Legal Implications of No Adverse Impact Floodplain Management: Protecting the Rights of All

Delaware River Basin Commission
Floodplain Regulations Evaluation Subcommittee
DRBC Flood Advisory Committee

March 31, 2008
Edward A. Thomas, Esq.
Land Use Regulations Are Local Within A State and Federal Context

The Views Expressed Are Those of the Author and Do not Necessarily Reflect Approval Of Any Organization.

- This is Not Legal Advice – It is a Lecture on General Principles of Law. For Legal Advice see a Lawyer Licensed in Your Jurisdiction.
Today’s Outline

- NAI Background and Principles
- Publications, Web-Casts And Workshops
- Questions and Answers
To Set the Stage For Our Brief Discussion on Land Use-Sustainability-Liability - Water Resources –And Marketing

- Lets Discuss Some Basics of Law
- In the Law-Especially Criminal Law Attorneys Often Seeks to Identify Someone Else to Take the Blame
- Often Called SODDI-Some Other Dude Did It
- On the TV show “The Practice” it Was Called “Plan B”
- The SODDI for Increased Flood Damages is Often…
Mother Nature
Does Nature Cause Disasters?

- Some Folks Say: Global Warming Sea Level Rise Causes Harm: Mother Nature is at Fault
- Are Natural Disasters “Natural”?
- Dr. Gilbert White Stated The Facts:
  - “Floods are Acts of Nature; But Flood Losses Are Largely Acts of Man”
- Excellent Lecture by Dr. Roger Pielke Jr. at Natural Hazards Conference:
  
  Cause of increased Flood Loss Is Changes in Density and Cost/Type of Buildings in Hazardous Areas
Disaster Losses Have Been Increasing

Source: Munich Re 2007

Courtesy of Dr. Roger Pielke Jr
Flood and Wind Disasters Have Been Increasing Most

Source: Munich Re 2007

Courtesy of Dr. Roger Pielke Jr.
US Damage If Every Hurricane Season Occurred in 2005

Courtesy of Dr. Roger Pielke Jr
USA: Coastal Development

Miami Beach 1926

Miami Beach 2006

Wendler Collection

Joel Gratz © 2006
Can We All Agree?

- Among the Most Clear Lessons of The Horrific Aftermath of Hurricane Katrina:
  - We Need Housing for Employees to Have Businesses and Industry – to Have an Economy
  - There Is No Possibility of A Sustainable Economy Without Safe Housing and Safe Locations for Business and Industry to Occupy
Must Sustainability Or “Smart-Growth” Have A Foundation in Hazard Mitigation?

- The Spring 2007 Edition of The Urban Lawyer Contains and Article Which Summarizes the Views of 16 of the Leading Gurus of the “Smart Growth” Movement
- A Total of 135 Separate Principles
- None Refer to Hazards Specifically
- A Very Few Refer to Protecting Natural Resources
- Gabor Zovanyi is the Author; Article is The Role of Smart Growth Legislation in Advancing the Tenents of Smart Growth
Massachusetts and Louisiana See The Need For Recognizing Hazards

- Louisiana Has Recognized That Hazard Identification and Mitigation Must Be The Foundation of Sustainability

- Massachusetts Has Developed The StormSmart Coasts Concept Which Is Rapidly Spreading to Other States
Hurricane Camille

Camille (Cat 5) 1969

- # Dead: 250
- # Evacuated (prior to impact): 2,000,000
- # Displaced (after impact): 300,000
- # Homes Destroyed: 400,000
- # Homes Damaged: 2,000,000
- $ Damage (2005 Dollars): $150B
- $ Damage: $75B

Legend:
- # Dead
- # Evacuated
- # Displaced
- # Homes Destroyed
- # Homes Damaged
Camille and Andrew

$ Damage (2005 Dollars)

- # Homes Destroyed
  - 300,000
  - 400,000

- # Homes Damaged
  - 1,000,000
  - 2,000,000

- # Homes Evacuated
  - 101,241

- # Evacuated (prior to impact)
  - 2,000,000

- # Displaced (after impact)
  - 1,000,000
  - 150,000

- # Dead
  - 500
  - 1500

Camille (Cat 5) 1969
Andrew (Cat 4) 1992

$150 B
$75 B
$43.7 B
Camille, Andrew and Ivan

- Camille (Cat 5) 1969
- Andrew (Cat 4) 1992
- Ivan (Cat 3) 2004

$ Damage (2005 Dollars)

- # Evacuated (prior to impact)
- # Displaced (after impact)
- # Homes Destroyed
- # Homes Damaged
- # Dead

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$75 B
$150 B
Katrina & Rita w/o New Orleans

$ Damage (2005 Dollars)

# Homes
- Destroyed
- Damaged

# Displaced
(after impact)

# Evacuated
(prior to impact)

- Camille (Cat 5) 1969
- Andrew (Cat 4) 1992
- Ivan (Cat 3) 2004
- Katrina (Cat 3) 2005

- Rita-Katrina without New Orleans

- 365
- 737,940
- 1,000,000
- 33,253

- 75 B
- 12 B

- 500
- 250
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Katrina & Rita w/o New Orleans

- # Dead: 500
- # Evacuated (prior to impact): 2,000,000
- # Displaced (after impact): 2,000,000
- # Homes Destroyed: 150,000
- # Homes Damaged: 3,000,000
- # Homes Displaced: 352,930
- Damage (2005 Dollars):
  - $124B w/o New Orleans & Levee Breaks
  - $150B with New Orleans & Levee Breaks

Hurricanes:
- Camille (Cat 5) 1969
- Andrew (Cat 4) 1992
- Ivan (Cat 3) 2004
- Katrina (Cat 3) 2005 (with New Orleans & Levee Breaks)
Central Message

Even If We Perfectly Implement Current Minimum 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…
Where is the Floodplain?
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.
With Full Build Out Flood Heights May Increase Dramatically

- No Adverse Impact:
  - A New Direction in Floodplain Management Policy
  - Larry Larson PE, CFM and Doug Plasencia PE, CFM
  - Published in Natural Hazards Review Nov. 2001, IAAN 1527-6988
Stormwater
Impacts of Development on Streams

Greater & earlier peak discharge
Greater runoff volume
Smaller & less rapid peak
Reduced baseflow

WITH DEVELOPMENT
WITHOUT DEVELOPMENT
Deeper and Higher Water Results?

Serious Public Safety Issues
What is A Watershed?

A watershed is an area of land that drains into a lake or river. As rainwater and melting snow run downhill, they carry sediment and other materials into our streams, lakes, and groundwater. The image below is a watershed illustration.

Watersheds provide water for drinking, irrigation, and streams. Many people also enjoy the lakes and streams for their beauty — and for boating, fishing, and swimming. Healthy watersheds also provide food and shelter for wildlife.
Demographic Trends: The Future

- As We Move Into the Next Generation Things Will Be Much More Challenging For Floodplain and Stormwater Managers
- Dr. Arthur “Chris” Nelson, FAICP
- Leadership in a New Era
- “More than half of the built environment of the United States we will see in 2025 did not exist in 2000”

© American Planning Association, Chicago, IL.
As printed in www.architectmagazine.com
Chris Nelson Tells APA Convention That:

In the Next One Hundred Years the US Population Will Grow To:

Any Guesses?

Does 100 Years Have Any Special Meaning To Us?
Flood Risk = P (Probability of flood) X Consequences

Photo Courtesy of Pete Rabbon USACE
A Solution

- Go Beyond NFIP Minimum Standards
  - No Adverse Impact-Community Rating System
  - Rewarded Type Watershed Management:
    - Development Decision-making
    - Planning
    - Emergency Preparedness
What is No “Adverse Impact Floodplain Management”?

ASFPM Defines it as “…an Approach that ensures the action of any property owner, public or private, does not adversely impact the property and rights of others”
Why Go Beyond the Current Minimum Standards?

Flood damages are rapidly increasing unnecessarily!

Current approaches deal primarily with how to build in a floodplain vs. how to minimize future damages
What Is The Result Of Following
The No Adverse Impact Principle?

- PROTECTION OF THE PROPERTY RIGHTS OF ALL

- Legally Speaking, Prevention of Harm is Treated Quite Differently Than Making the Community a Better Place.

- Prevention of Harm to the Public Is Accorded Enormous Deference by the Courts
No Adverse Impact Floodplain Regulation

- Consistent with the Concept of Sustainable Development
- Provides a Pragmatic Standard for Regulation
- Complements Good Water Quality, Wetland and Stormwater Regulation
- Makes Sense on a Local and Regional Basis
- May be Rewarded by FEMA’s Community Rating System, Especially Under the New CRS Manual
No Adverse Impact Floodplain Management

- New Concept?
- “Sic utere tuo ut alienum non laedas”
- Detailed Legal Paper by Jon Kusler and Ed Thomas available at: www.floods.org
- More Information in ASFPM
- A Toolkit on Common Sense Floodplain Management at: www.floods.org
NO ADVERSE IMPACT AND THE COURTS: PROTECTING THE PROPERTY RIGHTS OF ALL

Prepared for the Association of State Floodplain Managers

By: Jon A. Kusler, Esq. and Edward A. Thomas, Esq.

November 2007
Question For The Group

• Anyone Ever Hear Of Mohandas K. Gandhi? He Was:
  A) One Of The Great Moralists of The Twentieth Century.
  B) A British Trained Attorney-At-Law.
  C) A Tremendous Influence On The Philosophy Which Guided Dr. Martin Luther King.
  D) All Of The Above.
According To Gandhi's Writings

• "Sic Utere Tuo Ut Alienum Non Laedas" That Is, In English: Use Your Property So You Do Not Harm Others Is:
• "A Grand Doctrine Of Life And The Basis Of (Loving Relationships) Between Neighbors”
• The Concept Of Using Property So It Does Not Harm Others Is Important To Discussion Of Dam And Levee Liability And Design.
• This Concept Will Also Help Us Understand How To Proceed In The Future, As We Shall See
The Impediments To Proper Floodplain and Watershed Resources Management I

- Externality
The Problem of Externality

- When One Group Pays Maintenance or Replacement of Something Yet Different Person or Group Uses That Same Something, We Often Have Problems
- Classic Example Is a Park Bench
- Disaster Assistance Is Another Classic Example of Externality
- Who Pays For Disaster Assistance?
- Who Benefits?
Costs of flooding are usually largely borne by:

a) The Federal and Sometimes the State Taxpayer Through IRS Casualty Losses, SBA Loans, Disaster CDBG Funds, and the Whole Panoply of Federal and Private Disaster Relief Described the Ed Thomas and Sarah Bowen Publication "Patchwork Quilt" (Located at: http://www.floods.org/PDF/Post_Disaster_Reconstruction_Patchwork_Quilt_ET.pdf)

b) By Disaster Victims Themselves
Cui Bono? (Who Benefits?)

- At Least the Short Term Benefits of Unwise or Improper Floodplain Development Flow to:
  
  a) Developers (profit on sale and occupancy)
  
  b) Local Governments (Real Estate and Sales Taxes-Jobs etc.)
  
  c) State Government (Some Sales Tax-Jobs etc.)
  
  d) Mortgage Companies (Profits On Loans etc.)
  
  e) The Occupants of Floodplains Who May Benefit From a Lovely Place To Stay For a While, Anyway
Why Should Government Do Something About This?

- Fundamental Duty
- Protect The Present
- Preserve A Community’s Future
Why Else Should Government Do Something About This?

- **In a Word:** Liability
How Can You Best Avoid These Friendly Lawyer Folks?
Floods and Litigation

- When Someone Is Damaged by the Actions of Others Who Pays?

- This is a Fundamental Question of Law.
Three Ways to Support Reconstruction Following Disaster Damage

1. Self Help: Loans, Savings, Charity, Neighbors
2. Insurance Disaster Relief: A Combination of Social Insurance and Self Help
3. Litigation

The preferred alternative is...

To have NO DAMAGE

Due to Land Use and Hazard Mitigation
Proof of Causation of Harm Is Easier Now Than In Past Times

- Forensic Hydrologists
- Forensic Hydraulic Engineers
Legal Issues: Professional Liability For Construction in Hazardous Areas

- Excellent Paper By Jon Kusler, PhD, Esq. Is Now Available
  - www.floods.org
- Prepared For The Association Of State Floodplain Managers Foundation
Lincoln, Nebraska

Flooded Homes May Cost City Millions
City Held Liable – Damages Still To Be Determined

Photo: Lincoln Star Journal
Lawsuit seeks $1 billion in Marin flood damage

The plaintiffs – 265 individuals and businesses – are each seeking $4.25 million in damages.

Lawyers representing the victims could collect more than $66 million in fees.
Lawsuit seeks $1 billion for Marin flood damage

Government agencies blamed for failing to prevent disaster

By Tad Whitaker

Victims of last winter's devastating flood in Marin are seeking more than $1 billion in damages from a laundry list of governmental agencies that they say share blame for the destruction.

The plaintiffs — 265 individuals and businesses — are each seeking $4 million in damages and another $250,000 in legal fees, according to lawyer Herb Rowland, who is defending San Anselmo. Lawyers representing the victims could collect more than $86 million in fees.

The scope of the lawsuit, first filed last fall, and the cost to fight it have rankled some officials who believe the flood — which began on Dec. 31, 2005 — was the result of unique circumstances.

The storm damaged about 1,200 homes and 300 businesses.

The suit resulted from the Dec. 31, 2005, flood that damaged about 1,200 homes and 300 businesses in Marin.

The lawsuit has been filed against a number of public agencies, including:

- San Anselmo
- Mill Valley
- Ross
- Fairfax
- Corte Madera
- Larkspur
- Marin County
- Marin Municipal Water District
- the state of California
- the Ross Valley Sanitary District
- Tamalpais Union High School District
- Marin County Flood Control and Water Conservation District

The plaintiffs, said the goal is to win the maximum allowed by each entity's insurance policy so the settlement does not affect municipal budgets. Officials have estimated total damage exceeded $110 million, although Mann puts it above $500 million.

He said some of his clients have expressed interest in directing at least a portion of the proceeds toward flood solutions.

"Most people would like to see some of the money used to prevent flooding," he said.

Supervisor Hal Brown, whose district covers much of the flooded area, laughed when asked about people donating settlement money toward flood repairs.

"That to me isn't human nature," he said. "I think there are more positive directions to go in."

See Lawsuit, page A7
City Of Half Moon Bay, California
November, 2007

- City Liable for Nearly $37,000,000 Under the Federal and State Takings Clauses, as Well as the Common Law Doctrines of Nuisance and Trespass, for Constructing a Storm Water Drainage System Which Flooded Someone
Fernley, Nevada

- “Class-action lawsuit updated in Fernley flood case”

- “The lawsuit names the Truckee-Carson Irrigation District, Lyon County, the city of Fernley, and companies that built and sold homes in the area flooded when a storm-swollen irrigation canal ruptured” Nevada Appeal, 1/26/08
California Law Changes

1986 Sacramento River Flood

1 levee rupture
+ 50,000 people evacuated
+ 9,000 families left homeless
  + 29 counties declared
  + $532 million in damages
+ almost 2 decades of litigation

= Paterno, A landmark court decision in 2003
  Damages $464 Million
Lawsuits Are Being Filed Following Hurricane Katrina

- Defendants:
  A) Corps of Engineers;
  B) Local Levee Boards;
  C) Oil and Gas Companies;
  D) State Government, Public Officials (As Individuals); Construction Companies, Architects, or Design Firms; and Maintenance Entities.

- $278 Billion In Claims For:
  A) loss of life;
  B) injury;
  C) insurable risks: commercial losses, property damage, business interruption, jobs lost, repair costs, disability claims; and
  D) virtually every type action allowed by our legal system.
Katrina Legal Situation

- Katrina Lawsuits
- 500,000 Plaintiffs
- $278 Billion in Damages Requested
- Approximately 1,000 Plaintiffs Attorneys Involved-Learning About Levees, Floods, and Liability
- A Copy of an Article on This Topic Appeared in the National Wetlands Newsletter and is available at: www.floods.org/PDF/ET_Katrina_Insurance_082907.pdf
- For The First Time In Many Years, Lenders Will Lose Considerable Money on Mortgages in A Disaster Area
Ironic A 'Plenty In The Katrina Litigation

- The Folks Who Have Land Use Authority and Are Also Responsible For Many Of the Steps For Reducing Levee Residual Risk: Lawsuits Against Them Are Being Dismissed
- They Were Not Responsible For the Levees
- Just Responsible for Much of The Increase in Consequences
Is That Fair?

- John Fitzgerald Kennedy Offers Us Guidance on That Topic
- Most of You Know of JFK
Legal Issues: Professional Liability For Construction in Hazardous Areas

Excellent Paper By Jon Kusler, PhD, Esq. Is Now Available

- www.floods.org

Prepared For The Association Of State Floodplain Managers Foundation

Ed Thomas and Jon Kusler Did a Web-Cast on this Topic Last March

Next Web-Cast TBD
The Impediments To Proper Floodplain Management II

- Concerns About A “Taking”
Fifth Amendment to the Constitution: “... nor shall private property be taken for public use without just compensation.”

Was this Some Theoretical Thought, or Passing Fancy?

Which Part of this Directly Mentions Regulation?

Taking Lawsuit Results

- Regulations Clearly Based on Hazard Prevention and Fairly applied To All: Successfully Held to be a Taking – Almost None!
- Many, Many Cases where Communities and Landowners Held Liable for Harming Others
- **NO ADVERSE IMPACT AND THE COURTS: PROTECTING THE PROPERTY RIGHTS OF ALL**
- Prepared for the Association of State Floodplain Managers
- By: Jon A. Kusler, Esq. and Edward A. Thomas, Esq.
- Special Edition Minnesota Association of Flood Plain Managers, November 2007
Examples of Situations Where Governments May Be Held Liable

- Construction of a Road Blocks Drainage
- Stormwater System Increases Flows
- Structure Blocks Watercourse
- Bridge Without Adequate Opening
- Grading Land Increases Runoff
- Flood Control Structure Causes Damage
- Filling Wetland Causes Damage
- Issuing Permits for Development Which Causes Harm to a Third Party
New Trend In The Law

- Increasingly States Are Allowing Lawsuits Against Communities for Alleged Goofs in Permitting Construction OR in Conducting Inspections

- Excellent Paper By Attorney Jon Kusler PhD For The Association of State Floodplain Managers Foundation Available On Line at www.floods.org
Recent Legal Research by Ed Thomas

- Many Cases Where Communities Try to Prevent Building in a Hazardous Area
- Refuse the Requested Permit Based on Nebulous Environmental or Aesthetic Concerns
- And They Lose
- If they Clearly Related Permit Refusal to Harm Prevention—Very Likely a Different Result
An Illustration of the Trend in the Law Towards Recovery by Injured Parties

- Background: For Over Thirty Years Lenders and the Companies Who Read FEMA Flood Insurance Maps Have Escaped Liability When They Read A Map Incorrectly; the Plaintiff Does Not Purchase Flood Insurance and Then Gets Flooded


- Plaintiff Allowed To Sue to Recover From Flood Determination Allegedly in Error

- The Court Noted that a Flood Zone Determination Was the Kind of Professional Opinion for Which it is Foreseeable that Justifiable and Detrimental Reliance by a Reasonable Person Would Be Induced.

- Would a Court Think that a Levee Certification Is a Similar Professional Opinion?
No Adverse Impact Hazard Regulation Is A Winning Concept

- So How Do We Proceed?
- Planning
- Partnerships
- Planning
- Multi-Use Mapping and Engineering
- Planning
- Fair Regulation to Prevent Harm
Can Government Adopt Higher Standards Than FEMA Minimums?

- FEMA Regulations Encourage Adoption of Higher Standards—"... any floodplain management regulations adopted by a State or a community which are more restrictive than (the FEMA Regulations) are encouraged and shall take precedence.” 44CFR section 60.1(d). (emphasis added)
Governmental Rights and Duties to Manage Development

- Does Government Have a Right to Regulate to Prevent Harm?

- Does Government Have an Affirmative Duty to Regulate to Prevent Harm?
Could One Argue That Higher-Coordinated Watershed Wide Water Resources Planning is NEEDED for our Nation?

Consider:

A) Uncertainties in Flood Elevations  
B) Plasencia-Larson Paper On Flood Height Increases Due To Future Watershed Development  
C) Consequences If Levee Is Overtopped  
D) Height of Freeboard  
E) 50% Chance That 1% Flood Will be Exceeded Within 70 Years – Bulletin 17 B

Legal Benefits of Harm Prevention as a Foundation of an Ordinance
Summary

- No Adverse Impact Water Resources Management Is:
  - A) Legal
  - B) Equitable
  - C) Practical
  - D) Defensible in Court
Hazard Based Regulation And The Constitution

- Hazard Based Regulation Generally Sustained Against Constitutional Challenges

- Goal of Protecting the Public Accorded **ENORMOUS DEFERENCE** by the Courts
Publications and Workshops

- 1. Total Water Resources
NAI Total Water Resources Management

ASFPM 2008 Annual Conference

Doug Plasencia, Ed Thomas, Robert Murdock, Fernando Pasquel, Baker
Panel Discussion: David Mallory, Denver UDFCD
Burton Johnson, Harris County FCD
Sam Riley Medlock, ASFPM
Karl Christians, Montana DNRC

May 22, 2008
Implementing NAI in the Real World

- 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

- Baker Has Developed A Workshop To Explain This Concept Using Baker Staff and Clients and Potential Clients As Instructors
LID Balances Development and Watershed Protection

**What is LID?**

- An approach to site or subdivision design that mitigates the impacts of development on stormwater flows and water quality (specific design storm)
Total Water Resources Management-Linkages

- Land Use-Water Quality-Stormwater-Floodplain Management
- Transportation
- Municipal Liability
- Protection of Groundwater
- Savings on Road Salt
Recent Publications on Comprehensive Water Resources Management

- A Perfect Storm of Opportunities to Establish and Fund a Program to Reduce Misery and Protect Water Resources; April 2008.

- Article for the Louisiana Sea Grant Law and Policy Program. This article encourages a comprehensive view of water as a resource.

- http://www.lsu.edu/sglegal/pdfs/lcl_89.pdf
2. Failed Dams and Levees
Legal Problems When Levees Do not Protect: A Challenge To The Engineering Profession

On Behalf Of:

The Society of American Military Engineers
Rock Island Post
Quad City Botanical Center
December 18, 2008

Edward A. Thomas, Esq.
Paper On This Topic From ASFPM

LIABILITY FOR WATER CONTROL STRUCTURE FAILURE DUE TO FLOODING

Special Edition for the Floodplain Managers Annual Meeting
September 7, 2006
Edward A. Thomas, Esq.
Michael Baker, Inc.
www.floods.org
On Behalf Of:

The American Council of Engineering Companies

Web-Cast

Failed Dams and Levees: Examining Engineering Liability

Edward A. Thomas Esq.
Liability For Failed Dams and Levees-Linkages

- State and Municipal Liability
- Professional Liability
- FEMA Efforts
- USACE Efforts
- SAME Interest
- ASCE Interest
- ACEC Interest
- Emergency Planning and Preparedness
- Evacuation Planning
- COOP and COG
- Continuity of Business Operations
Publications and Workshops

- 3. Legal Aspects of Floodplain and Stormwater Management
Legal Issues in Our Floodplain

The Association of State Floodplain Managers Annual Conference
Reno, Nevada
May 18–23, 2008

Wes Shaw, Massachusetts CZM
David Mallory PE, Urban Denver Flood Control District
Edward A. Thomas, Esq.
NO ADVERSE IMPACT AND THE COURTS: PROTECTING THE PROPERTY RIGHTS OF ALL

Prepared for the Association of State Floodplain Managers

By: Jon A. Kusler, Esq. and Edward A. Thomas, Esq.

Special Edition Minnesota Association of Flood Plain Managers, November 2007
Recent Publications on Floodplain Management

1.) Law Review Article for the Vermont Journal of Environmental Law, on property rights and floodplain management:

*Mitigating Misery: Land Use and the Protection of Property Rights Before the Next Big Flood. Winter 2007-2008*


2.) Monograph for the Denver University School of Law, Rocky Mountain Land Use Institute, on legal aspects of floodplain & stormwater management as they relate to sustainability:

*Protecting the Property Rights of All: No Adverse Impact Floodplain and Stormwater Management 2008*

Legal Aspects of Floodplain and Stormwater Management-Linkages

- State and Municipal Liability
- APA
- Land Use Planning
- Professional Liability
- Emergency Planning and Preparedness
- Evacuation Planning
No Adverse Impact Hazard Regulation Is A Winning Concept

- So How Do We Proceed?
- Planning
- Partnerships
- Planning
- Multi-Use Mapping and Engineering
- Planning
- Fair Regulation to Prevent Harm
Publications, Web-Casts and Workshops

- 4. Outreach and Risk Communication
ACEC Web-Cast
Liability of Communities and States for Regulating Construction in Flood Hazard Areas
March 4, 2008

Dr. Jon Kusler Esq.
Edward A. Thomas Esq.
Special FEMA Sponsored Outreach Meetings
January 2008

Liability For Failed Levees
Edward A. Thomas Esq.
Harm Prevention And The Law

- Is NAI a Silver Bullet?
- Use of NAI Will Significantly Reduce the Probability of a Loss in Court!
- Even Better Odds if there is A Good, Fair Variance Procedure + Flexibility in the Regulation + Community Applies the Principle to their Own Activities.
Take Away Messages For Today

Prevention

- We Throw Money At Problems After They Occur
- You Can Pay A Little Now Or Lots Later
- The Legal System Is Ready To Help You Pay Later
Take Away Message

- Responsible For Community Development?
  - Many Areas Can Flood
  - Uninsured Victims Will Likely Sue-If They Can Find Someone to Blame
  - Fair Harm Prevention Regulation Helps Everyone
Message For All Involved In Community Development

- The Fundamental Rules of Development Articulated, By Federal Law, Envision Housing and Development Which Is:
  - Decent
  - Safe
  - Sanitary
  - Affordable
Flooded Development Fails That Vision!

- Housing And Development Which Flood Are:
  - Indecent
  - Unsafe
  - Unsanitary
  - Unaffordable- by the Flood Victims, By Their Community, By The State, and By Our Nation!
Outreach and Risk Communication - Linkages

- State and Municipal Liability
- Emergency Planning
- Evacuation Planning
- Professional Liability
- APA
- ASCE
- ACEC
- FEMA
- USACE
5. Liability
Dr. Kusler’s Paper

- A Comparative Look at Public Liability for Hazard Mitigation, author: Jon Kusler, JD, PhD, ASFPM Foundation, 2009.

- Available at:
  http://www.floods.org/PDF/Mitigation/ASFPM_Comparative_look_at_pub_liability_for_flood_haz_mitigation_09.pdf
ACEC Web-Cast
Liability of Communities and States for Regulating Construction in Flood Hazard Areas
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Dr. Jon Kusler Esq.
Edward A. Thomas Esq.
Publications and Workshops

- 6. Creating and Funding a Hazard Mitigation Program
Post Disaster Reconstruction:
The Patchwork Quilt — A Creative Strategy for Safe Post-Disaster Rebuilding

National Floodproofing Conference IV
New Orleans, Louisiana
November 20, 2008

Deborah Mills, CFM; Edward A. Thomas Esq.; Sarah Bowen CFM;
Jennifer K. Dunn, CFM; Wes Shaw; Chad Berginnis, CFM;
Judy Soutiere, CFM; Sean Le Blanc
This Publication Is Now on The Association of State Floodplain Managers Web Site

POST-DISASTER RECONSTRUCTION
THE PATCHWORK QUILT:
A CREATIVE STRATEGY FOR SAFE &
LONG TERM POST-DISASTER REBUILDING

Edward A. Thomas Esq. and
Sarah K. Bowen CFM

Special Edition of November 20, 2008 for the National Floodproofing Conference IV

New Orleans, Louisiana
Creating and Funding a Hazard Mitigation Program-Linkages

- Emergency Planning
- APA
- FEMA
- USACE
- Evacuation Planning
- Hazard Mitigation
7. StormSmart Coasts Materials

- The NOAA StormSmart Coasts Materials Could Be Beneficial For coastal and inland Communities
the StormSmart Coasts Network
the StormSmart Coasts Network:

A collaborative effort to help local officials with:

- storms
- sea level rise & climate change
- flooding
the audience:
LOCAL OFFICIALS
Is the message interesting?

Is the message relevant?

Is the message actionable?
Evaluation of the National Flood Insurance Program’s Building Standards

Christopher P. Jones, William L. Coulbourne, Jamie Marshall, and Spencer M. Rogers, Jr.

Christopher Jones and Associates

October 2006

Prepared under subcontract to the American Institutes for Research as part of the 2001-2006 Evaluation of the National Flood Insurance Program
freeboard?
RAISE YOUR HOME, LOWER YOUR MONTHLY PAYMENTS
Protect buildings and reduce monthly expenses with freeboard

WITHOUT FREEBOARD

WITH 3' OF FREEBOARD

Annual flood insurance: $5,499
Annual flood insurance: $2,084

Elevating a home a few feet above legally mandated heights has very little effect on the overall look of a home, and it can lead to substantial reductions in flood insurance rates, significantly decrease the chance a home will be damaged by storms and flooding, and help protect against sea level rise.

What is Freeboard?

Freeboard is elevating a building a few feet above approved elevation levels by a small additional height (generally 1-3 feet above National Flood Insurance Program (NFIP) minimum height requirements). Elevating a home a few feet above legally mandated heights has a minor effect on the overall look of a home, and it can lead to substantial reductions in flood insurance, significantly decrease the chance a home will be damaged by storms and flooding, and help protect against sea level rise.

What are the Benefits of Freeboard?

Increased protection from floods and storms. Storms can move at a rate of 3-7 feet per hour, which means a one-foot elevation can be a protective measure against flooding. Freeboard provides a buffer against storm surges, reducing the risk of property damage.

Example of savings on NFIP premiums with freeboard

<table>
<thead>
<tr>
<th>V Zone</th>
<th>1 freeboard</th>
<th>2 freeboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings in NFIP premiums</td>
<td>$1,580</td>
<td>$1,370</td>
</tr>
<tr>
<td>Savings over 25-year mortgage</td>
<td>$10,600</td>
<td>$81,900</td>
</tr>
</tbody>
</table>

In this example, 1 freeboard saves $1,580 in NFIP premiums over 25 years, while 2 freeboard saves $1,370,000 over 25 years.

For more information...

- For technical information on the costs of incorporating different flood-resistant building techniques (including freeboard), see the American Institute for Research’s Evaluation of the National Flood Insurance Program’s Building Standards (2005 study).
- For general information on the National Flood Insurance Program, see www.floodsmart.gov.
- For specific questions on flood insurance rates, contact your local insurance agent.

Checklist for freeboard:

- If your property is located in a flood zone, consider elevating your home or adding freeboard.
- Contact your local flood insurance adjuster to determine the costs.
- Consider adding freeboard to protect your property against storm surges and sea level rise.

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Interesting? Relevant? Actionable?
GENERAL MITIGATION GRANT PROCESS

1. Municipality designs a program with assistance from MEMA
2. Municipality advertises to find interested property owners
3. Municipality works with each applicant to find best mitigation option & assembles joint application
4. Municipality submits application to MEMA, where it is reviewed and sent to FEMA
5. FEMA determines whether or not project will be funded
6. Selected projects are funded
Introduction to No Adverse Impact (NAI) Land Management in the Coastal Zone

What is NAI?
No Adverse Impact (NAI) land management is a legally sound way for municipalities to protect people and property. It's a set of rules and practices that enable coastal communities to protect their residents and property from storms and floods. NAI land management includes:

- Protection of natural ecosystems
- Identification of vulnerable areas
- Use of natural and engineered solutions
- Compliance with state and federal regulations

NAI Land Management

Managing coastal flood risks is a challenging endeavor that requires a coordinated effort by coastal communities. The law mandates that coastal municipalities have comprehensive planning and development regulations in place to protect the community and its natural resources. NAI land management helps communities meet these requirements by providing a framework for coastal planning and development decisions.

Case Study: A Cape Cod Community Prevents New Residences in Floodplains

Lessons learned from Chatham's legally successful conservation district

In a small town on Cape Cod, the town of Chatham has successfully prevented new residential development in a floodplain by using the law to stop zoning changes that would have allowed development in a flood-prone area. The town was able to prevent the development by challenging the zoning law in court, citing the requirement for a special permit in floodplains.

Freeboard Quincy/Scituate Coastal Landscaping Cost of Storms

No Adverse Impact and the Legal Framework of Coastal Management

How communities can protect people & property while minimizing lawsuits

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Mississippi
Alabama
TENTATIVE SITE ORGANIZATION

1. Before the storm
2. During the storm
3. After the storm
4. Your community
5. Background
Summary

To Better Serve Our Nation We Have Developed A Vast Body of:

A.) Publications
B.) Workshops
C.) Web-Casts

Most Are Available In pdf Format On Various Web-Sites

See Handout

How Can We ALL Work Together To Make Best Use Of Them?
Next Steps

- Tough Choices

- Friendly Persuasion & Education

- Encourage State and Local Regulation

- Direct Regulation

- Combination
Lots of Folks Working on This Topic

FEMA Risk MAP
Emphasizes Analysis & Planning as Well as Outreach and Risk Communication

NOAA StormSmart Coasts
Web-Based Information and Planning Support

Urban Denver Flood Control
Win-Win Development Approach

Charlotte-Mecklenburg North Carolina
Multiple NAI Based Approaches
Questions and Answers

Thank You
Legal Implications of No Adverse Impact Floodplain Management: Protecting the Rights of All

Delaware River Basin Commission

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