardous areas

Planning

- NAI: Multi-Objective Management and Sustainability
 - Identify all potential impacts of all hazards and the alternatives to address the impacts
 - Coordinates floodplain management with other community concerns (economic development, housing, water quality, habitat protection and recreation)
 - Multiple resources at the Federal and State level are available to support these efforts
 - Municipal Vulnerability Program
 - Hazard Mitigation Planning
 - Coastal Resilience Grants

Regulations and Standards

- Basic: NFIP minimum floodplain management requirements for participating communities
- Better: Higher regulatory standards
 - NFIP encourages higher standards
 - Freeboard
 - Count improvements cumulatively
 - Subdivision development standards
 - Stormwater regulation

Regulations and Standards

- NAI: Enhanced watershed protection
 - Need to protect the carrying capacity of the floodplain
 - Detailed mapping is essential
 - Consider setbacks from the river channels or shorelines
 - Establish buffer zones
 - Protect natural resources beneficial functions

Mitigation Actions

- Mitigate while not transferring the problem elsewhere
- Non-structural mitigation on individual structures:
 - elevation
 - acquisition
 - Flood proofing
- Structural---often cause adverse impacts to others
 - levees, dams, channels

Infrastructure

- Basic: Response and replacement
- Better: Implement protective measures and procedures
 - Establish routine procedures for inspections
 - Maintenance should incorporate corrective measures
 - Establish maintenance procedures that are pro-active



Infrastructure

■ NAI: Plans and alternatives

- Major investments (e.g. new fire station) should not be in a flood hazard area
- Public services such as road, sewer or utility improvements should not encourage more intense development in a floodplain
- Bridge and culvert improvements should include replacement or modifications to reduce flood levels, velocities, erosion, and sedimentation impacts to other areas
- Mitigate infrastructure while not transferring the problem elsewhere

Emergency Services

- Disaster response should consider cumulative impacts
 - Sand bags--levees, etc.
- Pre-plan flood fighting to avoid adverse impacts
- Emergency actions should not increase flooding on others

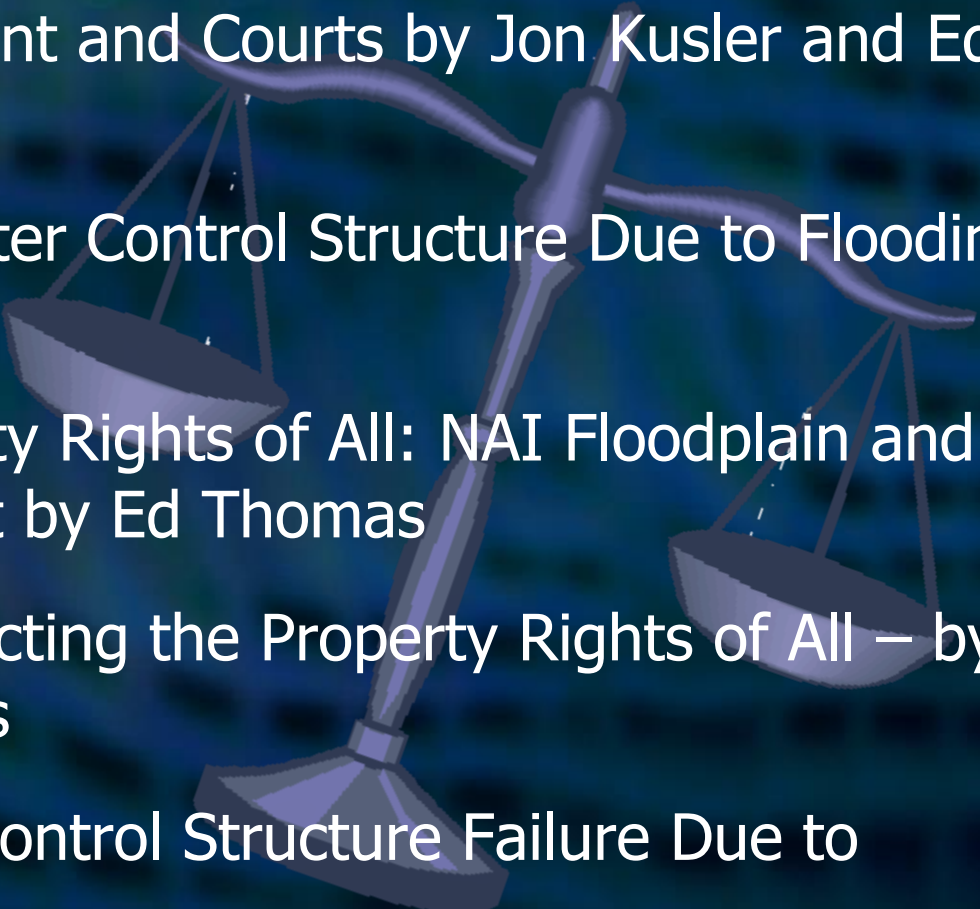


Legal Research

- ASFPM currently updating floodplain development case law
 - ◆ Specifically looking into community liability, standard of care, takings and NAI
- ASFPM has contracted with Jon Kusler, Esq. to research case law, identify trends and provide a report on this legal research



Legal Research Products

- ASFPM 4 page brochure "Community Liability and Property Rights"
 - NAI Floodplain Management and Courts by Jon Kusler and Ed Thomas
 - NAI Liability Paper for Water Control Structure Due to Flooding by Ed Thomas
 - NAI Protecting the Property Rights of All: NAI Floodplain and Storm Water Management by Ed Thomas
 - NAI and the Courts: Protecting the Property Rights of All – by Jon Kusler and Ed Thomas
 - NAI – Liability for Water Control Structure Failure Due to Flooding
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Actions A Community Can Take

- Define “adverse impact”, based on your community’s unique condition
- Evaluate your hazards and programs
- Identify existing adverse impacts in the floodplain and throughout the watershed
- Require adverse impacts to be mitigated when development occurs

No Adverse Impact

- Resources available at www.floods.org:
 - NAI How -to Guides
 - Hazard Identification and Floodplain Mapping
 - Regulations and Development Standards
 - Education and Outreach
 - Mitigation
 - Infrastructure
 - NAI Case Studies
 - NAI Legal Issues
 - NAI in the Coastal Zone Handbook & Case Studies



Questions?



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