



No Adverse Impact

The “Do No Harm” Principle



presented by

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GAFM Chair

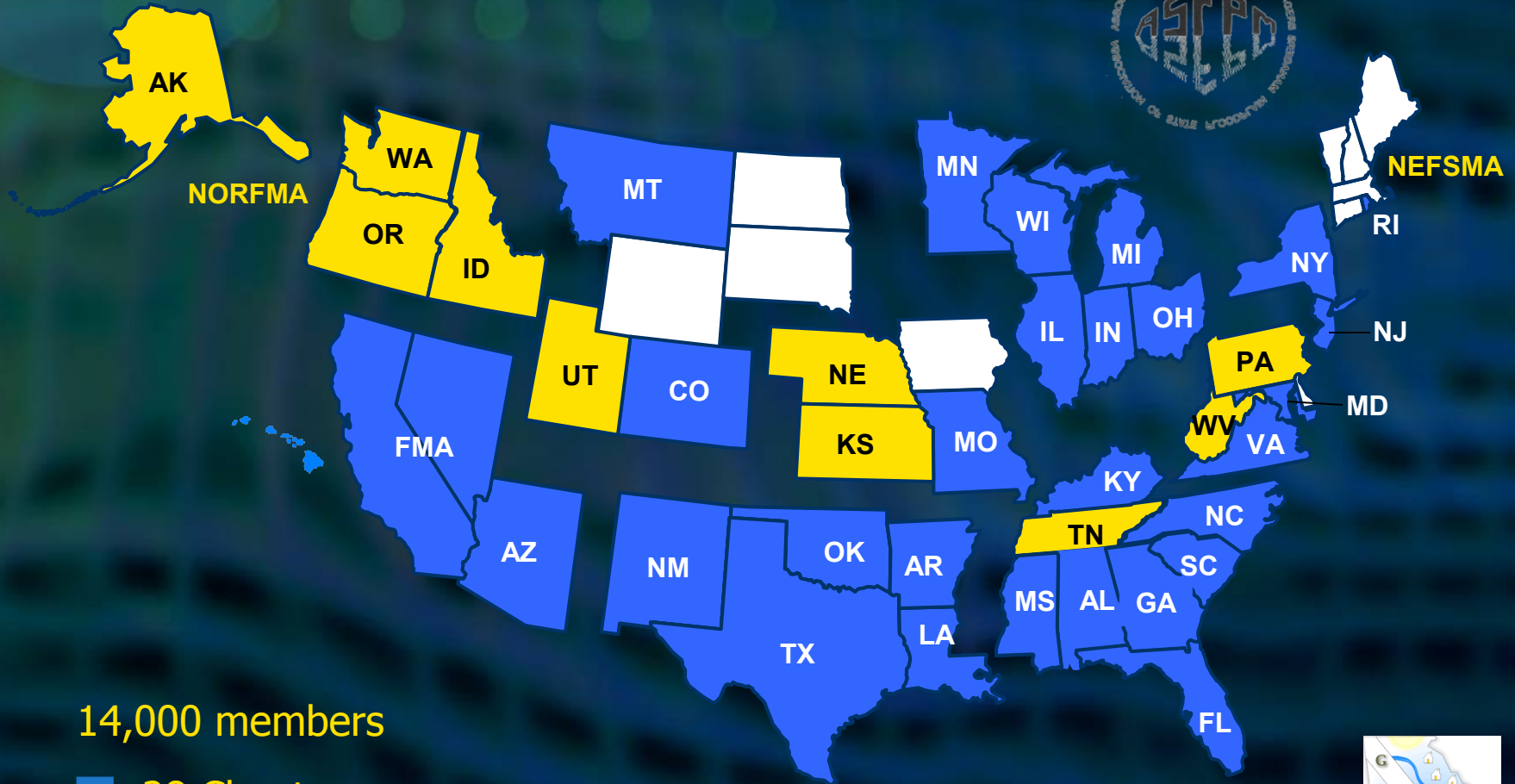
Tom McDonald, CFM

GAFM Vice-Chair



Georgia
Association
of
Floodplain
Management

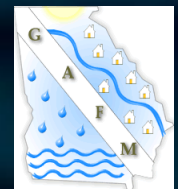
The Georgia Association of Floodplain Management (GAFM) is one of the 28 Chapters of the Association of State Floodplain Managers (ASFPM)



14,000 members

■ 28 Chapters

■ State Associations & Pending Chapters



A little bit about GAFM

The formation of GAFM is the result of the concerted efforts of numerous individuals and organizations sharing a common desire to forward the cause of sound floodplain management. Membership in GAFM is open to all professionals, public and private entities, students and citizens interested in or involved in floodplain, watershed, stormwater, wetlands and hazard mitigation management and/or related disciplines within the State of Georgia.

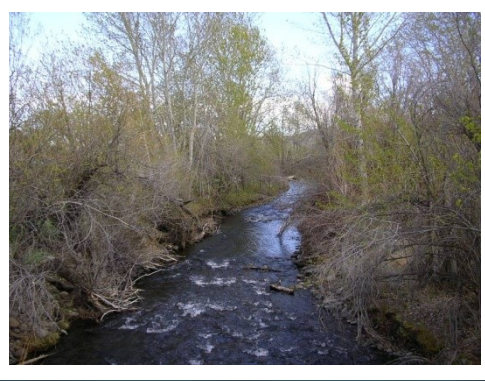


How does GAFM fulfill our mission ?

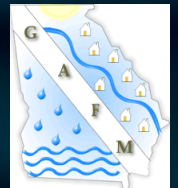


Working towards mitigating the losses, costs, and human suffering caused by flooding.

and



Protecting the natural and beneficial functions of floodplains.



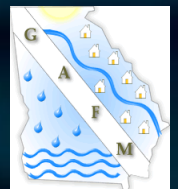
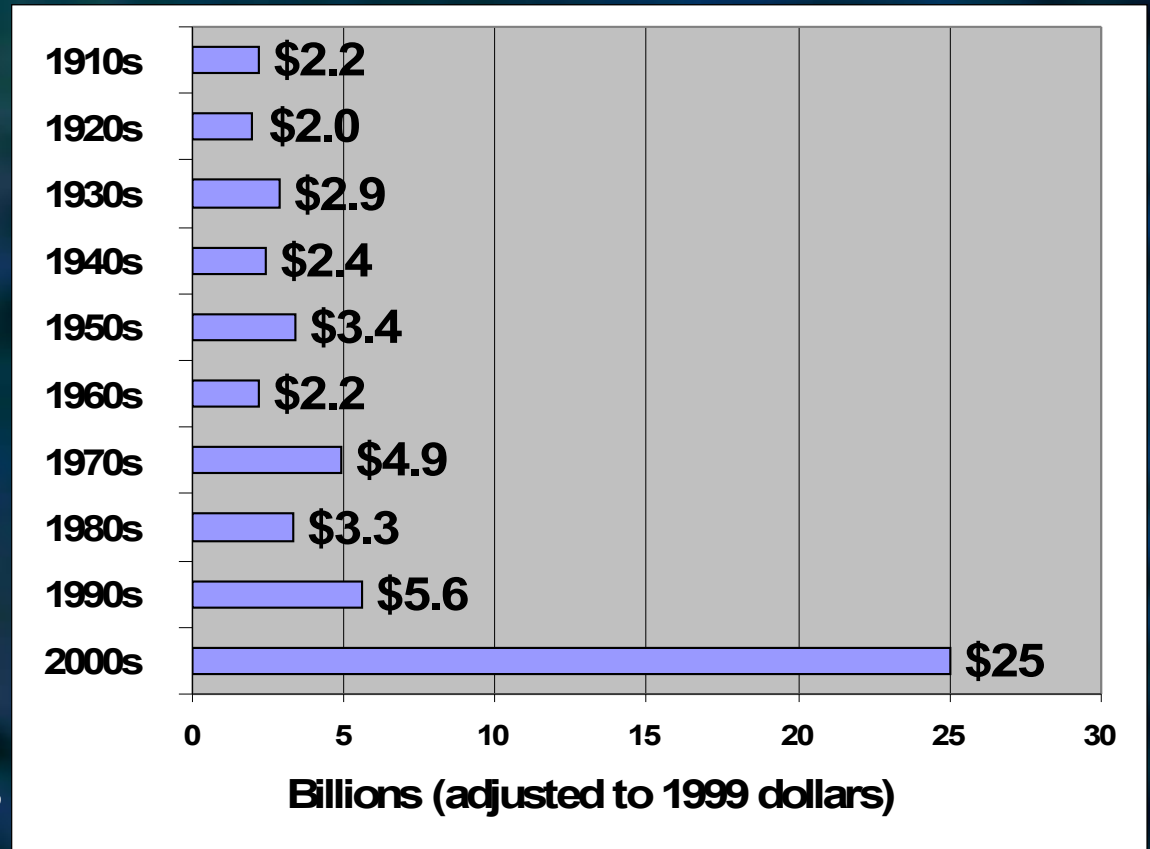
Basic Flood Facts

- Flooding is the #1 natural hazard in the US
- More than 50% of all properties that are in high-risk areas do not have flood insurance
- 25% of all flood insurance claims are outside the mapped special flood hazard area (SFHA)
- There is a 26% chance of flooding during a 30-year mortgage (compared to 9% chance of fire)
- 30% of flooded small businesses never reopen
- Per Capita Damages increased by more than a factor of 2.5 in the previous century in real dollar terms



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.....and Rita.....and Gustav.....

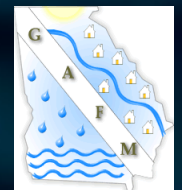


What is Influencing the Trend?

(Why is there increased property at risk ?)

The current policy:

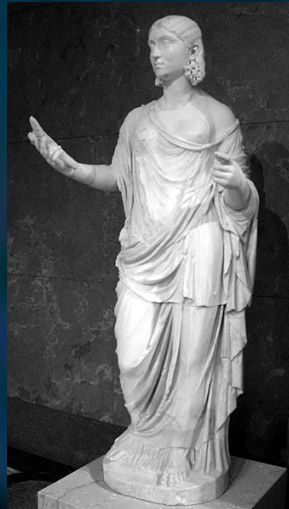
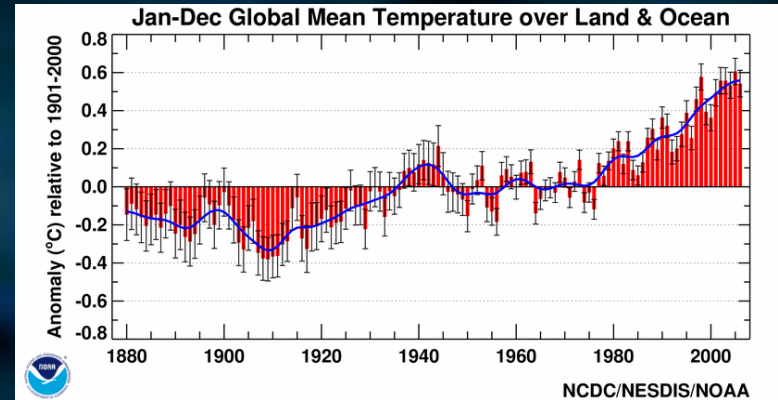
- Promotes intensification in risk areas
- Ignores changing conditions
- Ignores adverse impacts to existing properties
- Undervalues natural floodplain functions



Who or What is to blame ??



Global Warming??

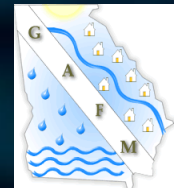


Mother Nature ??

Climate Change ??



Random chance ??



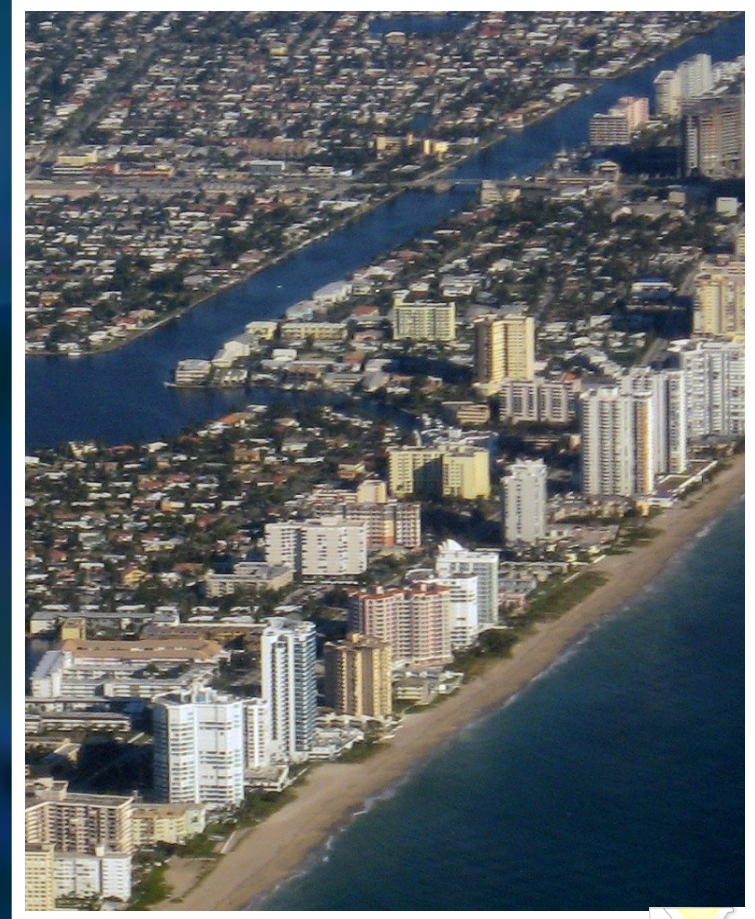
Or perhaps man ????

Miami Beach 1926



Wendler Collection

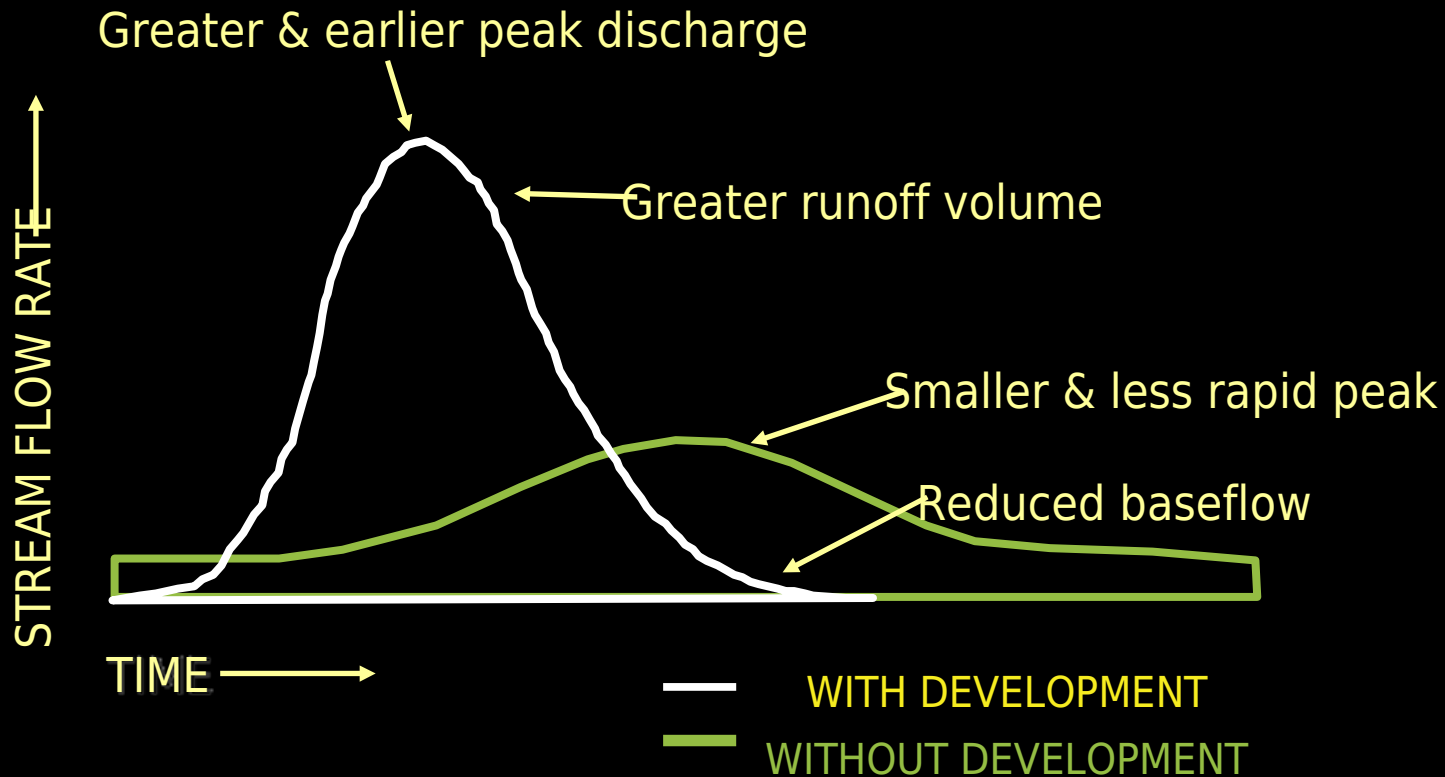
Miami Beach 2006



Joel Gratz © 2006



Stormwater Impacts of Development on Streams





Central Message



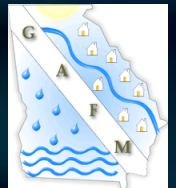
Even if we perfectly implement the current standards, **damages will increase** because we are putting development in the path of disaster.

Remember, we have done a number of positive things, both non-structural and structural, but..... It is not enough !

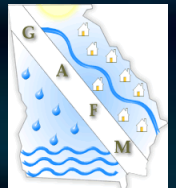
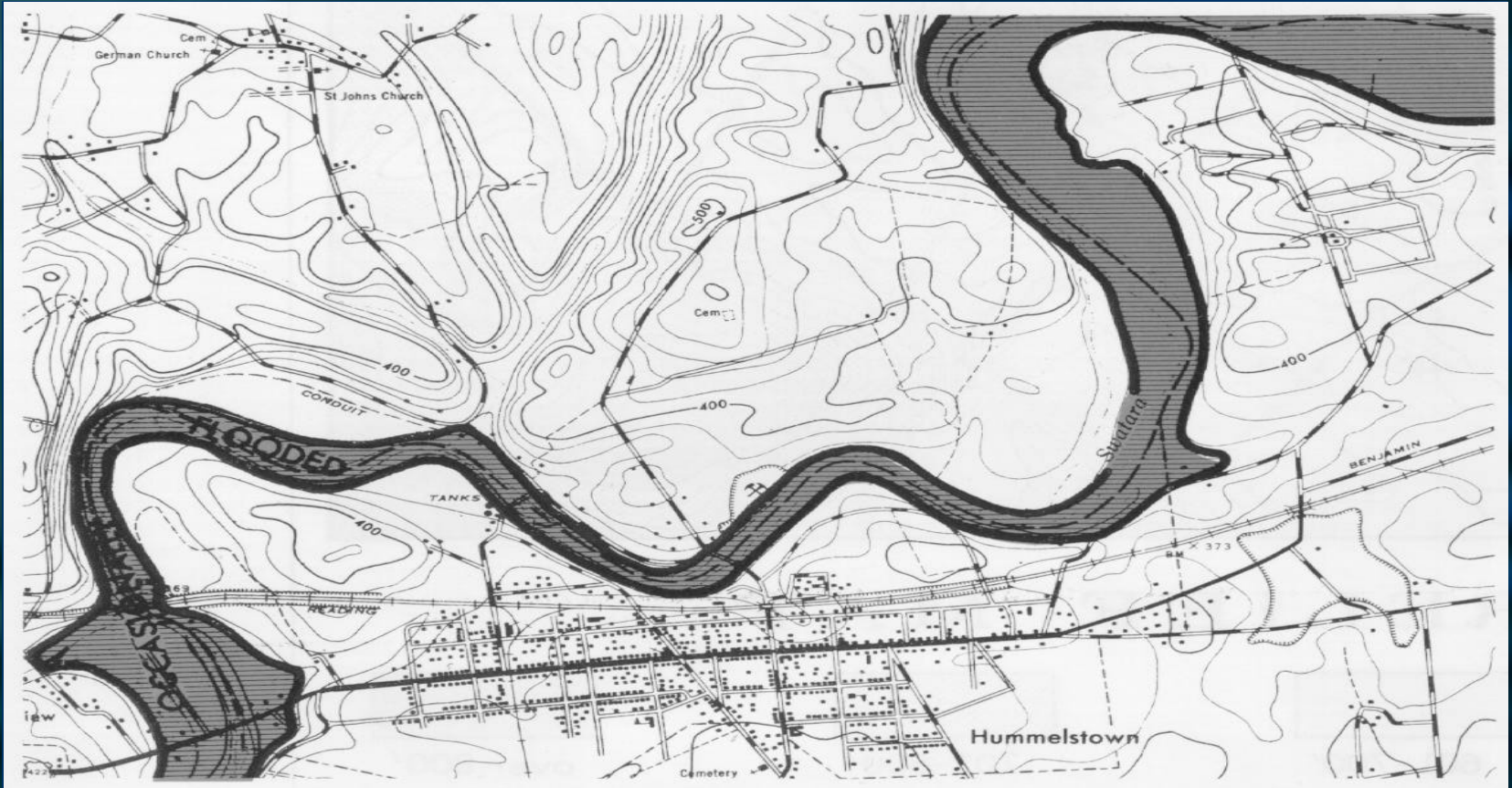
We'll discuss why that is.....



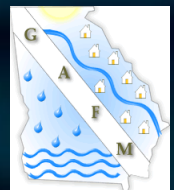
Where is the Floodplain ?



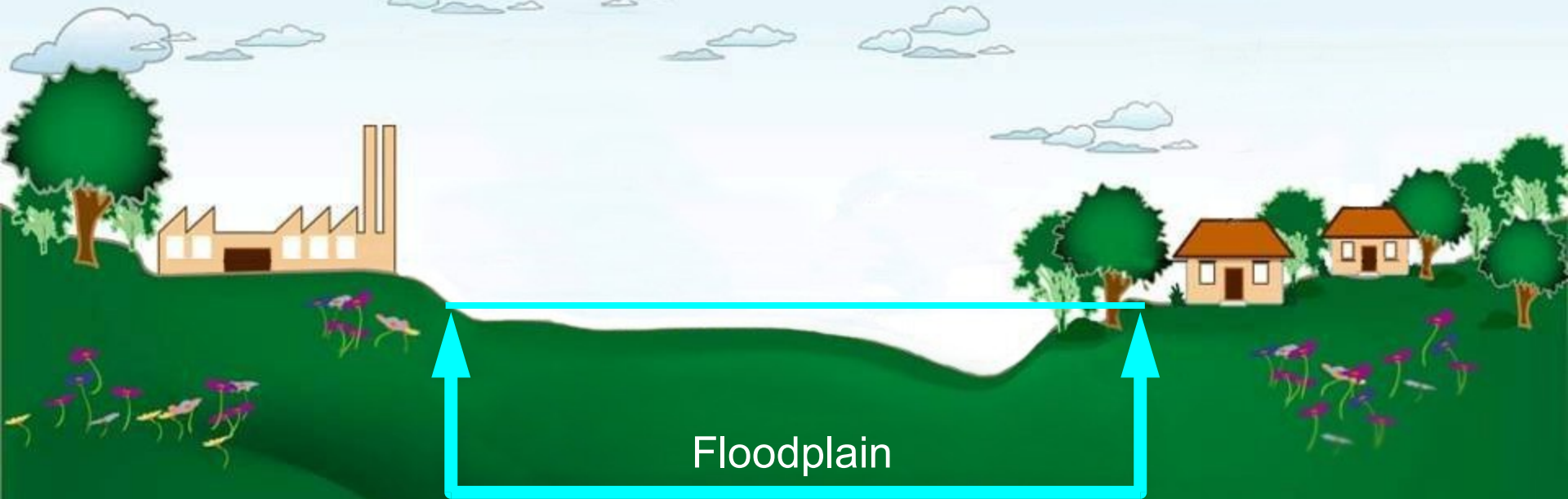
Where is the Floodplain ?



Where is the Floodplain ?



Today's Floodplain Is Not Necessarily Tomorrow's Floodplain



If you prevent floodplain fill,
you keep existing development safe.

Today's Floodplain Is Not Necessarily Tomorrow's Floodplain

Large areas of the floodplain are filled and developed.

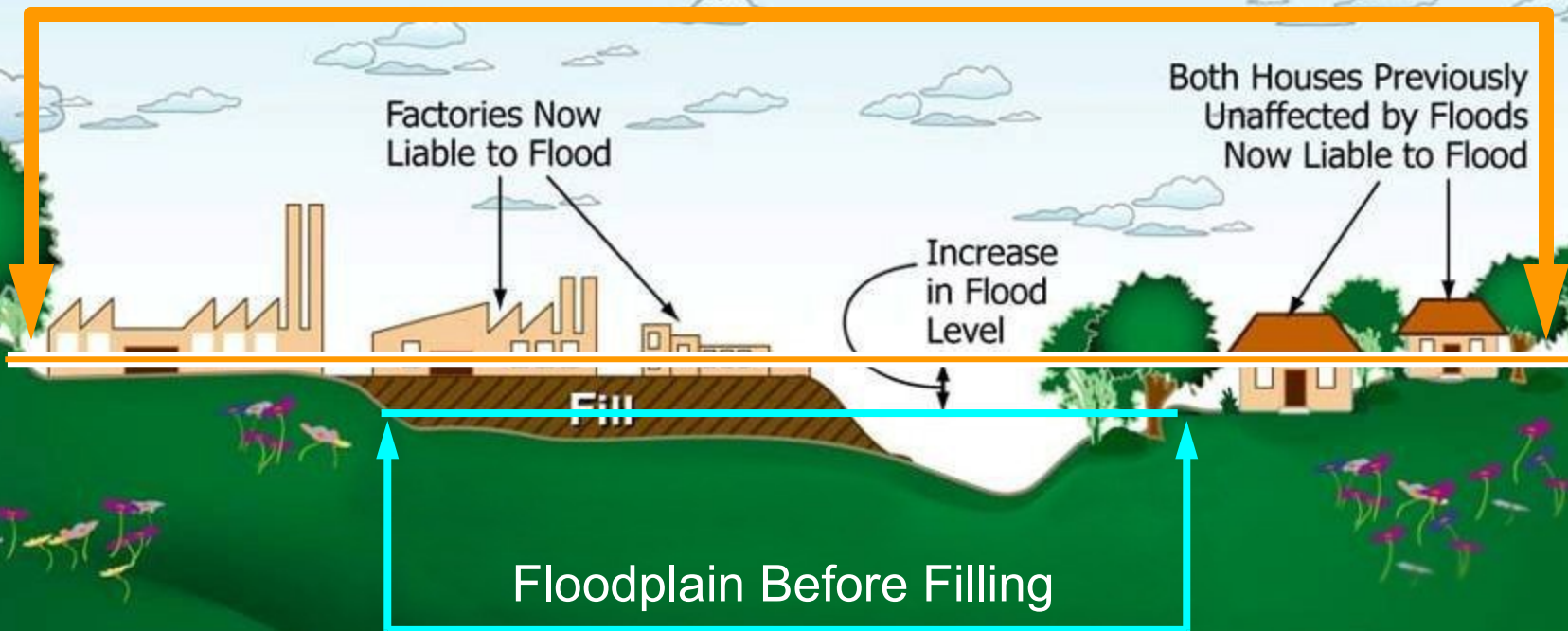


Fill

However, if you allow fill in the floodplain, you change the dynamics of the floodplain.

Today's Floodplain Is Not Necessarily Tomorrow's Floodplain

Floodplain After Filling



If floodplains are filled, there is an increase in the land area needed to store and convey flood waters. **This means your home or business may be impacted.**

Why No Adverse Impact?



Flood damages are rapidly increasing
unnecessarily!

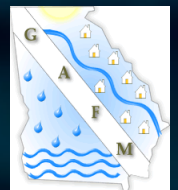
Current approaches deal primarily with *how to build in a floodplain - vs - how to minimize future damages to all affected property owners*



No Adverse Impact Explained

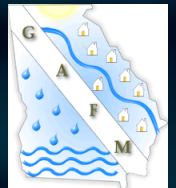
NAI is a concept/policy/strategy that changes one's focus from building within the environment to "do no harm".

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



No Adverse Impact Defined

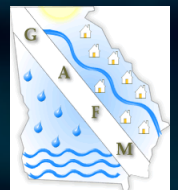
No Adverse Impact (NAI) is an approach that ensures that the action of any community or property owner, public or private, does not adversely impact the property and rights of others.

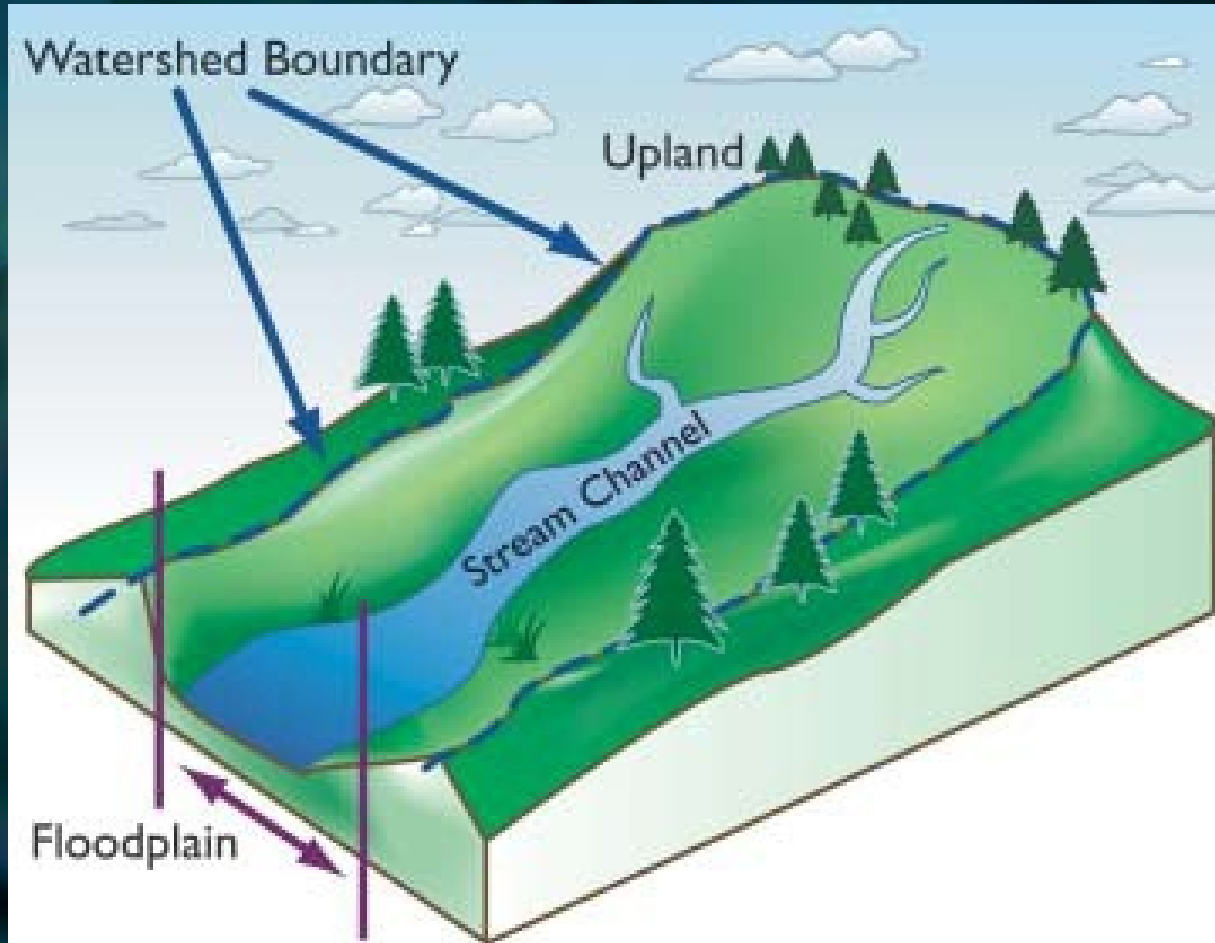


No Adverse Impact Defined

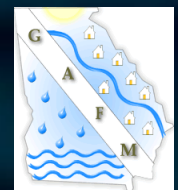


The true strength of the **No Adverse Impact** approach is that it encourages local decision making to ensure that future development **impacts will be identified, considered on a watershed-wide basis and mitigated** – it is a truly comprehensive strategy for reducing flood losses and costs.



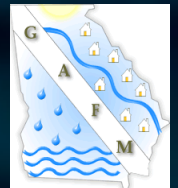


All land area in the watershed drains toward the stream channel; construction in any part of the watershed can impact other properties.



No Adverse Impact Defined

In short, 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.



Who plays a role in the No Adverse Impact approach ?

Federal government can.....

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



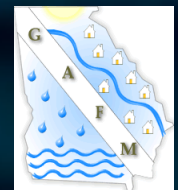
State government can.....

- Update State Executive Orders
- Provide locals technical & planning assistance
- Adopt policies with incentives to encourage NAI

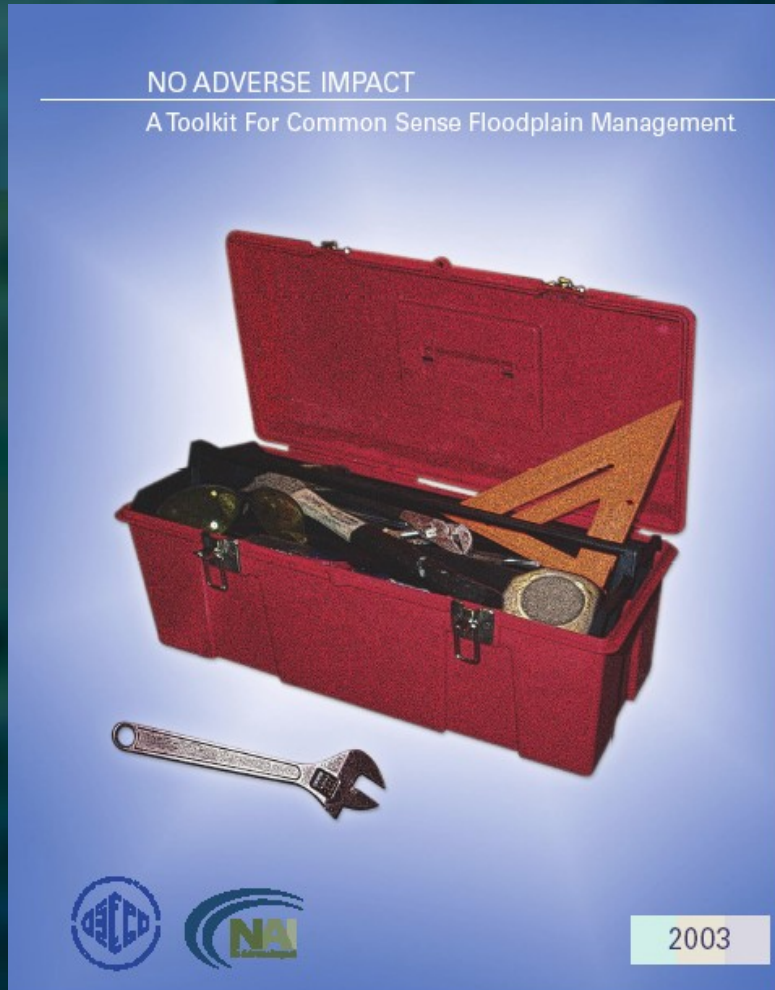


National Organizations such as ASFPM can provide support:

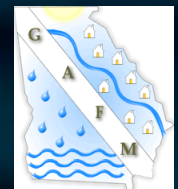
- Identify NAI Project Examples-Case studies
- Provide Toolkit on NAI to locals
- Document the Benefits of Mapping Future Conditions
- Support Local NAI Principles
- Provide outreach on community liability and “takings”
 - ◆ Legal workshops with Chapters/States
 - ◆ Legal Q&A brochures



ASFPM Support:



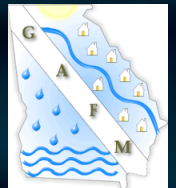
The NAI Toolkit was published in 2003 by ASFPM to assist local communities in implementing NAI principles.



No Adverse Impact Roles

Local government is the key :

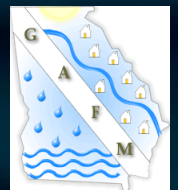
- Develop and adopt NAI community-based (entire watershed based) plans
- Adopt NAI strategies
- Educate citizens on the "Good Neighbor Policy"



“Each locality controls the character of its disasters, forcing stakeholders to take responsibility for natural hazards and realize that decisions they make today will determine future losses.....”

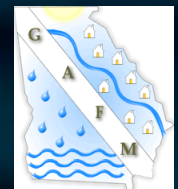


(Dennis Mileti, Disasters by Design)



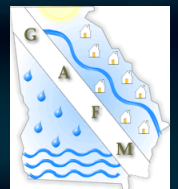
Community Characteristics that Influence Flood Risk:

- Topography
- Weather patterns
- Flooding source (s)
- Flooding history
- Development patterns and political / community pressures to develop



Community Activities that can Incorporate NAI:

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



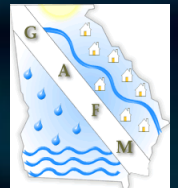
Hazard Identification

- Use a comprehensive approach
- Reflect future conditions
- Identify hazards not mapped by FEMA



Education and Outreach

- Target specific audiences
- Modify existing outreach efforts
- Your message should be:
 - know your hazards
 - understand how your actions could adversely impact others
 - identify how community members can protect themselves and others



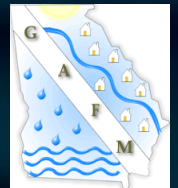
Planning

- Use a comprehensive watershed approach
- Incorporate NAI in all planning activities



Planning

- Consider individual and cumulative impacts of current and future development
 - HAZUS is one tool for that
 - Assume the development--then calculate new flood levels
- Incentives needed (PDM, Corps, EPA) to get local and state support



Planning

Incorporate NAI into your land use planning:



down
proposed

- * utilize low density zoning in sensitive areas
- * require a vulnerable analysis on all projects
- * quantify and qualify what's at risk (both up and stream from the development)



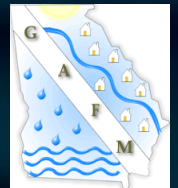
Regulations and Standards

- Current standards don't consider all impacts
 - Current and future impacts
 - Cumulative impacts
- Policies and regulations must go beyond NFIP
 - Zero rise floodways--do not put one more foot of water on others
 - Additional freeboard to account for mother nature
- Consequences of ignoring impacts are drastic
 - Damages increase beyond \$6 billion per year
 - Downstream and upstream damage--and loss of life



Mitigation Actions

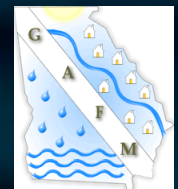
- Mitigate while not transferring the problem elsewhere
- Non-structural mitigation on individual structures:
 - elevation
 - acquisition
 - flood-proofing
- Structural (but be careful – these often cause adverse impacts to others)
 - levees, dams, channels



Infrastructure



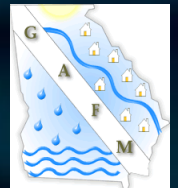
- Consider impacts of maintenance, repair and new construction
- Consider individual and cumulative impacts
- Mitigate infrastructure while not transferring the problem elsewhere





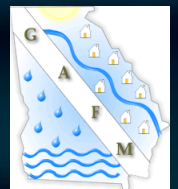
Emergency Services

- 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



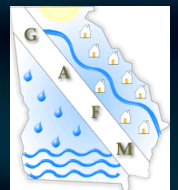
The Pluses of the NAI Approach

- Will reduce future flood damages
- Will reduce future suffering
- Will protect the communities natural resources and amenities
- Will improve the quality of life
- Will provide for more sustainable growth within the community
- Will reduce the community's liability



Other Potential Community Benefits of the NAI Approach

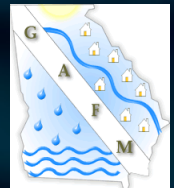
- Improved water quality and reductions in non-point pollution impacts
- Green corridors which also serve as additional areas for floodwater storage
- Improved groundwater recharge
- Better bank stabilization and better erosion control
- Possible increased property values near these “green” areas



Legal Research



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



Legal Research: Trends in Case Law

- Courts have modified common law doctrines to require an increased standard of care over time (e.g., common enemy to reasonable use doctrine for surface water)
- Hydraulic, hydrologic, and geologic models facilitate proof of causation
- “Act of God” defense has been greatly reduced due to ability to predict hazard events



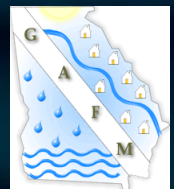
Legal Research: Trends in Case Law

- Defense of sovereign immunity has been greatly reduced
- Communities most apt to have to pay:
 - not when they deny permit, but
 - **when development they permit causes damage to others,**
 - ❖ damage is easily predictable (which is easier to do with better computer models and technology)



Actions Your Community Can Take

- Define “adverse impact”, based on your community’s unique condition (and remember that every community is unique – what works in another community may not work in yours !)
- Evaluate your hazards and programs
- Identify existing adverse impacts in the floodplain and throughout the entire watershed
- Require adverse impacts to be mitigated when development occurs



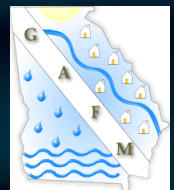
Is Your Community Liable ???

When individuals are damaged by flooding or erosion they often file law suits against government claiming:

- the government has caused the damages,
- the government knowingly allowed actions which contributed to the damages,

or

- the government failed to provide adequate warnings of natural hazards.



A little hint.....

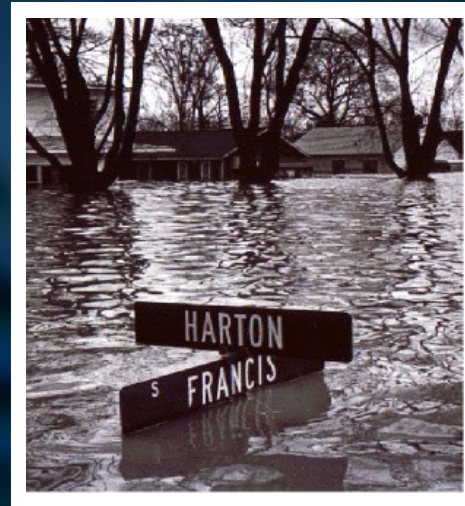
Dr. Gilbert White Stated The Facts:

“Floods are Acts of Nature; But Flood Losses Are Largely Acts of Man”



Is Your Community Liable ???

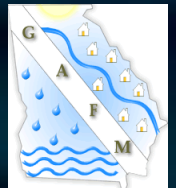
Courts and legislative bodies have expanded the basic rules of liability to make governments responsible for actions which result in, or increase, damages to others. Courts have, according to common law, followed the adage “use your property so that you do not injure another’s property”.



Is Your Community Liable ???

It bears repeating.....

“use your property so that you do not injure another’s property”.



Is Your Community Liable ???

A landowner does not have all rights under the law:

No Right to be a Nuisance

No Right to Violate the Property

Rights of

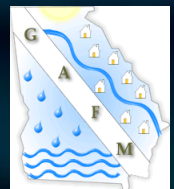
Others

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"



Is Your Community Liable ???

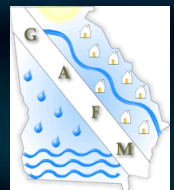
Most successful suits against communities result from actions such as construction of or inadequate maintenance of dams, levees, roads, and bridges, which increase flood damages on other lands.



Is Your Community Liable ???

Landowners damaged by flooding are also suing governmental entities that fail to adequately administer or enforce floodplain regulations, particularly where an issued permit resulted in damage to other lands.

*Cootey v. Sun Inv., Inc., 690 P.2d 1324, 1332 (Haw., 1984):
Hawaiian Supreme Court held that a county may be liable for approving a subdivision with inadequate drainage.*

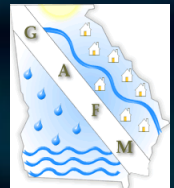


Is Your Community Liable ???



Communities are most apt to pay when development they permit causes damage, not when they deny a permit.

Damage is easily predictable with current computer models

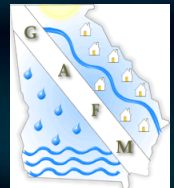


**Or perhaps you think you can
walk on water.....**



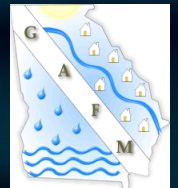
What is Common Law Liability ?

In the legal research paper “No Adverse Impact Floodplain Management and the Courts”, Jon Kusler, ESQ. concludes that under common law, no landowner, public or private, has the right to use his/her land in a way that substantially increases flood or erosion damages on adjacent lands.



Reasonable Conduct

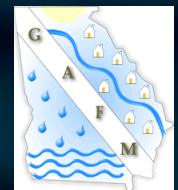
The overall issue, in most instances is the “reasonableness” of an action by the community or property owner. Due to advances in technology and products, there is an increasingly high standard of care for “reasonable conduct”. The “act of God” defense is seldom successful anymore, because even rare flood events are now predictable.



Reasonable Conduct

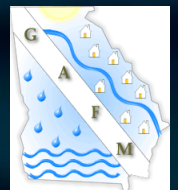
As technology advances, the techniques and approaches also advance for “reasonable conduct” by engineers and other professionals.

Governments are negligent if they fail to exercise the same “reasonable conduct” expected of technical professionals.



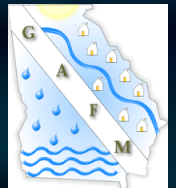
Your Community May Not be Protected, Even by Adopting the Minimum Federal Standards.....

The National Flood Insurance Program requires the adoption of a **minimum set of floodplain management criteria** in order for communities to be eligible for federally backed flood insurance, certain types of disaster assistance, and other federal support.



Your Community May Not be Protected, Even by Adopting the Minimum Federal Standards.....

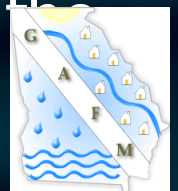
The minimum standards reduce overall flood damages for new construction and may be appropriate for the purposes of managing the flood insurance fund, but FEMA has long supported the adoption of higher standards through its regulations and through programs such as the Community Rating System.



Your Community May Not be Protected, Even by Adopting the Minimum Federal Standards.....

Current NFIP Standards allow the following:

- * floodwaters to be diverted onto other properties;
- * channel and overbank conveyance areas to be reduced;
- * essential valley storage to be filled;
- * velocities changed with little or no regard as to how these changes impact others in the floodplain and in the entire watershed.



Your Community May Not be Protected, Even by Adopting the Minimum Federal Standards.....

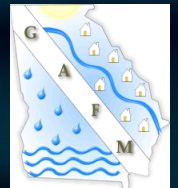
These impacts may result in successful common law or “takings” suits brought against a developer and/or a community despite community compliance with minimum federal standards.



In general, if your community permits development that results in an adverse impact, your community may be liable, even if you meet the minimum federal standards.



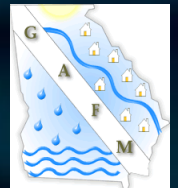
Are these guys in your future ??



Can Your Community Protect Itself from Legal Action ?

Your community can protect itself from liability by incorporating the No Adverse Impact approach and making sure that the actions taken in the floodplain, and more importantly, throughout the entire watershed, do not lead to adverse impacts on neighbors and neighboring communities.

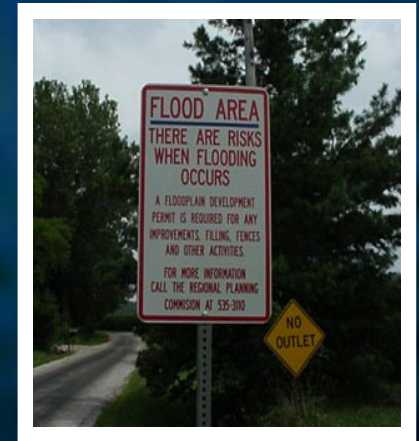
Adverse impacts need to be mitigated to prevent transferring the problems to another property or community.



Can Your Community Protect Itself from Legal Action ?

Your community can incorporate the No Adverse Impact approach in

- ✓ Hazard Identification / Floodplain Mapping
- ✓ Education / Outreach
- ✓ Planning
- ✓ Regulations / Development Standards
- ✓ Corrective Actions
- ✓ Infrastructure
- ✓ Emergency Services

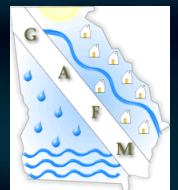


Can Your Community Protect Itself from Legal Action ?



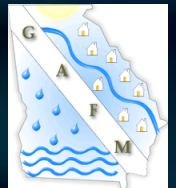
Courts have broadly and consistently upheld performance-oriented floodplain regulations including those that exceed minimum FEMA standards.

Regulations that require additional freeboard, establish setbacks, impose tighter floodway restrictions, or very tightly regulate high risk areas, have consistently been upheld by the courts.



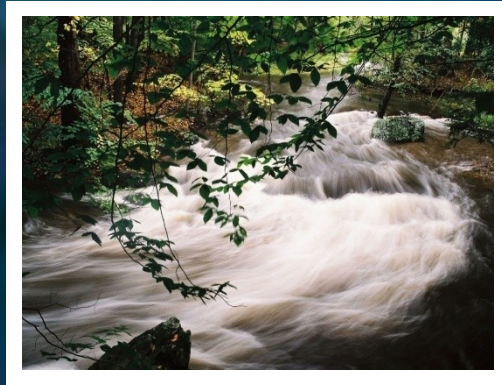
Can Your Community Protect Itself From Legal Action ?

It should be important to note, that in legal research on regulatory takings, Jon Kusler was unable to find a single case where a landowner prevailed in a regulatory takings suit against a municipality's denial of use, where the proposed use would have had any substantial offsite impacts or threatened public safety.



CONCLUSION

Current Approaches Create Future Disasters



If we continue to encourage at-risk development and ignore the impact to others, can we accept the consequences...

... and, are you willing to pay for it?

CONCLUSION

*..... the loss of even one life is much too high
a price to pay !!!*

A special thanks to :



ASFPM – NAI Powerpoint



ASFPM - NAI Legal Flyer

“Community Liability and Property Rights”

(May 2003)

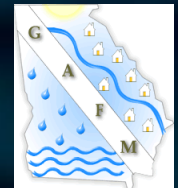
NAI Powerpoint – Christy Miller, CFM

NAI Powerpoint - Kimberly Bitters, CFM

(NAI Committee Co-Chairs)

Ed Thomas – Eagle City Workshop – Idaho – 2009

Ed Thomas – Boise River Lecture - 2009





No Adverse Impact

The “Do No Harm” Principle



for more information on No Adverse Impact contact:

The Association of State Floodplain Managers

608-274-0123

Email: asfpm@floods.org

Web Site: www.floods.org

